Three years ago on August 29, 2005, before I had ever heard of Defiance College or the McMaster School for Advancing Humanity, I sat in my living room in Spokane, Washington, in the Northwest corner of the United States watching news reports concerning the devastation wrought by Hurricane Katrina in New Orleans, Louisiana. As the television broadcasted images of destroyed homes, levee breaches, and fleeing peoples I joined throngs of Americans as they questioned why anyone would want to live in New Orleans. After all, the city is five feet below sea level and if you choose to live in New Orleans then you should expect and be prepared for hurricanes, right? Moreover, I like many Americans thought New Orleans is so far away from me and from my home how could this disaster affect me or be my fault? How could I possibly have contributed to the problem? As the days following the hurricane passed the news became bleaker. According to many the city is sinking at the rate of approximately three feet a century (Cohen, 2000). News reports suggested that perhaps it was time to relocate to a new part of Louisiana; maybe as little as thirty miles up the road would solve the problem. Despite all the warnings of impending doom, the people of New Orleans are determined to rebuild. According to Chris Rose, a reporter for the Times-Picayune, “Our hearts are broken into a thousand pieces. But don’t pity us. We’re gonna make it. We’re resilient. After all, we’ve been rooting for the Saints for thirty-five years. That’s gotta count for something” (Rose, 2005). Yet, as I read reports about rebuilding, I questioned the logic of
such endeavors. Why would anyone want to rebuild the city? Why would people want to live in fear of another hurricane wiping out their homes and their lives? For the next two years I held onto these convictions, until I came to Defiance College and became acquainted with the McMaster School for Advancing Humanity. During my first semester here, I listened to people talk about their work in places like Belize or Cambodia and wondered how could I fit my historical research endeavors into these places? In 2007, the opportunity to visit New Orleans presented itself and I found my niche, a location where I could use my skills as a historian and a researcher to contribute to the city’s recovery. Yet, I still wondered about recovering a city that seemed doomed by both news and science reports. Nevertheless, I boarded the plane to New Orleans with my colleagues and my life changed forever, because I no longer question why people want to save the city, my only question is how I can help?

As an historian, I believe that one must understand the past in order to make sense of the present, and more importantly the future. Therefore, a brief examination of the history of New Orleans is necessary to fully understand the culture, resilience, and significance of the city to our history. The city of New Orleans was founded in 1718 by Jean-Baptiste LeMoyne, Sieur de Bienville, a French/Canadian, in an effort to protect New France from encirclement by the Spanish, to gain a strategic location in relation to Mexico and its silver mines, to serve as a mid-point between Natchez (Fort Rosalie) and Mobile (Fort Louis), and to control trade along the Mississippi River (Marshall, 2007). Bienville believed that this city at the mouth of the river would link France’s Canadian and Caribbean colonies and thereby create a vast North American empire under French control (Delehanty, 1999).

According to Bienville, he chose this specific location because, “it was a spot safe from hurricanes and Tidal Waves” (Garvey and Widmer, 1982), or so he was led to believe by earlier reports from the natives. Although his comrades believed, much like Americans today, that his chosen location in the middle of a swamp was a strange locality, it was there at the “beautiful crescent” (hence the city’s nickname) that the city of “Nouvelle Orleans” was born (Garvey and Widmer, 1982). Over the next three years, Governor Bienville supervised the clearing of the swamp; the arrival of European immigrants including French and German peoples, as well as convicts and soldiers; and the construction of what might be called a village, for building the city of New Orleans proved a difficult task. Bienville’s choice of a natural levee required a significant labor force to make it viable. As Elizabeth Fussell explains, “the land was subject to regular flooding and endemic waterborne diseases” (2007) therefore, this influx of people quickly died off leaving the company with a labor shortage that would be filled with the importation of African slaves. Moreover, it is sad to note that the city of New Orleans
would not exist without slave labor, because without the use of force workers fled their jobs for drier and greener pastures further inland.

Bienville’s vision for a dominant French post was dashed for the first time in 1721, when a hurricane wiped out the development that according to Father Pierre de Charlevoix consisted of three streets, “a hundred barracks,” placed in no particular order, a wooden storehouse, and two or three houses “which would be no ornament to a village in France . . .” Nevertheless, Charlevoix believed that geography was destiny when he stated “the city would be the future capital of a fine and vast country” (Garvey and Widmer, 1982). As a result of this unnamed hurricane, the people of New Orleans began their first round of rebuilding. Adrian de Pauger, the famous French architect, was hired to supervise the reconstruction, or rather the construction of the city and set out to create the Vieux Carré (“Old Square”), which is commonly referred to as the French Quarter. For several years, the Vieux Carré served as the city of New Orleans, today this fragment of Old Europe continues to represent the distinctive cultures that continue to influence the city even today.

Although the location of the city is crucial for understanding its importance, so too are the people who chose to live there. French fur traders from Canada composed the majority of the Louisiana population. Early on the government of New France believed that this would provide their colonists with a strategic advantage as they competed for land with the English, since many of the fur traders had according to Bill Marshall “gone native” skillfully familiarizing themselves with the customs of the local tribes (2007). Yet adopting native ways did not solve all of the problems. In fact, many of the French intermarried with the Choctaw tribes of the region resulting in a new culture and French “corporatist” policy that filtered through the city during the nineteenth century (Marshall, 2007). Moreover, this inclusive policy laid the foundation for unique the cultural blending that still permeates New Orleans today.

In 1762 the French and Indian War (AKA the Seven Years War) ended with a French defeat and as a result the French gave up their possessions in Canada. In addition, they lost their desire to maintain control of the Louisiana territory, thereby allowing the English to take control of the region for a brief moment in history. Ultimately, the French were unwilling to allow the British to maintain control of Louisiana and relinquished it to Spain, yet the city was never Spanish. The schools, businesses, and cultural practices all remained French. In fact, it is from this pairing that we get the term Creole, whereby the French and Spanish intermarried and create a new casta or class of people living in New Orleans. In his book The Creoles of Louisiana (1884)
George Washington Cable explains that in order to truly be Creole one must not be allied with the slave race, which would entitle him to a social rank. Moreover, he suggests that the term would later be adopted by the natives of mixed-blood.

Although the Spanish culture failed to subsume the French characteristics of the city, the Spanish did leave an indelible mark on the architecture of New Orleans. In fact, the majority of the city’s buildings are of Spanish design. Between 1763 and 1803 the city caught fire twice. The first fire occurred on March 21, 1788 when a candle fell from a church altar on Chartres Street. According Garvey and Widmer, 856 of the 1,100 buildings had been consumed by flames (1982). A mere six years later the city suffered another devastating fire. The Great fire of 1794 began on December 8 when a group of children playing on Royal Street accidently set fire to the hay store. Within hours 212 buildings were destroyed, ironically, this fire left the Spanish portions of the city untouched, but wiped out the remaining French influences in the Quarter. The early hurricanes together with the fires set the stage for a city that would undergo continuous change. Perhaps these early disasters steeled the people of the region for the constant physical and emotional challenges that define the region.

It is interesting to note that the United States grew up around New Orleans. From its inception the Americans understood the importance of the city, but found themselves constantly at the mercy of foreign powers that controlled the mouth of the Mississippi River. As Thomas Jefferson once noted, “It is New Orleans, through which the produce of three-eighths of our territory must pass to market, and from its fertility it will ere long yield more than half of our whole produce, and contain more than half of our inhabitants” (Jefferson, 2009). Jefferson goes on to explain that the events between Spain and France at the turn of the nineteenth century made him very nervous. According to his letter to United States Minister to France (Robert E. Livingston) Jefferson believed that “Spain might have retained it quietly for years. Her Pacific dispositions, her feeble state, would induce her to increase our facilities there, so that her possession of the place would be hardly felt by us, and it would not, perhaps, be very long before some circumstance might arise, which might make the cession of it to us the price of something of more worth to her” (Desmarais and McGovern, 2009). Although historians today are still unsure of why Charles IV, King of Spain, decided to cede Louisiana back to France, 1 October 1800, modern convictions hold that he feared the power of Napoleon Bonaparte after his European campaigns. Despite the reason for the receding of the region, this transfer of property proved a windfall for the United States and Thomas Jefferson. Napoleon’s dream of a new French Caribbean empire dissolved with the independence of Haiti, for
which Louisiana was meant to be the granary and he quickly moved to sell
the 827,000 square miles of the Louisiana Territory to Thomas Jefferson for
a mere $15,000,000 on 30 April 1803. Seven months later on 30 November
1803, the French under Napoleon took possession of Louisiana from Spain
(although the transfer of territory had officially taken place three years
earlier). Twenty days later on 20 December 1803 the Louisiana Territory
and the city of New Orleans changed hands for the third and final time in
its history (Garvey and Widmer, 1982). Although the dominant authority of
the region remains the United States, the city continues to grow and change
incorporating the various cultures of the world into her boundaries and
making them her own.

Cultural transition is a hallmark of the city. For years, French culture
dominated the region, Spanish architecture became the norm in the late
eighteenth century, but in 1803 the city became American. Contributing
to the unique cultural makeup of the city of New Orleans is the Haitian
Rebellion of 1794-1804, which resulted in an influx of approximately ten-
thousand refugees (Fussell, 2007). The newcomers consisted of French
colonists, free Creoles of color, and ex-slaves who were forced back into
slavery upon arrival in America. The new arrivals doubled the population
of New Orleans and reinforced its Francophone and Afro-Caribbean culture
(Campanella, 2007). Fussell (2007) notes that the 1810 census records illustrate that the city consisted of one-third white, one-third free people of color, and one-third African-American slaves that would form the predominate labor force in the region. The city also developed a unique character because of the significant presence of free people of colour that populated the city. As Marshall (2007) explains they were not always lighter skinned, but did aid in the creation of a three-tiered Caribbean-type society at odds with the polarization of American racism. Under American law, blacks were denied the right to vote and interracial marriage was banned. Yet, it is important to note that despite American governance, the people often looked to France for inspiration when it came to race relations. Some historians would argue that the French were more progressive than the Americans and in 1848 France abolished slavery throughout its empire. Despite this French connection the number of American emigrants soon overwhelmed the area resulting in increased racial tensions (Marshall, 2007).

In the years following the sale of the Louisiana Territory the immigrant makeup continued to change German, Irish, and other Europeans moved into the area as did Anglo-emigrants from the Mississippi Valley. As Campanella (2007) explains economic, religious, political, and cultural institutions arose among the Anglos uptown, while the Creole population would become the dominant cultural influence in the lower city. It is also important to note that slaves in New Orleans differ from the traditional “American” definition of chattel. Both the French and the Spanish approached slavery with a different perspective than the British. Together they encouraged their slaves to hold onto their music which gave birth to jazz, traditional dance styles, cooking, and architectural methods which can still be seen in New Orleans today. Although slaves were chosen for their brawn, many of the New Orleans slaves were technologically sophisticated and earned money of their own hoping to purchase their own freedom someday. Moreover, an African who arrived in New Orleans as a slave did not necessarily remain one. In fact, many masters manumitted their slaves allowing them to become members of free society. Despite the cultural shock of integration experienced by both the natives of the region, the immigrant population, and the Americans the city slowly began to pull together as demonstrated by their perseverance during the War of 1812.

Within days of Louisiana being declared a state, the United States declared war on the British, who focused their southern offensive on the city of New Orleans, the greatest seaport of the American continent during the early 19th century, according to historian John C. McManus (2008). If the British could gain control of the city, they would also be able to take control over the entire Southern coastline as well as the Mississippi River. The only obstacle that
stood in their way was Major General Andrew Jackson, commander of the U.S. 7th Infantry Regiment along the Southern coast. In his effort to secure victory Gen. Jackson assembled a “rag-tag group” of men to further support his cause. This eclectic group consisted of local militiamen, pirates, African-American freemen, Marines, sailors, and Choctaw tribesmen (McManus 2008). The Battle of New Orleans is unique in United States history, the Americans knew only that their country had been invaded, and that must fight. Together this group proved that they could overcome the world’s best trained military despite their differences. Moreover, the survival of the city was longer in question. In fact, with the defeat of the British, New Orleans took on new life, for no longer was the city a pawn of empire or a tool of strategy it had become a valued port city in a growing country (Garvey & Widmer, 1982).

Between 1815 and 1860, New Orleans grew exponentially experiencing continued population growth, prosperity, and change. Garvey and Widmer (1982) suggest that the invention of the cotton gin (1793) and the process for sugar granulation (1875) resulted in increased production and the creation of a plantation aristocracy. The Civil War, however, put a crimp in the New Orleans style of living. First, the citizens of New Orleans’ opposed secession, not because they wished to curb the spread of slavery, but they feared the destruction of trade with the upper Mississippi Valley. Second, when Abraham Lincoln was elected president it became apparent that he would wipe out slavery altogether, which resulted in Louisiana making the final break with the Union in 1861 (Toledano, 2007; Marshall 2007). Opting to fight on the side of the Confederacy proved to be a serious mistake for the city of New Orleans. It quickly became apparent that Southern leadership under President Jefferson Davis could not provide the resources necessary to defend the city. With the majority of its military fighting in Virginia, the city of New Orleans was left defenseless. On April 25-26, 1862 Flag Officer Dave G. Farragut took control of the city and eventually passed command to federal troops that occupied New Orleans for the next fourteen years, from April 1862 until 1877, longer than any other American city ever occupied by a hostile power (Garvey and Widmer, 1982; Toledano, 2007).

Events that transpired during the Civil War and Reconstruction forced people to choose sides and draw color lines. Former slaves although free found few options under Reconstruction in New Orleans. Many were relegated to dependence upon whites and Creoles found themselves in the most confusing situation. Lynching and intimidation, plus the lack of free market for mobile wages labor confined black laborers to agricultural occupations until well into the twentieth century (Fussell, 2007). In fact, the tri-racial society that had been the hallmark of the city fell apart only to
be replaced by a biracial society. Under military occupation, New Orleans attracted northern opportunists known as Carpetbaggers who looked to make an easy profit (Toledano, 2007). Money schemes like the Louisiana State Lottery Company, founded by Charles T. Howard kept city, state, and even national politicians on its payroll loyal, but also caused the city to stagnate for the next thirty years.

Over time the mansions of the French Quarter have turned into rental properties and sub-divided into tenant homes for working class citizens. It is during this period from 1880 to 1920 that the history of the city becomes a bit sketchy. Yet, we do know that the French Market grew bringing more traffic into the area, Italians invested in real estate (as they could not participate in the formal banking system), but it is not until the 1920’s when the charm of the city was rediscovered by a group of artists including Sherwood Anderson who lived in a room above the Royal Café (Delehanty, 1999). After Anderson declared that the city should be “the winter home of every American artist” several others moved into the area including F. Scott Fitzgerald, Edmund Wilson, Anita Loos, and Ernest Hemmingway. This new infusion of energy benefitted the city as prosperity reigned supreme. Art galleries, bookstores, restaurants, clubs, and speakeasies filled Royal, Charters, St. Peter, and St. Ann streets. Even as the roaring twenties lost their cry new energy still filled the Quarter as the Works Progress Administration’s Federal Writers Project began an historical assessment of the area. As World War II heated up so too did New Orleans as mass tourism flourished along Bourbon Street (Delehanty, 1999).

In this modern era the rich cultural history of New Orleans is lost on many Americans. All that remains is the “Disneyfied” charm of the French Quarter or the stories of wild parties during Mardi-Gras. Even after Hurricane Katrina made landfall people lamented the lost joys of the city’s cuisine, music, and architecture, however as Toledano (2007) explains these undeniable charms and graces had masked problems of major proportions. New Orleans is predominately black; it is largely a poor city with over half of the citizens living below the poverty line. We learned that the city of New Orleans is threatened by a combination of two man-made problems: more levees and fewer wetlands (Cohen, 2000). According to Ari Kelmam (2007) New Orleans is surrounded by levees and drainage technologies that make living in the city a virtual prison of their own making. The other problem facing the people of New Orleans is that its wetlands and its low-lying barrier islands are disappearing. Cohen (2000) suggests that the Louisiana is losing 16,000 acres of wetlands each year. This devastating disappearance of wetlands means that the buffer zone between Louisiana and hurricanes is diminishing leaving the coastline vulnerable to future hurricane damage.

McMaster School for Advancing Humanity
We constantly blame others for the problems taking place in New Orleans, yet we have all had a hand in their despair. It is America’s nationwide demand for oil and gasoline that has led to the creation of “Cancer Alley” a 100-mile stretch between Baton Rouge and New Orleans, which primarily affects poor black families (Hertsgaard, 2005). In addition to the petrochemical problems we here in the Midwest contribute to the problem through the use, and sometimes overuse, of fertilizer and pesticides that runoff into the Mississippi River eventually finding their way into the Gulf of Mexico creating massive “dead zones” where fish and plant life are unable to exist. Americans also purchase cypress bark to decorate their gardens, yet most are unaware of the environmental damage that results from their ornamental acquisition. The cypress-bark, although pretty is harvested from the barrier islands leaving them unable to slow the hurricane force winds, thereby increasing the damage to the mainland. Although we are aware of the damage caused by harvesting cypress trees it will take seventy to one hundred years to see any real recovery of the barrier islands. Therefore, even if we stop harvesting cypress trees today we may not see the benefit in our lifetime, which is frustrating for many Americans who believe in instant gratification.

In the last two years, since the beginning of the New Orleans McMaster initiative, I have contemplated the importance of advancing humanity domestically. After all the people of New Orleans are just like you and I. What can we contribute to this city and its recovery? First and foremost, we create awareness both here and in New Orleans. Students here learn about the issues facing the people of New Orleans and look for proactive strategies to help them. For instance, McMaster Scholar Jennifer Creighton studied the environmental issues facing New Orleans with the help of Robert Moreau at Southeastern Louisiana University in Hammond, Louisiana. Together they developed an awareness brochure that will educate students in both Northwest Ohio and New Orleans about the need for recycling to preserve the environment. McMaster Scholar Kasey Carlisle set out to understand the importance of cypress trees, examining the strategies for planting and maintaining the tree base. While in New Orleans, she learned first hand from Turtle Cove field biologist Michael Greene about the challenges facing the cypress trees including invasive insects, to invasive wildlife species like the nutria. Most importantly, she championed the cause of awareness creating an information sheet that highlights why people should not purchase cypress bark that was shared with the Defiance community as well as the researchers in Hammond. McMaster Scholar Amanda Zimmerman set out to gather data concerning the Christmas tree recycling program and its efforts to protect various plants from invasive species. Her project looked at twelve
years’ worth of data and discovered that the recycling project has long-term implications for wetland restoration.

Although creating awareness about environmental damage is an important component of our contributions in New Orleans we also set out to work with the University of New Orleans [UNO] environmental education department. McMaster Scholar Sandi Burden in conjunction with Dinah Maygarden used global positioning systems [GPS] and global information systems [GIS] to work with at risk teens in an effort to help them understand their environment. Although this project encountered glitches along the way we learned several important lessons concerning young people on field trips, the environment, and the incorporation of technology into said situations.

McMaster Scholar Brenda Delarber revisited her work at the Amistad Research Center on Tulane University’s campus. During her first visit to New Orleans, she worked to preserve the materials of Thomas C. Dent an eclectic researcher, author, and interviewer. During her second visit she worked with the newly donated Ellis Marsalis collection. Once again, she helped to preserve a unique piece of New Orleans culture, helped with the collection backlog, and carved out her own piece of New Orleans history by assisting in the research and writing of the scope of collection, which will allow future researchers to identify the pieces of the Marsalis collection.

So how does it all fit together? As a historian the importance of the cultural and ethnic history is important to the story I tell. It helps us understand the “tossed salad” of American culture that suggests people from a variety of places may come together and live in a common area, share their culture, while still maintaining elements of their own. Yet, in the wake of Hurricane Katrina, I worry about diaspora. In an effort to stave off this loss of culture, I set out to better understand the traditions of benevolence that permeates the culture of New Orleans.

In the days following Hurricane Katrina troops and supplies eventually arrived in New Orleans. Relief lurched along in a piecemeal fashion and the American press began a rousing rendition of the “blame game.” CNN, USA Today, MSNBC and Fox News all attempted to point fingers at the federal, state, and local governments and their failures both pre- and post-Katrina. As *The Economist* (2005) article “When Government Fails” explained top US officials including Condoleeza Rice and Donald Rumsfeld quickly departed for New Orleans with President George W. Bush in tow to let the people know that their government cared about them. Spin doctors set to work suggesting that the local government failed, while still others suggested that the state did not maintain appropriate evacuation plans, and still others
suggested that the failure of Louisiana governor Kathleen Blanco to turn control of the situation over to federal authorities deepened the crisis. At the same time environmental critics suggested that the apathetic nature of Americans and their government concerning the wetlands was the crux of the problem. Others looked at the crisis and saw racism suggesting that the government did not care about the poor or black population of the city. Despite the search for accountability life continued on and the traditional benevolence model, which suggests that the quality of life of one person concerns all members of the community (Ginzberg, 1990), kicked into gear and began the process of stabilizing the city of New Orleans.

As noted earlier, the structure of New Orleans society was tri-racial until the end of the Civil War. As a result, the free black population of the city attained both status and wealth unbeknownst to most blacks at that time. According John Hope Franklin and Alfred Moss Jr. (1998), free blacks in New Orleans owned more than $15 million worth of property in 1860. Moreover, they explain that “the free black population was a sober, industrious, and moral class, far advanced in their education” (Franklin & Moss, 1998). Despite their wealth and status as the racial justifications for slavery began to strengthen in the city blacks found it necessary to develop their own lives and institutions to ensure their survival, their welfare, and the fulfillment of their personal and group aspirations. To achieve this they assumed as much responsibility as circumstances would allow. In New Orleans benevolent associations of mechanics, coachmen, caulkers, and other workers were created. As late as 1860 the Band Society was formed with the motto “Love, Union, Peace,” with the bylaws requiring members “to go about once in a while and see one another in love” (Franklin & Moss, 1998).

Religion served as an important component of the benevolent associations work. Moreover, African-Americans are very community oriented, focused on relationships in their neighborhoods, which they view as their family network. Scholars like John Hope Franklin, suggest that their slave status, which would eventually translate into their racial alienation forced them to depend upon each other since the state felt no obligation to come to their aid in times of crisis. As James Joseph (1995) explains African-American notions of community service are rooted in a traditional legacy of interconnectivity and intergenerational obligation, in essence preservation of their society meant emphasis on internal communalism. Drawing on African traditions whereby communal groups served as the family unit with a common interest and lifestyle the free black population and the former slaves felt a responsibility to nurture, protect, and educate the black population of New Orleans in the years following the Civil War. Moreover, they realized that their fate was connected young and old, free and former slave. To achieve
this goal of benevolence they turned to the church, because religion offered opportunities for social intercourse as well as spiritual uplift (Franklin and Moss, 1998). Moreover, the strong sense of community found through the church provided support even in post-Katrina New Orleans where people are struggling to reclaim their lives and neighborhoods.

In addition to church sponsored associations men joined fraternal orders like the Masons or Odd Fellows, while women tended to join benevolent associations. The Amistad Research Center preserves the records of several of these organizations including the Young and True Friends Benevolent Ass’n of Carrollton, La., 7th District (1886), St. Mary’s Benevolent Association of Louisiana (1870), the Violet S. Club of the 7th District of N.O Louisiana (1888), and the Ladies Friends of Faith Benn. Ass.[sic] (1914-1916). Each of these organizations offered insurance against sickness and death, aided widows and orphans of deceased members, and gave opportunities for social interaction. These organizations collected weekly dues ranging from 25 cents to $3 per meeting from their members (St Mary’s Bylaws, 1883; Ladies and Friends of Faith Benn. Asso. 1914-16). Although these societies imposed for the time relatively exorbitant dues, they served as important training groups for blacks to secure business experience. Moreover, as Franklin and Moss note (1998), benevolent associations helped reinforce their reliance on one another.

As tensions between whites and blacks living in the city increased businesses grew reticent to work with blacks, benevolent associations channeled their resources into charitable undertakings that helped the unfortunate and underprivileged. According to organization bylaws “the object of this Association shall be purely charitable principally; to assist its members according to its power and ability in every instance of sickness and extreme want, and to bury them whenever it shall please Almighty God to separate them from their fellow members” (St. Mary’s Bylaws, 1883). For instance, Bro Peterson of the Ladies Friends of Faith used monies garnered from membership fees to fund projects including low interest mortgages and a library in conjunction with the Young Men’s Christian Association (Ladies Friends of Faith Benn. Asso., 1914-1919). As John Blassingame (1973) explains many of these societies were miniature insurance companies that guaranteed members sick benefits and burial expenses. It is important to note that in order to receive monies from an agency meeting attendance was mandatory, if one missed a meeting they needed to restore their membership to good standing by paying back dues (Frank & Dixon papers). In essence African Americans were attempting to take control of their own lives and solve the problems facing them as best they could.
Much like the benevolent associations of the early twentieth century a revived model of community action has emerged in New Orleans in the wake of hurricane Katrina. As Reverend C.T. Vivian explained “it was clear that no one even noticed the destruction of the churches.” “At one point it occurred to me that they were even dividing it up—I could see them giving the Ninth Ward to the oil industry, and downtown to the people with money,” he continued (Churches Supporting Churches Newsletter, 2007). In his mind it was time for the community to take action to rebuild itself. To this end Vivian suggested the Churches Supporting Churches model whereby 36 churches that had lost everything banded together to rebuild what they had lost and empower their communities to move forward, with the help of other churches around the country. Essentially, they began the tried and true method of “lifting as they climb” to achieve their goals.

Progress is slow, churches and communities did not coalesce as quickly as the founding members hoped. Nevertheless, the organization assisted people as they returned to New Orleans. Educating pastors on how to deal with their own grief and the grief of their congregants has allowed the people to come together. Moreover, the group calls for capacity building and community redevelopment. Much like the traditional benevolence agencies CSC is providing marginalized people with a voice, although, this time it is on the local, state, and national levels. Since its creation in 2006 over $200,000 has been raised to support their cause and while the monetary donations are good, CSC has also created new inroads for the New Orleans community. Reverend Alden Cotton explained that “the Churches Supporting Churches model has not achieved all of its goals and financial contributions from outside churches are slowing down; nevertheless, it has brought the pastors together” (Alden Cotton interview, December 2008). Moreover, according to Tronn Moller the National Council of Churches representative to CSC “it has created a new sense of community and trust among the ministers” (Tronn Moller interview, December 2008). Despite the slow nature of progress; benevolence agencies that develop and strengthen social agency will continue to rebuild the city. Organizations like these assume responsibility without hesitation in times of crisis and provide us with yet another unique cultural path to follow into the future.

If we do not take the time to preserve the history of the city and its people we will lose who we are, where we came from, and why New Orleans is more than just any American city. The history of New Orleans demonstrates the best of what it means to be an American. It is the culmination of art, culture, religion, and politics. It may be difficult for those who have never been to New Orleans to understand why the people want to recover the city. Is it the history? Perhaps, as I have demonstrated here, the city is filled with Native
American, French, Spanish, and Creole traditions, just to name a few that are worth holding onto. Is it the ambience? Walking through the French Quarter and visiting Bourbon Street; riding a street car through the Garden District admiring America’s oldest and most beautiful homes and colleges such as Tulane or Loyola University; is it listening to zydeco music at the Rock-n-Bowl; or listening to Ellis Marsalis play a Christmas concert at St. Louis Cathedral; or perhaps, it is beignets and coffee at Café du Monde. Or, perhaps, as Tom Piazza (2005) explains, it is the interactions of all of these things and countless more that make the city worth saving. After all a city is more than bricks and mortar, money and business, it is the people who live there, it is their spirit, and it is their home. In the end, we must put all the rhetoric aside the city should be rebuilt not just because of its historical significance, its great culture, food, music, and architecture. It should be rebuilt because disaster relief, protection and repair from catastrophic events is an entitlement to everyone in society, as a condition of membership.

REFERENCES

Churches Supporting Churches Newsletter 2005-07
Constitution of the Violet S. Club of the 7th District N. O. Louisiana
Frank & Dixon Papers
Ladies Friends of Faith Benn. Asso. 1914-19
St. Mary’s Benevolent Association of Louisiana
INTRODUCTION
I had planned on working with students on an environmental education program that incorporated GIS/GPS technologies. I learned what worked, and more importantly what did not work when working with behaviorally challenged students. The project set out to learn the benefits of environmental education outside of the classroom to behaviorally challenged students.

For the purpose of this article when a student is said to be behaviorally challenged it refers to the fact that the student has a difficult time behaving in a manner that is acceptable to teachers and instructors alike. These students may be very outspoken in class often interrupting, or they may not pay any attention in class at all. They also may have a problem acting inappropriately around others in the classroom by distracting others from their work.

Broda and Baxter (2003) claimed Global Positioning Systems (GPS) and Geographic Information Systems (GIS) are often confused with one another and can be confusing to someone who does not use them on a regular base. GPS are basically a very advanced compass giving information such as location, velocity and time. In the classroom, it is used primarily as a data gathering tool. GIS, however, can give quite a bit more information to its user through layer upon layer of data that allows the user to visually see the relationship between the possible problems and solutions (p. 158).

METHODODOLOGY
On the ground, I worked with Dinah Maygarden, the Education and Outreach Coordinator at University of New Orleans Pontchartrain Institute for Environmental Sciences (PIES), on a project with fifth and eighth graders from two different parishes in New Orleans. This project used hand held computers equipped with GIS and GPS technology to help learn about the importance of healthy coastal wetlands to community resiliency. My role in this project was to assist in explaining the technology process and promote conversation around the idea of healthy coastal wetlands.

While working with the above mentioned project, I observed and meaningfully interacted with the students in the field. These observations and interactions are written up as field notes for use in my research. I also used extensive journaling with pre-developed questions of my experiences.
to create another data set to help support the evidence found throughout observations. I hope to use this data to understand the role of environmental education in social work.

**Reflection/Conclusion**

To gain more information about the project an interview with Dinah Maygarden was conducted. During the interview Maygarden stated that she regrets using the gas station as the location. She was hoping that it would be a less hectic but it turned out the other way. Although we had left a half hour in advance she still wishes she would have gone down sooner to pick out other spots. Another thing that popped up was the private property that we stumbled upon. Although the land owner did allow us to continue our field trip on his land, it was another challenge that distracted the group’s attention. If it would have been pre-arranged with the owner it would not have been an issue. She wonders if it would have been beneficial to establish relationships with some of the people who live in Leeville.

She said that she made the assumption that the students being from the technology generation would have had some experience with new technology even if they were from poor families. But as the field trip progressed, several students showed that they were not familiar with new technologies and some did not have to have anything to do with it at all while others felt they knew what they were doing and did not want any help at all from the instructors.

This is the first time she has worked with this level of students. In working with the teacher from Bayou Lafourche Marine Institute she has found that he is fine with the students doing different things but he is not sure how much content they can actually learn from the experiences.

Maygarden believes that maybe these behaviorally challenged students are more fatalistic because they have never been in a position in which to make deciding choices that affect them. They understand that parts of Louisiana are sinking and are ready to move on and not worry about it or put effort in to fixing the problem. To the students this is just the way of life for them and they feel that there is nothing they can do about it.

Maygarden went down a week before the field trip, on December 9th 2008, to prepare the class. The teacher at the school was difficult to work with at first because he had it set in his mind as to what they were going to do on the field trip. There were also glitches with the technology the day of the field trip and were not enough ipaqs for all the students. While they were there the students did a local survey of the land around the school (water
collection, wild life observation). The students also came up with questions to ask during an interview on the field trip.

While Maygarden and her assistant, Heather Gordon, were at the school they talked to the students about coastal communities. Some of the students were very interested in the discussion and had questions about salinity, its effect on the environment and what it took to build a strong house that would withstand hurricanes. Not all of the students participated in the conversation and some other students were falling asleep. Another distraction that added to the lesson was a lot of background chaos and there was not very being done about it. This demonstrated that the adults did not have much control over the students’ attention during the field trip.

Maygarden said that she is frustrated by the situation. She feels that it could be done better but with the distance involved including the preparation which is time consuming, and the fact that there are so many projects going on and it’s hard to focus on one project at a time since they are going on all at the same time. She also would have liked more cooperation from the teacher and a less distracting classroom.

**THE FIELD TRIP**
We drove ahead to plot out some buildings in which to show the students and plot on the ipaq systems. The first stop was at Bobby Lynn’s gas station which did not have any gas pumps. We split up into two groups. Maygarden took a group down to the water to test the salinity and assess the wildlife along the bayou, while Heather and I took the second group down Interstate 1 to plot a few (3) buildings on the ipaq.

The students were having a hard time concentrating on the task at hand because of the bugs, heat and the noise from the traffic. Some work was accomplished; they completed plotting the points and taking pictures along the way. They were somewhat reluctant to contribute to the conversation about what exactly the purpose of the field trip was though. It is possible that they were not confident in their own opinions or answers, or that they were intimidated by the technology and did not understand the significance of the ipaqs and GPS or how it relates to them at all.

**LESSONS LEARNED**
Although there were challenges there were lessons to be learned from this McMaster project. Preparation is a key component to having a productive and successful environmental education field trip with behaviorally challenged students. Here are some recommendations for future preparation.
First and foremost, the instructor needs to be trained and very familiar with using the technology involved. Any instructors or chaperones involved in the field trip should know how to use the technology so that they will be able to assist in educating the students and keeping them on task. In order for teachers to implement GIS and GPS technologies teaching in their classrooms they need to know how to use such technology themselves. McClurg and Buss (2007) presented several ways in which to improve professional development experiences for teachers requiring GIS and GPS technologies. First it is important to understand and assess teachers’ confidence and attitudes toward using GIS and GPS technologies in classrooms and whether they believe it would be worthwhile to learn how to use such technology themselves. The next thing to consider is time and pacing of the workshops. There needs to be enough time “in order to provide participants with opportunities to test and refine their skills at home and in the classroom between sessions.” Next teachers need to know how to make the GIS and GPS technologies relevant to their classroom curriculum (p. 82).

Additionally teachers benefit greatly from supportive structure when learning how to use GIS and GPS technologies. According to McClurg and Buss (2007) a participation website, email and phone calls, on-site visits, support manuals, and checking out GPS and GIS units for teacher-usage all contributed to a successful education in regards to GIS and GPS technologies. Finally there is something to be said about teachers having access to information pertaining to the hard ware and soft ware and incentives for attending professional development experiences involving GIS and GPS technologies (p. 83).

Second, the students need to understand the technology ahead of time also. There should be several preparation classes conducted by the field trip instructor for the students so that they day of the field trip they are familiar with the technology and not distracted by trying to figure out how to complete their tasks. Morris and McKee (2003) emphasized teachers are responsible for getting a group prepared for their environmental activities. Teachers need to start with implementing lessons related to ecosystems, interactions of living organisms, and proper journaling. Teachers also need to arrange adult supervision and go over rules, expected behavior and consequences. All the activities at the Conservation Education Center are hand-on and mind-on. Activities include fishing, archery, fears discussion and night hiking among other things. Journaling is used to “help students recognize some of the positive effects that the outdoor experiences are having on their attitudes and temperaments” (2003, p. 41) This will allow the students more time to thoughtfully process the information they are
collecting and participate in open discussion about what is going on in the environment around them.

Lastly, the instructor should be prepared for the environment in which they are going to be taking the field trip. Be prepared for the weather, insects, and various distractions in the environment. For example, the day of the field trip it was very hot and muggy out which attracted insects. The students had worn sweat shirts and there was only one bottle of bug spray that did not deter the insects at all. The site that had been picked for the field trip was not conducive to an educational learning experience because of the loud traffic along the road. This traffic prevented the group from having much of a meaningful conversation about how they could apply GPS/GIS technology to their lives and why it was so important to understand and use GPS/GIS.

Another valuable lesson learned was the need to have an ongoing and open relationship between the environmental outreach staff, the teacher, and the school involved. Stronger communication pertaining to the involvement, activities and specific lessons to be taught could have enhanced the experience for the students.

CONCLUSIONS
Three predominate issues in working behaviorally challenged students include the role structuring the experience, preparation of those in teaching role for the field experience, and communication and cooperation between community partners.

The role of structure is very predominant in successful teaching/field experiences with behaviorally challenged students. Being able to handle any situation that comes up during a field trip will reduce the distractions and increase the learning experience for the students involved. These are students who already are challenged and easily distracted from learning so reducing the distractions will help keep them on task.

Preparation of those in teaching role is a predominate need when working with behaviorally challenges students. The instructors involved, whether the environmental outreach staff member or the classroom teacher, need to understand the technology and the agenda for the field experience. This will aid them in keeping the students on task. There also should be a ratio of three of four students per instructor. This ratio will also help keep the students on task.
Cooperation and communication is the third most important aspect of conducting an environmental educational field trip. With both the outreach program staff, the teacher and the school all understanding one another’s roles and responsibilities pertaining to the program experience, it leaves less room for inaccurate assumptions and unmet expectations.

REFERENCES

CREATING A PUBLIC AWARENESS ABOUT THE GULF COAST

Jennifer Creighton, McMaster Scholar

The wetlands of southern Louisiana are a key component for the survival of millions of people, flora, and fauna and for various industries in the United States. If the wetlands are not restored, the ecological impacts of a potentially lost southern Louisiana will reverberate throughout the natural community and will reach the civilized world, affecting nearly everyone in the U.S.

LITERATURE REVIEW
According to the Coalition to Restore Coastal Louisiana (CRCL), barrier islands and wetlands protect against storm surges and lower the damage done by high winds (“Storm Protection,” n.d.). Estimates state that 2.7 miles of wetlands are needed to lower storm surge by one foot (“Storm Protection,” n.d.). With this in mind, LaCoast has estimated that Louisiana “has lost up to 40 square miles of marsh [wetlands] a year for several decades” (n.d.). Donald F. Boesch et. al. translates this into a loss of wetlands “the size of New Orleans every five to six years” (as cited in Shallat, 2006).

This loss puts two million people in southern Louisiana at risk of losing their homes, businesses, and even lives (“Storm Protection,” n.d.). The inhabitants of southern Louisiana are not the only ones who will be affected by disappearing wetlands, however. The entire United States relies on the coast of Louisiana to maintain its standard of living. Commercial and recreational fishing, the oil and natural gas industries, the shipping industry, and the natural habitat will all be adversely affected if the wetlands are not restored. The CRCL estimates that approximately 30% of the United State’s commercial fishing catch comes from the coast of Louisiana (“Habitat,” n.d.). In addition to commercial fishing, non-commercial fishing accounts for between $703 million and $1.2 billion spent every year (“Habitat,” n.d.). America is still heavily reliant on oil and natural gas, and much of what is used travels through the pipelines running through the wetlands of southern Louisiana. The CRCL states that “nearly 25% of all the oil and gas consumed in America and 80% of the nation’s offshore oil and gas travels through Louisiana’s wetlands” (“Energy,” n.d.). In addition to being America’s lifeline to oil and natural gas, the six deep-water ports in Louisiana make this state the first in the nation in shipping tonnage, handling roughly 20% of the nation’s shipping and providing the heartland with access to the world market (“Navigation,” n.d.). While the implications of wetland loss for these various industries are quite obvious, what may not be as obvious are the
repercussions of what will happen in the natural habitat if the wetlands are not restored. The coast of Louisiana is home to a very diverse group of flora and fauna which rely on the ecosystems of the wetlands for survival. If the wetlands are allowed to continue to degrade, these plants and animals face possible extinction, which will have far-reaching consequences that may not yet be fully understood.

Now that the effects of wetland loss are known, what are the causes? While various actions have contributed to wetland loss, three of the main causes are subsidence and coastal erosion, the dredging of canals and the creation of spoil banks, and climate change.

Subsidence and coastal erosion are the two natural forces which cause wetlands loss (Ko & Day, 2004). Subsidence is the compressing and sinking of the wetlands; it “is caused by compaction, dewatering, and consolidation of sediments” (Ko & Day, 2004). This is a natural process that was naturally balanced by the arrival of sediments from three sources: sediment from the flooding of rivers (most notably the Mississippi), storm surges that bring sediments from the ocean floor inland, and the slow but steady accumulation of new soil from decaying plant matter (Marshall, 2008a). Now that the Mississippi River has been levied, all of the tons of sediments coming down
from 41% of the continental United States that would normally flood out into the wetlands are now being funneled out into the Gulf of Mexico and are no longer feeding the wetlands (Shallat, 2006). But subsidence continues.

Coastal erosion is also a natural cause of wetland loss. Barras states that the majority of this loss occurs during hurricanes and does not have a large affect on interior marshes (as cited in Ko & Day, 2004).

Canals dredged for the oil and gas industries have also contributed greatly to the degradation of the wetlands. Bahr et al. states that when a canal is dredged, the wetlands are torn out and the dredged materials are placed along the edges of the canal in banks called spoil banks (as cited in Baustian & Turner, 2006). The canals and the spoil banks both have direct and indirect affect on wetland loss. Directly, Craig et al. states that the canals have created open water in the marsh and the spoil banks have created areas of raised land in an otherwise flat environment (as cited in Baustian & Turner, 2006). Indirectly, canals are not static once they have been dredged; on the contrary, Craig et al. has concluded that the banks continue to erode, resulting in a canal doubling in width every 5-60 years (as cited in Ko & Day, 2004). Swenson and Turner point out that spoil banks have an indirect affect on the wetlands by “restricting water flow above and below the marsh surface . . . [which can] increase flooding and drying of the marsh behind them (as cited in Baustian & Turner, 2006). Turner and Rao attribute 22% of wetland loss to the direct effects of canals and spoil banks and an even greater amount from the indirect effects (as cited in Baustian & Turner, 2006).

Climate change is contributing to wetland loss by causing the sea level to rise. One of the National Wetlands Research Center’s senior researchers and an expert on climate change, Virginia Burkett has been quoted as saying, “The delta of the Mississippi River is the most vulnerable location in the nation to global warming, because it is sinking at the same time sea level is rising, . . . and it’s only going to get worse” (Marshall, 2008a). However, while sea level rise is attributing to the degradation of the wetlands, this is not to say that the wetlands cannot be saved. Gornitz, Lebedeff, and Patrick have evidence showing that sea level rise accounts for 10-15% of relative sea level rise, leaving much of the problem to other causes (as cited in Ko & Day, 2004). The problem is that climate change and global warming are making a bad situation even worse by raising the level of the oceans. The existing scenario of degrading wetlands by the deprivation of sediments and the dredging of canals, coupled with global warming, has created a situation which has “left the state [of Louisiana] with less than a decade to fix [the] problem or face permanent land loss” (Marshall, 2008a).
What can be done? Three areas that must be focused on are a diversion of the Mississippi River, backfilling of canals, and the overall reduction of global warming. As discussed previously, the wetlands of southern Louisiana need the sediments from the flooding of the Mississippi River to counteract subsidence. A prime example of the positive affect a diversion of the Mississippi will have can be seen at the mouth of the Atchafalaya River. Not only is the Atchafalaya River counteracting the results of subsidence, a new delta is actually being formed in Atchafalaya Bay, creating “one of the few locations in southern Louisiana that has experienced a net land gain” (Roberts & van Heerden; Boesch et al. as cited in Reyes, Martin, Day, Kemp, & Mashriqui, 2004).

Backfilling existing canals with the spoil banks will restore the wetlands where high ground from the spoil banks used to be. Backfilling will also allow for the proper hydrology to be reached in the wetlands and will create a “beneficial shallow-water habitat in the canal” (Baustian & Turner, 2006). This process will also halt future erosion of canal banks.

Reducing global warming poses a more complex problem to resolve, as the issue is much more far-reaching than southern Louisiana. The sea level is rising due to the gradual warming of the oceans which has most recently been occurring since the 1800’s and could take 500 years to stabilize, according to current models (Marshall, 2008b). The primary causes of global warming and climate change are greenhouse gases, which are created by the burning of fossil fuels. Reducing greenhouse gases will have the largest impact on climate change (Marshall, 2008b).

**Methodology**

My project was threefold: In the first part, I continued my research on the coastal wetlands issues as it pertains to New Orleans and the overall structure of the coastal environment. In addition, I conducted research on my community partners to discover their missions, what they are doing about this issue currently, and what they want to do in the future. By knowing all I could about the issues at hand and about my community partners, I was better able to make my work benefit them while I was on the ground and after I returned home.

The second part consisted of my work on the ground. I spent time learning about the issues of conservation and sustainability with our community partners at the Turtle Cove Environmental Research Station, which is a part of Southeastern Louisiana University. I was also given numerous sources to examine and possibly utilize in developing the awareness pamphlet.
I discussed the pamphlet possibilities with Dr. Rob Moreau, manager of Turtle Cove and environmental economist, and together we decided what information to include. In addition to my research at Turtle Cove, I also went out to the wetlands to obtain a first-hand look at the environmental situation.

Once back in Ohio, I began work on the third part of my project; developing a tri-fold pamphlet to raise awareness about the degradation of the wetlands, which my community partners will be able to distribute. I used the information I gathered while on the ground to produce multiple copies of the pamphlet that was made to fit my community partners’ needs and which was sent back to them to distribute, however they see fit. The pamphlet consists of the outline, layout, and information that Dr. Moreau and I devised during my time at Southeastern Louisiana University and the Turtle Cove Environmental Research Station.

**On the Ground**

My time on the ground consisted of research and first-hand experience in the Louisiana wetlands, which began with a group visit to the Jean-Lafitte Barataria, a preserve of various wetlands. Our tour guide explained the various swamps and marshes. The visit to the Barataria let us see the tourist end of preservation – here was a large tract of various wetlands, battered a bit from Hurricane Gustav, but generally in very good shape. The combination of the preserved wetlands and the information from our tour guide gave one a sense – false, in this case – that the wetlands, while maybe not doing as well as they could, were nonetheless not in grave danger. After all, we were standing in the midst of a large and diverse preservation. We learned from our time at the Barataria that although the Barataria was preserving wetlands and teaching about them and the degradation the region faces, it would be easy for one who is not well-informed about the issues to develop a false sense of security regarding the amount of danger facing the wetlands.

We also visited the Ninth Ward in New Orleans to see the devastation caused by the hurricanes, which was made much worse by the degradation of the coastal wetlands. This visit to the devastated Ninth Ward was integral to understanding just how intertwined are the health of the wetlands and the security of those living near them.

My time with our community partners at the Turtle Cove Research Station at Southeastern Louisiana University was divided into two parts – part of the time I worked with Dr. Rob Moreau at Southeastern and part of the time I assisted my colleagues with their projects in the wetlands with Michael Greene, the biologist on staff at Turtle Cove.
During my time at Southeastern with Dr. Rob Moreau, we discussed multiple facets of the problems facing the wetlands; causes, effects, and the laborious uphill battle facing those working to save the remnants vital to the survival of millions of people, flora and fauna. Dr. Moreau gave me numerous sources of information for the tri-fold pamphlet, which I researched during my time at Southeastern. We also discussed the format that the pamphlet would take, working to develop a layout that would be easily accessible and provide the most impact. Dr. Moreau was integral to the formation of the pamphlet, working with me to develop the outline and structure that it would take. The pamphlet begins with a section explaining what the wetlands are and what impact they have on the environment and the economy. The pamphlet then explores the topic of the economic benefits of the wetlands, which includes the commercial fishing industry, the oil and gas industries, and the impact on storm surge protection. Once the benefits of the wetlands have been explained, the pamphlet moves onto why we are losing the wetlands. Included in the myriad of reasons are subsidence, sea level rise, and lack of accretion due to excess leveeing. The final section of the pamphlet addresses what can be done to save the wetlands. To do this, multiple acts, including a diversion of the Mississippi river for land building, backfilling canals, and rebuilding barrier islands are necessary.

The hands-on part of my time was spent going out into the field with Michael Greene and my colleagues from Defiance College to study the wetlands and to assist my colleagues with their projects. We took a boat ride out to Turtle Cove’s onsite station, located on Lake Maurepas. There, while gathering the materials to plant cypress trees for a colleague’s project, we were able to examine the damage done to the station during the hurricanes which was substantial enough to hinder its operations to this day.

We also traveled with Michael on Highway 1 to Grand Isle, stopping at various points along the way, including Bayou Lafourche and Golden Meadow. I was able to study the degradation of the wetlands along Highway 1 and the impact of this degradation on the surrounding areas. The telephone poles along the road were surrounded by water, since the marsh that they were built in now only consists of small patches, as the marsh was slowly being engulfed by open water. I saw numerous fishing boats out of place on dry land, having been thrown there by the hurricanes and left on land by those who could not return. Throughout the over hour-long trip down to Grand Isle, I saw almost no housing. With the water overtaking the land, it seemed that not many people were willing to inhabit the area along Highway 1, a major highway. At one point we passed through a town called Port Fourchoun with quite a bit of rebuilding going on, but Michael informed us that this rebuilding was centered almost solely on the oil industry and not
on those who live or used to live there. In addition, at various points along our journey, the new highway system being built to replace Highway 1 was visible, raised high above the water and ready to take over the flow of traffic once Highway 1 is no longer viable, as it will be under water very soon from the effects of the degradation.

**Reflection**

My time in southern Louisiana amongst those who call it home made me aware of the importance of the coastal wetlands. They are vital not only to those who feel the devastating impact of their death but also to the diverse flora, fauna, ecosystems, and industries that depend upon these lands for their survival. The destruction caused by Hurricanes Katrina and Rita reverberated throughout America, but did not have enough of a lasting impact to act as a catalyst for the nation to bring about the changes needed to save these lands. We must not forget the phenomenon that was integral to the degree of their severity and devastation: the unrelenting degradation of the coastal wetlands. The most nightmarish part of this ordeal lies not only in what has happened, but also in what will happen if the necessary and desperately needed changes are not made, and the coastal wetlands are not preserved for the future.

**REFERENCES**


WETLAND RESTORATION IN THE BALDCYPRESS SWAMP

Kasey Carlisle, McMaster Scholar

While the United States was very young and there was still an abundance of natural resources available, entrepreneurs took a great interest in one particularly abundant southern tree, the baldcypress (Taxodium distichum). This great species is located primarily along the Gulf Coast, but extends east across the coastal plain, through Alabama and Georgia, and along the east coast as far as the Chesapeake Bay. Baldcypress comprised the vast tract of ancient forest that extended from below New Orleans, up the Mississippi River floodplain as far north as Cairo, Illinois, that was found to be a great cash crop for the logging industry due to its incredible durability and resistance to insects and other pests.

The community partner I had the opportunity to work with was Southeastern Louisiana University and its field station, Turtle Cove Environmental Research Station. Turtle Cove has focused a lot of their work on the restoration of the baldcypress in the immediate vicinity by planting trees and doing experimentation. I primarily worked with Michael Greene, biologist on staff at Turtle Cove who focused a portion of his Master’s work on baldcypress regeneration and remains involved in efforts to restore the population in The Manchac Wildlife Management Area. This area is found on the land bridge formed between Lake Ponchartrain and Lake Maurepas and is located north of New Orleans near Hammond, Louisiana. As Greene (1994) has stated in his master’s thesis, “I believe the focus of baldcypress is important because these grand trees once dominated Southern Louisiana but because of extensive logging in the late 19th century there was a sharp decline and there has been little to no regeneration of the trees.”

By learning the planting technique of baldcypress I could contribute to the restoration efforts already in place. I call it a technique because baldcypress need a little more protection from herbivory, as well as suitable environmental conditions, than do most trees planted. None could really be ideal however because the land has changed so much from years past when the original forests dominated. The land is now dominated with land cover vegetation such as bulltongue (Sagittaria lancifolia) and alligator weed (Alternanthera philoxeroides) as evidenced by helping another scholar Amanda Zimmerman with a vegetation survey.

As a Restoration Ecology major, the work of recognizing that this ecosystem is important to the people and that for the most part was completely
destroyed is my field of interest. I feel there is an expressed need resounding throughout the country since Hurricanes Katrina and Rita in 2005 which I believe gave most people a wake-up call; not only to the people of Southern Louisiana but to the larger community of America. More needs to be done for this area than using man-made structures to protect the people. The people should rely on the stability of the Earth itself and look at ways the natural landscape can provide protection for them. The Port of New Orleans is a very crucial key to the importing and exporting of goods in the United States. The more we can do to preserve the area for future use as a key part of the economy is vital.

**Literature Review**

I believe Donald Boesch (2005) put it best by saying “The lesson of Katrina is that the costs of environmental restoration are dwarfed by the costs of ignoring it.” Money makes the world go round, and for years the long-term effects of destroying a key tree species for profit and destabilizing the land have been overlooked. The people of Southern Louisiana realize the risks they take living near the coast but they have allowed the destruction of the cypress forests, extensive wetlands, and barrier islands in order to make their lives more economically secure. “Prior to logging there was almost 3.64 million hectare (1 hectare=2.5 acres) of cypress swamps which was reduced to a measly 140,000 hectare today” (Greene, 1994). Yes, in the restoration ecology world, time is needed for all the negative effects to be reversed but there is a large amount of money needed to fund restoration efforts and, as such, the ecological aspect should be formatted in such a way it is understandable for all to realize what environmental improvements they are putting their money towards and how it will affect their lives.

“Cypress trees can take as much as a century to reach maturity” (Schardt, 2006). It can be very difficult to get the people with the money needed to fund the replanting of the trees to see beyond their lifetime and provide for the posterity of humankind and the Earth alike. The cypress trees are not naturally regenerating on their own as scientists would hope, they need help “The Maurepas Swamps are deteriorating at an alarming rate because of flooding, drought, and saltwater intrusions. It was found that there are negative correlations between the biomass productions of the trees and the aforementioned problems” (Hoepner et al, 2008.). However, Keim et al. (2006) expresses that “the natural re-growth of the cypress does happen, just on a small scale. Their conclusions showed that “80% of baldcypress stumps sprouted after logging but only 21% retained live sprouts 4 years after harvest” (p. 25). In my research I found there are several natural pests which cause the baldcypress to struggle as well.
The baldcypress is known for its disease and rot resistance but natural pests contribute to its detriment as well. Nutria, (*Myocaster coypus*), reduces survival rates of baldcypress significantly. There was a “100% reported mortality rate of unprotected cypress trees” (Greene, 1994) in Greene’s study. The protection is a simple tube made of 4-inch Polyvinylchloride or a patented Tubex © sleeve. Nutria could be looked at in the future to see what management techniques can be done to reduce their numbers. There is definitely an expressed need in all articles reviewed that suggests outside help and a river diversion should be done to increase the productivity of the cypress swamps and keep them alive.

“The baldcypress leaf roller (Archips goyerna) became a nuisance in the Atchafalaya River Basin first and has since spread to the Southern portion of Lake Maurepas” (Effler et al., 2006). “They defoliate about 72,000 hectare a year with a potential to increase because of nutrient increases. As diversions of the nutrient-laden river into the nutrient starved swamps are the ideal propositions of restoration this can also increase the spread of the leaf roller by making more trees available for them to eat. The swamps provide a great filter for absorbing the nutrients which would also reduce the hypoxia, low oxygen zone, in the Gulf (Lindau et al.).
Methodologies
My project was two-fold. The first part was learning the planting techniques and the second part was creating educational materials to educate the public at large about the importance of the baldcypress tree. The planting of these trees was done in two different areas of The Manchac Wildlife Management Area. The first was in a stand of previously planted cypress where the soil was compact and clay-like. The second area was in a marshy area where the soil was loosely held together and stored water. A hole was made for the sapling with a dibble bar, a tool specifically used for planting, then the tree was inserted and the roots were covered up. Tubex © pipe made of corrugated plastic, designed to biodegrade within four to five years, was then placed over the tree and inserted into the ground firmly with a twisting motion to provide extra support for the tree and to prevent nutria from eating it during the night. Next a wood stake was inserted in the zip tie hole on the side of the Tubex © and pushed straight down into the ground.

The second part of this project was to get the word out to individuals of the broader American community about the importance of the restoration being done for the baldcypress swamps. I produced a handout that highlights the importance of the baldcypress. I also suggested alternative methods to using the common cypress mulch. I’ve used this method to convey my overall message and reach out to the hearts of the average person that is in some way affected by the baldcypress swamps. It is also very important to separate one’s own personal values and beliefs from the factuality of scientific evidence when informing those outside the scientific community to give more credibility to the importance of a certain species.

Reflection and Conclusion
Years after one of the worst natural disasters in the country’s history, the rebuilding phase is still underway in the city of New Orleans. In light of these rebuilding efforts, there is the chance to rethink land use and focus on the natural environmental endeavors to make the disappearing coast more useful as a natural barrier. I believe the focus on baldcypress swamp restoration itself is very important to the people of Southern Louisiana. As the planted trees grow, their roots will begin to create a stabilization matrix that will act as a buffer and front-line defense to catch the brute force of storms as they come ashore and reduce overall wave energy to minimize storm effects further inland. This protection will enhance the security of the citizens who have chosen to call this area their home – the people that live right on the shores and who have cypress wood as part of their homes.
I have previously traveled to Louisiana and have been touched deeply by the compassion of the people. I have witnessed first-hand the hard work of a community pulling together and re-establishing their lives after a major disaster like Hurricane Katrina. New Orleans City Park is still in need of repair after those major disasters. While on this trip we had the unique opportunity to do a service project with America’s WETLAND Conservation Corps. This project was not planned. We received the e-mail on a Tuesday from a faculty member back home in Defiance. The project was scheduled for Saturday and our schedule was flexible enough for us to squeeze it in, so I signed us up. It was a great addition to our experiences. As a senior Bonner Leader, I know that every opportunity to do service is a time to bring people together and I wanted to be that much closer to the people in the community I care so much about. We worked alongside other college students, just done with finals, a family that want to give their time, and surprisingly, one of our community partners Dinah Maygarden, to name a few. Together we organized the park’s greenhouse and helped plant some wetlands plants in the park. It’s always interesting to do a service project with such a wide variety of people whom you have never met from communities far apart; but by the end of the day you feel as if you’ve made a new connection to each and every one of those people.

The people that do not live in Southern Louisiana don’t understand the reasons anyone would want to live in such a vulnerable area. To the residents of Southern Louisiana however, they are part of one of the richest communities of culture one would ever experience. Deep in history, this area has truly been blessed with a great sense of southern comfort and I lovingly embrace the fact that the spirituality of the area is very evident and willingly expressed at the center of every community. A restoration project like the one involving baldcypress can be something that the people of Southern Louisiana come together for once again to provide a more stable environment for their posterity; but it needs to happen for this unique geographical area to still exist.
REFERENCES


Hurricane Katrina devastated New Orleans in August of 2005 and left the city under water and full of many unresolved issues that floated to the top once the water receded. Many different organizations came to the rescue to assist in the recovery of the city. The Defiance College and the McMaster School for Advancing Humanity became involved with the situation in 2007 with a Service Learning trip to the city. This was the start of a partnership that would continue to be a large part of Defiance College’s McMaster School’s mission “to serve as a focal point for teaching, service, scholarship and action to improve the human condition worldwide” (Master School). The McMaster School allows students to have experiential learning experiences along with advancing humanity and learning to become global citizens.

How does one advance humanity or become a good global citizen? This question is difficult to apply to the New Orleans site, because it is a domestic location. Yet, to become a good global citizen one must understand the issues facing one’s own nation. The New Orleans learning community provides students with this opportunity by allowing them to explore the importance of the city of New Orleans to our own country’s history, the root causes of poverty in the United States, and the consequences of a natural disaster. In the pre-Katrina period New Orleans struggled with the issues of poverty and marginalization and in the years since the hurricane this situation has only grown worse. The African American community has historically struggled with poverty, but now they are confronted with the issue of Diaspora, meaning that the members of their community are leaving the region and are not returning. This is creating a new problem, which and historian seeking to contribute to the recovery of the region can resolve. Using my skills as an historian, I can collect and perverse the history of the region and make that information available to other scholars via conferences, publications, and other presentations. By generating an awareness of these issues I am creating a better understanding of these peoples and their needs (Delarber, 2008).

The 2008-2009 New Orleans Learning Community marked my second year as a McMaster Scholar. I was continuing a project started in the 2007-2008 school year at the Amistad Research Center located in Tilton Memorial Hall on the campus of Tulane University. My project the previous year consisted of working with the Thomas C. Dent collection. My colleagues and I worked with Dent’s audiotapes and constructed a scope of collection...
for them. My current project continued the work I started in 2007-2008 and took it to another level. During my visit at Amistad this time I implemented the numerous skills garnered from my history courses and prior research. It was a transformation of the basic organization of audiotapes to a more experiential learning experience being able to preserve a collection on my own. The collection Brenda Billups-Square, Head Archivist at Amistad, chose for me was the Ellis Marsalis Collection. The collection had just recently been donated and Mr. Marsalis was anxious for it to be preserved. The opportunity to preserve the collection on my own provided me with the chance to not only understand the role of an historian, but also to focus specifically on the role of an archival historian. The culmination of my research allowed me to turn to history and strengthen the community partnership.

The purpose of my 2007-2008 New Orleans McMaster Scholar project was to volunteer at the Amistad Research Center and assist with the processing of the Thomas Dent collection. My research focused on the Dent family and their importance in both the African-American community and at Dillard University. In addition, I investigated best practices for processing archival collections and identifying the Amistad Research Center’s role as an independent research institution in New Orleans. The Amistad Research Center and Defiance College entered into a service learning partnership that provided both parties with unique opportunities. For me as a student, I was able to gain hands on experience working with an archival collection. Moreover, I was meeting the community partner’s identified need by aiding in the processing of various collections. This need arose as a result of Hurricanes Katrina and Rita, which made it impossible for twelve members of the research center’s staff to return to New Orleans. Through this project a partnership has formed that will allow for future McMaster Scholars to continue volunteering at the Amistad Research Center.

The development of a community partnership like that between the Amistad Research Center and Defiance College can assist with the development and planning of the community and the greater area of New Orleans. Not only can the partnership assist with neighborhood planning, but also historians and more specifically the work of oral historians to provide for a better framework for rebuilding the city. June Thomas Manning (2004) describes in her article Neighborhood Planning: Uses of Oral History that oral history offers a potential avenue for providing knowledge for planning history as an activity involving ordinary citizens, such as marginalized populations who have worked to improve their communities rather than just involving political leaders and professional planners in the process (Manning, 2004). According to Manning (2004), “…finding knowledge able people to talk
about the history of their lives or their communities, providing a framework for conversation, and then listening very carefully to what they have to say” (p. 56) can further the process of neighborhood development. Oral History provides a different perspective, one of ordinary citizens to be able to understand the needs of the city, like poverty and African Diaspora, to assist in alleviating the problem. Completing a study regarding oral history and the role it can play in community development, Manny concluded historians hold two roles. Manny (2004) commented “We might envision two sets of contributions, the first by professional historians who write about oral history as a method and the second by professional historians who could help with training neighborhood planners” (pg. 67). Historians have a role to fulfill in the development of New Orleans by providing an institutional memory of not only pre-Hurricane Katrina, but also post-Hurricane Katrina. It is important for the community of New Orleans to have an institutional memory of the many different identities within the city and the continuous history being made within it. This is the role that historians can play within the community of New Orleans.

While in New Orleans on the 2008-2009 Learning Community Trip, I worked with Brenda Billups-Square to further develop my project. Brenda hoped to develop goals for our week together. The goals were reciprocal
in nature. My project was to assist Amistad in their backlog of collections along with allowing for the advancement of my career goals and aspirations. As an aspiring historian, it is crucial to have hands on experiences to better understand what it means to be an historian. This experience gave me a better understanding of the work of an archival historian. Brenda assisted with the development of my project while on the ground in New Orleans by wanting to know what my goals were and what I desired to learn while serving at the Center. We sat down together and developed a list of goals for the week. The goals included to assist in researching Ellis Marsalis in order to help Brenda with the scope of collection for the recently donated Ellis Marsalis Papers, process part of the Ellis Marsalis Papers, travel to the offsite location to provide support in areas of re-boxing and organizing some of the backlog of collections, and to meet with Laura Thomson, the Director of Processing at Amistad to better understand the process of preserving a collection. All of these goals were met at the end of the work week.

The first goal was to research Ellis Marsalis for Ms. Billups-Square and to assist with the Biographical Note and Scope and Content Note, both of which come at the beginning of the Processing Inventory. My research led me to better understand the man whose papers, awards, and various other artifacts I would be working with throughout the week. Ellis Marsalis is an influential pianist and educator in the New Orleans area and throughout the United States. The Marsalis family is known for its musical talent, which includes Ellis who plays the piano, sons saxophonist Branford, trumpeter Wynton, trombonist Delfeayo, and drummer Jason (Ellison, 2001). Ellis also has two other sons, Ellis Marsalis III and Mboya. Ellis III pursued a career in a writing and photography and little is known about Mboya. Ellis and his family have kept Mboya in good care due to the fact that he has autism.

Mary Ellison in her article entitled The Marsalis Family and the Democratic Imperative in Jazz states that “Jazz has long been the most powerful expression of African American hopes and aspirations, as well as a creative form that is essentially communal and co-operative” (2001). The Marsalis family provides the African American community with music to allow for a communal feeling and something to be able to call their own. Ellison (2001) provides commentary from Wynton Marsalis who stated that, “Jazz is something Negroes invented and it says the most profound things, not only about us and the way we look at things, but about what modern democratic life is really about” (Ellison, 2001). It is imperative to preserve the history of the Marsalis family because it is not only the history of New Orleans, but also a part of the newly developing institutional memory. Jazz music can and is serving as a form of dealing with the devastation still facing the city. Ellis and his family are providing an art form that is historically relevant to the
city along with a way to express the current situation that the city faces.

In my McMaster Scholar project in 2007-2008, I researched the mission of archivists, which included identifying records and papers of enduring value, preserving them, and making them available to patrons. The Marsalis collection was identified as records of enduring value and was in the process of being preserved to allow for future scholars to use. One of Ms. Billups-Square’s goals during my time in New Orleans was to speak with Laura Thomson, the Director of Processing at the Amistad Research Center, who would assist me with the preservation of the Marsalis collection. It was at this time that I was able to apply my prior research to the work I would be doing on the ground. Gregory Hunter provides basic information about archival processing in Chapter One, “Introduction to Archives and Manuscripts,” in his book *Developing and Maintaining Practice Archives*. A large amount of the information I researched in his book I was able to apply while in New Orleans in 2007-2008, along with this most recent trip with the 2008-2009 learning community. The identification process starts the preservation of a collection, which was already completed by Ms. Billups-Square. The identification process includes the acquisition and accessioning of the collection. Hunter states “Acquisition covers such areas as donor relations and contacts, and policies for collecting records and papers” (1997). Accessioning involves the transfer of the records to an archive along with the transfer of legal rights to the physical and intellectual property (Hunter, 1997). Having these two crucial elements completed prior to my arrival allowed for my work to be ready for me when I arrived at the Center.

My responsibility would begin with assisting Ms. Billups-Square with the description of the collection. The description bridges the gap between preserving the records and making them available. It is an opportunity for the archivist to record what is known about the collection and arrange it in a way that is accessible by researchers (Hunter, 1997). The description included first doing research on Ellis Marsalis, which would be put into the Biographical Note and Scope and Content Note. According to Hunter (1997), the preservation of historically valuable items involves three archival functions: arrangement, preservation, and security. The arrangement process is organizing the records in direct accordance with acceptable professional standards (Hunter, 1997). A very important component to preservation is the protection of the records from physical deterioration and damage. While working with the Marsalis collection Laura taught me how Amistad preserved their collections in a manner that would keep them from damage. Once I completed the inventory of what items were located in which box and applied the labels to each item I wrapped the items and arranged them in boxes. I wrapped the items in acid free paper and placed them in acid free
boxes. The acid free boxes and paper protect the collections from natural and human disasters, which completed the security function of preserving historically valuable items (Hunter, 1997). The preservation of the Ellis Marsalis collection allowed for me as, an aspiring historian, to have hands on experience applying prior research and history courses I have completed thus far at Defiance College.

My research project was an experiential learning experience that strengthened the relationship between The Amistad Research Center and the McMaster School for Advancing Humanity. The partnership between the Amistad Research Center and the McMaster School is a prime example of the mission of the McMaster School. The mission of the McMaster School includes “educating students for responsible citizenship, to produce committed global citizens and leaders who understand the importance of individual liberties in improving the human condition worldwide, and to encourage graduates to take an active role in addressing these issues in whatever professions they may choose” (McMaster School). From my various forms of research, not only about my specific project, but also about the many issues facing New Orleans, I now better understand the issues facing the human condition. This experience has broadened my outlook on the world and made me feel like even though I am one citizen of the world that I can truly make a difference in the lives of one population to start a ripple effect throughout the United States and the world. My efforts in New Orleans in assisting with the institutional memory of a prominent leader within the city will allow for future scholars to research an individual who has played a large role in the development of New Orleans. I started my McMaster Scholar experience having the desire to learn about archiving and the process of preserving a collection. I have ended it with a better understanding and appreciation for not only history, but the role of historians.

REFERENCES

CHRISTMAS TREE PROJECT VEGETATION SURVEY
Amanda Zimmerman, McMaster Scholar

All over the world there are many wetland communities disappearing at rapid rates. One of the most important communities to New Orleans is the wetland aquatic plant community that helps protect the city during storms and keeps them above sea level. These wetlands are disappearing in this community at a fast rate and something must be done to protect them as they are a great resource to humans as well as many different animal species. One project being conducted is known as the Christmas tree project to help protect shore lines of islands. Can this save our wetlands in New Orleans?

INTRODUCTION
New Orleans, Louisiana is a place known to get hit by hurricanes and yet still survive as a city. According to R.W. Kates, C.E. Colten, S. Laska, and S.P. Leatherman, New Orleans’ 288 year history has had 27 major disasters equaling one about every 11 years (2006). However after each disaster the city rebuilt and even expanded further into the wetlands (Kates et al. 2006). John Bohannon and Martin Enserink mention in a 2005 article that one idea for restoration of New Orleans area is to restore the wetlands and let them act as a natural buffer between the city and the sea.

This act of restoring the wetland is one of the better options for protecting New Orleans from future storms and sea level rise. The Office of Coastal Restoration and Management (OCRM) has mentioned in their Article Restoration Program Background (2008) that Louisiana contains 3.4 million acres of wetlands that are homes to thousands of plants, animals, and humans as well as industrial holdings (OCRM, 2008) However, the wetlands are disappearing at such a fast rate that by 2050 there will be 2,400 sq. miles of wetlands lost since 1932 (OCRM, 2009).

The OCRM indicates nine major reasons why the wetlands are vanishing: “Alteration in hydrology, tropical storm and hurricane impacts, subsidence, gradual rise in sea level, levee construction, degradation of canals, harvesting of wetland forests, exploring for oil and gas, and herbivory” (OCRM, 2008). “These wetlands are known as “America’s Wetlands” which give us products such as: industrial infrastructure, transportation infrastructure, water quality, fisheries, coastal communities, habitats, and most importantly to New Orleans storm protection” (OCRM, 2008).
So one might ask what is being done to restore these wetlands. While many plans have been constructed, these plans have yet to be implemented. One project that has been implemented is the Christmas Tree Project. An island called Jones Island in Lake Maurepas is being protected by putting old Christmas trees along the shore line to help protect the island and rebuild its plant community. A man named Fred Stouder, marsh restoration coordinator, is working with Turtle Cove research station to use Christmas trees from the community to stabilize the island. The program has been running for the past 10-12 years; however, there have been few studies to see if it is working. Therefore a wetland vegetation survey was conducted to determine if the Christmas tree Project is positively affecting the wetland plant community. I hypothesize that the areas where Christmas trees have been laid down will allow for a greater wetland plant diversity and greater plant community than those areas not reinforced with old Christmas trees.

**Materials**

Several pieces of equipment were needed to conduct the proposed experiment. The materials needed were PVC pipe, a plant identification handbook, GPS, and a notebook for recording information. With the PVC pipe a 1m x 1m square was constructed to use as the sampling area. The identification book that was used is the Common Vascular Plants of Louisianan Marsh by R.H. Chabreck. The notebook was then used in the field for recording observations and writing down the sampling plots and all of the species found in the sampling areas. The GPS was used to mark the location each sampling plot.
METHODS
According to Dr. Meiyin Wu, Dr. Dennis Kalma and Boquet River Association (2007) in their Vegetative Assessment of Wetlands Sites Quadrant Sampling Protocol, the steps to a wetland vegetation survey are explained as follows: All sites are to be recorded with the GPS for instances where a vegetation survey was to be conducted again it could be compared to the one being conducted. Then in a notebook information such as where, what site and date are to be recorded for each site. Then the constructed 1x1 meter square quadrant will be thrown out into the sampling area. Each time this is done, record which sample number that will be and record all plant species present and amount of each plant species within the quadrant. This process was should be repeated 4 or more times per area to be sampled.

Once all data was collected and recorded it was then analyzed. Both the density and diversity of species per site were compared between each surveyed site. Grass species were compared using percent coverage as they it was hard to count each individual piece while all other species were compared using single plants per square meter.

RESULTS
With the data analyzed there were several results. Of the 4 areas sampled there were a total of 13 different species found. There were three species found in the non-Christmas tree area, nine species found in the area that has had Christmas trees for 10-12 years, nine species in the area with Christmas trees for 5-6 years and in the area planted 1-2 years ago with Christmas trees there were 7 different species of plants found. The most common plants that were found in almost all the different areas were bull tongue (Sagittaria lancifolia), costal water hyssop (Bacopa monnieri), smartweed (polygonum hydropiperoides) and a number of unidentified species. These species were unidentifiable because they do not flower in the winter and they had more dieback (where plants die due to climate changes) than ones that were identifiable. All results can be found in Table 1.

DISCUSSION
The results support my hypothesis that the Christmas Tree Project has positively affected the wetland plant community. There are only three species that have been found in the area that has no Christmas tree protection. In areas that are being protected by the Christmas trees, there are seven different species found in the areas (Table 1). Not only that, but the densities of most of the species that are found in the earliest plantings of Christmas trees (10-12 years ago) are at greater numbers than those of the other areas (Table 1). This supports the concept that Christmas trees
help stabilize the soil and provide protection to the area to allow plant communities to establish.

CONCLUSION
This study supports the hypothesis that laying down old Christmas trees along shorelines of wetlands helps protect them and allows them to establish more diversity and abundant plant communities. This plant diversity abundance will allow shoreline stabilization and slower degradation of wetland communities, which, then, also helps save wetlands from disappearing so fast and gives New Orleans a chance to survive if the wetlands can be rebuilt.

This project was conducted in the month of December when most plants are harder to identify and not all plants are evident. Therefore if this project was conducted in the spring time when plants are in bloom and active, there most likely would be even greater results in diversities and densities of plant communities per area. With these wetlands getting a chance to reestablish their plant communities they become more stable and can still support all the products for which Americas Wetlands are known.

Table 1: Density of plant species on Jones Island New Orleans per square meter

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Density in non-Christmas tree per meter square</th>
<th>Density In 10-12 years Christmas Tree Planting per meter Square</th>
<th>Density in 5-6 years ago of Christmas Tree Planting per meter Square</th>
<th>Density in 1-2 years ago of Christmas Tree Planting per meter Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alligator Weed</td>
<td>Alternanthera philoxeroides</td>
<td>1.50</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bull Tongue</td>
<td>Sagittaria lancifolia</td>
<td>5.67</td>
<td>4.83</td>
<td>14.50</td>
<td></td>
</tr>
<tr>
<td>Costal Water Hyssop</td>
<td>Bacopa monnieri</td>
<td>1.67%</td>
<td>4.33%</td>
<td>0.33%</td>
<td></td>
</tr>
<tr>
<td>Green Grass</td>
<td>Rottbellia sp</td>
<td>10.83%</td>
<td>9.17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iris</td>
<td>Iris sp.</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maidencane</td>
<td>Panicum hemitomon</td>
<td>5.83%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marsh Elber</td>
<td>Iva frutescens</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marsh Morning</td>
<td>Ipomoea sagittata</td>
<td>0.50</td>
<td></td>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td>Glory Shrub</td>
<td></td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shrub</td>
<td></td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smartweed</td>
<td>Polygonum hydropiperoides</td>
<td>8.5</td>
<td>6.83</td>
<td>3.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Unknown 1</td>
<td>Unknown 1</td>
<td></td>
<td></td>
<td></td>
<td>4.33%</td>
</tr>
<tr>
<td>Unknown 2</td>
<td>Unknown 2</td>
<td>5.83%</td>
<td>3.33%</td>
<td>0.83%</td>
<td>1.67%</td>
</tr>
<tr>
<td>Unknown 3</td>
<td>Unknown 3</td>
<td>9.17%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Species</td>
<td></td>
<td>13</td>
<td>3</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>

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