

**The Woodlands Township
Storm Drainage Task Force Meeting
Meeting Summary
July 28, 2016**

Purpose of this Document: This document is designed to capture the essence of the discussion and will serve to summarize the results, actions and follow-up items agreed to during this meeting.

1. Call meeting to order – The Woodlands Township

Task Force members and visitors were welcomed by Township Director and Task Force Chairman Jeff Long who had task force members introduce themselves: Don Norrell, President/General Manager - The Woodlands Township; Jim Stinson, General Manager – The Woodlands Joint Powers Agency (WJPA); Deborah Sargeant, Director - MUD 6; Wilson McCoy, Director - MUD 46; Laura Norton, Director - MUD 47; Jace Houston, General Manager, David Parkhill, Director of Raw Water Enterprise and Bret Raley, Division Manager, Lake Conroe Division – San Jacinto River Authority (SJRA); Mark Mooney, County Engineer – Montgomery County; Matt Beasley, Montgomery County Precinct 3; Russ Poppe, Director of Operations -- Harris County Flood Control District; Joshua Stuckey, Chief Administrative Officer, Public Infrastructure Coordination – Harris County Engineering; Antonio Paz, Senior Project Manager, Land Development – The Woodlands Development Company; Jeff Andrews, Regional General Manager – ClubCorp / The Woodlands Country Club; and Stuart Schroeder, President – Cochran’s Crossing Village Association.

Approximately 12 visitors from the community attended.

Historic events of prior flooding were noted, including Spring Creek in 1994; recent floods displayed significant characteristics, prompting the Township to bring together key people who can do something about the issue, with the Township acting as facilitator and communicator. The Township does not have direct statutory authority for drainage and recognizes that authority is vested in the Municipal Utility Districts (MUDs), Montgomery County, Harris County, Harris County Flood Control District and San Jacinto River Authority.

2. Public Comment - none registered to address the committee

3. Overview / Role of Drainage Task Force

Mr. Norrell reviewed the historical events experienced in April and May, 2016 – rainfall of 5 to 15 inches in April, and 5 to 16 inches in May, within and in areas adjacent to The Woodlands. A substantial amount and intensity of rainfall in and around The Woodlands, watershed areas, and properties were impacted differently in the events; street flooding can be expected in any rainfall event which exceeds a 1 inch per hour rainfall intensity for which the design standard of the local storm drainage systems is based upon.

The Township received numerous contacts from residents, who were seeking resolution for various issues. Those residents were directed to the proper authority: the MUDs for drainage, the appropriate county for roadways and drainage within the roadways; and to SJRA who has some limited authority. Within boundaries of The Woodlands, there are ten operating MUDs in Montgomery County portion and one MUD in the Harris County portion.

Several MUDs have initiated forums with residents to discuss their concerns. The Task Force does not replace this effort, rather seeks to keep focus on the problems until some solutions are reached, and involve The Woodlands Township and its strong communications tools to deliver the message and coordinate activity – to work cooperatively with all the organizations involved in the planning, development, management, and maintenance of the drainage systems. The Woodlands Township will use social media and other communication resources to push out the message that the responsible organizations are dealing with the problem.

4. Presentation from Jim Stinson of The Woodlands Joint Powers Agency regarding areas in The Woodlands that received property damage as a result of the April and May, 2016, rain events.

Mr. Stinson provided a recap of the April/Tax Day and late May rain events. WJPA staff has been responding to residents' concerns resulting from those storms. Homes along Spring Creek and Bear Branch were impacted from rising water, street ponding and the overflow of drainage ditches. Survey data was collected following the April event and again in May. WJPA has identified 116 "Concerns" which have been categorized into 4 areas: water in homes and/or garage; street drainage/flooding; property drainage / across lots; and drainage ditches. Many of the drainage issues may be inter-related with the various agencies or impact one another: a drainage situation within a MUD may connect to a County roadside ditch which may lead to SJRA areas, for example.

Mr. Stinson reviewed areas that experienced water in home/garage -- most homes do not lie within the 100 year flood plain, some are in 250 year or 500 year flood plain. WJPA has hired a consultant that will use computer based 2-D storm water modeling analysis, to guide WJPA to solid, reasonably, cost-effective decisions.

Recap of affected areas: 45 homes reporting water in home or garage, over 50% have been contacted by WJPA. Some homes along Spring Creek that were potentially affected, have not contacted the MUD or any other agency to report impact. There has been no clear pattern of drainage issues identified; they are scattered, checker-board and /or isolated across the area.

Key players & responsibility: Montgomery County, Harris County, San Jacinto River Authority, MUD, Office of Emergency Management – most exceed boundaries of The Woodlands Township. Some areas overlap with combination of authority and the agencies are coordinating for the best outcome. WJPA is partnering with SJRA to enhance and improve storm water modeling as some MUD facilities drain into SJRA facilities. Impacted properties and neighborhood must be reviewed individually to determine needed improvements.

- *Montgomery County Engineer and Flood Plain Administrator:* major focus is on management of the flood plain area, working with local county precincts and Office of Emergency management to isolate, identify and inspect homes that flood. If substantially damaged, homes must comply with federal (FEMA) requirements – foundations to be a height of 1 foot above before flood event level. In 1994, the Montgomery County buyout of flood damaged properties estimated at \$5M. County Office of Emergency Management received reports of over 2,000 homes county-wide were damaged, though not necessarily all "substantially damaged." County has hired a consultant to assist with the inspections.

- *Harris County Flood Control District (HCFCD)*: more than 10,000 homes in Harris County affected by recent events. Minimum requirements to obtain federal flood insurance determined by permit per CFR 44 60.33, for individual assistance, public assistance/infrastructure (bridges, channels, etc.,) assistance for 75% FEMA reimbursement.

District praised for its interactive real-time monitoring of 142 gauges – collects rainfall data and stream response data throughout the area, can assist residents with preparation and action plans in advance of potential flood events.

- *San Jacinto River Authority*: through contracts with six MUDs in The Woodlands, SJRA conducts annual and periodic inspections, maintenance services of creeks, tributaries, Bear Branch Reservoir dam and Lake Conroe dam and monitors flood early warning system - primarily to operate the gates at Lake Conroe; system expanded for broader view to anticipate needs based on weather patterns; partners with HCFCD to view gauges, as Montgomery County / Spring Creek watershed all eventually drain to Lake Houston. SJRA is interested in a regional partnership, in order to know well in advance to make preparations, to collect better data over time and to facilitate future decisions.

SJRA has submitted a request to State of Texas Water Development Board for a grant pertaining to tributary water shed reaction, using state of the art technology and computer modeling of the amount of water, including other watersheds, to predict water levels into Lake Conroe. Mr. Houston offered the joint effort of the Authority as central point to pursue grant opportunities.

5. Review of drainage concerns submitted by residents to determine if additional information should be solicited through surveys or other means.

Triage process and timing and prioritization of the 116 “Concerns”:

- Water in home/garage – about 50% of the homes have been evaluated, estimate another 2 months to evaluate the remaining homes
- Street ponding – system performed as it should have based on the established design standard of a 100 year event; it may take another 60 days to evaluate
- Property cross-lot, not necessarily a MUD issue – courtesy review only, if no MUD easement exists, resolution will need to be resolved between affected property owners
- Drainage ditch – very few reported issues, estimate 30 days to evaluate
- Overall estimate - 60 to 90 days to make contact with remaining property owners and to develop plans for coordination

Protocol for residents to be contacted: WJPA will work with consultants, develop recommendations, present to the appropriate MUD Boards of Directors and gain authorization to move forward; areas that require construction will require a 30 to 45-day bid process. Residents reporting drainage concerns have already been contacted by WJPA by e-mail.

Summary – these rain events were widespread and unprecedented, unlike any previous events.

Staff actions to provide public information and contact impacted property owners:

The Township will use the Township web site, social media and other communication resources to provide a public summary about the task force meeting and the proposed task force follow-up meeting in about 60 days.

Mr. Stinson indicated that about 50% of the properties with water in the homes or garages have been evaluated. Mr. Stinson will follow up with remaining impacted property owners that had water in homes or garages and evaluate their particular situations. Based on these property review and discussions with drainage engineers, the WJPA will develop recommendations for consideration by the MUD Boards.

6. Establish date and time of the next task force meeting.

The Task Force will re-convene in approximately 60 days on a date and time that limits schedule conflicts with other regularly scheduled meetings of individual members of the task force.

- Review problem areas (water in houses and garages) and discuss short term and long term recommendations (Montgomery County and Harris County MUDs)
- Review early warning devices that could be installed and monitored on creeks and tributaries in or near The Woodlands