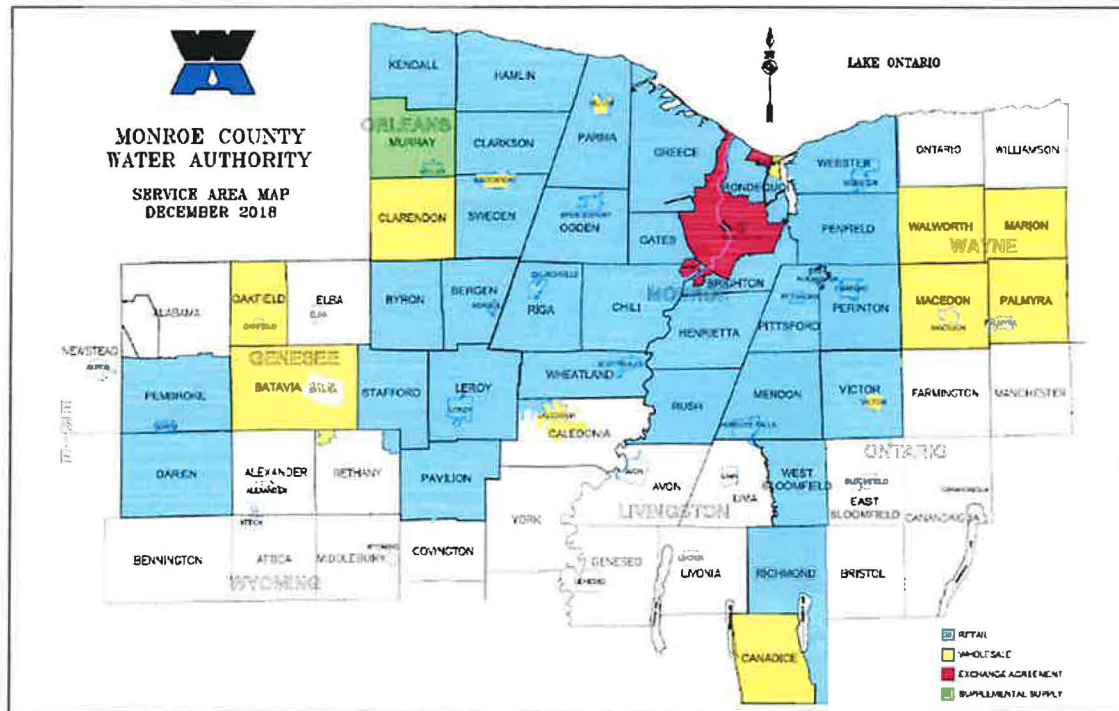


# OPERATIONS OF THE MONROE COUNTY WATER AUTHORITY

## BACKGROUND

The Monroe County Water Authority (the "Authority") services Monroe County and portions of each of the five surrounding counties. Our service area includes over 50 towns, villages, cities, and other water authorities. The Authority presently serves approximately 200,000 separate retail, wholesale, and other customer accounts. It also provides the City of Rochester with up to 26 million gallons per day (mgd) for distribution within its retail service area.



The Authority currently sets rates at levels sufficient to pay debt service on outstanding Authority obligations, to pay operating and maintenance expenses, and to make payments to the County under the existing lease and financing agreement between the Authority and the County.

## WATER SUPPLY

The Authority's primary source of water is Lake Ontario. The water is treated at the Shoremont Water Treatment Plant (WTP) in the Town of Greece, and the 50 mgd Webster WTP in the Town of Webster. The Authority's other major source of water consists of water purchases from the City of Rochester pursuant to an existing exchange agreement. This water comes from Hemlock and Canadice Lakes in Livingston County south of Monroe County.

The Authority can also purchase water from the Town of Ontario, Wayne County; the City of Batavia, Genesee County; and the Erie County Water Authority. These sources are minor in relation to the overall water system and are for our convenience or pursuant to terms of agreements when the Authority became the provider of water.

The Authority provides water on a retail or wholesale basis. In retail areas the Authority supplies the water, maintains the distribution system, and bills the customer directly. In wholesale areas, a municipality or water district buys some or all of its water from the Authority, but maintains its own distribution and customer billing systems.

## **FACILITIES**

The Shoremont and Webster Water Treatment Plants employ the direct filtration process using Lake Ontario as their source of supply. The main components of each plant are the raw water intake, pumping and transmission, chemical addition, rapid mixing, contact basins, filtration, residuals disposal, clearwell storage, and high lift pumping. The Authority also operates a small well supply to a plant in the Village of Corfu. With the exception of the Corfu plant, the entire water supply receives the same chemical process, coagulation, filtration, carbon absorption, and disinfection. The Corfu Water Plant uses carbon absorption, softening, and disinfection. Water is pumped from the treatment plants to storage facilities and customers in the water system service area through approximately 3,400 miles of transmission and distribution mains, ranging in diameter from 2-inch to 60-inch. The water system operates 48 pumping stations to provide the pressure to distribute water to storage facilities and customers. The system includes two reservoirs and 55 other storage facilities with an aggregate capacity of 140 million gallons. All service connections are metered, with the meters owned by the Authority.

As with most other water systems, our water usage also varies year to year depending on weather variations. Hot, dry summers tend to increase water usage, while colder and wetter summers tend to dampen or reduce water usage.

## **FINANCIAL HIGHLIGHTS**

Water Authority Rates & Charges – The Authority sets its rates annually in concurrence with the adoption of its annual operating budget. The Authority is required by its Trust Indenture dated October 1, 1991 and Supplemental Indentures issued with and specific to each subsequent revenue bond issue (Trust Indentures) to set rates and fees sufficient to cover all its operating and capital expenses. The Authority raised rates in 2021 to achieve the projected revenues to cover total budgeted expenses.

### **Summary of Operating Revenues**

	<b><u>2021</u></b>
Water Sales:	
Residential/Quarterly	\$63,986,170
Large Commercial/Monthly	6,855,080
Water Districts/Wholesale	4,728,140
Total Water Sales	\$75,569,390
Other Water and Operating Revenue	5,332,291
Total Operating Revenue	\$80,901,681

## **OPERATING EXPENSES**

The Authority's expenses (excluding depreciation and amortization) are budgeted and tracked functionally by operating department. The Authority is functionally divided into: Administration; Production/Transmission; Engineering; Facilities, Fleet & Operations; and Finance & Business Services.

The following is a breakdown of the Authority's functional expenses by operating department (excluding depreciation and amortization):

### **Functional Expenses**

	<b>2021</b>
Administration	\$10,440,996
Production/Transmission	13,839,409
Engineering	3,534,341
Facilities, Fleet & Operations	13,398,153
Finance & Business Services	7,415,505
Total Functional Expenses	<u>\$48,628,404</u>

## **LONG-TERM DEBT ADMINISTRATION**

The Authority has six water revenue bond series outstanding totaling \$139,550,000 as of December 31, 2021.

## **CREDIT RATINGS**

The Authority is the recipient of very favorable credit ratings from both Moody's and Standard & Poor's. The Authority has an Aa1 rating assigned to its revenue bonds by Moody's Investors Service and an AA+ rating by Standard & Poor's. The Authority's bond ratings were last reviewed by Moody's Investors Service and Standard & Poor's in March of 2020. The Authority issues revenue bonds subject to its master Trust Indenture dated October 1, 1991 and Supplemental Indentures issued with and specific to each subsequent revenue bond issue.



**Monroe County Water Authority**  
**2021 Water System Accomplishments / Projects**

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Below is a summary of improvements made to the Monroe County Water Authority (MCWA) water system in 2021. This list includes both completed and ongoing projects, but does not include all bids and procurements completed.

**Water Mains**

- ✓ Completed the design, bid and substantially completed the construction of the Salt Road Water Main Replacement project. This project consisted of the replacement of approximately 10,160 linear feet of 8-inch water main and appurtenances on Salt Road from Schlegel Road to Lake Road in the Town of Webster.
- ✓ Completed the design, permitting, and bid the Trabold Road Main Replacement project. This project consists of the replacement of approximately 1,300 linear feet of 8-inch and 1,700 linear feet of 12-inch water main on Trabold Road in the Town of Gates. The work for this project is scheduled to commence in 2022.
- ✓ Completed the design, permitting and bid the River Meadow Drive Water Main Replacement project. This project consists of the replacement of approximately 4,200 linear feet of 6-inch water main and appurtenances on River Meadow Drive and Hazel Street in the Town of Henrietta. Work for this project is scheduled to commence in 2022.
- ✓ Completed the design, permitting and bid the Long Pond Road Water Main Replacement project. This project consists of the replacement of approximately 2,280 linear feet of 8-inch and approximately 3,400 linear feet of 12-inch water main and appurtenances on Long Pond Road between Kentucky Crossing and Jay Vee Lane in the Town of Greece. Work for this project is scheduled to commence in 2022.
- ✓ Designed and permitted the Van Voorhis Road and Mendon Ionia Road Water Main Replacement Project. This project consists of the replacement of approximately 4,580 linear feet of 8-inch water main and appurtenances on Van Voorhis Road in the Town of Pittsford and approximately 1,000 linear feet of 8-inch water main and appurtenances on Mendon Ionia Road in the Town of Mendon.
- ✓ Completed the design, permitting and constructed with a hybrid of staffing, materials, and equipment, the following water main replacement projects:
  - Deming St., Town of Greece 145 LF 6-inch
  - Eaglehead Point, Town of Perinton 210 LF 6-inch
  - Chamberlin Rd, Town of Mendon 5,000 LF 8-inch
  - Commerce Dr, Town of Henrietta 4,400 LF 10-inch
  - Erie Station Rd, Town of Henrietta 1030 LF 8-inch
  - Fairfield Road, Town of Brighton 160 LF 6-inch
  - Erie Station Rd, Town of Henrietta 1,400 LF 24-inch
  - Fairfield Road, Town of Brighton 1,100 LF 6-inch
  - York Road and Big Tree Road, Town of Pavilion 820 LF 8-inch
  - York Road and Big Tree Road, Town of Pavilion 760 LF 8 inch
  - York Road and Big Tree Road, Town of Pavilion 40 LF 6-inch
- ✓ Completed design, permitting and easement acquisition for the replacement of 2,400 linear feet of 8-inch water main on Hard Road in the Town of Webster. This work is scheduled to commence in 2022 under the existing Service and Water Main Contract.

- ✓ Completed design, permitting, easement acquisition for the replacement of 2200 linear feet of 8-inch and 280 linear feet of 6-inch water main and appurtenances at 1815 Clinton Avenue South in the Town of Brighton. Work for this project will be completed in 2022 under the existing Service and Water Main Contract.
- ✓ Completed design and permit acquisition for the Elmwood Terrace Main Replacement project. This project will included the replacement of approximately 2,375 linear feet of 8-inch water main and appurtenances. Easement acquisition is in progress and the work for this project will be completed in 2022 under the existing Service and Water Main Contract.
- ✓ Completed design, permit and easement acquisition for the Stuart Road Main Replacement project. This project includes the replacement of approximately 3,100 linear feet of 6-inch water main on Chili Riga Center Road and Stuart Road in the Town of Chili. This project will be bid in 2022.
- ✓ Administered and inspected the asphalt replacement program, which included rehabilitation of a portion of the East Side Operations Center Parking Lot and the sealing of the asphalt ring road and driveway at the Denise Reservoir.
- ✓ Designed and bid the 2021 Roof Replacement project. This project includes the coating of approximately 1,600 SF of precast concrete roofs at five pump stations. The work for this project was added to another contract and is scheduled to be bid and completed in 2022.
- ✓ Completed the construction of the 2020 Roof Replacement Project. This project consisted of the replacement of approximately 500 SF of metal standing seam roof and related work at the Eastside Operations Center.
- ✓ Completed the replacement of the 30-inch cone valve with a 30-inch butterfly valve on the 48-inch transmission main between the Mt. Read Boulevard Pump Station and the Shoremont Water Treatment Plant on Latta Road in the Town of Greece.
- ✓ Bid the purchase of a 30-inch butterfly valve for the replacement of a 30-inch cone valve at the intersection of English Road and Mt. Read Blvd. on a 48-inch transmission main in the Town of Greece.
- ✓ Performed acoustical leak detection survey of approximately 500 miles of water main.

#### **Water Storage Facilities**

- ✓ Completed the design, bid and commenced with the construction for the rehabilitation of the 2021 Water Storage Tank rehabilitation Project. This project included making structural repairs and modifications, blasting, priming and painting the interior and exterior of two stand pipe water storage tanks. The 1 million gallon Boughton Hill water storage tank and the 300,000 gallon Cobblestone water storage tank in the Town of Victor.
- ✓ Cleaned and inspected the following water storage facilities:
  - Baker Hill Tank (2yr warranty)
  - Willard Tank

- Thayer Tank
  - West Webster Tank
  - Keith Terrace
  - Widger Rd Tank
  - Gloria Drive Tank
  - Mumford Tank
- ✓ Aided in the coating repairs for the following tanks:
- South Ave. Tank
  - Baker Hill Tank
- ✓ Bid and completed the construction of the site clearing and grubbing work for the proposed Walker Road Tank project.
- ✓ Completed repairs to the Denise Reservoir and Parrish Reservoir covers.

### Water Districts

At the request of Towns in the MCWA service area, we assist with their implementation of water district projects. In 2021 we:

- Provided support for the following completed and activated water district projects:
 

• LeRoy - Water District#11 - East Bethany-LeRoy Road	1,000 LF	8 services
• Kendall Water District#10 - W. Kendall Road	6,800 LF	26 services
• Clarkson-Hamlin Joint Water District (Rte.18 – Roosevelt Hwy)	8,900 LF	28 services
• Pavilion - Consolidated Water District and tank-		
• York Road	6,400 LF	0 services
• Sweden – Lake and Redman Road Water District	25,500 LF	80 services
• Pembroke – GCEDC Stamp along Route 77	<u>9,000 LF</u>	<u>1 service</u>
Total:	57,600 LF	143 services
- Provided design review comments for the following in progress water district projects:
 

• Byron - Water Improvement Benefits Area 1	150,000 LF	380 services
• Bergen - Water Improvement Benefits Area 1	109,470 LF	303 services
• Stafford – Water District 12	<u>28,450 LF</u>	<u>78 services</u>
Total:	287,920 LF	761 services
- Provided preliminary comments for the following proposed water district projects:
 

• Bethany - WD5 (Overall Town District)	152,000 LF	380 services
• Pembroke – Water District 4 – (Northern area of the Town)	109,470 LF	303 services.
• Pembroke - Water District 5 – (Pratt Road)	15,000 LF	68 services
• Pavilion - Water District 7 – (South East Area of the town)	<u>22,350 LF</u>	<u>41 services</u>
Total:	298,820 LF	792 services



- Reviewed and commented on 4 preliminary engineering reports
- Assisted the Town of Pavilion's engineer with the design and construction of a 0.3 MG elevated tank on York Road in Pavilion. Work included changing out their four 1.5" PRVs to two 6" and two 2" PRVs to better serve the demands of the 1102 pressure zone.

**Developer Main Extensions (DME's) and New Services**

- Generated 33 Main Extension Agreements (MEA) and 28 were executed. Generated 19 Water Service Installation Agreements (WSIA) and 16 were executed. Placed 39 projects in service this year compared to 26 in 2019/2020, 49 in 2018/2019 and 42 in 2017/2018.
- Processed 49 initial and 44 revised DME application submissions this year compared to 50 initial and 50 revised in 2019/2020, 36 initial and 30 revised in 2018/2019, and 44 initial and 40 revised in 2017/2018. Of the 49 DME initial application reviews 19 ended up being categorized under a Water Service Installation Agreement (WSIA).

**New Service Program:**

- Coordinated the creation of 1238 new 1-inch service accounts
  - 579 from DMEs,
  - 435 from water districts,
  - 31 from secondary source change-overs, and
  - 177 from new construction

**Booster Pump Stations**

- ✓ Completed the design, permitting and commenced with construction of the demolition and replacement of the Harek Road Booster Pumping Station (BPS) Hypochlorite Building Addition.
- ✓ Completed replacement of the variable frequency drive (VFD) for Pump No. 3 at the Riga BPS.
- ✓ Completed installation of new VFDs for Pump No. 3 at the Moseley BPS and Pump No. 1 at the Harris Road BPS.
- ✓ Completed rehabilitation of Pump No. 2 at the Twin Hills BPS.
- ✓ Completed rehabilitation of the motors for Pump Nos. 1 and 2 at the Scottsville BPS; and Pump No. 3 at the Moseley BPS.
- ✓ Completed construction for replacement and upgrade of the dechlorination chemical storage and feed system at the Thornell Road BPS/Denise Reservoir.
- ✓ Assisted Genesee County's consulting engineer with completion of construction of the new Mumford BPS in the Town of Wheatland, which is a component of the Genesee County Phase 2 Water Supply project to increase supply to Genesee County.
- ✓ Assisted Genesee County's consulting engineer with completion of construction of the new Churchville BPS in the Town of Riga, which is a component of the Genesee County Phase 2 Water Supply project to increase supply to Genesee County.

- ✓ Assisted Genesee County's consulting engineer with completion of design and initiation of construction of the new Golden Road BPS in the Town of Chili, which is a component of the Genesee County Phase 2 Water Supply project to increase supply to Genesee County.
- ✓ Assisted Genesee County's consulting engineer with continuation of design of improvements to the North Road BPS, Morgan Road BPS, Riga BPS, and Scottsville BPS, which is a component of the Genesee County Phase 2 Water Supply project to increase supply to Genesee County.
- ✓ Completed conversion from Frontier private network (PN) to fiber optics for SCADA communication for the Echo Street BPS.
- ✓ Completed repairs to the medium voltage transfer switchgear at the Scribner Road BPS.

## **Treatment Plants**

### Shoremont Water Treatment Plant

- ✓ Completed Phase II of the SWTP Concrete Repairs project that included repairs to deteriorated concrete in the North and South Clear Wells.
- ✓ Completed design of the West 1 Plant Improvements – Phase 2 project that will include rehabilitation of the filters, replacement of filter valves, and new filter-to-waste piping system.
- ✓ Completed replacement of the High Duty Pump No. 3 discharge pump control and isolation valves.
- ✓ Completed replacement of a surge control valve on the High Duty pump discharge header.
- ✓ Completed construction of the Low Lift Pump Station Electrical Improvements project that included replacement of electrical equipment and VFDs at Low Lift Pump Station Nos. 1 and 2.
- ✓ Initiated design of the 2022 GAC Replacement – East Filters Phase 1 project that includes replacement of the granular activated carbon filter media in Filter Nos. 2, 4, 6, and 8.
- ✓ Initiated design and procurement of materials and equipment for replacement of the 480V Main Distribution Panel.
- ✓ Completed design and bidding for replacement of the 4160V motor for Pump No. 2 at the Lee Road BPS.
- ✓ Completed replacement of the bearings on High Duty Pump No. 8.
- ✓ Completed conversion from Frontier private network (PN) to radio for SCADA communication for the Low Lift Pump Station.
- ✓ Completed design and procurement of materials and equipment for replacement of the isolation valve on the High Duty pump surge relief discharge header.
- ✓ Initiated design and procurement of materials and equipment for rehabilitation of the sodium hypochlorite feed systems.



- ✓ Completed upgrade to the SCADA system software.

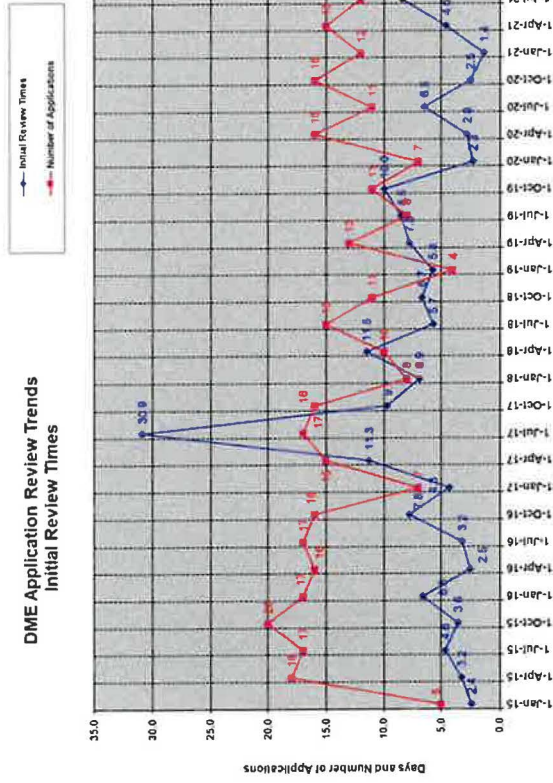
Webster Water Treatment Plant

- ✓ Purchased a new 1500 kW generator to be utilized to provide emergency electrical power at the Lake Water Pump Station.
- ✓ Completed design and initiated construction of the Generator Optimization – Phase 2 project that will include automation of generator switchgear and installation of new uninterruptible power supply (UPS) equipment at the Webster Water Treatment Plant; and installation of a new 1500 kW generator and automation of the generator switchgear at the Lake Water Pump Station.
- ✓ Completed construction of the Filter GAC Replacement project that includes replacement of the granular activated carbon filter media.

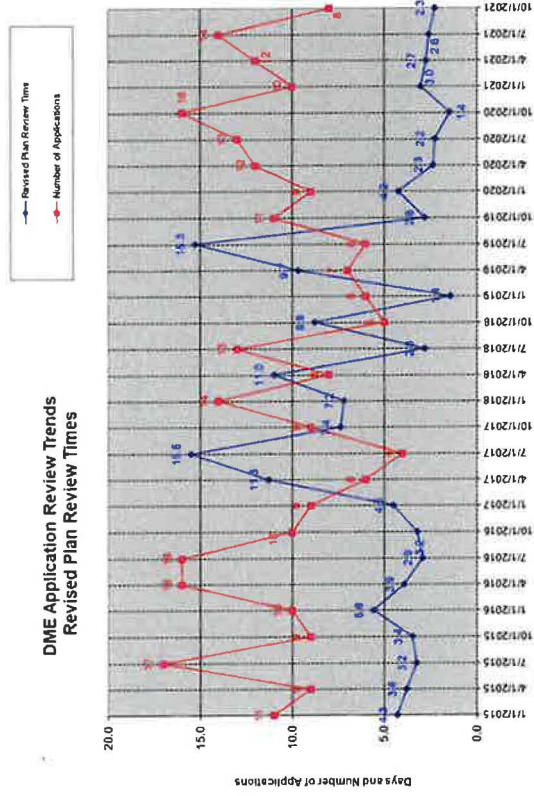
Brockport Water Treatment Plant

- ✓ Completed Phase III of the demolition of a portion of the Brockport Water Treatment Plant, which included the backwash tank.

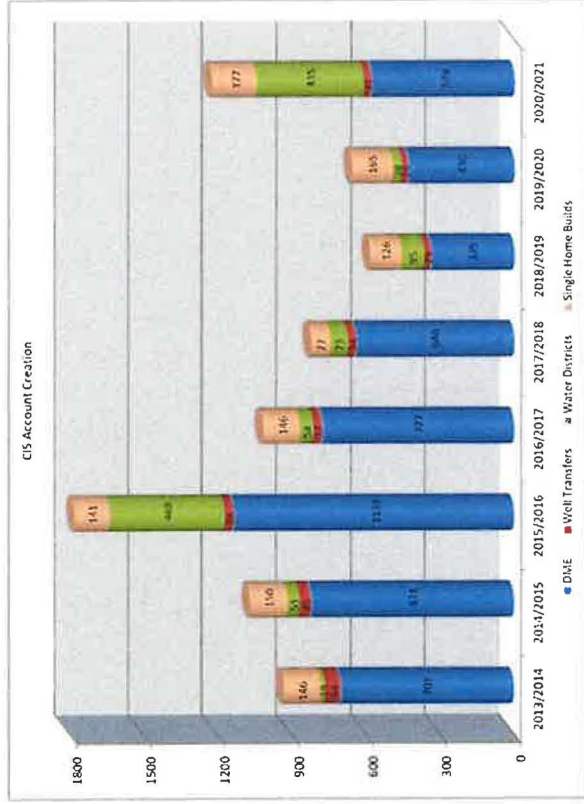
DME Application Review Trends  
Initial Review Times



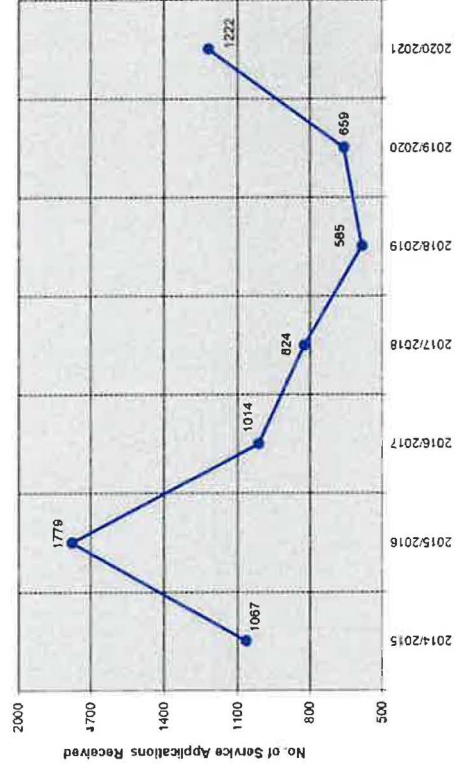
DME Application Review Trends  
Revised Plan Review Times



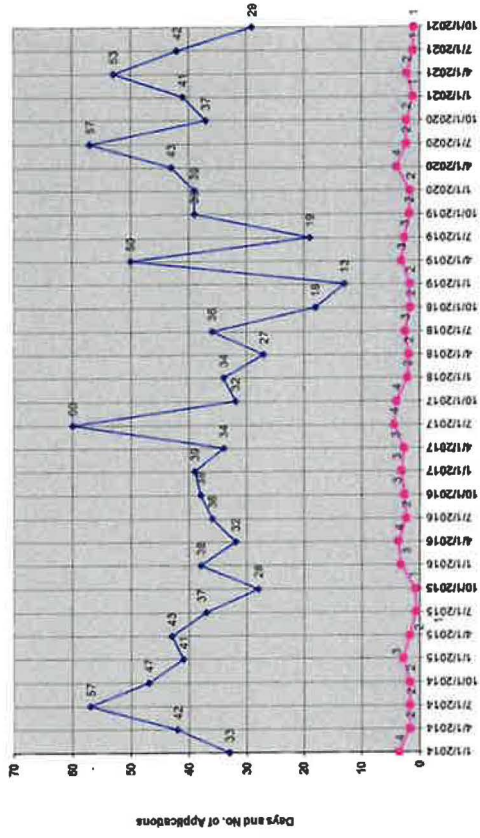
CIS Account Creation



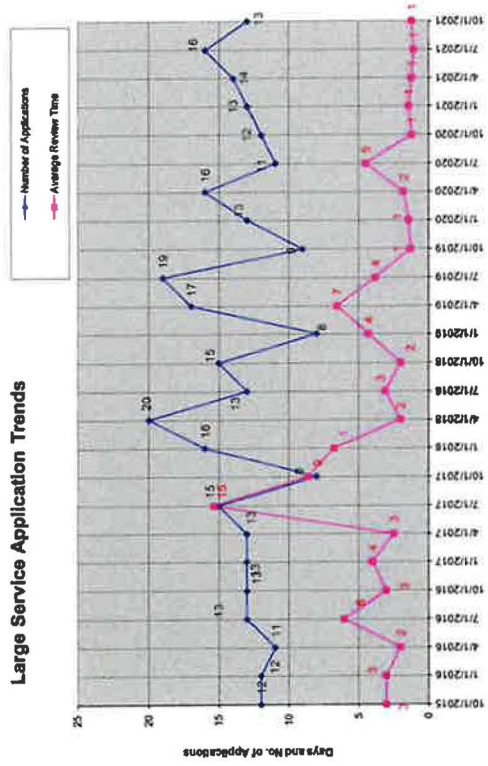
Total Number of Service Applications Received



Backflow Prevention Application Trends



Large Service Application Trends



Water District Extensions

Total Amount of Water Main Installed

