Glynn Environmental Coalition

The report is produced by an independent technical advisor to interpret and help the community understand technical information about our Superfund Sites.

Technical Assistance Report: EPA Releases the Record of Decision and Response to Comments for LCP Marsh Site

LCP Chemical site marsh Photo by James Holland

What is a Record of Decision?

This Technical Assistance Report covers the Record of Decision and the Response to Comments for the LCP Chemical marsh and estuary. In early October, EPA released the Record of Decision for the LCP Chemical site marsh and estuary. This 1200 page document also includes a section called "Response to Comments" that gives both the public comments and the EPA response to those comments. EPA responses are in the form of 1) replies to comments that were similar or identical, 2) responses to comments at the public meeting held December 4, 2014, and 3) responses to comments submitted in writing or email by the public and others.

The Record of Decision is the official remedy that EPA has selected from among the alternatives in the Feasibility Study. This remedy must not have any methods that are not in the Feasibility Study and gives a general description of what methods will be used to deal with contamination. Details of how the methods will be carried out are not provided in the Decision, but are worked out in detail at a later time in a different document.

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In This Issue

This update and more information about Glynn County Superfund Sites at:

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This report was produced by **Environmental Stewardship Concepts, LLC** (ESC, LLC) for and in cooperation with the **Glynn Environmental Coalition**.

Site Background

LCP Estuary Historical Highlights

- **August 1980: Site identification**
- **July 2011: Human Health Baseline Risk**
- **Assessment for the Estuary**
- **June 2014: Estuary Feasibility Study**
- **November 2014: Estuary Proposed Plan**
- **October 2015: Record of Decision / Responsiveness Summary**

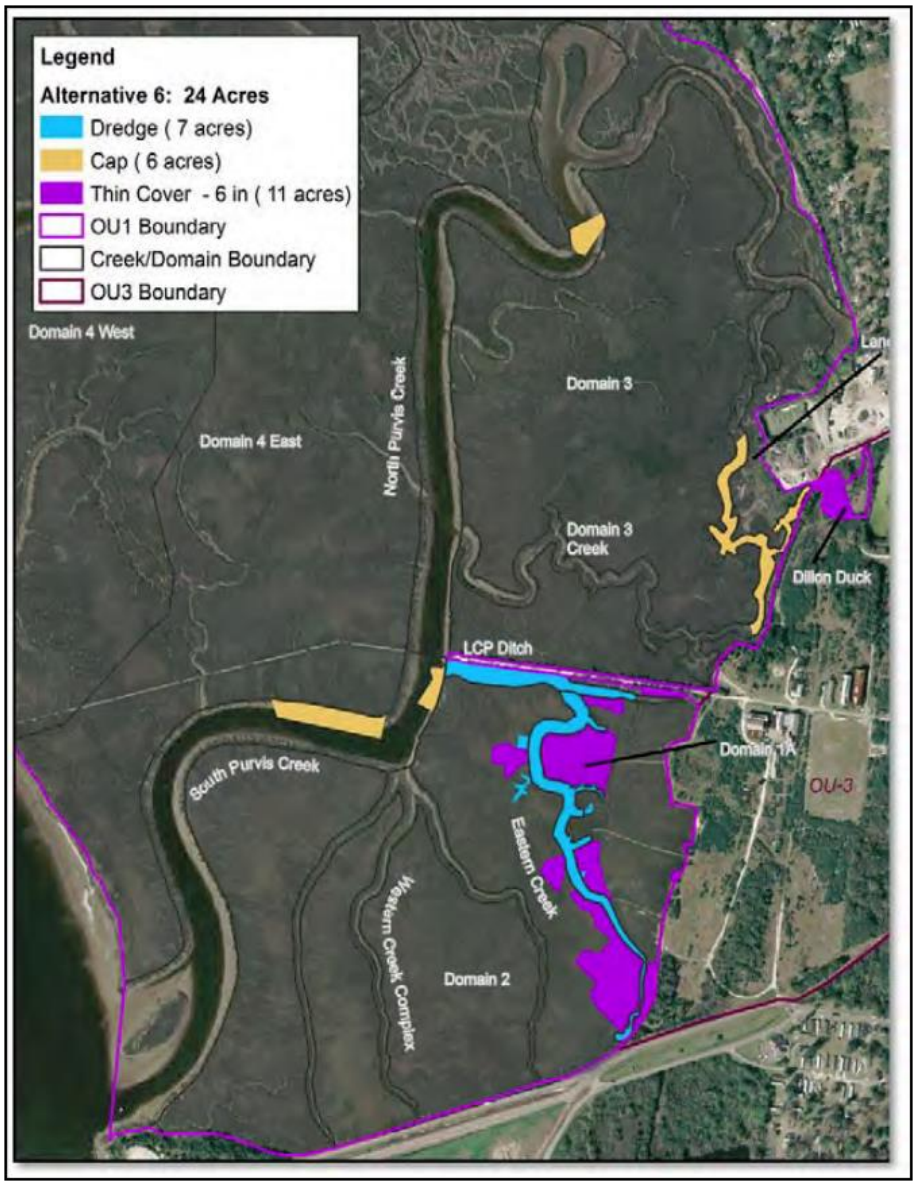
The LCP Chemicals Superfund site consists of approximately 550 acres, the majority of which is a tidal marsh. Various industries (i.e. oil refinery, electrical power, paint/varnish, and a chlor-alkali chemical plant) used this site from the 1920s through 1994. These industries contaminated the site with polychlorinated biphenyls (PCBs), mercury, lead, dioxins, and cancer-causing hydrocarbons. All of these pollutants are still present as runoff and are impacting the soil, groundwater, tidal marsh sediment, marsh plants and animals, including dolphins and Least Terns. The site cleanup is being managed in three parts: the estuary, the groundwater, and the upland soils and sediments.

Record of Decision

EPA states that the Record of Decision is not changed from the Proposed Plan.

The chosen remedy to clean up the LCP Chemicals marsh, Alternative 6, includes sediment removal, capping, and enhanced monitored natural recovery, which is also known as thin-layer placement. The chosen remedy only addresses 24 acres, and does not include any treatment of the contaminated sediment. The chosen remedy will likely not meet the surface water quality standards for mercury and Polychlorinated biphenyls (PCBs) and will keep Georgia from being able to remove fish consumption advisories from St. Simons Sound. The selected remedy will also leave behind elevated levels of mercury and Aroclor 1268 that exceed a set of cleanup levels that protect crabs and other animals living at the surface and within the marsh sediment.

The use of thin layer capping will not be sufficient for a tidally influenced marsh. Contaminants will remain on site at levels that will not allow unrestricted use. A review of the site every five years will have to be conducted to determine if the cleanup remedy is working, but this will likely show that contaminants still remain.



Alternative 6 map from the Proposed Plan

Sediment Disposal

The Record of Decision indicates that the sediment dredged from the marsh area will be taken to a licensed disposal facility. No other details are provided. The EPA statement is the usual way that the disposal is addressed in a Record of Decision. EPA does not plan to use alternative treatment methods on the contaminated sediment.

Responsiveness Summary

Removal and Capping

Many members of the public recommended that the EPA remove more contamination to make cleanup more permanent and certain. The public also raised many problems with the thin layer cap. The EPA admitted that removal is more permanent and certain and that no other site like the LCP site has used a thin layer cap. However, they said that the plan would remove and cover enough contamination, and that the cap should work. Environmental Stewardship Concepts notes that the EPA has no experience with such a remedy at a place like the LCP marsh.

Contaminated Marsh Areas

The EPA responded to the public's request to remove more of the contaminated marsh by stating that the damage caused by more removal would be too harmful. However, one marsh removal has been successfully completed at LCP, and modern equipment and methods will greatly reduce the damage.

Site Boundaries

The public said that site boundaries need to be extended because PCBs are found outside the LCP site. The EPA's reply downplayed the PCBs located outside of the LCP site, including Sapelo Island. EPA made two errors in their reply. The first error was the way EPA looked at the PCB data; the data are not what the public submitted or what was reported for dolphins or Sapelo Island. PCBs from the site are widespread outside the Brunswick area. The PCB data on dolphins supports the data from Sapelo Island. All of the current data indicate that the LCP site is the principle, and possibly sole, source of Aroclor 1268 in this area. The EPA even indicated in the responsiveness summary that the LCP site is the principle source of Aroclor 1268 in southern Georgia.

Salt dock located on-site **Photo by Daniel Parshley**

The second error is that the EPA claimed that they are unable to do anything about contaminants that spread far away from a site, which is false. The Asarco smelter in Tacoma, Washington contaminated over 1000 square miles of the state for many decades, and the EPA took remedial actions for that site in Washington.

Health Concerns

The public raised many health concerns. The EPA replied that the agency responsible for addressing and investigating health concerns is the Centers for Disease Control. The Response to Comments indicated that EPA would hand over these concerns to the Center for Disease Control, but no one knows if that happened. EPA is responsible for estimating current and future health problems caused by the marsh contaminants and is supposed to plan the actions to control or eliminate those health threats, which is why this report and so many comments raise issues with fish consumption and fish contamination. There is no disagreement that fish contaminated with chemicals from the LCP marsh present a health threat but the EPA greatly underestimated the risks because they used the wrong fish consumption rates and ignored dioxin.

Next Steps

Consent Decree

The general Superfund process is explained on page 7 of this Report. Now that EPA has issued the Record of Decision, EPA lawyers will sit down with the lawyers for the three companies that are responsible for the site, and work out a legal agreement on what will happen next. This agreement is called a **Consent Decree** that must be approved by a judge and filed with the court as a legal document. The Consent Decree must be completed before any of the work in the Record of Decision can begin. But EPA and the companies may spend months discussing the exact wording in the Consent Decree and there is no way for the public to know about any of those discussions until the process is over.

Remedial Design/Work Plan

Once the Consent Decree is approved and filed, then the consultants for Honeywell will plan out what work needs to be done, in quite a bit of detail, and EPA must approve the plans. The two major steps involved are the Remedial Design, explaining what work needs to be done and when, and the Work Plan, describing how the work will be done and what company will do the work. EPA must approve these documents before the company can proceed to the next phase of the project. The planning and preparation of these documents often takes many months for a site as large as the LCP Chemical site marsh. The different activities of sediment removal, thin layer capping, and stone capping will require careful engineering and planning. A part of the plan should include scheduling the work to not interfere with fish, birds or mammals using the marsh or estuary for spawning or nesting.

Construction Phase

Most sites need to have additional samples collected right before the work begins, and this site should have samples collected to have something to compare to the samples taken in the future. Comparing the two sets of samples will help determine if changes are taking place at the site. The work on the site is called the "construction phase" by EPA and at this point, EPA and the state need to be careful that everything is done properly and meets the standards. Starting as soon as the work begins, EPA must review the progress every five years towards meeting the goals of the clean up at the site.

Five Year Reviews

The EPA review of progress will continue during the work and for many, many years afterward for as long as chemicals remain at the marsh site. EPA has to compare the progress toward meeting the goals and objectives that are explained in the Feasibility Study. This includes decrease in chemical concentrations in fish tissue, sediment, and water. They also check that the thin layer cap is still in place.

Monitoring

EPA should not only require monitoring of the work at the site, but also the monitoring of water and air around the LCP marsh during the construction to be sure that humans and the environment are not harmed during the work at the site. At many river sites similar to the LCP site marsh, water and air samples are collected to measure chemicals in the sediment and the water.

Porpoise in the Sapelo River **Photo by James Holland**


LCP Chemicals outfall area

Photo by James Holland

Enhanced Monitored Natural Recovery

The Record of Decision uses the term **Enhanced Monitored Natural Recovery** to explain how EPA will address contamination across much of the marsh. Natural Recovery is simply letting nature take its course and cover up the contamination, wash the chemicals away, or, for some chemicals, let them break down without any action. Enhanced Monitored Natural Recovery means taking some steps to speed up the processes and taking samples to monitor the progress of covering up or washing away the chemical contamination. The enhancement is adding a thin layer of sediment. Neither polychlorinated biphenyls (PCBs), mercury, or lead will break down, so EPA is counting on burial to deal with much of the contamination.

Natural Resources Damage Assessment

A separate action takes place to assess the harm to the environment through a **Natural Resource Damage Assessment**. This effort by federal and state agencies estimates the harm to natural resources, and the cost of that harm, including any recovery. The assessment process must begin within three years of the signing of the Consent Decree.

Comments to EPA

Environmental Stewardship Concepts has covered many of these topics in previous Technical Assistance Reports, as well as comments submitted to EPA on the marsh site cleanup.

Fish Consumption Rates

The public commented to EPA that fish consumption rates used by the EPA were too low and not recent. EPA used fish consumption information that came from a report in 1999 on surveys conducted in earlier years of white anglers who were boating. The EPA information did not include people fishing from the shore or African American fishermen. The same criticism was made by the Centers for Disease Control in a Health Assessment on the LCP Chemical site. Several comments suggested a much higher fish consumption rate, based on a survey from Savannah Georgia. The EPA responded that the fish consumption rates they used were reasonable and based on local information.

Cleanup Standards and Fishing Advisories

The fish consumption rates are important in setting clean up standards and goals that protect people from chemicals in the marsh. Scientists and health officials know that chemicals like PCBs and mercury are toxic and they can estimate how much of each chemical can make a person ill. These chemicals accumulate in fish and the more contaminated fish a person eats, the more chemical they take in. The more contaminated the fish, the smaller the amount of fish that can be eaten and still be considered "safe". In order to protect people's health, the Georgia Department of Health already has fish consumption advisories in place, based on current contamination. But if EPA underestimates how much fish people eat, then EPA will allow more contamination and will remove less contamination from the LCP marsh.

The problem with fish consumption advisories appears in another place in the EPA plan. EPA plans to let the fish consumption advisories that cover much of St. Simons Sound in addition to Turtle River remain in place and assume that these advisories work to keep people from consuming contaminated fish out of local waters. But EPA mistakenly assumes that the fish consumption is in the Turtle River Brunswick area when it is really all of St. Simons Sound estuary. And EPA did not respond to the comments that fish consumption advisories and other "**Institutional Controls**" do not work to prevent people from being exposed to chemical contamination from Superfund sites. A federal report found that Institutional Controls like fish consumption advisories do not work.

Costs of fish consumption advisories

The Record of Decision does not include any cost estimates for maintaining the fish consumption advisories as Institutional Controls in the future, but the advisories will be a required part of the plan for the marsh. In the experience of Environmental Stewardship Concepts, no Record of Decision has required payment by the company doing the clean up to fund the state's programs to include enforcement of the advisories, which includes fish tissue testing, surveys, and staff time.

Yellow-crowned Night Heron (left); Great Blue Heron (right)

Photos by James Holland

Superfund Process: Where are we now at the LCP Site Marsh?

The **Remedial Investigation** involves testing the site to determine the health risk to humans, plants, and animals from the harmful chemicals at the site.

The **Feasibility Study** looks at each of the cleanup options to figure out the best cleanup for the site to protect human health and the environment from current or future exposure to the site chemicals.

The **Proposed Plan** evaluates the different options for cleanup and gives a recommendaton for the best option.

The **Record of Decision** officially states how a site will be cleaned up and the long-term monitoring that will be put in place.

LCP Site Is Here

The **Consent Decree** is a legal document that describes the work to be done, the schedule for the work and who is responsible for that work as well as the role of the EPA and responsible party.

The **Remedial Design/Work Plan** describes how the plan described in the Record of Decision will be carried out.

Construction is the actual work that will be done to address the contamination.

Long Term Monitoring checks on the progress of the cleanup in the future.

Superfund is the federal law to clean up contaminated places, the process is displayed at left.

The **Remedial Investigation** for the marsh involves testing the site to determine the health risk to humans, plants, and animals from the harmful chemicals at the site. If the health risks are above what is allowed, the site must be cleaned up.

A **Feasibility Study** for the marsh looks at each of the cleanup options to figure out the best cleanup for the site to protect human health and the environment from current or future exposure to the site chemicals. Because the cleanup can be accomplished in different ways, the cleanup options must be compared to each other. These steps were finished for the LCP site in 2014.

In December 2014, EPA selected a cleanup plan, known as the **Proposed Plan** for the LCP Chemical site marsh**.** Members of the Brunswick community commented on this plan before mid March 2015. EPA wrote the **Record of Decision** after the comment period closed. The **Record of Decision** officially states how a site will be cleaned up and the long-term monitoring that will be put in place. The **Record of Decision** includes a **Responsiveness Summary**, which is the EPA's response to the public's comments on the **Proposed Plan.**

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Roseate Spoonbill in Flight

Photo by James Holland