

City of Dallas

Water Utilities

Briefing to
Economic Development & Housing
Committee

Recycled Water Business Plan

October 16, 2006

Purpose Of Briefing

- Provide background and update on the City's use of recycled water
- Seek support for hiring a consultant to assist in the development of a business plan

Background What is Recycled Water?

- Recycled water is the treated effluent produced from the wastewater treatment process.
- The City's wastewater treatment plants use advanced secondary treatment followed by filtration which produces high quality effluent well suited for recycling.

Background Types of Recycled Water Use

Direct recycling involves providing water directly to the customer for non-potable uses such as irrigation, cooling towers, industrial processes, etc.

Indirect reclamation involves transporting the water to a reservoir to augment the drinking water supply. It is processed through a water treatment plant before being delivered to the customer.

This briefing focuses on Direct recycling.

What Have We Already Done?

- A pilot project to irrigate the Cedar Crest Golf Course was placed in service in 2005
- A high-level, strategic implementation plan for direct recycling was completed in 2005.

What is the History of the Cedar Crest Golf Course Pilot Project?

- Implemented April 2005
- Fully irrigated with recycled water for 18 months
- Average usage 7.8 million gallons/month (April 2005 – Jun 2006)
- Maximum month usage of 15.2 million gallons (July 2005)
- Total pipeline construction cost of \$1.4 million
- Constructed in conjunction with golf course and irrigation system improvements

What are the Key Objectives of the Cedar Crest Golf Course Pilot Project?

- Document the suitability of Dallas's existing high quality WWTP effluent for a variety of recycled water uses.
- Develop an understanding of operations and maintenance issues related to use of recycled water.
- Develop a protocol for Water Utilities and customer compliance with regulatory requirements.
- Evaluate financial information for assessing cost (capital and operational) of recycled water.
- Develop basis for expanding the Water Utilities Recycled Water Program to other sites.
- Identify responsibilities and benefits of partnerships between Water Utilities and future customers on recycled water projects.

Background Implementation Drivers

- Water recycling is efficient use of water supply
 - Extends life of current water supply
 - Provides long term dependable supply
 - Supports economic development potential
- Water recycling is included as a strategy in the Dallas Long Range Water Supply Plan and in the Region C Water Plan (Included in draft “2007 State Water Plan”)
 - Direct Recycling – Minimum of 18 MGD by 2012
 - Indirect Recycling
 - 60 MGD by 2015
 - 60 MGD by 2022

Background Implementation Drivers

- Water recycling is considered a Best Management Practice for water conservation
 - Must demonstrate “highest practicable” conservation to obtain inter-basin transfers for both connection to existing water supplies (e.g. Wright-Patman) and development of any future reservoirs.
- Water recycling is considered a dependable supply which is attractive to and promotes economic development.

What is the High-Level Implementation Plan for Direct Use of Recycled Water?

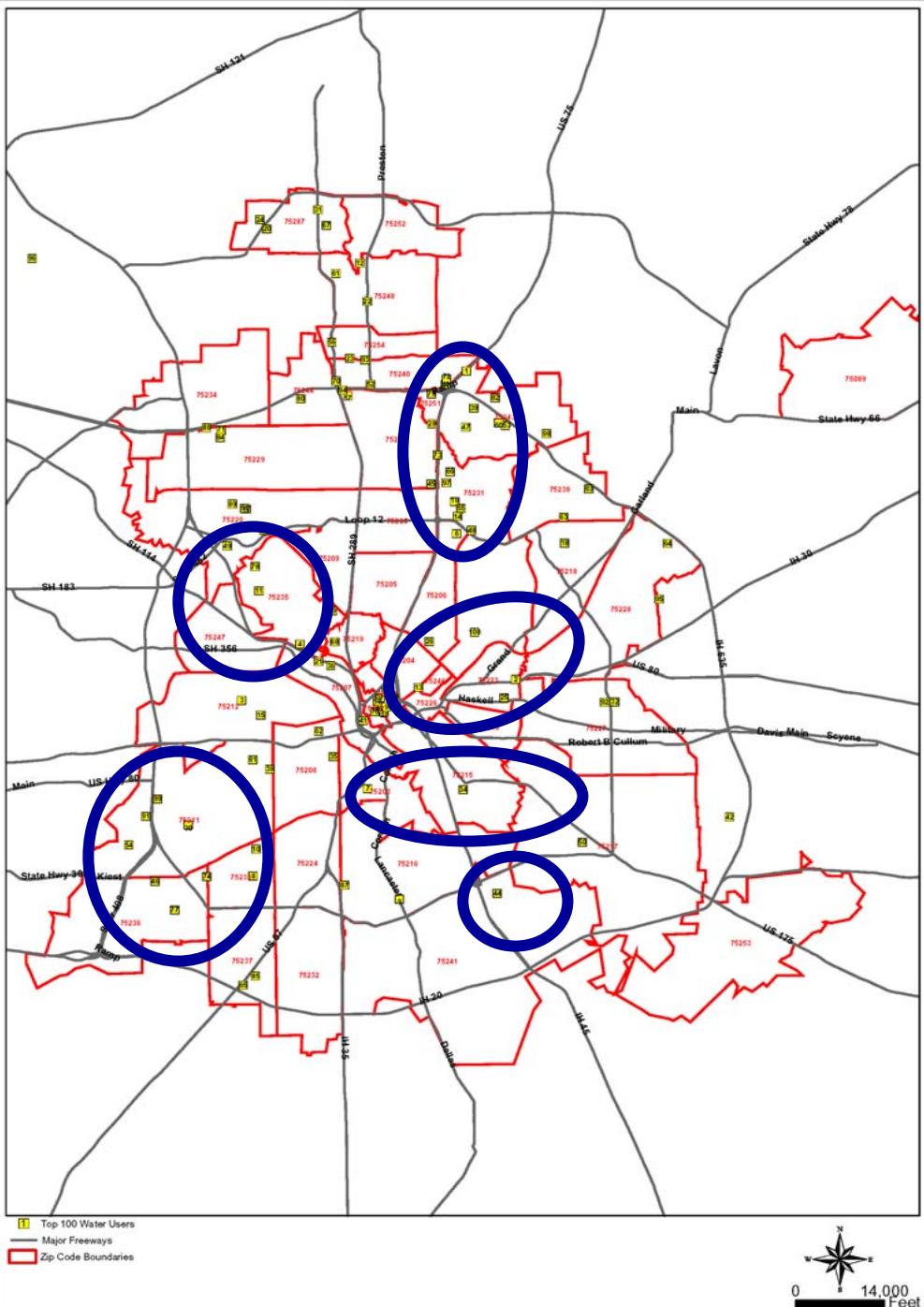
A high-level, strategic implementation plan for direct recycling was completed in 2005. It:

- Evaluated feasibility of potential recycled water projects
 - Identified DWU major water users
 - Identified candidates for recycled water
 - Defined potential recycled water service areas

The Plan

- Concluded that Recycled water is feasible and its cost is competitive with other water supply options.
- Recommended proceeding with additional implementation steps.

Identification of Potential Direct Recycled Water Service Areas

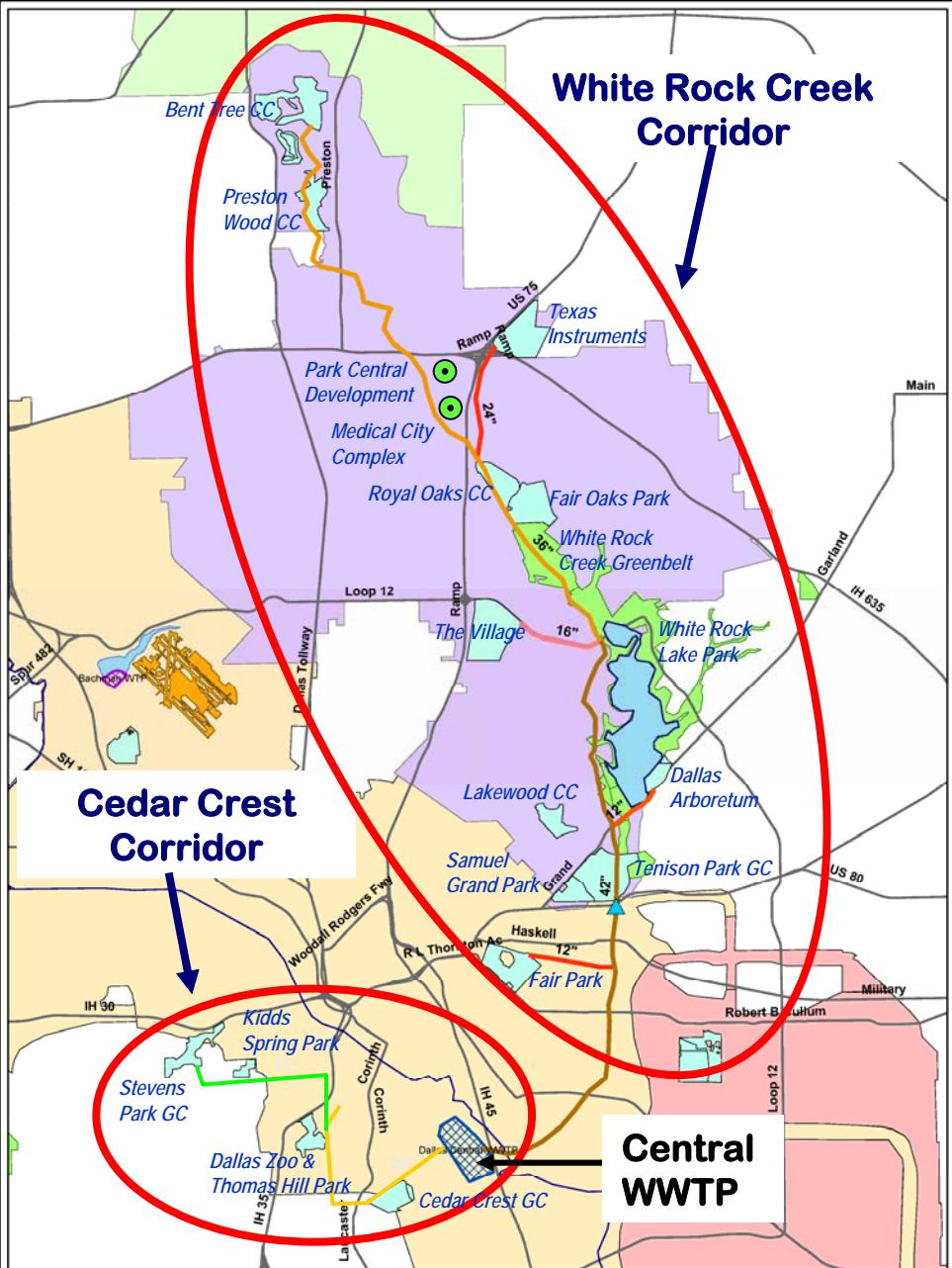


- Identify major water users
- Group major water users
- Evaluate potential water quality requirements
- Identify feasible service areas

Recommended Initial Direct Recycled Water Service Areas

- Cedar Crest Corridor
 - Includes Dallas Zoo & Stevens Park Golf Course
 - Target In-service by 2010
- White Rock Creek Corridor
 - Various customers
 - Alignment needs refinement
 - Target In-service by 2012

Target in-service dates are dependent on interest of potential customers



What Actions Are We Doing Now?

| <i>Action</i> | <i>Status</i> |
|---|---|
| Monitoring of Cedar Crest Golf Course project | Ongoing |
| Design extension of Cedar Crest pipeline | Currently underway in-house; Alignment survey- FY07; Design completion date- FY08 |
| Obtain City-wide TCEQ reuse authorization (for Type I uses) | Currently underway in-house; Target completion date- FY09 |

Recycled Water: A New ‘Business’

- The recycled water program will be a new business area for Dallas Water Utilities.
- Like any new business, the recycled water program needs a sound business plan that will strategically plan for the creation and development of an efficient cost effective program that addresses the following major objectives:
 - Strategically identify and plan to serve customers in high use corridors to minimize the construction of high cost infrastructure (miles of pipeline)
 - Development of Public Relations information that aids in successfully marketing the business to our customers
- The Business Plan must be strategically coordinated with and help to achieve the objectives of the City's Comprehensive Plan and promote economic development.
- A business plan can be developed that will draw from the experience and lessons learned from other previously implemented recycled water systems.

What Will We Get?

A Business Plan and Implementation Strategy that will:

- Develop general policies/procedures and evaluate the need to modify specific City ordinances
- Determine customer groups to be served (parks, schools, commercial, industrial) or not served (residential?)
- Recommend standard contract provisions
- Define customer requirements for quality and recommend the overall water quality parameters for the system
- Develop a cost-of-service model, rate structures, and a system financing plan
- Develop marketing strategies to reach the targeted customers
- Develop the initial Operation and Maintenance Plan
- Coordinate with and compliment the Dallas Comprehensive Plan
- Cooperate with and support efforts of the Economic Development Department

What Will We Get? Cont'd

- Services to expand and refine previous work through detailed efforts that will:
 - Evaluate the pilot project at Cedar Crest to determine any operational or customer issues to consider
 - Evaluate additional customers and potential service areas and usage projections
 - Initial effort was based on very large water users to determine feasible service areas
 - This work will identify more users in those service areas based on the City's top 3,000 water users
 - Review and modify service area pipeline alignments based on the findings

Conclusion/Recommendation

- Conclusion
 - In order to achieve recycled water goals, we must develop a business plan
- Recommendation
 - Committee approval is requested to support Council Award of a contract with Alan Plummer & Associates for \$674,875.00 to develop a Recycled Water Business Plan

Questions?