Index-based Multispecies Conservation Value (IMCV) Model for Prioritizing Invasive Weed Eradication

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Mapped Arundo donax in the Sacramento-San Joaquin Legal Delta Mapped Arundo don Infestation Legal Delta

The IMCV metric is a measure of habitat value and can suggest a priority for eradicating invasive species threats to that habitat. It is derived from habitat suitability rankings for a suite of selected species. These rankings are weighted by threatened or endangered listing status to give greater weight to listed species. For this project, the weighting is derived by merging federal and state listings.

Species were chosen to represent the range of biota and habitat important for protection. Delta specific as well as threatened and endangered species were selected with the help of biologists at CDFW, CDWR, Delta Conservancy and Sonoma Ecology Center. 23 species from 7 taxa were considered for the IMCV.

> The IMCV metric is then calculated by the following formula:

iMCV,

1. Root, K., H. R. Akcakaya, L. Ginzburg. (2003). A Multispecies Approach to

Where n is the number of species, Sij is the habitat suitability for species i at location j, and Ei is the Endangerment Index value for species i. These values are then





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normalized so they range from 0 to 1, with 0 representing Not Suitable and 1 representing High Suitability.

Focal Statistics Prioritization Layer

This Focal Statistics Prioritization layer was developed to ensure that for eradication. It is derived from the Indexed Multispecies **Conservation Value metric** (IMCV) through a focal statistics method that sets the habitat value for each location to the highest habitat value within a 30 meter radius.





any pest plant within threat distance of high value habitat is prioritized



