

**Standing Order No. OPN – 74**  
**McNary Project**

**Boat Restricted Zone (BRZ)**  
**February 28, 2013**

1. **Purpose** - The McNary Project establishes this Boat Restricted Zone (BRZ) Policy to ensure that persons whose work requires them to enter the restricted zones are fully apprised of the hazards associated with the structures, current operating conditions, and the required equipment to safely deal with the hazards.
2. **Scope** - The BRZ Policy is applicable to all persons or equipment entering the Boat Restricted Zones at McNary Lock and Dam. The map in Appendix A shows the BRZ's.
3. **General** - The waters immediately around the structures and channels at the project present fixed and dynamic hazards to personnel and equipment performing work in close proximity to these areas.
  - a) Cables and wires may span the channels both upstream and downstream of the powerhouses and spillway structures. Changing pool elevations cause a varying clearance between the water and cables or wires. The cables and wires may be both above and below the water level. The wires and cables are difficult to see in daylight and impossible to see during the hours of darkness.
  - b) The structures have open, unprotected water inlets and outlets that are capable of ingesting, capsizing or swamping smaller vessels. These facilities have both remote and automatic operating capabilities.
  - c) Water velocities at the surface and below are constantly altered due to normal operation of the turbines and spillway gates. (These alterations may occur automatically or remotely.)
  - d) Protective relay actions can cause sudden water elevation variations resulting in a sudden increase or decrease in water velocities. These sudden elevation changes are sufficient in magnitude and duration to capsize a vessel, or pitch them into structures or wires when in close proximity. Personnel on board vessels are at great risk of being cast overboard during sudden elevation changes resulting from load rejection events.
  - e) Surface and submerged debris are an ever-present danger and are capable of fouling or breaking vessel propulsion or steering mechanisms.
  - f) Boat entrance into the forebay BRZ at night will not be allowed without meeting the requirements in this document and equipment being tagged out according to Procedure 385-1-20 (Powerhouse Safety Clearance Procedure).
    - (1) Boats may not enter the tailrace BRZ at night.

4. **Requirements** - Personnel and Vessel Safety Equipment.

- a) All BRZ entrances will be at the discretion of the Operator in Charge.
- b) All personnel must wear U.S. Coast Guard (USCG) approved personal flotation devices while in the BRZ.
- c) All vessels entering the BRZ will meet or exceed USCG safety standards for day and night operations. Included are fire extinguishing capabilities, running and anchor lights, and an audible warning device capable of being heard anywhere within the BRZ. Each vessel entering the BRZ will have either a current USCG certification or state inspection sticker on the boat demonstrating the equipment meets current safety standards.
- d) Depending on location, one boat with two motors or two boats (one being used as a rescue boat) will be required.
- e) A marine band radio capable of communication with the project control room on Channel 14 must be available to the boat operator(s). Failure to maintain communication with the control room during the period the boat(s) are operating within the BRZ is cause for removal from the BRZ and denial of future access.
  - (1) A rescue line requirements:
  - (2) Shall be available in a throw bag or other approved device;
  - (3) Shall be of sufficient length (at least 50 feet) to reach personnel that have gone overboard; and shall consist of buoyant material.
- f) A spotlight that can be easily operated by the boat operator must be available.
- g) No vessel may enter the BRZ without proper coordination with the Operating Project Manager or his/her representative:
- h) The applicant must submit a written request for access to the Operations Project Manager two weeks in advance of the anticipated work date(s). The request must include a schedule and written work plan.
- i) The work plan must include a description of the work to be performed, the locations of the work and any known project operating requirements or restrictions necessary. **Requests that require project support must be as far in advance as possible, but a minimum of 30 days prior to the anticipated need.**
- j) The applicant must submit a written job and activity hazard analysis with the written request.

k) Immediately prior to entering the BRZ, entrants must contact the control room operator, using marine band radio Channel 14, and request permission to enter the BRZ. The entrants must identify themselves and the BRZ to be entered. This will allow the control room operator time to relay any pertinent real time conditions about the BRZ prior to granting final approval. The BRZ entrants will contact the control room operator at the time they are leaving the BRZ.

l) The project has two distinctive boat restricted zones (forebay and tailrace) that are split up again between the spillway and powerhouse. They all present varying degrees of risk. Consequently, they have varying requirements.

5. **BRZ Forebay Powerhouse** - Operations in the forebay BRZ upstream of the powerhouse have the risk of vessels being pulled into structures, wires and cables. It may be required to clear out the Main Unit Turbine and adjacent Main Unit Turbines during boating activities in the upstream BRZ that require approachment closer than 400 feet to the Dam structure. This will be dependent on several factors (project flows, weather, debris, type of work being performed, etc.)

a) The work vessel second engine shall be of sufficient power that it can propel the boat and anticipated load upstream against current flows.

b) If the nature of the work is outside of 400 feet from the dam, BRZ entrants will have a second boat engine or standby safety boat for their activities while the Units are operating.

c) The work vessel's second engine shall be of sufficient power that it can propel the boat and anticipated load upstream against current flows.

d) While acting as the safety boat, occupants of the boat will have no duties other than observing the primary boat inside the BRZ.

e) The safety boat will meet all the other requirements listed in the "Requirements" section (above).

6. **BRZ Forebay Spillway** - Operations in the forebay BRZ at the spillway have the additional risk of surface spill due to the Top Spill Weir (TSW). No BRZ entrances will be made in front of the spillway until the TSW's spillway gate has been tagged out in accordance with 385-1-20.


a) If the nature of the work is outside of 400 feet to the spillway structure and the TSW is tagged out, BRZ entrants will have a second boat engine or standby safety boat for their activities while spilling. During times of high flows through the spillway, entrance into the spillway BRZ may be prohibited.

b) The work vessel second engine shall be of sufficient power that it can propel the boat and anticipated load upstream against current flows.

- c) While acting as the safety boat, occupants of the boat will have no other duties other than observing the primary boat inside the BRZ.
  - d) The safety boat will meet all the other requirements listed in the “Requirements” section (above).
7. **BRZ Forebay North of Unit 12 and South of Spillbay 20** - When boat operations in the forebay require work north of Unit 12 and south of Spillway Bay 20, a combination of powerhouse and spillway requirements shall be used.
- a) No entrance into this area will be allowed without the TSW tagged out.
8. **BRZ Tail Race of Powerhouse** - BRZ entrants will have a second boat engine or standby safety boat for their activities.
- a) The work vessel second engine shall be of sufficient power that it can propel the boat and anticipated load against current flows.
  - b) While acting as the safety boat, occupants of the boat will have no other duties other than observing the primary boat inside the BRZ.
  - c) The safety boat will meet all the other requirements listed in the “Requirements” section (above).
9. **BRZ Tail Race of Spillway** - The spillway shall be cleared out during boating activity in the Tailrace BRZ that requires approach within 200 feet to the Spillway structure.
- a) BRZ entrants will have a second boat engine or standby safety boat for their activities.
  - b) The work vessel second engine shall be of sufficient power that it can propel the boat and anticipated load against current flows.
  - c) While acting as the safety boat, occupants of the boat will have no duties except observing the primary boat inside the BRZ.
  - d) The safety boat will meet all the other requirements listed in the “Requirements” section (above).
  - e) If the nature of the work is outside of 200 feet from the spillway structure, BRZ entrants will not be required to clear out the spillway. However, close communication is still necessary. BRZ entrants will have a second boat engine or standby safety boat for their activities.
  - f) The work vessel second engine shall be of sufficient power that it can propel the boat and anticipated load against current flows.

g) While acting as the safety boat, occupants of the boat will have no duties except to observe the primary boat inside the BRZ.

h) The safety boat will meet all the other requirements listed in the "Requirements" section (above).

  
DAVID R. COLEMAN  
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McNary Lock and Dam

APPENDIX A

