



University of Maryland Center for Environmental Science
Horn Point Oyster Hatchery

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Quarantine Laboratory

This state of the art quarantine facility was opened in 2004. The quarantine lab is supplied with up to 350 gallons per minute of Choptank River water. Choptank River water is available in the following types; raw, 10 micron or 2 micron filtered, unfiltered chilled, unfiltered heated, filtered chilled, and filtered heated. All water used in the laboratory is channeled to a series of chlorination injection tanks where it is held prior to a sodium thiosulfate injection system. This system neutralizes the chlorine before it enters a series of settling ponds that eventually lead back to the river. In the event of a failure in either of the chlorination/de-chlorination treatments, automatic shut-off valves close prohibiting any additional water from entering the quarantine lab.

The quarantine lab is equipped with temperature controlled broodstock holding facilities each capable of holding up to eight distinct groups of broodstock. A temperature controlled spawning table is also located within the lab that allows broodstock spawning attempts to be accomplished in either a re-circulating or flow-through manner. Complete larval culture facilities are also included within this laboratory up to 28, 600 liter fiberglass larval rearing cones are available for use and a larger number of smaller vessels can be substituted if experimental design dictates. The laboratory is equipped with upweller/downweller tanks that are multi-purpose and designed for use in setting trials, spat holding and testing, or for additional holding space for test animals.



quarantine cones

Conducting research on the Asian oyster, *C. ariakensis* is one of the main goals of the quarantine laboratory here at HPL. The laboratory allows us to experimentally answer questions such as; the effects of multi-species spawning on recruitment, do local HABs (harmful algae blooms) effect the non-native oyster and the native oyster similarly, and are both species natural reef builders? Research has also concentrated on determining size-specific fecundity and spawning cues. The facility not only provides us with the ability to conduct our own experiments but supplies the opportunity for fellow researchers to do their work there. Currently we have collaborated with researchers from Horn Point as well as Virginia Institute of Science, University of Maryland College Park, Haskin Shellfish Research Lab of Rutgers University as well as the NOAA Milford Lab. The quarantine facility is one of only a few facilities on the east coast able to produce *C. ariakensis* for other researchers to use in their experiments. We look forward to the coming years in collaborating more with our colleges and answering many more questions about this species of oyster.



Asian Oyster (*C. ariakensis*)

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