

2. *By Mail.* Send your scientific views to: Water Docket in the EPA Docket Center, Environmental Protection Agency, Mailcode 4101T, 1200 Pennsylvania Ave., NW., Washington, DC 20460, Attention Docket ID No. OW-2001-0010.

3. *By Hand Delivery or Courier.* Deliver your scientific views to: Water Docket, EPA Docket Center, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC, Attention Docket ID No. OW-2001-0010. Such deliveries are only accepted during the Docket's normal hours of operation as identified in section I.B.1.

D. What Should I Consider as I Prepare My Scientific Views for EPA?

You may find the following suggestions helpful for preparing your scientific views:

1. Explain your scientific views as clearly as possible.
2. Describe any assumptions that you used.
3. Provide any technical information and/or data you used that support your scientific views.
4. Provide specific examples to illustrate your concerns.
5. Offer alternatives.
6. Make sure to submit your scientific views by the deadline identified.
7. To ensure proper receipt by EPA, identify the appropriate docket identification number in the subject line on the first page of your response. It would also be helpful if you provided the name, date, and **Federal Register** citation related to your scientific views.

II. Background and Today's Action

A. What Are Recommended Water Quality Criteria?

Recommended water quality criteria are the concentrations of a chemical in water at or below which aquatic life are protected from acute and chronic adverse effects of the chemical. Section 304(a)(1) of the Clean Water Act requires EPA to develop and publish, and from time to time revise, criteria for water accurately reflecting the latest scientific knowledge. Water quality criteria developed under section 304(a) are based solely on data and scientific judgments. They do not consider economic impacts or the technological feasibility of meeting the criteria in ambient water. Section 304(a) criteria provide guidance to States and Tribes in adopting water quality standards. The criteria also provide a scientific basis for EPA to develop Federally promulgated water quality standards under section 303(c).

B. What Is Atrazine and Why Are We Concerned About It?

Atrazine is an organic chemical used as an herbicide throughout the U.S. for control of weeds in agricultural crops. Environmental exposure occurs mainly from its application as an herbicide but may also occur from industrial manufacture, distribution releases, precipitation, field runoff, and drift. Atrazine is moderately volatile and soluble in water, and resistant to natural degradation in water. Because of atrazine's chemical properties and widespread use as an herbicide, concerns have been raised over the potential risks posed by exposure of aquatic organisms to it. For these reasons, EPA has developed the following water quality criteria:

C. What Are the National Recommended Water Quality Criteria?

Freshwater

Aquatic life should not be affected unacceptably if the: One-hour average concentration of atrazine does not exceed 1,500 ug/l more than once every three years on the average (Acute Criterion) and if the Average Primary Producer Steinhaus Similarity deviation for a site is less than 5% (as determined using the Comprehensive Aquatic Systems Model (CASM)¹ or other appropriate model and index) and is not exceeded more than once every three years (or other appropriate return frequency sufficient to allow system recovery). The 5% index for the protection of aquatic plant community should also be protective of most freshwater animals (Chronic Criterion).

Saltwater

Aquatic life should not be affected unacceptably if the: One hour average concentration of atrazine does not exceed 760 ug/l more than once every three years on the average (Acute Criterion) and if the thirty-day average concentration of atrazine does not exceed 17 ug/l more than once every

three years on the average (Chronic Criterion).

D. How Are the Revised Draft Criteria in Today's Publication Different From the 2001 Criteria?

The revised draft criteria in today's publication incorporate information on the toxicity of atrazine to aquatic plants and invertebrates that had not been available at the time of the 2001 publication. The change in critical endpoints reflects the scientific views of the Agency, the registrant, and those received from the public.

E. How Has EPA Coordinated Development of Ecological Risk Assessments on Atrazine Between the Office of Water (OW) and the Office of Pesticide Programs (OPP)?

Concurrent with OW's release of the Draft Aquatic Life Criteria Document for Atrazine at 66 FR 49186, OPP released its Preliminary Ecological Fate and Effects Risk Assessment of Atrazine at 66 FR 49180. Both offices shared their aquatic toxicity data bases for atrazine in the development of their risk assessment documents. OW and OPP also shared scientific views received on their respective risk assessment documents in response to their publication for review by the public.

Today, EPA is notifying the public about the availability of this aquatic life criteria document for atrazine to expand the public's involvement in the criteria development process. Simultaneously, EPA is publishing its Ecological Fate and Effects Risk Assessment for atrazine under FIFRA (<http://www.epa.gov/oppsrrd1/reregistration/atrazine/>).

EPA notified the public of its intent to develop aquatic life criteria for atrazine in the **Federal Register** on October 29, 1999 (64 FR 58409). At that time EPA made available to the public all references identified by a recent literature review and solicited any additional pertinent data or scientific views that would be useful in developing the draft aquatic life criteria for atrazine. EPA then made the draft aquatic life criteria document for atrazine available for public review.

The Office of Water and the Office of Pesticide Programs will continue to work together and with stakeholders (States, Tribes, manufacturers, growers, and other interested parties) to develop an implementation document for States and Tribes to use in their adoption of atrazine criteria in State and Tribal standards. The draft implementation document will be made available for public review. EPA's current thinking is that the document would include:

¹ CASM is an aquatic ecological food chain model, specifically, the Comprehensive Aquatic Systems Model (Bartell *et al.* 2000, Bartell *et al.* 1999, DeAngelis *et al.* 1989).

Bartell, S.M., K.R. Campbell, C.M. Lovelock, S.K. Nair, and J.L. Shaw. 2000. Characterizing aquatic ecological risk from pesticides using a diquat dibromide case study III. Ecological Process Models. Environ. Toxicol. Chem. 19(5):1441-1453.

Bartell, S.M., G. Lefebvre, G. Aminsinski, M. Carreau, and K.R. Campbell. 1999. An ecosystem model for assessing ecological risks in Quebec rivers, lakes, and reservoirs. Ecol. Model. 124:43-67.

DeAngelis, D.L., S.M. Bartell, and A.L. Brenkert. 1989. Effects of nutrient recycling and food-chain length on resilience. Amer. Nat. 134(5):778-805.