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Audubon Society of Rhode Island

Microcosm

Superfund Records Center
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The riverbanks are red with the color of maples and highbush blueberry, and the Tree Swallows have flown to the Gulf Coast where they can find insects from October to March. The Woonasquatucket River, flowing from Smithfield, Glocester and North Smithfield to Providence Place and into Narragansett Bay, provides habitat for wildlife even in its most urban setting. In July, an immature Black-crowned Night Heron gawked out of a willow near Valley Street in Olneyville. Hooded Mergansers check out the buffet the river offers in stretches in Providence, Johnston, and North Providence, as well as the more rural reaches.

The Tree Swallows nesting around Allendale Pond, an impoundment of the Woonasquatucket River that is contaminated by the illegal release of dioxins and other compounds more than 30 years ago, have been studied for the past two summers in an Ecological Risk Assessment performed by U. S. EPA under its management of the Superfund site nearby. Tree Swallows nesting at Allendale were compared to Tree Swallows nesting at Greystone Mill Pond, upstream of the contamination.

A recent preliminary report, issued by the EPA, "showed that the eggs, nestlings and diet of the Allendale Pond Tree Swallows had much greater concentrations of dioxin and PCBs compared to the eggs, nestlings and diet of Greystone Mill Pond Tree Swallows. In addition, less than 50% of the eggs laid in nest boxes on Allendale Pond hatched, as compared to 90% or more hatching on Greystone Mill Pond." The EPA adds, "There is no link however, between public health impacts and these ecological impacts from the site."

We concur as long as people do not eat fish or eels from the river. Human health would be linked through ingestion of dioxin-contaminated animals from the river, and warnings against consumption of fish, turtles and eels from the Woonasquatucket below the Smithfield sewage treatment outfall have been issued regularly since 1998 when elevated levels of several compounds were found in fish. Dioxin can also harm through skin contact. To prevent this route of contamination to humans, EPA has ordered excavations along the shoreline of Allendale and Lymanville Ponds in spots where concentrations of dioxin are greater than one part per billion. A careful plan of trucking the excavated material out of the neighborhood and to an incinerator in Canada has been planned.

Not much is left of Allendale Pond because, about 10 years ago, the dam creating the pond broke, releasing water and, presumably, contaminated bottom sediments. As part of the remediation of the Superfund site, the dam will be restored so that hot spots of dioxins remaining in the sediments will be covered by water and reduce exposure to humans. The inundation is being called a temporary solution, but the reality of money

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available for Superfund cleanups may make it the final action – unless there is enough concern from local citizens to pressure U. S. Congress for continuing funds to remove the contamination remaining on the bottom of the restored Allendale Pond.

Also in question is whether funds will be forthcoming for another year of testing of swallows. Will the inundation of Allendale Pond help these birds? Insects like damselflies, caddisflies, and midges lay eggs that develop into larva in aquatic habitats. These larvae grub underwater in the sediments, the very sediments that still will contain dioxins and PCBs. Many factors including size and metabolism of the insect prey will affect how, if at all, contaminants move through the food web and continue to affect Tree Swallows.

Other animals using the Woonasquatucket such as otters, eels, and wading birds, will use the pond as a resource differently than they use the trickle through the mudflats that now passes through the breached dam. How the inundated compounds may affect their reproductive success, if at all, has few precedents in scientific studies. We don't know the concentrations of dioxins or PCBs that may affect Mergansers, Great Blue Herons, Black-crowned Night Herons and other creatures possibly using the soon-to-reappear Allendale Pond. A decision to capture these larger creatures along the Woonasquatucket for study has not been made.

Such a decision would require weighing the impact of contamination to populations rather than to individual birds. It should consider the loss of habitat over the long range. It would require an assessment of the value of this wildlife to local residents and people of Rhode Island – a measurement usually taken by the public response from meetings and letters – to induce EPA to act further or require further action from the parties responsible for the spill and its consequences.

Arguments against further expenditures for a higher level of cleanup are couched in a concept of limited funding, in reality a value judgment on how to divide the pie rather than creating a larger pie. The impact on the populations of Tree Swallows of this spill underscores the case of those who advocate for environmental protection for more than humans. How does Audubon respond when we're asked to make a choice between cleanup to a higher level and some other slicing of the pie? What do we say when asked about increasing the reproductive success of one particular population of birds or fish?

Instead of throwing up our hands or shrugging shoulders, we continue to ask questions and continue to promote the idea that we humans are stewards for birds, mammals, reptiles, amphibians, fish, invertebrates and their habitats. We hope that you will join us. We hope that you will come to meetings and ask questions. We hope that you will write to representatives to ask for adequate budgets for the environment. We trust the notion that human life is not solitary among the worthy lives existent on this planet.

Eugenia Marks