

WETLAND CONSERVATION



LOSS OF WETLANDS

Wetlands historically comprised vast amounts of land area in the United States. According to the U.S. Environmental Protection Agency (EPA), there were over 200 million acres of wetlands in the continental United States prior to the American Revolution. By the end of the 20th century, there was less than half that. There was a time in the not-too-distant past that we were losing over 50 thousand acres of wetlands each year.

HOW DO YOU "LOSE" WETLANDS?

Natural wetlands are typically lost due to human activities. They may be drained for agricultural or industrial purposes. They may be lost when dams block their water source. Wetland losses also occur from dredging, filling, diking, logging, mining, and construction. We also lose wetlands to habitat degradation. Although wetlands have a natural ability to clean water, they can only take so much pollution. Excessive runoff, air and water pollution, and toxic chemicals can all harm a wetland to the point that it loses its ability to function as a healthy ecosystem. Wetland habitats can also be degraded by overgrazing of domestic animals and by the invasion of non-native plant and animal species.

Compared to the rest of the country, very little of Arizona's landscape today has wetlands. However, historical records indicate that Arizona once had approximately 30% more wetlands than today. Fortunately, because of our growing awareness of the value of wetlands, we have reduced wetland losses both in Arizona and across the country. Despite laws protecting wetlands, however, they are still threatened. Understanding wetlands will help aid their conservation.

ACTIVITY: SPY THE INVADERS



Directions: Review the natural history information about the invasive species at Sweetwater Wetlands. In the diagram below, find the invaders. Circle each invasive species and note where it is in the scene. On your visit to Sweetwater Wetlands, see if you can find this scene and spy the invaders in real life!

In Tucson and the surrounding Sonoran Desert, several invasive species have taken hold. Some of these plants and animals can be seen at Sweetwater Wetlands. The managers of the wetlands work hard to keep these species from taking over and negatively affecting the native species. Several invasive species that occur at Sweetwater Wetlands are described below.



BULLFROG (*Rana catesbeiana*) – Although they occur throughout the United States, bullfrogs are not native to Arizona. They were introduced as a game animal and are now abundant statewide. Bullfrogs are so ravenous and produce so many young, that they can wipe out entire populations of native small animals. Since showing up at Sweetwater Wetlands, bullfrogs have reduced the populations of other amphibians.



TAMARISK (*Tamarix ramosissima*) – Tamarisk trees originally came from Asia. Tamarisks are known to invade riparian areas where they take up space and water and otherwise “out-compete” native riparian species such as willow and cottonwood. Tamarisk trees often sprout up on the islands at Sweetwater Wetlands. Although some have grown to tree size, most new sprouts are immediately removed.



BUFFELGRASS (*Pennisetum ciliare*) – Originally from Africa, buffelgrass is now widespread in the Sonoran Desert. Originally introduced as a pasture grass for cattle to graze, it has now taken over many stretches of desert, changing the habitat into a grassland. Buffelgrass can be found in neighborhoods throughout most of Tucson. When found at Sweetwater Wetlands, it is removed immediately.



YELLOW STARHISTLE (*Centaurea solstitialis*) – The starthistle, a small herb native to Europe and Asia, has become a successful weed in many areas of the United States. It out-competes other plants for space and water and will degrade a habitat if left to spread. It produces small, yellow, thistle-like flowers in the late spring. At Sweetwater Wetlands, yellow starthistle plants are removed as soon as they are detected.

