Aquatic Invasive Species in New Mexico

As a state in the arid Southwest, New Mexico’s aquatic resources are extremely valuable, providing habitat for wildlife, as well as generating income through recreation, agriculture and industry. Aquatic invasive species (AIS), also referred to as nonindigenous aquatic species (NAS), are becoming an increasing problem for surface waters of New Mexico and throughout the United States. Once introduced into their new environment, which is often free of natural predators, competitors or pathogens, populations of these AIS can increase rapidly and expand their ranges. This can lead to displacement of native species, degradation of ecosystems, reductions in recreational and commercial fishing opportunities, public health problems and clogging of agricultural, municipal and industrial water systems.

Nonnative species in the United States cause ecological, economic, and human health problems and have been reported to cost the nation $137 million annually (Pimental et al. 2000, Lodge et al. 2006). While the negative effects of AIS in New Mexico are not as profound as in some areas of the country such as Florida or the Great Lakes region, where species such as the water hyacinth and the zebra mussel cost hundreds of millions of dollars per year to combat, over 100 AIS have been recorded in New Mexico and more are expected to invade. These include Myxobolus cerebralis, the parasite which causes Whirling disease in stocked rainbow trout and native cutthroats, golden alga (Prymnesium parvum), responsible for extensive fish kills in the lower Pecos River since 1988, parrotfeather (Myriophyllum aquaticum) and Eurasian watermilfoil (M. spicatum), which infest many drainages in New Mexico, threaten the state’s extensive network of irrigation systems and reduce fish habitat, the exotic Asian clam (Corbicula fluminea), a serious biofouling pest now found in many surface waters throughout the state, and a number of nonnative fish and crayfish species that have had detrimental effects on native biota and ecosystems. A complete list of priority AIS for New Mexico can be found in the New Mexico Aquatic Invasive Management Plan (2008) at http://www.wildlife.state.nm.us/documents/NMAISMgmt%20Plan_Final_Oct_08.pdf.

Some AIS, such as Whirling Disease, are present in the state, but their impacts can still be controlled through appropriate management strategies. These strategies include controlling population size, and preventing dispersal of the species to other waterbodies. Other invaders, such as golden algae, Parrotfeather and Eurasian watermilfoil, are considered impossible to eradicate once they have become established, and no feasible management techniques currently exist.
Many of the AIS that have become established in New Mexico and elsewhere are the result of bait bucket introductions and sport fisheries management practices, commerce (horticultural practices), and release of aquarium pets and plants. While more stringent regulations now exist to prevent further unauthorized introductions, the threat of accidental introductions continues to grow. Furthermore, many AIS which are currently not found in New Mexico occur in neighboring states. Therefore the potential for further invasions from shared drainages is high.

The biggest obstacle to managing AIS is the general lack of awareness of the degree to which these invaders can impact aquatic systems or of the role that humans play in transporting and introducing them. Many AIS have been introduced by uninformed people through dumping of an aquarium or bait bucket, launching a contaminated boat, or stocking of exotic species that have escaped. These introductions can be eliminated or restricted by educating the public of their potential to transfer AIS to New Mexico. Not only is it important to prevent the spread of AIS within New Mexico, but also throughout drainages shared with adjacent states.

The best way to avoid problems associated with AIS is to never let them establish in the first place. Prevention is much less expensive and easier than remediation once an invading species has become established. The following are simple steps that can be taken to help prevent the spread of AIS within New Mexico and elsewhere:

- Before leaving a lake or other water body drain all water from the bilge, live wells and any other water-holding device of your watercraft.
- Remove any visible mud, plant, fish, or animals before transporting equipment.
- Rinse out the boat, bilge, live wells, trailer and equipment with fresh water and, if possible, allow all the equipment to dry for 2 to 3 days before using it at another water body. Clothing and pets that came in contact with water should also be cleaned and dried.
- Never move water, live animals or plants from one water body to another, as you may transplant undesirable AIS.

Literature cited


UPCOMING EVENTS:

** A.I. (Artificial Insemination) School – March 16 - 18 in Clovis

** Spring Break for all students – March 22 - 26

** Spring Holiday – April 2

** State FFA contest – April 6 – 8

From our staff to yours, have a Happy Easter!