

The Department of Ecology's Response to: Matthew Knox – City of Kent (Comment 44)

Listing IDs:

51560 - 2,3,7,8-TCDD

52038 - Dieldrin

52552 - Hexachlorobenzene

52670 - PCB

52733 - Total Chlordane

52794 – Toxaphene

17408 - Mercury

Proposed Category: 5 (except mercury, a proposed Category 1 listing)

Water Body: Meridian Lake

The Water Quality program thanks you for the comments provided by the City of Kent regarding potential 303(d) listings on Meridian Lake. We are providing a response to the questions you raised. The response incorporates information from the Department of Ecology's Environmental Assessment Program staff Keith Seiders and Dale Norton.

Six of the parameters mentioned by the City (2,3,7,8-TCDD, Dieldrin, Hexachlorobenzene, PCB, Total Chlordane, and Toxaphene) are candidates for EPA's 303(d) list. The data assessed for these potential listings was collected in 2006 as part of the Washington State Toxics Monitoring Program (publication no. 08-03-002). Samples collected during monitoring were composites of five to ten fish of the same species. The sample size used to identify potential listings meets requirements detailed in Ecology's Water Quality Program Policy 1-11 "Assessment of Water Quality for the Clean Water Act Sections 303(d) and 305(b) Integrated report".

(www.ecy.wa.gov/programs/wq/303d/wqp01-11-ch1_final2006.pdf).

The Department of Ecology is aware that the Washington's Department of Fish and Wildlife (WDFW) annually stocks Meridian Lake with hatchery-raised fish. Ecology researched fish and fish feed from WDFW hatcheries in 2005 to address questions about hatcheries as potential sources of contaminants: "Persistent Organic Pollutants in Feed and Rainbow Trout from Selected Trout Hatcheries" (<https://fortress.wa.gov/ecy/publications/SummaryPages/0603017.html>). The study focused on rainbow trout of catchable size that are used in stocking lakes. The study did not test the relation between contaminant burdens and stocked rainbow trout or kokanee fry so it is unknown how much these fish, as prey, contribute to contaminant burdens in larger fish. Fish ages were not determined during the 2006 study but Keith Seiders, lead author for the study, stated that kokanee sampled were around two years old. He based this estimate on a 2000 WDFW report that showed kokanee about 80 mm or larger (392-429 mm) to be 2-3 year olds ("2000 Lake Meridian Survey: The Warmwater Fish Community of an Oligotrophic Urban Lake," by Peter A. Verhey and Karl W. Mueller).

The purpose of the Water Quality Assessment is to highlight areas of pollution requiring further investigation, up to and including a Water Quality Improvement Report (also known as a total maximum daily load, or TMDL). The presence of pollutants in tissue or water column samples can lead to 303(d) listings in a waterbody based on the assessment of available monitoring data.

These remain on the 303(d) list until human-caused factors can be ruled out or a TMDL is in place. Ecology recognizes PCBs are a common environmental contaminant in urban and rural settings and is trying to gain a better understanding of this through the current study "PCB and Dioxin Levels in Resident Fish from Washington Background Lakes and Rivers"

(<https://fortress.wa.gov/ecy/publications/SummaryPages/0803102.html>). Meridian Lake is in an urbanized setting and some parameters included as potential 303(d) candidate listings, such as toxaphene, chlordane, hexachlorobenzene, and dieldrin, are indicative of local or historical sources.

In summary, the monitoring findings from Meridian Lake meet Water Quality Program Policy criterion set for 303(d) list candidacy. The Department of Ecology recognizes your request for a briefing on the proposed listings. If, after reviewing our response, you still feel that a meeting is appropriate, please contact Chad Brown at (360) 407-7026.