

# Ecological Risk Assessment: Areas of Interest 1 through 9

## Plain Language Overview

### Key Points & Takeaways

- This report presents an evaluation of the likelihood of legacy refinery contamination causing negative impacts to vulnerable plant and animal species.
- Act 2 requires an Ecological Risk Assessment (ERA) to evaluate threatened species, endangered species, and species of special concern.
- The following species were identified as currently threatened, endangered, or of special concern, and potential impacts were assessed using multiple lines of evidence:
  - 3 fish species: Atlantic Sturgeon, Shortnose Sturgeon, Hickory Shad
  - 1 reptile species: Eastern Redbelly Turtle (also called the Northern Red-Bellied Cooter)
  - 3 bird species: Marsh Wren, Peregrine Falcon, Least Bittern
  - 5 plant species: Waterhemp Ragweed, Walter's Barnyard-grass, Multiflowered Mudplantain, Bugleweed, River Bulrush
- The evaluations showed that negative impacts to these species are not expected.

### Summary

The ERA includes both field surveys performed at the site and desktop evaluations that consider site information and published reference data.

#### Field Surveys

- An ecologist performed a botanical site survey to look for populations of the identified plant species. They did not identify any plant populations that the state currently considers a conservation priority.
- A sturgeon expert performed an evaluation for the Shortnose Sturgeon and the Atlantic Sturgeon. Both are endangered fish species that are known to live in the Delaware River. The scientific community did not previously know whether these fish were present in the Schuylkill River. Through tracking of tagged fish, it was found that a small number of Shortnose Sturgeon were present in the Schuylkill River during parts of the year, and that Atlantic Sturgeon enter the Schuylkill River rarely.
- A certified biologist performed site surveys for potential habitat and populations of Eastern Redbelly Turtle. Potential habitat was identified in some areas of the site. Turtles were found in some water bodies, including Mingo Basin. The populations do not show evidence of negative impacts.

#### Desktop Evaluations

- The ecological risk assessment looks at the ways in which each of the identified species might be exposed to contaminants. For example, a fish species could be exposed through ingesting or swimming in contaminated water. The report goes through each of the ways each animal species might be exposed. These are called potential exposure pathways.

- The assessment considered available surface water and sediment data.
- The June 30, 2022 Sitewide Fate and Transport Remedial Investigation Report (RIR) summarizes modeling of site contaminants and includes predicted surface water concentrations. Values are available for both the Schuylkill River and Mingo Basin. These predicted surface water concentrations of site contaminants were compared to state and federal ecological screening values. There were no exceedances.
- Evaluations of the potential exposure pathways for the animal species, also called ecological receptors, showed no unacceptable risks.

### **For more information**

- View the detailed report that was submitted to PADEP (report is attached and can also be downloaded from: [www.phillyrefinerycleanup.info/act-2-documents](http://www.phillyrefinerycleanup.info/act-2-documents))
- During the public comment period of June 30, 2022 through July 30, 2022, comments and questions regarding the report may be submitted to Evergreen which will be addressed and submitted to PADEP and EPA as part of their review of this report.
- Comments/questions can be submitted via the following methods:
  - Website comment page: [www.phillyrefinerycleanup.info/comment-submission-form](http://www.phillyrefinerycleanup.info/comment-submission-form)
  - Via email to: [phillyrefinerycleanup@ghd.com](mailto:phillyrefinerycleanup@ghd.com)
  - Via USPS to: PO Box 7275, Wilmington, DE 19803