



From the Editor

A big congratulations should be extended to **Dr. John Rodgers** who was selected as the **2009 Member of the Year** for his dedication and service to the society. Also, congratulations are in order for the **2009 Phillip M. Fields Scholarship** winner, **Ms. Amanda Rotella**, for her work at Coastal Carolina University entitled, *The Growth and Distribution of Water Hyacinth in a Tidal Blackwater River System, SC*. More about these awards will appear in the next issue of the newsletter as we were unable to include them in this printing due to the importance and time sensitive nature of the article on the NPDES permitting issue.

If you are interested in attending a board meeting, President Feller encourages you to do so. The next board meeting will be held January 8 at the Styx Fish Hatchery in West Columbia. You can contact a board member for directions.

I hope you enjoy receiving the SCAPMS Newsletter and that it brings pertinent information and useful news to you as a member of SCAPMS. I am always looking for article submissions and good photos to include within the newsletter, so if you have any topics you'd like to see covered in the newsletter feel free to contact me.

Michael Hook, Editor - SCAPMS



South Carolina Aquatic Plant Management Society Newsletter

C/O Michael Hook
2730 Fish Hatchery Road
West Columbia, SC 29170

Printed on Recycled Paper

South Carolina Aquatic Plant Management Society Newsletter

Volume 30, Number 3

<http://www.scapms.org>

December, 2009

Letter from the President

By: Larry Feller, Syngenta

It is with great humility and honor that I accept the responsibility of leading the South Carolina Aquatic Plant Management Society for the 2009-2010 year. This society includes some of the best people with whom I have ever worked. Your passion for your business and for the society makes this group what it is. Our past annual meeting is a perfect example. I know each person who attended has been impacted in some way or another by the current economy, yet we had the best attendance we've ever had in the upstate. You hear "times are tough and we are cutting back", yet the society increased the number of sustaining members who support and fund our efforts. When you look at the current economic and political condition in our country and the world, it is easy to get bogged down in the negatives. SCAPMS continues to rise above the current situation and search for solutions that will help the society and our industry to survive. To the membership, I say thank you. To the students who are interested in aquatic plant management, I say don't be discouraged. With every challenge, there is a reward. Please continue to put forth the effort to better yourselves, our society and the world for future generations.

We are in trying times. Decisions about NPDES are in the hands of the uneducated and easily influenced. Climatic conditions continue to be used as a fear factor for gaining political power. The list goes on and on, but there are solutions. It is time to stand up for our beliefs that science will prevail. The direction our government is leading us is uncertain. Our struggles, in my opinion, are a result of man leaning on his own understanding and feelings of what is best. I believe there are answers and I believe that SCAPMS can be a part of the solution when it comes to the aquatic environment. It requires involvement. Each one of us should be in touch with state and federal officials who have the power to decide in what direction legislation should go. We must make sure our legislators hear both sides of issues that affect aquatic invasive vegetation management.

I ask that each one of you make a concerted effort to get involved. We will make sure you have access to talking points and contact information for governmental officials who make policy. When you see issues that negatively impact SCAPMS, make it known so we can work to correct them. When you see misuse and abuse,

take a stand. When you see the un-educated making irrational comments and decisions, take the time to teach, not with arrogance, but with a care for a better world. Today, we are in a world of Me. We need to get back to a world of us. In the words of Margaret Mead, an American anthropologist, "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has". I believe that, together, we can educate legislators and the general public to offer alternatives based on sound science and not solely on emotion.

This is your society. Let the board know how we can help.

Respectfully,

Larry Feller

Inside this issue....

Letter from the President

SPECIAL TOPIC: NPDES Permitting Issues

New Invasive in South Carolina

Photos from the 2009 SCAPMS Annual Meeting



A "White Paper" from the SC APMS ad hoc Committee on NPDES Permitting

Within the next year or so (April 9, 2011), a Sixth Circuit Court ruling will require a National Pollution Discharge Elimination System (NPDES) permit for applications of aquatic pesticides in and around rivers, lakes, and other waters. An NPDES permit is a federal document issued under the Clean Water Act (CWA) authorizing discharge of treated water into waters of a state or the nation ("jurisdictional waters"). Typical NPDES permits are complicated, costly and usually require monitoring and toxicity testing as well as regular reporting. The Court's ruling in National Cotton Council vs. EPA affects, among others, water resource managers (e.g. aquatic plant managers, mosquito control, etc.), farmers, foresters, land managers and developers who use pesticides to protect their crops, water resources and land. Members of the SC APMS may be significantly impacted by this ruling.

Currently, the US EPA is drafting a general NPDES permit for "discharges from the application of pesticides" to guide states in developing and issuing their own permits. EPA plans to help states to develop their NPDES permits and to "provide outreach and education to the regulated community" (that would be most of us). EPA has pledged to "work closely with state water permitting programs, the regulated community and environmental organizations in developing a general permit that is protective of the environment and public health." If you are interested or concerned, you should keep informed through the EPA web site (Agriculture – Office of Wastewater Management). You should have an opportunity to communicate your thoughts. We are making a concerted effort to be sure that the EPA is informed "up front", but we cannot predict what their "solution" for this problem may be. Important to aquatic plant and algal management is the need for rapid response on occasion. Cost is also a primary concern as well as uncomplicated monitoring and reporting. When we have a draft permit to respond to, we will need your help. Please be ready to respond since the opportunity may be brief. As we often say "the devil will be in the details" and the EPA estimates this court decision could affect 365,000 pesticide applicators that perform 5.6 million applications annually.

In case you are interested, we have provided some details below.

Background

The Clean Water Act (a federal law) requires an NPDES permit in order to discharge pollutants or treated water from point sources (e.g. outfall pipes, hoses, etc.) into waters of the United States. In the past, the US EPA has not required a NPDES permit to apply aquatic pesticides, as long as these applications comply with another federal statute – the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"). The purposes of both statutes, while similar are clearly distinct and nonequivalent. The purpose of the CWA is "[to restore and maintain] the chemical, physical and biological integrity of the Nation's waters". FIFRA's purpose is similar in that it seeks to protect human health and the environment from harm caused by pesticides through a pesticide registration system but it is not specifically

charged with ensuring the chemical, physical and biological integrity of U.S. waterways.

In a 2001 decision (*Headwaters, Inc. vs. Talent Irrigation Dist.*), the Ninth Circuit Court opined that aquatic herbicide residue left in water from pesticide applications was a "chemical waste" and thus a "pollutant" requiring a permit under the CWA. The Ninth Circuit declined to decide whether a pesticide that leaves no chemical residue in the water falls within the definition of a "pollutant". The following year, in *League of Wilderness Defenders vs. Forsgren*, the Ninth Circuit Court addressed whether an NPDES permit is required for the aerial application of insecticides to control pests, where some insecticide inevitably enters waters. The court held that the application of insecticides over National Forest land constituted a "point source" discharge requiring an NPDES permit. The Court, however, did not address whether such insecticides were "pollutants," assuming that they were. In 2005, in *Fairhurst vs. Hagen*, the Ninth Circuit Court took on the question remaining in *Talent* – namely, whether pesticides that are directly and intentionally applied to water bodies, in accordance with the requirements of FIFRA, are "chemical wastes", and thus CWA "pollutants", that require an NPDES permit. The Court held that such pesticides are not "pollutants" requiring a CWA NPDES permit if they are intentionally applied to the nation's waters, in compliance with FIFRA, and produce no residue or unintended effects.. The Court distinguished its previous finding in *Talent* on the grounds that, in *Talent*, the pesticide remained in the water after it performed its intended beneficial function. Simply put, proponents for permits argue that labels for pesticides are the same or much the same nationwide, and so the FIFRA does not and cannot consider local environmental conditions. By contrast, the NPDES program attempts to provide adequate protection against specific, individual impacts to water bodies regulated under CWA.

The Aquatic Pesticide Rule

A year after the Fairhurst decision, the US EPA issued a final rule, on November 27, 2006, that exempted application of aquatic pesticides in compliance with FIFRA from the CWA (and the need for an NPDES permit). Specifically, EPA stated that an NPDES permit was not required for: (1) application of pesticides directly to water in order to control pests; or (2) application of pesticides to control pests present over or near water (such as via aerial application) where a portion of the pesticides would unavoidably be deposited into waters. EPA intended the second circumstance, among other things, to cover pesticide spraying to control non-native plants (i.e. weeds) growing at the water's edge because some pesticide would unavoidably enter the water as a result of herbicide application. EPA was clear that its rule was based on its longstanding policy that pesticides applied according to its federal label are not CWA "pollutants" and, thus, do not require NPDES permits. EPA explained that aquatic pesticides that are sprayed or otherwise applied consistent with FIFRA are not "chemical wastes" because "they are products that EPA has evaluated and registered for the purpose of controlling target organisms, and are designed,

2009-10 Board of Directors

Officers:

President: Larry Feller
Syngenta
Smyrna, SC

Vice President: Dr. John Rogers
Clemson University
Clemson, SC

Treasurer: Chris Page
S.C. Dept. of Natural Resources
Columbia, SC

Secretary: Rebecca Haynie
University of Georgia
Athens, Georgia

Editor: Mike Hook
S.C. Dept. of Natural Resources
Columbia, SC

Immediate Past President:
Dr. Susan Wilde
University of Georgia
Athens, Georgia

Directors:
1st Term: Larry McCord
Santee Cooper
Moncks Corner, SC

1st Term: Rob Emens
N.C. Dept. of Environ. & Nat. Resources
Raleigh, NC

2nd Term: Mike Hook
S.C. Dept. of Natural Resources
Columbia, SC

2nd Term: Neal Coulter
Cygnet Enterprises
Statesville, NC

Photos from 2009 SCAMPS Meeting at Clemson



Special thanks to
Bridget Lassiter for
being our "official"
SCAPMS
photographer for
2008 and 2009!



South Carolina Aquatic Plant Management Society Newsletter

Published three times a year by the
South Carolina Aquatic Plant
Management Society

Editor: Michael Hook
Design/Production: Chris Page
Photos: Bridget Lassiter (unless cited)

Reproduction permitted if source is cited.

purchased, and applied to perform that purpose.” Further, EPA stated that aquatic pesticides are not “biological materials” because, to find otherwise, “would mean that biological pesticides are pollutants, which chemical pesticides applied in the same circumstances are not.” Finally, EPA wrote that, while residual material remaining following pesticide application may be considered “pollutants”, the pesticide itself is not a pollutant at the time of discharge or application. Accordingly, EPA encouraged treating any residues as nonpoint source pollutants for which no NPDES permit would be required. EPA’s final rule became effective January 26, 2007.

National Cotton Council vs. US EPA

Environmental and industry groups subsequently challenged EPA’s final rule in eleven circuit courts throughout the United States. The petitions for review were consolidated in the Sixth Circuit by an order of the Judicial Panel on Multidistrict Litigation [National Cotton Council vs. EPA, 2009 U.S. App. LEXIS 45 (6th Cir. 2009)]. Several industry groups also intervened in support of EPS’s final rule. Environmental Petitioners argued that: (1) EPA exceeded its authority under the CWA by excluding pesticides from the definition of a CWA “pollutant”; (2) EPA exceeded its authority under the CWA by determining that, while pesticides are discharged from a point source, the residue of such pesticides is a “nonpoint source pollutant”; and that (3) EPA may not exempt FIFRA compliant pesticide applications from the purview of the CWA. Industry Petitioners argued that EPA’s final rule was arbitrary and capricious because, under that rule, pesticides applied in violation of FIFRA are “pollutants” while the same pesticides applied in compliance with FIFRA are not. The Court addressed whether the CWA unambiguously includes pesticides within its definition of “pollutant”, and concluded that it does. The CWA defines a “pollutant” to include “chemical wastes” and “biological materials.” After analyzing the meaning of the word “waste”, the court found that the CWA definition of “chemical waste” includes “discarded chemicals, superfluous chemicals, or refuse or excess chemicals.” Like the Ninth Circuit Court in Fairhurst, the Sixth Circuit Court therefore, found: “so long as the chemical pesticide is intentionally applied to the water [to perform a particular useful purpose] and leaves no excess portions after performing its intended purpose, it is not a ‘chemical waste’...and does not require an NPDES permit.” However, the Court decided that excess chemical pesticide and pesticide residue may be “pollutants”. The Court noted there are at least two situations in which excess pesticide or pesticide residue would meet the CWA definition of “chemical wastes”: (1) if chemical pesticides are applied to land or air, and excess pesticides or pesticide residues are subsequently deposited in jurisdictional waters; and (2) if pesticide residues remain following direct application of chemical pesticides to jurisdictional waters. The Court also examined the meaning of the term “biological materials” and decided that that term includes biological pesticides and their residues that are discharged into water. The Court then concluded that application of biological pesticides would also require an NPDES permit.

Finally, the Court rejected EPA’s argument that excess and residual pesticides should be exempt from NPDES permitting requirements because they do not qualify as pollutants at the time of discharge. The Court found: “[t]here is no requirement that the discharged chemical, or other substance, immediately cause harm to be considered as coming from a ‘point source.’ Rather, the requirement is that the discharge come from a ‘discernable, confined, and discrete conveyance,’ 33 U.S.C. § 1362(14), which is the case for pesticide applications.” Therefore, the Court held that EPA’s final rule was not a reasonable interpretation of the CWA since the plain language of the terms “chemical waste” and “biological materials” include aquatic pesticides (such as herbicides and algaecides). On this basis, the Court dismissed EPA’s final rule. The Court did not analyze arguments addressing the relationship between the CWA and FIFRA.

Conclusion (or What this means to SCAPMS Members and Others)

Following the Sixth Circuit’s decision, applicators will need an NPDES permit to apply aquatic pesticides into, around, and over water in most instances. NPDES permits will not be required, however, for applications of chemical pesticides that leave no residue in receiving waters. States are likely to review their current NPDES permitting requirements for aquatic pesticide use in light of the court’s decision. Several states, including California, Washington, Oregon, and Nevada, developed NPDES permit programs for aquatic pesticides following the Ninth Circuit decisions in Talent and Forsgren. Other states have not issued permits to aquatic pesticide applicators. The EPA is developing a “model” permit that may be widely applicable (see US EPA Clean Water Act Permitting of Discharges from Pesticide Applications).

Numerous groups have sent letters to the US EPA. The ranking members of the congressional Committee on Agriculture sent a letter to the EPA administrator and the U.S. Attorney General, urging an appeal and a hearing among all judges of the 6th Circuit, rather than just three members. The letter stated that “By extending the Court’s decision to terrestrial applications, the Court has placed farmers and commercial applicators that serve them in legal jeopardy under the Clean Water Act’s citizen-action provisions. Unless EPA appeals the decision, farmers face threat of lawsuits as EPA has no permitting system in place. Additionally, the court’s decision can be construed to apply to non-agricultural/non-pesticide applications and emissions, including spraying for mosquito control, vegetation management, and chemical de-icing of roads and highways. The Court’s rule is inconsistent with the intent of Congress and would drastically change decades of EPA regulatory practice.”

Information supplied by:
Dr. John H. Rodgers, Jr.
Clemson University
Email: jrodger@clemson.edu



A New Species Invades South Carolina's Waters

Article Provided by:
SCDNR-ANS Section, Michael Hook, Chris Page, Walt Meitzen

Hygrophila polysperma was first noted as a small patch in the Goose Creek Reservoir near Hanahan, SC in the summer of 2007. In 2008 it could be found interspersed with other submersed invasive species near the original infestation. The population expanded greatly during 2009 growing season to nearly 6 acres. The original infestation remained at roughly the same acreage but a new infestation to the southeast appeared and grew quite rapidly, quickly covering an additional 2 acres. The majority of the plants found in the Goose Creek Reservoir are found at a depth of five feet or less. It is usually found growing as a submersed plant, although in late summer to early fall emergent tips tend to develop. The plant has extremely brittle stems that fragment very easily. Large mats of separated hygrophila can be found floating in the reservoir on a regular basis, thus establishing new infestations around the reservoir via vegetative reproduction.

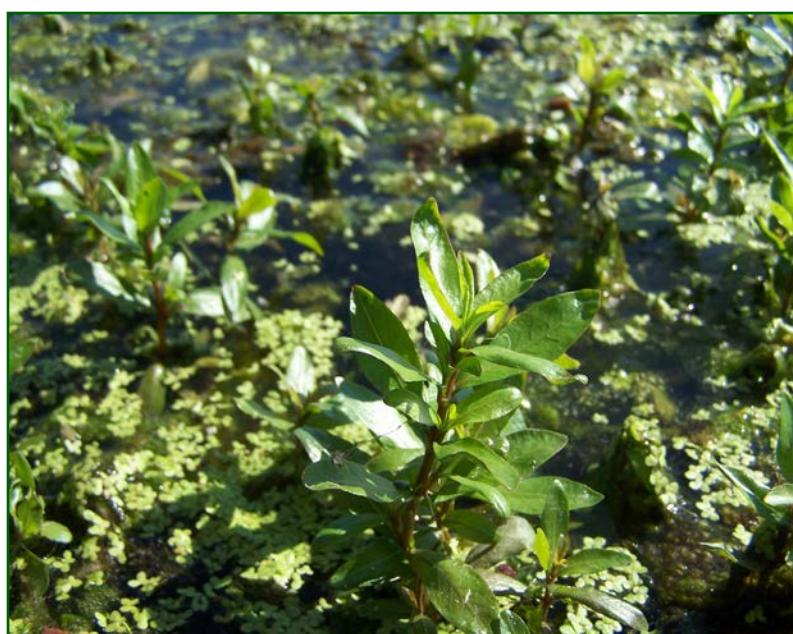


Submerged *Hygrophila polysperma* (photo by:SCDNR-ANS)

It should be noted that there is limited threat downstream for further infestation because of the location of the reservoir. The discharge from Goose Creek Reservoir flows into an estuarine system well below the freshwater dividing line. This fact does not diminish the immediate danger to nearby fresh water bodies. Goose Creek Reservoir receives a great deal of recreational users that travel to many other ponds and lakes around the state. Special care should be used when transferring boats and any equipment from one lake to another. Thoroughly clean the boat hull and trailer, removing any vegetation that may be present in order to help prevent the spread of this noxious weed.

Efforts to control this highly invasive species have already begun. Aquatically labeled herbicides were used with varying levels of success in the Goose Creek System starting in August 2009. A follow up treatment was

completed in early October 2009. Continued efforts with herbicides will proceed in order to diminish the threat from hygrophila beginning again in the early summer of 2010. Triploid grass carp may also be included as a part of a multifaceted approach to control this invasive species. Generally speaking triploid grass carp do not favor this plant and therefore higher stocking rates must be used for effective control.



Emerged portion of *Hygrophila polysperma* (photo by:SCDNR-ANS)

Hygrophila polysperma is a very tenacious and fast growing weed. In some locations in Florida, hydrilla is being outcompeted by the hygrophila. It has also proven difficult to control by the traditional herbicides and biological means. So early detection and rapid response is the best defense against this new invader to our state. Please contact the SCDNR ANS Section if you have any questions or comments.

(invasiveweeds@dnr.sc.gov).

