
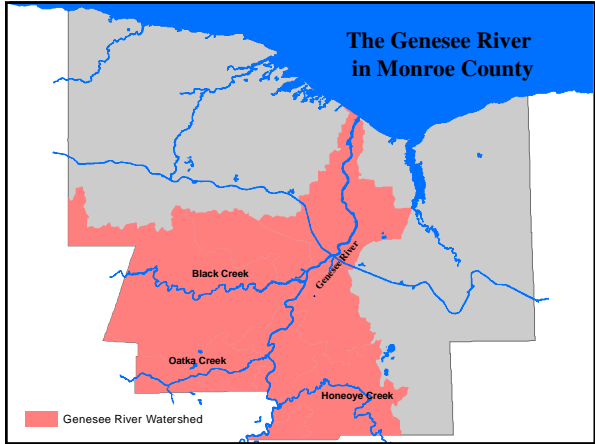


**Working to Improve Water Quality  
In the Genesee River**

**Monroe County Pure Waters and the  
Combined Sewer Overflow Abatement Program**

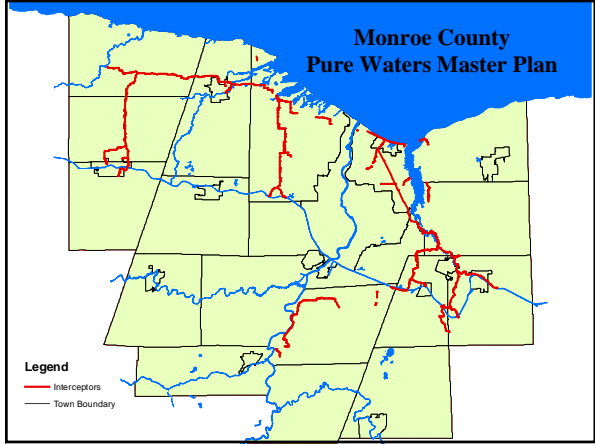
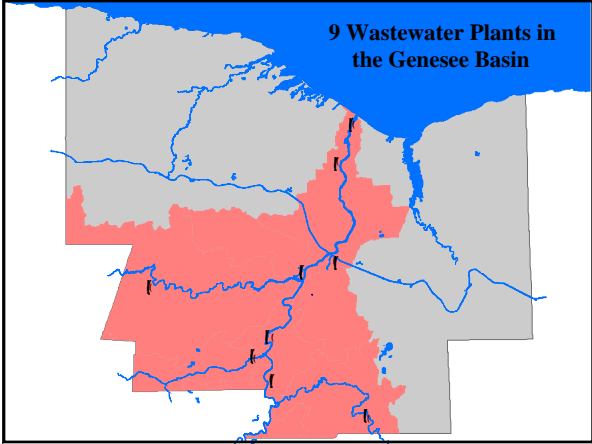
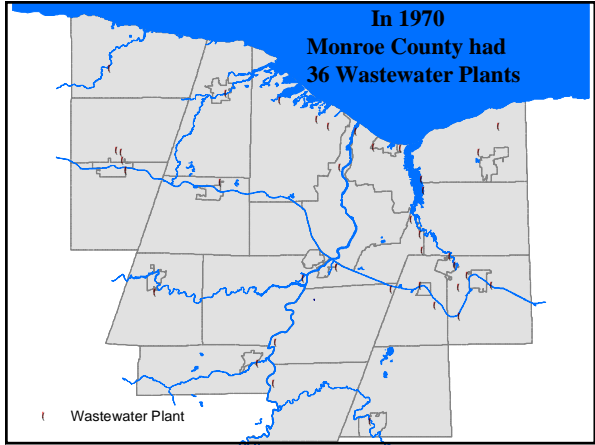
Presented by Andy Sansone  
Monroe County Dept. of Environmental Services

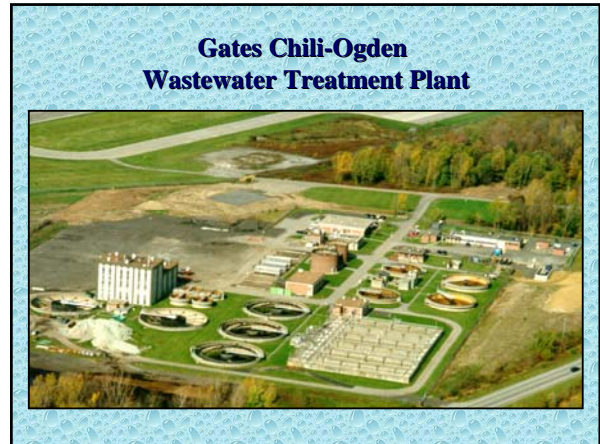
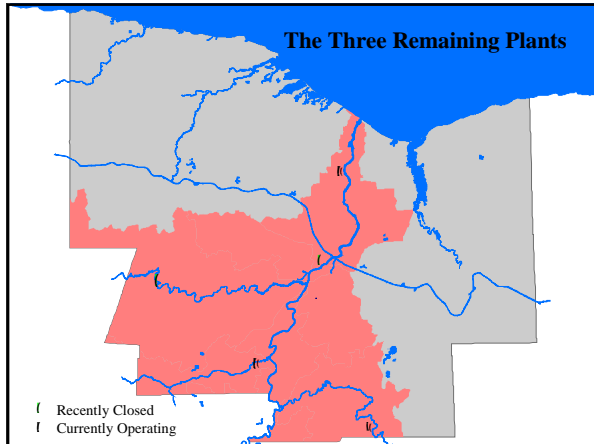



**State of the River.....1969**

**Upper Genesee**  
 2ppm Dissolved Oxygen  
 Fish Kills  
 Gross Discoloration  
 Excessive Weeds and Algae

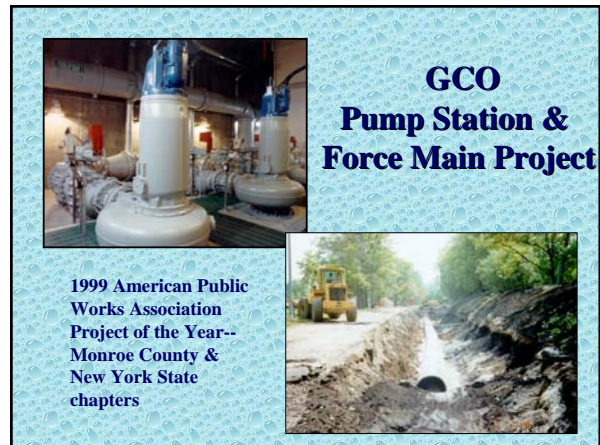
**Lower Genesee**  
 Grossly Polluted  
 Frequently Devoid of Oxygen  
 Sludgeworms 40,000/yd<sup>2</sup>  
 Coliform counts > 1,000,000





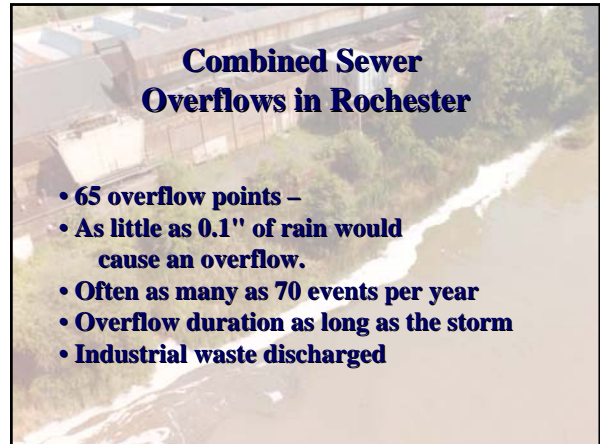
### A year in the life of GCO.....1997

- Average Flow 13.4mgd
- Average Phosphorus Conc. 0.91mg/L
- Daily Phosphorus Load 101.76 lbs
- Annual Phosphorus Load 18.5 tons



### VanLare Wastewater Treatment Plant

RPWD established 1971 to fund plant upgrades  
 1972 County took over sewers in City began to assess CSO's  
 VanLare Upgrade Complete 1976  
 135 mgd primary/secondary treatment  
 660 mgd during storm events



**CSOAP**  
**Combined Sewer Overflow Abatement Program**

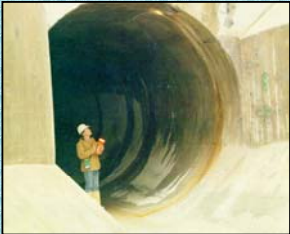
- Combined sewer system was modeled
- Water quality goals and costs were considered
- Various options and configurations considered
- Capture, convey and treat method selected

**CSOAP– Early Investments Saved Ratepayers Millions**

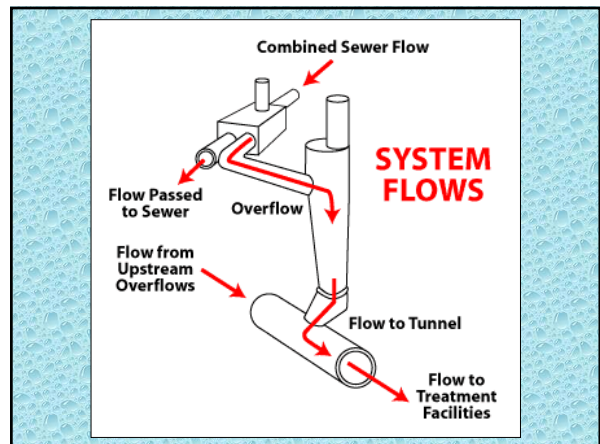
- \$550 million cost
- Federal grant covered 75% of cost, State paid another 12.5%
- Municipalities now paying >\$500 M, some > \$1B

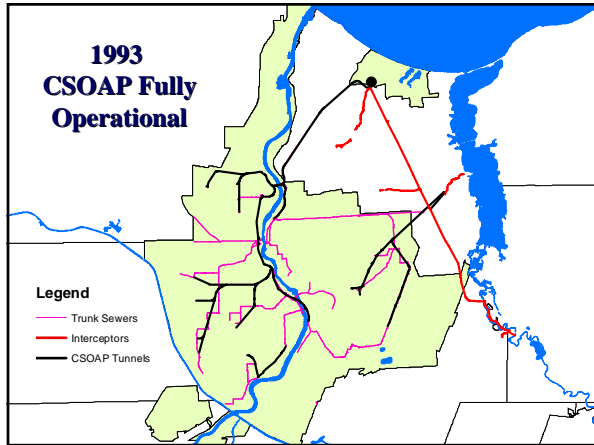
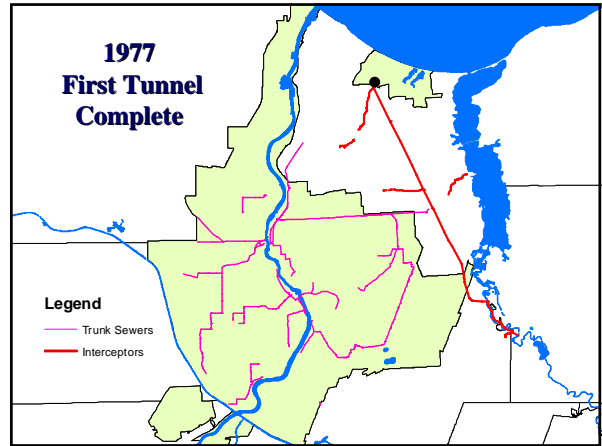
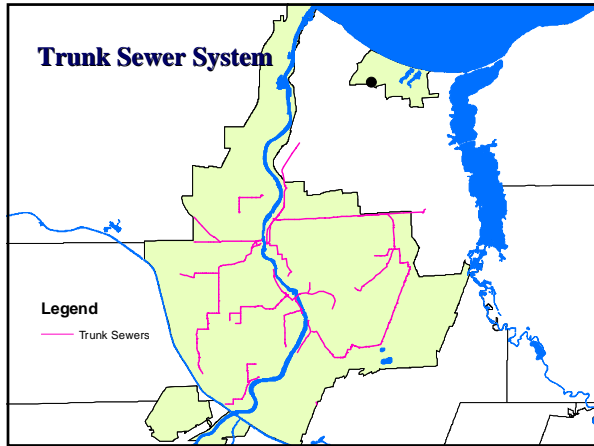


**CSOAP Tunnel Facts**

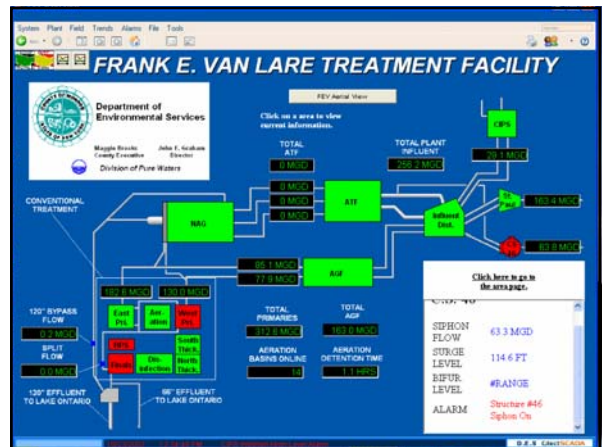
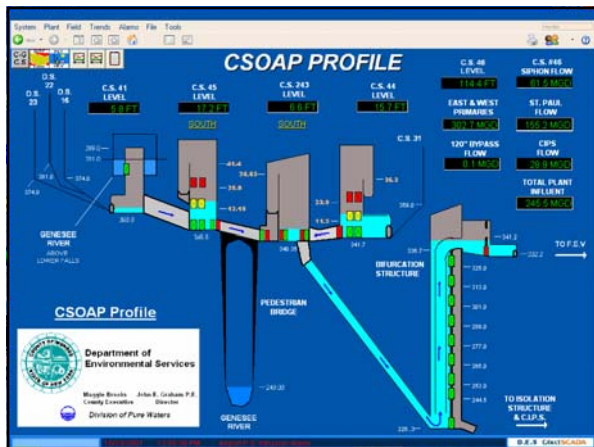


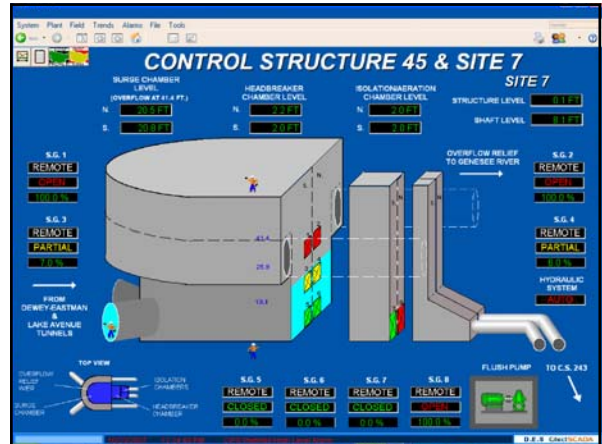
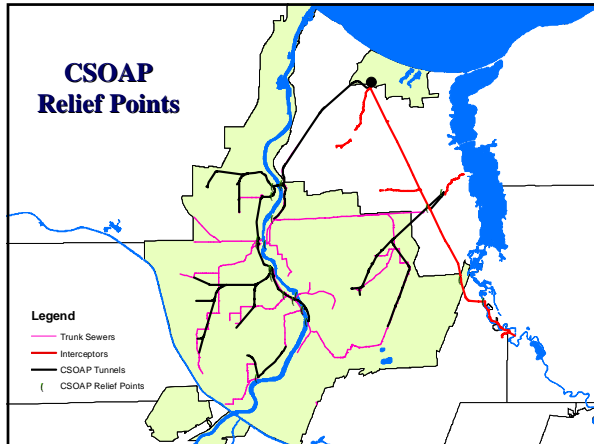
- 12-16' average diameter
- 150 ft deep
- 30 drop shafts
- 34 miles total length
- 175 million gallons storage





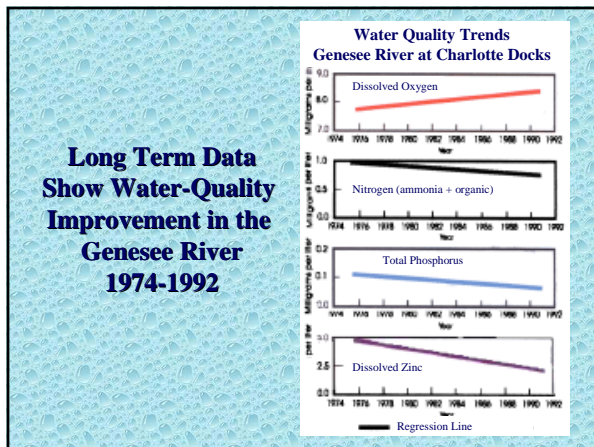
### An Integrated Approach to Wet Weather Management





### CSOAP Success

- Capture & treat approx. 3 billion gallons per year
- 85-90% receives full secondary treatment
- 3-6 excursions per year (6-30 million gallons)
- “First Flush” is captured
- Overflows are short duration, dilute



### USGS Water Resource Investigation Report

#### “Loads and Yields of Selected Constituents In Streams and Rivers of Monroe County” Genesee River 1984-2001

Constituent	Mean Annual Load (Tons)	Trend
Total Phosphorus	347	↓
Orthophosphate*	51	↑
Total Suspended Solids	362,000	↓
Ammonia + Organic N*	1,780	↓
Dissolved Chloride*	134,000	↓

\* Statistically Significant Trend

## Lower Genesee River Today

**Impairments :**     **Public Bathing**  
                           **Fish Consumption**  
                           **Aquatic Life**

**Causes:**         **Nutrients, Priority Organics, Pathogens**

**Sources:**        **Industrial, Municipal, Toxic Cont.**  
                           **Storm Sewers, Urban Runoff**

## Beach Closed

1977

2001



## Today's Stormwater Program

- Education and Outreach**
- Construction Site Regulations**
- Illicit Discharge Detection**
- Municipal Pollution Prevention**

## Source Control & Urban Hotspots

## Making Your Home the Solution to Pollution

**Making a Difference  
and  
Protecting our Resource**



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