

**Buffalo Bayou & Lower White Oak Bayou  
Federal Flood Damage Reduction and Ecosystem Restoration Study  
INITIAL STAKEHOLDER GROUP MEETING**

October 10, 2005

**Introductions and Welcome**

Mike Talbott, director of the Harris County Flood Control District (the District) welcomed guests to the first initial stakeholder group meeting for the Buffalo Bayou & Lower White Oak Bayou Federal Flood Damage Reduction and Ecosystem Restoration Study.

The District has been looking at issues on White Oak Bayou and Buffalo Bayou for some time. Buffalo Bayou was described as a stressed natural stream in an urban environment. It has environmental issues such as bank erosion, trees in the bayou, etc. The District was influenced to take an in-depth look at Buffalo Bayou, in some respects by the Buffalo Bayou Partnership's Buffalo Bayou Master Plan completed about three years ago.

The District conducted a study of Buffalo Bayou (Turner Collie & Braden was the consultant) during the Master Plan study to look at features for flood damage reduction (between Shepherd Drive and the Turning Basin). It was determined that it would be possible to lower the flood elevation by up to five feet at the Main Street Bridge, and the project cost could be approximately \$500+ million. While the cost estimate doesn't surprise the District, an extensive benefit and cost analysis must be developed to do such a project if federal funding is desired. Similar to the Brays Bayou study, there is a financial partnership in place with a federal agency (U.S. Army Corps of Engineers [USACE]) to accomplish the study, and federal funding could be 50% for the study, and up to 50% for construction of a project. The USACE has established ecosystem restoration as a new program. The adverse impacts on Buffalo Bayou's natural system are, in the District's opinion, an opportunity for restoration.

The study the District is embarking on is a time consuming process. It is not a project; the District is trying to determine if there is a federal financial interest in a project. There is a limit to the federal dollars – which are usually attributed to only the most economical projects. But this process is important so that we leave no stone unturned in developing the study to justify federal financial interest.

This initial group of stakeholders has shown an interest in the bayous. Initially, the District and its engineering and environmental consultants will be focused on data gathering and documenting the “without project condition.” “Without project condition” provides an estimate of damages that could be expected from flooding, and also the environmental baseline.

The Buffalo Bayou study is a Section 211<sup>1</sup> study in which the District is the local lead. As the local lead, the District can start a project before the federal study process is finished. A project can start and the District could get reimbursed through the process later. This is what the District

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<sup>1</sup> The Water Resources Development Act of 1996 (or WRDA 96) Section 211(f) contains eight demonstration projects throughout the country. Three of those are in Harris County and include Brays, Hunting and White Oak Bayous. WRDA 96 allows the non-federal sponsor (like the Harris County Flood Control District) to take the lead on a project like this and get reimbursed for the federal share of the cost once functional segments of the project are constructed.

is currently doing on the Brays, White Oak and Hunting Bayou projects. The Buffalo Bayou and Lower White Oak Bayou study could take five years to evaluate the economic, environmental and engineering alternatives for flood damage reduction and ecosystem restoration, after developing the baseline information.

The District is investing the time to engage the initial stakeholder group to improve understanding of the process required to determine federal interest. Please note that the District could go down this road and receive no federal funding. However this would not mean that there would not be a project; only that the federal government had decided not to financially support a project.

The District must go through this study process with the federal government because we are competing with other projects on a national level for federal funds. The new approach of Section 211 allows us to begin the study in advance of the USACE.

Final two notes are that the process is important and whatever alternatives that come out of this study don't necessarily have to be built.

### **Project Orientation**

Wayne Crull, study manager for the Buffalo Bayou & Lower White Oak Bayou Federal Flood Damage Reduction and Ecosystem Restoration Study, gave the group a brief history of federal and local flood damage reduction projects on Buffalo Bayou.

This study is the 4th such Section 211 study the District has undertaken, after Brays, White Oak and Hunting Bayous. The study is not yet authorized as a Section 211, but the District expects that it will be.

This study is different than the other Section 211 efforts in that White Oak Bayou connects to Buffalo Bayou in downtown Houston. Therefore, the alternatives we review will affect Lower White Oak Bayou, which increases the number of alternatives.

The economics of the White Oak federal project are mostly in the mid reach and aren't significantly benefiting the lower concrete-lined east channel. This encouraged shifting the lower portion of White Oak Bayou to this study.

The boundaries of the study are: Buffalo Bayou from just south of Barker Reservoir east to the Turning Basin, and from the White Oak Bayou confluence to south of IH 610 North. The tributaries are in the model but they are not part of the study.

### **Flood Damage Reduction**

The District endeavors to reduce the magnitude of flooding on buildings and structures. The economics justified looking at existing conditions today. Future conditions are also reviewed but are done so conservatively. A project of this kind could typically take the USACE on its own, an average of 10 to 25 years to start construction on.

The District does take into consideration that the more frequently the area floods, the more economic value a flood damage reduction project has.

### Economics

The District is conducting a structure inventory on approximately 40,000 structures.

The study area is the area of the 0.2% floodplain (500-year) plus 500-foot buffer.

For the 40,000 structures, the consultants are collecting information such as first floor slab elevation, approximate value of property plus depreciation, value equivalent to the Appraisal District's approximate value of structure.

There are hundreds of parcels in the study area that may be valued in excess of \$1 million and those have to be evaluated. There will also be damage categories such as transportation, vehicles, etc.

### Ecosystem Restoration

The District is cognizant and caring of the environment. Federal entities are also becoming more progressive as well. Examples of the federal government's restoration efforts include work on the Mississippi River, the Everglades and, locally, Clear Creek Restoration. The USACE is operating under new environmental principles when planning and designing projects.

Ecosystem restoration, under the USACE's program, will be considered for restoration of significant national natural resources. There are overall project goals, the USACE does not support and which the District tries to avoid when partnering with them on projects. Projects that are enhancements, water quality projects, brownfield projects, etc. are not particularly attractive to the USACE in the context of ecosystem restoration. However, they do support a project with a good environmental plan.

On the Clear Creek project, the USACE is restoring marshland and disposing of spoil material, recreating forest habitat and establishing a wetland.

Linda Pechacek, a representative from the White Oak Bayou Association, recommended that the Buffalo Bayou Ecosystem Restoration Plan be developed to mesh directly with the Implementation Plan of the Buffalo/White Oak Bayous Bacteria TMDL study. She said that it would be highly beneficial and economically efficient if the Ecosystem Restoration Plan could be directly integrated into the Implementation Plan since both plans would be developed around the same time. The Bacteria TMDL study is currently being conducted by the University of Houston and Texas Commission on Environmental Quality.

A recreation feature can be an element of a flood damage reduction project. For example, such a feature can be built on or adjacent to the public lands. Features could include trails or boat ramps. Stands, lighting or buildings are not features to which the federal funds can be dedicated.

This study will not include a study of tributaries other than lower White Oak Bayou. The USACE is doing a study of reservoir operations, and during the study approximately 1,000 structure slab elevations were surveyed.

Environmental baseline data will include wetland habitat, plants and wildlife, and historical components. The District and its consultants will evaluate the data and make decisions about which model(s) to use to evaluate habitat value. Resource agencies including U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, and possibly the Environmental Protection Agency would have input to this activity.

An environmental impact study will be prepared. The USACE requires us to have an existing condition defined including the physical, biological, and human resource issues. The study will also document air quality; hazardous waste; and biological resources. Any existing available information will be used. Field surveys and special studies are not currently in the scope of work. The District will also be following the National Environmental Policy Act (NEPA) process for environmental and public meetings.

#### Stakeholder Participation

This is the first of several meetings at which the District is asking the initial stakeholders to participate. The stakeholder team's input will initially be limited in this phase of the study since the District and consultants are performing required data collection activities. In this first year, there are not a lot of decisions to be made. Input from stakeholders and other interested parties will be needed about 12-15 months from now but the education and participation at this stage by the stakeholder group is encouraged.

Again, the District asked this group for their participation because they have expressed long-term interest in this area. The Study Manager will keep the group informed of the data collection efforts. Feedback is always welcome.

Some proposed "information topics" for upcoming meetings of this group include ecosystem restoration, flood damage reduction and federal project funding.

USACE has surveyed slab elevations on Buffalo Bayou from SH 6 to Shepherd while the District has surveyed on the ground.

#### **Study Status**

The District sent its "without project condition" environmental scope of work to the resource agencies for review. The resource agencies (EPA, U.S. Fish & Wildlife Service, Texas Parks & Wildlife Department) have responded and we are encouraged by their early positive feedback. This review has delayed the start of the environmental data collection shown on the project schedule.

Economics: The survey of structures has started. The first floor slab elevations on the structures has been captured and entered with the exception of the 7,500 that were unidentified.

Engineering: Turner Collie & Braden are utilizing the TSARP models. They are adjusting for comparisons and coordinating with the economic side.

Project management: The project team had a field trip last week. Wayne asked if the stakeholder group would be interested in a field trip. The group is interested in taking the trip, and a trip in early Spring was suggested.

Consultants under contract for the study include Turner Collie & Braden (environmental and engineering) with subcontracts to CivilTech Engineering Inc. (economics) and Elmore Public Relations (communications).

The Section 211 status means that the Flood Control District can be the local lead and advance the money for the study and any project that might come out of the study with the option for federal reimbursement at a later date. While waiting for authorization through the Water Resources and Development Act, the District has signed a memorandum of agreement with the USACE to allow their participation.

The typical cost of this type of study is \$1 – 1.5 million per year. While this may sound like a high price tag for a study, by comparison the USACE spends the same amount of money for this same type of study. It is a worthwhile investment for the District if it, in turn, receives federal participation on a multi-million project.

This phase of the study will be 18-24 months long, and it is expected that before completion, component identification will be started. The USACE review of the report documenting the current work effort takes less than one year.

The real benefit of a 211 project is that the project lead can head in the direction of construction before it is ever federally funded. An interim report must be published and the project must be adopted by Harris County Commissioners Court. The Commissioners are kept apprised of our projects and studies by the District's Precinct Coordinators.

Steve Fitzgerald, Chief Engineer at the District, asked the team for recommendations on a representative that could join the group that represents Buffalo Bayou west of SH 6. The West Houston Association was discussed. While they are primarily a business organization they might have a good contact. Fitzgerald also solicited from the team any other organization within the study area that the District should approach at this phase. There were no suggestions.

### **Communications**

Susan Elmore, of Elmore Public Relations and consultant to the District on this study, reviewed with the group the proposed meeting schedule. Quarterly meetings were suggested and Wayne Crull will follow up with the members to determine whether the dates/times are feasible.

Each stakeholder group member was given a binder that included handouts from today's meeting including a study overview, a set of study area maps, contact list and study schedule.

Meeting Summaries will be prepared after each meeting and distributed to the team via email.

As part of this phase of the study, the District will prepare a Public Engagement Plan, incorporating any recommendations gleaned from the initial stakeholder group. The plan will be utilized as the study moves forward past the initial phase and if a project is defined.

While the District does not expect media interest at this time, Heather Saucier, District spokeswoman, is participating in these meetings.

**Next Meeting**

The next proposed group meeting date is Thursday, January 12 at 2 p.m. at the Flood Control District.