



District Report

SPRING 2014

fort bend LID #2 - DISTRICT MAP



fort bend flood management association awarded for **EXCELLENCE** in emergency management

The Fort Bend Flood Management Association (FBFMA) along with the Fort Bend County Office of Emergency Management (OEM) recently received the Excellence in Emergency Management Award. Both groups were honored on Tuesday, February 25 during the 7th Annual Symposium of the Emergency Management Association of Texas (EMAT), a professional organization of over 600 emergency managers from around the state. FBFMA members include LID#2 and many other Fort Bend County agencies with flood management responsibility and collectively protect over 140,000 people and \$14 billion in assessed property value.

Both groups were recognized for their continued efforts to educate levee districts about their responsibilities related to emer-



Left to Right: Doug Barnes, Fort Bend County OEM; Richard Sherrill, Chairman of FBFMA Emergency Preparedness Subcommittee and President of First Colony Levee Improvement District; Andre' McDonald, President of FBFMA and Fort Bend Levee Improvement District No. 2; Glen Gill, former Chairman of the Emergency Preparedness Subcommittee and Secretary of Fort Bend County Levee Improvement District No. 2.

gency preparedness. Together FBFMA and Fort Bend County OEM have conducted workshops, flood-fight training, and the development of basic Emergency Action Plans for levee boards. In June, FBFMA hosted its annual Flood Risk Reduction Symposium for members to discuss emergency preparedness and also to raise awareness about pending federal and state regulations related to flood control. In August, both Fort Bend County OEM and

FBFMA participated in an emergency preparedness table-top exercise designed for local levee and flood control districts.

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LID #2 flood protection at work October 2013

In late October and early November of 2013, the Brazos River crested at over 35 feet during a high-river event, with projections at the time forecasting a river level of almost 50 feet. At the same time Sugar Land received several inches of rainfall over a few short days. These conditions prompted the district to activate the initial stages of its Emergency Action Plan (EAP) and take the necessary steps to protect the homes, business, and other community assets inside its levees.

The large gates through which most storm water typically flows out of the district were closed in order to keep out the high flood waters of the Brazos River. At the same time localized rain inside the district activated the pump stations that divert this rain water around the flood gates and outside of the District. The photo below shows Ditch “H” which normally receives most of LID #2’s storm water and channels it into the Brazos River. However, during high river events the Brazos will back up into Ditch “H” and not allow gravity to move storm water out of the district. After 6 days operating under in the preliminary stages of the EAP, LID #2 returned to normal operations as the river levels decreased and the flood gates were reopened.



Main Picture: Ditch “H” - water backing up from Brazos River
Inset picture: Pump Station “A” flood gates - holding back flood water

LID #2 completes EMERGENCY ACTION PLAN

During the Spring of 2014, Fort Bend County LID #2 finalized its Emergency Action Plan (EAP), replacing the interim EAP the District operated under previously. As the operator of a large system of flood control works it is essential for LID #2 to be prepared to respond in emergency situations. The document anticipates not only LID #2’s response to emergency situations, but also outlines how the District coordinates these efforts with the City of Sugar Land and Fort Bend County.

During the transition period between the interim and final version of the EAP, LID #2 participated in the emergency preparedness table top exercise mentioned in lead article. Active participation in these events provides the District with an opportunity to practice implementing the existing plan while also identifying changes or revisions for future EAP updates.

mowing ENCROACHMENTS

Many homes in the community are adjacent to the levee right-of-way that is owned and operated by LID #2. These areas are inspected on a regular basis by district management, and a common problem relates to improper maintenance of district property by neighboring homeowners. While many lawns around the community must be maintained with a grass height of only 1-2 inches, the turf on top of the levee must be mowed at a higher level. The following article outlines why LID #2 performs its current level of maintenance and also explains why the district must keep individual property owners from mowing levee grasses too low. As mentioned in the adjoining article, LID #2 is testing some different varieties of grass that only grow to minimal height that may also help to resolve this issue.

LID #2 must adhere to the United States Army Corps of Engineers’ (USACE) standards for levee maintenance. As stated in Chapter 2.8, Section B of the USACE, “Levee Owner’s Manual for Non-Federal Flood Control Works” the “grass should be mowed to a minimum height of 3 inches...including zones extending 15 feet beyond the toes of the embankment.” This turf height is needed to sustain a solid groundcover in unirrigated areas like the levee. Taller grasses are more likely to survive long periods without precipitation while turf maintained at a minimal height is far less likely to survive a drought. The district must maintain grass coverage along the entire levee to prevent its soil from cracking which will ultimately weaken the actual structure of the levee and reduce the flood protection efforts of the district. Furthermore, the district must pass USACE inspections to be eligible for federal assistance during emergency situations, and improper levee maintenance may cause the district to fail that inspection. In addition, poor levee maintenance can also threaten district residents’ participation in FEMA’s National Flood Insurance Program which helps keep home insurance rates from increasing drastically.

LID #2 flood control works protect:

- Approximately 5,300 acres of property within Sugar Land, TX
- \$4.1 billion dollars in assessed value of property and structures
- Over 9,000 residential homes
- Hundreds of business including First Colony Mall and Sugar Land Town Square
- Multiple hospitals including Methodist Sugar Land Hospital complex
- Major transportation arteries - U.S. 59 and S.H. 6



TURF GRASS pilot project

LID #2 is currently working on a pilot project to test a variety of turfgrass called JaMur Zoysia. Keeping district levees covered with a healthy stand of grass is essential to the long term health and maintenance of the system. As most residents are aware, lawns in this area require a great deal of effort throughout the year to stay maintained at the proper height. LID #2 must also keep hundreds of acres of turf healthy without irrigation, which has been a challenge during recent area droughts.

JaMur Zoysia has been developed to alleviate a variety of these concerns related to levee turf maintenance. The thick nature of the root system makes the grass very drought tolerant and great for use in unirrigated areas. Zoysiagrass has also been very successful growing in areas with poor light. However, the biggest benefit of JaMur Zoysia is that it only grows to four inches in height which could greatly reduce the frequency of levee mowing. If the pilot project proves to be a successful venture, and the District moves forward with installation across larger sections of the levee system, reduced mowing cycles could potentially save LID #2 thousands of dollars in maintenance costs each year.