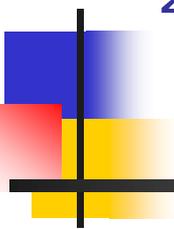


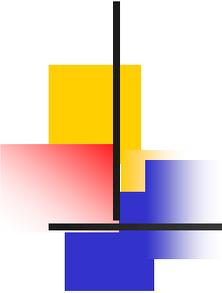
# Town of Bethlehem

## 20/20 Advisory Committee



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Committee Meeting  
May 9, 2008  
Elsmere Fire House, Poplar Drive  
7:30 – 9:15 a.m.



# Agenda

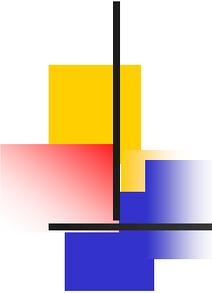
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1. Co-Chair Report – Terri Egan and Ken Ringler
  - April 11, 2008 Meeting record
  - Executive Summary, Facilities Needs Analysis
  - Action Items Update
  - Discussion Board Update
  - Commission on Local Government Efficiencies
  - Revised Schedule
2. Infrastructure Overview – Gregg Sagendorph, Highway Dept.; Josh Cansler, Department of Public Works; Erik Deyoe, Town Engineer
3. Open Discussion
4. Next Meeting: Friday, June 13, 2008

Town of Bethlehem

**HIGHWAY and SANITATION DEPARTMENTS**

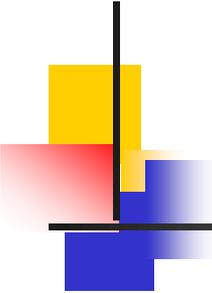




# Highway Infrastructure

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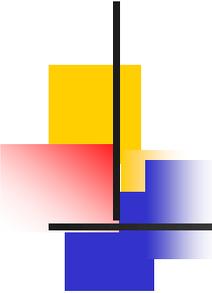
- 175 miles of roads
- 41 miles of sidewalks and paths
- Municipal parking lots
- Storm water pipelines and facilities
- 155 cul-de-sacs, medians, parks etc.
- Over 130 vehicles and equipment



# Sanitation Infrastructure

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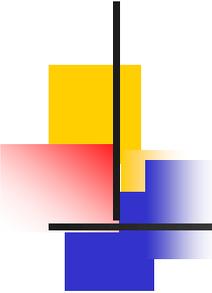
- Rupert Road Transfer Station
- Rupert Road Construction and Demolition Landfill
- Route 32 Compost Facility



# Personnel

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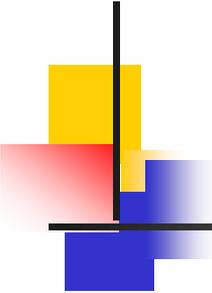
- 56 Highway
- 4 Highway Administration
- 3.5 Sanitation
- 1 Signs and Signals



# Seasonal Staffing Levels

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- Winter: need 57 employees to send out 29 plows
- Spring & Fall: add 8-10 temp agency laborers
- Summer: add 12-14 college students



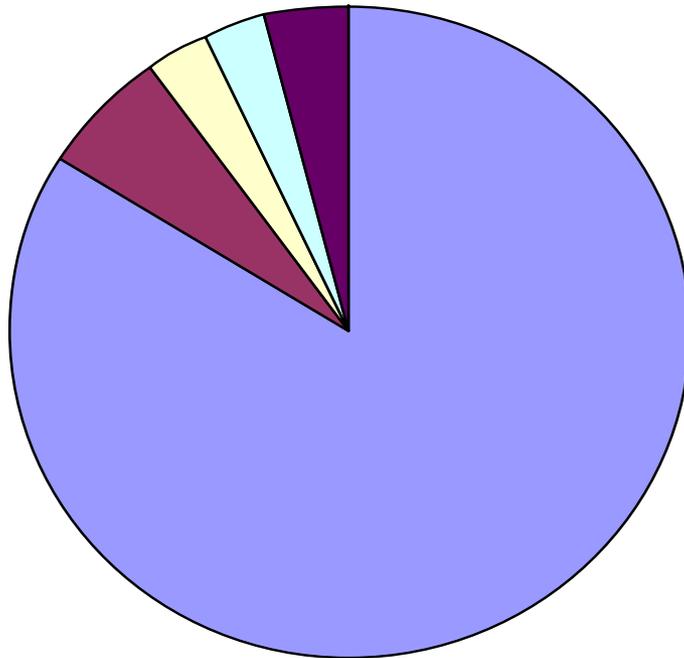
# Budgets

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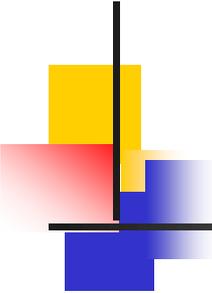
■ Highway	6.5 million	Highway Fund
■ Sanitation	1.3 million	General Fund
■ Highway Admin & Highway Garage	0.5 million	General Fund
■ Signs & Signals & Community Beautification	<u>0.2 million</u>	General Fund
Total	8.5 million	

# Funding Sources

## Highway Revenues



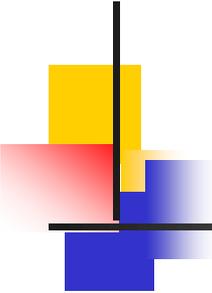
- 84% Property Taxes and Pilot payments
- 6% Interfund Reimbursement
- 3% CHIPS (State Funding)
- 3% Interest
- 4% Miscellaneous and fund balance



# Highway Tax Rate

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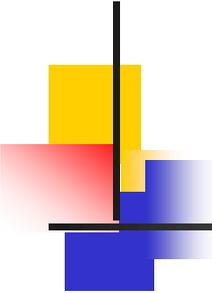
<u>Year</u>	<u>Tax Levy</u>	<u>% Raise</u>	<u>Tax Rate</u>
■ 2006	3,590,000	4.7	1.897410
■ 2007	3,744,000	4.2	1.205352 (Revaluation)
■ 2008	3,889,000	3.8	1.242912



# Cost of Doing Business

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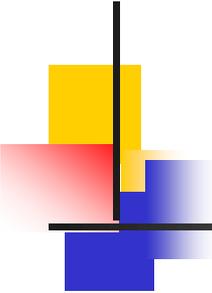
- Cost of New Trucks Up 15% Per Year
- Cost of Blacktop Up 12% Per Year
- Cost of Deicing Salt Up 18% Per Year
- Cost of Unleaded Gas Up 48% Per Year
- Cost of Diesel Fuel Up 90% Per Year



# Sanitation Services

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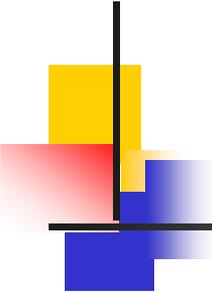
- Operation of transfer station and C&D landfill
- Operation of compost facility
- Sale of biodegradable lawn bags
- Sponsor of Household Hazardous Waste Collection Day
- Sponsor of Computer & Electronics Collection Day



# Highway Services

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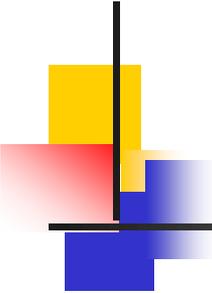
- Ice and snow control
  - Snowplowing
  - Salting and sanding
  - Snow removal
  - Repairs to lawns, mailboxes, driveways



# Highway Services

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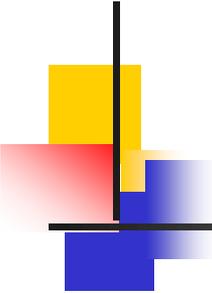
- Brush collection
  - Spring clean-up
  - Summer yard waste pickup
  - Fall leaf collection services



# Highway Services

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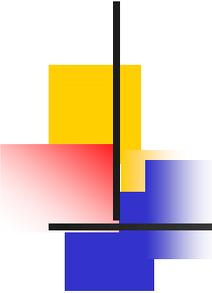
- Street and sidewalk maintenance
  - Repaving existing roads and walks
  - Patching and minor repairs
  - Total reconstruction of existing facilities
  - Construction of new facilities
  - Shoulder and edge of pavement repairs



# Highway Services

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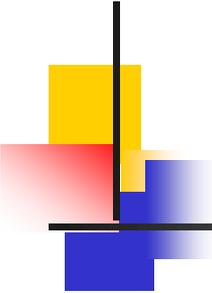
- Storm sewer maintenance
  - Routine cleaning and maintenance of pipelines
  - Installation of new facilities
  - Correct existing drainage problems
  - Maintain new storm water treatment facilities



# Highway Services

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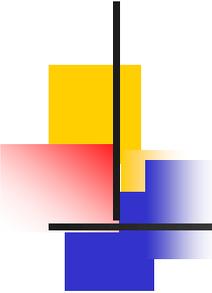
- Mowing and community beautification
  - Roadside mowing along all rural town roads
  - Mowing of 195 Cul-de-sacs, medians, parks, etc. (Some DPW)
  - Plant and maintain numerous gardens and flower beds
  - Maintain Flags and Flowers program
  - Holiday decorations and community events



# Highway Services

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- Fleet maintenance
  - Service and repair entire town fleet over 320 vehicles
  - Purchase new vehicles and equipment
  - Maintain parts inventory
  - Manage fleet fueling system



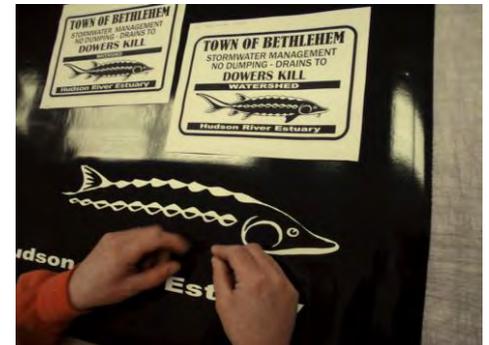
# Highway Services

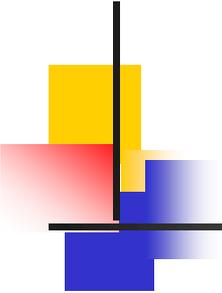
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- Highway Administration
  - Work Orders
  - Inventory
  - Payroll
  - Accounts Payable
  - Accounts Receivable and Cash Receipts
  - Fleet Management

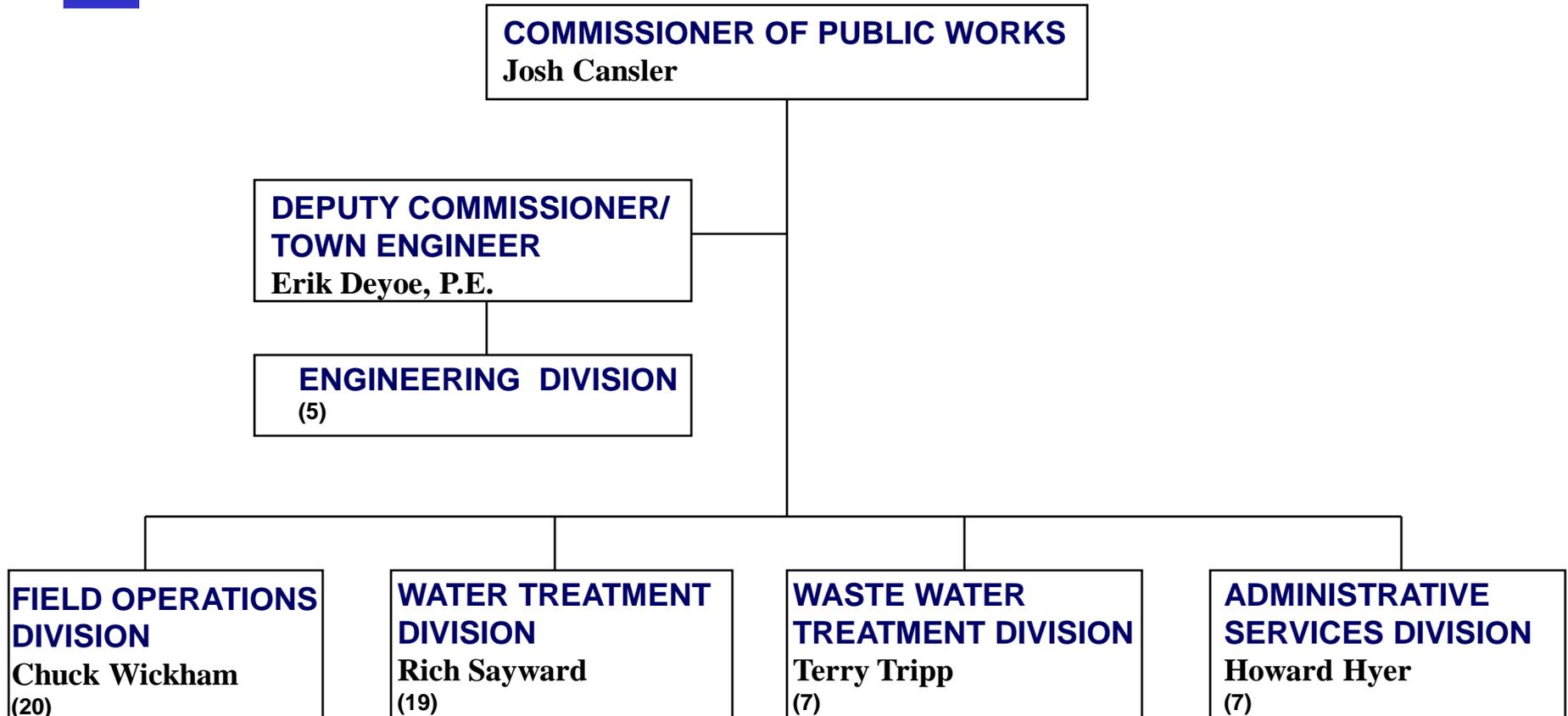
# Highway Services

- Signs and signals
  - Maintain signage throughout town
  - Sign production shop
  - Striping of crosswalks and parking lots
  - Pedestrian and traffic safety

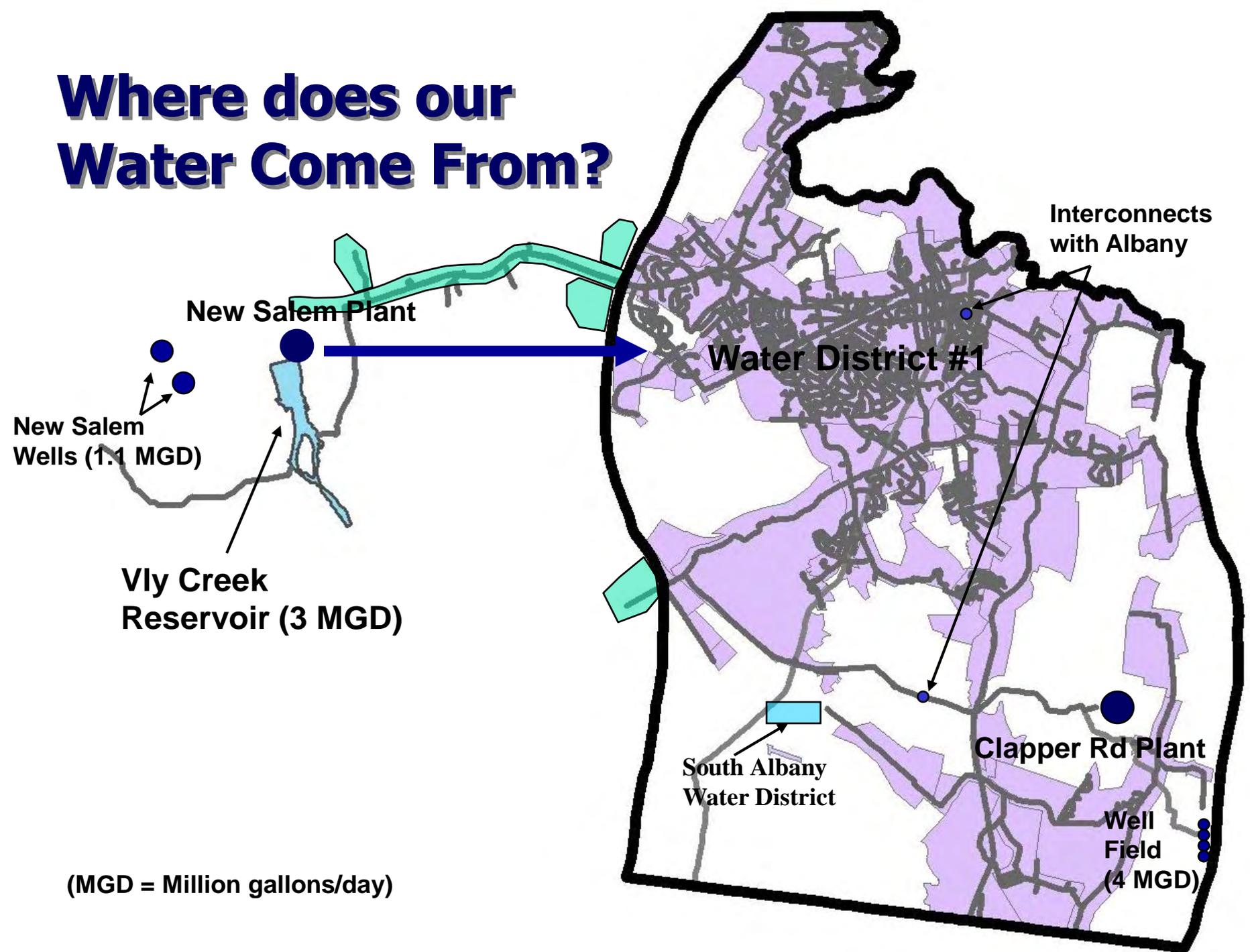




# DPW Organization Chart



# Where does our Water Come From?



(MGD = Million gallons/day)

# Vly Creek Reservoir

- **Vly and Onesquethaw Creeks (1957)**
- **1.1 Billion Gallons**
- **3 MGD Yield**



# New Salem Plant

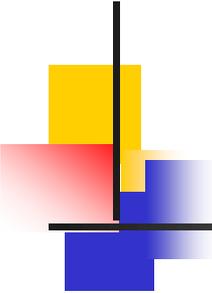
- **5 MGD Production**
- **Completed in 1958**
- **Last Renovated in 1972**
- **Past Useful Life**
- **Primarily Residential & Commercial Consumers**



# Clapper Road Plant

- **6 MGD Capacity**
- **Completed in 1994**
- **Well System (4 MGD)**
- **Industrial Consumers**



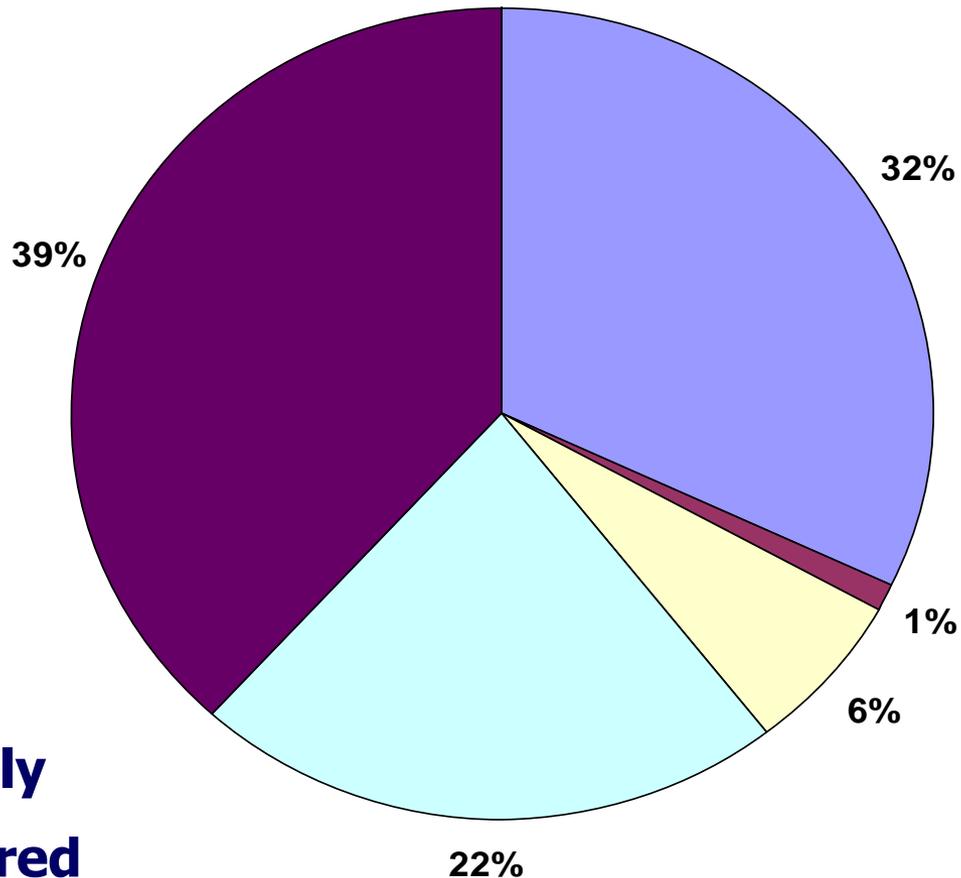


# Water Agreements

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- **Albany**
  - Purchase Finished Water
  - 20 years (2004-2023)
  - Minimum take or pay, increases every 5<sup>th</sup> year
  - Rate increases based on residential rate increases
- **Guilderland**
  - Emergency Water Supply
- **New Scotland**
  - Mandated to provide water service to anyone 150' of main.
  - Four special water districts
- **Selkirk Cogen**
  - 20 years (started 1995)
  - Minimum take or pay

# Water Consumption



**Approximately  
11,130 metered  
water customers.**

# Water Storage Tanks

## **Kenwood Avenue Tank – 1928**

250,000 Gallons



# Water Storage Tanks

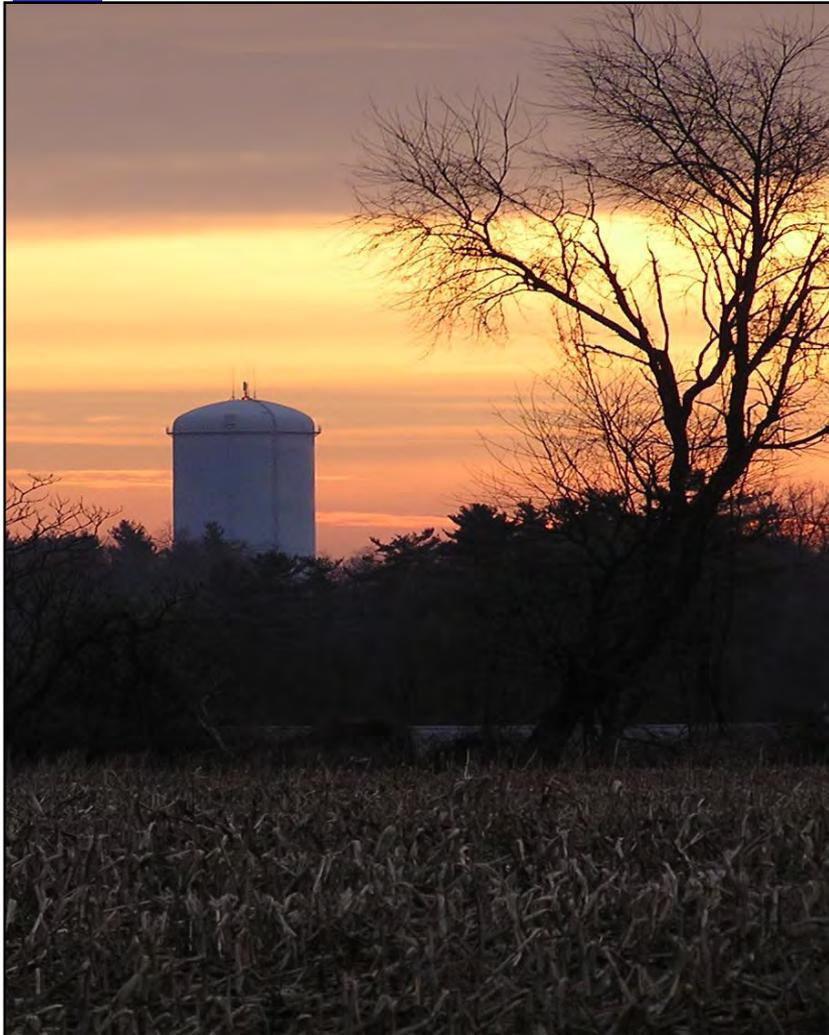


## **Thatcher Street Tank – 1964**

200,000 Gallons  
8 leaks in 8 years!



# Water Storage Tanks

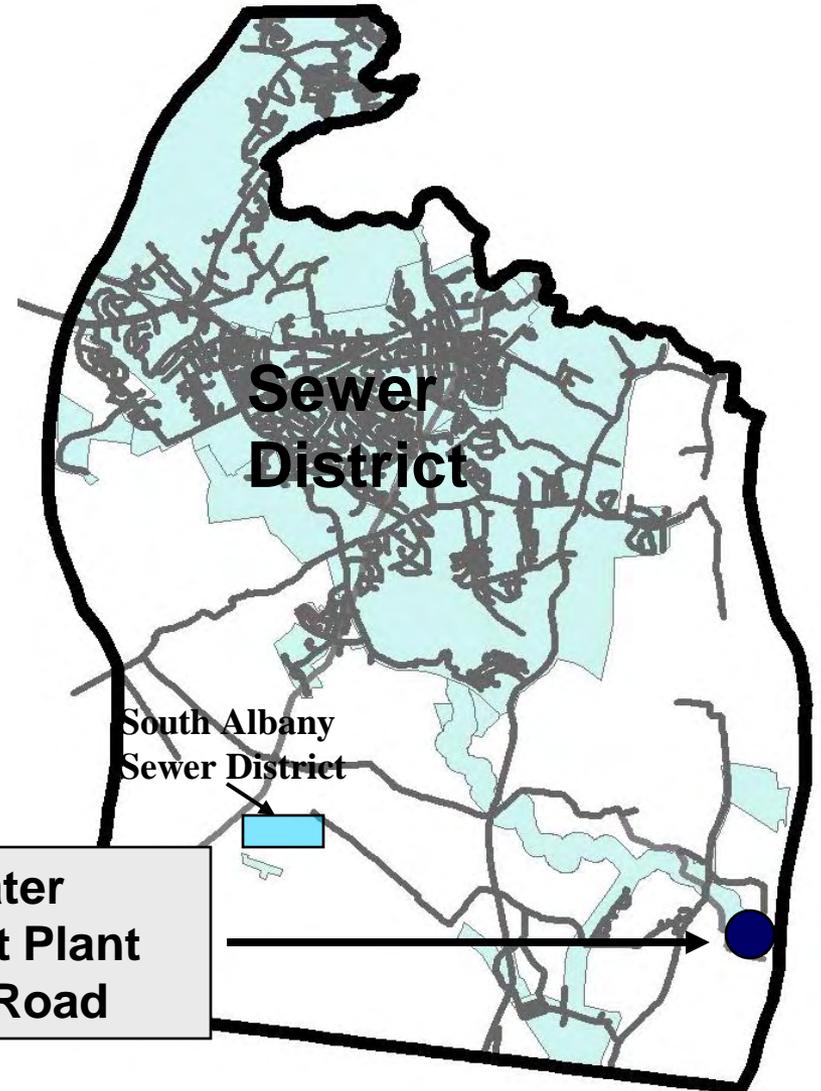


- **Elm Avenue Tank – 1979**  
(3 million gallons)
- **Park Tank – 1984**  
(4 Million gallons)
- **New Scotland Road – 1984**  
(5.75 million gallons)
- **New Salem Tank – 1957**  
(20,000 gallons)
- **New Salem WTP Tank – 1969**  
(100,000 gallons)
- **Clapper Road WTP Tank – 1994**  
(125,000 gallons)

# Where does our "Water" Go?



**Waste Water  
Treatment Plant  
Dinmore Road**

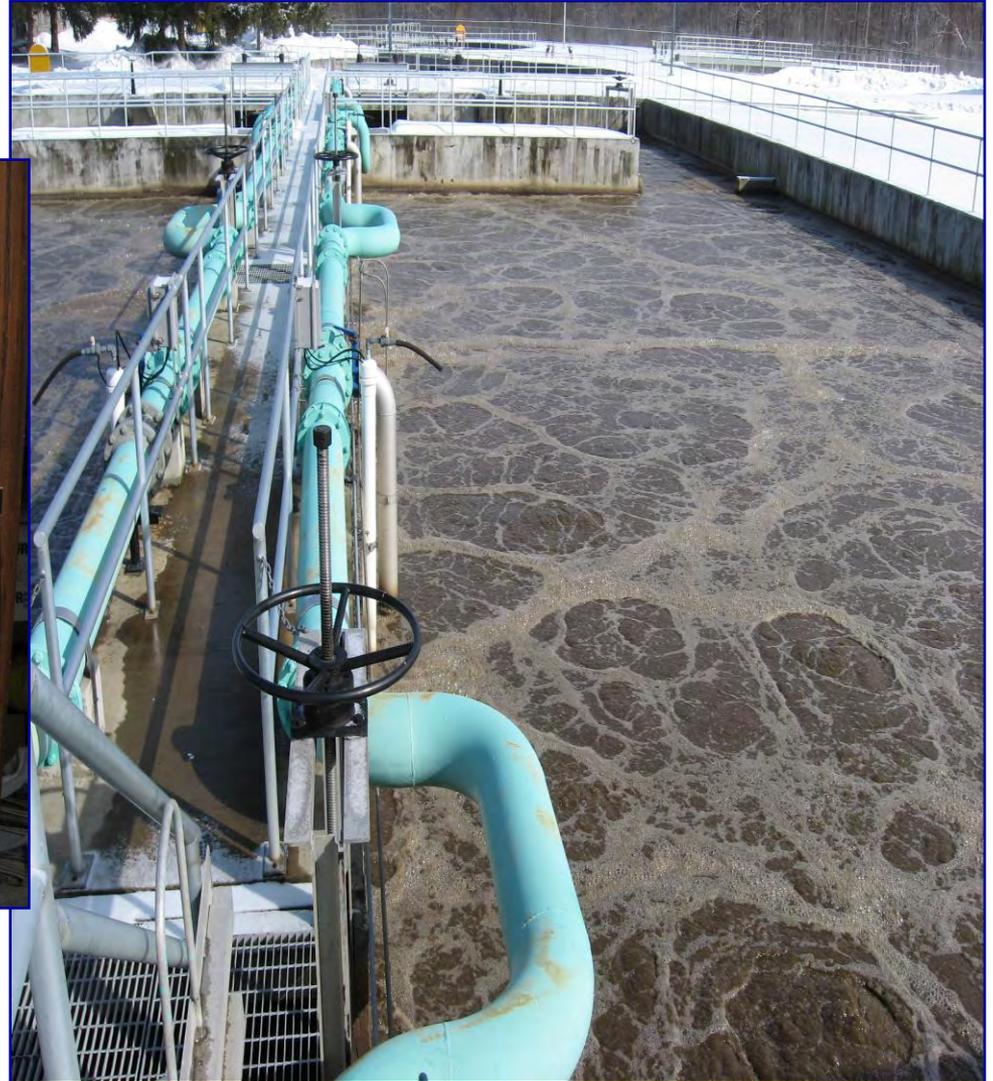


# Waste Water Treatment Plant



- **Permitted for 5.9 MGD**
- **Built in 1974**
- **Last Significant Upgrade in 1994**

# Waste Water Treatment Plant



# Water/Sewer Mains

**Water Mains  
- 190 miles**

**Sewer Mains  
- 160 miles**



# Water/Sewer Mains



# Water/Sewer Mains



**Brockley Drive  
January 4, 2007**

# Water/Sewer Mains

**Henry Drive – 4" hole in 16" main**

August 5, 2004



# Water/Sewer Mains



**Hole in 10" main on  
New Scotland Rd.**

# Water/Sewer Mains



**48 Kenwood Ave.**

April 21, 2006

# Water/Sewer Mains



**Thanksgiving Day 2006**

At the corner of Delaware Avenue  
& Groesbeck Place.

# Water/Sewer Mains



**Vlomankill @ 1049 River Road (Route 144)  
November 5, 2007**

# Water/Sewer Mains

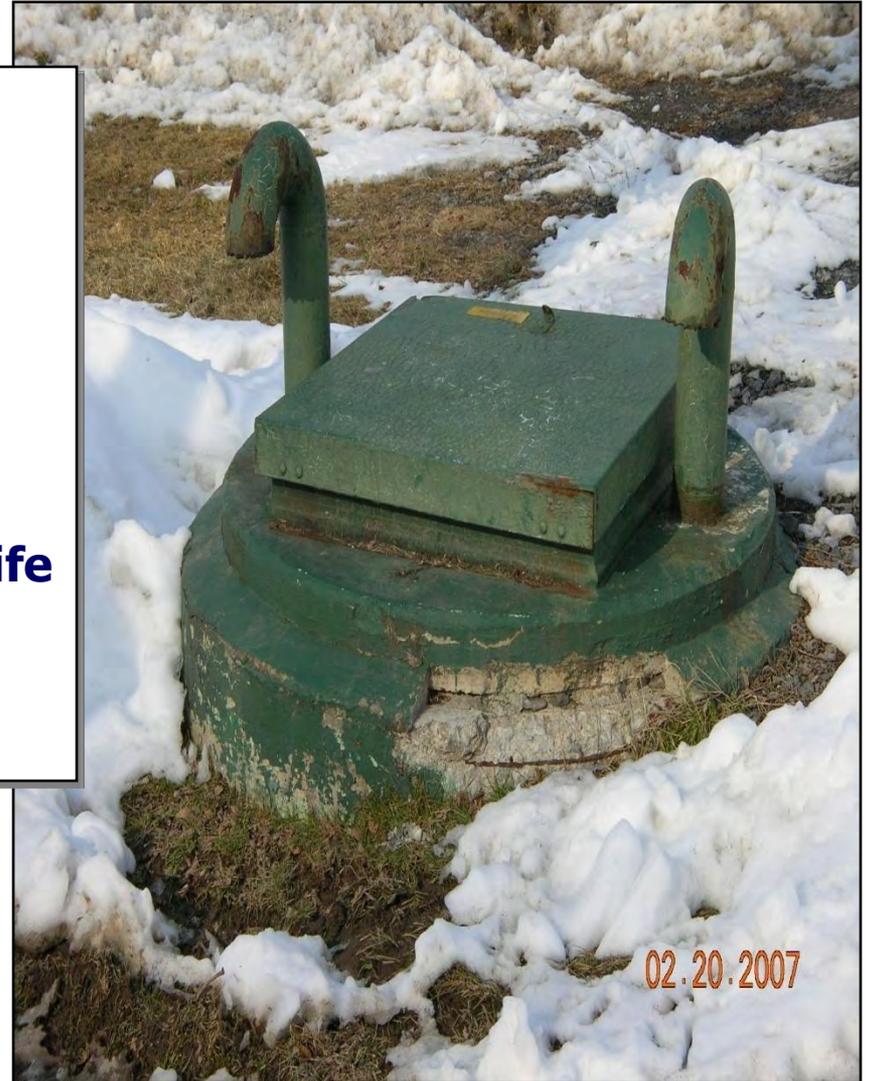


**Glenmont Road  
at entrance to K-Mart**  
November 6, 2006

**350 miles total -  
Replace on average  
less than 1 mile/year!**

# Sewer Pump Stations

- **37 Stations**
- **20 to 30 Equipment Life Expectancy**
- **Range in age from 2 to 70 years old**
  - **18 Stations Beyond Design Life**
  - **11 Stations Near End of Design Life**
- **21 stations require confined space entry**



# Sewer Pump Stations



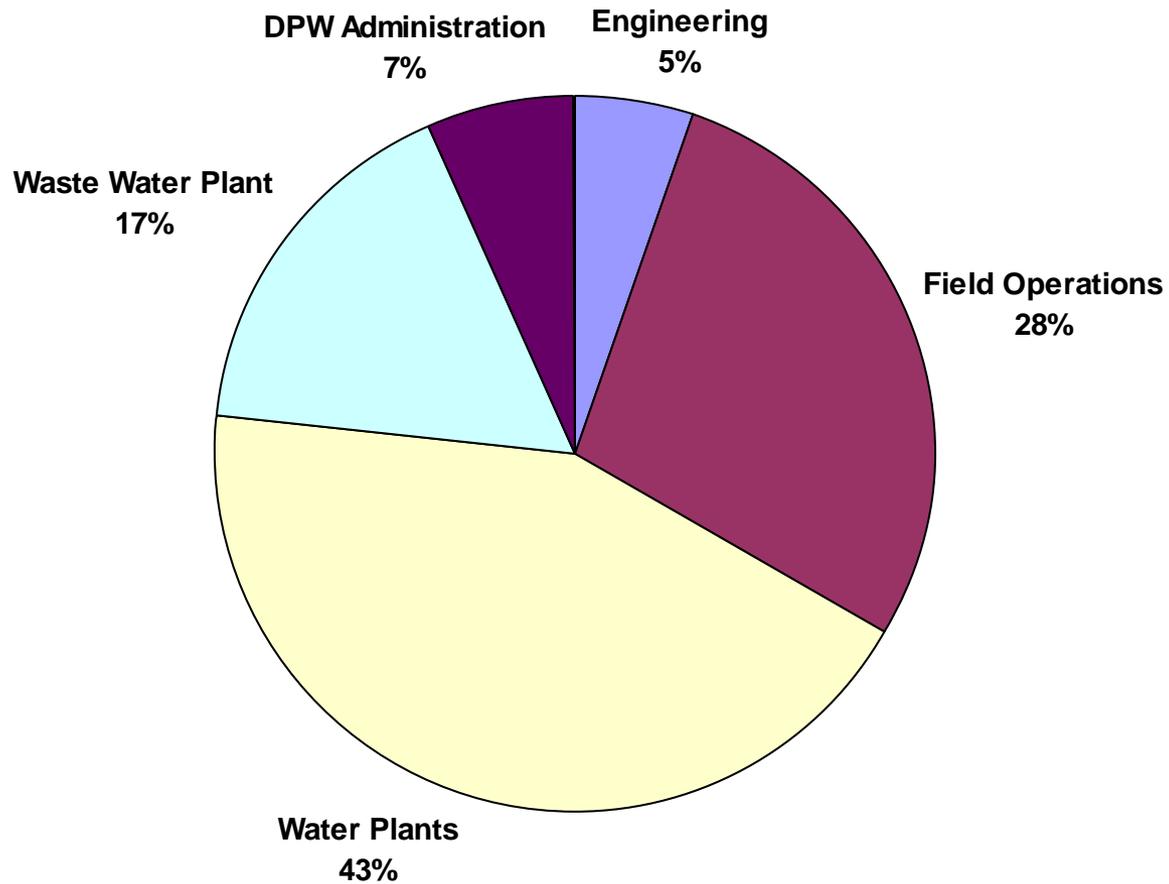
**Old Sewer Pump Station  
Delaware Avenue**

# Sewer Pump Stations

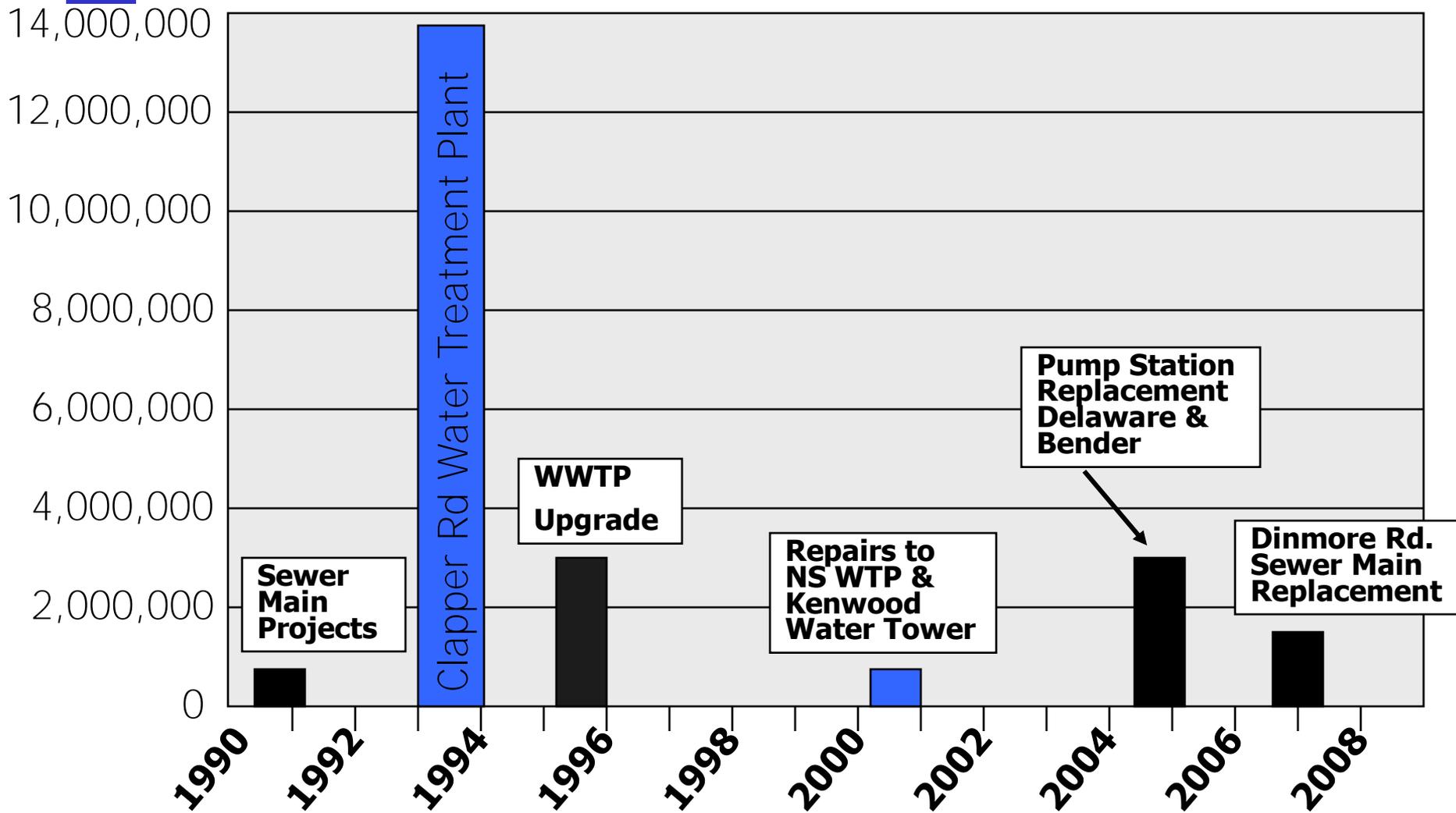


**New Sewer Pump Station  
Delaware Avenue**

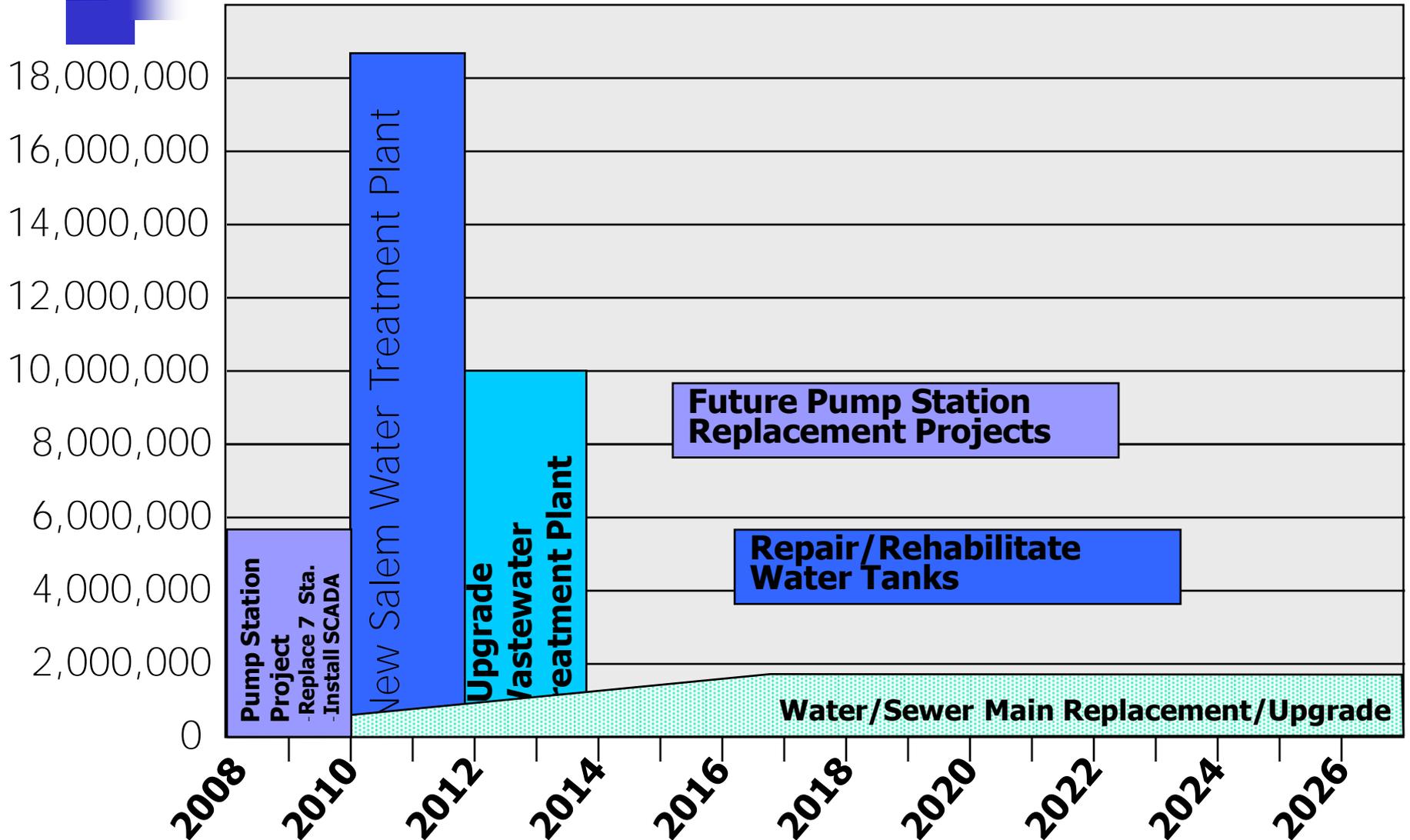
# DPW Budget



# Capital Program Expenditures on Utility Infrastructure since 1990



# Anticipated Capital Program Expenditures - Utility Infrastructure



**Pump Station Project**  
- Replace 7 Sta.  
- Install SCADA

**New Salem Water Treatment Plant**

**Upgrade Wastewater Treatment Plant**

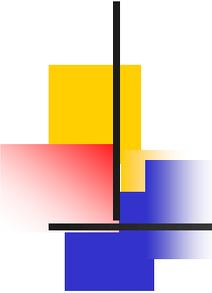
**Future Pump Station Replacement Projects**

**Repair/Rehabilitate Water Tanks**

**Water/Sewer Main Replacement/Upgrade**

# Equipment





# Regulatory Impacts

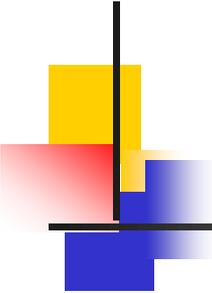
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## Water Treatment Plant

- **Raw Water Supply:** EPA mandated 2 year monitoring program for Bacteria and Cryptosporidium (Estimated Cost: \$20,000)
- **Finished Water Supply:**
  - Complete EPA approved Monitoring Program for Chlorination byproducts and address deficiencies by Jan 2009
  - Implement and construct WTP and distribution system upgrades by the 2012. (Estimated Cost: depends on monitoring results)
- **Dam Safety:** New NYS DEC regulations due out in 2008. (Cost initially \$250,000; annually \$25,000)

## Waste Water Treatment Plant

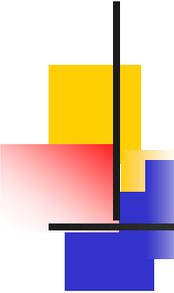
- **Increased Sampling Requirements (\$10,000 annually)**
- **Chlorination of effluent during summer months starting 2009 (\$15,000 annually).**



# Infrastructure Summary

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- **Major Upgrade or Replacements Needed for:**
  - **New Salem Water Treatment Plants**
  - **Waste Water Treatment Plant**
  - **35 Sewer Pump Stations**
  
- **Need to Establish Budget for Continuous Maintenance/Replacement Program for:**
  - **350 miles of water system pipeline**
  - **Water Storage Tanks**
  - **Well Systems (14 wells total)**
  
- **Resolve Long-term Water Supply Issue**

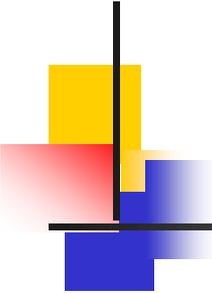


# Administrative Services Division

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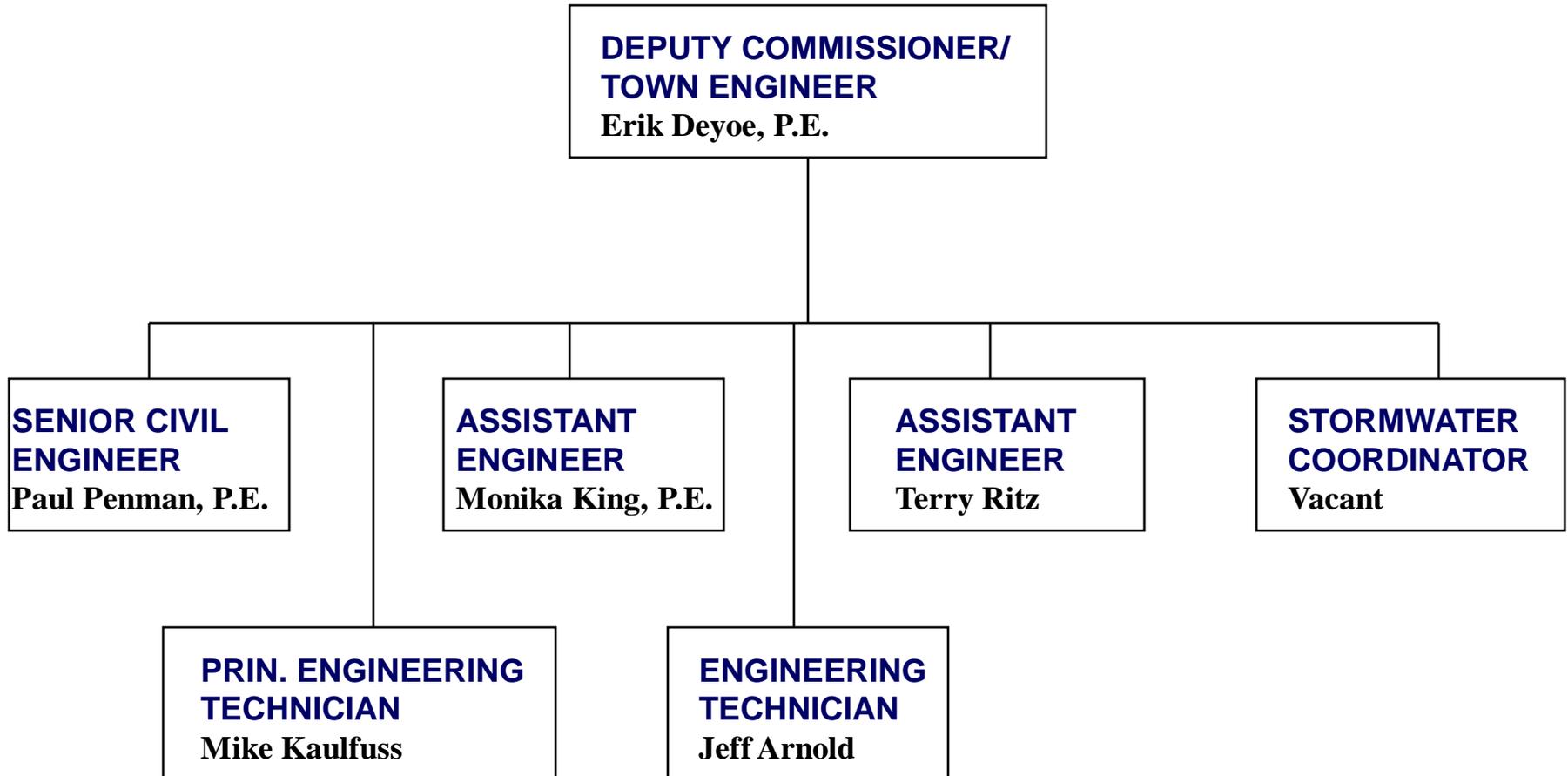
## **Administrative and Customer Services**

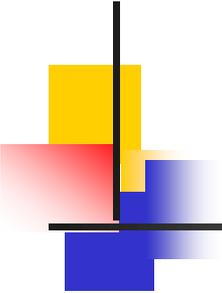
- Partially Consolidated w/ Highway Dept. in 2007
- 7 FTE Employees
- Operate Town's Call Center
- Water & Sewer Billing & Customer Service
- Administrative Support for DPW & Engineering
- Scheduling Water/Sewer Service Visits
- Fleet Management
- DPW Purchasing & Work Orders



# Engineering Division

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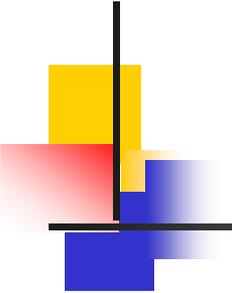


# Engineering Division

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## Engineering Services

- Capital Project Planning & Project Management
  - *Technical leadership in managing CIP*
  - *Assemble and manage project team*
  - *Lead long-term planning initiatives in water & sewer*
  - *Coordinate with Boards & regulators*
  - *Coordinate land acquisitions, SEQR, and permitting*
  - *Manage budget, scope, and schedule*
  - *Seek outside funding*
- Land Use Review & Development
  - *Planning Board – site plans, subdivisions, etc.*
  - *Building Dept. – building permits, grading, erosion & sediment controls*
  - *Review for compliance with Town standards, constructability, consistency with adopt Town policy and plans, conformance with state and federal regs.*

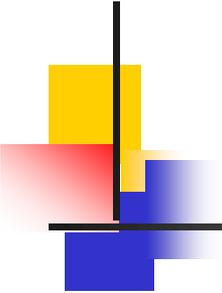


# Engineering Division

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## Engineering Services

- Storm water Management Program
  - *Compliance with Phase II regulations and DEC permit*
  - *Review storm water management plans*
  - *Enforcement – construction and illicit discharges to storm sewer*
  - *Inspection – operating treatment systems, construction*
  - *Improve Town work practices that affect storm water quality*
  - *Town staff training & public education*
- Geographic Information Systems (GIS)
  - *Assist MIS to implement decision-support & analysis tool*
  - *Field location of existing infrastructure*
  - *Input mapping and infrastructure data*
  - *Update with land development project completion*

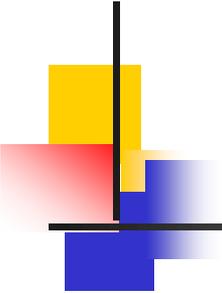


# Engineering Division

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## Engineering Services

- Inspection
  - *New public infrastructure and connections to existing*
  - *Issue ROW work permits*
  - *Coordination with contractors, outside agencies, & contractors*
  - *Administer and track performance bonds and surety*
- Miscellany
  - *FOIL*
  - *Infrastructure data to residents and professionals (realtors, surveyors, engineers, etc.)*
  - *Drainage complaints*
  - *ROW delineation*

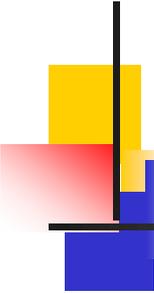


# Engineering Division

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## Some Current Capital Projects...

- DPW
  - *Pump Station Replacements, Sewer Main Improvements & SCADA Implementation (\$ 5.2 M)*
  - *New Salem WTP Upgrades (TBD >\$ 17M)*
  - *Aeration Improvements at WWTP (\$ 0.5 M)*
  - *Dinmore Road WWTP Master Planning Study (TBD > \$ 0.05 M)*
  - *Clapper Road WTP Generator Replacement (\$ 0.35 M)*
  - *South Albany Sewer District Sand Filter Replacement (\$ 0.45 M)*
  - *New Salem Well Facility Improvements (\$ 0.5 M)*
  - *Long-range water supply studies (\$ 0.1 M)*
- Parks & Recreation
  - *Elm Ave. Park Pool Filter Replacement (\$ 0.4 M)*
  - *Shoreline stabilization study at Henry Hudson Park (\$ 0.04 M)*
  - *Fishing Platform at Henry Hudson Park (\$ 0.1 M)*

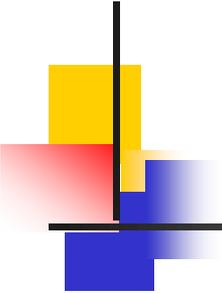


# Engineering Division

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## Some Current Capital Projects...

- Sidewalks & Highway
  - *Weisheit Road Realignment (\$ 0.20 M)*
  - *Delaware Ave. Sidewalk & Turn Lane (\$ 0.85 M)*
  - *Maple Ave. sidewalk (\$ 0.35 M)*
  - *Elsmere Ave. & Feura Bush Road sidewalk (\$ 0.35 M)*
  - *Future sidewalks (grants applied):*
    - *Feura Bush Road – Wemple to Colonial Acres (\$ 0.21 M)*
    - *Orchard St. – Cherry to Crestwood (\$ 0.28 M)*
- Others
  - *Fire Tower Rehabilitation (\$ 0.15 M)*

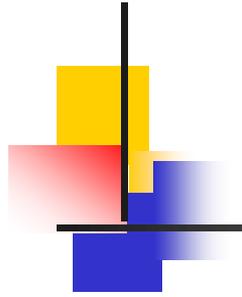


# Engineering Division

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## Future Engineering Challenges

- Storm water Management Program
  - *Increasing regulatory responsibilities – inspection & enforcement*
- Long backlog of deferred capital investment
  - *Potential staffing shortfalls for project management*
  - *Funding*
  - *Project Timing*
- Balancing Priorities of Capital Projects
  - *Between Departments*
  - *Against Supporting Other Town Depts.*
- Limited Condition Information on Underground Infrastructure
  - *Hampers decision-making & prioritization*
  - *Right Project in the Right Location at the Right Time – Saves \$\$*



*Thank you!*

May 9, 2008 Committee Meeting