

Water Quality Standards



2011-2013 Triennial Review

<http://www.state.ak.us/dec/water/wqsar/trireview/trireview.htm>

Section Manager, Jim Powell

(907) 465-5185

FACT SHEET

Human Health Criteria for Consumption of Fish and Water

Background Information:

Human health criteria are water quality criteria that address contaminants that can reach humans through consumption of water and aquatic organisms (e.g. fish, shellfish). Key factors in the calculations used to derive human health criteria are the amount and type of fish a human in a typical population eats. The Alaska Department of Health and Social Services has estimated that fish consumption rates for some Alaskan villages may be more than 10 times more than the 6.5 grams per day (grams/day) amount that the EPA originally used in 1980, which is the value used in current Alaska Water Quality Standards. Fish intake can vary widely from village to village.

In 2000, EPA published the *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* using a national fish consumption rate of 17.5 grams/day instead of the 6.5 grams/day value. In December 2002, EPA published updated nationally recommended human health criteria based on the 2000 Methodology.

DEC participates in the Interagency Fish Consumption Advisory Workgroup. This group has convened to determine how best to protect Alaskan fish consumers. One goal is to design realistic, protective fish consumption recommendations based on scientific studies of the health effects of fish consumption.

This Triennial Review issue consists of examining data and assumptions for fish consumption rates in Alaska along with the latest federal guidance for protecting human health, and updating the water quality criteria for human health based on this information. One option is to adopt the EPA value that would apply throughout the state, but then include a regulation that requires significant dischargers to document actual consumption of resident fish down gradient of the discharge, considering site-specific criteria.

Potential actions:

- Gather information on fish consumption rates in Alaska, particularly in high subsistence use areas.
- Evaluate methods, including permitting procedures, for adjusting human health criteria in those locations where fish consumption rates may be higher due to subsistence use.

- Revise human health criteria in the Toxics Manual adopted in 18 AAC 70, and APDES permitting guidance in 18 AAC 83 as needed.

Who is affected?

- Subsistence fishers and other consumers of fish from Alaskan waters.
- Permittees with discharges near heavy subsistence use areas.

For additional scientific information: *Fish Consumption Advice for Alaskans: A Risk Management Strategy to Optimize the Public's Health*. Lori A. Verbrugge, Ph.D. on behalf of the Alaska Scientific Advisory Committee for Fish Consumption, Section of Epidemiology, Division of Public Health, Department of Health and Social Services, State of Alaska. October 15, 2007.
http://www.epi.hss.state.ak.us/bulletins/docs/rr2007_04.pdf.

For more information contact:
Carl Reese
Department of Environmental Conservation
410 Willoughby, AK 99801
Carl.Reese@alaska.gov; (907) 465-5018