Peer Review Summary Template

(1/22/2026)

Peer Review Plan

Tissue distribution and temporal patterns of selenium and mercury concentrations in the Lake Koocanusa fish community [133 KB]

Title and Authorship of Information Product to be Disseminated

Selenium and mercury tissue partitioning and trophodynamics in the Lake Koocanusa (USA–Canada) fish community. By Noëlie Molbert, James L. Dunnigan, Travis S. Schmidt, Trevor M. Selch, Brian C. Balmer, Molly A. Moloney, Jessica E. Brandt

Peer Reviewers Expertise and Credentials

Reviewer 1 – over 20 years of experience with fish ecology in the Columbia River system and is an expert in fish health.

Reviewer 2 – expertise in trace element toxicology, fish ecology, trophic accumulation of trace elements, and statistics.

Reviewer 3 – familiarity with the specific ecosystem and served as a reviewer of the scientific names utilized in the manuscript.

Reviewers 4-7 – these four reviewers were anonymously selected by journal *Environmental Science & Technology* for their subject matter expertise.

Reviewers 8 and 9 – these two reviewers were anonymously selected by the journal *Environmental Pollution* for their subject matter expertise.

Charge Submitted to Peer Reviewers

Reviewers were asked to evaluate the scientific rigor and clarity of the study design, data analysis, and interpretation of selenium and mercury accumulation in fish tissues; assess novelty and significance of findings.

Summary of Peer Reviewers Comments

Internal USGS Peer Review: Manuscript was well-structured and scientifically sound. Suggested clarifications on sample sizes, figure legends, and consistency in species names and units. Recommended expanded discussion on selenium-mercury interactions and ecological implications.

External Journal Peer Review: *Environmental Science and Technology* reviewers questioned novelty; recommended resubmission to a different journal. *Environmental Pollution* reviewers praised the comprehensive dataset and multi-dimensional approach; requested deeper discussion of biochemical mechanisms and implications for risk assessment.

Summary of USGS Response to Peer Reviewers Comments

The manuscript was revised to clarify methods, sample sizes, and statistical approaches; figures and tables were updated for clarity; the discussion was expanded to address mechanistic context and limitations of selenium-mercury ratios; journal revisions included emphasizing the novelty of the integrated study design and scope of the study, context on mercury-selenium interactions were

provided, more improvements to figures and site details were provided, references revised, an explanation for why isotope data was not utilized in trophic analysis, a broader casting of ecological implications was provided, and some final language improvements were offered as revisions.

The Dissemination

The product will be published in the journal *Environmental Pollution* at (https://doi.org/10.1016/j.envpol.2025.127623*).*