

APPLICATIONS



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Habitat Priority Planner → Restoring Rivers and Streams

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Introduction

Conditions in Mobile Bay watersheds impact the health of rivers and streams in Mobile and Baldwin Counties, Alabama. Watersheds that contain a moderate amount of impervious surfaces are thought to have a negative impact on rivers and streams, but these watersheds have the potential to be restored to a healthier state. To identify high-priority areas for river and stream restoration, this effort examined impervious surfaces and impaired streams within watersheds.

This document illustrates a spatial approach to identify high-priority areas appropriate for river and stream restoration in Mobile Bay, Alabama. The table and information below show the steps needed to conduct spatial analysis using the Habitat Priority Planner to reach the stated objectives. Developing a clearly defined goal and objectives will help spatial analysis run more smoothly and ensure that the appropriate data sets are identified.

Goal

Identify priority areas for river and stream restoration in Mobile Bay, Alabama, using watersheds as an analysis proxy.

Objectives

- Identify 12-digit hydrologic unit code (HUC) Watersheds in Mobile and Baldwin Counties as a proxy for river and stream restoration.
- Identify 12-digit HUC Watersheds with 10-25% Impervious Surface that would be appropriate for river and stream restoration.
- Identify 12-digit HUC Watersheds with Impaired Streams that would be appropriate for river and stream restoration.

Spatial Analysis Steps Using the Habitat Priority Planner

1. Use the Habitat Classification module to run a Unique Classification on the base dataset, Watersheds. From the original dataset, select only 12-digit HUCs within the study area.
2. Use the Habitat Priority Planner's Habitat Analysis module to select a series of analyses that will help identify key areas that fit the criteria:
 - Polygon Overlay
 - Calculate the amount of Impervious Surface in each 12-digit HUC Watershed.
 - Presence/Absence

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- Identify 12-digit HUC Watersheds that contain Impaired Streams.
3. Use the Data Explorer module to narrow down from all available watersheds to those that meet the specific criteria:
- Select only those watersheds that contain 10-25% impervious surface.
 - Select the watersheds that contain impaired streams.

Describe Objectives	Data	Analysis (HPP Modules 1 & 2)	Selection Criteria (HPP Module 3)
Identify 12-digit HUC Watersheds in Mobile and Baldwin Counties	Watersheds	Unique Classification	
Identify 12-digit HUC Watersheds with 10-25% Impervious Surface	Impervious Surface	Polygon Overlay	10-25%
Identify Watersheds that contain Impaired Streams (303(d) listed)	303(d) Listed Streams	Presence/Absence	Present (true)

Results

Of the original 107 watersheds, the final output from the Habitat Priority Planner shows 10 12-digit HUC watersheds that contain 10-25% impervious surface and impaired streams. These areas have been determined to be ideal for river and stream restoration.

