


<b>ARIZONA DEPARTMENT OF AGRICULTURE</b> <b>DIRECTOR'S ADMINISTRATIVE ORDER</b>  <b>PLANT SERVICES DIVISION</b>  <b>Zebra Mussel</b> <i>Dreissena polymorpha</i>	<b>DIVISION/</b>	<b>PSD</b>
	<b>PROGRAM</b>	
	<b>DAO 21-01</b>	
	 <b>SIGNATURE</b>	
<b>March 16, 2021</b>		
<b>DATE</b>		

**1. PURPOSE**

This order adopts and provides for the enforcement of the restrictions on the interstate and intrastate movement of the aquatic nursery stock *Aegagropila linnaei* that have been found to be infested with the invasive zebra mussel (*Dreissena polymorpha*), an organism not known to occur in Arizona.

A type of green algae (*Aegagropila linnaei*), commonly referred to as Marimo balls, Cladophora ball, moss ball or lake ball, was recently discovered to be infested with the zebra mussel by the Arizona Game and Fish Department and the Arizona Department of Agriculture in Arizona pet stores. Marimo balls are common in the aquatic plant and aquarium trade. They are imported from at least 18 countries through 17 suppliers in 7 states under permit from the U.S. Department of Agriculture. Detections of zebra mussel infested Marimo balls have been confirmed in at least 26 states.

Zebra mussel, an aquatic mollusk originally detected in the Great Lakes region of the United States in 1988 are regarded as one of the most destructive invasive species in North America. Once they become established in lakes, reservoirs or waterways, they attach to hard surfaces quickly causing blockages and reducing food and oxygen levels utilized by native fauna. It is estimated to cause at least \$1 billion per year in damages and associated control costs throughout the infested regions of the United States.

If allowed to establish, this pest could have devastating effects on Arizona's lakes, reservoirs and waterways, including our extensive agricultural irrigation and public works canal systems.

**2. AUTHORITY**

- A.R.S. § 3-201 Definitions
- A.R.S. § 3-201.01. Associate director; powers and duties
- A.R.S. § 3-202. Infested or infected plants as public nuisances
- A.R.S. § 3-210 Destruction of infected shipments
- A.R.S. § 3-211 Imported nursery stock; labeling; certificate of inspection
- A.R.S. § 3-212 Infested plants; sale or transportation prohibited; disposition of infested or wormy apples and pears
- A.A.C. § 3-4-201 Definitions
- A.A.C. § 3-4-201 Domestic Importation

### 3. ORDER

- A. Area under quarantine: All states, districts, and territories of the United States.
- B. Commodities covered: The aquatic nursery stock *Aegagropila linnaei*, and any other aquatic nursery stock found to be infested with *Dreissena polymorpha* (zebra mussel).
- C. Restrictions: *Aegagropila linnaei* shall be prohibited unless otherwise exempted in subsection (D).
- D. Exemptions: *Aegagropila linnaei* may be imported into Arizona if accompanied by a quarantine compliance certificate stating that the commodity was “inspected and found free of zebra mussel (*Dreissena polymorpha*)” issued within seven (7) days of shipment.
- E. Disposition: *Aegagropila linnaei* or any other aquatic nursery stock found to be in violation of this order shall be destroyed, treated, or transported out-of-state (A.R.S. § 3-210)

### 4. EFFECTIVE DATE

This order is effective immediately.

### 5. RECOMMENDATIONS

If you are currently in possession of Marimo balls you are strongly urged to destroy them utilizing the guidelines provided by the U.S. Fish and Wildlife Services:

<https://www.fws.gov/fisheries/ANS/zebra-mussel-disposal.html>

#### **DESTROY, DISPOSE, DRAIN**

Do not dispose of the moss balls in drains, waterways, or gardens. Moss balls must be destroyed and disposed of in a sealed container in the trash.

#### **DESTROY** in one of three ways:

- Freeze - Place the moss ball into a sealable plastic bag and freeze for at least 24 hours.
- Boil - Place the moss ball in boiling water for at least 1 full minute.
- Bleach / Vinegar - Submerge the moss ball in chlorine bleach or undiluted white vinegar for 20 minutes.

**DISPOSE** of the moss ball and any of its packaging in a sealed plastic bag in the trash. If vinegar, boiling water, or bleach was used, the liquid can be disposed down a household drain —never down a storm drain where it could enter and damage local waterways.

**DRAIN** and clean the aquarium.

Collect any fish or other living organisms and place them in another container, with water from a separate, uncontaminated water source. Remove contaminated water from the tank and sterilize by adding 1 cup of salt for each gallon of water. Let the water sit for 10 minutes and then dispose the sterilized water down a household drain.

Clean the aquarium and accessories using ONE of the following methods, ensuring that the decontaminate method you choose is in accordance with manufacturers' recommendations:

1. Hot Water Method:
  - Use water that is 120 degrees F to flush and coat the tank and all accessory surfaces for at least two minutes.
2. Salt Water Method:
  - Make a saline solution using ½ cup of salt per gallon of water and soak aquarium substrate, rocks, décor, and filter media in salt water solution for at least 24 hours.
  - Dispose of the treated water in a household drain and rinse all items prior to setting up the aquarium.
3. Bleach Disinfection Method:
  - Make a disinfection solution using 1 cup of bleach per gallon of water.
  - Soak the aquarium, substrate, rocks, décor, and filter media in the bleach water solution for 10 minutes.
  - Rinse off all items prior to setting up the aquarium.
  - Dispose of the previously used filter media and replace with new media.
  - Use a dechlorinating product to neutralize any residual chlorine prior to reintroducing aquatic life.