



**Working Together:  
A Unified Response to Regulatory Issues  
Facing Vegetation Management.**

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President,  
Weed Science Society of America**



# The Question:

- **Question:** What can we do as a National Professional Organization to respond in a constructive and positive manner to apply our science to influence public policy and current regulatory issues impacting vegetation management?
- **Answer:** A lot!  
By bringing together the science and practice of plant management, the Weed Science community can and has provided a united voice and unique strength to address a number of emerging issues and new opportunities.



- **Three Key Science Policy Issues for WSSA in 2009-2010**
  1. Spray Drift PR-Notice 2009
  2. National Pollution Discharge Elimination System (NPDES) permits for application of pesticides on, near, or over water under the Clean Water Act.
  3. Management of Herbicide Resistant Weeds



## Steps that have brought us forward

- **Staff for success**
  - Created roles that puts us in the game
- **Develop relationships that are routinely relied on for independent information**
  - Earn creditability, deliver what's needed
- **Invest in people and partnerships**
  - Sought partnerships with like-minds, other Applied Science Societies and Regulators



## EPA– WSSA partnership

### Subject Matter Expert (SME) in Weed Science

- The WSSA SME is a 3-way agreement
  - EPA provides office space
  - WSSA provides travel funds
  - Home institution agrees to time commitment by SME
- SME spends a week at a time in DC at EPA headquarters.
  - 1 wk/month for 6 months followed by 1 wk/2 months or when needed.



**Dr. Jill Schroeder,  
New Mexico State Univ.**



# Subject Matter Expert Purpose

- To develop a technical relationship between academic Weed Science community and EPA
  - Provide current information to the Agency
    - Answer agronomic questions on herbicide use
    - Identify experts within the Weed Science community
  - Learn about the Agency as they learn about us
    - Participate on EPA scientific committees
  - As an applied science, WSSA is in a unique position to provide expert advice
  - It's not just about helping EPA be more transparent, it's about being more transparent ourselves and delivering our science in the service of the practitioner.



# Develop partnerships with other Applied Science Societies

- The **Entomology Society of America** and the **America Phytopathological Society** have used the WSSA model to establish Academic SME's in their disciplines.
  - WSSA SME: Dr. Jill Schroeder, New Mexico State Univ.
  - ESA SME: Dr. Thomas (Gene) Reagan, Louisiana State University
  - APS SME: Dr. Frank Wong, UC Riverside
- The more we act together, the greater the opportunity to have impact.



# **Draft PR Notice 2009-X on Pesticide Drift Labeling.**



# Draft PR Notice 2009-X on Pesticide Drift Labeling

- EPA and state lead agencies have long acknowledged that some *de minimis* amount of drift is inevitable and unavoidable
- FIFRA risk assessments in registration- reregistration decisions include spray drift considerations
- FIFRA label requirements also include drift reduction considerations
- However, in late 2009, EPA issued a PR-Notice with Additional guidance for State Lead Agencies



# Proposed Pesticide Spray Drift Enforcement Guidance

- “Draft Guidance for Pesticide Registrants on Pesticide Drift Labeling”
  - *“Do not apply this product in a manner that results in spray (or dust) drift that **could cause** harm or adverse effects to people or any other non-target organism”*
- Abandons FIFRA's science-based risk-benefit standard of *“no unreasonable adverse effect”*
- Opens the door to frivolous law suits and enforcement actions against farmers and applicators
  - Forces state regulators to become theoretical risk assessors
  - Puts applicators at legal risk every time they go to work



# WSSA's Role

- To provide the most up-to-date information on the advances in application technology since the SDTF developed its data set on drift in the early-1990s.
- To provide written comments on the PR-Notice so that there is documentation of our concern and suggestions.
  - Joint comments were developed by WSSA, ESA and APS and signed by all 3 Society Presidents
- To provide forums for research and information exchange on Drift Reduction Technologies between EPA and the academic/research community.



# Dr. Bob Wolf – Kansas State Univ.



- Seminar - September 14, 2010
- Update on Application Technology for Agricultural Boom Sprayers
- Attendees from all EPA OPP divisions





# WSSA's Role

- **This isn't finished!**
  - EPA has reviewed all the 34,000+ comments and will come forward with a version of this as a final PR-Notice in mid-2011.
    - Possible new EPA label language: *“Do not apply this product in a manner that results in spray [or dust] drift that harms people or any other non-target organisms or sites.”*
- **WSSA needs to stay engaged to:**
  - Continue to make the technical expertise of our membership available,
  - Help the agency understand the practitioner's needs,
  - And take advantage of our leadership opportunities in application technology development and validation.



U.S. EPA

# National Pollution Discharge Elimination System (NPDES) permits





## 6<sup>th</sup> Circuit Court Ruling- Jan. 7, 2009

- Vacated the standing CWA pesticides rule that NPDES permits were not required when applications of pesticides to, over or near waters of the U.S. are consistent with FIFRA labels
  - Any chemical that leaves a residue (waste) falls under NPDES
  - Biological pesticides must also be permitted as they “undeniably alter the physical integrity of the waters”
- EPA was granted a two-year stay to develop a permitting process with implementation this coming April, 2011.



# NPDES Permitting

- Ruling takes effect on April 9, 2011
- NPDES Pesticide General Permit (PGP) will cover NH, ID, MA, OK, AL, NM, D.C. and Indian territory where EPA is NPDES permitting authority.
  - Above a defined threshold pesticide users must file a Notice of Intent (NOI).
- 44 Other States need to propose draft permits (with the EPA Federal PGP as a blueprint).

Four types of applications covered:

- Mosquito control
- Aquatic weed and algae control
- Aquatic animals
- Forest canopies





# WSSA and EPA: A very active relationship

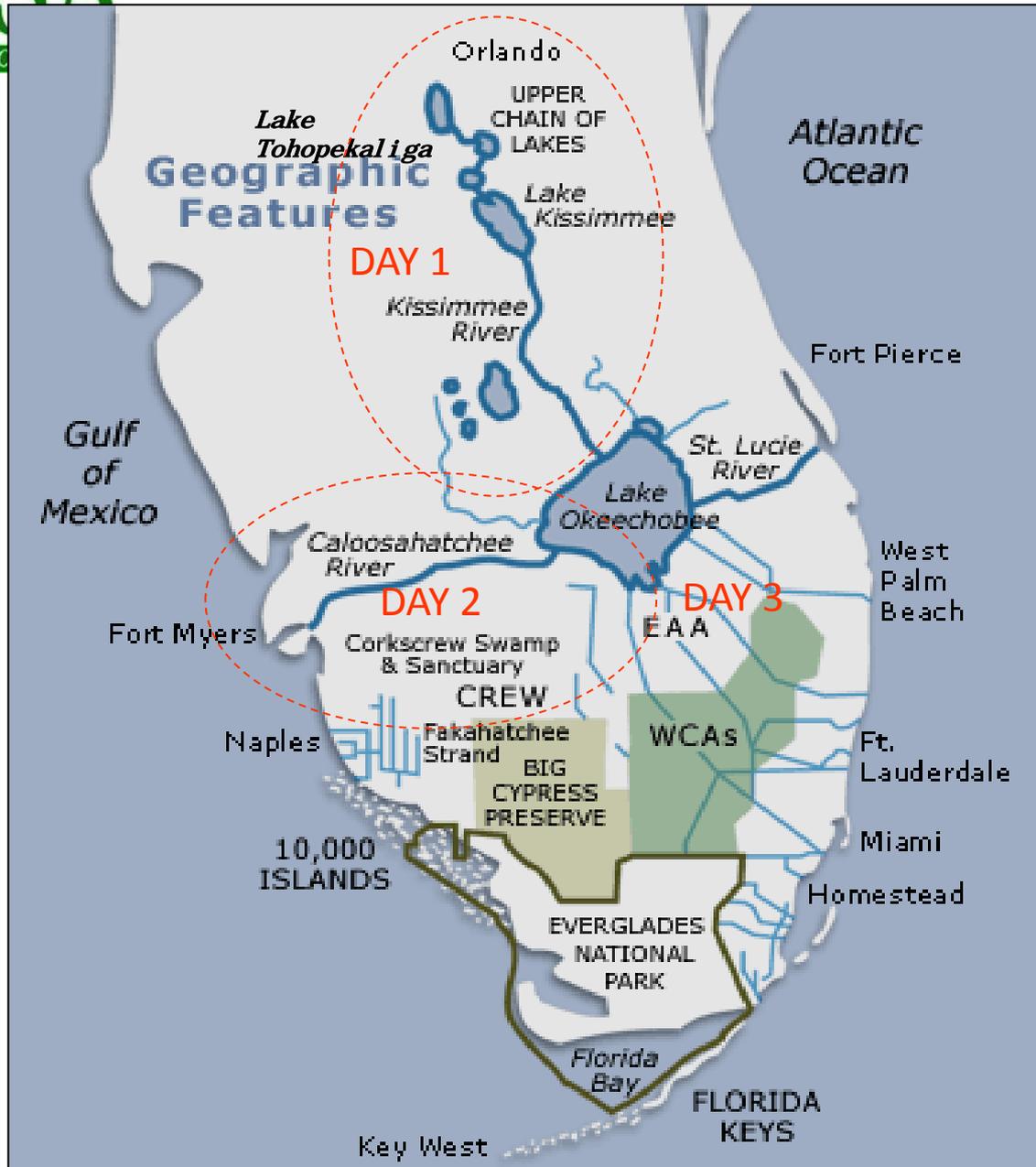
- *A special subset of WSSA's adult educational mission and an opportunity to offer the expertise of our membership:*
  - Invited EPA Office of Water (OW) to speak at the 2009 *National Invasive Species Awareness Week* and in symposia at the 2010 WSSA Joint National Meeting with SRM
  - Initiated and implemented 2 educational tours for EPA OW personnel to understand aquatic & riparian weed control
  - Created many occasions for WSSA and EPA scientists to discuss impacts and issues at EPA Headquarters



# U.S. EPA Florida Aquatic Pesticide Tour

## May 11-14, 2009

Map courtesy of  
the South  
Florida Water  
Management  
District  
(SFWMD)





# Florida Tour Objectives

- Interaction and discussion with Federal, State and local agency staff that sponsor, regulate and permit aquatic pesticide applications
  - Invasive species control practitioners
  - Federal and state regulators
  - University of Florida research and extension personnel
  - Public and private land and water users
- Provide information on the potential impacts of the NPDES permit process
- Develop a contact list for EPA



# Discussion of NPDES permitting issues



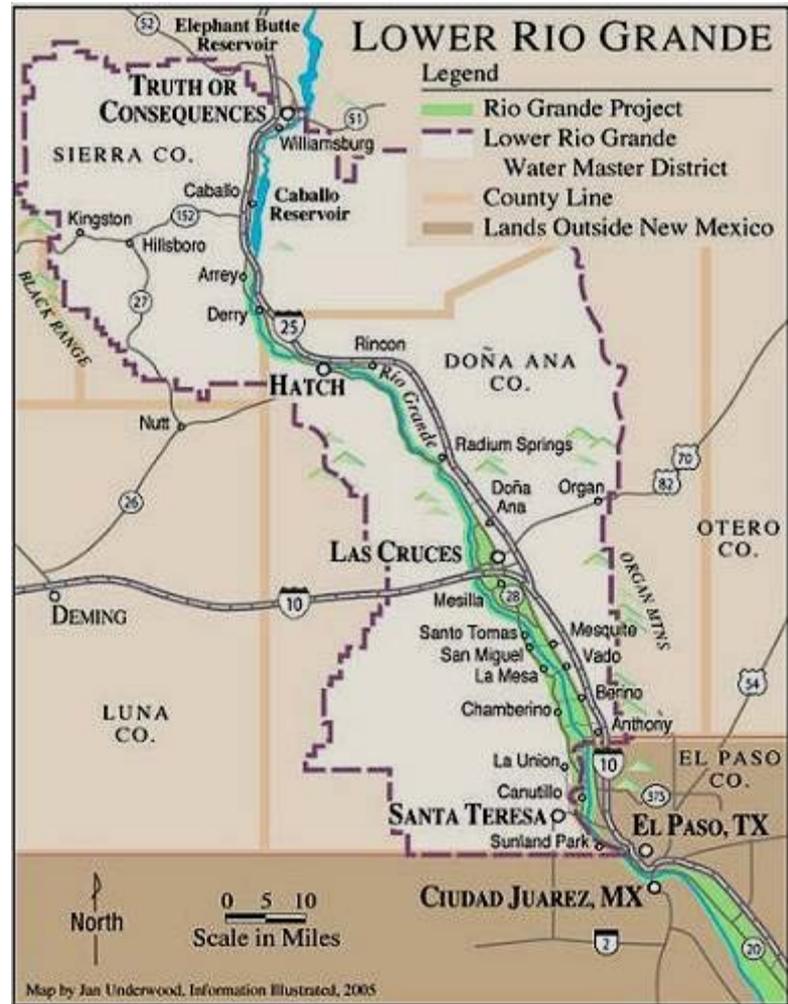
Lee County Mosquito/Hyacinth Control District , Florida Department of Agriculture and Consumer Services, and EPA personnel discussion





# Second Tour- August, 2010 Riparian Weed Management in New Mexico

To provide information on western Invasive Weed Management in contrasts to Florida, Dr. Jill Schroeder and Bonnie Rabe, NMDA Division Director, invited EPA staff from RD and OW to learn more about water and weed management in an arid land-locked state.





# Second Tour- August, 2010

## Riparian Weed Management in New Mexico

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### Tour Objectives:

- Storage and delivery of water to agricultural interests in south-central New Mexico where the maintenance of irrigation canals is a major issue
  - Sediment build up and weed control are major obstacles to efficient irrigation.
- Specialty crop issues on water and pest management.
- Management of invasive species (*esp. saltcedar*) to reduce water losses from reservoirs supplying Southern NM, Texas and Mexico.
- Restoration of wildlife habitat in the riparian corridor.



# Lessons only learned by listening



Create openings for EPA to discuss issue and opportunities with on-the-ground vegetation management professions, state authorities and academia



# Management of Herbicide Resistant Weeds



# Background

- EPA (*and everyone else*) has identified pest resistance as a major problem threatening continued use of currently registered weed management tools.
  - No new herbicide mechanisms-of-action have been identified since 1992!!!!
- EPA is still in the process of determining their role in herbicide resistance management.
  - A new Resistance management workgroup within EPA
- As the authoritative resource on Resistance Management, WSSA engaged to take the lead in RM Education



# Glyphosate- Resistant Weeds:

*Can We Close the Barn Door?*

David Shaw, President  
Weed Science Society of America

Presentations to EPA OPP

- October 13, 2009
- September 14, 2010



# The Challenge of Resistance

- Best Management Practices have not been followed, not just for glyphosate resistant crops, but for many modes-of-action. Glyphosate is just the most important one, given it's widespread use
  - Economics
  - Reduced tillage systems
- Six-state research project
  - Assess grower awareness
  - Comparison of BMP's to standard grower practice



# Continuing discussion on resistance management

- EPA and USDA sought a partnership with Weed Science to enhance the Nation's RM educational efforts
- In response, WSSA established a Herbicide Resistance Education Committee lead by David Shaw, Mississippi State University
  - A special WSSA committee
  - Charged with assembling HR education information for use by Weed Science Extension and others
  - Develop a consistent message across all groups



# WSSA Herbicide Resistance Education Committee

- Developing a comprehensive web-based education strategy on herbicide resistance
- Keeps WSSA as the go-to organization for science-based information on herbicide resistant weeds.
- A critical element of the committee's activities is the development of the two reports, funded by USDA-APHIS and EPA.



# WSSA committee activities

- Two Review papers funded by APHIS/EPA
  - **The Influences of Herbicide-Resistant Crops on the Evolution of Herbicide-Resistant Weeds**
    - Bill Vencill, University of Georgia, Editor
    - Completed and sent to APHIS
    - Will be submitted for publication in *Weed Science* (open access)
  - **Herbicide-Resistant Weeds Management Report**
    - David Shaw, Mississippi State University, Editor
    - Target date for completion is early to mid-2011
    - Will also be published in *Weed Science* (open access)



# Herbicide-Resistant Weeds Management Report

- **The APHIS-II report will include:**
  - Most effective best management practices (BMPs) for managing the development and spread of herbicide resistance in weeds
  - Degree of adoption of these BMPs
  - Factors impacting adoption, or the lack thereof
  - Recommendations for how to increase adoption
- **The National Research Council (NRC) has invited WSSA to hold a national roll-out symposium of our materials at the National Academy of Science in Washington, DC in 2011.**



# WSSA committee activities

- Engage other groups concerned about issue
  - National Research Council
  - National Cotton Council
  - National Corn Growers Association
  - American Soybean Association
  - National Association of Conservation Districts
  - NA Herbicide Resistance Action Committee
  - Natural Resource Conservation Service
  - USDA Office of Pest Management Policy

# WSSA in the Future

- Invest in long-term partnerships for impact and influence in the international discussion on vegetation management
  - What should these look like?
  - Who should be included?
  - Can we broaden our network?
- There has been no time when the Applied Sciences have been more needed to address change than right now!





**Thank you!**