

## WASTEWATER TREATMENT FACILITIES

The Wastewater Treatment System (System) collects, conveys and processes wastewater from an estimated 2.0 million people, generated in a service area, which includes the City of Houston, several municipalities and unincorporated communities in the Houston metropolitan area. The system consists of approximately 6,200 miles of sanitary sewer lines, over 425,000 services connections, approximately 400 lift stations, 41 (5 major and 36 satellite) wastewater treatment plants, and three major sludge treatment facilities. The average daily wastewater flow through the system for the FY2006 is estimated at 267 million gallons per day (MGD). As reflected by state permits, the effective treatment capacity of the system is 564 MGD. The permitted capacity of plants is a part of the wastewater system treatment capacity that ranges from 0.20 MGD for the smallest plant to over 200 MGD for the 69th Street Wastewater plant.

Prior to granting a building permit for construction, the City evaluates the wastewater system's ability to transport and treat the estimated volumes of additional wastewater. Impact fees are collected, at least in part, to recover the cost of facilities previously constructed. These fees can be applied to the construction of new facilities providing additional capacity.

The Wastewater Utility Treatment Facilities Improvements Program provides for the continued upgrading of the wastewater collection and treatment system. Additional funds are provided to comply with the regulations issued by the Texas Commission on Environmental Quality (TCEQ) and the U.S. Environmental Protection Agency (EPA).

The five-year program totals \$760 million and is financed through two funding sources with the largest single source being revenue bonds.

## **WASTEWATER TREATMENT FACILITIES**

Highlights of the FY2007-2011 CIP include:

- Compliance with anticipated TCEQ Citywide Agreed Order.
- Continued rehabilitation of neighborhood sewers to improve service, remove excessive infiltration, prevent sanitary sewer overflows, and eliminate sewage backups (\$28.8 million in FY2007).
- Rehabilitation or replacement of various wastewater treatment plants.
- Rehabilitation or replacements of various wastewater lift stations.
- Improvements to the Almeda Sims Wastewater Treatment Plant.
- Continued plant consolidation to reduce operation and maintenance cost.
- Increased participation in sewer line construction cost with Developers to promote inner city development.

2007 - 2011 CAPITAL IMPROVEMENT PLAN

CITY OF HOUSTON - SUMMARY

| Department | Council District | CIP No. | Project   | FY Planned Appropriations (\$ Thousands) |                |        |        |        |        |        | Project Total |
|------------|------------------|---------|---|--|----------------|--------|--------|--------|--------|--------|---------------|
|            |                  |         |   | Through 2005                             | Estimated 2006 | 2007   | 2008   | 2009   | 2010   | 2011   |               |
| Wastewater | ALL              | R-0019  | Miscellaneous Construction Acquisition, Engineering & Legal               | 95,935                                   | 3,484          | 4,000  | 4,000  | 4,000  | 4,000  | 4,000  | 119,419       |
| Wastewater | ALL              | R-0265  | Wastewater Treatment And Sludge Plant Renewal/Replacement                 | 108,456                                  | 26,958         | 22,000 | 18,000 | 16,700 | 20,800 | 20,000 | 232,914       |
| Wastewater | ALL              | R-0266  | Neighborhood Sewer Rehabilitation Var. Service Areas                      | 298,825                                  | 31,720         | 28,800 | 28,800 | 28,800 | 28,800 | 28,000 | 473,745       |
| Wastewater | ALL              | R-0267  | Pump And Lift Station Renewal/Replacement                                 | 95,803                                   | 8,046          | 8,100  | 7,000  | 8,000  | 8,000  | 10,000 | 144,949       |
| Wastewater | ALL              | R-0268  | Rehabilitation/Replacement of Various Wastewater Facilities               | 14,186                                   | 5,858          | 3,100  | 3,000  | 2,000  | 1,500  | 1,600  | 31,244        |
| Wastewater | ALL              | R-0295  | TCEQ Compliance - Citywide  | 25,698                                   | 11,749         | 12,500 | 12,500 | 12,500 | 13,000 | 13,000 | 100,947       |
| Wastewater | ALL              | R-0302  | Wastewater Facilities Safety Improvements                                 | 5,444                                    | 253            | 600    | 600    | 600    | 600    | 600    | 8,697         |
| Wastewater | ALL              | R-0500  | Utility Improvements Under Street & Bridge And Other CIP Projects         | 5,681                                    | 6,342          | 5,600  | 5,000  | 5,000  | 5,000  | 5,000  | 37,623        |
| Wastewater | ALL              | R-0512  | Supervisory Cont. & Data Acquisition (SCADA) Sys. & Process Improvements. | 37,491                                   |                | 4,000  | 500    | 1,500  | 500    | 1,500  | 45,491        |
| Wastewater | ALL              | R-0521  | Government Agencies - Sewer Line Replacement                              | 8,503                                    | 3,357          | 800    | 800    | 800    | 800    | 800    | 15,860        |
| Wastewater | ALL              | R-0535  | Northwest Maintenance Facility And Wastewater Operations                  |  |                |        |        |        |        | 500    | 500           |
| Wastewater | ALL              | R-0536  | Plant Consolidation   | 8,213                                    | 5,101          | 1,800  | 16,900 | 17,000 | 10,900 | 7,400  | 67,314        |
| Wastewater | ALL              | R-0541  | Infrastructure Management System  |  | 1,271          |        |        |        |        |        | 1,271         |
| Wastewater | ALL              | R-0542  | Construction Management   | 4,876                                    |                |        |        |        |        |        | 4,876         |
| Wastewater | ALL              | R-0543  | Sewer Model Management  | 10,793                                   |                |        |        |        |        |        | 10,793        |
| Wastewater | ALL              | R-0800  | Collection Sys. - Sponsor Participation Categorical (Resident.)           | 10,315                                   | 4,166          | 4,000  | 4,000  | 4,000  | 4,000  | 4,000  | 34,481        |
| Wastewater | ALL              | R-0801  | Providing Sewer Service to Areas Inside the City Not Served               | 22,924                                   | 1,205          | 1,000  | 1,000  | 1,000  | 1,000  | 1,000  | 29,129        |

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|------------|------------------|---------|--|--|----------------|--------|--------|--------|--------|--------|---------------|
|            |                  |         |  | Through 2005                             | Estimated 2006 | 2007   | 2008   | 2009   | 2010   | 2011   |               |
| Wastewater | ALL              | R-0802  | Collection Sys. - Sponsor Participation Categorical (Commerc.)   | 1,902                                    | 1,096          | 600    | 600    | 600    | 600    | 600    | 5,998         |
| Wastewater | ALL              | R-0803  | Evaluate & Develop a Plan to Regionalize the Wastewater Treatment Plants & Provide Sanitary Service to |  |                | 1,000  | 1,000  | 1,000  | 1,000  | 1,000  | 5,000         |
| Wastewater | ALL              | R-1000  | Evaluation of Wastewater Treatment Plant Service Area  | 6,525                                    | 2,759          | 1,000  | 1,000  | 1,000  | 1,000  | 1,000  | 14,284        |
| Wastewater | ALL              | R-2011  | Neighborhood Sewer Systems Improvements  | 92,358                                   | 3,517          | 13,000 | 13,000 | 13,000 | 13,000 | 13,000 | 160,875       |
| Wastewater | ALL              | R-2013  | Large Diameter Sewer (LDS) Rehabilitation Program  | 30,480                                   | 11,959         | 7,000  | 7,000  | 7,000  | 7,000  | 7,000  | 77,439        |
| Wastewater | BDHI             | R-0036  | Houston Hope Project   |  |                |        |        |        |        |        |               |
| Wastewater | BHI              | R-2003  | Northside Sewer Relief Tunnel Rehabilitation   | 3,900                                    |                | 200    | 300    | 6,000  | 7,000  | 5,000  | 22,400        |
| Wastewater | D                | R-0298  | Almeda Sims Wastewater Treatment & Sludge Process Facility   | 35,161                                   | 31,364         | 9,400  | 7,500  | 7,500  | 1,500  | 11,000 | 103,425       |
| Wastewater | D                | R-0534  | Cullen Maintenance Facility  | 1,207                                    | 79             | 7,000  |        |        |        |        | 8,286         |
| Wastewater | E                | R-0290  | Horsepen Gully Regional Wastewater Treatment Plant   | 4,936                                    |                |        |        |        |        | 2,000  | 6,936         |
| Wastewater | I                | R-0294  | Sims Bayou TCEQ Compliance   | 23,230                                   | 12,157         | 12,000 | 11,000 | 12,000 | 12,000 | 12,000 | 94,387        |
| Wastewater | I                | R-0509  | 69th Street Wastewater Treatment Plant Improvements  | 60,659                                   | 769            | 4,500  | 8,500  | 2,000  | 10,000 | 2,000  | 88,428        |
| Wastewater | I                | R-0537  | Downtown Projects  | 16,456                                   | 1,922          |        |        |        |        |        | 18,378        |