

Meeting Minutes
Charlotte Harbor National Estuary Program
Technical Advisory Committee
September 13, 2006
North Port, Florida

MEMBERS PRESENT

Kris Kaufman	Southwest Florida Water Management District-SWIM
Lizanne Garcia	Southwest Florida Water Management District-SWIM
Liz Abbott	South Florida Water Management District
Chris Anastasiou	Department of Environmental Protection
Renee Duffey	Department of Environmental Protection-CHAP
Celia Stearns	Department of Environmental Protection-CHAP
Joe King	Department of Environmental Protection
Keith Kibbey	Lee County
Wayne Daltry	Lee County
John Ryan	Sarasota County
Bill Byle	Charlotte County
Teresa Payne	City of North Port
Andrew Kelly	City of North Port
Mike Gurr	Central Florida Regional Planning Council
Greg Tolley	Florida Gulf Coast University
Jason Hale	Charlotte Harbor Environmental Center
Kendra Willet	Johnson Engineering
Scott Mears	Mosaic

ALSO PRESENT

Catherine Corbett	Charlotte Harbor National Estuary Program
Jaime Greenawalt	Charlotte Harbor National Estuary Program
Pete Wenner	Department of Environmental Protection
Tom Allen	Cape Coral Friends of Wildlife
Rodrigo Diaz	University of Florida
Brett Cunningham	Jones Edmunds

1. **Call to Order and Introductions**—Keith Kibbey agreed to chair until Mike Gurr arrived. Meeting was called to order at 9:05 A.M.
2. **Agenda Additions or Deletions**—Keith Kibbey
No additions or deletions.
3. **TAC Minutes**-- Keith Kibbey
MOTION TO APPROVE THE JULY 26, 2006 MEETING MINUTES BY WAYNE DALTRY. MOTION WAS SECONDED BY LIZANNE GARCIA. MOTION WAS APPROVED UNANIMOUSLY.
4. **Sarasota County Pollutant Loading Model**—Brett Cunningham

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Brett Cunningham of Jones Edmunds & Associates presented an overview of Sarasota County's pollutant loading model. John Ryan introduced the item.

5. **Effectiveness of Burrowing Owl Conservation Measures**—Tom Allen
Tom Allen presented the on-going efforts and preliminary findings from this study. The Research and Restoration Partners Grants provided \$3,575 for the study. The FY04 R&RP project is part of a larger project to determine the number and distribution of burrowing owl nest sites, productivity of pairs, survival of adult and juvenile owls, and dispersal characteristics of adult and juveniles from 2002-2007 on a 39 sq. km. study area in Cape Coral, Lee County, that was used for earlier studies by banding, radio collaring and assessing mortality and reproduction rates of burrowing owls within the study area. A total of 584 owls were banded since the study began in 2002. The majority of mortality to owls was due to predation or road kill. Most owls were killed or lost during the months of May and June when the young were learning to fly and again in July and August when many of the young birds were dispersing. Dispersal of juvenile owls began as early as May, and increased each month peaking in September. Distances from the natal nest varied, but did not conform to the original thinking that females disperse further than males. The majority of young birds dispersed less than 0.5 miles from the natal burrow; however, the next peak in dispersal was between 1 and 3 miles with females and males about equal in numbers. The greatest distances moved, up to 8 miles from the natal burrow was recorded for males. The unknown owl in that category turned out to be a male, which actually moved in excess of 50 miles before settling down 8 miles from its natal burrow. New burrows were established by young owls from September through the end of the year, peaking during October. The final report from the FY04 R&RP project is available from the program website at www.chnep.org.

**MOTION BY WAYNE DALTRY SECONDED BY KEITH KIBBEY
TO RECOMMEND TO THE MANAGEMENT AND POLICY
COMMITTEES THAT, RECOGNIZING THAT THE LOSS OF
HABITAT FOR THE BURROWING OWL IN CAPE CORAL MAY
BY ITSELF MOVE THE SPECIES FROM "SPECIAL CONCERN"
TO "THREATENED", THE CHARLOTTE HARBOR NEP WRITE A
LETTER TO THE CITY OF CAPE CORAL, REQUESTING AND
RECOMMENDING THAT ADEQUATE SITES PROTECTIVE OF
BURROWING OWL HABITAT BE IDENTIFIED, AND THEN
PURSUE WITH ASSISTANCE OF OTHER FUNDING AGENCIES,
THE ACQUISITION OR MANAGEMENT BY OTHER MEANS
OF THESE LANDS FOR CONSERVATION. MOTION WAS
APPROVED UNANIMOUSLY.**

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6. Impact of West Indian marsh grass on freshwater wetlands in Myakka River State Park—Rodrigo Diaz

Rodrigo Diaz presented the results from this FY04 Research and Restoration Grant project. The South American grass, *Hyamenachne amplexicaulis*, is invading wetlands of the Charlotte Harbor watershed. The marsh grass invades river banks, marshes and other areas which seasonally flood and grows from stolons, which can be fragmented by flowing water and transported great distances downstream. Therefore, the seasonal flooding associated with summer rainfall in Florida facilitates the spread of this aggressively invasive plant. The results of this invasion include the simplification of native plant communities leading to a reduction of biodiversity and altered hydrology. With this project, researchers at the University of Florida hope to: a) quantify the impact of *Hymenachne* on plant and arthropod communities, b) assess the invasiveness of *Hymenachne* in different seasons and c) determine the effectiveness of herbicides and burning as a mean of controlling *Hymenachne*. The researchers will use monthly ground sampling in plots infested and uninfested with *Hymenachne* to assess changes in arthropod and plant communities. Aerial photography will be employed to assess the temporal invasiveness of *Hymenachne*. The end result will be a better understanding of the marsh grass and its health during different times of the year and environmental conditions so that better control and eradication methods can be developed.

7. Numeric Water Quality Targets for Charlotte Harbor and Lemon and Estero Bays—Catherine Corbett

Substantial research and restoration efforts have focused on seagrass meadows as an environmental indicator for coastal environmental conditions, including Tampa and Sarasota Bays and Indian River Lagoon. In Tampa Bay, resource managers have set goals for restoring seagrass coverage to approximately 95% of the coverage present in 1950 excepting those areas impacted by dredge and fill. Reductions in nitrogen loads since 1982 have led to reduced phytoplankton concentrations and increased water clarity, which has allowed increases in seagrass extent (see Tomasko et al., 2005 for references). Increases in seagrass coverage is also a restoration objective for seagrass managers in Sarasota Bay, where recent increases (1988-1996) may be linked to decreased nitrogen loads to the bay by the City of Sarasota and Manatee and Sarasota counties (same). In both Tampa and Sarasota Bays, water clarity and quantity of light reaching the tops of seagrass blades is related to nitrogen loading and its effects on phytoplankton populations (same); thus, seagrass restoration strategies in these areas have focused on nitrogen load reductions. Charlotte Harbor confronts different issues, and phytoplankton concentrations do not have as large an influence on light attenuation in Charlotte Harbor as dissolved and suspended matter (McPherson and Miller

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1987; Dixon and Kirkpatrick 1999). Also, analyses of seagrass coverage data demonstrate that seagrass coverage in Upper Charlotte Harbor is stable since 1988 (Kurz et al., 1999; Corbett et al., 2005; Tomasko et al., 2005) and no trends were detected in Upper or Lower Charlotte Harbor regions since 1982 (Corbett, 2006). Seagrass management strategies in the Charlotte Harbor region have not focused on nutrient load reductions, and currently, resource managers have not established *restoration* goals for seagrass coverage nor numeric water quality targets outside of those established by Florida's Impaired Waters Rule. Nonetheless, our analyses of water quality data demonstrated significant increases in total suspended solids in the Lower Charlotte Harbor and Upper Charlotte Harbor regions and increasing turbidity and nutrients in the Lower Charlotte Harbor region (Janicki Environmental Inc., 2003). Also, there is other evidence that suggests Charlotte Harbor may be nutrient enriched, including the hypoxia work by Turner et al. (2006), annual seasonal chlorophyll *a* concentrations exceeding 20µg/l in the Peace and Myakka Rivers (Morrison et al., 1997) and exceeding 60-80 µg/l seasonally in the tidal Peace River since 1976 (FDEP 2003) and elevated chlorophyll *a* and depressed DO in the Caloosahatchee River (ERD 2003, DeGrove 1981; DeGrove and Nearhoof 1987; Baker 1990). Seasonal chlorophyll *a* levels of the magnitude found in this region are considered indicative of hypereutrophic conditions in some estuarine classification systems (e.g. NOAA 1996). Thus, we propose developing voluntary water quality targets using a resource-based approach such as those used in Tampa and Sarasota Bays and Indian River Lagoon. Program and CHEC staff completed an article for the *Florida Scientist* special issue that presents such an approach—an optical model which can be used to establish water clarity goals to maintain percent-light-at-depth requirements to achieve seagrass maximum depth distribution by region within Charlotte Harbor and Lemon and Estero Bays. The water clarity goals proposed in this effort are meant to maintain the present seagrass coverage and depth distribution into the future. Program staff has presented this method at a previous WQQOS meeting along with the Seagrass Working Group; a Lee County, DEP, SFWMD workshop; a Sarasota County workshop for water quality goals and the 2005 biennial Estuarine Research Federation conference. The WQQOS recommended approval of the approach and it be presented with additional information to the TAC for consideration by the Management Conference.

**MOTION BY WAYNE DALTRY SECONDED BY KEITH KIBBEY
TO FORWARD TO THE MANAGEMENT AND POLICY
COMMITTEES, AN ENDORSEMENT FOR APPROVAL OF THE
DRAFT NUMERIC WATER QUALITY TARGETS DOCUMENT,
INCLUDING ITS METHODS ON DETERMINING THE TARGETS
WITH A RESOURCE FOCUS, WITH THE UNDERSTANDING
THAT THE DOCUMENT WILL BE MODIFIED TO REFLECT**

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SEVERAL COMMENTS FROM TAC MEMBERS. MOTION WAS APPROVED UNANIMOUSLY.

MOTION BY CHRIS ANASTASIOU SECONDED BY KEITH KIBBEY TO HAVE THE CHARLOTTE HARBOR NEP HOST A WORKSHOP ON COLORED DISSOLVED ORGANIC MATTER IN SPRING 2007. MOTION WAS APPROVED UNANIMOUSLY.

8. **Program Report**—Catherine Corbett and Jaime Boswell
9. **Member Comments**—TAC Members
Wayne Daltry requested that he receive a list of current TAC members.
10. **Public Comments**
11. **Next Meeting's Topics and Date**—October 25, 2006
12. **Adjourn** –Mike Gurr, Co-Chair
The meeting was adjourned at 12:30 P.M.