ZEBRA MUSSELS FACT SHEET

What are zebra mussels?
Zebra mussels (Dreissena polymorpha) are small, freshwater bi-valve mollusks (relatives to clams and oysters) that are triangular in shape with an obvious ridge between the side and bottom. The zebra mussel gets its name from the black (or dark brown) and white striped markings that appear on its shell.

Where did zebra mussels come from?
Zebra mussels are native to the Caspian, Black and Azov seas of Eastern Europe. This exotic species was first discovered in the U.S. in Lake Saint Clair, Michigan in 1988 and is believed to have been introduced in 1986 through ballast water discharge from ocean-going ships. Since their initial discovery, zebra mussels have spread rapidly throughout the Great Lakes and Mississippi River Basin states and other watersheds throughout the eastern and central U.S.

Where on Lake Mead have zebra mussels been found?
Zebra mussel were found at Las Vegas Boat Harbor and Lake Mead Marina on 1/8/07. These areas are in the Boulder Basin of Lake Mead, from two to five miles upstream of the Hoover Dam.

How did zebra mussels get to Lake Mead?
The zebra mussels in Lake Mead are 1,000 miles farther west than any other known colony of zebra mussels. The primary method of overland dispersal by zebra mussels is through human-related activities. Given their ability to attach to hard surfaces and survive out of water, many infestations have occurred by adults hitching rides on watercraft. The microscopic larvae also can be transported in bilges, ballast water, live wells, or any other equipment that holds water.

What do they eat?
They are primarily algae feeders. They feed by filtering up to a liter of water per day through a siphon.

Why should we be concerned about Zebra Mussels?
Zebra mussels are filter feeders that consume large portions of the microscopic plants and animals that form the base of the food web. The removal of significant amounts of phytoplankton from the water can cause a shift in native species and a disruption of the ecological balance of the lake.

Zebra mussels often settle in massive colonies that can block water intake and effect municipal water supply and agricultural irrigation and power plant operation. In the U.S., Congressional researchers estimated that zebra mussels cost the power industry $3.1 billion in the 1993-1999 period, with their impact on industries, businesses, and communities over $5 billion.

Only a few zebra mussels were found in Lake Mead, how can that become a problem?
Zebra mussels can live for three to five years and can release thirty to forty thousand fertilized eggs in a breeding cycle and one million fertilized eggs in a year.

Do zebra mussels have any predators?
Zebra mussels do not have many natural predators in North America. But, it has been documented that several species of fish and diving ducks have been known to eat them.

How do we get rid of them?
Once zebra mussels have been established in a water body, there is no known method of eradication. Preventing spread remains our best course of action. Since zebra mussels have planktonic (free drifting)

larvae, preventing spread to water bodies downstream from known infestations may not be possible. However, westward, overland spread is assumed to be largely due to trailered boat traffic. Thus, farther westward spread of zebra mussels is highly preventable.

What can I do to help?
It is up to each of us to take extra precautions to stop the spread of zebra mussels or any other invasive species. The following actions should be taken with any equipment used in potentially infested waters: All equipment (e.g., dive gear, boats, trailers, motors, etc.) should be visually and tactically (by feel) inspected for the presence of zebra mussels prior to and after use in any water body. Additionally, any vegetation attached to this equipment must be removed and left at the site of origin.

- Remove all sediment and gritty organic materials; these could actually be zebra mussel veligers (juveniles).

- Clean and scrub boat hulls, motors, anchors and trailers, then hose equipment with hot (140° F) and/or high-pressure water. Bilges, live wells, and any other compartments that could hold water should be drained at the site of origin, and, if possible, flushed with disinfectant or hot water. All boat equipment should be allowed to remain completely dry for at least 24 hours before being used again.

- Thoroughly clean all equipment in a saltwater bath (1/2 cup per gallon) or with warm tap water (104 degrees Fahrenheit). Ensure that all equipment remains completely dry for at least 24 hours before being used again. Pay special attention to those areas and equipment that can hold water. Take similar precautions with waders, bait buckets, and other equipment that can hold water or comes into contact with water.

Now that zebra mussels have been discovered, what happens next?

Federal and state agencies with interest in water and wildlife resources along the lower Colorado River basin (NV, AZ and CA) have initiated contact for coordination of public information related to this issue. These agencies will be meeting over the next few weeks to determine action plans related to public information and management actions related to boating that can help prevent further infestation along the Colorado River or to other water bodies. The National Park Service and other agencies will be inventorying other areas of Lake Mead and Lake Mohave to determine whether there are additional infested areas beyond the Las Vegas Boat Harbor and Lake Mead Marina. Agency biologists will be assessing the feasibility of treatment of currently infested areas to suppress reproduction. The best tool to prevent further spread is the proper cleaning of boats and trailers, and the agencies will be coordinating public information and policies to assist the public in the best prevention measures.