

An Overview of Methylmercury Concentration in Fish Tissue from the Snake River, With Emphasis on the Hells Canyon Complex

James Chandler
Idaho Power Company 1221 W. Idaho St
Boise, ID 83702
Telephone: (208) 388-2974
Email: jchandler@idahopower.com

Information on methylmercury (MeHg) concentrations in fish tissue was assembled for the Snake River between Palisades Reservoir (River Mile 917) and downstream to the confluence of the Snake and Clearwater Rivers (River Mile 108) near Lewiston, Idaho. Fish MeHg data were identified for 24 species of fish with samples collected between 1969 and 2011. Comparisons among locations or years were difficult because of variability of species and lengths represented in the various collections. To allow for comparison among location and size, in spring of 2013, IPC collected fish tissue samples for MeHg analysis from 30 smallmouth bass (*Micropterus dolomieu*) in each of Brownlee, Oxbow and Hells Canyon reservoirs, and 30 smallmouth bass from the Snake River below Hells Canyon Dam. The MeHg levels in smallmouth bass tissue generally increased with size and ranged from 0.026 in Oxbow Reservoir to 0.75 in Hells Canyon Reservoir (Figure 6.6 1). Of the smallmouth bass sampled, only eight met Oregon's human health criteria for MeHg and 112 exceeded Oregon's criteria. Eighty-two of the smallmouth bass sampled met Idaho's MeHg criteria, while 38 smallmouth bass exceeded Idaho's criteria. All of the smallmouth bass in the size groups less than 200 mm were below the Idaho criteria. These MeHg levels are an issue because the existing data indicates an exceedence of both Idaho and Oregon water quality criteria for MeHg in fish tissue. This is a concern for human consumption of fish with elevated MeHg and also for the ESA -listed species present in HCC and below Hells Canyon Dam. Idaho and Oregon each have an aquatic life water quality criterion for mercury and a human health criterion for MeHg.