

**AQUATIC ECO-SYSTEMS' LAKES DEPARTMENT PROUDLY PRESENTS
THEIR MOBILE ALUM INJECTION DEVICE (MAID)**

The Lakes Department of Aquatic Eco-Systems, Inc., located in Apopka, FL, proudly presents the Mobile Alum Injection Device, known as MAID. The MAID unit uses a state-of-the-art alum injection system and contains 5,000 gallons of liquid aluminum sulfate (alum), an automated remote monitoring system, a liquid dosing pump and a high volume air compressor. Aquatic Eco-Systems is working with the Orange County Environmental Protection Division, at the Lake Apopka Restoration Area to assist in instituting a method of reducing high volumes of pollutants in storm water runoffs and retention ponds. The MAID system specifically addresses problems associated with high levels of soluble nutrient loads or pollutants in storm water and retention ponds by injecting flocculants that remove target substances from the water column. Technological advances allow the MAID to dose a pond with the proper amount of alum based on rainfall and flow data collected by the environmental monitoring equipment used by the MAID.

As part of the MAID system, in a retention pond or storm water runoff, a liquid injection mixing apparatus is used to add and dispense liquid alum throughout the pond. The MAID is able to detect when and how much alum to inject using an automated remote monitoring system which works in conjunction with the liquid dosing system pump and in-pond mixing apparatus to facilitate injection. Using this technique allows the submersed injector located in the retention pond to properly disperse the injected substance throughout the water column. Shoreline controls automatically adjust dispersal volume and flow rate of the injection system based on real-time data pertaining to fluctuating environmental conditions and water chemistry parameters.

Aside from the general beautification of area bodies of water, the MAID is both safe and practical for use by cities and counties for wastewater compliance and construction discharge monitoring. Alum is a non-toxic binding agent used in the treatment process of drinking water. In this case, it is used by the MAID to bind excess nutrients, specifically phosphorous, and render them unavailable for algae to use as a food source. Controlling algae is a practical example of how the MAID can assist a common issue found in storm water and retention ponds. High levels of phosphorous are often present in these bodies of water. This issue requires attention because just one pound of phosphorous can yield 500 pounds of algae.

One of the added benefits of using the MAID is that the system does not create any unusable byproducts as a result of using alum to clarify the retention pond or storm water runoff. The soluble nutrient loads and pollutants that the alum binds with eventually sink to the floor of the pond. This matter can then be collected and removed from the pond, transported and potentially used in wetlands or wastewater management facilities.

For more information about the Mobile Alum Injection Device (MAID) by Aquatic Eco-Systems, or for advice and solutions to all of your lake management, pond or fountain needs, contact the experts in the Aquatic Eco-Systems [Lakes Department](#) by calling 407-472-0520. You may also visit AquaticEco.com for additional products, services and contact information.

ABOUT AQUATIC ECO-SYSTEMS LAKES DEPARTMENT

The Lakes Department of Aquatic Eco-Systems is a world leader in lake management systems, having improved the quality of large bodies of water and aquatic ecosystems since 1978. The Lakes Department handles everything from large reservoir aeration system design to assistance in troubleshooting the backyard farm pond as well as simply providing the answer to an aquatic question. Aquatic Eco-Systems stocks a wide selection of products and equipment to suit your needs. Contact a Lakes Department technician by calling 407-472-0520 or visit AquaticEco.com.

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