

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

January 11, 2007

Harris County Flood Control District, 9900 Northwest Freeway

Introductions and Welcome

Wayne Crull, study manager, welcomed the members of the Buffalo Bayou & Lower White Oak Bayou Federal Flood Damage Reduction and Ecosystem Restoration Study Initial Stakeholder Group (ISG).

Study Goals & Objectives

Wayne outlined the planning steps for establishing Goals and Objectives for a 211, or federal study, sharing both the District's past and current experience with developing such statements for other federal studies.

Generally, goals "do good broadly" and objectives "do good specifically." National Economic Development (NED) Alternative¹, National Ecosystem Restoration (NER) Alternative² and Combined NED/NER Alternative³ were reviewed. In short, it is the federal government's primary objective to determine the NED Plan and secondary objective to contribute to the nation's ecosystems through ecosystem restoration. For this study, the District is striving to achieve the Combined NED/NER Alternative, with the support of the ISG representatives.

The District has experience preparing goal statements and objectives for other federal studies, including Brays Bayou, Hunting Bayou, White Oak and Clear Creek. Sample goal statements for Clear Creek and Brays Bayou were shared with the ISG representatives.

After these details were reviewed, Wayne proceeded to share and solicit comment from the group on the draft goals and objectives prepared for the Buffalo Bayou/Lower White Oak Bayou study.

The proposed Goal Statement(s) included:

- 1) To identify and recommend effective, affordable, and environmentally sensitive plans for flood damage reduction and ecosystem restoration for Buffalo and Lower White Oak Bayous.
- 2) Conducting the necessary engineering, economic and environmental studies in a timely manner in order to identify a viable project that is acceptable to the public, local sponsors and the U.S. Army Corps of Engineers.
- 3) Selecting and documenting a recommended plan that is considered well qualified for Congressional appropriations.

¹ National Economic Development (NED) Alternative is the alternative that reasonably maximizes net economic benefits. *Provides the most benefit compared to the costs.*

² National Ecosystem Restoration (NER) Alternative is the alternative that reasonably maximizes ecosystem restoration benefits compared to costs.

³ Combined NED/NER Alternative is the alternative that reasonably maximizes the sum of net NED and NER benefits compared to total project cost.

The proposed Objectives and Constraints included:

- 1) Reduce riverine flood damages along Buffalo Bayou and Lower White Oak Bayou
- 2) Reasonably maximize the net economic benefits for any identified flood damage reduction alternative
- 3) Identify opportunities for ecosystem restoration that are complementary to the flood damage reduction components
- 4) Identify a recreation plan
- 5) Do not worsen flooding conditions in any location

The group made several recommendations to the proposed goal statements and objectives. Wayne committed to taking all comments, routing to the group and taking additional comments.

Some questions from the ISG representatives included:

Q: How is future development reflected in this Study?

The economics reflect the structures that are developed now as well as conservative assumptions on future developments.

Q: How can we quantify the reduction of the floodway and floodplain? Specifically for White Oak Bayou? (Percentage.)

Yes, percentage can be used. The District also will describe the reduction in flooding with the change in depth and number of structures benefitting.

Q: The east side of downtown is developing very quickly and will be so in 10 to 20 years. How is that factored in?

The study reflects what is “on the ground” today. Economics are strongly weighted toward existing conditions.

There are two conditions the estimates are based upon: today, or without project conditions, and future or when the project is complete and the benefits are realized.

Any new developments must comply with the floodplain administrator. The additional run off from any new development must be addressed.

Study Status

Wayne Crull gave the group an overall progress report on the Without Project Conditions Report.

- Economics is 75% complete
- Engineering is 85% complete
- Environmental is 65% complete

A Study Status document dated January 11, 2007, was provided for the group to include in their notes. The text is reflected below.

Engineering

The engineering investigations in this phase of study are approximately 85% complete. The engineering investigations include the hydrological and hydraulics (H&H) studies, the initial collection of design criteria for flood control and ecosystem restoration components, and the compilation of data on existing infrastructure and other non-structural items that would potentially be impacted by such components.

Since October 2006, the H&H work effort included addressing technical review comments on the draft report, performing risk and uncertainty analysis, and updating the model and draft report. The engineering work effort included resolving infrastructure information gaps or discrepancies and completing a draft Engineering Report. The next step for the H&H without-project conditions report is to be reviewed by the Corps.

Economics

The economics investigations in this phase of study are approximately 75 percent complete. The economics investigations establish baseline economic information to use throughout all study phases, to evaluate the base year and future without-project economic damages from flooding. The study team is evaluating floodplain characteristics – structure inventory, structure elevations, and value of floodplain property – for approximately 14,000 properties potentially at risk from a 500-year event and includes portions of the downtown area and the downtown tunnel system. The evaluation of the downtown tunnel system has been completed and is currently being put into the HEC-FDA model.

Since October 2006, the economic flood damage analysis model (HEC-FDA) received an extensive quality assurance/quality control (QA/QC) review, including checks against the floodplains developed from the H&H model. The economic modeling assumptions and structure inventory are being reviewed by an ITR. After further discussion with the USACE, standard depth-damage curves were analyzed and applied to sample unique structures. As a result a revision to the way these curves are applied was recommended and is awaiting approval by the USACE for use in the economic modeling. In the following months, the work effort will consist of precision elevation surveys for a set of unique structures valued at \$1 million and more, since flood damages calculated for them may represent a greater proportion of total damages than other average floodplain structures, and finalization of unique depth-damage curves.

Environmental

The environmental investigations in this phase of study are approximately 65 percent complete. The environmental investigations during this phase of the study document the past, present, and future environmental, social and economic without project conditions in the study area.

Since October 2006, the environmental investigations focused primarily on preparation of draft environmental without-project conditions report (primarily the analysis of past and present

conditions) and completion of a cultural (archaeological and historical) resources study. Land use information was updated for use in socioeconomic population and employment forecasting, to evaluate the need to perform detailed analysis of potential future structures in the economic analysis. In the next three months, the future without-project conditions in the study area will be documented and the draft environmental report will be prepared for review by the Corps.

In addition, Wayne explained that the engineering part of the study evaluates the 2, 5, 10, 25, 50, 100, 250, and 500 year floodplains based on the TSARP models.

The District continues to discuss with the Army Corps the economics related to the downtown business structures.

The study team will also host a field trip with the environmental agencies to engage them.

Communications

Claudia Morlan distributed a summary of the Long Range Public Engagement Plan for the study. The highlights for communications outreach in this phase (Data Collection) include consistent communication with the ISG representatives through regular meetings and, in the latter part of the first quarter 2007, a public meeting for all audiences.

Wayne will conduct a special presentation for the ISG in advance of the public meeting.

Content for a web page about this study is underway and a web link will be shared with the ISG in the near future.

Project Schedule

Some upcoming key milestones/dates include:

- Continuation/completion of the Without Project Conditions Report (1Q 2007)
- Public Meeting (late 1Q 2007 or early 2Q 2007)
- Component Identification and Evaluation phase of the Study (2Q 2007)
- Initial Screening (2Q 2007)
- Army Corps Review of Without Project Conditions Report (2Q/3Q 2007)
- Army Corps Feasibility Scoping Meeting (3Q 2007)
- Alternative Building (4Q 2007 and beyond)

A summary of the Without Project Conditions Report will be made available to ISG representatives at the end of the second quarter of 2007.

Next Meeting- To be determined