**MSU PFAS 2024 Symposium: Newsted**

**Author:** John L. Newsted

**Affiliation:** Ramboll

16852 Cynthia Lane

Haslett, MI 48840

Phone: 517-614-3416

Email: [John.newsted@ramboll.com](mailto:John.newsted@ramboll.com)

**Title:** Assessing the potential impact of per- and polyfluoroalkyl substances (PFAS) to mink and otters: Approaches and considerations

**Abstract (Limit of 250 words):**

Perfluoroalkyl substances (PFAS) are synthetic substances that have been released into the environment during manufacturing processes, from commercial products, and applications. This has resulted in their presence being detected in avian and mammalian wildlife on a global scale. However, investigations into the toxicological significance of these exposures to wildlife are ongoing. To address this issue, a critical examination of toxicity data as well as bioaccumulation data from mammalian laboratory and field studies was conducted. The extent of this effort was limited to PFAS that have been identified and measured in mustelid species (mink, and otters), and that also have toxicity data with ecologically relevant endpoints that can be used to establish TRVs. While the principle focus of this effort has been on perfluorooctane sulfonate (PFOS) due to the availability of toxicity and bioaccumulation data in mink, insights gained from these efforts have been used to examine the potential effects of other PFAS including PFOA and PFNA. Normalization approaches that take into about the capacity of tissues to accumulate PFAS were also investigated to better evaluate underlying factors that can contribute to species related differences in toxicity and tissue accumulation. Based on this analysis, tentative toxicity benchmarks for PFOS and other PFAS for surface waters and fish tissues were derived and compared to environmental data in the Great Lakes basin. Finally, data gaps and uncertainties related to addressing potential risks of PFAS to mustelids will be discussed.