

The Association of State Wetland Managers Presents: Improving Wetland Restoration Success Webinar Series

Gulf Coast Restoration Post-Katrina

Presenters:

- *Bren Haase, Coastal Protection & Restoration Authority, State of Louisiana*
- *William P. Klein, Jr. Ed.D., U.S. Army Corps of Engineers*
- *John Andrew Nyman, PhD, Professor, School of Renewable Natural Resources, Louisiana State University*
- *Denise J. Reed, PhD, Chief Scientist, The Water Institute of the Gulf*

Moderators: Jeanne Christie & Marla Stelk



Supported by EPA Wetland Program Development Grant 83578301

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AGENDA

- **Welcome and Introductions** (15 minutes)
- **Wetland Restoration Post-Katrina** (80 minutes)
 - Bren Haase, Coastal Protection and Restoration Authority, State of Louisiana
 - William P. Klein, Jr. Ed.D., U.S. Army Corps of Engineers
 - John Andrew Nyman, PhD, Professor, School of Renewable Natural Resources, Louisiana State University
 - Denise J. Reed, PhD, Chief Scientist, The Water Institute of the Gulf
- **Question & Answer** (20 minutes)
- **Wrap up** (5 minutes)





WEBINAR MODERATORS



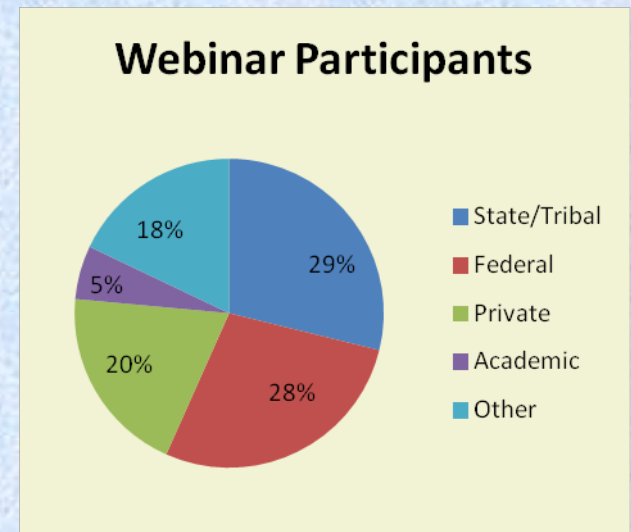
Jeanne Christie,
Executive Director



Marla Stelk,
Policy Analyst

WETLAND RESTORATION PROJECT

- Interdisciplinary workgroup of 22 experts
- Monthly webinar series
- Draft white paper based on webinars, participant feedback, external review
- Pursuing strategies that:
 - Maximize outcomes for watershed management
 - Ecosystem benefits
 - Climate change
 - Invasive species
 - Improve permit applications and review
 - Develop a national strategy for improving wetland restoration success



ACTION PLAN ➡ IMPLEMENTATION

WEBINAR SCHEDULE & RECORDINGS

Association of State Wetland Managers - Protecting the Nation's Wetlands.



ASWM Upcoming Webinars

- **Stream/Wet Meadow Restoration** - September 8, 2015
- **The Florida Wetlands Integrity Dataset: Part 2** - September 16, 2015
- **Solar Project Siting and Wetland Permitting** - September 29, 2015

For a complete list of ASWM webinars, [click here](#).



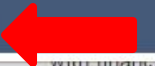
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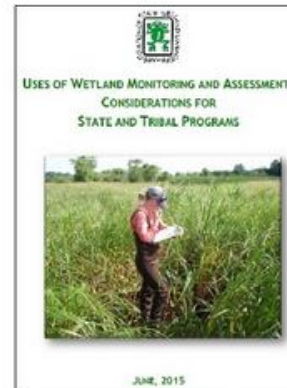
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ASWM Publications

Use of Monitoring and Assessment in Wetland Programs

The Association of State Wetland Managers has released a new report - *Use of Monitoring and Assessment: Considerations for State and Tribal Wetland Programs*. This report - which was prepared with financial assistance from an EPA State Wetland Program Development Grant - explores the various ways that states and tribes could make better use of existing monitoring and assessment methods to obtain science-based answers to wetland management problems. While it provides an overview of many common approaches to wetland monitoring, the focus is primarily on **why** these methods are selected for a given purpose. This report encourages the thoughtful identification of the most appropriate and efficient methods in light of available financial and staff resources.



Picture of the Week *Lovely Weeds*




Jeanne Christie Photo

For information about this picture and to see past pictures of the week click [here](#).

WEBINAR SCHEDULE & RECORDINGS

Association of State Wetland Managers - Protecting the Nation's Wetlands.



ASWM Upcoming Webinars

- Novel Ecosystems and Restoration - 11/19/15
- Climate-Smart Conservation for Wetlands - 12/9/15
- Improving Wetland Restoration "Success": What We've Learned So Far - 12/15/15

For a complete list of ASWM webinars, click here.

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[State Wetland Managers Association of State Wetland Managers, Inc. \(ASWM\)](#)

ASWM Webinars/Conference Schedule


ASWM WEBINARS

The Association of State Wetland Managers holds webinars on various topics, most of which relate to a specific project and work group. In addition, ASWM holds webinars as part of its members' webinar series on topics of interest to members. Please click on the webinar group name below for more details about individual webinars. In all cases, if you have any questions about registering for a webinar, please contact Laura at laura@aswm.org.

If you haven't used Go To Webinar before or you just need a refresher, please view our guide prior to the webinar here.

The Association of State Wetland Managers (ASWM) and the Society of Wetland Scientists (SWS) share the common goal of encouraging sound science in wetland research, management, restoration, policy, and conservation. To meet this goal, the two organizations developed a formal partnership in 2014. ASWM is pleased to provide a link to SWS's new Members Webinar Series and encourage you to investigate their webinar series as well as our own.

For a full list of all available webinar recordings with links, click here.



Members' Wetland Webinar Series

For Members of ASWM Only

[Future Webinars](#)

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Hot Topics Webinar Series

[Using Remote as a Wetland Restoration Tool: Restoration Lessons Learned and an Introduction to the Wetland Restoration Assessment Tool \(WRAT\)](#)

[Future Webinars](#)

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Improving Wetland Restoration Success Project

The Association of State Wetland Managers Presents
Improving Wetland Restoration Success
2014 - 2015 Webinar Series

[Future Webinars](#)

[Past Webinars](#)

Natural Floodplain Functions Alliance Webinar

[Future Webinars](#)



FUTURE SCHEDULE

Topics for the remainder of 2016:

- Tuesday, July 12, 3pm ET: Bottomland Hardwood Restoration
- How to Select the Right Wetland Restoration Team
- How to Incorporate Wetland Restoration in to Landscape Planning
- Prioritizing Wetland Restoration Mitigation Site Selection in the Face of Climate Change
- Final draft report: A National Strategy for Improving Wetlands Restoration Outcomes

FOR FULL SCHEDULE, GO TO: <http://aswm.org/aswm/6774-future-webinars-improving-wetland-restoration-success-project>

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Please contact **Laura Burchill**
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(207) 892-3399

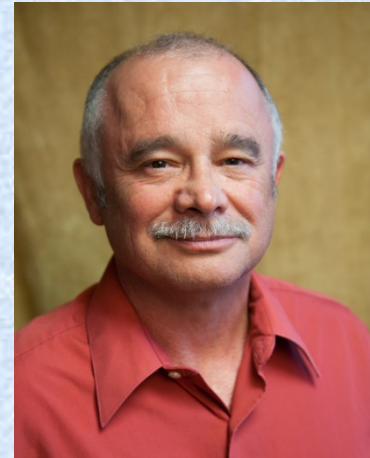
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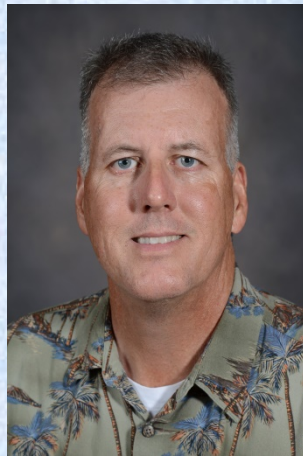
PRESENTERS



Bren Haase
Coastal Protection and
Restoration Authority
State of Louisiana



William P. Klein, Jr. Ed.D.
U.S. Army Corps of Engineers



John Andrew Nyman, PhD
School of Renewable Natural Resources
Louisiana State University



Denise J. Reed, PhD
The Water Institute of the Gulf

A “COOKBOOK” APPROACH TO WETLAND RESTORATION WON’ T WORK

There are too many variables.

- *Every landscape is different*
- *Purpose of restoration varies*
- *Even a good design may not anticipate events*
- *Time needed varies*
- *Intervention and adaptation may be needed during and after construction*
- *Evaluating progress and completeness is needed*



Major Reasons for Failure (examples)

Overarching

- Poorly Defined Outcomes/Performance Criteria
- Lack of Access to Expertise and Training
- Lack of Accountability and Enforcement
- Altered and Changing Landscapes/Climate
- Separation of Professions – The ‘Silo’ effect

Site-Specific

- Planning issues, i.e., Inadequate Assessment of landscape, hydrology & soils
- Construction issues, i.e., failure to implement design, no adaptive management
- Post construction issues, i.e., poor record keeping, limited follow up activity to address problems

How Do We Improve?

- Better defined goals and performance criteria
- Improve Access to Knowledge and Training
- Require Accountability
- Require Documentation of Credentials
- Develop a Common Taxonomy
- Adopt New Science and Technology into Regulations and Guidance
- Engage Multi-Disciplinary, Integrated Teams
- Regional Data Depositories to Document Reasons for Success and Failure

EACH WETLAND RESTORATION PROJECT IS UNIQUE:

- *Consider both historic and current landscape setting*
- *Analyze how water moves into and out of the site*
- *Evaluate soils present and identify any onsite drainage*
- *Focus first on hydrology and soil first, last on plants*
- *Develop a plan that is achievable for the site*
- *Develop comprehensive cost estimates*
- *Ensure plan is followed*
- *Hire experienced and knowledgeable contractors*
- *Adapt plan as needed during construction*
- *Determine if monitoring criteria will measure progress*
- *Keep good records and share with others*



WHITE PAPER AVAILABLE TO REVIEW

<http://www.aswm.org/pdf lib/wetland restoration whitepaper 041415.pdf>

This white paper is currently in draft form only. The final version is expected to be completed by the end of 2016. Chapter Two will be extensively revised after significant consultation with federal and state agencies and non-governmental organizations involved in wetland restoration efforts in order to identify actions that are already being done, new actions that can be done, and agencies/organizations that can implement them.

Wetland Restoration

Contemporary Issues & Lessons Learned

v. 3.8.16

Additional Information: <http://www.aswm.org/wetland-science/wetland-restoration>

CHAPTER 2: ACTIONS TO IMPROVE WETLAND RESTORATION

OVERALL RECOMMENDED ACTIONS

This current document identifies needed actions. In 2015 & 2016, this part of the paper will be expanded and revised to identify how these changes could be implemented by suggesting who, what and how.

RECOMMENDED ACTION #1: DEVELOP CLEAR PROJECT GOALS & USE APPROPRIATE AND QUANTIFIABLE PERFORMANCE STANDARDS TO MEASURE PROGRESS

RECOMMENDED ACTION #2: DEVELOP ACHIEVABLE PERFORMANCE CRITERIA FOR SHORT TERM EVALUATION AND ESTABLISH A LONG-TERM MANAGEMENT PLAN

RECOMMENDED ACTION #3: ESTABLISH APPROPRIATE PERFORMANCE CRITERIA BASED ON RESTORATION GOALS & PROJECT TYPE

RECOMMENDED ACTION #4: RESEARCH THE SITE'S LAND USE HISTORY AND MODEL POTENTIAL FUTURE STRESSORS USING HISTORICAL TREND DATA

RECOMMENDED ACTION #5: USE A WATERSHED APPROACH

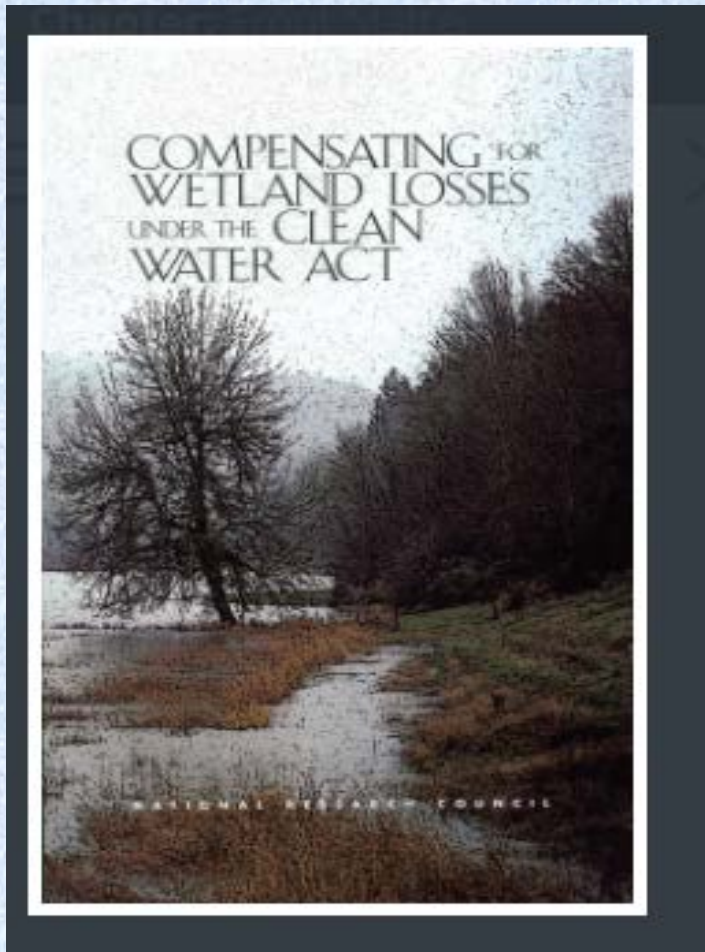
RECOMMENDED ACTION #6: INCLUDE PRE AND POST CONSTRUCTION COSTS IN ESTIMATES

RECOMMENDED ACTION #7: USE AN ADAPTIVE MANAGEMENT APPROACH THROUGHOUT THE LIFE OF THE PROJECT

RECOMMENDED ACTION #8: REQUIRE DOCUMENTATION OF CREDENTIALS, PROVIDE INCENTIVES & ENFORCE ACCOUNTABILITY

RECOMMENDED ACTION #9: IMPROVE ACCESS TO KNOWLEDGE & TRAINING AND ENGAGE MULTI-DISCIPLINARY INTERDISCIPLINARY TEAMS

Identifying Challenges Can Lead to Solutions: A Previous Case



National Mitigation Action Plan Recommendations

Example: The Corps and EPA, in conjunction with USDA, DOI, and NOAA, working with States and Tribes, will co-lead the development of guidance on the use of on-site vs. off-site and in-kind vs. out-of-kind compensatory mitigation by the end of 2003.

RECOMMENDED ACTION #2:

**DEVELOP ACHIEVABLE PERFORMANCE CRITERIA
FOR SHORT TERM EVALUATION AND ESTABLISH A
LONG-TERM MANAGEMENT PLAN**

Seeking Specific Recommendations

- ❖ Who should take action (can be many parties)?
- ❖ What should they do?
- ❖ How should they do it?

Recommendations Welcome

❖ Please submit to:

Marla Stelk (one of your moderators today!)

marla@aswm.org

Gulf Coast Restoration Post-Katrina

IT WILL TAKE US A FEW MOMENTS TO MAKE THE SWITCH...



Photo Credit: Marla Stelk

Haase Recommendations

Challenges	Recommendation	Selected Measures
Funding: Recommended plan exceeds \$50 Billion	Wise expenditure of available funding on high priority/most impactful projects	Continued update of plans incorporating new information and lessons learned from previous implementation
Scale: Projects on order of thousands of acres	<p>Better resource management (\$, sediment, water)</p> <p>Better contractor management (industry capacity)</p>	<ol style="list-style-type: none"> 1) Louisiana Sand Resource Database 2) Mississippi River Hydrodynamic Study 3) LaGov Financial Management System 4) Industry Days 5) Market Soundings
Assessing success: How do we know we are accomplishing anything?	Continued improvement of monitoring, AM and forecasting/hind casting tools	<ol style="list-style-type: none"> 1) System-wide Assessment and Monitoring Program 2) Coast-wide Reference Monitoring System 3) Barrier Island Comprehensive Monitoring Program 4) Programmatic AM - Master Plan Updates

Klein Recommendations

A direct quote from the FY 2017 Corps budget proposal:

“The Budget continues to reflect the tough choices necessary to put the country on a fiscally sustainable path.”

Pre-LCA Study Guidance:

If you can clearly demonstrate agreement between the various stakeholders and the Corps

If you can clearly demonstrate cooperation between the various stakeholders and the Corps

And If you can clearly demonstrate a combined will to accomplish the same thing between the stakeholders and the Corps

Then I can show you the money.

Congress serves the people, all of the people. If you have a **lack of agreement** on what and how to do ecosystem restoration, if you do not have **cooperation** among the various stakeholders and the Corps, and if you can not demonstrate a **combined will** to accomplish the same thing between the stakeholders and the Corps, then Congress **will look to those projects and those folks who can clearly demonstrate agreement, cooperation, and combined will.**

Nyman Recommendations

Cause of Failure	Recommendation	Selected Measures
<p>Over-filling vertically: many wetlands created with dredged material are too high to provide significant habitat for fish.</p>	<p>Recognize that creating wetlands higher than natural wetlands delays rather than extends fish use of created wetlands.</p>	<p>Flooding patterns: percent flooding and duration of flooding events.</p>
<p>Over-filling laterally: wetlands created with dredged material have less edge than most natural wetlands.</p>	<p>Recognize that creating wetlands with little edge delays rather than extends the abundance of high quality fish and wildlife habitat.</p>	<p>Edge habitat: area of open water within 10m of emergent vegetation (m²)/project area (ha).</p>
<p>Assuming bigger is more efficient: barrier islands and back barrier marshes created with dredged material generally support too many predators to allow successful nesting by shorebirds.</p>	<p>Create numerous wetlands that are too small, isolated and salty to support raccoons, coyotes, and feral pigs.</p>	<p>Nest success.</p>

REED: OBSERVATIONS/ RECOMMENDATIONS

- Tailor the scientific tools to meet the needs
 - Not all answers require the most detailed approaches
- Identify the key decision drivers
 - Focus analysis there to get useful results
- Focus on the big picture
 - There are so many aspects of wetlands that are impossible to predict
- Acknowledge what you don't know
 - Scenarios can help explore 'uncertainty space'
- Allow nature to work – don't try to over-engineer
 - Some natural dynamics cannot be replicated



Questions?

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John Andrew Nyman, PhD: jnyman@lsu.edu

Denise J. Reed, PhD: dreed@thewaterinstitute.org



*Thank you for your
participation!*



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