

Ranking and Categorizing Invasive Species of Concern

A subjective listing of invasive organisms of potential concern to Reclamation's mission

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Invasive and nuisance species pose a potential threat to Reclamation in numerous ways, including operation, maintenance, and environmental threats. The ability to effectively anticipate, manage, and control these species is of immediate concern to Reclamation facility managers, fisheries, and environmentalists. This project will provide a first look at organisms that are of concern in the western United States and to Reclamation specifically.

Mission Issue

This research directly benefits the mission responsibility to manage water delivery and hydropower in an environmentally sound manner by assisting in the reduction of cost and damage that invasive and nuisance species cause.

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"The Bureau of Reclamation spends millions of dollars annually addressing issues caused by aquatic and terrestrial invasive and nuisance species. The ability to look ahead and prepare for organisms that may cause problems in the future is critical."

Diane Mench
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Collaborators

Diane Mench
Biologist
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More Information

<https://www.usbr.gov/research/projects/detail.cfm?id=7135>

Problem

Numerous invasive and nuisance species exist in the United States that have not yet traveled into the 17 western states where Reclamation facilities exist. A great deal of time and money is spent managing weeds and pests and maintaining native fishes and infrastructures. It's essential to have knowledge about what other organisms could become problematic to Reclamation.

Solution

Regional Integrated Pest Management Coordinators were queried about what organisms they're aware of being an issue. Internet research was conducted to see what other agencies in the US have determined to be priority invasive species of concern, as well as looking for what other agencies in other parts of the US and the world have come up against regarding problematic invasive species for similar types of facilities. A list was compiled, and a presentation provided at the joint Mussels Task Force and Integrated Pest Management meeting held in February 2019.

Application and Results

Research was largely conducted via email and online. There are multiple organisms that Reclamation staff should be aware of, but no actual ranking was done. There's no way to know if a specific organism will establish in a Reclamation facility, nor is there a way to know if it would genuinely become problematic.

Future Plans

The analyses and conclusions of this study are limited by the relatively small number of paleoflood sites and geochronological ages in the Upper Colorado River Basin. Most of Reclamation's data on tributaries to the Upper Colorado River are in the form of non-exceedance bounds, which only provide upper limits to flood magnitude.

More locations of paleoflood estimates would further refine the paleoflood history of the Upper Colorado River Basin and our understanding of flood-climate linkages. It is critical to continue the work on the Colorado River downstream of Lees Ferry, Arizona. This specific reach is important because it includes all the drainage area for the major dams and water supply from the Upper Colorado River Basin.