# SOUTH & CENTER CHAUTAUQUA LAKE SEWER DISTRICTS



SERVICE AREA



#### SUMMER 2003



THE TREATMENT PLANT ON GIFFORD AVENUE IN CELORON, NEW YORK

# WASTEWATER COLLECTION AND MAINTENANCE

Gravity, vacuum and low pressure grinder pump sewers are used to collect wastewater from customers in a ratio of 60%, 30% and 10% respectively. However, 95% of all users are also served by major pump stations and pressure sewers that deliver sewage to the Treatment Plant. Depending upon a customer's location, wastewater may flow through a series of several gravity and pressure sewers before delivery to treatment.

The different kinds of sewers built were cost effective for each area served. There are 833 vacuum valves and 4 vacuum pump stations together with 23 miles of vacuum sewers. Pressure sewers represent 15 miles of piping and serve 10 major pump stations, 12 smaller pump stations, 16 duplex grinder pump stations, and 128 other grinder pumps. A total of 72 miles of gravity public sewers plus 50 miles of private sewer laterals are also in use.

Routine sewer system maintenance includes rebuilding and replacing pumps, motors, controls and vacuum valves on a scheduled basis. Except for specialized machining and occasional major construction projects, all work is performed by nine Sewer Districts maintenance staff. Staff also performs repair and replacement at the treatment plant as necessary. Emergency response by staff is available 24 hours a day at 664-9727.

INTERIOR OF MAPLE SPRINGS PUMP STATION SHOWING THE VACUUM RESERVE TANK



VACUUM SEWER CUSTOMERS! If you hear constant, hissing air coming from your vent pipe, call us! 664-9727

### **ASTEWATER TREATMENT OPERATIONS**



THE DISCHARGE POINT INTO THE CHADAKOIN RIVER AT THE CELORON/ JAMESTOWN LINE.

The Treatment Plant is permitted to accept

4,100,000 gallons of wastewater daily. The normal flow received is about 2,000,000 gallons each day. The Districts maintain a nationally certified laboratory on the premises to monitor and control the activated sludge treatment process. Laboratory analysis examines the removal of organic and solid pollutants as well as pathogen destruction, ammonia reduction and the amount of dissolved oxygen in the discharge. Treatment staff includes the supervising operator, a laboratory technician, and support personnel. The Plant has an exemplary federal discharge compliance record. Our treated effluent has the appearance of drinking water.

\* 国家国家国家 The Administration Offices of the Districts are open between 8:00 and 4:00 pm weekdays except holidays. Billing inquiries may be made and payments will be received during those hours.

# GRINDER PUMP SEWER CUSTOMERS!



If you see a red light blinking on one of our control panels, or hear an alarm, please call us! 664-9727

## CLOSED CIRCUIT TV SEWER ROBOT CAMERA



THE DISTRICTS' CAMERA, POSED BY A MANHOLE. PRIOR TO INSER-TION INTO THE SEWER LINES.

The Sewer Districts acquired a \$45,000 internal sewer inspection system in 2001. There are approximately 51 miles of gravity sewers in excess of 60 years old in the Lakewood, Celoron, and West Ellicott service areas of the Districts. Inspections are conducted to assess the condition of sewer pipe, intrusion of roots, deposition of grit, grease or other solids and any conditions that may cause interruption of sewer service.

Televised sewers are recorded on video cassette and a log of observations is made in the field. Root cutting, sewer high pressure flushing/cleaning and pipe replacement are scheduled based upon priorities established from the daily log and viewing of video tapes.

STILL PICTURE OF ROOTS GROWING THROUGH PIPEWORK, STILL PICTURE FROM VIDEO PHOTOGRAPHY,





If your facilities are not working properly, or are backing up, call us first! 664-9727

#### HISTORY OF THE DISTRICTS

The South & Center Chautauqua Lake Sewer Districts were formed in 1969. Studies indicated substantial health and environmental problems were occurring as a result of on-site disposal of sewage. Most development within the Districts was halted by the Chautauqua County Health Department pending construction of adequate public sanitary facilities..

The Wastewater Treatment Plant was placed in service during 1980. The villages of Lakewood and Celoron, which had sanitary sewers since 1940, were connected to the new plant. The old sewage plants that served the villages were retired. New service area connections were completed in 1985.

The Wastewater Treatment Plant typically removes 98% of the organic and solids load received, bettering the 85% required by our federal discharge permit. This equates to 2 tons per day of pollutants that are extracted during physical and biological treatment. In comparison, the decommissioned plants that had served Lakewood and Celoron, including West Ellicott, each removed only 50% of pollutants received.

The combined South & Center Sewer Districts comprise a Chautauqua County Enterprise Department. Our annual budget is approximately \$2,600,000. All revenue comes from user charges, not from general tax revenues. More than 5,000 customers are served and there is sufficient reserve capacity at the treatment works for future regional growth.