

## Habitat Priority Planner → Restoring Rivers and Streams

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### Introduction

Efforts to harvest energy from offshore wind and wave resources are increasing. While wind and waves are excellent sustainable sources of energy, it is important to consider an array of ocean uses when identifying the best locations for building energy infrastructure.

This document illustrates an example spatial approach to identify priority areas appropriate for river and stream restoration in Mobile Bay, Alabama. The information and table below show the process steps needed to conduct spatial analysis using the Habitat Priority Planner for the objectives described. Developing a clearly defined goal and objectives helps *spatial analysis* run more smoothly and ensures that the appropriate *datasets* 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
    - Identify 12-digit HUC Watersheds that contain Impaired Streams.

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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.

