



MEMORANDUM

TO: Mayor and Council Members
FROM: Rudy Garza, Assistant City Manager
DATE: June 19, 2007
SUBJECT: WTP#4 Update and Environment Commission Agent

Item #61 on this week's agenda is another significant milestone in the design and construction of water treatment plant #4 (WTP#4). The requested Council action item is an award to Intera, Incorporated for environmental commissioning services as we continue our commitment to have the most environmentally sensitive and responsible treatment plant in our system.

I wanted to take this time to also provide you with an update on some of the major steps that have been completed, ongoing, or scheduled, as well as an update on cost estimates for WTP#4.

Major Steps

- Established a WTP#4 Project Team which includes key representatives from the Water Utility, Watershed, Public Works, Law, Engineering consultants, and City Management (other representatives are requested to attend as necessary)
- Preliminary engineering for plant, intake, and raw water pump station
- Site assessment for raw water pump station
- Established the Environmental Commissioning process & developed the scope for the Environmental Commissioning agent (EC agent)
- Established buffers for critical environmental features (CEF's)
- Geotechnical investigations and field works has been completed
- Continued environmental monitoring, testing, as well as training on environmental commissioning process and objectives for all staff
- Design and site development plan completed for stormwater controls
- Continued environmental mitigation reviews and planning
- Various meetings with neighborhood groups, open house was held on-site, and monthly newsletters also continued to be distributed
- Review and assessment of required easements for raw water and transmission mains; continue with securing all required easements

Per E.B.
6/20/07
hand out
to E.B.

- Continued component cost review and assessment, including engineering peer review

Updated Cost Estimates

As you are aware, WTP#4 is planned to be constructed in several phases. Phase 1, which is the phase currently being planned and under preliminary engineering is for a treatment capacity of 50mgd.

Last summer our preliminary cost estimate for WTP#4 was \$314.4m (net present value basis). There have been two major categories of costs which have impacted the estimates we previously provided. The most significant cost increases are attributed to the efforts for environmental commissioning/mitigation, secondly there are costs with infrastructure features that are being considered for enhanced operations.

Environmental Efforts \$26.65m

- Environmental monitoring, testing, review, reporting, Best Management Practices study, and environmental commissioning project management (includes Watershed staff) \$4.1m
- EC agent \$3.4m
- Infrastructure and construction environmental mitigation \$14.15m
- Environmental mitigation contingency \$5.0m

Operational Improvements \$14.0m

- Construction of second electrical substation to ensure dual feed of power supply (this will provide further assurances of no disruption to treatment operations which could be caused by loss of power) \$10.0m
- Construction of facilities and necessary equipment to provide on-site hypochlorite generation (this feature will eliminate transportation/delivery of chlorine to the plant) \$4.0m

At this time efforts continue to secure all necessary easements and site acquisition for the raw water pump station. Cost estimates will be provided during review and discussion of real estate matters in executive session.

As design, review, planning and assessment continue we will further refine all cost estimates.

(Note all costs are shown in Net Present Value terms)

The project team and all staff continue to work diligently to ensure the operational goal of Phase 1 by the summer of 2013. Final Design is expected in the fall of 2009, and treatment plant construction is planned to commence in the spring of 2010. Over the next several months, staff will be requesting Council action for approval of the necessary design contracts.

Please contact me if you have any questions, or would like to discuss.


Rudy Garza, Assistant City Manager

xc: Toby Futrell, City Manager
Perwez Moheet, Acting Director - AWU

May 8, 2007

6/20/07

Project Summary

Barton Springs Master Plan

THE PUPOSE

The purpose of the Barton Springs Master Plan project is to prepare a master plan/needs assessment report, illustrated with preliminary design concepts. The report will include budget projections for preliminary design concepts and future studies, as well as implementation and prioritization recommendations. The report will serve as a guide for future funding and project decisions.

GOALS STATEMENT

The goal of the Barton Springs Master Plan is to return the site to its former glory, where the water was cleaner and the experience of the pool was more enjoyable. To accomplish this goal, the Master Plan will propose appropriate additions and renovations to the swimming pool, the buildings and grounds that respect the fragility of this unique natural and historical setting and also accommodate the significant user demands on Austin's most popular park amenity.

PROCESS

Public meetings for information gathering and setting priorities with:

- Stakeholder groups
- General public
- City of Austin Board, Commission and Council hearings

Project to be completed in two phases:

- Interim (90 days): identify budget placeholders for FY 08
- Final (180 days): further develop interim solutions, define budget

Stakeholder groups:

- Friends of Barton Springs Pool
- Save Our Springs Alliance
- Save Barton Creek Association
- Hill Country Conservancy
- Scientific Advisory Committee
- Zilker NA
- Baton Hills NA

Boards and Commissions:

- Parks Board
- Environmental Board
- Historic Landmark Commission

Regulatory Agencies:

- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- Texas Historical Commission
- Texas Commission on Environmental Quality
- Texas Accessibility Standards
- Barton Springs/Edwards Aquifer Conservation District
- City of Austin Building and Site Plan Officials
- City Historic Preservation Office

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C-2

BUILDINGS

Provide conceptual design recommendations for the rehabilitation of the existing, historic Barton Springs bathhouse. Existing conditions issues to be addressed include dressing and toilet rooms, handicapped accessibility throughout the bathhouse, roof systems, hazardous materials remediation, heating and air conditioning systems and structural and utility infrastructure upgrades with consideration of sustainable building practices encouraged. Preservation issues to be addressed include the restoration of the original entry to the bathhouse. Improve the educational and interpretive amenities in the building.

Provide conceptual design recommendations for a new, modest bathhouse at the south gate. Functional requirements include a cashier office and dressing, shower and restroom facilities.

POOL and its INFRASTRUCTURE

Study flow modifications to enhance water movement and salamander habitat conditions. Recommend flow modeling strategies to study water movement and velocity in the pool under various spring discharge conditions, to understand nuisance algae growth and flow across habitat areas. Study the installation of piping and pumps to direct water current across the “beach” and other areas to increase habitat area and reduce nuisance algae accumulation. Study the reconstruction and reconnection of surface habitats, including reconstructing the spring run from Eliza Spring to include a reconnection to the pool. Study the feasibility of removing the concrete bottom to Eliza Spring.

Study modifications to the existing pool infrastructure to enhance the operation of pool. For the upstream dam, issues to be addressed include raising the height to prevent minor flooding, widening the top deck to allow passage of pool cleaning equipment, installing several gates to allow creek flow through the pool during extended creek baseflow events and modifying the bypass grate to enhance flow efficiency during floods. For the downstream dam, issues to be addressed include shifting gates to allow more natural water movement out of the pool to aid in silt removal and adding spillway gates to allow for water conservation during droughts. For both dams, study methods to install mechanical gate controls, with a digital control system. For the bypass tunnel, study methods to repair cracks and openings in the joints. Study algae control skimmer installations, designed to remove floating algae in the pool. Study methods of removing gravel and large rocks from the pool to facilitate more frequent removal and more efficient use of available labor force. Study disposal methods of silt and algae produced during pool cleaning.

GROUNDS

Provide conceptual design recommendations for the beautification of the pool grounds. Landscape issues to be addressed include tree, plant and turf materials and placement, fencing, site furnishings, trash cans and site lighting. Preservation issues to be addressed include the rehabilitation of the stone walls at Old Mill Spring/Sunken Garden, the concrete walls at Eliza Spring/Amphitheatre, the walkways and decks on the south side of the pool and the ponds, steps and plantings at the Zilker Ponds/Rock Garden. Infrastructure issues include relocating the electrical service and emergency communication system at the site to below grade. Improve the educational and interpretive amenities at the site.

Provide conceptual design recommendations for creek restoration downstream of the pool, including the area below the downstream dam and the access to the Old Mill Spring/Sunken Garden. Study the possibility of expanding the pool downstream.

STUDIES BY OTHERS

Note that these are future environmental studies, to be addressed in the Barton Springs Master Plan as future work items, with funding projections identified in the Barton Springs Master Plan.

Drought contingency planning for Barton Springs, to address alternatives for salamander survival during periods of severe drought including flow augmentation options and dissolved oxygen augmentation.

Evaluate algae growth over several seasons. The goal would be to define conditions favorable for algae problems at the levels of nutrients currently measured, the changes in coverage and species with local velocities and development of structural and nonstructural improvements to permanently decrease nuisance algae coverage.