

ADVANCING HUMANITY in NEW ORLEANS

2010 - 2011 Learning Community

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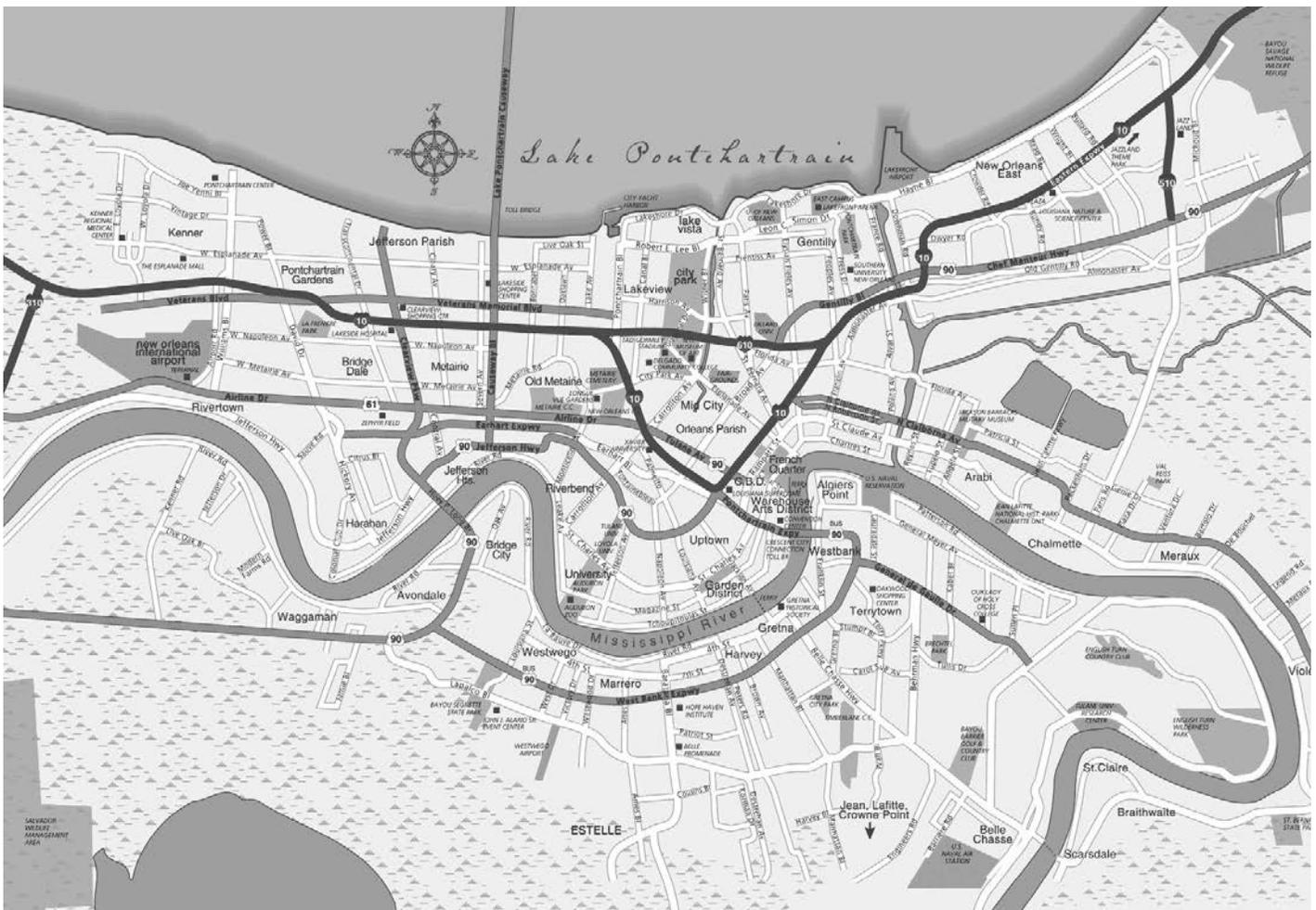
Jenna Deskins, McMaster Scholar

Phoenix Golnick, McMaster Scholar

Lynn Haller, McMaster Scholar

Andrew Kibler, McMaster Scholar

Taylor Tuttle, McMaster Scholar





Doug Kane, fellow, and scholars Taylor Tuttle and Phoenix Golnick water testing in New Orleans

Developing a Zooplankton Salinity Index

Doug Kane, McMaster Fellow, New Orleans 2010 - 2011

Among the many threats (i.e. sea-level rise, invasive species) to the coastal marshes and swamps of Louisiana, salinization is often cited as a major reason for loss of salt-intolerant vegetation (i.e. *Taxodium distichum* (bald cypress)). During 2009 I developed a Zooplankton Salinity Index (ZSI) to serve as a surrogate for salinity measurements, as zooplankton has been used as bioindicators for a variety of environmental perturbations (i.e. eutrophication, heavy metals). Although this ZSI showed some promise, a greater range of salinities was needed to fully discern site salinity by using zooplankton. In December 2010, I again took salinity measurements at the same set of sites in the Lake Maurepas/Lake Pontchartrain ecosystem. Although salinity measurements at all sites were again in the 0-5 ppt (parts per thousand) range, as during December 2009, salinities were greater in Lake Maurepas and Pass Manchac and less in Chef Pass during December 2010 compared with December 2009. The differences between years highlights the dynamic nature of this ecosystem and why frequent monitoring of salinity is important for understanding loss of bald cypress and eventual restoration of this important species.

Comparing Fish Communities in Lake Pontchartrain

Phoenix Golnick, McMaster Scholar, New Orleans 2010 - 2011

The purpose of this project was to compare fish communities before and after the BP Gulf Horizon oil spill in Lake Pontchartrain, Louisiana. Basic fish sampling methods (trawl, gillnet, and seine) were used to survey seven sites throughout the lake. Once the fish were collected, counted, identified and measured, Mann-Whitney tests were used to compare the differences between the December 2009 and December 2010 samples. All results were statistically not significant, which means that there was no significant difference in the two fish communities. Although the results were not significant, the median diversity index number in 2010 was over twice that in 2009, and the median abundance in 2010 was about twice that in 2009. Possible explanations of these differences include the Intermediate Disturbance Hypothesis and salinity changes due to residual effects of Hurricane Katrina.

Shoreline Loss in Coastal Louisiana

Andy Kibler, McMaster Scholar, New Orleans 2010 - 2011

The purpose of my project was to map the shoreline loss in a small section of coastal Louisiana, using a GPS/GIS system to trace gains and losses of shoreline from previous tracings. The community is in need of this erosion tracking because erosion affects wildlife habitat and losing the shoreline to erosion means that people are losing protection from hurricanes. In my project I found a 22.09% loss of land in Bayou Sauvage and a 94.08% loss of land in Fritchie Marsh between 2004 and 2008. This project helped me accomplish my academic goals by challenging me use to my academic knowledge and skills in a diverse context facing real environmental and conservation challenges.

Water Testing

Taylor Tuttle, McMaster Scholar, New Orleans 2010 – 2011

Lake Pontchartrain is an estuary situated north of New Orleans. Freshwater flows in from the west and salt water from the east, which impacts the pH, salinity, water temperature, and dissolved oxygen of the lake. The freshwater input into the lake impacts nutrient levels as well, which can cause phytoplankton blooms. These blooms are potentially harmful to humans and aquatic ecosystems. After Hurricane Katrina, nutrient levels were found to have increased. Due to its location, fishing is New Orleans's major industry and serves as the city's economic base.

Water testing was done to find levels of nitrates, phosphates, and ammonia. Seven sites were sampled in Lake Maurepas, Pass Manchac, and Chef Pass. Results were found using Hach testing kits. Nitrates were not present in any site, ammonia levels were high, and phosphorous levels were average. Ammonia levels were between two and three times higher than before Hurricane Katrina and phosphates were about the same as what they were before Katrina.



Taylor Tuttle, scholar, water sampling in New Orleans

Family Justice Center Pairing

Lynn Haller, McMaster Scholar, New Orleans 2010 – 2011

The purpose of this project was to provide the Defiance Family Justice Center (FJC) and the New Orleans Family Justice Center (NOFJC) with a strategic analysis involving their organizations. Both locations expressed an interest in having a strategic analysis completed that would possibly give the locations new ideas to implement in their organizations. This was a strategic analysis of both the Defiance, Ohio (rural) location and the New Orleans, Louisiana (urban) location. A SWOT (strengths, weaknesses, opportunities, and threats) analysis was conducted comparing a rural location to an urban location.

To begin the project, research on the Defiance FJC was completed. Data was gathered through interviews and email correspondence. While the Defiance FJC research was taking place, data was gathered through email correspondence with the NOFJC. Then, face-to-face interviews were conducted with key domestic violence advocates in New Orleans including a police detective and sergeant, attorneys, the FJC coordinator and director, various Crescent House representatives and the director, a social service representative, a Project Save representative, an outreach coordinator, and a few other key domestic violence advocates. Most of the information gathered was qualitative in nature, but a small amount of quantitative data was also collected.

The findings were that the NOFJC is facing challenges in regard to its location and the recent change in court systems, but the NOFJC does have a wealth of support from its community based partners. On the other hand, the Defiance FJC faces the challenges of relying too much on one individual and having a lack of public transportation, but its main weakness, key individuals, is also an invaluable strength along with its various partnerships. Finally, even though both FJCs are fighting the same injustice – domestic violence – they each face their own unique challenges outside of a lack of funding, and they each have their own success stories.

Also working on this project were Jenna Deskins, McMaster Scholar and Michael Gallagher, McMaster Associate Fellow.



Jenna Deskins, scholar, Pam Weaner, Lynn Haller, scholar, at the Family Justice Center in New Orleans