Invasive zebra mussels inhabit the Highland Lakes and Lady Bird Lake. Property owners may encounter zebra mussels on their docks, and residents who use water directly from lakes Buchanan, Inks, LBJ, Marble Falls, Travis, Austin or Lady Bird will likely encounter the invasive species in their water systems.

Zebra mussels can colonize

Zebra mussels can colonize on hard surfaces underwater.

How do I know if zebra mussels have infiltrated my private water system?

Issues with water pressure or flow rate are indicators that zebra mussels may have colonized inside pipes of the water system. Have your water system inspected at least annually to determine the level of colonization and whether maintenance is needed.

How can I maintain my private water system that withdraws water from one of the Highland Lakes or Lady Bird Lake?

This <u>technical paper</u> discusses a variety of methods to control zebra mussels in the offshore and onshore components of your residential water system. Examples include in-line filtration, desiccation, snaking and sand filters. The company that installed your water system also may be able to provide technical guidance on system maintenance.

Do copper intake screens prevent zebra mussel colonization water systems?

Screens made of copper, zinc or related alloys can help prevent zebra mussel colonization on the screens to a certain extent. Over time, the screens can become fouled or covered by various biofilms and other substances, and a greenish oxidized layer may appear. This fouling can reduce the screen's effectivity. Therefore, some degree of routine maintenance is still required.

These specialty screens may prevent zebra mussels from covering them, but the intake pipes connected to the screens do not necessarily benefit. The microscopic zebra mussel larvae known as veligers may still be able to pass through the intake screen (depending on screen pore size) and colonize inside the intake pipes. See the technical paper linked above for more info on screening and filtration.

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Is there a specific depth at which my water intake will be protected?

No. There is no standard depth underwater at which zebra mussels will not colonize. A zebra mussel's preference and tolerance of habitat is largely dependent upon environmental factors such as water temperature, dissolved oxygen concentration and food availability. These factors change with lake depth and vary seasonally in most reservoirs.

Generally speaking, the closer an intake is to the surface, the more suitable the habitat will be for colonization by zebra mussels. As lake levels lower, the distance between a fixed depth intake pipe and the water's surface decreases, increasing the likelihood that the intake pipe is located in suitable zebra mussel habitat.

How can I clean my dock once zebra mussels have attached to it?

Manual removal such as scraping zebra mussels off docks and related structures is a simple approach to managing colonization. This can be performed by property owners or any of the businesses in the Highland Lakes area that offer dock and watercraft cleaning services. Additionally, removing swim ladders from the water when not in use is a good way to keep lake access points mussel free with minimal maintenance.

It is important to note that annual or even biannual removal of zebra mussels on structures may be necessary. Zebra mussels generally have two significant spawning periods per year in Texas (late spring/early summer and fall). Therefore, areas where zebra mussels have been removed may be recolonized after a single spawning season. Removing zebra mussels after a spawning season will yield mussel-free areas for longer than if mussels were removed just weeks before a spawning season.

What do I do with all the mussels that were removed from my dock, watercraft or water system?

Review the <u>Texas Parks & Wildlife Department's Best Management Practices for Controlled Exotic Species Disposal</u> if you intend to remove zebra mussels from a waterbody and dispose of them elsewhere.

Am I able to use chemicals to treat zebra mussels in open water around my dock or shoreline?

LCRA does not recommend using chemicals to treat zebra mussels in open water. Application of chemical products should follow all applicable <u>Texas Commission on Environmental Quality (TCEQ) pesticide discharge regulations</u>, Texas Department



of Agriculture (TDA) pesticide regulations and the pesticide label requirements, which state whether the product has been approved for open water use. Visit the National Pesticide Information Retrieval System to determine if a particular pesticide is registered in Texas. Applicators will likely need to curtain off the target area, which can be difficult, to maintain chemical concentrations high enough to achieve zebra mussel mortality. Many chemical products approved for treating zebra mussels are general molluscicides, which can also negatively impact native mussels that inhabit our waterways. Use of any pesticide in any way that is not consistent with label directions and precautions is illegal.

Please note the sharp shells of zebra mussels will still be present after chemical application unless the shells are manually removed. Localized chemical treatments in open water may not be an effective use of time and money if removing shells is the priority. Recolonization of areas treated with pesticides will likely reoccur during the next zebra mussel spawning season.

Has LCRA approved any chemical for treatment of zebra mussels? LCRA does not have regulatory authority to approve pesticides or related products for use. That authority rests with the <u>US Environmental Protection Agency</u> and the Texas Department of Agriculture.

Will a lake drawdown help control zebra mussels?

A drawdown would kill some zebra mussels as well as native mussels in a reservoir, but the impact is dependent upon the duration of the drawdown as well as how far the water level is being lowered. The effectivity of a drawdown is very short lived because zebra mussels generally have two significant spawning periods a year in Texas and may reproduce and recolonize areas within the same year of a drawdown.

LCRA does conduct drawdowns of lakes Inks, LBJ, Marble Falls and Austin for infrastructure maintenance from time to time. The drawdowns typically are announced in November and occur in January-February of the following year.

I have heard about a product called a Dock Disk. Does it work?

LCRA does not endorse specific products and is not aware of any independent scientific studies on the product's effectiveness.



Can I introduce zebra mussels into my swimming pool by swimming in the lake and then my pool?

Unlikely. Most pools are chlorinated, which would prevent growth of zebra mussels as well as most other organisms. However, it is still important to <u>clean, drain, and dry</u> all equipment such as floats and toys used in a lake prior to taking them elsewhere.

