

**Floodplain Statement of Findings  
for the  
Effects of Proposed Herbicide Application at Environmental  
Sampling Locations  
on the Savannah River Site**

**Prepared for  
  
U.S. Department of Energy  
Savannah River Operations Office  
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**1.0 Project Description**

The Department of Energy (DOE) prepared the *Floodplain and Wetland Assessment of the Effects of Proposed Herbicide Application at Environmental Sampling Locations on the Savannah River Site* (SRNS-J2000-2019-00157, Revision 0, December 2019) to evaluate potential impacts to floodplains and wetlands from the application of herbicide treatments at certain environmental sampling locations on the Savannah River Site (SRS) to effectively control vegetation growth.

Herbicide application to effectively control vegetation growth is proposed at selected environmental sampling locations in wetlands and floodplains (Figure 1). Herbicide will be applied using backpack sprayers or handheld containers to conduct spot treatments of vegetation growing along access paths, around sampling equipment, at stream access points, and at certain in-stream locations. Herbicides will be selected from a list pre-approved for use on SRS and appropriate for use in wetland and stream habitats.

A surfactant may be mixed with the herbicide to increase its effectiveness. Polyethoxylated tallow amine, a commonly used surfactant, is not used on SRS because of its recognized high toxicity to amphibian larvae. Further mention of herbicide in this assessment references the herbicide-surfactant mixture.

Selection and application of herbicides to be used for this proposed action will be compliant with the U.S. Environmental Protection Agency (EPA) and South Carolina Department of Health and Environmental Control (SCDHEC) Pesticide National Pollutant Discharge and Elimination System (NPDES) Group Permit for wetland and over water applications and herbicide label directions. Under the proposed action, DOE-SR has compliance responsibilities as the “Owner-Operator,” as defined in Appendix A of NPDES Permit No. SCG160000.

Herbicide application will occur annually on an as-needed basis during the growing season, typically April through October, but could begin earlier or extend later in the year. The necessity of repeat

applications will be determined based on visual inspections of the environmental sampling locations by appropriate personnel in accordance with owner-operator internal procedures or other guidelines.

## **2.0 Floodplain Location Explanation**

DOE-SR routinely samples environmental media for contaminant analyses. Water and sediment sampling, as well as stream flow measurements, require floodplain locations.

## **3.0 Alternatives Evaluated**

Vegetation control at environmental sampling locations is required for worker safety and proper deployment and operation of sampling equipment. The preferred alternative for vegetation management in wetlands and floodplains is herbicide application using backpack sprayers or handheld containers to spot treat vegetation growing along access paths, around sampling equipment, at stream access points, and at certain in-stream locations. Herbicides used will be selected from a list pre-approved for use at SRS and appropriate for use in wetland and stream habitats. The no-action alternative is to not control the vegetation at environmental sampling locations. The third alternative is to continue the previous and more costly management regime of mechanical vegetation control (e.g., mowing, hand tools).

The preferred alternative has an insignificant effect on floodplains and wetlands because the magnitude of impact is less than 0.6 acre, floodplain services, as well as wetland soils and hydrology, are unaffected, and there is no loss of wetland acreage. The no-action alternative of not controlling vegetation at environmental sampling locations creates worker safety hazards and prevents proper deployment and operation of sampling equipment; it is considered infeasible. The third alternative, mechanical vegetation control with mechanized equipment or hand tools, is a more expensive than the preferred alternative with inherent worker safety hazards associated with the equipment. Mechanized equipment also could negatively affect wetland soils and hydrology with equipment rutting in wetlands. None of the alternatives affect floodplain functions.

## **4.0 Statement on Conformance to Applicable Floodplain Protection Standards**

The project does not change flood storage volume or base flood elevations; therefore, the project is considered to conform to applicable floodplain protection standards.

## **5.0 Description of Minimization of Potential Floodplain Harm**

The floodplains associated with the project are owned by DOE-SR, are uninhabited by people, and are undeveloped; therefore, the project, which does not change base flood elevations or flood storage volume, is not anticipated to cause floodplain harm.

