

FINAL REPORT SUMMARY		<u>GRANT NUMBER:</u> # NOAA 58512-S4	
PRINCIPAL INVESTIGATOR OR PROGRAM DIRECTOR		PERIOD COVERED BY THIS REPORT	
Martin T. O'Connell		FROM 7/1/03	THROUGH 8/31/04
APPLICANT ORGANIZATION			
University of New Orleans			
TITLE OF PROJECT : Sustainability and health of recreational and commercial fish species			
AMOUNT FUNDED: \$82,552			

➤ FINAL REPORT SUMMARY

As of the time of final report submission, the project has been completed. Professional presentations have been given on these results and manuscripts for publication are being prepared (see below).

TMELINE FOR PERIOD COVERED BY THIS REPORT:

Project was completed in fall 2004 after a no-cost extension allowed for the hiring of a post-doctoral researcher (Dr. Jason P. Turner) to conduct the work.

➤ MAJOR ACCOMPLISHMENTS, RESULTS AND SIGNIFICANCES:

The major accomplishments and results for the report period are: (1) organic matter collected from the western portion of the Lake Pontchartrain estuary appears to be primarily derived from freshwater-based systems, while organisms collected from the eastern inlet are largely reliant on productivity from marine systems, (2) isotopic signatures from the northeastern sample site appear to be dominated by marine sources of organic matter, (3) the number of energy resources differed along the estuarine gradient as the western site was dominated by a combination of freshwater phytoplankton and detritus with a small contribution from marine phytoplankton during the summer months, and (4) a mixture of detritus and marine phytoplankton dominated the northeastern sites, while the eastern site was driven by marine phytoplankton. Further, food web analysis has indicated: (5) composition of food webs differed significantly along the estuarine gradient, (6) consumers from the western portion of the estuary may rely largely upon freshwater-based food webs, while consumers from the eastern inlet are largely reliant on marine food-webs as do consumers from the northeastern site, (7) food chains from the northeastern sample site appear to be significantly shorter, possibly indicative of seagrass communities within this region, and (8) summer food webs in all three regions were relatively stable at all trophic levels while winter food webs were marked by exceptionally high variability, possibly indicating significant differences in the availability of seasonally based consumer resources.

DELIVERABLES/TASKS FINISHED (ACCORDING TO YOUR WORKPLAN):

We are in the process of submitting the following manuscript for publication:

Turner, JP and MT O'Connell. *In Prep*. Variability in consumer resources utilized by fishes in an oligohaline estuary. *Estuaries*.

Also, the following presentation on these results was given in 2004:

Turner, JP, O'Connell, MT, Cashner RC. 2004. Variability in consumer resources utilized by fishes in an oligohaline estuary. American Society of Ichthyologists and Herptologists Annual Conference. May 26-31, Norman, Oklahoma.

➤ ANY UNRESOLVED ISSUES.

There are no unresolved issues for the project at this time.

➤ ARE THERE ANY DELAYS AND WHY?

The project is complete.