

Big Cypress Watersheds Restoration Coordination Team

Friday, February 22, 2008 Meeting Minutes
9:30 – 12:30

1. Welcome/Call to Order: The meeting was opened at 9:45.
2. Introductions of members

In Attendance

Jim Burd, FWC

Adrienne Ruga

Christy Fagundez

Jennifer Nelson, DEP

Jason Lauritson,
Audubon

Nicole, Audubon

Ron Clark, BCNP

Paul Murphy, BCNP

Joe Bozzo, FFWCC

Mac Hatcher, Collier
County

Kirk Otto, Edison

College and FGCU

Vicki McGee RBNERR

Tina Gwaltney,
RBNERR

Ananta Nath SFWMD

Bob Sobczak BCNP

Daryl Thomas USFWS

Amanda

Dave Addison,
Conservancy

Kate Laakonen, City of
Naples

Mike Bauer, City of
Naples

David Ceilley

Molly Meadows

Tom Schmidt

Ed Hanlon

Sarah Davis, FGCU

The minutes were reviewed from the last meeting and were accepted and approved.

3. South Florida's Watershed Journal Update

- ◆ Bob gave an update on the watershed hydrology and the journal. We are at a record drought however rainfall this past month was at a 25-year high

for February in Big Cypress National Preserve. Annual inflows under Tamiami Trail into Everglades National Park are at 25 year low. Water levels in Everglades National Park are at a 17-year low. Lake Okeechobee is at an all time February low, but coastal communities along the East Coast have experienced above average rainfall. Kissimmee at a 25 year low as well. By looking at the various locations and neighbors to our watersheds we begin to see the big picture.

- ◆ The website builds a forum to connect the group with hydrologic issues, providing the whole picture of the connected watersheds. Ideas we discussed included adding a species of the month, encouraging others to eventually submit some of their research within the watershed, and making entries that link to the BCB monitoring database. The journal is a work in progress and open to ideas and collaborations.

4. WatershEDITORIAL – Presentation and Discussion: Naples Bay Water Quality Sampling Program Katie Laakkonen, City of Naples

- ◆ Katie presented an overview of the Naples Bay Water sampling program. They monitor a total of 16 different sites within Naples Bay. They look at many hydrological parameters and assess nutrient levels. They are able to locate hot spots within the bay for different nutrients and hope to influence environmental policies of the City with this research.

Recent effects of drought on sea bed grasses and nutrients was discussed.

Use of monitoring and mapping in TMDL process was discussed.

5. WatershEDITORIAL – Presentation and Discussion: Fishes and Macroinvertebrates as Indicators of Everglades Restoration Success in the Picayune Strand. Dave Ceilley, Inland Ecology Research Group, FGCU

- ◆ David Ceilley presented ecological surveys research of macroinvertebrates relative to hydrologic restoration and their importance in, providing an exhaustive and species specific model of how to relate biological composition of aquatic organisms to hydrologic regimes. David demonstrated ways that biological monitoring and trends can be used to gauge restoration impacts and benefits. There is a need to figure out how and to what extent this sort of monitoring can be integrated into the permitting and restoration review process.

6. Watershed EDITORIAL – Presentation and Discussion: The BCW Metadata Project: A New Web-enabled Metadata Data Entry Application and the Use of Theme and Place Keywords Jim Burd, FWC

- ◆ Jim Burd presented his programming work with the meta data tool software and discussed the use of key words and a plan of action to make the metadata tool more relevant. We discussed ways to make this database of more interest and use to the local community, including featuring it as entries to the journal.

7. Other Watershed News

RRCT October meeting briefing and Working group presentation

- ◆ GEER July 28 – August 1, Naples, Abstracts due in April 1, 2008
<http://conference.ifas.ufl.edu/GEER2008/hotel.htm>
- ◆ Saltwater Intrusion Model meeting SWIM, June 23 – 27
<http://www.conference.ifas.ufl.edu/swim/>
- ◆ Daryl – Feasibility Study update, Major milestone, selected array of alternatives sent to modelers, output in 1-2 years. HSI data assessing alternative comparing to each other. OK Slough restoration funding authorized.
- ◆ Shawn and Nicole Final Big Cypress map project. Fish community structure in Big Cypress and Corkscrew
- ◆ Ananta- Picayune Strand last trip, 90% design pond stations, Faka Union, Levy Canals, design reports done, Corp of Engineers done, FY09 funding \$24 million, Start Federal funding, start pump stations.
- ◆ Bob presenting Watershed journal at Water symposium in Gainesville. .

6. Next meeting Friday June 6, 2008 at Corkscrew Swamp

Big Cypress Watersheds Restoration Coordination Team

Friday, June 6, 2008 Meeting 9:30 – 12:30
Corkscrew Swamp Sanctuary, Naples

MINUTES

1. Welcome/Call to Order

The meeting was called to order at 9:35 AM

2. Introduction of members

Adrienne Ruga, FWC
Shane Collier FWC
Rebecca Beck, Audubon
Allyson L. Webb, Audubon
Sasha Wohlpart, FGCU
Kirk Otto, Edison
Shawn Liston, Audubon
Nicole Katin, Audubon
Sue Leitholf, Rookery Bay
NERR
Craig Faanes, Rookery Bay
NERR
Brenda Thomas, CREW
Valerie Thomas, CREW

Kathy Broyard, CREW
Brenda Brooks, CREW
Daryl Thomas, USFWS
Laura Roys, Collier County
John Bomba, FWC
Jason Lauritsen, Audubon
Ron Clark, Big Cypress NP
Paul Murphy, Big Cypress NP
David Shindle, Conservancy
of SW FL
David Ceilley, FGCU
Ananta Nath, FGCU
Sarah Davis, FGCU
Bob Sobczak, Big CypressNP

3. Corkscrew Update and Welcome – Jason Lauritsen

- ◆ Jason provided an overview of research work and conditions at Audubon's Corkscrew Swamp Sanctuary. He pointed out that the recent low water levels have depleted the avian food base, thus explaining the absence of a Woodstork nesting season this year, and probably for the next year until the aquatic fauna becomes replenished, and a good dry-down comes along.

4. South Florida's Watershed Journal Update

- ◆ Bob provided an overview on recent happenings in the local and regional water cycle and watersheds, and new developments with The South Florida Watershed Journal. Bob pointed out that viewership of the journal is around 1500 visits per month, 8,022 visits since June 1. Bob emphasized that the idea from the start was to provide our team, other interested aquatic professionals across the region, and the general public with a place to track real time data in a timely and integrative fashion, and

more recently through the blog-o-sphere can be integrated with photographs and more simplistic graphics that are easier to read at a glance, and that everyone can use, either to stay in-tune or to look back in time.

- ◆ Bob presented a new “flow volume” tool that can be used to compare annual flow volumes (or flow volumes to date) for major structures of interest across south Florida, and emphasized that this is a powerful way to compare one river system to another, whether in south Florida, or with other parts of the state or gulf region.
- ◆ Bob also followed-up with Jason’s observation of importance of breaking down rainfall and hydrologic regimes into time-periods and with regard to ecological thresholds that high-light the hydro-ecological link. Bob jokingly suggested that we should eat less Georgia peaches until the water dispute affecting Apalachicola Oysters is resolved. Bob also presented a graphic showing historic flow volumes down the Peace River, and how its demise is linked to loss of flows from Kissengen Spring.

5. WatershEDITORIAL – The Development of Estuarine Systems in Southwest Florida: A Perspective from the Late Holocene History of Oyster Reef Development Sasha Wohlpart, Florida Gulf Coast University

- ◆ Sasha Wohlpart provided an overview of her research on the development of estuarine systems in Southwest Florida. Her research focused on paleontological evidence found in oyster and vermetiform gastropod reefs from Estero Bay and the Ten Thousand Islands. She commented that oysters, which thrive in brackish water, tend to exhibit more accelerated accretion rates than the saline-dwelling vermetiform gastropods. Also, according to her study, accretion rates for oysters in the 10,000 Islands appear to be twice that found for oysters in Estero Bay. This could be a function of the geographic position of the two study reefs. Interestingly, the cores extracted for this research were compared to cores taken previously by FGCU researchers in the Estero Bay adding to a comprehensive analysis of the geomorphology and paleontological record of the area. Sasha pointed out that rates of sea level rise started to slow around 3500 years before present, by some estimates dropping from 20 cm/century to 4 cm/century. Current rates of sea level rise are projected to be around 30 cm/century, a rate that would be detrimental to the formation of oyster reefs in our coastal estuaries.

**6. WatershEDITORIAL – Effects of dry-season reversal events on Big Cypress aquatic fauna communities
Nicole Katin, Audubon**

- ◆ Nicole provided an overview of the aquatic fauna inventory and monitoring research project that she and Shawn Liston are conducting at the Big Cypress National Preserve and Corkscrew Swamp Sanctuary. Nicole pointed out that Wood Storks are notoriously difficult to monitor (cost and logistics), but that their food

base – the aquatic fauna in the wetland water column – is not only a powerful indicator for assessing viability of Wood Stork nesting and foraging, but it also fills a big gap in our understanding of their survival. Nicole presented results of fish and invertebrate monitoring showing an absence of concentrated populations this year – i.e., not the usual stew of food in the dry season refugia – thus, corroborating Wood Stork absence of nesting. We are beginning to understand the critical link between aquatic communities and wading birds. For more information about Corkscrew Swamp Sanctuary Science, go to: <http://www.corkscrew.audubon.org/science/science.html>

7. The BCW Metadata Project Update

Shane Collier, FWC

- ◆ Shane provided an overview of FWC Florida Wildlife Research Institute (FWRI) meta data project. He commented that the database is switching from SSMS to Mermaid, a move that will streamline the product. He emphasized the increasing importance of putting information on the web since we are living in an increasingly web-enabled world. Shane emphasized that a new team is aboard on the project, and he is very enthusiastic to make it a product that meets the needs of the region.
- ◆ Ananta emphasized that the success depends on particular researchers to enter their monitoring and work into the database. This new format will be more user friendly and get data out so people can use it. It gives research visibility and has potential to open avenues of collaboration.

8. Other Watershed News

- ◆ Ananta provided an overview the conference he recently attended in Hawaii, for the American Society of Engineers. He helped organize the overall conference, and also presented at the conference a short talk on the watershed team and the watershed journal. He commented that it was favorably received, and provided a useful example of how such efforts could serve as a model for other areas.
- ◆ Dave Ceilly and Ananta provided an update on Lake Trafford. They commented that 3.8 million cubic yards of muck have been removed from the Lake, but that muck removal in the littoral zone is on hold until water levels rise back out of their historic lows. Dave commented that re-vegetation efforts are showing signs of success (i.e., Tape Grass plots), and that the Conservancy of SW Florida is planning an extensive re-vegetation of Bulrush and other native aquatic plants once suitable planting conditions return.
- ◆ The group discussed the recent Jeremy Cox article in the Naples Daily News on Belle Meade. Bob commented that Jeremy made extensive use of the Watersheditorial that the Big Cypress Watershed Team group-penned around a year ago. Bob pointed out that while our group is a

forum, who meet quarterly and exchange information networking between meetings through email and the journal, our overarching goal is to provide a means for our network of aquatic professionals in southwest Florida to connect the dots with how the system is unfolding. The watershed editorials are one way that we can help extend the dialogue on issues of importance, that often transcend our agency boundaries, and may at times fall between the cracks. Jason mentioned that a similar topic on storage in general, would be a good topic to tackle in this regard. Bob also expressed a little concern that the Naples Daily News article didn't convey the essence of the Belle Meade Stormwater Plan (or the Watershed editorial). Belle Meade is not a classic restoration project of "completely returning to nature," but rather a blueprint for managing water that will unfold in unison with surrounding development. Belle Meade is not Picayune Strand as inferred in the NDN article.

- ◆ Daryl Thomas provided an overview of the SW Florida Feasibility Study, with emphasis on its recent stall. He commented that timing was especially unfortunate because the alternatives had just recently been laid out, and were theoretically ready for analysis with Mike She model. The new direction will supposedly make it a framework study, not a Feasibility Study that would go before Congress, with modeling performed with a more simplistic Stella model treatment. Daryl expressed concern that after 7 years of very active engagement in the project, the project will not reach its final crossing line, and that as conditions develop on the final determination of its fate, it may be a good time to put together a group endorsement on the importance of keeping it a Feasibility Study, or this may alternatively be vetted through our individual organizations. Daryl pointed out that many good things have come out of the study regardless, including a database of over 300 restoration projects, conceptual models, numerous synthesize studies (i.e., aquifer, water quality, etc), indicator regions and performance measures.



9. **Meeting adjourned. Next meeting Friday September 5, 2008, 9:30 AM Edison College in Naples.**

Big Cypress Watersheds Restoration Coordination Team

Friday, September 5, 2008 9:30 – 12:30
Edison State College, Naples

Meeting Minutes

1. Welcome/Call to Order

- ◆ The meeting opened at 9:30 AM. We reviewed the minutes from the last meeting and they were accepted.
- ◆ Kirk Otto welcomed the group and announced the transitions of Edison State College to a four-year college educational institution.

2. Introduction of members

Dave Addison, Conservancy of SW FL
Mike Bauer, City of Naples
Joe Bozzo, FWC
James Burd, FWRI
Shane Collier FWRI
Sarah Davis, FGCU
Ed Hanlon, UF/IFAS
Katie Laakkonen, City of Naples

Shawn Liston, Audubon
Molly Meadows, SFWMD
Ananta Nath, SFWMD
Kirk Otto, Edison
Larry Richardson, USFWS
Adrienne Ruga, FWRI
Bob Sobczak, Big CypressNP
Kirsten Wilkie, Collier County

3. Eyes on the Watershed – Research Photo Exchange

Participants brought a few photos of their work and discussed some of their current research, projects, and interesting critters.

- ◆ Storm effects on Sea Turtles – Dave Addison reported on the challenges of sea turtle nesting during storm season
- ◆ Backyard critters – Kirk Otto Green
- ◆ Florida Panther Refuge – Larry Richardson discussed the refuge cabbage palm cutting program and the relationship of hydrology to species.
- ◆ Conservation area burning, Black Bears – Joe Bozzo
- ◆ Crayfish, catfish, melaleuca – Shawn Liston discussed 2 species of crayfish, different species of armored catfish and ecological integrity of this different food source for wading birds, value of melaleuca forest.
- ◆ Photomonitoring at FGCU – Sarah Davis
- ◆ Comparative hydrologic structures and flooding of Loop Road – Bob Sobczak
- ◆ Geologic history of Florida – Ed Hanlon

Leading the meeting off with this informal coffee-house photo exchange generated lots of interesting and relevant discussion, that may otherwise not be covered. We will continue this at our next meeting and ask participants to email Sarah in advance of next meeting 2-3 photos of their work, research, interesting critters, etc. And hopefully adopt it as a standard item for future watershed meetings.

4. BCW – Meta-data Tool

- ◆ Shane Collier from FWRI gave an update of the BCW metadata tool and emphasized the importance of metadata. They have revised and updated the format to facilitate easy entry of projects. The data entry website demo system should roll out by the beginning of September. His office will review and process metadata entries.
- ◆ Jim Burd reviewed the form and the process of entering projects and keywords.
- ◆ Any project with a location or is spatially oriented should be entered. Metadata encourages legacy, gives context to numbers, allows an opportunity for self-publication, visibility and metadata saves lives.
- ◆ Shane Collier can be reached at (727) 896-8626 extension 2030 or shane.collier@myfwc.com

5. South Florida's Watershed Journal and GEER briefing and update

- ◆ Bob Sobczak gave a brief update on the South Florida Watershed journal and shared his GEER presentation. Bob's presentation focused on the comparative hydrology of the area and its application as one way (of many) to stay connected to current state and inner machinations of the water cycle.
- ◆ He reviewed the rainfall data for the summer and the fluctuations in the levels of Lake Okeechobee thanks to tropical storm Fay and several rain events this past month.
- ◆ Some of the major highlights from the GEER conference were discussed. Among them was the discussion at the meeting that the early 1920s, not pre-drainage was the hydrologic target being pursued, however, with the new caveat that restoration is now focused on the future of combating sea level rise and the importance re-establishing flow into the Everglades as a tool for doing that.

6. Other Watershed News

- ◆ Ananta Nath discussed the Real time network available through Big Cypress Basin website, real data available for specific sites. Go to SFWMD Big Cypress Basin Website under projects for real time data link.
https://my.sfwmd.gov/portal/page?_pageid=2854,19725388,2854_20421183&_dad=portal&_schema=PORTAL
- ◆ Shawn Liston from Audubon has an entry level biologist position open work includes field work and data collection.

7. Set next meeting date and adjourn meeting

Next Meeting Friday November 21, 2008, location TBA

Big Cypress Watersheds Restoration Coordination Team

Friday, November 21, 2008 – 9:30 – 12:30
Edison State College, Naples

Meeting Minutes

1. Welcome/Call to Order

- ◆ The meeting was called to order at 9:40 AM
- ◆ Thanks to Kirk Otto for hosting the group and generously baking sweet treats!
- ◆ We reviewed the minutes from the last meeting and they were accepted.

2. Introduction of members

Michael Bush, Audubon
Ian Bartoszek, Conservancy of SWFL
Shane Collier FWRI
Sarah Davis, FGCU
Mac Hatcher, Collier County

Shawn Liston, Audubon
Molly Meadows, SFWMD
Kirk Otto, Edison
Larry Richardson, USFWS
Bob Sobczak, Big CypressNP

3. Eyes on the Watershed – Research Photo Exchange

- ◆ Bob showed us a different watershed area – Maryland rapids and Wakiva spring
- ◆ Ian Bartoszek from the conservancy discussed research and observations of the Pinewoods Tree Frog, gopher tortoises around conservancy, an Exotic Russian tortoise, and a rare sighting of the Everglades Mink in Fakahatchee
- ◆ Larry Richardson shared and update of the Refuge work with Cabbage Palms, cogon grass, Orchids, and suggested the group visit McBride's Pond.
- ◆ Mac Hatcher showed a different watershed situation in Aspen, Colorado and catching European Trout.
- ◆ Shawn Liston shared habitat restoration work at Corkscrew, a Brown Anole with two tails, Brown Haplo, Pike Killifish and Greater Siren.

4. South Florida's Watershed Journal Update

- ◆ The watershed journal is receiving 700 visits per week and the blog format is a good interface and dialogue. <http://sfwj.blogspot.com/>
- ◆ If we took away the rain events during Fay we would have a normal season. Following is the watershed in review for the last 11 months:
- ◆ January 2008 - After a dry summer had already dropped aquifer and lake levels to record lows, 2008 started with La Nina winds blowing the threat of a drier-than-normal dry season.
- ◆ February 2008 - A monster cold front dumped buckets of rain across south Florida just as the wetting front was retreating its way back into the tall cypress. Sheetflow returned to the swamps, and the dry season "clock" was "rewound" back to December.
- ◆ March 2008 - Lake Okeechobee's streak of 287 consecutive days of record lows comes to an end. An unusually wet "La Nina" winter baffles meteorologists, but is

eventually explained, at least in part, by an unusually heavy snow pack all the way on the other side of the Pacific Ocean in east Asia.

- ◆ April 2008 - Tamiami Trail celebrates 80th birthday, a month prior to Brooklyn Bridge turning 125. Which is better? Both are a scenic drive, but the Tamiami Trail has less congestion.
- ◆ May 2008 - Wildfires season is extinguished by start of the fabled wet season in late May as night time lows rise above 70° F mark. When that happens, the wet season turns on like a flip of the switch.
- ◆ June 2008 - Floridian's go on 6 month vigil for 3 of Florida's 4 Meteorological Horsemen: (1) the enhanced sea breeze, (2) the Cape Verde, and (3) the "no name" tropical tempest. Those three, plus the continental front, are the primary source of south Florida's 50-60 inches of rain per year. My summer sojourn to Belgium is interrupted with international news of Governor Crist's unveiling of a strategy to buy out of a major swath of sugar land south of Lake Okeechobee, opening the door for creation of a flow way into the Everglades.
- ◆ July 2008 - A no-name storm – later named Cristobol after crossing into the Atlantic – dumps first "Big Rain Day" in southwest coast. Drought is declared over, but the Big Lake passes 500th consecutive day below critical 11 ft mark.
- ◆ August 2008 - Fay makes landfall not once, not twice, but three times ... and in the process becomes newly crowned queen of the Florida rain makers. Fay dropped twenty inches of rain along parts of the Treasure Coast and around the gulf coast's Big Bend area, but misses Tampa, the only part of the state still in drought. The Big Lake crests at the top of the littoral zone, marking an approximate 4 ft rise in a two week period, an all-time record leap.
- ◆ September 2008 - As nation celebrates Labor Day, which ushers in first scents of fall, Florida is left with the summer equivalent of Groundhog's day. And the "Labor Day" Groundhog almost never misses his shadow in the "sunshine state": thus signaling 8 more weeks of heat and humidity, plus a revised forecast for the 2008 Hurricane Season to end on an especially active note. September ends as unusually dry wet season month, especially north of the Lake.
- ◆ October 2008 - Tropics churn, but sidestep Florida peninsula, causing peak water season to end early in most parts of south Florida. Water's start slow recession as dry season takes hold. The exception is Key West, which got drenched with a record-breaking 7 inch of rain in one day, and 12 inches for the month.
- ◆ November 2008 A rainless November – plus a little help from an emergency breach cut across the Tamiami Trail – drops the central Everglades out of high water territory. One of the colder Novembers on record, fronts descended on a regular clip -- with staying power, and cypress needles fall. But let's not kid ourselves: Naples is no Minneapolis.

5. Big Cypress Watershed Team – year in review

- ◆ The Big Cypress Watersheds (BCW) began its eighth year of operation on January 1, 2008 thanks to the renewed support from the Big Cypress Basin of the South Florida Water Management District. BCW has made a concerted effort to encourage participation from all respective agencies and stakeholders within the Big Cypress and Estero area. Considerable local participation continued during the past year holding meeting locally at SFWMD Big Cypress Basin Office, Edison State College and Corkscrew Swamp Sanctuary. See the full annual report at <http://www.fgcu.edu/bcw/minutes/>

6. Other Watershed News

- ◆ Acquisition of real estate plus 29?
- ◆ Information from Ed Hanlon - The SWFFS finally came up with a Tentatively Selected Plan (TSP). Out of the some \$14 Billion costs for all projects, we selected Yucca Pens, Coastal Fakahatchee, and State Road 29/Barron River Flow-way. These projects total close to \$1 Billion, meet the ACOE cost effectiveness criteria, and have close to a maximum of 25% of the funds in real estate costs. The \$1 Billion and 25% limits were imposed by ACOE, by the way. The SWFFS has entered into the writing phase and will have something in the next month. I believe that the TSP will be presented to the ACOE sometime in Feb09 in Jacksonville. It took close to 8 years to get this study at this stage. I made the motion to accept and Jim Beever seconded. The vote was unanimous! Cheers were heard throughout the room and via conference call from the ACOE in Jacksonville.
- ◆ Larry Richardson mentioned possible field experience to McBride's pond – details to follow.
- ◆ Shane Collier with FWC gave an update on the metadata tool, search tool has been photo typed and looking at making it easier to get system on board

7. Set next meeting date and adjourn meeting

- ◆ Ideas for speakers for next year? - Dr. Brian Bovard Evapotranspiration study, Mac Hatcher Collier County watershed plans
- ◆ The meeting was adjourned at 12:00
- ◆ **Next Meeting Friday February 20, 2009 – Conservancy of Southwest Florida**