

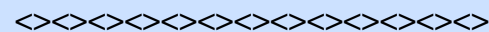
Glynn County Superfund Sites Environmental Cleanup Newsletter

The Terry Creek Remedial Investigation/Feasibility Study: What's Missing? March 2014

In this Issue

Terry Creek-Outfall Ditch

- *Site Background*
- *Toxaphene*
- *Remedial Investigation/
Feasibility Study*
- *What's Missing?*
- *Cleanup Options*



**This update and more information
about the Glynn County Superfund
Sites can be accessed at:**

www.glynnenvironmental.org



**For more information, contact the
Glynn Environmental Coalition**

Phone: 912-466-0934

Email:

gec@glynnenvironmental.org

Terry Creek-Outfall Ditch



Site Background

For over 30 years (1948-1980) the Hercules Brunswick pesticide production facility discharged their wastewater into Dupree Creek, and eventually Terry Creek, through an outfall ditch. The site has been placed on the Superfund or National Priorities List (NPL) because of the contaminated groundwater, soil, sediment, and fish. A fish consumption advisory remains in place for parts of Dupree Creek and Terry Creek due to concerns about chemicals such as toxaphene, as well as what toxaphene breaks down into in the environment over time.

Toxaphene

Toxaphene is a pesticide, historically used on southern cotton plants, which has been banned in the US since 1990. Although toxaphene does not break down easily, it can build up in the tissues of animals, which makes it a problem, even in small amounts. Exposure to toxaphene can cause liver and kidney damage, birth defects, and cancer. Toxaphene released into the environment can break down over time into chemicals that are just as toxic.

Remedial Investigation/Feasibility Study

A Remedial Investigation/Feasibility Study report was released for the Terry Creek Outfall Ditch, also known as Operable Unit 1. This type of report in-

An **operable unit** is an area of a Superfund site that has its own characteristics and therefore, requires its own cleanup plan.

cludes information on the chemicals found at the site and different ways in which the site might be cleaned up. A Remedial Investigation/Feasibility Study should also include information on the possible effects the site-related chemicals may have on human health and the environment. However, the Remedial Investigation/Feasibility Study for the Terry Creek Outfall Ditch is missing several important pieces of information that are needed before further action can be taken.

What's Missing?

Human Health

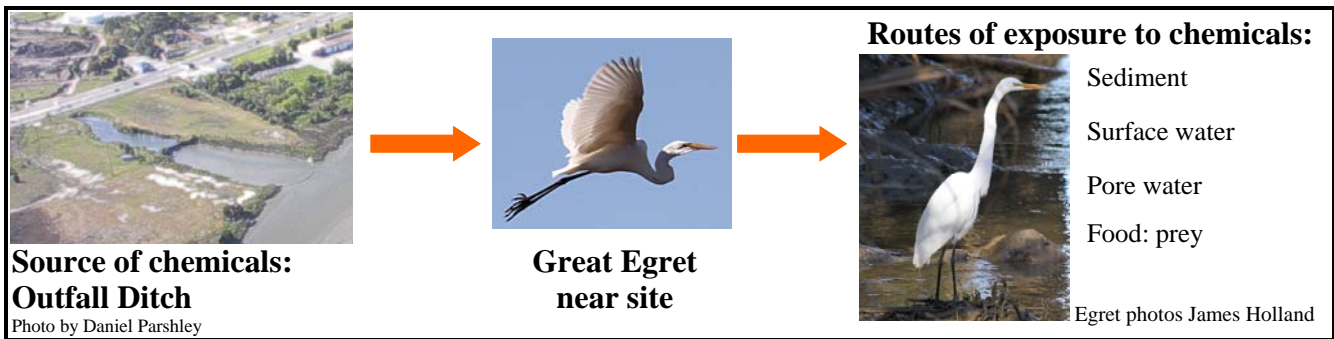
The Outfall Ditch is close to a trailer park, other neighborhoods, Goodyear Elementary School, and commercial areas (see map below). Because this area is heavily residential, the report should include a Human Health Risk Assessment, which would determine the risk to humans near the site and how to minimize those risks. The risk assessment should include an analysis of fish tissue because eating fish is a major route for human exposure.

Ecological Health

The report does contain an Ecological Risk Assessment, but it does not look at all the ways in which plants and animals are exposed to chemicals from this site. For example, the report doesn't include the food that animals eat, which is a significant way in which they gain a lot of exposure to chemicals. The report should cover all the exposure possibilities.



Animal Photos by James Holland



The report also does not choose specific wildlife found at the site to demonstrate how different groups of animals are affected by contaminants from the Outfall Ditch. For example, a Great Egret near the site could be used to represent the exposure of animals to site chemicals (see above), but the report just uses general categories of wildlife.

Conceptual Site Models

There is no Conceptual Site Model for human exposure in the report, and the Conceptual Site Model for animals and plants is incomplete and doesn't match

A **Conceptual Site Model** shows where specific contaminants are located and how humans, animals, and plants may be exposed.

what's found in the text of the report. This model is an essential part of a Remedial Investigation and makes sure that nothing is overlooked in order to protect the health of humans and wildlife.

Groundwater

The report notes that groundwater does move up through the sediment and into the Outfall Ditch, which means that surface water and groundwater are mixing. However, the report ignores that this same groundwater is now a potential source of chemicals coming from other areas of the marsh.

Testing for Toxaphene

The report does not use the best lab method to figure out how much toxaphene is present at the site. Because a less accurate test is being used, there may be more toxaphene at the site than is being shown. Also, the less accurate method does not test for the contaminants that toxaphene breaks down into over time, which can also have significant health impacts.

Clean up Options

Monitored Natural Recovery

Fortunately, Monitored Natural Recovery is not being considered as a stand-alone cleanup option as many studies show monitored natural recovery is not

Monitored Natural Recovery relies only on natural sedimentation over time to eventually cover contaminated sediments left in place.

sufficient to clean up toxaphene. Unfortunately, many of the cleanup options consider only minor sediment removal, and nothing at all about studies that show marsh grass (scientific name: *spartina alterniflora*) can take up toxaphene out of the sediment into their leaves, stems, and roots when growing or even planted in the contaminated sediments.

Capping

Capping of sediments is also relied upon heavily in the cleanup options but it requires monitoring far into the future to make sure there are no contaminants leaking out from the cap. The report does not indicate how far into the future they will pay to keep monitoring the caps.

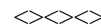
Preferred Cleanup Option

The report's preferred cleanup option includes re-routing the outfall ditch and building a concrete-lined channel, and only limited removal of contaminated sediment. This cleanup option only attempts to keep humans and wildlife from coming in contact with the contaminated sediments, not permanently remove contaminated sediments from the site. Without removal, the site could become re-contaminated in the future.

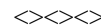
Return Service Requested



For More Information: These comments on the Remedial Investigation and Feasibility Study report are summaries of the full technical comments submitted to the EPA for consideration. Copies of the detailed documents are posted on the Glynn Environmental Coalition (GEC) website (<http://www.glynnenvironmental.org/>) under “Activities & Causes” and then “Superfund Sites” links. Copies of this report and prior newsletters can also be accessed at the GEC website.



This report was produced by Environmental Stewardship Concepts, LLC (ESC, LLC) for and in cooperation with the Glynn Environmental Coalition. As a Technical Advisor, ESC, LLC provides independent analysis of the reports and data related to the Superfund Sites referenced to help support a well-informed community.



This project has been funded wholly or partly by the U.S. Environmental Protection Agency under Assistance Agreement Numbers 198448298, 198453298, 199485001 to The Glynn Environmental Coalition, Inc. The contents of this document do not necessarily reflect the views and policies of the U.S. Environmental Protection agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.