Introduction
San Elijo Lagoon Conservancy protects and restores the resources of San Elijo Lagoon Ecological Reserve, the Carlsbad Hydrologic Unit, and its related ecosystems for the benefit of current and future generations.

Problem
Invasive plants are adaptable, aggressive competitors, and have high reproductive capacity. This combined with their lack of natural enemies, can often result in outbreaks of large infestations.

The Conservancy used GIS to map over 12,000 invasive species infestations in the Carlsbad Hydrologic Unit. The Conservancy has limited resources and wants to maximize its benefits to native habitats for the least cost. Therefore they needed to prioritize these invasive species in a simple and repeatable process.

Results
The purpose of the Habitat Risk weighed overlay is to identify areas where invasive species pose the greatest risk to harming sensitive native habitats. The Disturbance and Spread weighted overlay was calculated to identify which invasive species have the potential to propagate due to surrounding disturbances and transportation mechanisms. The Location Accessibility weighted overlay was calculated to determine which locations are most accessible and have the lowest cost to perform invasive species mitigation on those areas. This weighted overlay analysis is repeated for each entry in the weights table. The final output dataset contains all invasive species infestations prioritized from 1 to 5 based on their risk to habitats, possibility of spread, and cost of treatment.

Solution: Prioritization Tool
The tool performs three sub-weighted overlays. The resulting map is joined with the Conservancy’s invasive species infestation data. Each species has different weights based on their propagation methods and effects on the habitat. The tool references a weights table that can be easily updated by the user.