



## Tampa Bay: Numeric Nutrient Criteria: Improving Water Quality in an Urban Setting

*NRLI seeks to impact decision making in Florida by creating a network of professionals prepared to effectively address natural resource issues through collaborative leadership and conflict management.*

### Session Overview

Fellows and Project Team members convened at the St. Petersburg Bayfront Hilton on Thursday, October 9 for NRLI Class XIV Session 3. The issue focus was *Numeric nutrient criteria: improving water quality in an urban setting*.

Lindsay Cross, Environmental Science and Policy Manager for the Tampa Bay Estuary Program and NRLI Alumna, Class XI, was the context speaker for this session. She provided an overview of the history of the bay and described the unique and collaborative efforts to protect and improve estuary water quality. Lindsay noted that Tampa Bay is Florida's largest open-water estuary, spanning 400 square miles. The Tampa Bay watershed has many uses, including urban, agricultural, mining, and natural areas, and more than 2.3 million people live within its boundaries. In the 1970s and 1980s, the health of the watershed declined drastically. High levels of nitrogen led to increased algal growth, cloudy water, and seagrass decline, all visible and disturbing to both scientists and the public. In response to concerns about bay health, The Tampa Bay Estuary Program (TBEP) was founded in 1991 with the mission of building partnerships to restore and protect Tampa Bay through implementation of a scientifically sound, community-based management plan. In 1998, TBEP spearheaded the effort to establish the Tampa Bay Nitrogen Management Consortium. This consortium is a partnership of 45 local governments, regulatory agencies, industries, agricultural entities, and electric utilities. These diverse stakeholders have managed to work together to reverse the decline in water quality. Despite the size and scope of the challenge, Tampa Bay now meets rigorous water quality standards.

The NRLI Fellows had a chance to experience the estuary first hand on Friday morning, October 10. Libby Carnahan, Florida Sea Grant Agent, UF/IFAS Extension Pinellas County and NRLI Alumna, Class XII, guided NRLI Fellows on a canoe trip at Weedon Island Preserve, providing an overview of the habitats and species found in the bay. Fellows spent two hours enjoying the sunshine while examining mangroves, seagrasses, fish species, and the historic mosquito control ditches dug in the 1950s.

In addition to the context speaker and field trip, a group of stakeholders involved in the Tampa Bay Nitrogen Management Consortium joined NRLI to share their perspective and experiences. The stakeholders included:

- ◆ Cathy Harrelson, Florida Organizer, Gulf Restoration Network
- ◆ Jessica McCoy Stempien, Environmental Manager, Office of Agricultural Water Policy, Florida Department of Agriculture and Consumer Services
- ◆ Rob Brown, Manager, Environmental Protection Division, Manatee County
- ◆ Doug Yowell, Water and Natural Resources, Duke Energy



Class XIV Fellows canoeing at Weedon Island Preserve during session 3. Photo by Jessica Ireland.



A Roseate Spoonbill was among some of the wildlife we saw during our canoe trip at Weedon Island. Photo by Jessica Ireland.

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# Curriculum Focus: Values, Perceptions, and Understanding Conflict

During Session 3, Fellows learned about frameworks for understanding natural resource conflicts and negotiation; the impacts of values, perceptions, and attitudes on decision-making and consensus processes; and the timeline tool as a technique for understanding conflict and facilitating dialogue. Specifically, the objectives of the session were to:

- ◆ identify causes of conflicts impacting natural resource management discussions;
- ◆ explore implications of differing beliefs and values on natural resource decision-making;
- ◆ experience the *participatory timeline tool* as a technique to facilitate stakeholder discussions; and
- ◆ share practicum proposals and provide/receive input and feedback.

## Introduction to Conflict

NRLI Director Jon Dain led Fellows through two interactive sessions with large and small group activities. Because conflict is ubiquitous and complex, we use many different words to describe, manage, and frame it. The terms we use can either help or hinder problem solving.

In NRLI, conflict is defined as: a relationship between two or more parties; a real or perceived threat to needs, interests, or concerns, marked by violence or not; and a normal part of human life. Although conflict is usually considered in a negative context, conflict can have positive as well as negative outcomes—in NRLI, conflict management is viewed as an opportunity to use conflict for positive change.



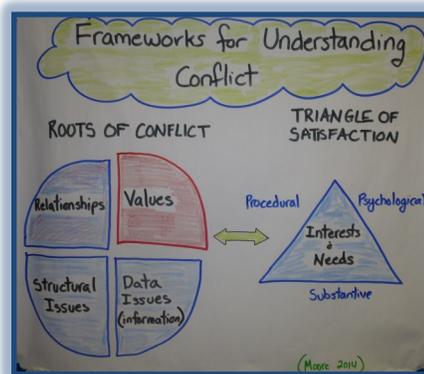
Jon Dain discusses frameworks for understanding conflict with Class XIV Fellows. Photo by Jessica Ireland.

Environmental conflicts are particularly challenging because they involve multiple and competing parties, jurisdictions, issues, and resources. These conflicts are often characterized by high emotions because the fundamental issues at stake can have implications for individual and community health, racial and ethnic justice, survival of species, integrity or destruction of ecosystems, economic or cultural viability, and access to treasured resources.

Negotiation and joint problem solving can be used to address tensions that result from clashing or competing interests. Interests are “desires, concerns, or wishes that people in a dispute want to have addressed and satisfied” (Moore 2014). In addition to competing interests, drivers like strained relationships, structural issues, information concerns, and clashing values can exacerbate or be the cause of conflict. While structural problems and information disputes can often be dealt with collaboratively, frictions resulting from relationship problems and/or values differences may create a chasm between parties that is challenging to overcome. Mediation may help bridge relationship distrust but differences in values require a unique set of strategies.



Class XIV Fellows brainstormed words associated with conflict then organized these onto a continuum from least serious to most serious. This activity introduced fellows to the concept of conflict and conflict management. Photo by Jessica Ireland.



Frameworks for understanding conflict (adapted from Moore 2014).

# Curriculum Focus cont'd

## Values and Perceptions

Fellows experienced the degree to which values and perceptions impact conflict when they participated in an interactive group activity called “Drama by the River.” The activity began with a story of conflict involving five people. After the story was read and the stage for the drama set, Fellows ranked the characters on a scale of worst to best behavior, first individually then in pairs. Next, Fellows divided into groups and attempted to come to consensus on a group ranking. Some groups succeeded in reaching consensus and others failed. In processing the experience, Fellows discussed their rankings, their opinions about the characters’ behaviors, and how they were or were not able to come to consensus as a group.

This activity highlighted the role that values play in decision making. We all have value systems—standards of rightness/goodness, practices, patterns of thinking. These value systems are linked to our identities and are challenging to negotiate or compromise on. As humans, we use our value systems to interpret our surroundings, develop positions, and make decisions. When lacking full information about a situation, we fill the vacuum with assumptions based on our values and experiences. Contentious issues can exacerbate differences in values and perceptions and make dialogue difficult.

## Timeline Tool

Timelines help groups of people gather, share, organize, and analyze information. When used in a participatory fashion, timelines can engage stakeholders in discussion and help to bridge differing perceptions. The participatory timeline tool is an interactive technique that can help individuals and groups reflect on events through time, thus gaining perspective on what has occurred and why. The tool can be used to facilitate discussion in systematic and non-threatening ways. In its simplest form, a long piece of butcher paper is placed on tables and participants are asked to create a timeline of an event or issue, noting key moments from their own perspective. Participants write down key experiences and use dots or other markers to note especially important moments or actions.

Timelines can help a group to create a shared history and can reveal flash points and key events. Discussion questions used to debrief a timeline in a conflictive situation may include: what have you learned about the conflict from the timeline; what have been the most significant events in escalating this conflict and why; how have events affected relationships among the parties; why do you think the parties acted the way they did; what outside forces were at play; and does this analysis suggest possible solutions or avenues for de-escalation? (FAO 2002)



Class XIV Fellows practiced using the timeline tool by mapping their experience of NRLI to date. Photo by Jessica Ireland.

# Confronting Conflict in Tampa Bay

Alison Adams & Jeremy Olson (Class XIV Fellows)

Each month, we ask a pair of Fellows to reflect on the session in their own words. This article describes the key takeaways from the point of view of Fellows Alison Adams and Jeremy Olson.

What do you think of when you hear the word conflict? We were asked this question on the first day of the session in Tampa Bay. Given a pad of sticky notes, we all scribbled our thoughts down and slapped them up onto the wall. Standing back afterwards, a glance of the wall revealed a wide range of key words – everything from “frustrating” to “war.” We then organized the words from least serious to most serious. Nearly all had a negative connotation, and we were questioned about why this was.

Conflict can be uncomfortable. What was pointed out, however, is that it is a normal part of human life and can have positive outcomes. Learning the root causes of conflict, including relationships, structural issues, data issues, and values, taught us how tackling each type presents unique challenges. For example, an exercise called “Drama by the River” helped to illustrate the importance of recognizing both our own and others’ values in working through conflicts. In this exercise, the NRLI fellows worked to reach consensus about our evaluation of a hypothetical scenario. The process of discussing the scenario made us realize not only how differently we all interpreted the situation, but also how our diverse values informed our interpretations.

Like our previous sessions that focused on topics such as framing and listening in conflicts, the program team both communicated the importance of recognizing values, as well as helped the fellows to develop a toolkit to deal with value-based conflicts. During our visit to Weedon Island Preserve in St. Petersburg, Jon Dain pointed out that you can’t negotiate over values. As such, values-based conflicts are some of the most difficult to navigate. We discussed some key tools for dealing with values-based conflicts such as reframing the issue, using empathy to understand all sides, and looking for the interests that lie behind people’s values. The takeaway of these exercises and discussions was that there are ways to manage and even resolve conflicts that may seem intractable at first glance.

Tampa Bay was a great location to show conflict does not always have to be negative. Here, diverse stakeholders successfully negotiated through complex challenges to improve the Bay’s water quality. Lindsay Cross, the Environmental Science and Policy Manager for the Tampa Bay Estuary Program, gave a presentation that explained how various stakeholders in the area were able to come together and contribute to the improvement of the bay’s water quality and the return of sea grass. The cooperation was reflected in

the stakeholder panel we held for the session. The panel members were cordial with one another, obviously proud that their efforts resulted in a cleaner Bay. As our group canoed over the clear water of Tampa Bay observing Roseate Spoonbills and other wildlife, we couldn’t help but be thankful for all the Tampa Bay consortium members. Instead of avoiding conflict, they used some of the tools we learned in this session to make a positive change.

As professionals who regularly work with and study natural resource conflicts, we are able to apply these conflict management tools in a variety of ways. As was emphasized in our sessions, these conflicts are complex, involving multiple stakeholder groups, issues, and natural resource concerns. Importantly, while these contentious issues are often scientific or structural in nature, they are subject to diverse and even conflicting interpretations. These tools are helpful in the analysis of environmental conflicts, as they encourage us to examine how people develop their positions about an issue and what may be influencing their opinions. By acknowledging the complexity of the situation and validating stakeholder perceptions and interpretations, we can help address environmental conflicts in a way that promotes positive outcomes.



What do you think of when you hear the word conflict? Photo by Jessica Ireland.



Class XIV Fellows converse with stakeholders involved in the Tampa Bay Nitrogen Management Consortium during the stakeholder panel. Photo by Jessica Ireland.

## NRLI Class XIV Fellow Spotlight

### Bonnie Wolff Pelaez



Bonnie Wolff Pelaez is an Environmental Manager with the Florida Department of Agriculture and Consumer Services (FDACS) Office of Agricultural Water Policy. She holds a Bachelor of Science degree in Animal Science from North Carolina State University and has been with FDACS for 21 years.

Based in Okeechobee, Bonnie works with agricultural producers within the Northern Everglades and Estuaries Protection Program, an area that spans from Orlando to Stuart and Ft. Myers. Her objective is to enroll producers in FDACS Best Management Practices (BMP) program and assist those producers in implementing the appropriate practices. Bonnie works with all categories of agriculture to implement BMPs for water quality and water quantity benefits. Many of the practices have the benefit of saving water as well, reducing the need for groundwater pumping for irrigation and freeze protection. Bonnie coordinates with the Okeechobee, Highlands, and Hendry Soil and Water Conservation Districts to provide expedited cost share reimbursement to producers who implement BMPs.

Bonnie has served on the board of the Okeechobee Area Agri-Council for many years and has coordinated their efforts to provide farm tours for middle school age youth. Bonnie assists with the Okeechobee Ag Venture, a program that brings 4<sup>th</sup> grade youth to an event featuring volunteers demonstrating how different foods are produced, encouraging them to appreciate the availability of local, affordable food.

Bonnie is a 4<sup>th</sup> generation Florida native, growing up in Okeechobee in a family dairy and citrus operation. She spends her time outside of work riding and assisting with cattle handling on her husband's local ranch as well as their ranch in Bay City, Texas. She is a member of Church of Our Saviour and has previously been elected to the vestry. Any other spare moments are spent writing checks to her daughter who is studying Renewable Natural Resources at Louisiana State University.

### Clay Coarsey



Clay Coarsey is a Professional Engineer for the Suwannee River Water Management District located in Live Oak, Florida. He has been with District for over 10 years. Clay started out at the District reviewing Environmental Resource Permits and Water Use Permits in the Department of Resource Management. In 2008, Clay moved to the Water Supply Division to assist in Groundwater Modeling and Minimum Flows and Levels (MFLs) development and

implementation. A minimum flow level is defined in Chapter 373.42 of Florida Statutes as the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area. His primary responsibilities are to assist in establishing scientifically based MFLs for all water bodies on the District's MFL priority list and to ensure that once they are established the MFLs are not violated as additional water is allocated for use by the District. He has worked both in the field collecting data and in the office processing and analyzing data that is used as input for the habitat modeling that is integral to establishing MFLs. Clay has had a broad range of experiences while working at the District, experiences ranging from coordinating flood pumping responses with the SWFWMD during the unprecedented flooding resulting from tropical storm Debbie in June of 2012 to data processing and analysis used as input for running groundwater flow models.

Clay is licensed as a Professional Engineer in the State of Florida and graduated from the University of Florida with a Bachelor's of Science in Agricultural and Biological Engineering. He is also the current President of the Suwannee River Toastmasters. Away from work Clay enjoys spending time with his wife, Melody, and 2 young daughters, Cayden and Kylie. He enjoys camping, hiking, grilling, and spending as much time outside as possible. He enjoys the privilege of living, working and traveling in the state that most people come to vacation in.

## NRLI Alumni Spotlight

### Lindsay Cross, NRLI Class XI Environmental Science and Policy Manager, Tampa Bay Estuary Program



Lindsay Cross received a B.S. degree in Environmental Health from Colorado State University and a M.S. degree in Environmental Science and Policy from the University of South Florida. As the Environmental Science and Policy Manager at the Tampa Bay Estuary Program, she manages multi-entity habitat restoration, water quality improvement, ecosystem protection, and environmental policy projects. She is also responsible for developing grant proposals, creating public documents summarizing Tampa

Bay research projects, facilitating projects related to Low Impact Development and smart growth in planning, and serving on policy and advisory boards. Prior to this position, Lindsay served as TBEP's Technical Assistant, Public Outreach Assistant, and Environmental Scientist. She has been with the Estuary Program for 11 years.

Before joining the TBEP, Ms. Cross was a project manager at the Iowa Natural Heritage Foundation and a Dive Master and children's SCUBA instructor. She currently volunteers as the President of the Friends of Weedon Island, Inc.

Lindsay completed NRLI in 2012 as a member of Class XI. As a result of her NRLI experience, she has been asked to facilitate various TBEP workgroups, as well as the Pinellas County RESTORE Act Working Group that will recommend how to allocate funds to benefit Pinellas County's environment and economy.

### Libby Carnahan, NRLI Class XII Florida Sea Grant Agent, UF/IFAS Extension, Pinellas County



Libby Carnahan is a UF/IFAS Extension, Florida Sea Grant Agent in Pinellas County. Libby is a proud graduate of NRLI class XII. In her position, she provides marine education and outreach to the community, government, and marine industries. Libby has 15 years experience teaching and researching marine science in Florida. Libby has a BS in Biology from Truman State University (1998) and a MS in Marine Science from University of South Florida, College of Marine Science (2005).

*A hearty thanks goes out to Lindsay and Libby for their help in planning this session and sharing their knowledge and expertise with our group. Thank you, also, to Weedon Island Preserve for the use of canoes and facilities.*



## Looking ahead: Class XIV Session 4

For session 4, we will be in Immokalee. The issue focus is endangered species: The future of the Florida Panther, and the curriculum will focus on designing effective meetings, multi-stakeholder processes, focus groups, and a NRLI mid-term review.

## Class XIV Fellows

**Alison Adams**, Assistant Professor, University of Florida School of Forest Resources and Conservation

**Carrie Stevenson**, Coastal Sustainability Agent, UF/IFAS Escambia County Extension

**Gene McAvoy**, Regional Vegetable Extension Agent/County Extension Director, UF/IFAS Hendry County Extension

**Jeremy Olson**, Land Management Specialist, St. Johns River Water Management District

**Kimberly Sykes**, Deputy Manager, Crystal River National Wildlife Refuge Complex, U.S. Fish and Wildlife Service

**Clay Coarsey**, Professional Engineer, Suwannee River Water Management District

**Greg Gibson**, Lt. Colonel/Deputy Director, Division of Law Enforcement, Florida Fish and Wildlife Conservation Commission

**Matt Arsenault**, Policy Analyst, Florida Department of Agriculture and Consumer Services Office of Energy

**Stacie Auvenshine**, Biologist, U.S. Army Corps of Engineers

**Bonnie Wolff Pelaez**, Environmental Manager, Florida Department of Agriculture and Consumer Services

**Scott Calleson**, Biological Scientist IV, Division of Habitat and Species Conservation, Florida Fish and Wildlife Conservation Commission

**Patty Hutfles**, Senior Project Manager, Johnson & Johnson Vision Care, Inc.

**Beth Dieveney**, Deputy Superintendent for Science and Policy, National Oceanic and Atmospheric Administration

**Tamela Kinsey**, Environmental Engineer, U.S. Army Corps of Engineers

**Jessica Mendes**, Research Analyst, Lee County Environmental Policy Management

**James Erskine**, Acting Director, Water Resources Department, Miccosukee Tribe of Indians of Florida

**Allen Scheffer**, Assistant Director of Field Services District I, Florida Farm Bureau Federation



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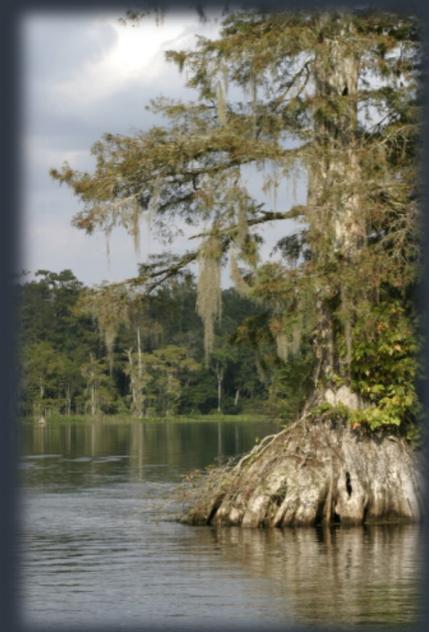
*Collaborative solutions for natural resource challenges*

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