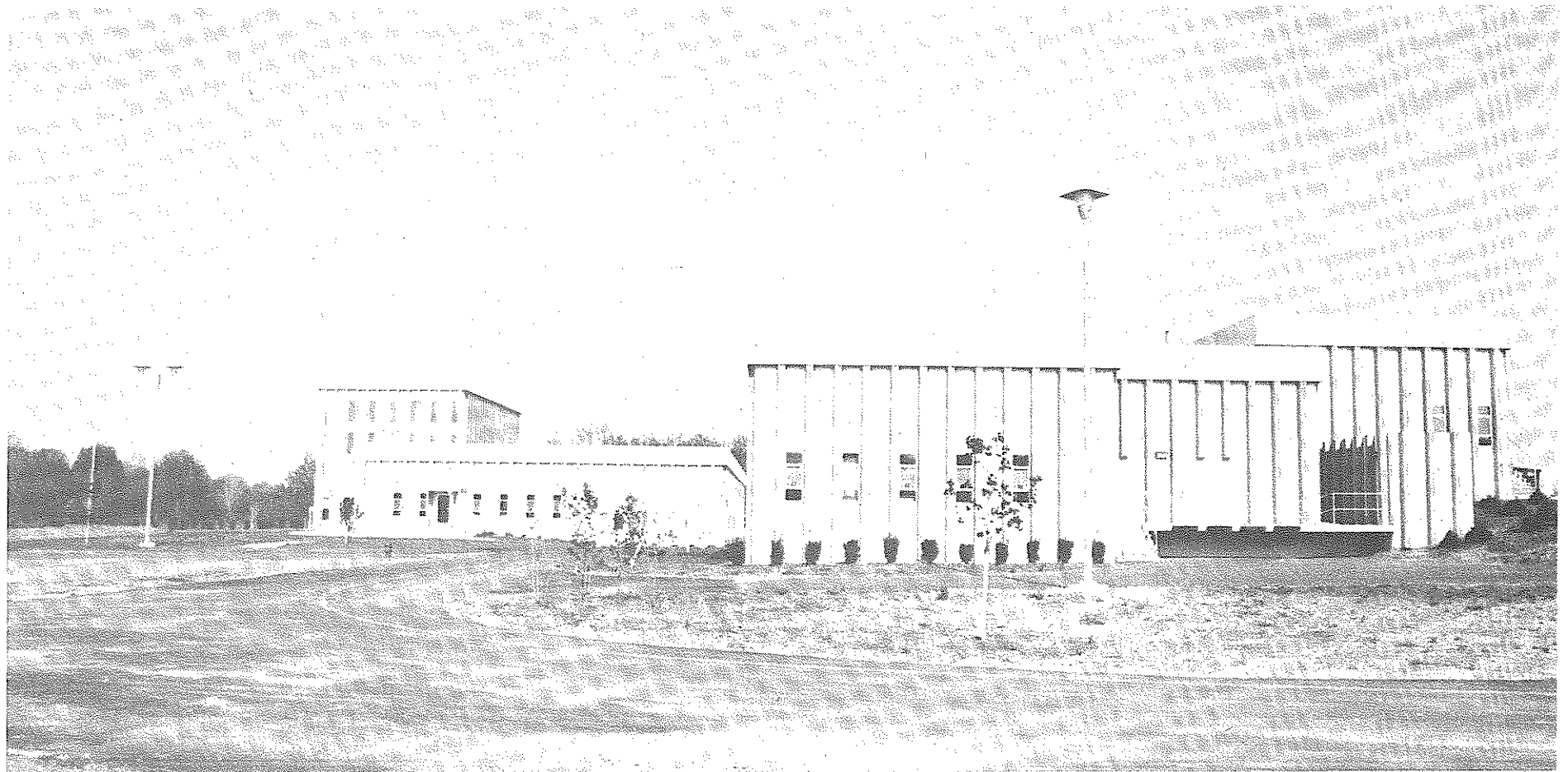


EAST ONEIDA LAKE WATER POLLUTION ABATEMENT PROJECT

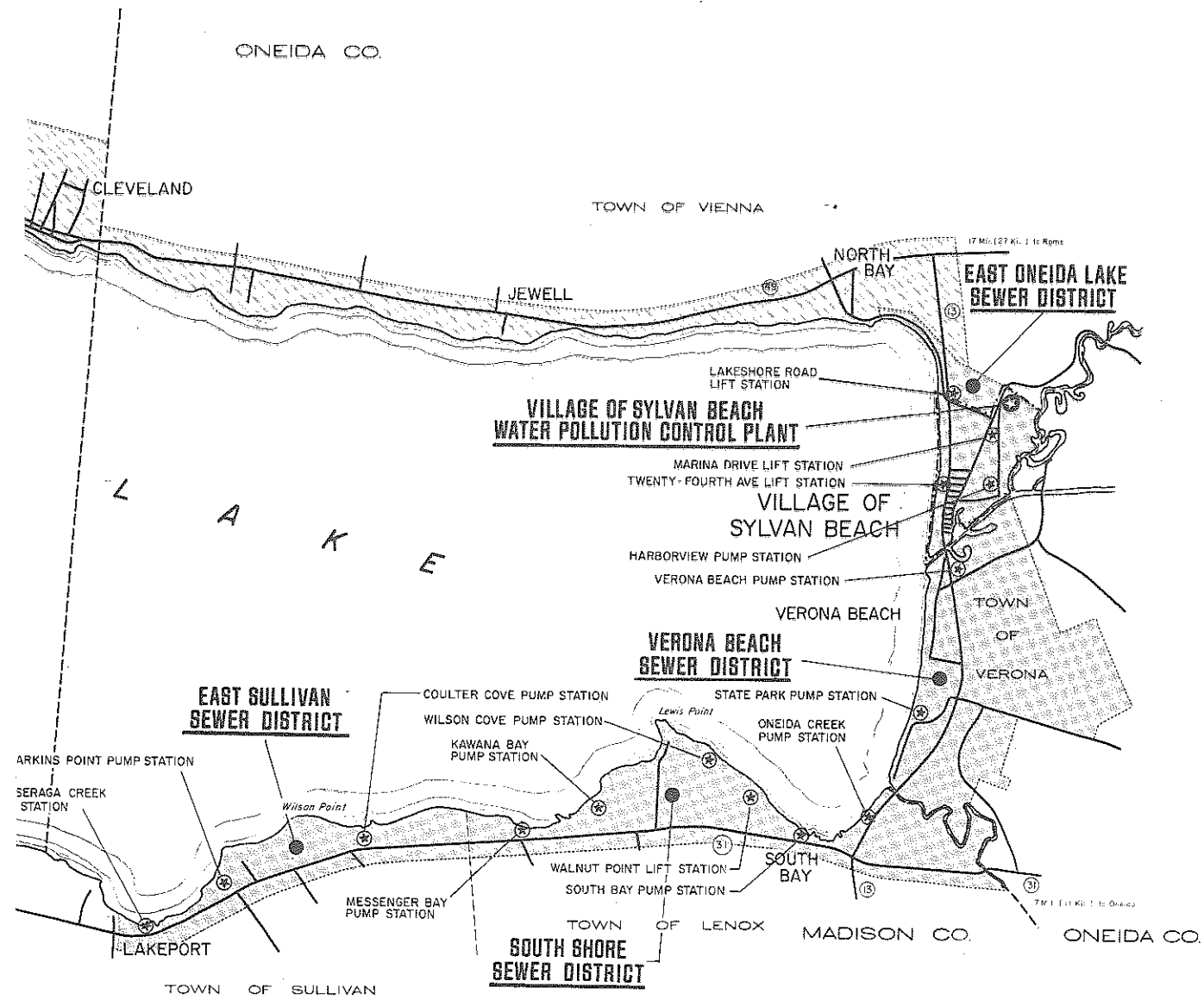
Serving The Village of Sylvan Beach and the Towns of Vienna, Verona, Lenox & Sullivan



SYLVAN BEACH WATER POLLUTION CONTROL PLANT

3100 Vienna Road, PO Box 514
Sylvan Beach, New York 13157

ON ABATEMENT PROJECT



VILLAGE OF SYLVAN BEACH

MAYOR
CHARLES G. JOHNSON

TOWN OF LENOX

SUPERVISOR
JOHN S. PATANE

TOWN OF SULLIVAN

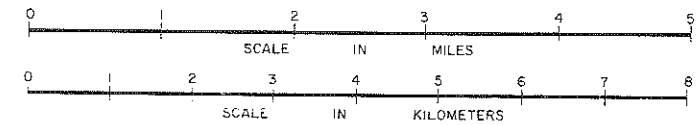
SUPERVISOR
JOHN W. MCCANN

TOWN OF VERONA

SUPERVISOR
ARTHUR E. HARRIS

TOWN OF VIENNA

SUPERVISOR
GEORGE W. HARRISON, JR.





VERONA BEACH PUMPING STATION

This Pumping Station utilizes two 50 HP centrifugal pumps. The Verona Beach and Oneida Creek Pumping Stations are similar.



EFFLUENT PURE ENOUGH TO DRINK

Shown sampling effluent (left to right) are Mayor Charles G. Johnson, N.Y.S. Senator James H. Donovan, N.Y.S. Assemblyman John R. Zagame and Robert D. Charlebois, P.E.

PROJECT HISTORY

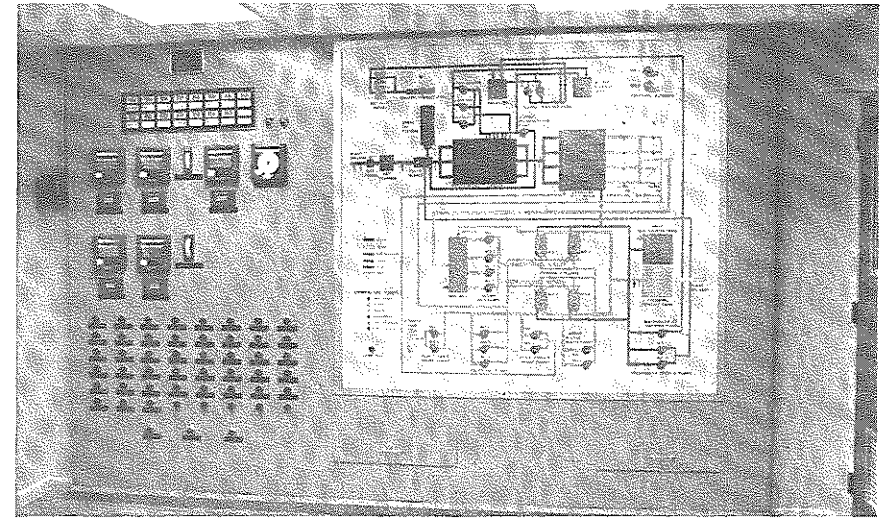
The East Oneida Lake Water Pollution Abatement Project originated in 1970 when the Towns of Vienna and Verona began working with the Firm of Robert D. Charlebois towards the goal of improving the environmental quality of Oneida Lake and enhancing the overall community. In 1971 the Village of Sylvan Beach was formed from a portion of the Town of Vienna. As planning progressed, it became apparent that the need for wastewater collection and treatment was not confined to the newly formed Village of Sylvan Beach and portions of the Towns of Vienna and Verona and, as a result, the scope of the Plan grew to include Sewer Districts in the Towns of Lenox and Sullivan. The merits of consolidation of the various districts were recognized by everyone. Representatives from the Towns and the Village together with the Robert Charlebois Firm pursued the concept of consolidation of all the districts along the east and south shores of Oneida Lake and finally in January 1977, after Special Legislation was passed by the State of New York, a 40-year Intermunicipal Agreement was reached formalizing the creation of the East Oneida Lake Water Pollution Abatement Project.

Work began in the Village of Sylvan Beach on December 18, 1975 when the installation of lateral sewer pipe commenced. Construction activity soon started in the other Districts where more than 34 miles (54 kilometers) of interceptor and lateral sewers were installed and pumping stations were constructed. After ten years of planning and the execution of some 26 construction contracts, the entire system was put into operation in June 1980.



DEDICATION CEREMONY

Participants are (left to right): George Harrison, Jr., Arthur Harris, John Zagame, James Donovan, Charles Johnson (cutting ribbon), John Patane, Robert Charlebois and Richard Elliott.



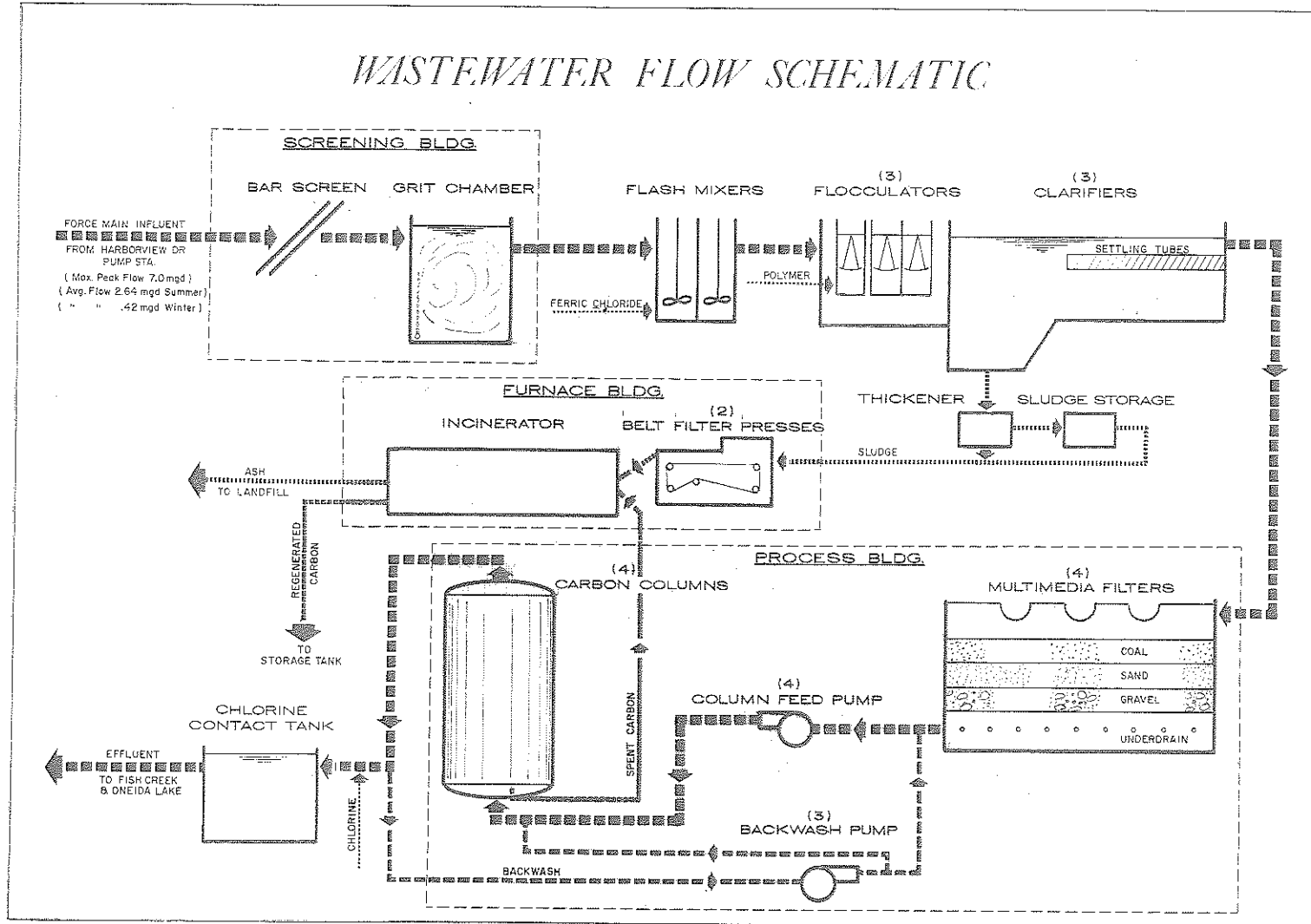
GRAPHIC DISPLAY PANEL

This panel, located in the Sylvan Beach WPCP, enables operating personnel to continuously monitor the status of all the remote Pumping Stations and the major equipment in the Plant.

FACTS

1. The Project is composed of more than 177,000 lineal feet (53,950 meters) or approximately 34 miles (54 kilometers) of lateral and interceptor sewer pipe.
2. Fifteen pumping stations are utilized within the system. The size and type of pumping station ranges from small lift stations to large multiple pump facilities with up to 75 HP pumps.
3. The total Project Cost was approximately \$31,000,000. A total of \$24,000,000 in aid was granted from the U. S. Environmental Protection Agency, New York State Department of Conservation, the U. S. Department of Agriculture Farmers Home Administration, and the Department of Housing and Urban Development.
4. The Treatment Plant has a maximum hydraulic flow rate of 4,725 gallons (17,900 liters) per minute and an average treatment capacity of 2.60 MGD [million gallons per day] (9.84 MLD - Million Liters per day) or an equivalent service population of 26,000 people.
5. The Treatment Plant is one of the few in Central New York able to remove Phosphorous from the wastewater. (Phosphorous is one of the major nutrient sources which promotes algae growth and leads to the degradation of fresh water supplies.)
6. The Treatment Plant will remove more than 90 percent of all Suspended Solids (SS) and Biochemical Oxygen Demand (BOD).

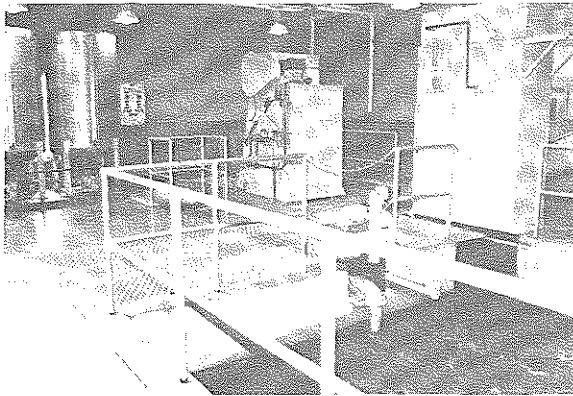
WASTEWATER FLOW SCHEMATIC



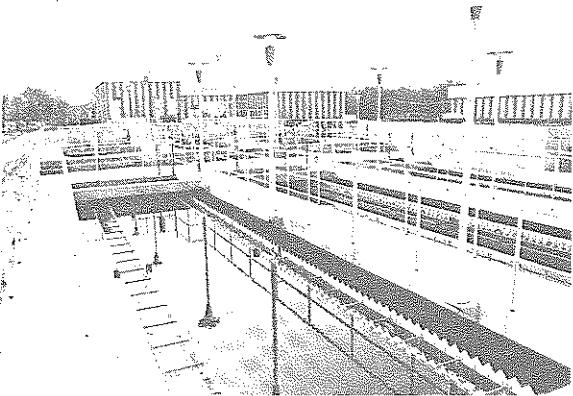
DESIGN CONCEPT

The Sylvan Beach Water Pollution Control Plant is an advanced Wastewater Treatment Facility. The enactment of more stringent wastewater discharge standards by the U. S. Environmental Protection Agency and the New York State Department of Environmental Conservation mandated a treatment plant which could consistently produce an effluent of near drinking water quality.

The seasonal variations in population of the service area required a treatment process that could efficiently accommodate abrupt changes in flow. Recognizing these requirements, Robert D. Charlebois Consulting Engineer, P. C. designed a Physical-Chemical treatment process which offers maximum flexibility to adjust for flow variation and maximum removal efficiency for a high quality effluent.



SCREENINGS BUILDING



FLOCCULATOR - CLARIFIERS



SLUDGE PUMP BUILDING

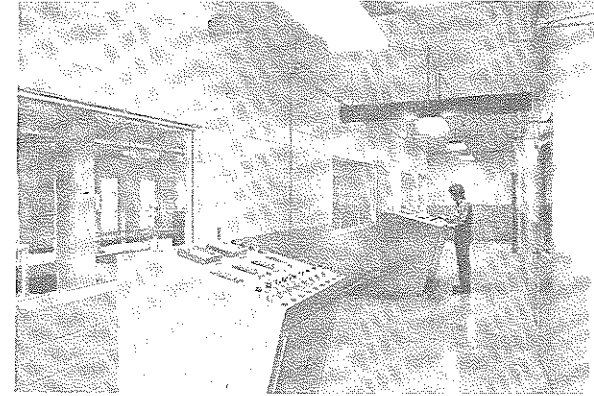
THE TREATMENT PROCESS

Three major processes are utilized to provide effective wastewater treatment.

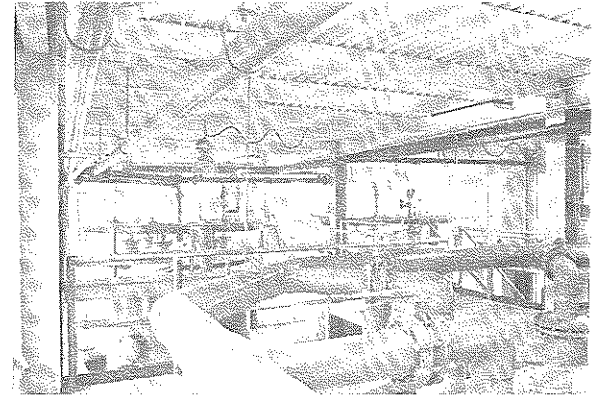
1. Primary Clarification - A primary coagulant chemical (Ferric Chloride) is added to the wastewater. The wastewater is mixed, then gently stirred (Flocculation) causing the suspended or nondissolved contaminants to group together and settle out in clarifiers. Approximately 80 percent of the contaminants in the wastewater are removed in this stage.

2. Filtration - After Clarification, the wastewater is passed through multimedia filters. The filters consist of precisely graded gravel, sand and anthracite coal which traps the smaller, lighter solid contaminants in the wastewater which would not settle out in the primary clarifier. Approximately 10 percent contaminant removal is achieved in the filters.

3. Carbon Adsorption - Four 30' (9.1 M) tall, 12' (3.7 M) diameter tanks contain activated ganular carbon, a substance made from coal. Activated carbon removes dissolved organic impurities and associated color and odor by a process called adsorption.



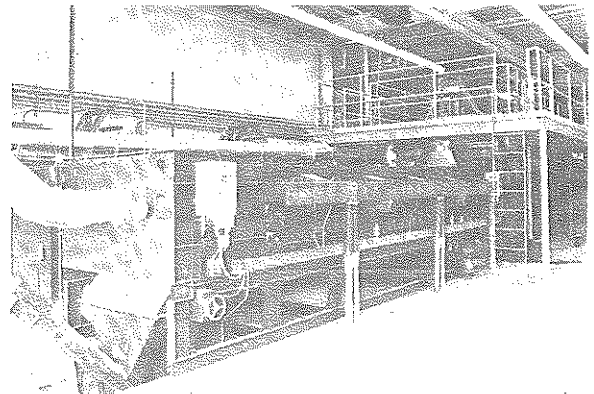
FILTER CONTROL ROOM



CARBON COLUMN AREA

ECONOMICAL SLUDGE DISPOSAL

Liquid sludge, which is generated in the primary clarification process, is gravity thickened and then aerobically stabilized in the sludge storage tank. The sludge is dewatered to a cake consistency in belt filter presses. The sludge cake is utilized in horticulture beds at a local nursery. On site sludge incineration and landfilling of the sludge cake are alternate disposal options.



INFRARED SLUDGE INCINERATOR & CARBON REACTIVATOR