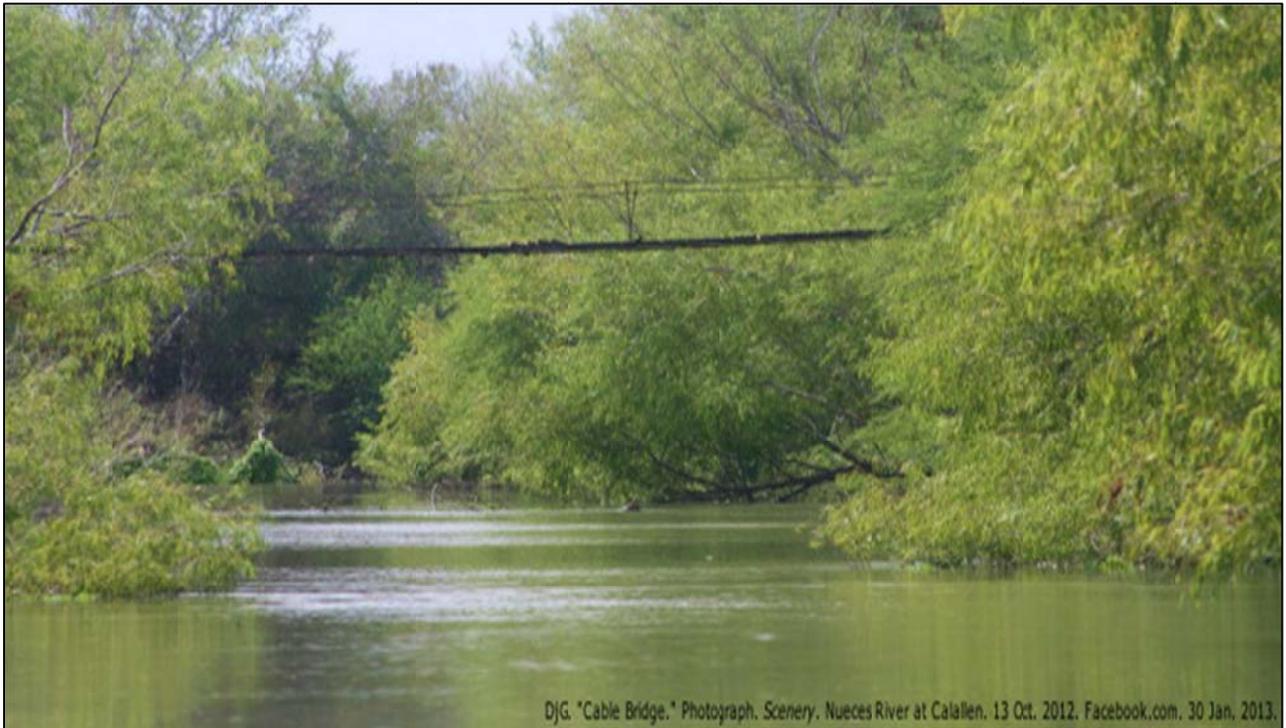


**Implementation of the Lower Nueces River Watershed Protection Plan  
PROJECT AND MANAGEMENT STRATEGY SUMMARY**

**TSSWCB PROJECT #15-09**

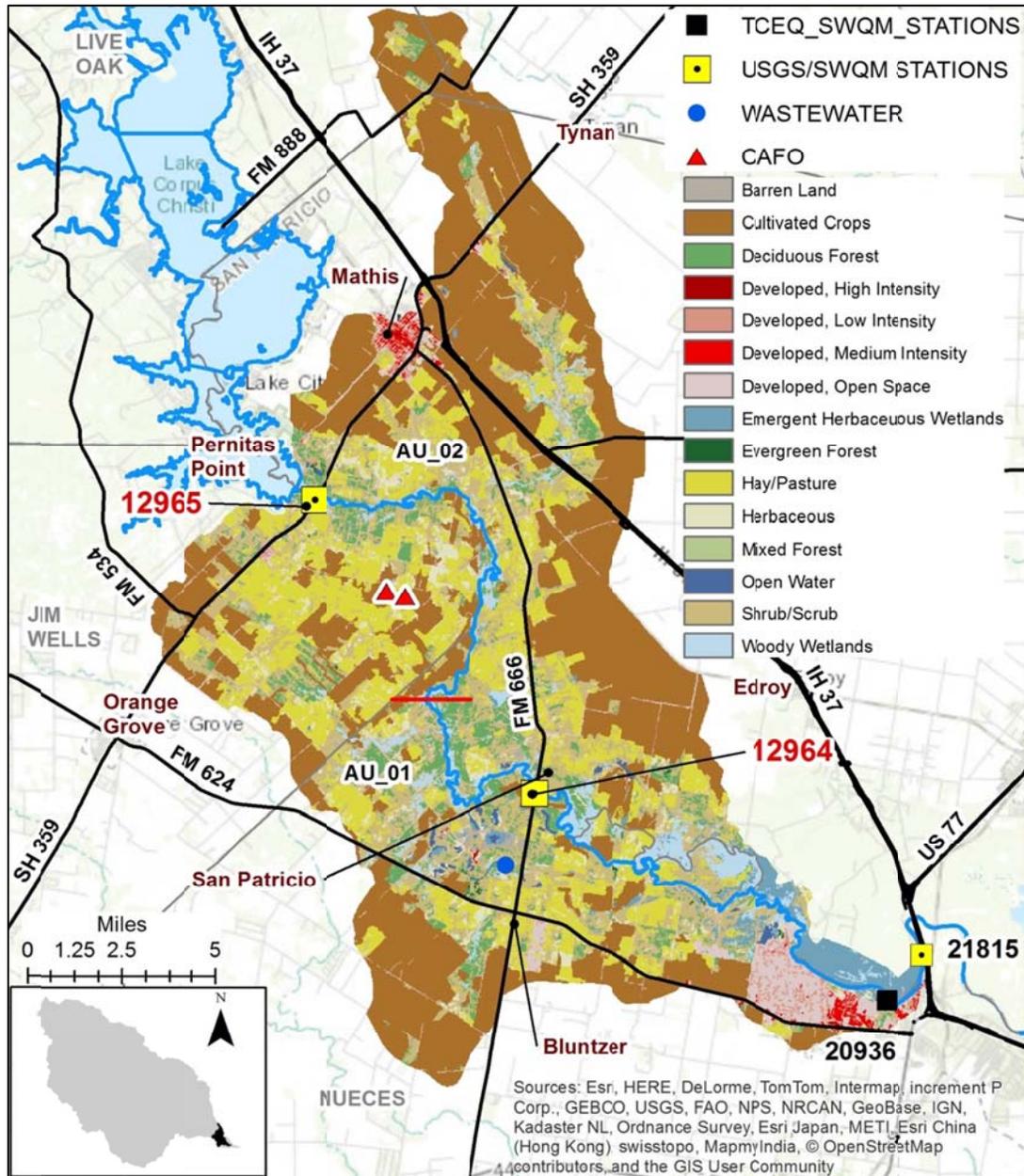
**Project Period November 1, 2015 – June 30, 2018**



**NUECES RIVER AUTHORITY  
FUNDING PROVIDED THROUGH A FEDERAL CLEAN WATER ACT §319(h)  
NONPOINT SOURCE GRANT ADMINISTERED BY THE TEXAS STATE SOIL AND  
WATER CONSERVATION BOARD FROM THE US ENVIRONMENTAL PROTECTION  
AGENCY**

## Introduction

The Lower Nueces River is the conduit of water from Lake Corpus Christi to the City of Corpus Christi, which supplies drinking water to approximately 500,000 people and to industries in the Coastal Bend. In November 2009, the City of Corpus Christi experienced a sudden, unexpected increase in turbidity levels at the O. N. Stevens Water Treatment Plant (WTP) that resulted in a drinking water violation. The City of Corpus Christi hired the Nueces River Authority (NRA) to develop a source water protection plan to help prevent future turbidity issues and to identify and prevent other possible threats to the water supply. The NRA based the source water protection plan on the US Environmental Protection Agency's (EPA) *Nine Elements of Successful Watershed Plans* with the goal of developing a full watershed protection plan (WPP) for the Lower Nueces River (Figure 1).



**Figure 1. Map of the Lower Nueces River Watershed**

Although at the time the Lower Nueces River was not listed on the Texas 303(d) List of impaired waters, the Texas State Soil and Water Conservation Board (TSSWCB) acknowledged the stakeholders' interest and efforts in protecting the river and selected it for development of the Lower Nueces River WPP – a voluntary, non-regulatory alternative to addressing water quality issues. The segment has been assessed as having a concern for chlorophyll-*a* since the 2008 Water Quality Inventory. It was listed as being impaired for total dissolved solids (TDS) in the 2012 Integrated Report. The Clean River Program (CRP) 2008 Basin Summary Report indicated an increasing trend in bacteria concentrations.

The TSSWCB project 12-05 – *Development of the Lower Nueces River Watershed Protection Plan*, was initiated in October 2012 and the WPP was approved by the EPA in April 2016. The project was a stakeholder driven process led by the NRA. The Nueces River Watershed Partnership Steering Committee includes local officials, land and business owners, and citizens. Most of the citizens were also members of the Nueces River Preservation Association (NRPA), a group of home owners that live on the river, and are dedicated to helping keep the river clean. See Appendix A for the list of Steering Committee members and their respective interest category.

Throughout the contract period and development of the WPP, identified management measures were implemented as opportunities arose and funding became available. This TSSWCB project, 15-09 – *Coordinating Implementation of the Lower Nueces River Watershed Protection Plan*, continued the implementation of the WPP.

## **Project Overview**

The contract for this project was initiated in November 2015 and completed in June 2018. It continued stakeholder engagement through newsletters, maintaining the project website, and hosting quarterly Partnership Steering Committee meetings. The management measures identified in the WPP were prioritized by the Steering Committee.

The management measures were organized into six categories: agricultural nonpoint source, riparian habitat conservation, wastewater and urban, wildlife, feral hog, and cleanup. Education and outreach (E&O) activities were conducted / supported when possible. The next section of this report will expand on each measure and additional measures that have since been added to the list.

NRA, through its CRP contract with the Texas Commission on Environmental Quality (TCEQ), conducts quarterly water quality sampling at four sites along the river (Figure 1). The analysis of these data will also be discussed in the next section. NRA also provided project updates in their quarterly CRP stakeholder update.

## **Project Highlights**

### ***Project Website***

The Nueces River Watershed Partnership website, <http://www.nuecesriverpartnership.org/>, is maintained by the NRA on its website. Updates to the webpage over the project period included: newsletters; stakeholder meeting announcements, agendas, summaries, and copies of presentations; project quarterly reports; watershed related meetings and workshops; graphs of the quarterly water quality data; and implementation progress.

During the contract period, the website was accessed a total of 15,841 times. The monthly hits ranged from 110 to 1,057, with an average of 495 hits per month. The total number of webpages accessed was 24,096 pages – ranging from 132 to 1,828 per month, with an average of 753 pages per month. The total number of hits including links to documents such as the WPP, newsletters, and meeting summaries, was 51,474: – ranging from 312 to 2,725 per month, with an average of 1,609 total hits per month. The

number of unique visitors per month ranged from 91 to 947 with an average of 424. Appendix A includes the complete monthly statistics.

### ***Newsletters***

Ten newsletters have been written, distributed, and posted since July 2013.

### ***Agricultural Nonpoint Source Management Measures Implementation***

- *Water Quality Management Plans (WQMP)*: Priority #15. WQMPs are required for agricultural producers to receive technical and financial assistance from the Natural Resources Conservation Service and the TSSWCB, through the local Soil and Water Conservation Districts (SWCD). At the time of the publication of the WPP, there were 47 certified WQMPs within the Lower Nueces Watershed in Nueces and San Patricio counties.

One additional WQMP was certified in Jim Wells County in 2017, and one additional WQMP was certified in San Patricio County in 2018.

- *WQMP Status Review*: Priority #17 (tie). WQMPs are periodically reviewed, as funding permits, to evaluate if the plan is being followed, the results, and if any changes are needed. No status reviews were conducted within the watershed during this contract period.

### ***Riparian Habitat Conservation Measures Implementation***

- *Purchase of Properties*: Priority #14. There are a number of properties along the river in Nueces County that have been auctioned off due to back taxes being owed on them. The City of Corpus Christi has purchased some of these properties with the intent to prevent further development in these flood prone areas. San Patricio County has also purchased properties after major flood events through Federal Emergency Management Agency grant opportunities. Some of these properties have been converted to parks and have been placed into conservation easements in perpetuity.
- *Acquisition of Conservation Easements*: Priority #17 (tie). Acquiring conservation easements through the purchase or donation of development rights is one avenue for protecting riparian zones from development. Easements allow land owners to retain ownership of their land while agreeing to leave it in its natural state for perpetuity. Conservation easements do not imply nor provide for public access to these lands. A local foundation has recently acquired property in San Patricio County for the purpose of placing it into conservation easements.

### ***Wastewater and Urban Measures Implementation***

- *Solid Waste Transfer Stations / Trash Collection Events*: Priority #1. The goal of this measure is to reduce the amount of illegal dumping by giving people a more local location to take their trash. However, the implementation of solid waste transfer stations is not a logistically feasible option for the counties in the watershed due to the resources that would be needed to properly maintain them. Another option to reduce illegal dumping is to hold periodic trash collection events at various locations within the watershed. There have been several cleanup events along CR 73 over the years. The City of Corpus Christi, Nueces County, Coastal Bend Bays and Estuaries Program (CBBEP), and TSSWCB have all contributed funds and/or in-kind services to the events. The last one took place in April 2013. NRA will assist in coordination of future events as opportunities arise.

- *Trash Can Lids at Hazel Bazemore Park:* Priority #2. The CBBEP provided funds for materials for 29 trash cans to be placed along the Nueces River in Hazel Bazemore Park in 2013. Nueces County provided the labor to install the cans. Loose trash was still an issue at the park due to nightly raids by raccoons. In 2018, Nueces County designed and installed lids on the trash cans (Figure 2).

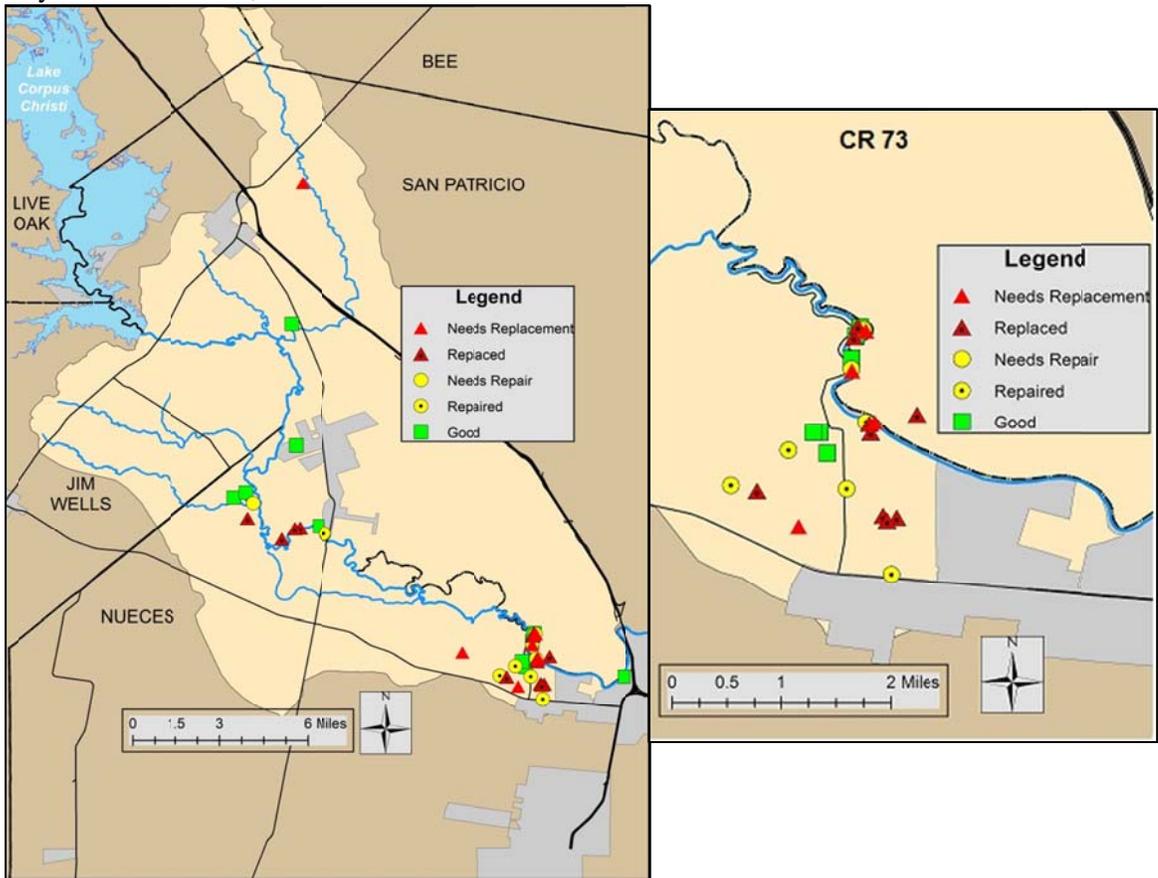


**Figure 2. Trash can with lid at Hazel Bazemore Park**

- *OSSF Repair and Replacement:* Priority #3. NRA received a federal Clean Water Act §319(h) Nonpoint Source Grant administered by the TCEQ from the EPA to fund an on-site sewage facility (OSSF) inspection, repair, and replacement program. This 15-09 project funded two OSSF workshops to promote the project. The project period is from March 2017 to February 2020, or until the repair and replacement funds have been expended. As of June 30, 2018, 43 systems have been inspected: 14 were found to be in good working order; 10 were in need of repair, 9 of which have been completed; and 19 needed to be completely replaced, 14 of which have been completed (Figure 3). NRA intends to submit a proposal for TCEQ's FY 2019 Request for Grant Applications to continue the program.
- *Connections to the City Corpus Christi's Wastewater System:* Priority #8. There is a portion of a neighborhood in the Calallen area, adjacent to the river and within the City of Corpus Christi city limits, that relies on OSSFs. These homes are also situated just upstream of the City's water intake at the O. N. Stevens WTP. Many of the homes are a short distance, but downhill, from existing wastewater infrastructure. The goal of this management measure is to connect these homes to the existing infrastructure and remove the OSSFs.

Implementation of this measure is a multi-phased approach. The first phase was initiated in December 2017 with NRA contracting with the City of Corpus Christi to develop a detailed plan and cost estimate for actual implementation. This work is being funded through a federal Clean

Water Act §319(h) Nonpoint Source Grant administered by the TCEQ from the EPA. The next phases will include identifying funding sources for construction, incorporating the work into the City's work schedule, and actual construction.



**Figure 3. OSSF Inspections, Repairs, and Inspections**

- Pet Waste Collection Stations and Leash Bag Holders:* Priority #11. In 2017 the CBBEP funded the purchase of nine pet waste stations, 12 boxes of additional bags (2,000 bags/box), and 500 leash bag holders. Nueces County installed four of the stations at Hazel Bazemore Park and received 10 boxes of extra bags. San Patricio County installed two of the stations at La Fruta Park. Wilderness Lakes RV Park in Mathis installed two of the stations and received two boxes of extra bags. Tackle Box Bait and RV Park in Mathis installed one of the stations and received two boxes of extra bags (Figure 4). Unfortunately, some of the stations at Hazel Bazemore Park have been vandalized.

**Figure 4. Pet Waste Station at Hazel Bazemore Park**



- *Storm Water Retention Ponds:* Priority #12. Storm water retention ponds have become a standard best management practice for new construction with large footprint of impervious cover. The cities of Corpus Christi (1%) and Mathis (83%) are the only larger cities that fall partially within the watershed. The City of Corpus Christi is required to have a Phase I Municipal Separate Storm Sewer System (MS4) permit due to its population being greater than 100,000, and it does have a city-wide storm water plan. The City of Mathis has a population of less than 5,000, which is below the threshold for a Phase II MS4.
- *Municipal and Public Utility Districts / Wastewater Treatment Facilities:* Priority #16. NRA conducted research on the feasibility of creating Municipal Utility Districts (MUD) or Public Utility Districts (PUD) to serve as wastewater treatment facilities for the communities relying solely on OSSFs. The research notes, including the online references used, are included as Appendix C.

MUDs are initiated by the homeowners. They require a petition requesting creation be filed with the TCEQ by a majority of the land title owners, or at least 50 land title owners if there are more than 50 land title owners. They must also have written consent from a city if they are within that city's extraterritorial jurisdiction. The legal expense of requesting the MUD creation, developing the supporting documentation, finding funding for construction, and the operation and maintenance, is borne by the citizens. A MUD does have taxation authority. The communities that would benefit from a MUD most likely do not have the resources to implement this measure.

PUDs are created by a local government body, such as a city, county, or metropolitan service area (two or more communities joining together for public utility purposes), and they are non-profit. PUDs are often governed by a commission, which may be appointed or elected. None of the local governments have expressed an interest in implementing this measure.

Water Control and Improvement Districts (WCID) can also operate sanitary wastewater systems. The closest WCID is Nueces County WCID #3, but its jurisdictional boundary does not include any of these communities in the area.

#### ***Wildlife Management Measures Implementation***

- *Workshops:* Priority #9. Texas Parks and Wildlife Department (TPWD) is the state resource agency charged with protecting and managing wildlife. They inform the public about wildlife, including hunting regulations; provide landowner incentives to manage for rare species; and provide technical guidance and assistance to private landowners in the development of wildlife management plans and conservation easements. Workshops to deliver this information to landowners will need to be coordinated closely with TPWD.

#### ***Feral Hog Management Measures Implementation***

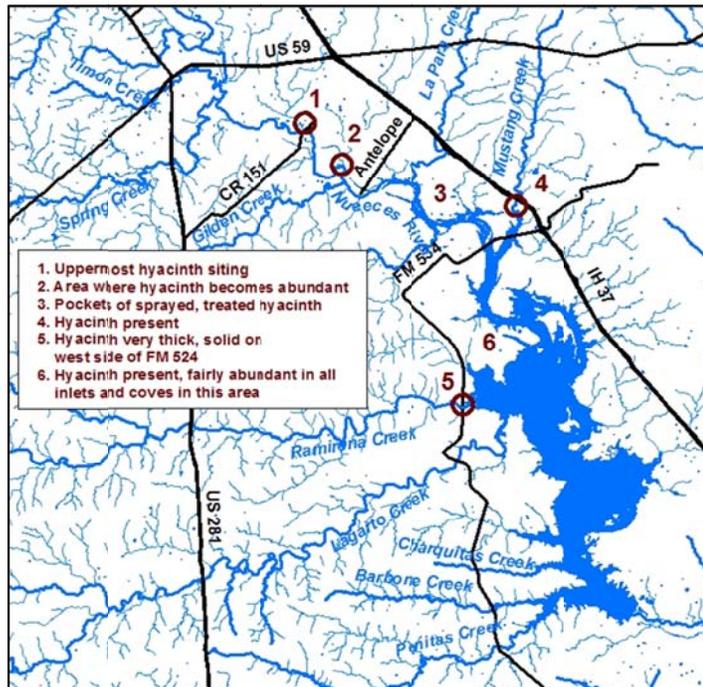
- *Workshops:* Priority #6. Feral hogs are a problem throughout the state. They cause millions of dollars of damage to crops every year and can be a major contributor to bacteria loading. Feral hogs cannot sweat, so they need access to water to cool themselves, making riparian areas a prime habitat. NRA has hosted several workshops which have included presentations on feral hog management: Texas AgriLife Extension's Spring Ranch Field Day (May 2017), Texas Riparian & Stream Ecosystem Workshop (October 2017), and Lone Star Healthy Streams Workshop (April 2018).

### **Cleanup Management Measures Implementation**

- **Volunteer Cleanups:** Priority #4. The NRPA has organized at least five cleanups of the river since 2012. The volunteers pick up trash and debris from boats and kayaks. NRA has assisted in these cleanups by providing supplies with funds from the TSSWCB and CBBEP grants. The City of Corpus Christi and Nueces County have provided in-kind services for disposal of the trash and debris. The NRPA lead person, Tim McWha, is an AEP Texas employee. In 2017, AEP Texas filmed a number of commercials recognizing employees that have gone above and beyond to give back to their community. Tim was one of these featured employees. The commercial can be seen at <https://www.youtube.com/watch?v=DfTjEftp0so>.
- **Hyacinth Control:** Priority #5. There have been reports over the years of parts of the Lower Nueces River being completely covered by water hyacinth. Weather conditions, such as hard freezes and floods, periodically reduce the infestations. Water hyacinth is problematic in that it increases the time required for water released from Wesley E. Seale Dam at Lake Corpus Christi to make its way to the fresh water intakes at the lower end of the river segment, its evapotranspiration can increase evaporative water loss, and it can be an impediment to recreation.

An aerial survey of water hyacinth on the Lower Nueces River in February 2015 was funded by the TSSWCB 12-05 grant. One hundred twenty-five (125) colonies of water hyacinth were documented by photograph and their global positioning system (GPS) locations recorded. Follow-up visits to several of these colonies revealed an average colony size of 1,120 sq. ft. Based on these observations it is estimated that approximately 3.21 acres of water hyacinth were present in the project area at this time.

The key to managing the hyacinth is to remove the source. This project funded an aerial survey of the upper end of Lake Corpus Christi and the Nueces River up to US 59 near George West. The upper extent of the hyacinth was identified near the confluence of an unnamed tributary, near Live Oak County Road 151, with the river (Figure 5).



**Figure 5. Hyacinth Survey Results**

The City of Corpus Christi has authority to treat the hyacinth as far up the river as they can travel. The City works with TPWD to periodically treat the hyacinth. However, they are prohibited from spraying within ½ mile of the City of Beeville’s water intake structure just downstream of FM 534 (Figure 6).



**Figure 6. Hyacinth Surrounding the City of Beeville’s Intake Structure (left) and Buffer Zone (right)**

NRA will continue to seek funding opportunities to develop a program that would work with landowners along the river above Lake Corpus Christi to treat the hyacinth in a coordinated effort.

- *Large Debris Removal:* Priority #7. The identification of a leaking tar bucket during an investigation of an oil sheen on the Nueces River in 2003 resulted in an interest to further investigate what else was in the river. During development of the Lower Nueces River WPP, the NRA partnered with Texas A&M AgriLife Research Center at Blackland to conduct a side-scan sonar survey of the river in April 2014. This effort was funded by the TSSWCB 12-05 grant.

The NRA worked with stakeholders and members of the NRPA to review the results of the survey and develop a list of objects to be removed from the river. The list consisted of 10 partially submerged boats and one collapsed pier. Other objects that were identified during the side-scan sonar survey were not considered to be recreation or navigation hazards nor detrimental to water quality, and were better left undisturbed (Figure 7).

The success of the large debris removal was made possible by the collaboration of a number of entities. In addition to the TSSWCB and EPA funding of the side-scan sonar survey, the NRA utilized funding from a CBBEP grant to contract with J. M. Davidson Inc. to remove the boats and pier in May of 2016. The NRPA spent their time and resources investigating and tagging, for

the contractor's benefit, items to be removed; the City of Corpus Christi Solid Waste Department provided a dumpster for the debris and its disposal; and the mobilization and demobilization expenses of the removal equipment were covered by Nueces County.



**Figure 7. Boat Removal during Large Debris Cleanup**

- *Oil and Gas Well Plug and Abandon:* Priority #13. There are numerous oil and gas wells located within the Lower Nueces River Watershed, many of which are active and connected to pipelines for product delivery. With respect to the inactive wells and no longer used pipelines, there exists the possibility of the improperly plugged and abandoned (P&A'd) wells, improperly shut-in pipelines, and / or leaking pipelines. This could result in seepage from the wells and pipelines, contributing to the TDS impairment. The Railroad Commission of Texas (RRC) is the regulatory agency over the oil and gas industry. For non-active wells and pipelines that are in need of being P&A'd or shut-in, the RRC will try and identify the responsible producer and require them to do the work. If the producer cannot be identified or found, RRC will perform the work as funding becomes available.

NRA contacted the RRC to investigate the possibility of them conducting a survey of the area to determine the extent, if any, of improperly P&A'd wells and / or leaking pipelines. The RRC will respond to a request to inspect a specific complaint, but they are unable to conduct an overall general survey of the watershed.

### ***Education and Outreach***

The NRA has an extensive E&O program and participates in E&O opportunities throughout the Nueces River Basin and the adjoining coastal basins. NRA is also asked to give presentations about the work we do to various organizations. Nonpoint source pollution and water quality protection are two topics that are addressed at nearly every event and presentation. Appendix D contains a list of all E&O events attended and presentations given during the contract period.

### ***Water Quality Analysis***

The Draft 2018 Basin Summary Report analyzed trends in water quality data from January 1, 2000 through November 30, 2016 and conducted statistical analysis on data from December 1, 2009 through November 2016. The analysis was conducted for the two assessment units (AU) designated by the TCEQ. AU\_01 is from the downstream end of the segment at the Saltwater Barrier Dam to the confluence with Javelin Creek just downstream of the Jim Wells/Nueces county line. AU\_02 is from the upstream end of AU\_01 to Wesley E. Seale Dam at Lake Corpus Christi.

*TDS*: trend analysis indicates increasing trends in both AUs; statistical analysis calculated an average of 562 mg/l in AU\_01, which exceeds the water quality standard of 500 mg/l; statistical analysis calculated an average of 491 mg/l in AU\_02, just barely meeting the standard.

*Chlorophyll-a*: trend analysis indicates an increasing trend in AU\_02; statistical analysis shows that only 2 of the 28 samples exceeded the screening criteria of 14.1 µg/l in AU\_01, indicating that the concern could be removed in the next State assessment; statistical analysis shows that at least 20% of the samples exceed the screening level in AU\_02, and the concern assessment will remain.

*Bacteria (E. coli)*: trend analysis indicates an increasing trend in AU\_01; statistical analysis calculated a geometric mean of 124 cfu/100ml in AU\_01, just barely meeting the standard of 126 cfu/100 ml; statistical analysis calculated a geometric mean of 32 cfu/100ml in AU\_02, well below the standard.

The analysis did not identify any additional potential impairments or concerns in this segment of the river.

### **Conclusion**

TSSWCB Project 15-09 – *Coordinating Implementation of the Lower Nueces River Watershed Protection Plan*, has been completed and was essential to the continued implementation of the WPP. NRA will continue implementation of projects and activities that support the goals of the WPP with a TSSWCB 18-53 – *Coordinating Implementation of the Lower Nueces River Watershed Protection Plan* grant beginning July 2018. NRA will also continue to seek funds for additional implementation opportunities as new water quality data is obtained and assessed by the CRP and as conditions in the watershed change over time.

## List of Acronyms

AU	Assessment Unit
CBBEP	Coastal Bend Bays and Estuaries Program
cfu/100 ml	Colony forming units per 100 milliliters
CRP	Clean Rivers Program
E&O	Education and Outreach
EPA	United States Environmental Protection Agency
GPS	Global Positioning System
mg/l	milligram per liter
MS4	Municipal Separate Storm Sewer System
MUD	Municipal Utility District
NRA	Nueces River Authority
NRPA	Nueces River Preservation Association
OSSF	On-site Sewage Facility
PUD	Public Utility District
RRC	Railroad Commission of Texas
SWCD	Soil and Water Conservation District
TCEQ	Texas Commission on Environmental Quality
TDS	Total Dissolved Solids
TPWD	Texas Parks and Wildlife Department
TSSWCB	Texas State Soil and Water Conservation Board
µg/l	microliter per liter
WCID	Water Control and Improvement District
WPP	Watershed Protection Plan
WQMP	Water Quality Management Plan
WTP	Water Treatment Plant

## Appendix A – Steering Committee Membership

Category	Name	Affiliation
Water Right Permit Holders	Steve Ramos / Larijai Francis	City of Corpus Christi
	John Herrera	Nueces County WCID #3
Industries	Larry Wolnik	Celanese
	Danna Sharpe / Rachal Robinson	Flint Hill Resources
	Karen Ivey	San Patricio Municipal Water District
Homeowners	Dan Brodhag	CR 73
	Judy Hutto	San Paricio
	Steve Naiser	CR 70
	Brien Nicolau	Sandia
	Tim McWha	Corpus Christi
Counties	Karin Knolle	Jim Wells
	Mike Pusley	Nueces
	Sarah Williams	San Patricio
Large / Rural Properties	Phillip Skrobarczyk / Steve Hutchins	Angelina Ranch
	Myra Morris	Ed Rachal Foundation
Environmental Stewardship / Education & Outreach	Rosario Martinez	Coastal Bend Bays and Estuaries Program
Recreation	Wayne Cochran	
Soil and Water Conservation Districts	Lindsey Koenig	Jim Wells SWCD

## Appendix B – Monthly Website Statistics

Month	Unique Visitors	Number of Visits	Number of Pages	Number of Hits
Nov-15	132	155	330	1,188
Dec-15	140	169	333	1,025
Jan-16	146	178	329	973
Feb-16	91	112	223	717
Mar-16	144	191	407	1,276
Apr-16	180	286	726	1,906
May-16	193	253	466	2,205
Jun-16	196	253	457	1,767
Jul-16	195	240	417	1,507
Aug-16	318	371	568	1,881
Sep-16	263	343	548	1,862
Oct-16	274	413	775	1,978
Nov-16	347	544	1,101	2,244
Dec-16	389	572	1,105	2,027
Jan-17	164	169	229	421
Feb-17	103	110	131	383
Mar-17	637	694	858	1,801
Apr-17	723	782	1,014	2,144
May-17	671	728	970	1,892
Jun-17	717	772	931	1,850
Jul-17	719	779	978	1,736
Aug-17	697	746	864	1,642
Sep-17	947	1,034	1,653	2,725
Oct-17	834	968	1,258	2,156
Nov-17	884	1,057	1,405	2,203
Dec-17	721	793	921	1,377
Jan-18	793	948	1,828	2,636
Feb-18	155	175	232	312
Mar-18	519	559	697	1,154
Apr-18	422	477	980	1,830
May-18	427	487	778	1,578
Jun-18	428	483	584	1,078
Total		15,841	24,096	51,474
Minimum	91	110	131	312
Maximum	947	1,057	1,828	2,725
Average	424	495	753	1,609

## Appendix C

### Municipal Utility District / Public Utility District Management Measure Research

Areas that could benefit from a Municipal Utility District (MUD) or Public Utility District (PUD)

Nueces County, CR 73  
Nueces County, Oak Lane  
Nueces County, Sandy Hollow  
San Patricio County, San Patricio River Estates  
San Patricio County, Peaceful Valley  
San Patricio County, CR 1092

#### Purpose and Process<sup>1</sup>

##### 54.012 Purpose of a District

- One of the listed purposes of a MUD is “the protection; preservation, and restoration of the purity and sanitary condition of water within the state”

##### 54.014 Petition

- A petition requesting creation shall be filed with TCEQ
- The petition shall be signed by a majority land title owners or at least 50 land title owners if there are more than 50 land title owners

##### 54.015 Contents of Petition

- Boundaries, either by metes and bounds or by lot and block number if platted,
- Nature of the work, necessity for the work, and estimated cost of the project.
- Name of the district.

##### 54.016 Consent of City

- If within the extraterritorial jurisdiction of a city, must have written consent from the city, by resolution or ordinance. (City of Corpus Christi ETJ affects CR 73, Oak Lane, Sandy Hollow, San Patricio River Estates, and Peaceful Valley; City of Mathis ETJ affects CR 1092). Request for written consent shall be signed by a majority of land title owners or at least 50 land title owners if there are more than 50 land title owners

Water Control and Improvement Districts (WCID)s can also operate sanitary wastewater systems.<sup>2</sup> The closest WCID is Nueces County WCID #3, but its jurisdictional boundary does not include any of the communities listed above.

In the United States, a **public utility district (PUD)** is a special-purpose district or other governmental jurisdiction that provides public utilities (such as electricity, natural gas, sewage treatment, waste collection/management, wholesale telecommunications, water) to the residents of that district.<sup>[1]</sup>

PUDs are created by a local government body, such as a city, county or metropolitan service area (two or more communities joining together for public utility purposes). Normally the districts are non-profit.<sup>[2]</sup>

PUDs are often governed by a commission, which may be appointed or elected.

Municipal Utility Districts (MUD) are similar but have taxation authority.

[https://en.wikipedia.org/wiki/Public\\_utility\\_district](https://en.wikipedia.org/wiki/Public_utility_district)

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<sup>1</sup> Texas Water Code, Title 4 General Law Districts, Chapter 54 Municipal Utility Districts, Subchapter A General Provisions, <http://www.statutes.legis.state.tx.us/Docs/WA/htm/WA.54.htm>

<sup>2</sup> TCEQ, *Texas Water Districts A General Guide*, [http://www.tceq.texas.gov/publications/gi/gi-043.html/at\\_download/file](http://www.tceq.texas.gov/publications/gi/gi-043.html/at_download/file)



## Appendix D – Education & Outreach and Presentations

January 19, 2016	Presentation to the Corpus Christi Propeller Club
March 10, 2016	Watershed Model Demonstration at Mireles Elementary in Corpus Christi
March 23, 2016	Presentation to the Water Environmental Association of Texas & Texas American Water Works Association
April 9, 2016	Watershed Model Demonstration at Earth Day / Bay Day in Corpus Christi
April 18-19, 2016	Watershed Model Demonstration at Jim Wells County Ag Fair
August 26, 2016	WPP presented and discussed at NRA Board of Directors Meeting
April 7, 2017	New Board of Directors Presentation at Board Meeting
April 8, 2018	Watershed Model Demonstration at Earth Day / Bay Day in Corpus Christi
May 17-19, 2017	Watershed Model Demonstration at Jim Wells County Ag Fair
May 20, 2017	Watershed Model Demonstration at City Hall in the Mall in Corpus Christi
June 15, 2017	Presentation to Port Industries of Corpus Christi Technical Committee
October 31, 2017	Presentation to Sunset Review Committee
November 10, 2017	Presentation to Kingsville Environmental Engineering Seminar Class
April 18, 2018	Presentation to the Coastal Bend Group of the Sierra Club
April 7, 2018	Watershed Model Demonstration at Earth Day / Bay Day in Corpus Christi
April 24-26, 2017	Watershed Model Demonstration at Jim Wells County Ag Fair