

An aerial photograph of the Mattabasset District wastewater treatment plant. The plant features several large circular aeration tanks and rectangular clarifiers. It is situated near a highway and a river. The surrounding landscape includes bare trees, fields, and some residential areas.

THE MATTABASSETT DISTRICT

Arthur Simonian, P.E., Executive Director
Michelle Ryan, P.E., District Engineer

WASTEWATER TREATMENT

**1968 PRIMARY TREATMENT &
MULTI HEARTH INCINERATOR**

**1989 SECONDARY TREATMENT &
FLUIDIZED BED INCINERATOR
(\$30 MIL)**

**2012 NITROGEN UPGRADE AND
INCLUSION OF CITY OF
MIDDLETOWN (\$110 MIL)**



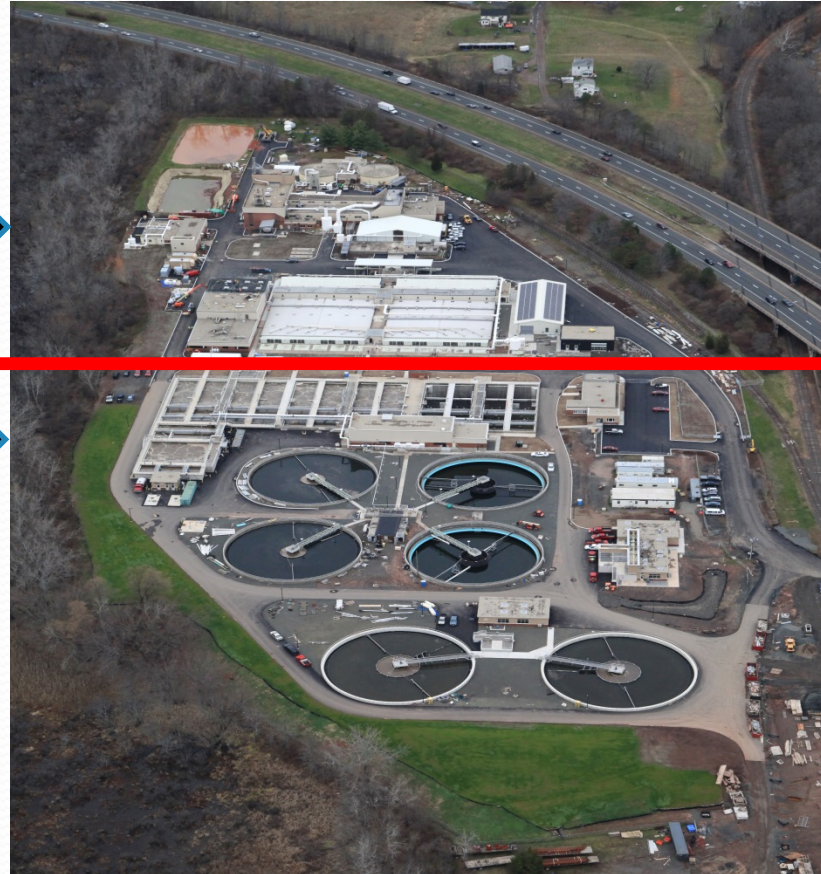
DISTRICT MEMBER & CONTRACTURAL TOWNS

- NEW BRITAIN,
- BERLIN,
- MIDDLETOWN,
- CROMWELL,
- portion of MDC & FARMINGTON
(CONTRACTURAL)



TREATMENT DESIGN

- PRIMARY TREATMENT 35 MGD AVE, **110 MGD** PEAK FLOW
- SECONDARY TREATMENT 55 MGD PEAK FLOW
- WET WEATHER TREATMENT **110 MGD** PEAK FLOW



THE MATTABASSETT DISTRICT

NEW BRITAIN FLOWS

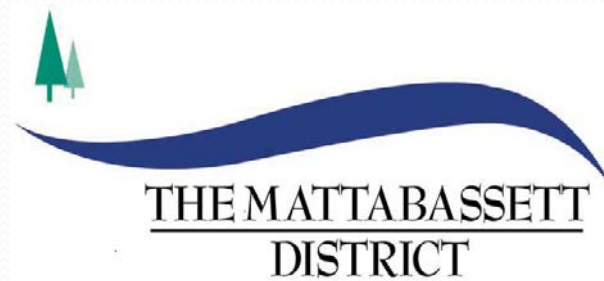
- ACCOUNTS FOR APPROX 62% OF COMMUNITY FLOWS
- RESERVE CAPACITY 46 MGD (TOTAL PEAK FLOW)
WITH 22.5 MGD (SECONDARY TREATMENT)

Resulting in.....

- WET WEATHER SECONDARY EXCEEDANCE
(INFILTRATION AND INFLOW)

DISTRICT BUDGET- NEW BRITAIN'S CONTRIBUTION

- **MAKES UP 40% OF DISTRICT'S BUDGET**
- **MAKES UP 51 % OF ALL ASSESSMENTS
COLLECTED FROM THE MEMBER TOWNS
(\$ 6.1 mil assessment due July 1, 2019)**



Why is Wastewater Treatment Important?

Importance of Clean Water

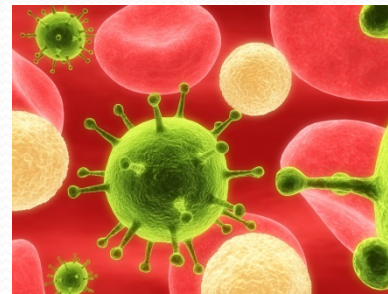
- 70% of Earth's surface is covered by water
- Less than 1% of world's total water supply is usable
- Clean Water is important for human use :
 - Public Health
 - Environment



What is being done to get clean water

Significant advancement in 20th century in Wastewater Treatment resulting in reduction in pollution to our environment:

- Significant decline in water related death and illness
- The United States saw the virtual elimination of waterborne diseases such as typhoid, cholera, and hepatitis A.





- Wastewater Treatment provides our communities with clean waters for rivers and beaches for recreational activity and for fish and animals

HOWEVER.....

- In Connecticut and many other states across the country, these systems are in need of repair or in need of expansion/improvement due to community growth and increasing regulations.

TREATMENT

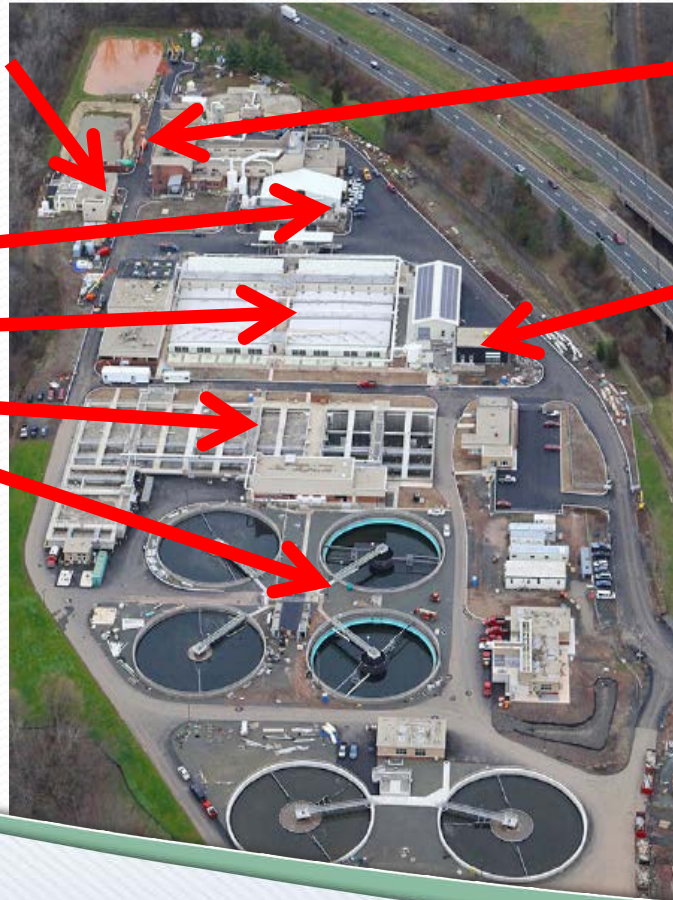
- INFLUENT SCREENING

- GRIT REMOVAL

- PRIMARY SETTLING

- ACTIVATED SLUDGE

- FINAL CLARIFICATION



- SOLIDS HANDLING &
- INCINERATION
- DISINFECTION

THE MATTABASSETT DISTRICT

2012 NITROGEN UPGRADE



THE MATTABASSETT
DISTRICT

THE MATTABASSETT DISTRICT

ADDITIONAL FACILITIES

- ODOR CONTROL SYSTEMS
- UNDERGROUND DIESEL FUEL STORAGE TANKS
- EMERGENCY GENERATORS
- SEPTAGE AND SLUDGE HANDLING FACILITY

FLUDIZED BED INCINERATOR

- MEETS LATEST EPA SSI EMISSIONS REGULATIONS
- AUTOMATED DEWATERING & SLUDGE FEED EQUIPMENT
- INCINERATE SLUDGE, SEPTAGE & GREASE
- INCINERATED ASH IS LANDFILLED



ENERGY EFFICIENCY



60 kW
Solar
Panels



Aeration
Blowers

Waste Heat
Recovery from
Fluidized Bed
Incinerator



THE MATTABASSETT DISTRICT

ENVIRONMENTAL COMPLIANCE



PLANT OPERATES IN COMPLIANCE WITH EPA & CT DEEP PERMITS :

- **WATER DISCHARGE PERMIT**
- **INCINERATOR OPERATING PERMIT**
- **AIR PERMIT**
- **STORMWATER PERMIT**
- **LANDFILL OPERATING PERMIT**
- **UNDERGROUND STORAGE TANK REGULATIONS**

THE MATTABASSETT DISTRICT

PLANT MAINTENANCE & OPERATIONS

- **ADMINISTRATION STAFF - 6**

PLANT MANAGEMENT, PLANNING, BILLING, ENVIRONMENTAL COMPLIANCE

- **OPERATIONS STAFF - 16**

PROCESS EQUIPMENT MONITORING AND OPERATIONS

- **MAINTENANCE STAFF - 9**

EQUIPMENT REPAIR

- **LABORATORY STAFF - 2**

SAMPLING AND REPORTING

WORKER SAFETY

- PLANT STAFF OPERATES IN COMPLIANCE WITH OSHA REQUIREMENTS AND
- EH&S PROGRAMS



THE MATTABASSETT DISTRICT

CONSTRUCTION



THE MATTABASSETT DISTRICT



THE MATTABASSETT DISTRICT

MATTABASSETT DISTRICT

*PROVIDING
CLEAN WATER
AND FOR OVER
50 YEARS*



THE MATTABASSETT DISTRICT