

Title: An Assessment of PFAS Exposure in Ecological Receptors at Clark's Marsh, Oscoda, Michigan.

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Abstract: Previous studies have demonstrated extensive per- and polyfluoroalkyl substances (PFAS) contamination of both ground and surface water at Clark's Marsh, a site located on the south side of the former Wurtsmith Air Force base in Oscoda, Michigan. The PFAS contamination originated from the extensive use of aqueous film-forming foams (AFFF) in training activities conducted at the site for 25 years. While the groundwater plume and concentrations of PFAS in fish and bird tissue have been well characterized, fewer studies have considered the accumulation of PFAS exposure in other ecological receptors inhabiting the site. Consequently, this presentation aims to provide a synthesis of several previous independent research efforts at Clark's Marsh, including measured PFAS concentrations in abiotic media (soil, surface water, and sediment) and a suite of ecological receptors including aquatic reptiles, birds, and invertebrates. We report preliminary results of PFAS concentrations in reptiles including the painted turtle (*Chrysemys picta*), snapping turtle (*Chelydra serpentina*), and the Northern watersnake (*Nerodia sipedon*). In addition, we determined PFAS concentrations in tree swallow nestlings (*Tachycineta bicolor*), a songbird that forages in aquatic-terrestrial habitats, and their prey (emergent aquatic insects). Our dataset provides valuable PFAS bioaccumulation data for use in risk assessments for multiple taxa and insight into critical linkages between the aquatic and terrestrial environment. Finally, these data also demonstrate the need for further studies to understand the potential impacts of PFAS exposure in these receptors, especially reptiles.