

States, federal agencies, tribes, lake and reservoir owners, water operators, or managing partners may require and perform inspections for amphibious aircraft before the plane lands on, or uses, a body of water to prevent or contain the spread of aquatic nuisance species (ANS). This procedure focuses on effective interdiction of amphibious aquatic aircraft (seaplanes or floatplanes). Following this procedure and educating aircraft manufacturers, owners and pilots will help to prevent the spread of ANS.

This procedure only applies to amphibious aircraft, which are capable of landing and taking off on land or water. This may include seaplanes, floatplanes and flying boats if they are capable of taking off and landing on land. Amphibious aircraft or seaplanes can be floatplanes (airplanes with floats attached) or flying boats (the fuselage of the plane is the hull).

This procedure does not apply to non-amphibious aircraft which do not have wheeled landing gear and are only capable of traveling from water body to water body. These aircraft are not able to get inspected at WID stations prior to launch and should be encouraged to [self-inspect](#).

### **Definitions**

Amphibious aircraft - [https://en.wikipedia.org/wiki/Amphibious\\_aircraft](https://en.wikipedia.org/wiki/Amphibious_aircraft)

Seaplane - <https://en.wikipedia.org/wiki/Seaplane>

Floatplane <https://en.wikipedia.org/wiki/Floatplane>

Flying boat - <https://www.dictionary.com/browse/flying-boat>

### **Step-By-Step ANS Inspection Procedure for Amphibious Aircraft**

#### **Step 1 - Greeting, Safety, and Education**

Ensure personal and public safety:

- After the plane has safely landed, taxied to the station, and turned off the engines, approach an aircraft where the pilot can see you.

*Note: Just because the prop has stopped, does not indicate the prop is safe, as the pilot must first complete a checklist to make sure the magnetos are off.*

- Show the pilot your chocks and request to place the chocks. The pilot will indicate when it is safe to do so. The inspector will have to climb on and under the aircraft, so it is important to prevent the seaplane from rolling and ensure safety.

Greet the seaplane pilot:

- Introduce yourself.
- Provide a brief verbal explanation of the purpose of inspection and inform the seaplane operator that you are looking for ZQM & other invasive plants & animals.

- Provide an explanation of what you are looking for (e.g. bumps on floats or hull, standing water) and tell the pilot that you are making sure their seaplane is clean, drained, and dry.
- Provide the seaplane operator with a brochure or educational item, if available.

### Step 2 – Initial Assessment

- Record on the Activity Log or in the Regional WID Data Collection System the following information:
  - o Registration or Identification Number
  - o Home state and/or postal code where the aircraft is registered
  - o Check for proof of prior compliance (e.g. seal and receipt) and record information if present

### Step 3– Risk Assessment

While there are four core risk factors to consider when making initial contact with a seaplane, two very important questions need to be asked first:

1. What water body and state did the aircraft or equipment last visit and what was the date of that last visit?
2. What are all the water bodies and respective states, provinces or countries that the aircraft has launched in within the last 60 days?
  - Note: Listen carefully and pay attention to notice if any of the locations listed are positive, suspect or infested for ZQM other ANS.
  - NOTE: Inspectors must ask **both** of the above questions to adequately determine aircraft risk. There are reservoirs in other states that are named the same as others in different states (e.g. Sylvan Lake State Park in South Dakota and in Colorado). If the inspector asks only one of the above questions, or combines these two questions into one “Where has the seaplane operated in the last 60 days?”, it is likely the inspector will not get complete information to determine risk, which could result in ANS on a seaplane being allowed to land on a water body and infest it.
3. Visually check the aircraft’s exterior to determine if it is dirty or harboring suspect or known AIS.
4. Visually and physically inspect the aircraft to determine if there is any standing water present and to verify the aircraft is clean, fully drained and dry.

### Step 4 – Check for Live Aquatic Bait (if allowed at the location)

*Note: Seaplanes do not have built in live wells. If bait is carried, it would most likely be in a cooler or other container.*

- Ask seaplane pilots if they have live aquatic bait.
  - a. If yes, follow watercraft live aquatic bait protocol.
  - b. If no, continue with inspection.

Step 5 – Perform the visual and physical (tactile) entrance inspection of the watercraft, using the acronym **HEAD** to ensure that the aircraft is properly inspected.

Be sure to spend time and pay close attention to detail to areas that come into contact with water. Be sure to include a completely thorough visual and tactile inspection of all portions of the aircraft and all equipment or gear, dock lines, floats, anchors, wires, equipment, and cables. The time it might take to complete seaplane inspections will vary depending on the complexity of the seaplane and the perceived risk.

**Hull and Floats – Rapid Exterior Inspection**

1. Look over (visual) and feel (tactile) the entire aircraft on both sides of hull, float, rudders, spreader bars, and wings or wing floats.
2. Physically inspect hand hole covers and bilge pump openings on deck.
3. Check areas below the waterline like the skeg, keel, chine, etc. Focus on right angles, fasteners, landing gear and spray rails, not just a single pass.
4. Remove any plants or plant fragments that are present.
5. Ask the seaplane operator to remove any water drain plugs that are present.

*Note: There is no transom in the usual sense with a removable plug. Floats are cleaned and dried from the top. Amphibious aircraft usually reside on land and will have those plugs removed to drain and dry. Some aircraft may have drain plugs in the hull at different locations. Aircraft may have some form of bilge pump.*

6. Physically and visually inspect the bilge area and use a flashlight to visually see if any ANS are present. Some Bilge areas on flying boats can be difficult to access and may require a mechanic.
7. If applicable, have the seaplane pilot activate the bilge pump.

*Note: There may be several pumps, and some aircraft the pump locations may not be at the lowest point while the plane is on the ground. Bilge pumps are designed pick up water from the hull while the aircraft is in the water. When the aircraft is on land the lowest part of the hull may be at a different location, hence the reason for the hull plugs along the keel.*

8. Check the spots that ANS can easily attach like the mooring cleat, spray rail, wheels/wheel wells, fenders, bulkhead, fuselage, and rudder.

*NOTE: It is important to explain what you are looking for and educate seaplane operators so that they can inspect their own aircraft. It is important to start and end inspections at the same place on each aircraft. Look the seaplane over and feel the hull with the pilot. Both you and the pilot should feel the ridges, seams, and recessed bolts of the craft. The young mussels may feel like bumps or sandpaper on the craft. If you or the pilot feels a rough spot, look for attached mussels. This is a good opportunity to use your inspection mirrors and flashlights to help look into difficult nooks and crannies along the underside or inside of floats and hulls.*

## Engine or Motor

The engine or motor does not need to be inspected because it is sealed and does not take in raw water.

*Caution – Never move an aircraft propeller. Aircraft engines operate with Magnetos unlike cars or boats. A ‘key on’ may not be necessary for a propeller to be HOT.*

## Anchor and Equipment Checked

1. Ask to see the anchor and anchor rope or chain.
2. Visually and physically inspect the anchor and rope or chain for mud, plants and/or ANS.
3. Check any additional equipment such as life vests, fenders, dock lines, buoys, paddles, ropes, nets, etc.
4. Ensure all equipment is clean and dry.

## Drain and Check Interior Compartments

1. Ask the seaplane owner or operator to open up all compartments so you can see any storage lockers, float tanks, and inside the hull through drain plug in keel.

*Note: Unless you have a very small bore scope you won't be able to look inside through a ¼ to 3/8-inch drain plug.*

- a. If the watercraft has standing water in any container, the inspector should work with the pilot to remove standing water from the aircraft using a pump, sponge, or towel. If the watercraft can't be drained, it should be decontaminated.
- b. Ensure that the compartments are fully drained to the best of your ability prior to launch.

## Step 8 - Closeout by Provide Proof of Inspection/Decontamination (e.g. Valid Seal and Receipt)

1. Ensure all inspectors are finished looking at the watercraft, that no ANS was found and that the aircraft is clean, drained and dry.
2. Provide the pilot with proof of compliance (e.g. seal and receipt).
3. Remind the seaplane owner or operator the importance of Clean, Drain, Dry and thank them for their cooperation in helping prevent the spread of ANS.
4. Remove the chocks when you verify the pilot has set the brakes and then show the pilot the chocks to let him or her that they have been removed. The aircraft can be moved easily by the wind or any slope, it's important to make sure the brakes are set or the pilot is holding the brakes when the chocks are removed. The pilot usually doesn't have a view of the wheels, so it's necessary to be shown the chocks have been removed.
5. To ensure the safety of staff and the public, make sure all are standing clear of aircraft prior to launch. Making sure all persons are clear should be done prior to engine start in addition to any aircraft movement. When the pilot is ready to start, they will announce out the window or door "CLEAR!" or "CLEAR PROP!" At that time the signal by the inspector having full view of the aircraft would confirm a clear area with signals as simple as a thumbs up or thumbs down to indicate the area is, or is not, clear for a start.

*Note: Movement of aircraft on the ground if to be controlled by station personnel should follow the procedures listed in the [Airmans Information Manual](#).*

6. Complete the data entry in the Regional WID Data Collection System or WID Activity Log.