



Upper Trinity River Central City Fort Worth, Texas

Final Supplement No. 1
to the Final
Environmental Impact
Statement

Prepared by:
U.S. Army Corps of Engineers
Fort Worth District



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Rendering Image courtesy of CDM



range in water surface elevations between 525 and 530 feet NGVD was considered due to the following criteria:

- Provide higher normal water surface elevation while maintaining providing storage or freeboard in the interior area (existing West Fork) to accommodate stormwater drainage from the interior area;
- Prevent 100-year water surface elevations on Marine Creek and on the West Fork in the vicinity of Samuels Avenue from exceeding the existing 100-year FEMA floodplain elevations; and
- Meet urban design criteria with regard to pedestrians' proximity to water, based on studies of other urban waterfronts

A normal water surface elevation of 525 NGVD was selected based on the 2003 Feasibility Study of the proposed concept due to the previously mentioned criteria.

Isolation Gates

The hydraulic design for the Community Based Alternative includes three isolation gates to protect the interior area from flood flows. The proposed gate locations and names are indicated in Figure 3 - 12. During normal flow conditions, the gates would be open to allow free exchange of flow and water craft passage between the bypass channel and the interior area. During flood events, the gates would be closed to protect the interior area. The gates would confine the high flows to the bypass channel, which would be designed to convey the flow downstream. The design capacity of the system would be such that the SPF could be passed entirely through the bypass channel (gates closed) while maintaining the required four feet of freeboard and providing protection to the interior area.

Six configurations of flood isolation gates were considered. As the environmental and socio-economic implications of the gate configuration are virtually identical, assessment of gate configuration was made solely on the basis of its mechanical characteristics. Each gate type was evaluated based upon the following functional, operational, and aesthetic requirements:

- Allow capability of closing under its own weight without power;
- Provide a clear opening, capable of passing small watercraft in the boat channels, and pedestrian traffic along walkways;
- Incorporate a design with self-cleaning characteristics;
- Integrate a design whereby gate can essentially be hidden within structure; and
- Require a minimal amount of concrete to support the gate structure and operating equipment.

Based upon these criteria, it was determined that fixed-wheel (roller) gates would be superior to the other choices due to ability to close during a power outage; the relative ease to conceal gate leaves in a narrow concrete structure; and maintenance accessibility while in the open position.