

REPORT ON ASBESTOS/CEMENT PIPE USE
IN
THE CITY OF HOUSTON, TEXAS

PREPARED FOR:
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Introduction

The Public Works Department of the City of Houston was the ninth of ten systems studied under the Municipal Analysis Program of the A/C Pipe Producers Association. Water Supply Division personnel in the Department of Public Works were interviewed regarding the use of A/C pipe in the City. The objective was to investigate and trace the usage of A/C pipe through its entire life cycle. The broad functional categories covered by this fact-finding mission are as follows:

- o Operational
 - Specification, Decisionmaking, and Procurement
 - Installation and Testing
 - Operation and Maintenance
 - Repair and Replacement
 - Detection and Prevention
- o Financial
- o Institutional

Each of these categories is discussed in detail in this report.

Background on the Houston Site Visit

The two-day site visit to Houston was conducted on March 9-10. A majority of the time was spent with Carl Schwing, the Assistant Director of Public Works for Water Supply. Mr. Schwing is well known in the Washington, D.C. area. He spent several years developing an environmental engineering program at the Charles County, Maryland Community College. Officials interviewed during the course of the visit are listed below:

Marty Manning, Utilities Director of Public Works
Carl Schwing, Assistant Director of Public Works
Emerick Jacobs, Jr., Manager--Maintenance Section
of Water Department
Peter S. Fortin, P.E., Manager--Water Engineering
Section
Peter W. Dobrolski, C.E., Water Division Engineering
Anita Kushen, Buyer--Maintenance Section

Houston's water department, like other large water systems linked closely to city politics and finance, appears to be disorganized. Mr. Schwing has held his job for less than one year; for a system the size of Houston (1.4 million served, 560 square mile service area), more time is needed to gain control and streamline the department.

Houston has a policy similar to that of San Diego and Phoenix regarding growth. This policy is characterized by aggressive annexation of land and any water systems contained in the area annexed. Houston, reflecting a fear voiced by other growth-oriented cities, does not want to become "land-locked" like many Eastern cities (e.g., Baltimore, Washington, Richmond, Philadelphia). As a result, the pace of activity in the water department is frenetic as officials try to cope with growth pains while struggling to upgrade a distribution system which has over 1000 miles of hydraulically undersized 2-inch cast iron mains.

This explanation is necessary in order for the reader to understand the reception of officials in Houston, San Diego, and Phoenix to the MAP study. The officials in Houston were polite, courteous, and somewhat interested, but obviously had other priorities and commitments which commanded their attention.

Institutional and Background Information

The water supply function in the City of Houston is handled by the Department of Public Works. The Water Division has operated as a part of Public Works since 1965 when the Water Department, which had operated as a separate City department since 1935, was consolidated into Public Works.

The water, sewer, and gas services comprise the utilities section of Public Works. Each of the three utilities has a separate enterprise fund, meaning that the revenues are not co-mingled with general fund revenues or with each other.

Houston has a strong mayor form of government. The current mayor is Kathryn J. Whitmire, formerly the City Comptroller. According to Water Division personnel, Ms. Whitmire has placed the operating department under a number of budgeting constraints. The annual budget under Whitmire's administration typically is not approved until July for a given fiscal year (calendar). Operating departments are allowed to spend on a "continuing resolution" basis last year's budget amount plus 5%. However, this does not include capital expenditures. Thus each department only has from July 31 to September 15 to make capital purchases. For a department such as Public Works, in which the Water Division budget alone amounts to \$125,000,000, this is a severe constraint.

The purchasing function also appears to be disorganized and inefficient. In accordance with City law, all departments have to go out for bids for any purchase over \$150. This appears to place a severe "crimp" on operations.

The Director of Public Works is Jimmie Schindewolf, described by Carl Schwing as a highly capable individual. An organization chart for the Department was not available. The partial one shown on the next page serves the function of placing the Water Division into perspective.

The Water Division provides service to about 1.4 million people and has more than 370,000 service connections. The Water Division employs over 2100 people; 908 persons are employed in the maintenance department alone.

Since 1949, the City has annexed a total of 87 water districts. According to Schwing, there are 450 small municipal utility districts in the Houston service area. The City is annexing them as rapidly as is feasible.

Houston's water comes from both ground and surface sources. Although Houston has rights to several surface sources, the primary source is Lake Houston from which 140 mgd is drawn. Houston's groundwater supply consists of approximately 200 wells, distributed in 93 well fields or individual well locations.

The average production of the water system amounts to 400 mgd. Per capita usage averages 320 gallons per person per day and peaks at 440 in the summer months. Schwing notes "the people of Houston will use every drop of water we can pump."

The Transmission and Distribution System

Houston's transmission and distribution system consisted of 4516.91 miles of pipeline as of February, 1982. More than 1000 miles of this total is 2-inch cast iron with poured lead joints. In total, the City has more than 1500 miles of cast iron with lead joints. In 1954, 60% of the system was composed of 2-inch cast iron. The water director describes the system as a "network of pipe that is a hodge-podge." A breakdown of water pressure pipe by material and size is shown on page 5.

ORGANIZATION CHART

