

# CADDO LEVEE DISTRICT



1320 Grimmett Dr.  
Shreveport, LA 71107

[www.caddolevee.org](http://www.caddolevee.org)

Phone: (318) 221-2654

## 2015 ANNUAL REPORT

# ADMINISTRATOR'S LETTER

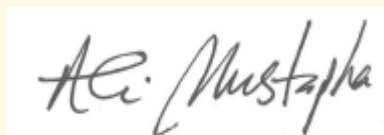
Working for Caddo Levee District and serving the residents of Caddo Parish has been an honor. Serving the public has been a fulfilling experience for me. After more than 25 years of working for the City of Shreveport's Engineering Division, I joined Caddo Levee District on May 1, 2014 as the Administrator.

During March 2015, the north part of the parish experienced a significant flood event with a crest of 32.75 feet on Twelve Mile Bayou on March 15. This flood stage elevation broke the fifth highest flood stage elevation of 30.87 feet that was set on July 10, 2007. We were fortunate that most of the flooding was confined to open space areas (low lying areas) that are located in the flood zone and there was no damage to property.

In mid to late May 2015, a series of heavy rain storms pounded parts of Oklahoma and Texas that are located in the Red River Basin. These rain storms broke 120 years of total monthly rain records for the area (totals of more than 20 inches were recorded in some areas which is 600% above normal). This record rainfall resulted in flooding of the Red River and produced a historic crest of 37.14 feet in Shreveport on June 9, 2015. This crest exceeded the most recent crest of 34.0 feet that was set in May, 1990 and was the highest crest of the Red River in 70 years. This historic flood event caused major flooding in the cities of Shreveport and Bossier City and Caddo and Bossier parishes. The levee district's crews worked hard during the flood to insure the levees and floodgates were operated and maintained properly and provided the needed flood protection for lives and property. Also, the USACE (Corps of Engineers) provided full support during the flood by patrolling the levee system daily and monitoring seepage to insure sand boils would not develop and cause damage or breach of the levee system. I am very pleased to report that our levee system along the Red River and Twelve Mile Bayou performed well and provided the needed flood protection for our residents.

After the flood, a detailed inspection of the levee system was performed and a field survey of the high water marks was conducted. The purpose of the survey was to assess the overall conditions of the levee system and to determine if any future improvements are needed to insure flood protection will be provided from similar storms or one's with higher flood stage elevations. In 2016, a more detailed field survey will be conducted on a segment of the Red River Levee South that was identified to have critical free board crown elevation.

Fighting this flood was a successful joint effort by all the local government organizations with the assistance of the USACE. Caddo Parish Public Works, the City of Shreveport, Caddo Levee District, Caddo Sheriff's office, the National Guard, the USACE and other community organizations did an outstanding job during the flood and played a significant role in protecting lives and prop-



# MEET THE BOARD

Caddo Levee District's Board of Commissioners

Carolyn C. Prator  
President



James T. Sims  
1st Vice President



Patrick Harrison  
2nd Vice Presi-



Gary Procell  
Member



Helen G. Smith  
Member



Kandi Moore  
Member



Willie L. Walker  
Member



# LEVEES

The District is charged with operating and maintaining the integrity of approximately 119 miles of a levee system in Caddo Parish that provides flood protection for over 30,000 residents and 200,000 acres of land.

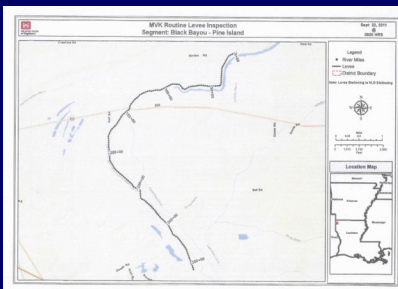
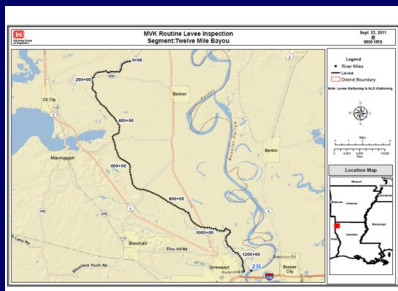
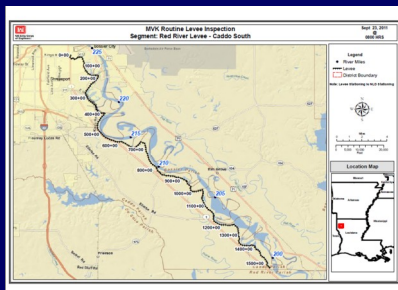
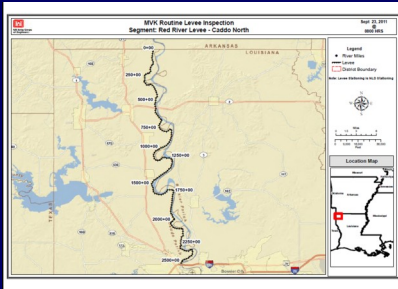
CLD staff monitors the levee system on regular basis, repairs ruts, eroded areas, slides, cave-ins, damaged fences and gates, and degraded levee crown surfaces, ramps and washouts. In addition to mowing grass, the staff sprays areas to control weed growth and nuisance vegetative growth, trims & weed-eats around levee gates and fence lines, etc. Overhanging tree branches and small trees within the statutory easement are removed as needed to ensure the integrity of the levee system is maintained.

The USACE- Levee Safety Program Division conducts annual inspections of levee system and DOTD's Public Works & Water Resources Division- Levee Safety staff performs quarterly inspections. The entire levee system, with the exception of Cherokee Park area levee segment, has been certified by FEMA and is classified by the USACE as minimally acceptable (no areas with an unacceptable rating).

The levee system consists of the following five (5) segments:

- 1) **The Red River main levee (80.37 miles). Extends 51.52 miles from north of the intersection of Cross Bayou and Red River to the hills at the Arkansas-Louisiana State line.**

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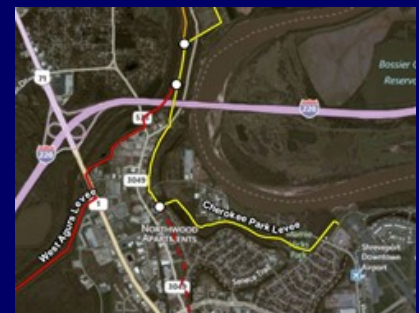
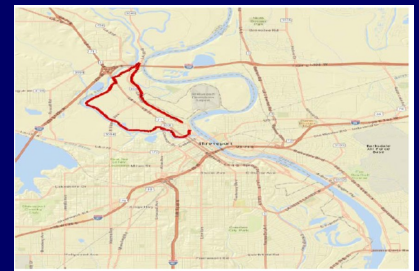




# LEVEES— CONTINUED

The other 28.85 miles extend downstream from the Shreveport-Barksdale Highway to the Caddo-Red River Parish Line.

- 2) The **Twelve Mile Bayou** Levee is 23.92 miles long and it extends from the Red River Levee at Twelve Mile Bayou Bend, north of Shreveport, to the high ground, approximately 9 miles above the mouth of Black Bayou, at Gamm Road, southwest of Gilliam.
- 3) The **Black Bayou-Pine Island** Levee is approximately 7.01 miles long and it extends from the high land, approximately one mile northeast of Caddo Lake Dam, to the high land above the mouth of Black Bayou.
- 4) The **West Agurs** Levee is 5.02 Miles and it extends along Cross Bayou and Twelve Mile Bayou, from the Red River Levee at Market St. and Cross Bayou, in Shreveport, to the Red River above Highway 1 Bridge.
- 5) The **Cherokee Park** Levee begins at point on the Red River Levee , close to Grimmiett Drive, and runs eastward, for 1.53 miles, to the high ground at the North end of Shreveport Downtown Airport's Runway.



## DRAINAGE

The drainage system, operated and maintained by the Levee District, includes natural drainage bayous (ditches and canals), paved drainage ditches, flood gates and one storm water pumping station. These drainage facilities, in conjunction with the levee system, provide flood protection to residents and property in Caddo Parish. Removal of obstructions, clearing, dredging, grading and mowing the high banks of the paved canals is performed by CLD staff to ensure proper drainage is provided.



The pump station and the floodgates are inspected on a regular basis. The floodgates are cleaned and painted, as needed. The Agurs Pumping Station serves the North Shreveport Business and Commercial area which includes Caddo Parish Correction Facility and North Louisiana Technical College. The Drainage Basin for the Station is approximately 1.595 Square Miles (1020 Acres). Summary of the Stations characteristics:



- Two 200 HP Vertical Turbine Electric Pumps (One was installed in 1966 and the other in 2004).
- Inlet Intake Elevation 148'
- Outlet Discharge Elevation 158.23'
- Two 36" Discharge Pipes equipped with Siphon-Breaker Valves.
- Pumping Capacity is 25,000 gpm.

## Capital Projects

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Capital projects which are implemented by CLD include: levee crown gravel surfacing; erosion, scour and slide repairs; rip rap revetment; pipe installation and rehabilitation; flood gates installation and repairs; paving ditches and repairing concrete and paved canals; dredging and grading canals; etc. Large scale projects are advertised for bids in accordance with Louisiana Public Bid Laws and licensed contractors are selected by the bid process to perform the work. Small scale projects and minor repairs are performed by CLD's in-house crews.

In late 2014 and 2015, the following capital projects were performed by contractors:

**Rip rap revetment at Bishop's Point** to protect the levee from scour and erosion by the Red River; **panels removal and replacement at the Lateral C-8 Canal** (S. Broadmoor ditch) in Southeast Shreveport; **surfacing the Black Bayou/Pine Island Levee's crown** with crushed aggregates to ensure the riding surface is stabilized, protected and accessible during flood prevention activities. The total cost for these projects was \$719,533.70. In addition, a project to perform **repairs to Bayou Pierre Channel, between Pierremont Road and Ockley Drive** is currently under construction, with an estimated cost of \$395,500 and a project to **rehabilitate the culvert at Black Bayou Levee & West Agurs Levee** is in the contract phase, with an estimated cost of \$305,000.

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## LAND MANAGEMENT (FORESTRY)

The Levee District is responsible for management of approximately 10,000 acres of lands. A full-time forester is responsible for property management, which includes; timber harvesting and re-planting, surface leases (usually one acre plots used for camp and home sites, and larger tracts of land used for grazing and agricultural). The Caddo Levee District has lease agreements with Caddo Parish Commission- Parks Division that allows them to construct and operate public recreational areas and public boat launches on CLD's property at three (3) locations (Robert Nance Park in Hosston on Black Bayou, Noah Tyson Park in Vivian/Rodessa area on Black Bayou and Horace Downs Park in Mooringsport at Caddo Lake Dam.

Also CLD has an Agreement with the Louisiana Department of Wildlife and Fisheries (LDWF) to manage the Soda Lake Wildlife Management Area (Soda Lake WMA), a 1,300 acre wildlife and public use area with a Boat Launch into Twelve Mile Bayou. The Soda Lake area is a key part of the total wildlife management plan for the Red River Valley in providing wintering waterfowl habitat.





# Permits

Permits are reviewed, approved and issued by CLD for all work that is to be performed by all entities (public and private) on or adjacent to CLD's facilities (canals, levees, property, natural bayous) that are under the jurisdiction of the Board. The USACE reviews all permits that might have any impact on the levee system and if it is determined that the proposed work is in conformance with the USACE's District guidelines, and does not adversely affect the levee, the USACE will issue a "No Objection" letter and CLD will proceed with the permit process. The Department of Transportation and Development- Public Works and Water Resources Division's (District 4) office reviews all permits submitted to CLD and provides recommendations to the staff. Letters of "No Objection" are issued if the proposed work to be permitted is in compliance with DOTD's guidelines and has no negative impact on CLD's facilities. The District handles approximately 30 to 35 permit requests per year. In 2015 (January – December) twenty-nine (29) permits were processed by CLD's office, in coordination with the USACE and DOTD.

**Permit Fee–** (Individuals) \$100.00 (Business/Commercial/Other- Excluding Govt.)- \$500

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## Common Types of Permits on the District's Levee System include:

- 1) Ramp Construction
- 2) Utility Crossing
- 3) Electric Powerline Crossing
- 4) Pipeline construction, up-and-over & directional drilling
- 5) Excavation adjacent to levees
- 6) Fences and Gates

Revised: 8/15/14

**CADDO LEVEE DISTRICT  
Permit Request**

Name of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Email Address: \_\_\_\_\_

Main Phone #: \_\_\_\_\_ Alternate Phone #: \_\_\_\_\_  
Fax Number: \_\_\_\_\_

**Detailed Description of Construction**  
*must include plan and profile sheet describing the scope of work showing distances and depths*

\_\_\_\_\_

\_\_\_\_\_

**Location of Construction**

Address: \_\_\_\_\_

Parish: \_\_\_\_\_ Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_

GPS Coordinates (must include topo map with GPS Coordinates): \_\_\_\_\_

Name of Levee: \_\_\_\_\_

Name of Professional Engineer/Architect: \_\_\_\_\_

Please attach check for: \_\_\_\_\_ \$100.00 Individuals  
\_\_\_\_\_ \$500.00 All others (excluding government)

**Insurance Company Name, Address & Phone #**

\_\_\_\_\_

\_\_\_\_\_

**NOTE: PROOF OF PERFORMANCE BOND OR INSURANCE BINDER MUST BE SUBMITTED WITH THIS APPLICATION BEFORE PERMIT WILL BE GRANTED.**

**CERTIFICATE OF INSURANCE OR PERFORMANCE BOND (if requested by CLD) NAMED AS AN ADDITIONAL NOTICEE FOR ALL PURPOSES. INSURANCE POLICY OF \$1,000,000 PROVIDED THAT THE INSURER WILL IMMEDIATELY NOTIFY CLD AND APPLICANT OF ANY CHANGES IN COVERAGE FOR ANY REASON\***

Applicant acknowledges and grants unto CLD the right to any information pursuant to a policy or bond and, with that right, the right to directly contact the insurer to determine any insured's status or any other right under the policy:

# REPORTS

The Levee District is tasked with the operation and maintenance of the levee and drainage system to provide flood protection to life and property in Caddo Parish from the Red River and its tributaries. The District employs 18 to 20 employees with an operating budget of \$2.40 to \$2.50 million dollars annually. During 2015, the staff of Caddo Levee District accomplished the following tasks:

- The 119 miles of levee were mowed 4 to 5 times to insure the grass height is maintained to the USACE specifications. Damage caused by animals, mother nature and vehicles was repaired. Two (2) degraded ramps were restored to proper grade.
- All the floodgates were inspected on a regular basis, repaired and painted, if needed. Major repairs included replacement of shaft and hoist heads of Agurs Pump Station's 10' x 10' floodgate.
- The concrete paved ditches located in the urban area (City limits of Shreveport) were mowed 3-4 times as needed, cleared and cleaned silt and debris and sprayed to control the growth of vegetation.
- The levee system was inspected by the USACE (annual inspection) and DOTD's Public Works Division (semi-annual inspection). Caddo Levee District's levee system continues to be Minimally Acceptable and meets the USACE eligibility requirements.
- Twenty-Nine (29) permit requests were processed by the District for various activities which include the installation of fences/gates, pipeline installation or repair, power line crossings, new ramps/driveways, temporary water line crossings and other installations or construction activity that could impact the levee or drainage systems operated and maintained by the District.
- Three (3) capital projects were completed in 2015 for a total of \$719,533.00. The projects included **gravel surfacing of Black Bayou/Pine Island Levee segments** (approximately 7 miles long), **rip rap revetment along the Red River Levee South at of Bishop's Point**, **repairs and replacement of concrete paved panel at the Lateral C-8 Canal (South Broadmoor ditch).**

## REPORTS-CONTINUED

Continued from Page 10

- Bids for timber sale on a 160 acre tract of land, Sections 2 & 3, T21N, R15W were received during February with the highest bid in the amount of \$79,092.00.
- Phase I of the Field Survey of the campsite surface leases managed by the District was completed. Approximately 81 lots were surveyed and lot plans were prepared. Also Guidelines for original leases (Campsite Permit) were developed and adopted by the District. The Guidelines and Field Survey are critical for managing the surface leases.
- The June 9, 2015 flood of the Red River was a historical event and the Red River Flood Stage reached a record high of 37.14' (167.62' NGUD). The recorded flood stage was the highest in 70 years when the river crested at 38.40' (168.88 NGUD) in 1945. Caddo Levee System along the Red River from the Arkansas state line to the Lock & Dam 5 performed very well and provided the required flood protection. This was the first time in recent history flood waters rose above the toe of the levee and remained against the levee for a long period of time (10 days and more at some locations). After the flood waters receded, detailed inspections of the levee system were performed to insure the integrity of the levee system is preserved and the levees are structurally sound. Also a detailed field survey of the high water marks was performed to allow for assessing the height of the levee system and insure flood protection will be provided in the future from similar floods with higher crest elevation.
- The Levee District's Board in June of 2015 adopted a zero (0.00) millage tax rate on all property subject to taxation by Caddo Levee District. This is the third year for adopting 0.00 millage. The District's self-generated revenues (campsite & grazing leases, timber sales, and mineral lease royalties) were adequate to fund the operation and maintenance and the collection of the tax millage was not necessary.



# CONTACTS

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**Carolyn C. Prator, President**

cprator@caddolevee.org

318-422-3251

**Ali M. Mustapha, P.E., Administrator**

amustapha@caddolevee.org

318-221-2654

**James T. Sims, 1st Vice President**

jsims@caddolevee.org

318-378-4380

**Gaylyn Bell, Assistant Secretary**

caddolevee@bellsouth.net

318-221-2654

**Patrick Harrison, 2nd Vice President**

pharrison@caddolevee.org

318-861-6640

**Sam Brimer, Forestry Branch Assistant Chief**

sbrimer@bellsouth.net

318-221-2654

**Kandi Moore, Member**

kmoore@caddolevee.org

318-213-3800

**Gary Hudson, Levee Maintenance**

**Superintendent**

318-221-2654

**Gary Procell, Member**

gprocell@caddolevee.org

318-865-3018

**Ronald F. Lattier, Attorney**

rfl\_esq@bellsouth.net

318-213-1077

**Helen G. Smith, Member**

hsmith@caddolevee.org

318-795-2720

**Marshall Jones, Attorney**

marshall.jones@jodplaw.com

318-221-1600