

concentrations and environmental and human health effects. Human health water quality criteria do not reflect consideration of economic impacts or the technological feasibility of meeting the chemical concentrations in ambient water.

CWA section 304(a)(1) requires EPA to develop and publish and, from time to time, revise criteria for water quality that accurately reflect the latest scientific knowledge. EPA's recommended section 304(a) water quality criteria provide guidance to States and authorized Tribes in adopting water quality standards for protection of human health and can be used as a scientific basis for developing controls of discharges or releases of pollutants. The criteria also provide guidance to EPA when promulgating Federal regulations under CWA section 303(c), when such action is necessary.

#### *B. How Is the 2000 Human Health Methodology Used?*

In November 2000, EPA published the revised *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000)* (EPA-822-B-00-004, October 2000; hereafter referred to as the "2000 Human Health Methodology"). Before this, the Agency developed recommended human health water quality criteria using the 1980 *Guidelines and Methodology Used in the Preparation of Health Effects Assessment Chapter of the Consent Decree Water Criteria Documents* (45 FR 79347, called the "1980 Methodology"). The 2000 Human Health Methodology incorporates significant scientific advances that have occurred over the last two decades, particularly in the areas of cancer and noncancer risk assessments (using new information, procedures, and published Agency guidelines), exposure assessments (using new studies on human intake and exposure patterns, and new Agency guidelines), and methodologies to estimate bioaccumulation in fish. EPA will use the 2000 Human Health Methodology to develop new section 304(a) water quality criteria for additional pollutants and to revise existing section 304(a) water quality criteria. The 2000 Human Health Methodology is an important part of EPA's efforts to improve the quality of the Nation's waters and strengthen the overall scientific basis of water quality criteria. Furthermore, the 2000 Human Health Methodology will help States and authorized Tribes address their unique water quality issues and make risk management decisions to protect human health consistent with CWA

section 303(c). The 2000 Human Health Methodology provides a detailed means for developing water quality criteria, including systematic procedures for evaluating cancer risk, noncancer health effects, human exposure, and bioaccumulation potential in fish.

#### *C. How Does EPA Use Its Recommended Water Quality Criteria?*

Water quality standards generally consist of designated uses (e.g., public water supply, recreational use, industrial use), water quality criteria to protect those uses, a policy for antidegradation (that maintains and protects existing uses and water quality conditions), and general policies for application and implementation of water quality standards. As part of the water quality standards triennial review process defined in CWA section 303(c)(1), States and authorized Tribes are responsible for maintaining and revising water quality standards. Section 303(c)(1) requires States and authorized Tribes to review and, if appropriate, modify their water quality standards at least once every three years. EPA's recommended section 304(a) water quality criteria may form the basis for Agency decisions, both regulatory and non-regulatory, until they are superseded by EPA's publication of new or revised section 304(a) water quality criteria. These recommended water quality criteria are used in the following ways:

- (1) as guidance to States and authorized Tribes in adopting water quality standards,
- (2) as guidance to EPA in promulgating Federal water quality standards,
- (3) to interpret a State's narrative water quality standard (in the absence of a State adopted numeric standard) in order to establish National Pollutant Discharge Elimination System (NPDES) water quality-based permit limits, and
- (4) for all other purposes of CWA section 304(a).

Two distinct purposes are served by the section 304(a) water quality criteria. The first is as guidance to the States and authorized Tribes in the development and adoption of water quality criteria that will protect designated uses for their waters. The second is as guidance for promulgation of Federal water quality criteria for States and authorized Tribes, when such action is necessary under the terms of the CWA.

#### *D. What Is the Relationship Between 304(a) Criteria and Your State or Tribal Water Quality Standards?*

States and authorized Tribes must adopt water quality criteria that protect

designated uses pursuant to CWA section 303(c)(2)(A). Protective criteria are based on a sound scientific rationale and must contain sufficient parameters or components to protect the designated uses. Water quality criteria may be expressed in either narrative or numeric form. States and authorized Tribes may use one of four approaches when adopting water quality criteria:

- (1) Establish numerical values based on section 304(a) recommended water quality criteria,
- (2) Modify the section 304(a) recommended water quality criteria to reflect site-specific conditions,
- (3) Use other scientifically defensible methods to derive protective water quality criteria, and
- (4) Establish narrative water quality criteria where numeric criteria cannot be determined or to supplement numeric water quality criteria.

EPA encourages States and authorized Tribes to use EPA's section 304(a) water quality criteria as guidance when adopting water quality standards consistent with CWA section 303(c) and the Federal regulations at 40 CFR part 131.

#### *E. May States and Authorized Tribes Adopt Water Quality Criteria Based on Local Conditions?*

EPA encourages States and authorized Tribes to develop and adopt water quality criteria to reflect local and regional conditions. In the 2000 Human Health Methodology, EPA published default values for risk level, fish intake, drinking water intake, and body weight for use by EPA, States or authorized Tribes in deriving human health water quality criteria. EPA believes these default values result in water quality criteria that protect the general population. States and authorized Tribes may also use these default values for their own water quality criteria, or they may use other values more representative of local conditions if they have data supporting the alternative values.

#### *F. How Does the Review and Approval of State and Tribal Water Quality Standards Affect Water Quality Criteria Adopted by States and Authorized Tribes?*

In 2000, EPA published new regulations addressing its review and approval of water quality standards adopted by States and authorized Tribes (see 65 FR 24642; April 27, 2000.) Under the new regulations, (codified at 40 CFR 131.21(c)-(f)), State or authorized Tribal water quality standards that were adopted by law or regulation before May 30, 2000, are in