Testimony of Robert Barham

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Before the U.S. House of Representatives Committee on Natural Resources

Subcommittee on Fisheries, Wildlife and Insular Affairs on Efforts to Control and Eradicate the Invasive Weed, Giant Salvinia

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Thank you for the invitation to testify before you today about Louisiana's efforts to manage the infestation of the aquatic nuisance plant Giant Salvinia. I am Robert Barham, the secretary of the Louisiana Department of Wildlife and Fisheries for Governor Bobby Jindal. Our Department is charged with a broad range of duties, including responding to major man-made and natural disasters that occur both in our state and along our coast, hunting and fishing license sales, outdoor education, enforcement of fish and game regulations, and habitat management. Ultimately, resource management and protection are at the core of our mission.

Since giant salvinia was identified in Louisiana more than five years ago, our biologists have made it a priority to identify methods for treating it, preventing further infestations and rehabilitating the water bodies across our state that it has already devastated.

This plant is voracious. While our staff works long hours and days, without a comprehensive strategy to combat giant salvinia we'll never get ahead. The green monster, as some call this plant, works 24 hours a day, seven days a week. In as few as three days, it is capable of doubling its biomass. And in as little as seven days, giant salvinia can double surface coverage of water bodies. It spreads incredibly quickly, devouring the resources and damaging the habitats within water bodies across our state.

There is no easy answer to this dilemma. We can't simply spray every area to kill it. We can't only introduce a predator and hope for the best. We can't fence it off or deploy booms and wait till the winter comes to kill it off. And no matter what efforts we take to prevent the spread, all it takes is one alligator, one nutria or other wildlife, to move from an infested water body into an area where giant salvinia hasn't yet taken root, and the spread continues. What we must do is devise a complex strategy, one that involves our agency, and local and federal agencies to stop the spread of giant salvinia and rehabilitate what it has damaged. This fight takes all of us, from the property owner on up.

Our Department has already begun many of these efforts. Over the past few years we have employed contract herbicide sprayers, deployed booms, conducted experiments with natural predators, like the salvinia weevil, conducted drawdowns and aggressively sought to educate members of the general public. Battling giant salvinia is tasked to our Office of Fisheries and utilizes a $6.9 million invasive aquatic species budget.

The current state of infestation in Louisiana is 25,076 acres, across 35 water bodies. Some of the most prominent areas of infestation are Lake Bistaneau and Caddo Lake. However, the jump in acreage infested with giant salvinia over the last two years from 13,691 to more than 25,000 acres, is due to the spread of infestation in South Louisiana, primarily in the Barataria and Terrebonne basins.

In each water body we face a different challenge, but the parameters that allow infestation to flourish remain the same throughout. While this rootless aquatic fern flourishes during the summer months, it is incredibly hardy. Stress, lack of water and cold winters won't necessarily kill off the plant. And in water bodies like the Barataria and Terrebonne basins, the temperature doesn't drop nearly enough to produce a large scale kill-off of the plant.

Giant salvinia even comes armed with its own defense mechanism in the tiny, white hairs that capture herbicides just above the plant's surface, seriously challenging the efficacy of any spray treatment. For nearly each solution we, as resource managers, can devise, giant salvinia has a solution. That is why we must tackle this problem from numerous angles.

For this year through May 31, the Department has utilized 21 spray crews and contractor air boat treatments to control 10,730 acres of giant salvinia. These herbicides provide us with the ability to kill of the plant during the spring and into the warm summer months when it would flourish. However, spraying can be incredibly difficult. Many areas, such as Lake Bistaneau, are also inhabited by the iconic cypress tree. The close proximity of trees can make it incredibly

difficult for spray crews and their boats to access parts of these infested water bodies. And as the tree loses its leaves each year, that debris further fuels the degradation of the aquatic habitat. While we advocate for moderate tree removal, this is both expensive and, at times, unpopular with the public.

Spraying is also an incredibly expensive treatment method. For each gallon of Galleon, the herbicide our Department utilizes, it costs us $1,851 per gallon. With more than 25,000 acres infested, simply spraying would be an incredibly expensive and likely ineffective task. And the costs not included in the cost per gallon for herbicide are the manpower costs to the state, the cost of the equipment, the boats and the fuel.

The financial commitment required by Louisiana residents for an herbicide-only approach is one reason we have also investigated and begun the introduction of giant salvinia's natural predator from Brazil – the salvinia weevil. This hardy little insect eats through the plant and consumes the terminal bud, the part of the plant which is responsible for growth, severely hampering further infestation. Currently, we produce salvinia weevils in the spring and release them during the summer months. However, we are exploring the possibility utilizing an existing Department facility as a salvinia weevil hatchery. A hatchery or farm that would allow us to produce the weevils during winter months will allow our biologists to release weevils before the start of the active months for giant salvinia – tackling the spread of infestation before the heat of summer.

LDWF also actively utilizes drawdowns of water bodies infested with giant salvinia. Lowering the water level of bodies of water with large-scale giant salvinia growth allows the biologists to strand and dry out the plants, killing them. In order to execute water fluctuations effectively, water control structures must be in place. In some instances, constructing water control structures requires authorization from the US Army Corps of Engineers, local governments and districts.

However, water fluctuations are not always a popular option with local residents as it may mean limited access of the water body being drawn down for recreational use. We work to communicate our efforts with local residents, government and user groups in affected areas. While there may be initial disapproval from residents and users, we firmly believe that water fluctuations provide a sustainable solution that, ultimately, means residents will have access to an infestation-free water body in the future.

An example of this method is the drawdown of Turkey Creek Lake, in combination with Galleon herbicide treatments, in 2008. The drawdown was, initially, a success, but small amounts of the plant that were isolated during the drawdown re-infested the main water body. Still, despite not being able to completely eradicate giant salvinia in Turkey Creek Lake, the current coverage is less than before the water fluctuations were instituted.

Another example of a water fluctuation and herbicide combination approach was in treatment of Toledo Bend. In addition to the actions taken by our Department biologists, two successive hard winters provided added reduction to the giant salvinia and help prevent continued infestation. Herbicide treatment is currently being used to ensure giant salvinia does not re-infest the lake as the water level rises.

Lake Bistineau is also a prime example of a combination approach to treatment of giant salvinia. Water level fluctuation, intense application of herbicides and two successive cold winters greatly reduced the giant salvinia infestation in the lake. Unfortunately, shallow cypress tree stands have provided refuge for the giant salvinia. Biologists and spray crews are unable to access the plants in shallow areas. However, total coverage in the lake is estimated to be less than 100 acres, down from 8,500 acres just a year earlier.

Public education is another crucial component in battling the giant salvinia infestation in Louisiana. Because this rootless plant can completely cover the surface of water bodies, it

severely limits public access for boating and fishing. It can be burden for property owners with waterfront access and it can be unsightly for residents who are used to enjoying the simple pleasure of viewing an un-infested lake.

Our biologists have been extremely proactive in communicating with residents in impacted areas – from requesting to be on the agenda at Police Jury meetings to attending user group meetings to be available for questions and comments. In some instances, like for Lake Bistineau, our biologists have worked closely with local government to provide residents with consistent updates. Information from our efforts can be found both on the local website: http://www.lakebistineau.com/salvinia/index.htm and on our Department's website at http://www.wlf.louisiana.gov/water-bodies/33991.

We have also produced numerous brochures and posters to educate the public about giant salvinia and their role in helping stop the spread. While it is not a cure-all, encouraging residents to thoroughly wash both their boat and boat trailer goes a long way to helping contain infestation. A boat trailer may pick up a small amount of giant salvinia; it may live on the trailer for a short while and upon the boater's next trip, be introduced to a new, uninfested water body. While we don't expect the actions of residents and those tourists who enjoy the lakes and rivers across Louisiana to be able to wholly prevent the spread of giant salvinia – a 10 inch rain event can do more damage in a short amount of time – encouraging good boating and fishing habits may be a small help. Like each component I have discussed, none can stand alone in treating the infestation. Instead a complex combination of actions must be taken.

Ultimately, we are dedicated to the effort to tame this voracious plant. Giant salvinia restricts boating and angling access in state water bodies. It degrades the quality of habitat for fish and other organisms. Each component I've mentioned today is crucial to the overall effort.

Let me be clear, giant salvinia cannot simply be eradicated. This deft plant is far too integrated into our environment to kill off. This will be an ongoing issue that will require local, state and federal dedication of funds to battle. Agencies at all levels, and local residents, must work together to reduce the occurrences of this plant and to rehabilitate impacted water bodies. Our Department is up to the task and we will continue to seek your support for our efforts in the years to come.

Thanks you, again, for the invitation to speak today. At this time, I'll take any questions you may have for our Department.