

**NOTICE OF PUBLIC INFORMATION  
ARIZONA GAME AND FISH DEPARTMENT**

**DIRECTOR'S ORDER 1 – R05/16 – AQUATIC INVASIVE SPECIES  
LISTING OF AQUATIC INVASIVE SPECIES FOR ARIZONA  
EFFECTIVE - MAY 1, 2016**

Effective May 1, 2016, the Arizona Game and Fish Department, under the authority of A.R.S. 17-255.01(B), establishes this updated list of aquatic invasive species for the State of Arizona:

<b><u>Aquatic Invasive Species</u></b>	<b><u>Notes</u></b>
<b>quagga mussel</b> ( <i>Dreissena bugensis</i> )	<b>Detected and present in Arizona</b> – confirmed in 2007: Lake Havasu, Lake Mead, Lake Mohave, Lake Pleasant
<b>zebra mussel</b> ( <i>Dreissena polymorpha</i> )	Not yet detected in Arizona, but poses an imminent threat. Zebra mussels are nearly indistinguishable in appearance from the quagga mussel.
<b>rusty crayfish</b> ( <i>Orconectus rusticus</i> )	Not yet detected in Arizona, but constitutes an imminent threat. No positive identification noted among current Arizona crayfish populations.
<b>red claw crayfish</b> ( <i>Cherax quadricarinatus</i> )	Not yet detected in Arizona, but constitutes an imminent threat. No positive identification noted among current Arizona crayfish populations.
<b>New Zealand mudsnail</b> ( <i>Potamopyrgus antipodarum</i> )	<b>Detected in Arizona</b> – confirmed in 2002: lower Colorado River (Lees Ferry, Lake Mead)
<b>didymo, a.k.a. rock snot</b> ( <i>Didymosphenia geminata</i> )	<b>Detected in Arizona (blooms)</b> – confirmed in July 2009: below Davis Dam, Lake Havasu on the lower Colorado River
<b>giant salvinia</b> ( <i>Salvinia molesta</i> )	<b>Detected in Arizona</b> – confirmed in August 1999: on the Arizona/California border at Imperial National Wildlife Refuge near Blythe, CA
<b>Asian carp</b> <b>silver</b> ( <i>Hypophthalmichthys molitrix</i> ) <b>bighead</b> ( <i>Aristichthys nobilis</i> ) <b>black</b> ( <i>Mylopharyngodon piceus</i> )	Not yet detected in Arizona, but poses an imminent threat from illegal stocking. Another species of Asian carp, triploid grass carp/white amur ( <i>Ctenopharyngodon idella</i> ), is present and regulated through permits in Arizona.
<b>apple snail</b> (Genus: <i>Pomacea</i> )	<b>Detected in Arizona</b> – confirmed in August 2011: lower Verde River to confluence with the lower Salt River down to Granite Reef Dam

NOTICE OF PUBLIC INFORMATION  
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**DIRECTOR'S ORDER 2 – R05/16 – AQUATIC INVASIVE SPECIES  
DESIGNATION OF WATERS OR LOCATIONS WHERE LISTED  
AQUATIC INVASIVE SPECIES ARE PRESENT  
EFFECTIVE - MAY 1, 2016**

Effective May 1, 2016, the Arizona Game and Fish Department, under the authority of A.R.S. § 17-255.01(B), establishes this updated list of waters or locations where listed aquatic invasive species are suspected or known to be present. The listing of aquatic invasive species in Arizona is established under the Arizona Game and Fish Department – Director's Order 1 – R05/16, 22, A.A.R. *Register Editor insert page number, <month day>*, 2016.

<b>Waters in Arizona where quagga mussel (<i>Dreissena bugensis</i>) are documented and present:</b>
<ul style="list-style-type: none"><li>- <b>Lower Colorado River</b> from Pierce Ferry Rapid (RM277 on Lake Mead) through the southerly international boundary with Mexico including:<ul style="list-style-type: none"><li><b>Lake Mead</b> (Mohave County);</li><li><b>Lake Mohave</b> (Mohave County); <b>Topock Marsh</b> (Mohave County);</li><li><b>Lake Havasu</b> (Mohave County);</li><li><b>Martinez Lake</b> (Yuma County); <b>Imperial Reservoir</b> (Yuma County);</li><li><b>Mittry Lake</b> (Yuma County)</li></ul></li><li>- <b>Lake Pleasant</b> (Maricopa County)</li><li>- <b>Lake Powell</b> (Coconino County)</li><li>- <b>Lees Ferry</b> (Coconino County) - from directly below Glen Canyon Dam downstream to Grand Canyon NP boundary.</li><li>- <b>Apache Lake</b> (Maricopa County)</li><li>- <b>Canyon Lake</b> (Maricopa County)</li><li>- <b>Saguaro Lake and lower Salt River</b> directly below Saguaro Lake to Granite Reef Dam (Maricopa County)</li></ul>
<b>Water delivery systems in Arizona where quagga mussel (<i>Dreissena bugensis</i>) are documented and present:</b>
<ul style="list-style-type: none"><li>- <b>Central Arizona Project (CAP)</b> aqueduct from Lake Havasu (Mark Wilmer Pumping plant to CAP canal mile 200 in Apache Junction, AZ) and all endpoint waters (e.g. Red Mountain Park Lake, Mesa)</li><li>- <b>Salt River Project (SRP) Canal System</b> commencing at the CAP Interconnect below Granite Reef Dam (Maricopa County)</li></ul>
<b>Water delivery systems in Arizona where quagga mussel (<i>Dreissena bugensis</i>) are suspected:</b>
<ul style="list-style-type: none"><li>- <b>Central Arizona Project (CAP)</b> aqueduct from CAP canal mile 200 in Apache Junction to terminus at canal mile 337 south of Tucson, AZ</li></ul>

**U.S. States or Provinces of the Dominion of Canada where quagga mussel (*Dreissena bugensis*) or zebra mussel (*Dreissena polymorpha*) are documented and present:**

- Alabama, Arkansas, California, Colorado, Connecticut, Iowa, Illinois, Indiana, Kentucky, Louisiana, Massachusetts, Maryland, Michigan, Minnesota, Missouri, Mississippi, Nebraska, Nevada, New York, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Virginia, Vermont, Wisconsin, West Virginia; and the Provinces of Ontario and Quebec

**Waters in Arizona where New Zealand mudsnail (*Potamopyrgus antipodarum*) are documented:**

- **Lower Colorado River** below the Glen Canyon Dam to Lees Ferry and at Lake Mohave Willow Beach area

**Waters in Arizona where didymo, a.k.a. rock snot (*Didymosphenia geminata*) are documented (bloom):**

- **Lower Colorado River** immediately downstream of Davis Dam (Lake Havasu)

**Waters in Arizona where giant salvinia (*Salvinia molesta*) are documented:**

- **Lower Colorado River** from Blythe, California (I-10 Bridge over Colorado River) through the southerly international boundary with Mexico (Morales Dam)

**Waters in Arizona where apple snail (*Pomacea*) are documented:**

- **Lower Colorado River** near Yuma (Yuma County); lower Verde River to the confluence with the lower Salt River Granite Reef Dam Area (Maricopa County)
- **Red Mountain Park Lake** Mesa (Maricopa County)
- **Lower portions of Indian Bend Wash** Scottsdale (Maricopa County)

**Waters in Arizona where whirling disease (*Myxobolus cerebralis*) are documented:**

- **Lower Colorado River** below Glen Canyon Dam Lees Ferry area near Page, AZ

**Waters in Arizona where largemouth bass virus (LMBV – Family: *Iridoviridae* ) are documented:**

- **Salt/Verde River:** Roosevelt Lake; Saguaro Lake; Bartlett Lake Tonto National Forest, AZ
- **Lake Pleasant** – Lake Pleasant Regional Park, Peoria, AZ (Maricopa County)

The name and address of agency personnel with whom persons may communicate regarding this Order:

Name: Tom McMahon, Aquatic Invasive Species Program Coordinator

Address: Arizona Game and Fish Department, WMAQ  
5000 W. Carefree Highway, Phoenix, AZ 85086-5000

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Fax: (623) 236-7265

Email: [tmcmahon@azgfd.gov](mailto:tmcmahon@azgfd.gov)

	Area, Maricopa County; also detected in the lower Colorado River at Yuma
<b>All snakehead spp</b> (Family: <i>Channidae</i> ) (Genus: <i>Channa</i> ; <i>Parachanna</i> )	Not yet detected in Arizona, but poses an imminent threat from illegal stocking.
<b>whirling disease</b> ( <i>Myxobolus cerebralis</i> )	<b>Detected in Arizona</b> – confirmed positive in 2007, re-confirmed in 2011 and 2012; Lees Ferry area of the lower Colorado River (Glen Canyon NRA)
<b>largemouth bass virus (LMBV)</b> (Family: <i>Iridoviridae</i> ) (Genus: <i>Iridovirus</i> ; <i>Chloriridovirus</i> ; <i>Ranavirus</i> ; <i>Lymphocystivirus</i> )	<b>Detected in Arizona</b> – confirmed positive in 2010 at Saguaro Lake; in 2011 at Bartlett Lake and Roosevelt Lake and; in 2012 at Lake Pleasant.

The name and address of agency personnel with whom persons may communicate regarding this Order:

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**NOTICE OF PUBLIC INFORMATION  
ARIZONA GAME AND FISH DEPARTMENT**

**DIRECTOR'S ORDER 3 – R05/16 – AQUATIC INVASIVE SPECIES  
MANDATORY CONDITIONS ON THE MOVEMENT OF WATERCRAFT, VEHICLES,  
CONVEYANCES, OR OTHER EQUIPMENT FROM LISTED WATERS  
WHERE AQUATIC INVASIVE SPECIES ARE PRESENT  
EFFECTIVE – MAY 1, 2016**

Effective May 1, 2016, the Arizona Game and Fish Department, under the authority of A.R.S. § 17-255.01(B), establishes these updated mandatory conditions for movement of watercraft, vehicles, conveyances, or other equipment necessary to abate, eradicate, or prevent the spread of listed aquatic invasive species (AIS) within or from those waters or locations listed in Arizona Game and Fish Department - Director's Order 2 – R05/16, 22, A.A.R. Register Editor insert page number, <month day>, 2016.

<b>Mandatory Conditions and Protocols for Movement from AIS Listed Waters/Locations</b>	
<b>Day Use Boater</b>	<p><b>The following protocols shall be taken for watercraft, vehicles, conveyances, or other equipment (e.g., fishing gear, anchor, etc.) that have been in or on an AIS listed water/location for <u>5 days or less</u>:</b></p> <p><b><u>Upon removing a watercraft from any listed waters in Arizona and prior to transport:</u></b></p> <p><b>Remove any clinging material</b> such as plants, algae, animals, and mud from anchor, boat, motor, trailer, and all other equipment.</p> <p><b>Remove all drainage plug(s)</b> (when so equipped) <b>and drain the water</b> from the bilge, live-well and any other compartments that may hold water.</p> <p><b>Drain water</b> from engine, engine compartments, and engine cooling systems.</p> <p><b>Dry completely</b> - Allow watercraft, vehicles, conveyances, or other equipment to dry completely.</p> <p><b>Recommended precautionary protocol:</b> If using watercraft again in less than five days at any other Arizona waters, pour vinegar into all bilges and other water retention areas that cannot be completely drained and dried to kill any residual small, young AIS (e.g., quagga veligers).</p>
<b>Long Term Use Boater</b>	<p><b>The following protocols shall be taken for any watercraft, vehicles, conveyances, or other equipment that have been in or on an AIS listed water for <u>more than 5 days</u> and <u>prior to transport from that AIS listed water (unless otherwise authorized by the State)</u>:</b></p> <p><b>Remove any clinging material</b> such as plants, algae, animals, and mud from anchor, boat, motor, trailer, and all other equipment.</p> <p><b>Remove all drainage plug(s)</b> (when so equipped) <b>and drain the water</b> from the bilge, live-well, and any other compartments that may hold water.</p> <p><b>Drain water</b> from engine, engine compartments, and engine cooling systems.</p> <p><b>Remove all attached invasive species (e.g., adult quagga mussels, New Zealand mudsnails)</b> from</p>

boat surfaces, motors, impellers, outdrives, rudders, anchor(s), and through hull fittings.

**Dry completely**, keep the watercraft, vehicles, conveyances, or other equipment out of water and completely dry, including bilge, through hull fittings and engine for a minimum of:

- **Eighteen (18) consecutive days during the months of November through April**, and
- **Seven (7) consecutive days during the months of May through October**.

**Where watercraft decontamination facilities exist** (private or government), flush the engine, cooling systems, and any other through hull fittings for ten to thirty seconds with hot water exiting those areas at 140°F to kill any hidden invasive species (e.g., adult quagga mussels, New Zealand mudsnails).

**OWNER, OPERATOR, AND/OR TRANSPORTER OF LONG TERM USE BOAT:**

**PRIOR TO TRANSPORT** of watercraft to any other Arizona waters or out of state, the owner, operator, and/or transporter **SHALL**:

- **Complete and sign** an Aquatic Invasive Species Boat Inspection Report - AISBIR (AGFD Form 2137); and
- **Fax or email** the completed form to the Arizona Game and Fish Department's Aquatic Invasive Species Program at (623) 236-7265 or [AIScomments@azgfd.gov](mailto:AIScomments@azgfd.gov).

*Note:* The AISBIR form is located on the Department's website ([azgfd.gov/ais](http://azgfd.gov/ais))

**Mandatory Conditions and Protocols for Movement from the lower Colorado River, below the Glen Canyon Dam to Lees Ferry and at Lake Mohave - Willow Beach area.**

**The following protocols shall be taken for the prevention/control of New Zealand mudsnail (*Potamopyrgus antipodarum*):**

- **Dry completely** all equipment (including, but not limited to, felt-soled waders, boots, nets, tackle) which has been in contact with the listed water.
- **Before using equipment** in any other waters in Arizona, treat all fishing equipment with a minimum 10-minute exposure to a 5% solution of quaternary ammonia (e.g., Quat128<sup>®</sup>, Formula 409<sup>®</sup>, Sparquat<sup>®</sup>).

**Mandatory Conditions and Protocols for Movement from the lower Colorado River, immediately downstream of Davis Dam (Lake Havasu)**

**The following protocols shall be taken for the prevention/control of didymo, a.k.a. rock snot (*Didymosphenia geminata*):**

- **Dry completely** all equipment (including, but not limited to, felt-soled waders, boots, nets, tackle) which has been in contact with the listed water.
- **Before using equipment** in any other waters in Arizona, treat all fishing equipment with a minimum 10-minute exposure bleach or 5% solution of quaternary ammonia (e.g., Quat128<sup>®</sup>, Formula 409<sup>®</sup>, Sparquat<sup>®</sup>).

**Mandatory Conditions and Protocols for Movement from the lower Colorado River, Yuma County and the lower Verde River to the confluence with the lower Salt River – Granite Reef Area, Maricopa County**

<p><b>The following protocols shall be taken for the prevention/control of apple snail (Genus: <i>Pomacea</i>):</b></p> <ul style="list-style-type: none"> <li>- <b>Dry completely</b> all equipment which has been in contact with the listed water.</li> <li>- <b>Remove and properly discard</b> any adult snails or egg masses; do not re-inoculate water.</li> </ul>
<p><b>Mandatory Conditions and Protocols for Movement from the lower Colorado River, below the Glen Canyon Dam at Lees Ferry area near Page, Arizona</b></p>
<p><b>The following protocols shall be taken for the prevention/control of whirling disease (<i>Myxobolus cerebralis</i>):</b></p> <ul style="list-style-type: none"> <li>- <b><u>Do not transport</u></b> live fish from one water to another.</li> <li>- <b><u>Do not transport</u></b> fish body parts (fish head, skeleton, entrails) to any other water.</li> <li>- <b>Dry completely</b>, all equipment which has been in contact with the listed water.</li> <li>- <b>Before using</b> in any other waters in Arizona, treat all fishing equipment (including, but not limited to, felt-soled waders, boots, nets, tackle) with a minimum 10-minute exposure to a 5% solution of quaternary ammonia {e.g., Quat128®, Formula 409®, Sparquat®} or a 50% bleach solution.</li> </ul>
<p><b>Mandatory Conditions and Protocols for Movement from Roosevelt Lake (Tonto National Forest {TNF}-Gila County, AZ); Saguaro Lake (TNF-Maricopa County, AZ); Bartlett Lake (TNF-Maricopa County, AZ).</b></p>
<p><b><u>Before leaving the vicinity of these above-listed waters in Arizona (Roosevelt; Saguaro; Bartlett), the following protocols shall be taken for the prevention/control of largemouth bass virus (LMBV – Family: <i>Iridoviridae</i>):</u></b></p> <ul style="list-style-type: none"> <li>- <b>Clean the watercraft/equipment</b> by removing any clinging material.</li> <li>- <b>Remove all drainage plug(s)</b> (when so equipped) <b>and drain the water</b> from the bilge, live-well and any other compartments that may hold water.</li> <li>- <b>Drain water</b> from engine, engine compartments, and engine cooling systems.</li> <li>- <b>Dry completely</b>, all watercraft, vehicles, conveyances, or other equipment before using in any other waters in Arizona.</li> </ul>

A.R.S. 17-255.01(C)(1); Watercraft, vehicles, conveyances, or other equipment are subject to inspection upon entry into this state, during overland transport within this state, or upon departure from any water or location listed in Arizona Game and Fish Department- Director’s Order 2 – Effective May 1, 2016, 22, A.A.R. *Register Editor insert page number*, <month day>, 2016.

A.R.S. 17-255.01(C)(3); A person departing from any water or location listed in Director’s Order 2 – Effective May 1, 2016, may be required to decontaminate watercraft, vehicles, conveyances, or other equipment in the manner required by Order.

A.R.S. 17-255.02 (1); A person shall not possess, import, ship, or transport into or within the State of Arizona Aquatic Invasive Species listed under Arizona Game and Fish Department – Director’s Order 1 – Effective May 1, 2016, 22, A.A.R. *Register Editor insert page number*, <month day>, 2016.

A.R.S. 17-255.02 (2); A person shall not release, place or plant an aquatic invasive species identified in Arizona

Game and Fish Department – Director’s Order 1 – Effective May 1, 2016, into waters of this state or into any water treatment facility, water supply or water transportation facility, device or mechanism.

A.R.S. 17-255.02 (3); A person shall not place in any waters of this state any equipment, watercraft, vessel, vehicle or conveyance that has been in any water or location listed in Arizona Game and Fish Department- Director’s Order 2 – Effective May 1, 2016, without being first decontaminated in the manner required by this Order.

A. R. S. 17-255.02(4); A person shall not sell, purchase, barter or exchange an aquatic invasive species identified in Arizona Game and Fish Department – Director’s Order 1 – Effective May 1, 2016.

The name and address of agency personnel with whom persons may communicate regarding this Order:

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