Village of Addison
Department of
Public Works

58th Annual
Operation Report

Fiscal Year
May 1, 2018 through April 30, 2019

Village of Addison
Department of Public Works

Mr. Richard Veenstra, Mayor
Addison Board of Trustees

RE: FIFTY-EIGHTH
ANNUAL OPERATION REPORT
FISCAL YEAR 2018-2019

Ladies and Gentlemen:

We respectfully submit for your review our Fifty-Eighth Annual Operation Report. In this report we attempt to provide an overview of Public Works operations, and a summary of the accomplishments and special projects undertaken during the past fiscal year.

Each section of the report highlights a division by providing an overview of operations and responsibilities and breaks down the costs and labor expenditures for various functions. In addition, each division provides data that allows us to monitor the goals and performance measures as they relate to the Village-wide strategic plan.

None of this would be possible without the continued support of the Mayor, Board of Trustees and the entire Village Administrative staff. Additionally, our department is fortunate to have over 60 talented and dedicated professionals who tirelessly work around the clock to make this a safe community, and provide quick, responsive and reliable services to our residents and businesses.

Finally, a special thank you to our Administrative Secretary staff, Lisa Affetto and Carli Flores, for their tremendous effort in preparing the report, and their continued service to our department.

Respectfully,

Rick R. Federighi, Director
Department of Public Works

1491 W. Jeffrey Drive Addison, Illinois 60101 Tel (630) 620-2020 Fax (630) 705-1669
www.AddisonAdvantage.org

Public Works
58th Annual
Operation Report

Budget for Fiscal Year
May 1, 2018 through April 30, 2019

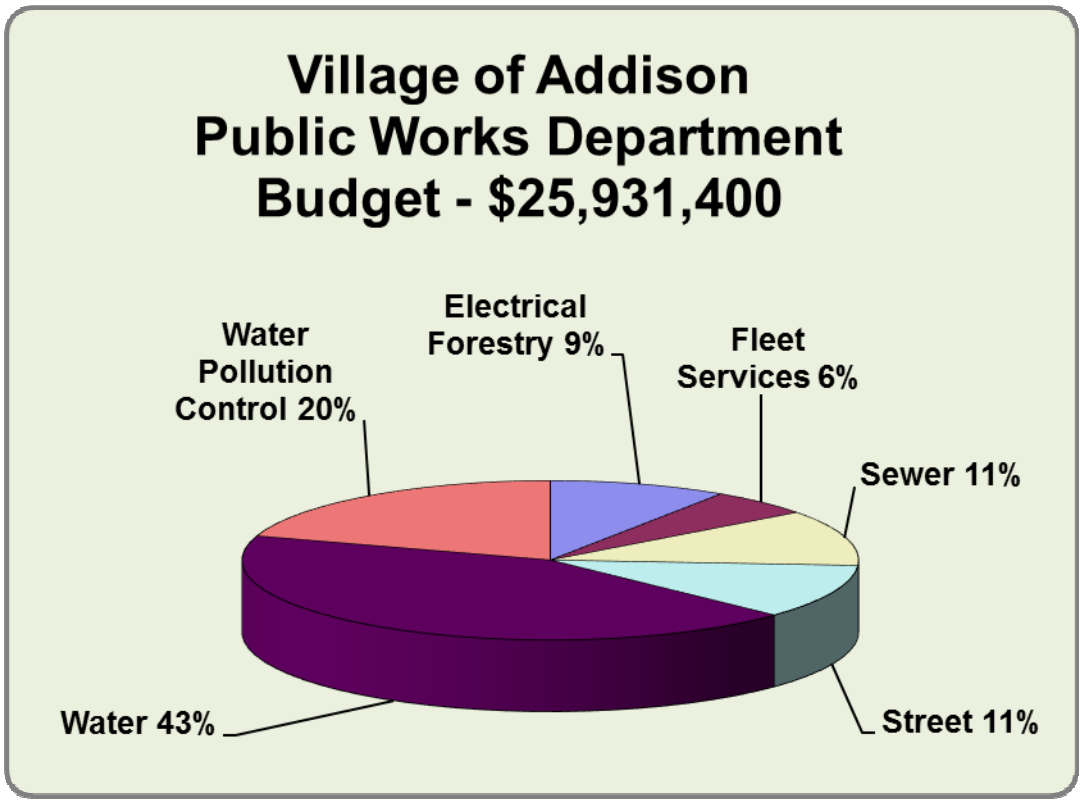


Table of Contents

Village of Addison
1 Friendship Plaza
Addison, Illinois 60101

Richard Veenstra	Village Mayor
Lucille Zucchero	Village Clerk

Village Board of Trustees

Thomas Hundley	Joseph McDermott
Cathy Kluczny	Sam Nasti
William Lynch	Harry Theodore

Village Officials

Joseph E. Block, Jr.	Manager
Robbins - Schwartz	Attorney
Timothy P. Hayden	Director of Police
Roseanne Benson	Finance Director/Treasurer
John Berley	Assistant Village Manager/ Community Development Director

Village Department Directors

Rick R. Federighi	Public Works
Donald Pinson	Risk Management/Human Resources
Donald Weiss	Community Relations

Village Directory

Village Hall	1 Friendship Plaza
Police Department	3 Friendship Plaza
Public Works Facility	1491 Jeffrey Drive
A.J. LaRocca Wastewater Treatment Facility	333 S. Villa Avenue
North Wastewater Treatment Facility	711 N. Addison Road
Sewer Division Facility	249 S. Villa Avenue

Introduction

The Village of Addison Public Works Department is comprised of several divisions, each utilizing specialized disciplines:

Public Works

Public Services	**Environmental Services**
Water Division	A.J. LaRocca Treatment Plant
Electrical & Forestry Division	North Treatment Plant
Fleet Division	Laboratory and Technical Services
Street Division	Sewer Division

These divisions are under the direct supervision of the Public Works Director, along with two Superintendents. Two Administrative Secretaries and two clerk typists carry out all of the office and administrative tasks which serve a department of over 60 employees. The total budget of the department is over 23 million dollars this fiscal year.

Director:	Rick Federighi
Superintendents:	John Chrysogelos John Brechin
Administrative Secretary:	Lisa Affetto Carli Flores
Clerk Typists:	Leslie McCombs Pam Waddle

The Public Works Facility is located at 1491 Jeffrey Drive and houses the administrative office as well as the Electrical & Forestry, Fleet Services, Street and Water Divisions.

The Environmental Services Division administrative office is located at 711 N. Addison Road and houses the North Wastewater Plant and the Laboratory and Technical Services Divisions. The Sewer Division and A.J. LaRocca Facility are located at 249-333 S. Villa Avenue.

Goals

The Public Works Department continuously strives to improve performance by setting annual goals for both efficiency and work quality.

Implementation of new Strategic Plan – the Public Works Department reviewed each of the strategic priorities and incorporated them into the "key objectives" in each division.

Service to Residents – the department places a high priority on quick, courteous and thorough service to citizen complaints and inquiries. We have clerical staff answering phones at both locations, during all office hours. Most of our requests are handled within a few hours, with only a few exceptions.

Technology Upgrades – new state-of-art equipment drives our department forward, with the implementation of CitySourced, SCADA controls and smart phones with utility mapping. In addition, new financial and work order software upgrades are scheduled for the coming year.

Safety – Paramount to the culture within Public Works is the focus on safety and the involvement of all levels of staff towards that end. Our safety committee, comprised of workers in each division, meets independent of Administration to collectively discuss safety concerns, improvements and training.

Infrastructure Rehabilitation – Major projects, primarily in water and sewer, have been completed the past few years. Long term planning, to include life cycle costing, asset management, and sustainability are all on-going priorities within Public Works.

Major Projects 2018-2019

Public Works was again involved in many important projects throughout the community. Many are discussed in each of the divisional reports that follow, but a few of the highlights include;

- Public Works continued with SCADA upgrades at all our sewer pump stations and at the treatment facilities. This will allow for closer monitoring and the ability to make adjustments off-hours from remote locations.
- The implementation of a new asset management and service request system continued during the fiscal year.
- Several drainage studies were commissioned during the year to identify problem areas and help prioritize future storm water improvement projects.

- Continued with the installation of new "lit" road signs at major intersections along the Lake Street corridor. The project will take one more year to complete.
- Installation of new water main and road resurfacing on Army Trail Road, Fullerton Avenue, and under I-290.
- Continued with a sewer pipe relining program, based on pipe televising, to upgrade and refurbish the sewer infrastructure. The improvements will help reduce inflow in to the sanitary system and reduce basement back-ups.
- Replaced all pumps and control equipment at the Myrick Avenue Pump Station (MAPS). SCADA controls will be added in 2019.
- Made significant repairs to equipment at both Wastewater Facilities to include; new actuator gate valves, raw pump valve replacement, and new potable water main at the AJL Facility, and; replacement of anaerobic digester pumps and final clarifier reconstruction at the North Facility.

Vision for the Future of Public Works

The ever changing and evolving world of Public Works has created new challenges for our staff. Coupled with these advancements is the aging of our workforce and the need to develop the next generation of leaders in our department.

In order to address this challenge, the Public Works Department has instituted several programs looking to the future, including:

Successions Planning – the department will focus training on supervisory development over the next several years, in order to prepare the next generation of leaders and personnel.

New Technologies – Public Works will continue to incorporate cutting edge platforms, such as the MyCivic mobile application, and the use of mobile devices for digital utility mapping.

Asset Management – In order to better prepare our department for long term decision making and sustainability of infrastructure, we are embarking on a new asset management program.

Community Outreach – Public Works will look to incorporate new interactive communication tools with residents. Several will be based through both apps and an upgraded website. Services such as access to water use accounts and automatic alerts for leaks and high usage will be available in the next generation of meters. Other service request and construction information will be available on a future new website.

Public Services Divisions

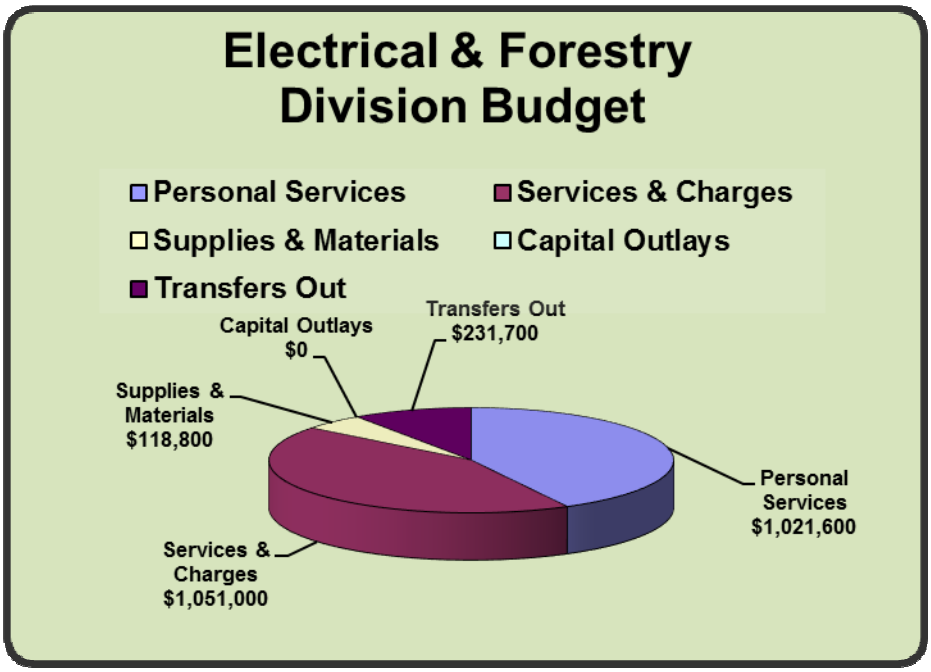
Electrical & Forestry

Electrical & Forestry Division

The Electrical/Forestry Division is responsible for the overall operation, maintenance and repairs of the Village's street lighting system, including street light poles and several aerators throughout the municipality. This Division is also responsible for the public landscaping, parkway tree maintenance, mulch give-away program, and the implementation of the storm damage emergency response procedures in the event that a special branch pick-up schedule is required in the wake of a heavy storm.

The Electrical & Forestry Division is managed under the direction of one foreman and a crew of six maintenance workers.

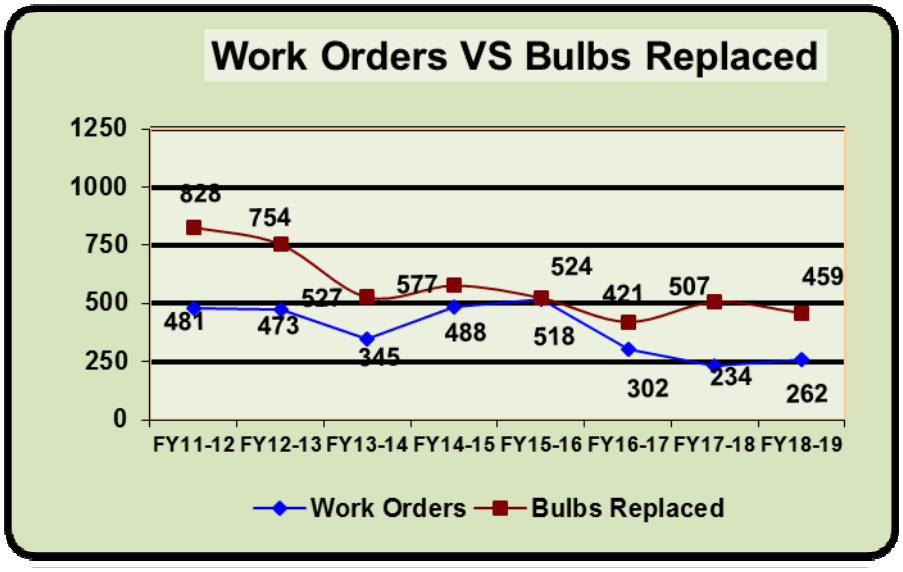
Foreman:	Tim Tokarz
Maintenance Worker III:	John Cooper
Maintenance Worker II:	Steve Crumpler Greg Soltwisch
Maintenance Worker I:	Chris Kasper John Van Meter
Electrician:	Eddie Paladino



The Electrical/Forestry Division reviews construction plans regarding proposed additions to the Village's streetlight system as well as punch list inspections upon completion of said projects are performed in-house.

The Electrical/Forestry Division is responsible for the overall maintenance of the Village's street lighting system. This includes cable repair and replacement, remote disconnect installation, lighting cabinet maintenance/repairs/upgrades, and streetlight pole maintenance. Streetlight pole maintenance entails replacement of bulbs, refractors, wiring, luminaire repair and replacement, as well as the painting and numbering of poles. Streetlight poles are often completely replaced as a result of traffic related knockdowns or severe deterioration. The Electrical & Forestry Division is also responsible for light pole safety inspections (concrete pole deterioration, aluminum pole fractures, frangible base/coupling inspections, etc.)

A resident may report a streetlight outage by contacting the Public Works Department, through the Village website or through the City Sourced web based service ticket request system. Each pole has a specific identification number located on the pole which indicates a pole's location and system information. Providing the pole's identification number when reporting an outage can help crews locate lighting issues with greater efficiency.



Other areas of responsibility include Addison's holiday lighting and decoration, flag and banner maintenance, pond aerator repair and maintenance, and electrical contract supervision (over-seeing the traffic signal and siren system maintenance contracts, helix foundation installations, and contracted pole replacements as needed).

The Electrical/Forestry Division provides and oversees the maintenance of all Village of Addison public landscape and parkway trees. Work includes planting, pruning, tree removal (dead/hazardous/diseased), and associated restoration work. This Division is also responsible for the Mulch Give-Away program and the implementation of the Storm Damage emergency response procedure in the event that a special branch pick-up schedule is required in the wake of a heavy storm.

EAB Infested tree removal

Cyclical Tree Pruning

Duties for the Electrical/Forestry Division also include contract supervision for the public grounds contract for mowing and landscape maintenance, contracted branch pick-up, cyclical tree pruning, mosquito abatement, decorative brick paver maintenance, and aquatic weed control for Village maintained ponds.

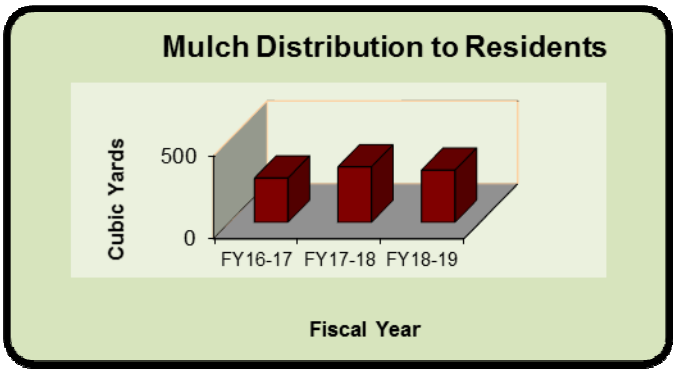
The Electrical/Forestry Division reviews new construction plans to ensure that the proposed plantings are selected and placed according to Village of Addison code.

Mosquito Abatement Program

The Village continues an aggressive abatement program in an effort to control mosquitoes and the associated occurrence of West Nile Virus. Contracted monitoring and spraying is performed several times throughout the season.

The catch basin treatment program is performed under contract. Approximately 4,000 Village catch basins and water holding inlets are treated with Natular XLT 180-day briquettes or Vextolex CG granules to control the species of mosquito that vectors West Nile Virus each year.

SERVICES PROVIDED TO VILLAGE RESIDENTS



Mulch Giveaway

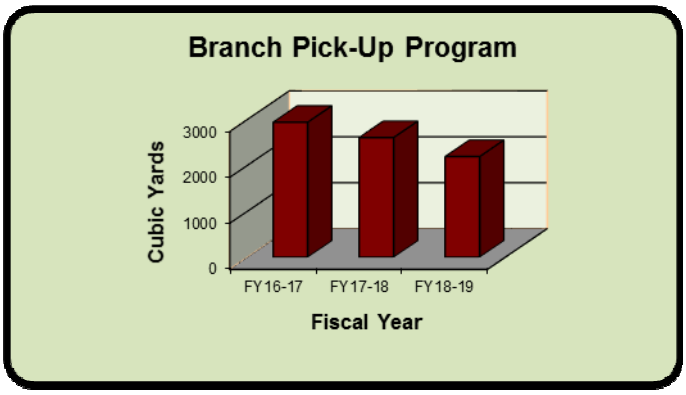
Auxillary branch pickup, pruning and removal of wood waste generated by in-house operations are recycled and refined into higher quality mulch. Mulch is recommended for use around the base of plants and trees to help retain the moisture in the soil, hold down aggressive weed growth, and return nutrients to the soil.

Full truckloads of mulch are available to residents for delivery by the Public Works Department upon request. Arrangements can be made for a weekday delivery by calling the Public Works Department direct. Upon completion of resident service requests for mulch, wood mulch is supplied at the corner of Vista and Winthrop Avenues, available to residents free of charge.

Christmas Tree Pick-up

Christmas tree pickup service is available throughout the month of January. Trees should be placed on the parkway on Sunday evenings for collection on Monday. Nails, tinsel, ornaments and lights must be removed, along with tree bags and bases.

Branch Pick-up



The Village's Branch Pick-up program is truly a service to Addison residents. It encourages each resident and building owner to pride themselves in the health, aesthetics and value of their home, building, surrounding yard and landscape. It promotes the community*s desire to beautify our neighborhoods while maintaining safe and healthy surroundings. Each month, April through November, an Addison resident or building owner has the opportunity to place branches out curb-side in front of their property.

Branch pick-up begins on the first Monday of each month, April through November, for a total of eight months. November was added in 2016.

Trees and branches cut by privately contracted companies, or individuals hired by residents or property owners do not qualify for the Village's Branch Pickup Program.

Branches, trees, and/or logs of this type must be properly disposed by said private contractor, or other private service. Trees and branches cut by privately contracted companies, or individuals hired by the residents, or property owners may not be stacked along the parkway for this described Village pickup.

Village of Addison Branch Pick-up requirements:

- Branches must be placed curb-side on the parkway, not in the street, stacked in one direction with the thicker ends facing the street. Please do not cross stack the branches.

- Branches shall be limited to eight feet in length and eight inches in diameter.

- Limbs or stems larger than eight inches in diameter must be cut into 16-inch log lengths and placed separately from the branches.

- Branches shall not be tied with string, wire, etc.

- Branch piles containing root balls, lumber, metal, glass, yard waste or other debris, as well as large branch mounds that have been multi-directionally cross stacked, will not be picked up.

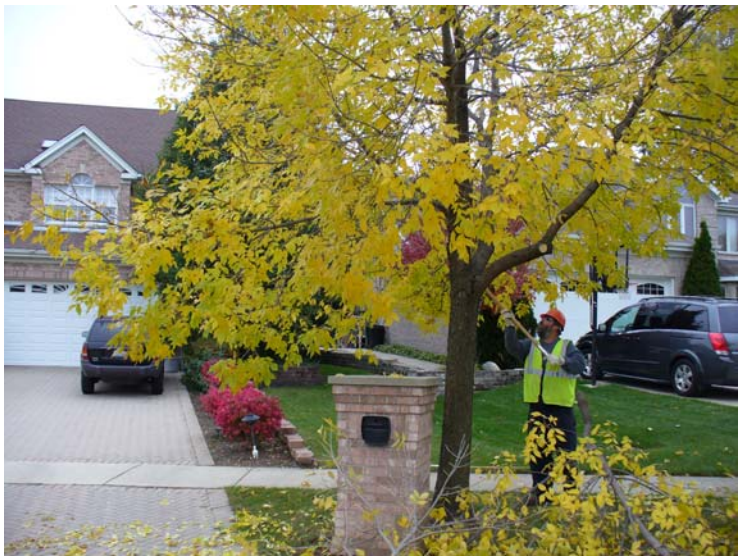
- Branches shall not be stacked in the alley or along private drives. Branches stacked in the alley or along private drives will not be picked up.

- Trees and branches cut by a private contractor hired by a resident do not qualify for the Village's Branch Pickup Program and may not be stacked along the parkway for Village pickup. Materials cut by private contractor must be disposed of by said contractor or other private service.

- Branch piles shall not be out on the parkways prior to or after the weekend prior to pick-up. All branches must be stored in the back yard until such time.

Small clippings and landscape waste may be discarded in paper landscape bags for disposal by our contracted waste management company.

Parkway Tree Maintenance

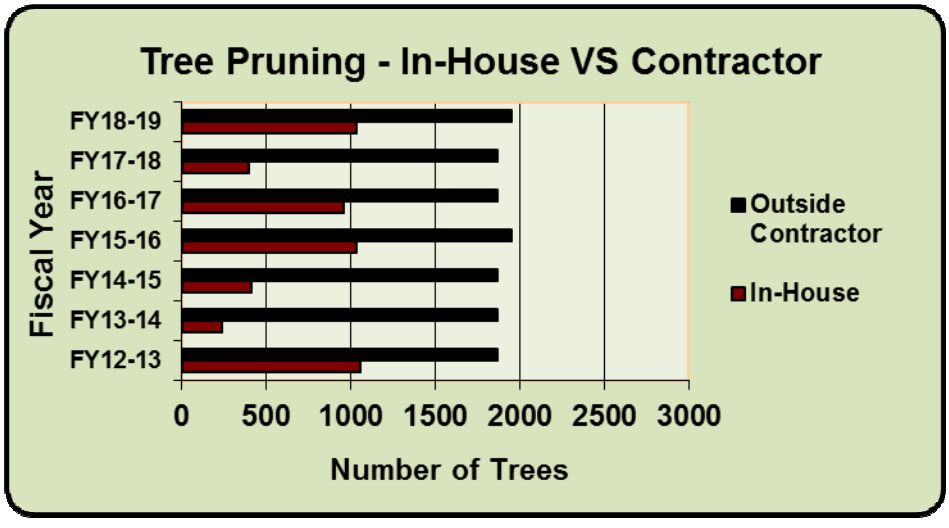


The Electrical/Forestry Division plants and maintains the Village's parkway trees. These parkway trees are provided and planted at no additional charge to residents.

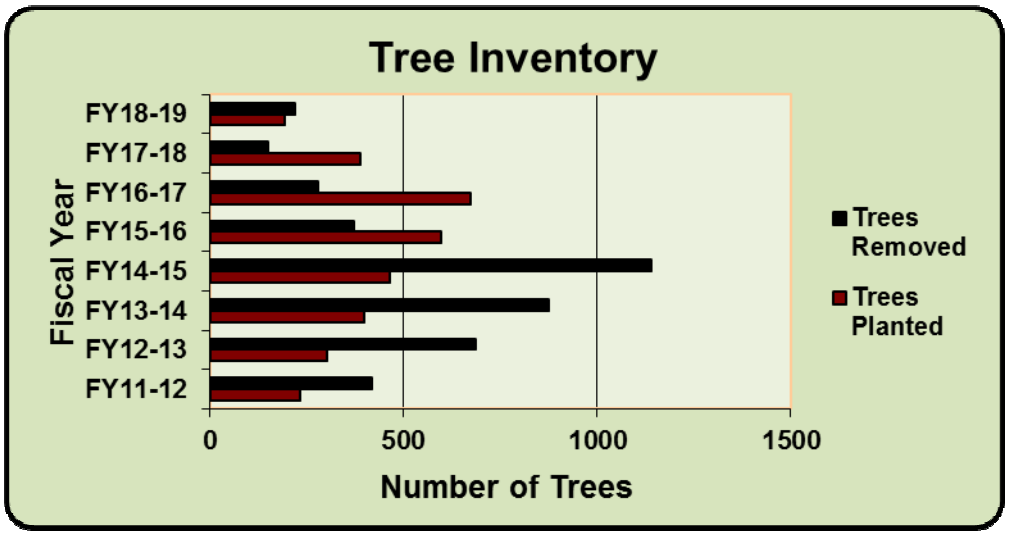
Planting is conducted during the spring and fall seasons, often depending on the specie of tree. Residents can call the Public Works Department with requests for a tree in their parkway. An inspection of the site will be made to determine if planting is possible, and the location will be added to the program if applicable.

A limited number of trees are available each year, thus planting may occasionally be postponed until the following season.

Parkway trees throughout the Village are cared for on a rotating schedule. The Electrical/Forestry Division strives to maintain a budget providing a targeted pruning cycle of five years. This is accomplished through a combination of the certified arborists on staff and contracted, certified tree care services awarded annual pruning bids.



Tree removals are conducted in-house by the Electrical/Forestry crew as well as under contract. Dead and/or diseased trees are taken down for public safety and placed on a schedule for replacement. As Village of Addison policy, we will not remove live, healthy trees from the parkway or right-of-way, except in extreme cases, or when hazardous conditions pose a threat to public safety.



COMMUNITY SERVICE PROJECTS

School Presentations – Arbor Day

Each year Arbor Day presentations are made to the area Fourth Grade classes. In April, 450 Chinese Dogwood seedlings were distributed to the 4th graders at seven grammar schools during Arbor Day presentations presented by the Electrical & Forestry Division. These presentations serve to educate Addison's students on the importance of trees in our community, as well as proper tree care and insect problems that threaten our urban forest.

Holiday Decor

Each year holiday decorations and lighting displays are installed throughout the entire Village Hall complex, (Library, Historical Houses, and Police Department, as well as at Veteran's Circle (at the corner of Lake Street and Addison Road). Banners and wreathes are displayed on streetlight poles that line the Addison Road corridor.

Holiday lighting operations begin as early as September in an effort to meet the Village's tree lighting ceremony deadline. Holiday lighting and display removal operations commence following the observance of the "Feast of the Epiphany" in early January.

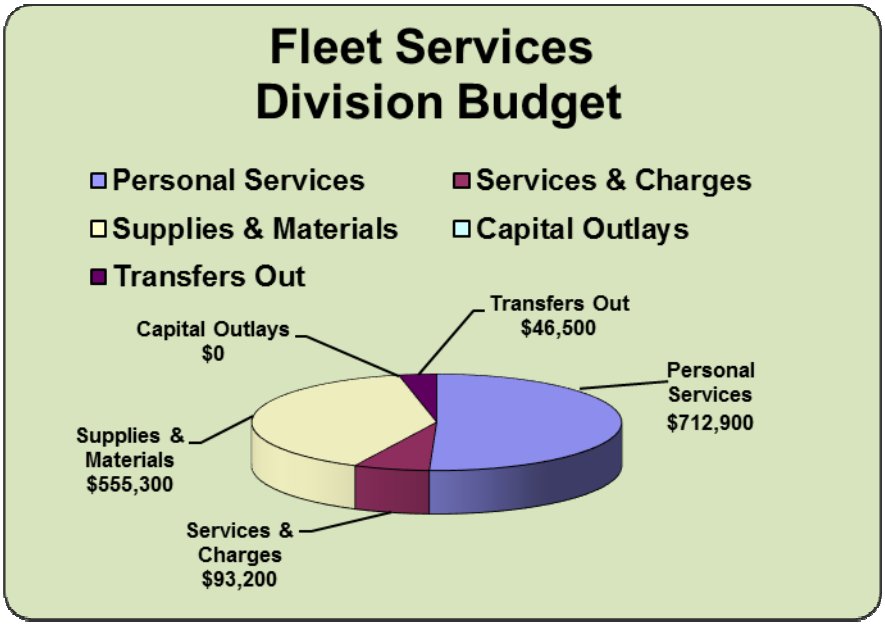
Fleet Services

Fleet Services

The Division of Fleet Services provides the employees of the Village of Addison with safe and dependable vehicles, equipment and service facilities. Working in partnership with the employees, the Division provides high quality products and services in a most cost-effective manner.

In order to carry out these tasks, the Division is under the management of one foreman with a crew of three mechanics.

Foreman:	Steve Kimbrel
Mechanic II:	Dominic Macri
Mechanic I:	Robert Kowalczyk (til 3/8/19) Mike Chow Rudy Avila (fr 1/3/19)



Services provided by Fleet Services include fleet asset management, procurement of vehicles and equipment, storage and dispensing of fleet fuels, repair and maintenance services and vehicle replacement fund management. During the 2014/15 Budget Year, Fleet Services took on the maintenance and repair of the Addison Fire Department vehicles and equipment in December of 2014.

Services Provided

1. Manages the procurement of all Village vehicles to ensure cost effectiveness
2. Maintains a fleet replacement schedule to minimize ownership costs
3. Provides specification for vehicle procurement in a manner that maximizes vehicle utilization
4. Provides a quality preventative maintenance program and schedule to ensure reduced operating costs
5. Provides a quality Vehicle and Equipment Repair Service
6. Provides efficient equipment utilization through reduction of equipment downtime
7. Participates in A.S.E. certification programs
8. Manages Village fuel purchase and usage
9. Manages Automated fuel dispensing for Village equipment and other designated entities, 24 hours a day, 7 days a week
10. Manages tire and parts inventory
11. Manages Vehicle Replacement Fund Recommendations
12. Manages Internal Service Fund
13. Manages and maintains titles and license plates for all Fleet Vehicles
14. Manages vehicle and fleet equipment disposal
15. Assist Risk Management on insurance claims

16. Coordinates external services, such as paint and body repair, transmission repair/rebuild, heavy duty suspension service, glass replacement, and warranty repairs

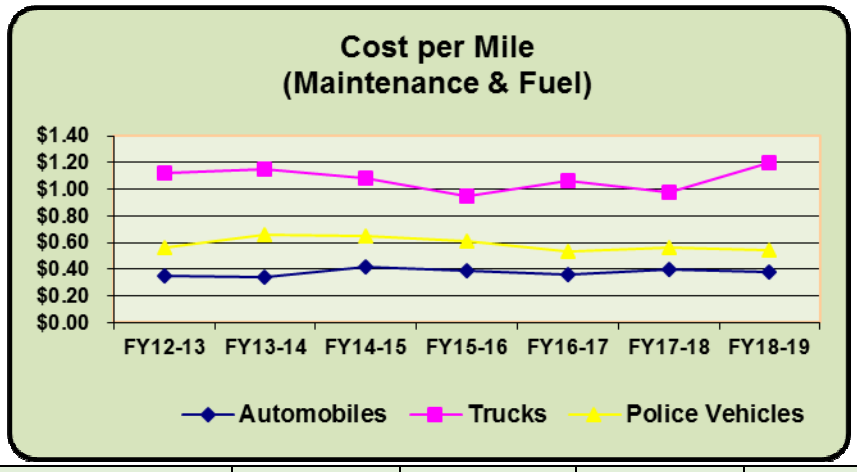
17. Furnish pool vehicles to meet customers needs while their vehicle is being serviced

18. Provide roadside assistance or arrange towing 24 hours a day, 7 days a week for Village vehicles or equipment

19. Up-fitting and set-up of all Village vehicles

20. Installation and removal of snow plow and salting equipment

21. Manage Village underground storage tanks and above ground diesel tanks



	FY14-15	FY15-16	FY16-17	FY17-18	FY18-19
Number of Preventive Maintenances Completed	229	286	268	335	692
Number of Breakdowns	9	5	9	22	16
Scheduled Repairs	76%	77%	76%	78%	85%
Non-Scheduled Repairs	24%	23%	24%	22%	15%

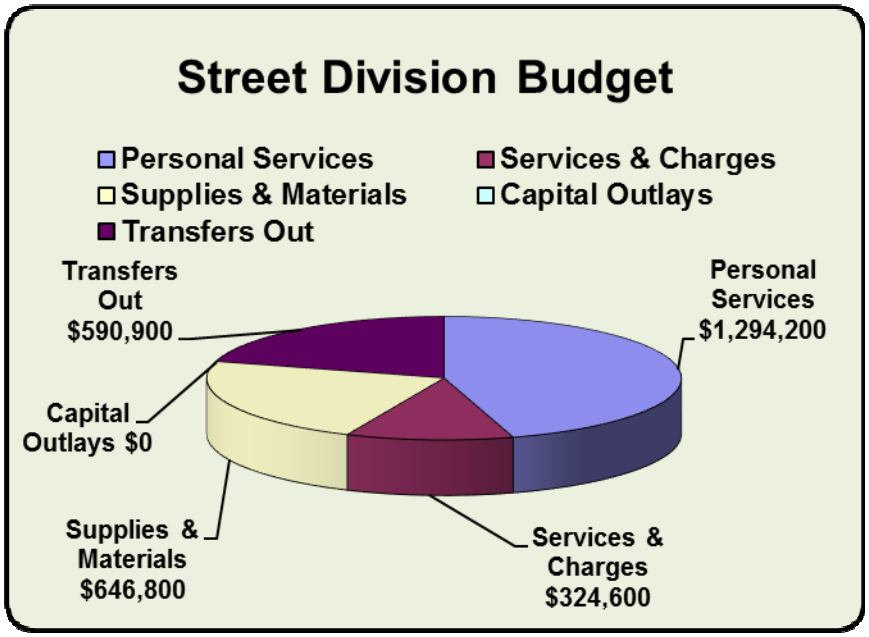
Street Division

Street Division

The Street Division is responsible for the maintenance and care of approximately 278 paved-lane miles, ice and snow removal, asphalt pavement repair and maintenance, emergency traffic control and barricading, repair of pot holes, maintenance of sidewalks, curbs, and ADA crossings, replacement of sidewalks, striping roadway lane lines, school crosswalks and stop bars, repair damage due to snow plowing operations, installation and maintenance of street signs within the Village corporate limits and maintenance of Addison's section of Salt Creek Greenway Trail.

These all are accomplished under the direction of one foreman and a crew of eight maintenance workers.

Foreman:	Ron Remus
Maintenance Worker III:	Andy France Robert Jakubowski
Maintenance Worker II:	Arnie Jeschke Pete Smith Mark Zimmerman
Maintenance Worker I:	Joe DiGiovanni Alex Melani Mike Hundley (fr 4/29/19) Jon Wagner



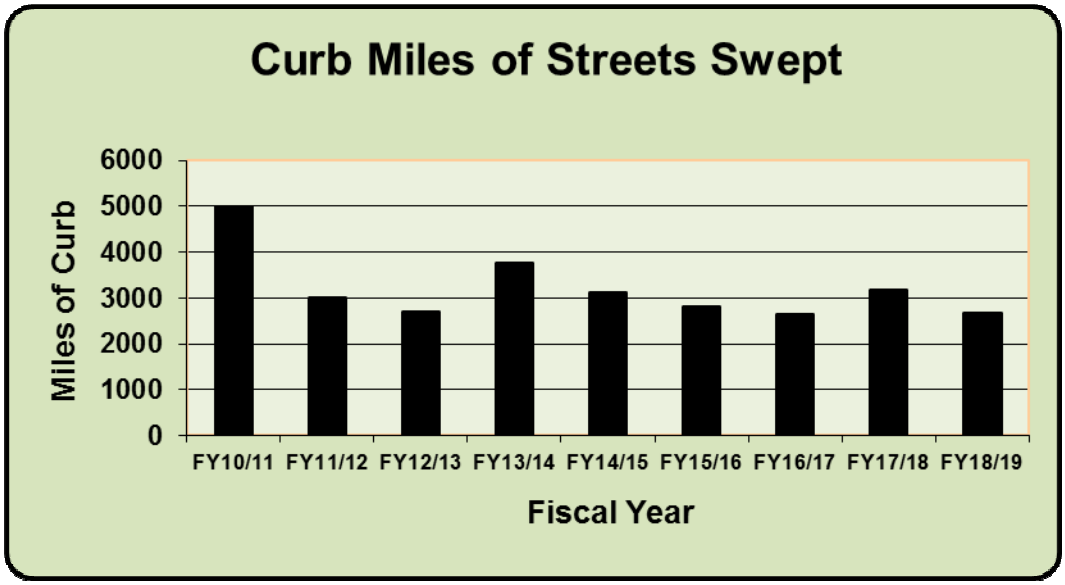
Specific Street Division Tasks: Graffiti removal, Road Kill Removal, Traffic Control, Parkway maintenance, sidewalks.

Major Cost Maintenance Projects: Blacktop maintenance, Snow & Ice Control, Street Sweeping, Street Sign Maintenance.

The Street Division also monitors flood control. This includes maintenance of creeks, clearing logs and debris blocking stream flow, curb inlet cleaning and barricading flooded streets or streets undergoing maintenance activities. This can also include sandbagging, evacuation of people from flooded homes and the follow-up cleanup and response post storm.

Other responsibilities include maintaining unrestricted flow in and out of Village holding ponds. The Division also aids in planning traffic control, crowd control and safety barriers for various community events.

The Street Division maintains a Street Sweeping Program whereby streets are cleaned of debris on a scheduled basis to keep curb inlets clear and prevent pollution and/or obstruction of storm water drains.



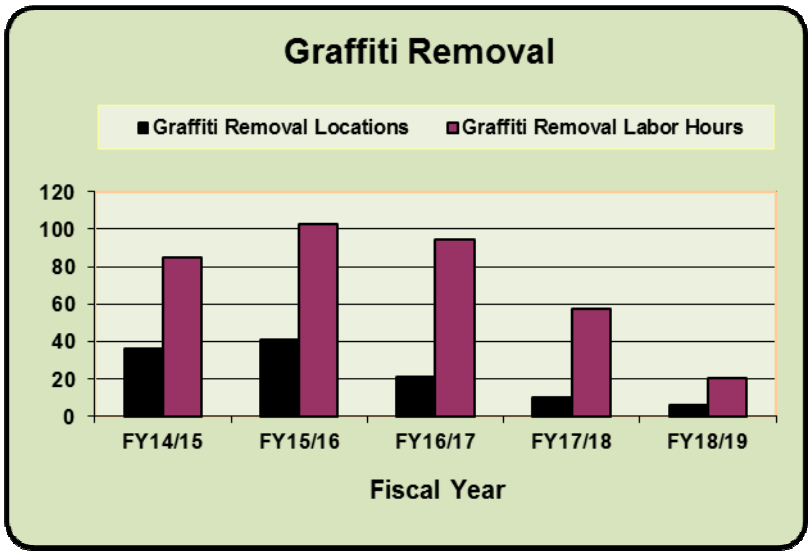
Graffiti Removal

The Street Division is responsible for the timely covering and/or removal of all reported instances of graffiti on public and private property. This can only be completed if a hold harmless agreement from the property owner is on file.

Pictured, graffiti is being removed from a Louis Pond transformer. This past fiscal year 20.5 hours were expended removing gang graffiti.

The Division uses different procedures for graffiti removal. On a smooth surface with marble-type finishes, a hot-water pressure washer is used. Most coarse brick surfaces are cleaned using a brand name chemical. The chemical is brushed on, allowed to sit for several minutes, then rinsed off with a hot-water pressure washer. The same procedure is used for smooth surfaces. .

In the case of a waste dumpster, tree or asphalt street surface, the graffiti is sprayed over with a spray paint matching as close as possible to the original color of the surface. If inaccessible to normal removal procedures such as a concrete viaduct, a like color that matches the concrete can be used.



Sidewalk Replacement Program

The Street Division maintains an ongoing sidewalk inventory, identifying potential hazards, damage, etc. Each fiscal year, certain areas are targeted for sidewalk replacement and are replaced as budget funding allows. Through this program the Village Board has encouraged a proactive approach to minimize trip hazards throughout the Village, ensuring the safety of our residents. This year we replaced 1,234 Squares of sidewalk.

In August 2009 the Street Division began the additional program of grinding sidewalk trip hazards. Sidewalk grinding is an approved alternative to sidewalk replacement in the overall maintenance program and it enables the Village to stretch tax dollars by repairing minor joint alignment issues, minimizing trip and fall hazards, and increasing foot traffic safety. The Street Division ground 94 trip hazards during the fiscal year.

A trip hazard at 12 N Grant will be ground flush to ensure public safety

Signs

The Street Division installs and maintains all Village street signage. An intensive schedule is maintained throughout the year. Each fall all regulatory and warning signs are inventoried, inspected and graded to include reflectivity and damage and placed into one of three categories: good, fair and replace. November through February all the signs that need replacement are completed.

Throughout the year this Division installs, fabricates, repairs and replaces signs requiring immediate attention.

Snow/Ice Operations and "Snow Plan"

Snow Fighting Vehicle Inventory

8	2-½-Ton Dump Trucks	6	1-Ton Dump Trucks
3	1-Ton Pick-Up Trucks	3	1-Ton Utility Trucks
4	¾-Ton Pick-Up Trucks	2	End-Loader W/12" Plow
4	Tandem Trucks	1	1 ¾ Ton Dump Truck

Public Works operates with a formal "Snow Plan" which outlines the snow/Ice removal operations. This plan is continually reviewed, updated, and revised throughout the winter season. Response and call-out procedures vary according to weather conditions, time of day, weekdays or weekends. All specifics have to be taken under consideration for response efforts and response timing as each storm progresses. Division Foremen work in conjunction with the Addison Police and Fire Departments, relying on their 24hr/day information on current road conditions and issues on the Village streets, along with using National Weather Service Forecasts.

For a cost effective and time efficient operation, the Village streets have been divided into seven designated response areas. Each area has assigned equipment and crews, which are on 24hr call to respond to storm events. The Addison Public Works Department, as a team, combines the workforce of all divisions to make up the snow response team. Additional information about the Addison Snow Plan can be found on the Village Website at AddisonAdvantage.org.

Pretreating/Prewetting/Salting Roadways

When pre-treating, pre-wetting and/or salting is required, crews respond to pre-assigned areas. Each driver is responsible for checking out his equipment, filling the truck and keeping track of all quantities used during their shift.

Roadway salt is ordered via a Government Pricing Contract. The Salt Purchase Agreement for the DuPage County Contract is Board approved early in the year for the next year's quantity. Salt supplies are monitored to ensure standby quantities are available. A salt conveyor system is used for ease in receiving and handling deliveries of roadway salt while maximizing the volume capacity of the dome.

Mailbox damage and parkway repairs add to the Division's costs for the snow/ice removal program. As damages are noted, crews will assess whether a temporary restoration needs to be completed. Otherwise all repairs or replacements are completed in the spring. All resident needs are considered to assure no interruption of mail delivery. We repaired 37 mailboxes this year.

Snow & Ice Removal Statistics					
	FY 14-15	**FY 15-16**	**FY 16-17**	**FY 17-18**	**FY 18-19**
Number of Events	23	16	11	30	20
Events Plowed	4	4	6	12	10
Hours Expended	2,231	2,165	1,477	3,047	2,525.25
Number of Trucks	22	23	24	25	25
Tons of Salt Used	1,011	1,231	830.8	2,200	1,704.80
Gallons of Liquid Pretreating Used	9,000	9,600	6,118	15,518	26,400

Street Re-Surfacing

During the year various blacktop re-surfacing projects are completed by the Public Works Street Division. These often are the result of severe weather conditions affecting the street surfaces such as pot holes or buckling of the pavement.

Each year funding is made available for milling of street surfaces (grinding/removing approximately two inches of existing surface) and placement of approximately 4,600 tons of asphalt for these resurfacing projects. In 2018-19, the Division used approximately 5,600 tons of hot mix asphalt and 65 tons of recycled asphalt mix.

Hot mix asphalt is being dumped into paver box hopper

Creek Cleaning

The entire Westwood Creek system is cleaned of debris every Spring & Fall. To the right, two employees are breaking apart a beaver dam near Jeffrey Drive. Street Division also responds and removes debris blockages along Salt Creek, drainage ditches, and all other waterways within the Villages corporate limits. Below, two employees are scanning the shore for debris.

DuPage County River Sweep

DuPage County River Sweep is a county-wide cleanup held annually to encourage citizens to improve local waterways by removing debris and litter from a section of stream or pond – Addison typically is responsible for a section along Salt Creek.

These events are organized by The Conservation Foundation which is dedicated to preserving open space and natural lands, protecting rivers and watersheds and promoting stewardship of the environment in northeast Illinois. They are also supported by the DuPage County Stormwater Management Division as part of the NPDES Phase II permit.

Volunteers for River Sweep 2019

Debris is collected and reported to The Conservation Foundation

Public Works Department volunteers, along with Addison Boy Scout Troops and citizen volunteers participate in this event annually. These registered volunteers cover 11 areas throughout DuPage County.

Since the event was launched in 1991, volunteers have removed over 225 tons of debris from DuPage County waterways. Interesting items being removed during these events include folding chairs, sofas, carpeting, golf clubs, shopping carts, tires, bicycles, and to include thousands of cans, bottles and plastic bags. The Street Division provides labor and equipment for loading debris disposal.

The sound wall along I-290 between 83 and Wood Dale Road and further West from Farmwood to Foxdale subdivisions is maintained by the street department. Every year we have experienced traffic accidents resulting in wall damage.

Accident on January 14, 2019 damaging several panels on the sound wall between Route 83 and Wood Dale Road.

While there have been a few hit and run accidents, most of the offenders are tracked down through the cooperation of the Addison Police department, Illinois State Police, the Addison Fire Department and the Itasca Fire Department.

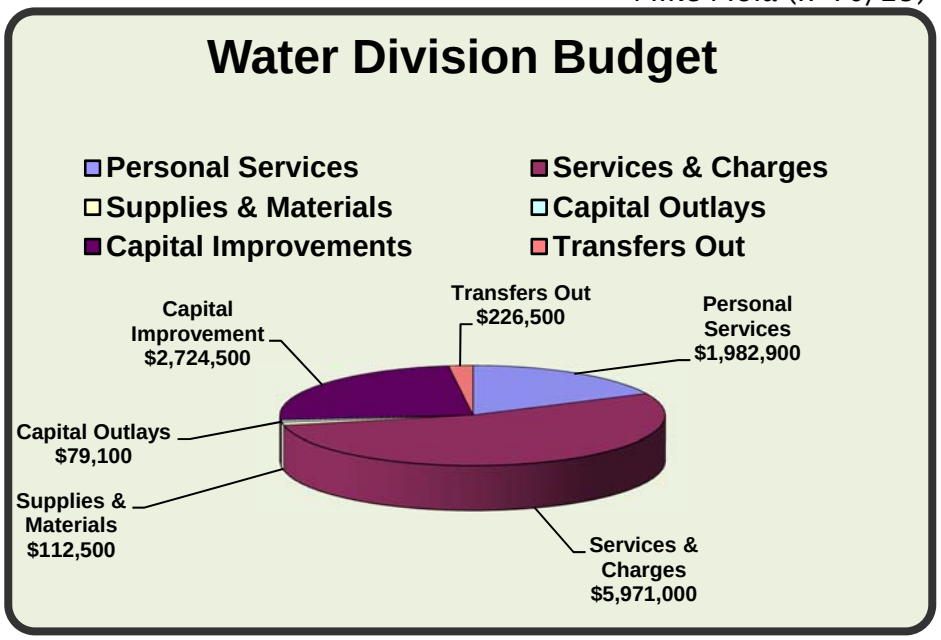
Water Division

Water Division

The Water Division monitors Village water quality in accordance with Illinois Environmental Protection Agency regulations for the safety and security of the community. The Division continues to also maintain wells in stand-by status to immediately cover any interruptions to the DuPage Water Commission water supply.

This monitoring is accomplished under the direction of the Division's foreman and a crew of three utility workers, five maintenance workers and one building maintenance worker.

Foreman:	Jim Russo
Public Utility Worker IV:	Stewart McLeod (til 8/14)
Public Utility Worker III:	Rick Russo
Public Utility Worker II:	Rob Davis
Public Utility I:	Jason Cunniff
Maintenance Worker III:	Jeff Ficarrotta
Maintenance Worker II:	Shawn Campbell Art Huebner Jim Sullivan
Maintenance Worker I:	Mike Caputo Mike Mola (fr 10/29)



Water Supply: Water supply responsibilities include the operation and maintenance of six standby wells, five pressure adjusting stations for receiving Lake Michigan water and two booster pumping stations.

The Division regulates all chemical feeding as required by the IEPA. This includes monthly samples for microbiology, Trihalomethane, volatile organics and lead and copper samples. The Division responds to resident concerns regarding water quality and pressure in their homes. Responsibilities also include the maintenance of all equipment and grounds for the 178 miles of water main, 2,300 hydrants, over 1,000 valves and 10,800 water services within the community.

Well	Address	Design Capacity
Well #4 **	Industrial & Westgate	400 GPM
	**Well #4 was capped and sealed	on August 13, 2014
Well #6	1011 W. Fullerton Avenue	1,150 GPM
Well #7	1011 W. Fullerton Avenue	1,000 GPM
Well #8	1011 W. Fullerton Avenue	800 GPM
Well #11	926 N. Lombard Road	1,000 GPM
Well #12	Swift Road south of Lake Street	400 GPM
Well #13	Waveland & Sumner	300 GPM

Water Reservoir Storage	Location	Design Data
#1	1011 W. Fullerton Avenue	2 – 750 GPM pumps 1 – 1,450 GPM pump 1.0 MG Storage
#2	711 N. Addison Road	4 – 900 GPM pumps 1.5 MG Storage
#3	926 N. Lombard Road	0.750 MG reservoir
#4	626 N. Swift Road	1.5 MG reservoir
#5	Vista & Winthrop	2 MG Stand Pipe 1 – 1,450 GPM pump

Standby Well Maintenance

The six standby wells remain operational. They are inspected yearly by an outside well contractor who performs a series of tests to determine the overall condition of each well. Each well is sampled for bacteriological contamination on a monthly basis VOC, SOC and IOC are sampled yearly and radiological elements sampled every 3 years.

Reservoir and Water Tower Maintenance
The water storage reservoirs are internally inspected and painted on a 12 to 15 year rotation. Technology has come a long way and the new coating system should last 25 years. This far exceeds the endurance of the paints that have been used in the past.

Special Programs: This consists of the Backflow Protection Program, Water Quality/System Testing, and GIS & GPS program data recording, Water Pressure Monitoring, Annual Consumer Confidence Reports, Hydrant Flow tests and Annual Fire Pump tests.

Watermain/Repair Maintenance: Main Repairs and Replacements, Hydrant Repairs, Replacements and Painting, Meter Installations, B-Box Repair/Install, Valve Repair/Install. Valve Exercising and Hydrant Flushing annually, Parkway and Concrete Restorations.

Repairs & Maintenance

	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
Water Main Breaks	57	65	75	74	64
Valves Repaired	5	8	9	8	5
Valves Replaced	0	1	3	2	1
Hydrants Repaired	20	9	25	16	19
Hydrants Replaced	3	0	2	2	3
Water Service Repairs	26	32	32	20	13

Water Meters: The Water Division has the responsibility of installing, testing, and rebuilding water meters. In many instances the Division will be asked to trouble-shoot meters on high bill complaints and leaky meters. An outside firm and one of the staff perform an organized large-meter testing annually. Monthly water service turn offs for non-payment of bills and private plumbing repair work can be a frequent work order for this Division.

Utility Locating: The Water Division is responsible to locate all village utilities when requested thru J.U.L.I.E. We respond to as many as 3,400 locate requests per year.

Automated Meter Reading Program (AMR)

Since 1991 the water division replaced all water meters in Addison with a new encoded type meter. This meter is the catalyst for any type of automated reading system. The ultimate goal is to have the ability to telemetrically read all meters.

In 2006 water division and Finance department reps met with several AMR System vendors and the Itron AMR system was chosen. This system is flexible and allows tracking of water use over multiple timeframes while sending meter alarms for various issues.

The Water Division continues the installation process of the new system and as of the beginning of this fiscal year 9,853 AMR units have been installed.

An end point unit is attached to the building and wired to the water meter enabling the system to record readings in 4-hour increments. After the installation on the outside of the building, the end point is programmed for that specific location via a lap top computer.

Through radio telemetry the readings are then sent via phone line to the central center, data is stored and made available to the Village providing water billing data.

This program has many advantages including the ability to provide ongoing, near continuous readouts of residents water use and eliminating the manpower requirements to travel "door-to-door" manually reading meters.

Emergency Water Main Repairs

Depending on each fiscal year's weather conditions, water main breaks can be a major factor in the department's material costs, equipment use and overall labor costs. This past Fiscal Year's water main breaks totaled 64. The "high" for water main breaks was 143 in Fiscal Year 1988-89 with a low in 2001-02 of only 47.

Water main breaks are identified by various means, whether by resident call-ins, Police notification, and alarm sensors built into the water system that "sense" abnormally high consumption spikes within identified sections of the system. Once notification of a main break comes into the division, steps are followed to ensure a timely response and repair to the main break. Staff assesses the site and it is secured, then J.U.L.I.E., the one call utility location center is notified, and utilities/potential utility conflicts are identified, crews respond, equipment and materials are prepared, and the repairs are completed using all safety measures and proper traffic controls. The location is then placed on a restoration list for a later date repair in house, using Public Works crews. The Village policy is to restore the location as close to its original condition as possible.

Results from each water main repair is recorded, recording manpower, equipment, materials used, even water loss when available. This information allows the Water Division to accurately track material use and inventory needs and provides much needed data for future budget preparations and background into trouble spots or weaknesses within the water system.

Capital Projects: Water Main Replacement Program

In-house records and data compiled from 1979 to 1989 were used to help prepare a report on the overall conditions of the water mains. The records and data, the type of break, the condition of the main, type of soil, proper main installation and lastly, breaks in the same area or street were all were used to prepare a report and list of areas where water main replacement projects would be most beneficial. This list was established based on the past 10 years of data.

Using this report, funding would be required to implement an ongoing replacement program. The water main replacement program is an ongoing Capital Improvement Program and proposed water main improvements are presented to the Village Board during budget reviews.

The basis of the annual water main replacement program is to improve the overall system performance, to replace old deteriorating water main, water mains improperly installed or installed in bad soils without protection from the elements. Water main replacement is a priority when new roads are proposed under the MFT Program, when water main breaks are frequent in an area, to improve the water distribution system, and/or due to other necessary requirements. This program has been funded since FY88/89.

The water main on Army Trail Boulevard was replaced from Mill Road west to Lombard Road. Approximately 4,400 feet of 8 inch water main, 1,600 feet of 12 inch water main, 18 fire hydrants and 35 water services were all replaced.

The water main under I-290 Expressway was replaced from 500 East Lake Street North to Old Grand Avenue. Approximately 900 feet of 8-inch water main was replaced with a new 12-inch ductile water main. Nearly 500 feet needed to be augured and jacked in a 24 inch steel casing pipe under the I-290 Expressway which is under the jurisdiction of the Illinois Department of Transportation.

Cross Connection and Backflow Protection

In 2004, the Village of Addison passed Ordinance #0-04-120 amending the Village Municipal Code to add a new Chapter 6 Article 30 – titled Cross Connection Control and Backflow protection. This is based on the Illinois State Plumbing Code and Environmental Protection Agency regulations.

Illinois State Plumbing Code requires protection of all potable water systems from contamination due to backflow of contaminants through plumbing connections, fixtures or appurtenances. The Illinois Pollution Control Board Regulations also require an active program of cross-connection control which will prevent the contamination of all public waste supply systems due to the backflow of contaminants or pollution through the potable water service connection.

The Water Division has aggressively enforced this ordinance to ensure all irrigation systems and fire sprinkler systems are in compliance. At conception of the law there were over 262 fire systems not in compliance with the ordinance. In the past years 176 businesses have been brought into compliance. The remaining 56 have been notified and are moving forward to change out their old systems. All backflow protection devices are required to be tested and certified on a yearly basis, with a copy of the test data results send to the Public Works Department Water Division for file.

Annual Water Quality Report

A Water Quality Report is prepared every April and is mailed to all customers within the Village. This report keeps the community current as to the quality of drinking water delivered to the community. Addison receives its water through the DuPage Water Commission (DWC) who receives it directly from the City of Chicago, Jardine Water Filtration Plant located near Navy Pier.

The Village of Addison Water Division samples and monitors the water throughout the entire water distribution system every month as mandated by the Safe Drinking Water Act (SDWA).

Water Sampling

The Water Division collects, at a minimum, 46 water samples each month from sampling points distributed evenly throughout the Village to insure the drinking water is free from bacteria. If these required samples were not submitted or if a sample would be found to be contaminated, this would be a violation of SDWA and EPA regulations. If this would be the case, the Water Division is obligated to notify all Addison residents immediately and take measures necessary to bring the system back into compliance.

This year, as in past years, Village of Addison drinking water met all USEPA and State drinking water standards. There were zero water quality violations recorded during this reporting period.

In addition to performing bacteriological testing, the Water Division collects water samples at homes throughout the Village to test for lead and copper contamination. Homes containing lead pipes, lead service lines or copper pipe soldered with lead based solder are chosen based on criteria set by the United Stated Environmental Protection Agency. If more than 10% of the collected samples exceed levels set by the USEPA, the Village would be notified by the IEPA as to what action would be required. Since the inception of this program in July, 1992, and after only two rounds of sampling, the IEPA reduced the number of samples Addison was required to test from 60 to 30 due to the Village's water being in compliance with lead and copper standards.

Plan Review

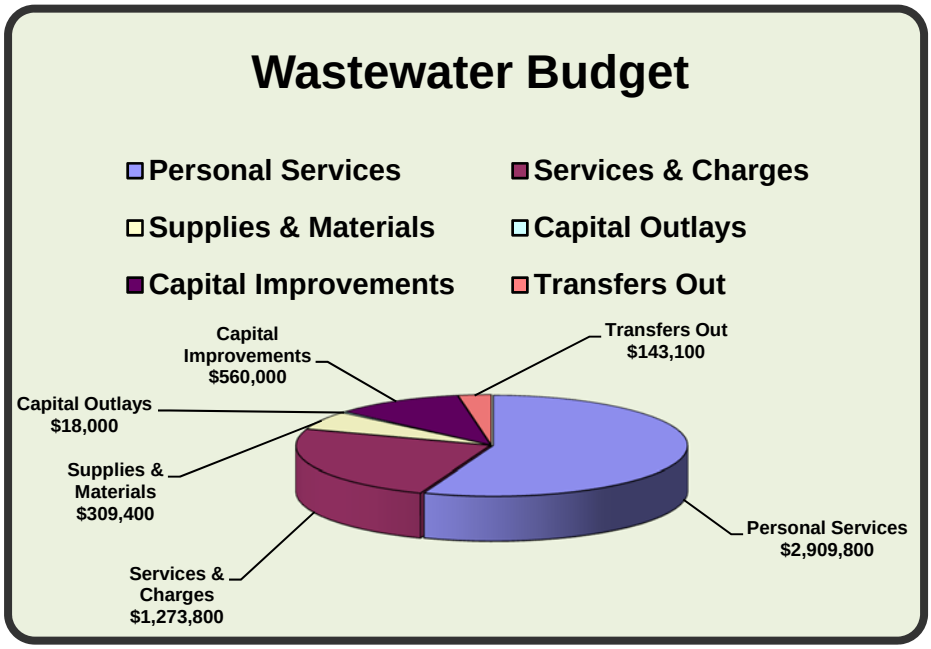
The Water Department reviews all plans relating to water main replacement, new construction and building services, domestic as well as fire protection.

Environmental Services Divisions

Wastewater Treatment

Wastewater

The Division of Environmental Services is responsible for the operation of the two wastewater treatment facilities in the Village of Addison. Between these two facilities over 2 billion gallons of municipal wastewater is treated annually under guideline levels set forth in the Federal NPDES (National Pollutant Discharge Elimination System) Permit utilizing an operating budget of 6.42 million dollars.



The Wastewater budget includes totals from three divisions of Environmental Services; the North Facility, the A J LaRocca Facility, and the Laboratory and Technical Services Division. Based on our average daily water usage in the Village, the current cost per 1000 gallons for treatment is approximately $3.40 per unit.

The **A.J. LaRocca Wastewater Treatment Facility** located at 333 S. Villa Avenue is under the management of one foreman, four certified wastewater operators and one maintenance worker.

Foreman:	Eric Pabon
Chief Operator:	Howard Hill, Jr
Wastewater Operator 2	Ryan Hayden
Wastewater Operator 4	Brad Baxa
	Al Sral
Maintenance Worker III:	Kirk Miller

This facility is a 3.2 MGD (Million Gallons per Day) Secondary, Activated Sludge Plant with nitrification process and combined sewer overflow pumping/treatment capabilities.

(Design Population: 32,000 – Design Volume: 2,216 GPM / 3,200,000 GPD)

A.J. LaRocca Treatment Facility Design Data

Raw Sewage Pumping Capacity	**2 –**	50HP (1,900 GPM/each)	(2,736,000 GPD/each)
	3 –	40HP (1,900 GPM/each)	(2,736,000 GPD/each)
	1 –	40HP (2,500 GPM/each)	(3,600,000 GPD/each)
		Total: 12,000 GPM	**Total: 17,280,000 GPD**

Influent Design Parameters
Raw Sewage Biochemical (204 mg/L – 5,444 lbs./day)
Oxygen Demand (305 mg/L – 8,140 lbs./day max.)
Raw Sewage Suspended Solids (264 mg/L – 7,045 lbs./day)
Raw Sewage Ammonia Nitrogen (20 mg/L – 534 lbs./day)

Preliminary Treatment

2 – Mechanical Screening Units
(22.75" Wide X ½' Clear Opening,
4 MGD @ 2' Wide T.D.H.)

1- Parkson Aqua Washpress Screenings compactor

1 – Pista Grit Trap
(205 GPM @ 41 T.D.H., Screw Conveyor, 5.0 MGD)

1 – Aerated Grit Chamber
(8.4 Min. Detention Time, 20 HP Motor – 250 GPM @
55 T.D.H., 3.2 MGD)

Primary Treatment

1 – Circular Settling Tank

Surface Area	5,024 Sq.Ft.
Volume	50,240 Cu.Ft.
Surface Settling Rate	637 Gal./Sq.Ft./Day
Detention Time	2.8 Hours
Weir Overflow Rate (248' of Weir)	12,903 Gal./Ft./Day
B.O.D. Reduction	25% of 204 mg/L=155 mg/L
Suspended Solids Reduction	50% of 264 mg/L=132 mg/L

First Stage Aeration Process A:	2-	**Aeration Tanks** (Volume Total: 55,944 Cu.Ft.)	
		Detention Time	8.3 Hours
		Average B.O.D. Applied	1,532 Lbs./day
		Average B.O.D. Loading	7.4 Lbs./1,000 Cu.Ft.
First Stage Aeration Process B:	2-	**Aeration Tanks** (Volume Total: 67,500 Cu.Ft.)	
		Detention Time	6.03 Hours
		Average B.O.D. Applied	2,552 Lbs./Day
		Average B.O.D. Loading	37.8 Lbs./1,000 Cu.Ft.
First Stage Settling Tanks - Process A:	1-	**Two-Bay Tank** (Volume Total: 19,200 Cu.Ft.)	
		Surface Area Total	1,920 Sq.Ft.
		Surface Settling Rate	625 Gals./Sq.Ft./Day
		Detention Time	2.87 Hours
		Weir Overflow Rate (171' of Weir)	7,020 Gals./Ft./Day
		B.O.D. Reduction	
		Suspended Solids Reduction	75% of 155 mg/L = 116 mg/L
			38% of 132 mg/L = 50 mg/L
First Stage Settling Tanks - Process B:	2-	**Flight/Chain Final Settling Tanks** (Volume Total: 37,500 Cu.Ft.)	
		Surface Area Total	3,750 Sq.Ft.
		Surface Settling Rate	533 Gals./Sq.Ft./Day
		Detention Time	3.27 Hours
		Weir Overflow Rate (344' of Weir)	5,814 Gals./Ft./Day
		B.O.D. Removal	75% of 155 mg/L = 116 mg/L
		Suspended Solids Removal	38% of 132 mg/L = 50 mg/L
Second Stage Aeration	2 –	**Aeration Tanks** (Volume Total: 76,500 Cu.Ft.)	
		Detention Time	3.8 Hours
		Average B.O.D. Applied	1,068 Lbs./Day
		Average B.O.D. Loading	16 Lbs./1,000 Cu.Ft.
		AVG Ammonia Nitrogen Applied	534 Lbs./Day
		AVG Ammonia Nitrogen Loading	8 Lbs./1,000 Cu.Ft.
Second Stage Settling Tanks	2 –	**Flight/Chain Final Settling Tanks** (Volume Total: 63,000 Cu.Ft.)	
		Surface Area Total	6,300 Sq.Ft.
		Surface Settling Rate	507 Gals./Sq.Ft./Day
		Detention Time	3.38 Hours
		Weir Overflow Rate (640' of Weir)	5,000 Gals./Ft./Day
		B.O.D. Removal	50% of 40 mg/L =20 mg/L
		Suspended Solids Removal	50% of 50 mg/L = 25 mg/L
		Ammonia Nitrogen Removal	92.5% - 20 mg/L=1.5 mg/L
Turbo Blower	1-	**Blower**@ 6270 CFM	
Centrifugal Blowers	2 –	**Blowers** @ 6,100 CFM/each	
		First Stage Aeration A	2,100 CFM
		First Stage Aeration B	3,200 CFM
		Second Stage Aeration	5,500 CFM
		Aerobic Digester A	800 CFM
		Aerobic Digester B	600 CFM
		Require 1,500 CFM/LF. B.O.D.	
		Total Air Required	12,200 CFM

Aerobic Sludge Digesters A&B		Aerobic Digester A Volume	52,542 Cu.Ft.
		Aerobic Digester B Volume	29,700 Cu.Ft.
		Combined Total Volume	82,242 Cu.Ft.
		Volume Per Capita	2.57 Cu.Ft.
Anaerobic Sludge Digestion	1 –	**Circular First Stage Heated Digester Floating Cover, Gas Accumulator & Gas Mixing** (Volume Total: 37,131 Cu.Ft.) (Volume Per Capita: 1.16 Cu.Ft.)	
	1 –	**Circular Second Stage Heated Digester Floating Cover & Gas Accumulator** (Volume Total: 37,131 Cu.Ft.) (Volume Per Capita: 1.16 Cu.Ft.)	
Sludge Dewatering	18-	**Paved Bottom Sludge Drying Beds** (Drying Area: 27,630 Sq. Ft.) (Area Per Capita: .86 Sq. Ft.)	
	2 –	**Mechanical Sludge Dewatering Units** (Unit 1&2 – Sized: 80" Belt) Hourly Capacity (@1.5% Feed Solids) 4,320 Gals. (551 lbs. – Dry Solids)	
Engine Generator	2 –	**Units** (620 KW/each – 775 KWA/each) 933 AMPS/each Fuel – Diesel Fuel Storage – 10,000 Gallons	
Engine Generator Storm Pump Station	1-	150 KW – 185 KVA 225 AMPS Fuel – Natural Gas	
Chlorine Contact Tanks	2 –	**Rectangular Tanks** (Volume: 31,600 Cu. Ft.) Detention @ 22.75 MGD – 15 Minutes	
	2 –	**Chlorine Units** Unit 1 – Capacity: 100 lbs/day Unit 2 – Capacity: 500 lbs/day Chlorine Storage: 1 1-ton container = 2,000 Lbs.	
Dechlorination Facilities	1 –	**Rectangular** (Volume: 6,000 gallons) Length – 25'6" Width – 8' Solution – Sulfur Dioxide Detention @ DAF – 2.70 Minutes	
CSO Pumping Station	3 –	**Influent Pumps** (60 HP, 350 GPM/each = 15,120,000 GPD Max.) Design – 2 @ 10 MGD Total	
	2 –	**Mechanical Climber Screens** 15 MGD 150#/Hr. – each **Grit Removal & Washing** 24,000 Gallons	

First Flush Tank

2 – **Rectangular Tanks** (69,300 Gallons/each = 138,600 Gallons/Total)
2 – (18,529 Cu.Ft.)
Aspirator Pumps (25 HP/each – 230 GPM/each)

CSO Clarifiers

2 – **Circular** @ 80' Diameter (100,000 Cu.Ft.)
(Volume Total: 750,000 gallons)
Surface Settling Rate @ 10 MGD – 1,102 Gal./Sq.Ft./Day
Surface Settling Rate @ 11.7 MGD – 1,163 Gal./Sq.Ft./Day

Chemical Building

Sludge Aeration Tank (12,500 gallons/1,671 Cu.Ft.)
200 – CFM Air Diffusion
3 – Diaphragm Pneumatic Transfer Pumps
(70-140 GPM Variable)

Chemical Building (Continued)

1 – Centrifugal Transfer Pump (5HP @ 100 GPM)

Sodium Hypochlorite Feed System (5,000 gallon Bulk Storage)
(2 – Chemical Feed Pumps)
(**1**-Neat: 0.1-315GPD)
(**1**-Neat 0.1-912GPD)
Polymer Feed System (1,000 gallon Bulk Storage)
(3 – Polymer Feed Pumps)
(Neat: 0.4-2.0 GPH)
(Solution: 10-100 GPH)
Non-Potable Water System
(2 – Raw Water Pumps: 100 GPM/each)
(2 – Non-Potable Pumps: 100 GPM/each)
(1 – Media Filter: 24.5 SF @ 100 GPM)
(1 – Hydroneumatic Tank: 1,400 Gallons @ 60-70 PSI)

MAIN GATE LIMITORQUE ACTUATOR REPLACEMENT

In February of 2019, the AJL Facility replaced its limitorque gate actuator that controls flow that comes into its main headworks. The picture shown on the left shows the control panel open in which all power was lost and the gate had stopped working property. This actuator is vital to the facility as once the wet well reaches a certain height, the gate will automatically close on its own to prevent the main wet well from flooding. The picture shown on the right is the brand new gate actuator that was installed. It is half the size of the old one and with technology, this gate has the capabilities of shutting down even sooner when a heavy storm comes in.

RAW PUMP PLUG VALVE REPLACEMENT

In the month of April of 2019, Dahme Mechanical Industries came in and replaced Raw Pump #2 plug valve. In the top left picture, the original plug valve is in process of getting removed which is the same valve that's been in service since the treatment plant was built. Over time, grit tends to build inside making it impossible at times to close and do service to the pump. The bottom two pictures show the installation of the new plug valve. The plugs in plug valves have one or more hollow passageways going sideways through the plug, so that fluid can flow through the plug when the valve is open.

POTABLE WATER LINE REPLACEMENT AT NORTH END OF THE AJL FACILITY

During the fall months of 2018, the Water Division replaced over 250 feet of the potable water line that feeds the north end buildings of the treatment plant facility. The workers were able to tie into an existing line inside the facility that began right in front of the Sewer Division and ended by the combined sewer overflow (CSO) building. During our winter months when we have deep freezes, pipes underground tend to burst which happened with the existing potable line that has been in service since the mid 80's. With bringing the new line inside the yard, field workers will be able to shut off the water in the near future to work on other damaged lines that will need to be replaced in the future.

The **North Wastewater Treatment Facility** located at 711 N. Addison Road is under the management of one foreman with a crew of threw wastewater operators, one maintenance worker, and one custodian.

Foreman:	Doug Armstrong
Chief Operator:	John Haberstich
Wastewater Operator 2:	Maureen Wright
	Dane Swenson
Maintenance Worker III:	Bob Greve
Custodian:	Felipe Fernandez

This facility is a 5.3 MGD (Million Gallons per day) Secondary, Activated Sludge Plant with nitrification process and storm water pumping/treatment capabilities.

(Design Flow: 5.30 MGD, Peak Flow (Dry Weather): 7.60 MGD)

North Wastewater Treatment Facility Design Data

Influent		Biochemical Oxygen Demand	155 mg/L = 6,850 Lbs./Day
		Suspended Solids	185 mg/L = 8,180 Lbs./Day
		Ammonia Nitrogen	15 mg/L = 660 Lbs./Day
Effluent		Biochemical Oxygen Demand	20 mg/L = 884 Lbs./Day
		Suspended Solids	25 mg/L = 1,105 Lbs./Day
		Ammonia Nitrogen	1.5 mg/L = 66 Lbs./Day
Raw Sewage Pumping Capacity	4 –	**Vertical Non-Clog Centrifugal Pumps - VFD** (40 HP, 1,760 GPM/each – 10 MGD Total)	
Preliminary Treatment	2 –	**Mechanical Screening Units w/ Washer Compactor** (2.10' Wide – 0.235" Clear Opening: 4.7MGD Capacity/each)	
	1 –	**Manual Bar Rack** (1.25" Clear Opening)	
	1 –	**Aerated Grit Tank** (2,120 Cu.Ft. Volume, 120 SCFM Air Requirement, 3.0 min. Detention Time @ 7.6 MGD) **Auger, Chain & Bucket Removal System w/Grit Washer**	
Primary Settling	3 –	**Circular, Center-Feed, Peripheral Effluent Clarifiers**	
		Diameter/Each	63'
		Sidewater Depth	10'
		Volume/Each	233,200 Gals. (31,176 Cu.Ft.)
		Detention Time @ 5.3 MGD	3.2 Hours
		Detention Time @ 7.6 MGD	2.2 Hours
		Surface Area/Each	3,120 Sq.Ft.
		SSR @ 5.3 MGD	567 GPD/Sq.Ft.
		SSR @ 7.6 MGD	813 GPD/Sq.Ft.
		Weir Length/Each	198 Linear Ft.
		Weir Overflow @ 7.6 MGD	12,800 GPD/Linear Ft.

4 – **Pneumatic Diaphragm Pumps**
Size: 4”
Capacity: 150 GPM

First Stage Aeration

2 – **First Stage Aeration Basins**

Length	135’
Width	30’
Depth	15’
Volume/Each	454,500 Gals. (60,600 Cu.Ft.)
Detention Time @ 5.3 MGD	8.2 Hours
B.O.D. Loading	40 lbs. B.O.D. (1,000 Cu.Ft./Day)
Oxygen Transfer Efficiency	12% (Clear Water)

Second Stage Aeration

4 – **Second Stage Aeration Basins**

Length	135’
Width	30’
Depth	15’
Volume/Each	454,500 Gals. (60,600 Cu.Ft.)
Detention Time @ 5.3 MGD	4.0 Hours
B.O.D. Loading	7 lbs. B.O.D. (1,000 Cu.Ft./Day)
Oxygen Transfer Efficiency	12% (Clear Water)

Centrifugal Blowers

4 – **Aeration Blowers** (2,600 CFM/each)
First Stage Aeration: 2,496 CFM
Second Stage Aeration: 2,496 CFM
3 – **Channel Air Blowers** (2,050 CFM/each)
3 – **Aerobic Digester Blowers** (2,050 CFM/each)
Aerobic Digestion: 2,600 CFM

Intermediate Settling Tanks

3 – **65’ Diameter, Peripheral Feed and Effluent**

Sidewater Depth	12’
Volume/Each	297,900 Gals. (39,826 Cu.Ft.)
Detention Time @ 5.3 MGD	4.0 Hours
Detention Time @ 7.6 MGD	2.8 Hours
Surface Area/Each	3,320 Sq.Ft.
SSR @ 5.3 MGD	532 GPD/Sq.Ft.
SSR @ 7.6 MGD	763 GPD/Sq.Ft.
Weir Length/Each	204 Linear Ft.
Weir Overflow @ 5.3 MGD	8,660 GPD/Linear Ft.
Weir Overflow @ 7.6 MGD	12,400 GPD/Linear Ft.

Final Settling Tanks

4 – **65’ Diameter, Peripheral Feed and Effluent**

Sidewater Depth	12’
Volume/Each	297,900 Gals. (39,826 Cu.Ft.)
Detention Time @ 5.3 MGD	5.4 Hours
Detention Time @ 7.6 MGD	3.8 Hours
Surface Area/Each	3,320 Sq.Ft.
SSR @ 5.3 MGD	399 GPD/Sq.Ft.
SSR @ 7.6 MGD	573 GPD/Sq.Ft.
Weir Length/Each	204 Linear Ft.
Weir Overflow @ 5.3 MGD	6,495 GPD/Linear Ft.
Weir Overflow @ 7.6 MGD	9,300 GPD/Linear Ft.

Chlorination Facilities	2 –	**Rectangular**	
		Length	49’
		Width	15’
		Depth	12’
		Volume/Each	64,600 Gals. (8,636 Cu.Ft.)
		Detention Time @ 12.1 MGD	15 Minutes
		Chlorine Requirement:	
		(Dry Weather @ 5.3 MGD)	6 mg/L – 265 Lbs./Day
		(Wet Weather @ 4.5 MGD)	8 mg/L – 300 Lbs./Day
Dechlorination Facilities	1 –	**Rectangular**	
		Length	25’
		Width	8’
		Volume	6,000 Gallons
		Detention Time	1.6 Minutes @ DAF
		Solution	Sulfur Dioxide
Anaerobic Sludge Digestion	3 –	**45’ Circular Digesters (2 Mixed & 1 Storage)**	
		Sidewater Depth	20’
		Volume/Each	31,793 Cu.Ft.
		VSS Loading (Mixed)	63 Lbs./1,000 Cu.Ft.
		Per Capita Loading	1.6 Cu.Ft./Capita
		VSS Destruction	55%
		Solids to Disposal	3,118 Lbs./Day
		Solids Retention Time (Mixed)	30 Days
		Storage Capacity @ 5% TS	63 Days
		Gas Yield (15 Cu.Ft./lbs.	32,800 Cu.Ft./Day
		VSS Destroyed)	
		Gas Production	.81 Cu.Ft./Capita/Day
		Heat Value (566 BTU/Cu.Ft.)	18.6 Million BTU/Day
Aerobic Digestion	1 –	**Circular** (Divided into four equal Quadrants)	
		Volume Total	86,400 Cu.Ft.
		VSS Loading	0.02 Lbs./Cu.Ft./Day
		Per Capita Volume	2.14 Cu.Ft./Capita
		Solids to Disposal	1,700 Lbs./Day
		Solids Retention Time	70 Days
		Air Required	2,600 SCFM
Sludge Dewatering Facilities	2 –	**Belt Filter Presses** (2 Meters Wide/Each)	
		Total Solids per Day	4,814 Lbs.
		Loading Aerobic	400 Lbs./Hour/Meter
		Loading Anaerobic	900 Lbs./Hour/Meter
		Cake Volume @ 18% TS	124 Cu.Yds./Weed

Excess Flow Facilities

Pump Station
3 – Wet Well Variable Speed Submersible Pumps
Capacity/Each: 6,800 GPM
Station Capacity (2 Pumps): 13.6 MGD

First Flush Storage – Aerated Circular Tank
Capacity: 670,400 Gals. (89,626 Cu.Ft.)
Detention Time @ 1.62 MGD: 10 Hours

Excess Flow Settling – One Circular
Diameter: 81'
Sidewater Depth: 10.5'
Surface Area: 5,150 Sq.Ft.
SSR @ 1.62 MGD: 315 GPD/Sq.Ft.
SSR @ 4.50 MGD: 874 GPD/Sq.Ft.

ANAEROBIC DIGESTORS PUMP REPLACEMENTS

The anaerobic digestors at the North Wastewater Treatment Plant utilizes two centrifugal pumps to both mix the digestor and transfer the biosolids through the heat exchangers. The pumps operate under a cycled sequence 24 hours a day. The anaerobic solids they pump are generally thick, acidic and contain amounts of inorganic materials. The pumps are considered severe duty. The pumps had been in operation for over thirty years, operating well past their life expectancy. Budgetary funding was secured this past year to replace both pumps. The pumps were replaced with identical models, due largely in part because of the previous pumps performance and longevity. Prior to pump selection, Village staff also consulted with the engineering firm tasked with upgrading the anaerobic digestor equipment, to ensure that the new pumps would be suitable for the future upgrade. Limited access to the pumps made removal of the old pumps and installation of the new pumps challenging.

CLARIFIER REPAIR

The North Wastewater Treatment Facility utilizes three primary clarifiers, three intermediate clarifiers, and four secondary/final clarifiers. All these basins are routinely drained, cleaned and inspected. Upon one of the inspections, it was discovered that the floor on one of the final clarifiers had suffered severe failure. The finished grout floor had heaved and subsequently cracked. This failure had caused significant reduction in clarifier operation. The Environmental Services administration requested and received budgetary funding to repair the clarifier. The project had several challenges that needed to be met. The most difficult was the ever present ground water. Significant ground water is a constant struggle at the North facility. The contractor created a sump pit within the basin, and ran a sump pump throughout the duration of the project.

The existing grout floor needed to be jackhammered and removed from the clarifier. A skid steer tractor was lowered into the structure; this tractor was used to break the floor as well as load the debris into a bucket and craned out. Once all flooring was removed, all new pressure relief valves were cored and installed into the existing base. Prior to installation of the new grout, the contractor needed to re-level and re-plumb the clarifier mechanical components. The new grout needed to be installed and leveled precisely to match the operation of clarifier mechanical structure. Once the grout had appropriately cured, the final was returned to service and has been operating satisfactorily.

Operation Data

Raw Sewage Flow/Cost

Location	Gallons Receiving Secondary Treatment	Daily Average Flow	Monthly Flow Rate Maximum MGD	Monthly Flow Rate Minimum MGD
A.J. LaRocca Facility	811,211,000	2,229,000	3.063	1.297
North Facility	1,309,570,000	3,588,000	4.639	2.903
Combined Total	2,120,781,000	5,817,000	7.702	4.200

Excess Flow Facilities

Location	Total Gallons Treated	Average BOD	Average Suspended Solids
A.J. LaRocca Facility	85,721,000	3.71 mg/L	9.5 mg/L
North Facility	47,910,000	3.85 mg/L	9.0 mg/L
Combined Total/Average	133,631,000	Avg = 3.78 mg/L	Avg = 9.25 mg/L

Electrical Consumption

Location	Average Daily KWH Used	Total KWH Used	True Cost KWH	Total Cost
A.J. LaRocca Facility	5,534.83	2,020,211.34	0.0785	$160,743.17
North Facility	8,436.93	3,320,801.92	0.0827	$273,958.48
Combined Total	13,971.76	5,091,254.02	0.0806	$434,701.65

Natural Gas Consumption

Location	Average Therms Use - Daily	Total Therms Used	True Cost Therm	Total Cost
A.J. LaRocca Facility	93.86	34,257.32	$0.507	$16,091.37
North Facility	101.14	36,914.80	$0.596	$19,768.14
Total	195.00	70,515.12	$0.551	$35,859.51

Treatment & Related Costs

Carbonaceous Biochemical Oxygen Demand – 5 days @ 20 Degrees C mg/L

Location	Average RAW	Average Effluent	Permit Required Effluent	% of BOD Removed	Total Lbs. BOD Removed
AJL Facility	142.37 mg/L	2.50 mg/L	20 mg/L	94.3%	933,824
North Facility	165.33 mg/L	2.80 mg/L	20 mg/L	95.0%	1,775.122
Average/Total	153.85 mg/L	2.65 mg/L	20 mg/L	94.7%	2,708,946

Total Suspended Solids mg/L

Location	Average RAW	Average Effluent	Permit Required Effluent	% of SS Removed	Total Lbs. SS Removed
AJL Facility	143.0 mg/L	4.6 mg/L	25 mg/L	96.0%	955,139
North Facility	121.1 mg/L	6.5 mg/L	25 mg/L	94.0%	1,301,839
Average/Total	132.05mg/L	5.5 mg/L	25 mg/L	95.0%	2,256,978

Chlorination Final Effluent

Location	Total Lbs. Cl2 Used	Average Lbs/Day	Average mg/L Residual	Avg. Fecal Colonies 100 M/L	Total $ Cl2
AJL Facility	900	21	0.034	1	$398.70
North Facility	8,510	48	0.020	1	$3,759.93
Average/Total	9,410	36	0.027	1	$4,168.63

*** DISINFECTION is seasonal and occurs only during the months of May thru October, as per IEPA permit.**

Sodium Hypochlorite	Gallons	Average Gals/Day	Total $
AJL Facility	6,004	32.6	$3,680.00

Dechlorination Final Effluent

Location	Total Lbs. SO2 Used	Average Lbs/Day	Total $ SO2
AJL Facility	2,317	12.0	$886.00
North Facility	3,238	19.0	$1,434.43
Average/Total	2,778	15.5	$2,460.86

Ammonia Nitrogen as N – mg/L Peak Flow Average

Location	Average RAW	Average Effluent	Permit Required mg/L Effluent Monthly/Daily Average/ Max	% of NH3 Removed	Total Lbs. NH3 Removed
AJL Facility					
Summer	14.73 mg/L	0.078 mg/L	1.5/3.0	99.3%	54,990
Winter	12.24 mg/L	0.039 mg/L	4.0/8.0	99.6%	32,903
North Facility					
Summer	17.44 mg/L	0.060 mg/L	1.5/3.0	94.7%	189,821
Winter	12.75 mg/L	0.034 mg/L	4.0/8.0	99.6%	138.881
Yr. Avg/Total	14.29 mg/L	0.052 mg/L	----	98.3%	416,595

Land Applied Sludge (Liquid)

Location	Gallons Aerobic	% Solids Aerobic	Gallons Anaerobic	% Solids Anaerobic	Sludge Hauled	$ Per Gallon	Total $ Liquid Applied
North Facility	- 0 -	- 0 -	- 0 -	- 0 -	- 0 -	- 0 -	- 0 -

Land Applied Sludge (Solid)

Belt Presses	Gallons Aerobic to Press	Average % Feed Solids	Average % Cake Solids	Total Cu. Yds. Removed	Cost Cu. Yds. Removed	Cost Press (Aerobic Disposal)
North Facility	4,290,581	1.80	12.71	3,325	$22.61	$76,308.75

	Gallons Anaerobic to Press	Average % Feed Solids	Average % Cake Solids	Total Cu. Yds. Removed	Cost Cu. Yds. Removed	Cost Press (Anaerobic Disposal)
	1,236.680	5.40	22.03	1,650	$22.61	$36,741.25

Drying Beds	Gallons Applied to Beds	Average % Solids	Cu. Yds. Removed from Beds	Cost Cu. Yds. Removed	Total Cost
AJL Facility	883,980	1.87%	830	$26.74	$22,194.20
North Facility	- 0 -	- 0 -	- 0 -	- 0 -	- 0 -

Total Land Applied Sludge

	Quantity	Cost
Total gallons liquid removed Land Application	- 0 -	- 0 -
Total cost liquid Land Application	- 0 -	- 0 -
Total Cu. Yds. Semi-Solid Land Application	5,830Cu. Yds.	$156,939.72
Total Cost Semi-Solid Land Application		$140,866.43

Sludge Transfer

A.J. LaRocca Facility to North Facility

Gallons Aerobic:	305,000
% Solids	1.71%
Gallons Anaerobic	620,500
% Solids	5.13%
Hrs. Transferred	236
Transfer Cost	21,694.82

Sludge Removal & Related Costs – Landfill

Landfill Sludge

	Gallons to Press	Average % Feed Solids	Average % Cake Solids	Total Cu. Yds. Removed
North Facility Aerobic (Belt Press)	- 0 -	- 0 -	- 0 -	- 0 -
Anaerobic	- 0 -	- 0 -	- 0 -	- 0 -

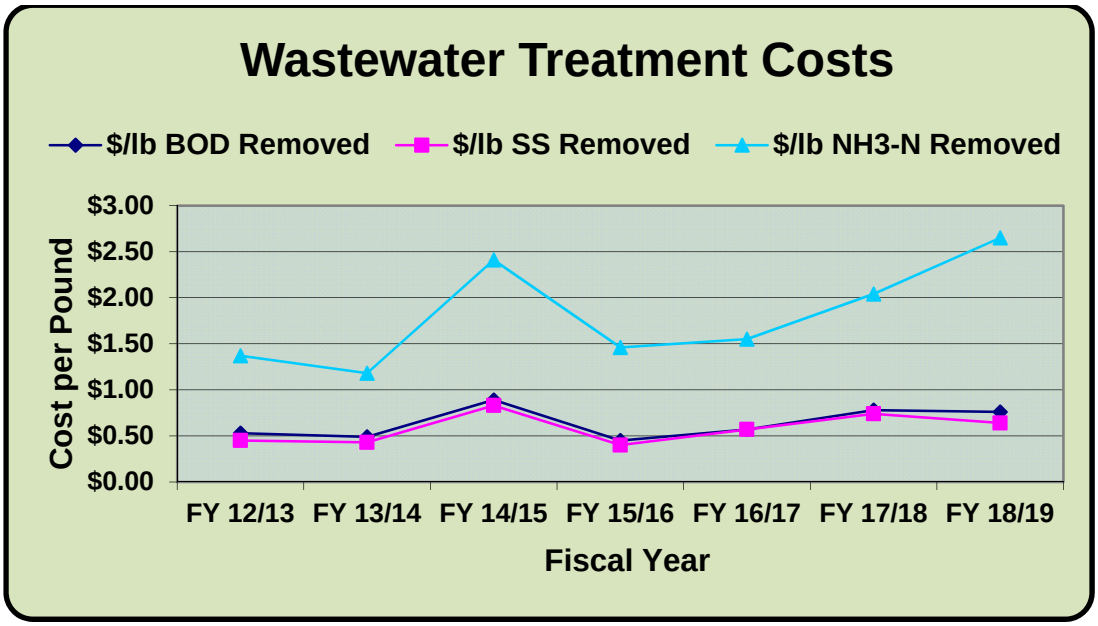
	Gallons Applied to Beds	Average % Solid SS	Cu. Yds. Removed	Cost Cu. Yds. Removed	Total Cost
AJL Facility (Drying Beds)	- 0 -	- 0 -	- 0 -	- 0 -	0.00

North Facility Landfill Costs

Press to Landfill Total Cu. Yds.	Total Landfill Cost
- 0 -	0.00

Total Sludge Removal Costs

Total Land Application Costs	Total Landfill Costs	Total Transfer Costs	Total Sludge Removal Costs
$140,866.43	- 0 -	$18,826.50	$159,692.93

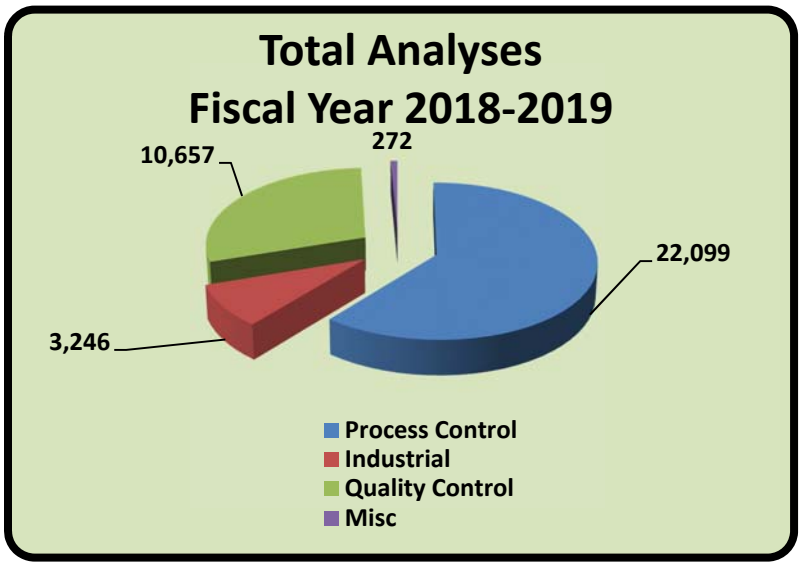


Lab & Tech Services/ Environmental Concerns

Laboratory and Technical Services

The **Laboratory and Technical Services Division** of Environmental Services is located in the North Wastewater Treatment Facility and performs the necessary analyses for process control and compliance for both the Wastewater Treatment facilities and Addison's industrial-commercial programs. In addition, the division is responsible for all technical support for the creation, testing, and enforcement of local environmental regulations. Some of the regulations include air pollution (particulates), noise pollution, and land pollution. The division also provides assistance for the use and implementation of Geographic Information Systems (GIS), recycling programs, and Public Works special waste disposal. The lab supervisor and four lab technicians maintain an extensive daily schedule to provide these services to comply with state and federal regulations.

Lab Supervisor:	Chris Reynolds
Lab Tech II:	Dianne Burdorf Guadalupe Rivera Elizabeth Fiorino
Lab Tech I:	Dan Panico



Process Control: Routine plant monitoring and required NPDES parameter performed on a weekly schedule, includes excess flow monitoring, belt press, analysis, stream monitoring and other process monitoring.

Industrial Pretreatment: Monitoring related to our Industrial Pretreatment Program. The related requirements of various permit Special Conditions.

Quality Control: All analytical data generated to meet the goals of our Quality Assurance program.

Analytical Parameters

Alkalinity – The capacity of water to neutralize acids measured in milligrams of equivalent calcium carbonate per liter.

Ammonia Nitrogen – The quantity of elemental nitrogen present in the form of ammonia (NH3) expressed in milligrams per liter.

Biochemical Oxygen Demand (BOD) – A measure of the quantity of oxygen required for the biochemical oxidation of organic matter in a specified time, at a specific temperature, and under specified conditions in milligrams per liter.

Carbonaceous BOD (CBOD) – A measure of the amount of oxygen required for the biological oxidation of carbon-containing compounds.

Chemical Oxygen Demand (COD) – A quantitative measure of the amount of oxygen required for the chemical oxidation for organic material expressed in milligrams per liter.

Chloride – A measure of the chloride ion present in the sample expressed in milligrams per liter

Chlorine Residual (Cl2 Residual) – The amount of chlorine in all forms remaining in water after treatment to ensure disinfection measured in milligrams per liter.

Chromium-Hexavalent – The method is used to measure the concentration of dissolved hexavalent chromium in milligrams per liter.

Cyanide (TOTAL) – The measurement of the toxin that contains simple or complex compounds which can be determined as the cyanide ion CN-. Weak Acid Dissociable cyanide (WAD) recovers weak cyanide complexes.

Dissolved Metals – Metals present in an un-acidified sample that passes through a 0.45 micron membrane filter.

Dissolved Oxygen (DO) – The quantity of oxygen in water expressed in milligrams per liter. All process control DOs are measured by plant operators.

Fecal Coliform – The rod-shaped bacteria discharged from the intestinal tract of warm-blooded animals. These bacteria are calculated by adding a nutrient indicator and observing the color change produced by the fecal coliforms. Counts are determined after disinfection per 100 mls of sample.

Fluoride – The measurement of the fluoride ion concentration in milligrams per liter.

Hardness – Sum of the Calcium and Magnesium concentrations, reported in milligrams per liter.

Metals (TOTAL) – The concentration of metals determined, after vigorous acid digestion, by optical emission spectroscopy. Currently, the lab analyzes for 21 metals and a couple of nutrients.

Microscopic Examination (MICRO) – The use of a microscope to perform a thorough examination of the diversity of the micro life found in the treatment process.

Oil and Grease (FOG) – A gravimetric determination of all materials recovered as a substance soluble in n-Hexane. These materials interfere with the biological processes at a wastewater treatment facility. Results are expressed as milligrams per liter

Phosphorus (P)/Ortho Phosphate (PO4) – Phosphorus levels are determined by two methods: Optical Emission Spectroscopy (total P) and colorimetric (PO4).

Analytical Parameters - Continued

pH – A measure of the hydrogen ion concentration in a solution. On a pH scale (0-14), a value of 7.0 indicates a neutral condition. Decreasing values indicate acidity; increasing values indicate alkalinity.

Settleable Solids – The matter in wastewater that will not stay in suspension during a pre-selected settling time, but settles to the bottom.

Specific Oxygen Uptake Rate (SOUR) – indicates how efficiently the biomass is metabolizing the sludge.

Temperature – The thermal state of a substance with respect to its ability to transmit heat.

Total Suspended Solids (TSS) – The portion of solids in a sample retained by a filter and dried to a constant weight at 104 degrees centigrade.

Total Solids (TS) – The residue left after evaporation of a sample dried to a constant weight at 104 degrees centigrade.

Volatile Solids (VS) – Materials generally organic that are driven off from a sample by heating to 550 degrees centigrade.

Volatile Acids – Water-soluble fatty acids are separated in the sample by distillation. This is a routine control test for anaerobic digesters.

Laboratory Analyses

Out of the total 36,274 analyses performed this fiscal year, 30% were specific to Laboratory Quality Control.

Quality Control Averages:

NPDES Parameter			Acceptance		
BOD	Relative % Difference of Duplicates	8.3 %	-20 %	-	20 %
	Recovery of Control Standard	104.3 %	80 %	-	120 %
TSS	Relative % Difference of Duplicates	6.7 %	-20 %	-	20 %
	Matrix Spike Recovery	103.8 %	80 %	-	120 %
	Recovery of Control Standard	96.5 %	80 %	-	120 %
NH3-N	Relative % Difference of Duplicates	3.7 %	-20 %	-	20 %
	Matrix Spike Recovery	97.6 %	80 %	-	120 %
	Recovery of Control Standard	101.0%	80 %	-	120 %
pH	Relative % Difference of Duplicates	0.2 %	-10 %	-	10 %

Daily Analyses:

	Process Control	Industrial	Quality Control	Misc	**Total**
Alkalinity	230	0	104	0	334
Ammonia Nitrogen	1649	45	479	23	2173
BOD	580	155	802	16	1537
CBOD	958	0	129	1	1087
Chloride	70	0	32	2	102
Chromium-Hex	20	0	30	2	50
COD	0	48	20	0	68
Cyanide- AVA	25	0	0	2	25
Cyanide- Total	30	12	30	0	72
Dissolved Oxygen	2980	0	1	1	2981
Fecal	565	0	0	2	565
Fluoride	58	23	34	2	115
FOG	137	162	70	22	369
Hardness	361	357	587	23	1305
Metals (Total)	4922	1806	6594	126	13322
Metals (Dissolved)	578	0	0	4	578
Micro	48	0	0	0	48
pH	1564	514	860	25	2938
Potassium	158	0	0	0	158
Settability	513	0	0	0	513
SOUR	57	0	0	1	57
Temp	508	6	0	0	514
T-Phosphorous	122	0	16	2	138
TSS	3515	118	713	17	4346
Volatile Acids	504	0	52	0	556
%TS	1232	0	52	1	1284
%VS	715	0	52	0	767
Total Analyses	22099	3246	10657	272	36274

Industrial Pretreatment Program

The Industrial Pretreatment Program was developed under provisions of the Clean Water Act (1972 and later revisions) and formally established in Addison in 1984 as part of a Federal grant to upgrade the North Wastewater Treatment Facility on Addison Road.

Through this program the approximate 1,100 industrial facilities within the Village are monitored to ensure pollutants are at levels to ensure worker safety and protect the treatment plants from exceeding pollution limits in both the sludge and the outfall to Salt Creek. Included in the 1,100 are 35 facilities that are regulated through the issuance of a Village discharge permit outlining maximum discharge standards, procedures for monitoring and reporting, and assuring compliance with applicable regulations.

Influent Pollutant Concentrations
A.J. LaRocca Facility

Pollutant	1984		2019		% Reduction
Cadmium	0.056	mg/L	0.001	mg/L	94.1%
Chromium	0.319	mg/L	0.018	mg/L	94.4%
Copper	1.28	mg/L	0.052	mg/L	96.0%
Lead	0.169	mg/L	0.021	mg/L	87.6%
Nickel	0.129	mg/L	0.030	mg/L	86.8%
Zinc	0.827	mg/L	0.196	mg/L	76.3%
Cyanide	2.01	mg/L	0.005	mg/L	99.8%
Oil & Grease *	49.0	mg/L	16.5	mg/L	66.3%

* Oil & Grease data from 1988, first year of restaurant grease trap monitoring program.

In addition to controlling discharges from industry, the commercial restaurants are monitored and inspected to determine the effectiveness of grease traps. The amount of grease removed has alleviated blockages in the collection system, and prevented biological interference at the treatment facilities.

Since the inception of the program in 1984, the Village of Addison has experienced significant reductions in the levels of influent pollutants at the treatment plants.

During this fiscal year the Pretreatment Program collected fees and penalties for industrial and restaurant monitoring, surcharges, and legal fines in the total amount of $212,454.

Influent Pollutant Concentrations
North Facility

Pollutant	1984		2019		% Reduction
Cadmium	0.271	mg/L	0.001	mg/L	99.6%
Chromium	0.35	mg/L	0.008	mg/L	97.7%
Copper	0.587	mg/L	0.063	mg/L	89.3%
Lead	0.129	mg/L	0.022	mg/L	82.9%
Nickel	0.294	mg/L	0.022	mg/L	92.5%
Zinc	3.00	mg/L	0.087	mg/L	97.1%
Cyanide	1.68	mg/L	0.005	mg/L	99.7%
Oil & Grease *	53.0	mg/L	22.3	mg/L	57.9%

* Oil & Grease data from 1988, first year of restaurant grease trap monitoring program.

This past year the Industrial Pretreatment staff has continued to work with local businesses to improve environmental quality and reduce pollution. One specific area, the Goals Program for the Metal Finishing Sector, creates incentives for metal finishing companies to voluntarily go “beyond” compliance in exchange for reduced monitoring and inspections. Programs like this create a positive dialogue between government, citizen

groups, and individual businesses to promote pollution prevention, low costs of compliance and ultimately improve the local environment.

In addition to performing monitoring and inspections related to our sewer use ordinance, the Industrial Pretreatment Program provides environmental assistance in matters of air, land, and noise pollution.

The Industrial Pretreatment Program also performs monitoring of storm sewers and local waterways to track pollutants from storm water run-off. The program is part of a county-wide effort to improve storm water quality throughout the primary watersheds and to comply with new Illinois EPA storm water permit requirements.

Our Industrial Pretreatment Program continues to be one of the most effective tools in the overall operation of the treatment facilities, and in maintaining the environmental safety of our industrial and commercial communities.

Village of Addison Recycling Program

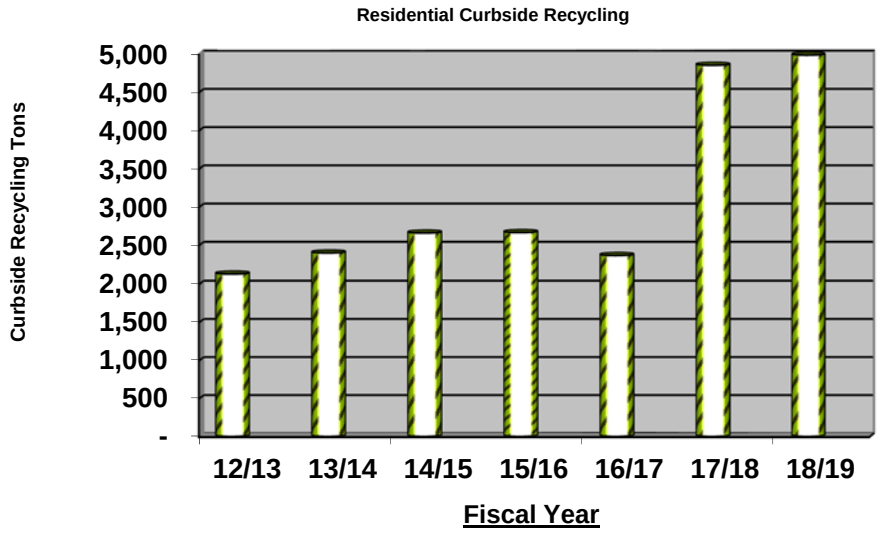
The Solid Waste Planning and Recycling Act – Public Act 85-1198 SB (1616) reads that all counties were to prepare, adopt, and implement a solid waste management plan to include a recycling program which would require solid waste diversions of at least 15% in the third year and 25% in the fifth year of a five-year plan. This would include separation of landscape waste and composting and may require residents of the county to separate recyclables. Public Act 85-1430 SB (1599) stated no person may place landscape waste for landfill disposal, landscape waste must be in a biodegradable container, and that the landfills compost the landscape waste and used for vegetative cover or soil conditioner.

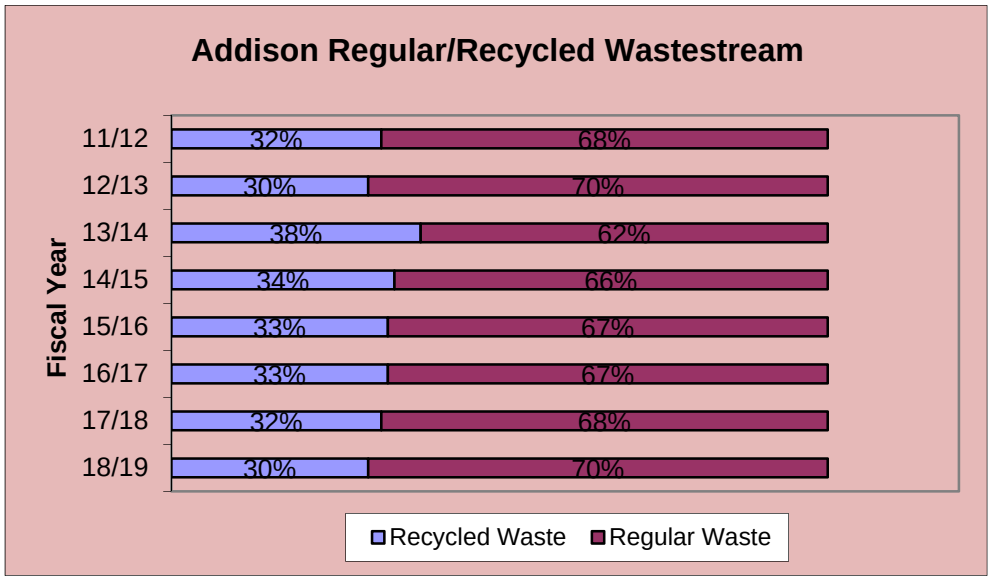
May 1990 – April 1991, the Village of Addison participated in meeting county goals by implementing programs for office paper recycling, opening a drop-off recycling center, initiating residential landscape waste pickup and began research on a curbside recycling program.

The Village's Drop-off Recycling Center opened in August 1990 and is located at the North Wastewater Treatment Facility at 711 N. Addison Road. The facility is open for recycling Saturday's only from 8:00 a.m. to 12:00 p.m. for Addison Residents only. Commodities accepted at the center range from paper products (newspapers, corrugated cardboard, chipboard, etc.) to non-paper products (glass bottles and jars, aluminum, steel and bi-metal cans, and categories of plastics, including #1 through #5 and #7. The Village has also started offering electronics recycling at this location due to the statewide ban that went into effect January, 2012.

The Village also offered a holiday lights recycling program from Thanksgiving through February which collected 879 pounds of lights.

Residential curbside recycling figures as represented in the chart below, show that residential participation has increased dramatically.





Used Prescription Disposal

The Village of Addison also participates in a statewide initiative by law enforcement agencies, public health organizations, and the EPA, to collect unused prescription drugs. The Village of Addison, by providing a safe drop-off point for the items, keeps the drugs away from teens and children and provides an environmentally safe alternative for disposal.

The program has been in operation since 2010. The drop-off container is in the lobby of the Addison Police Department, and is open 24 hours a day, seven days a week. Staff from the Police Department and the Public Works Department, Environmental Services Division, handles the collection, transport, and disposal of the materials. During the fiscal year 2018/2019 approximately 1,006 pounds of prescription drugs were reclaimed.

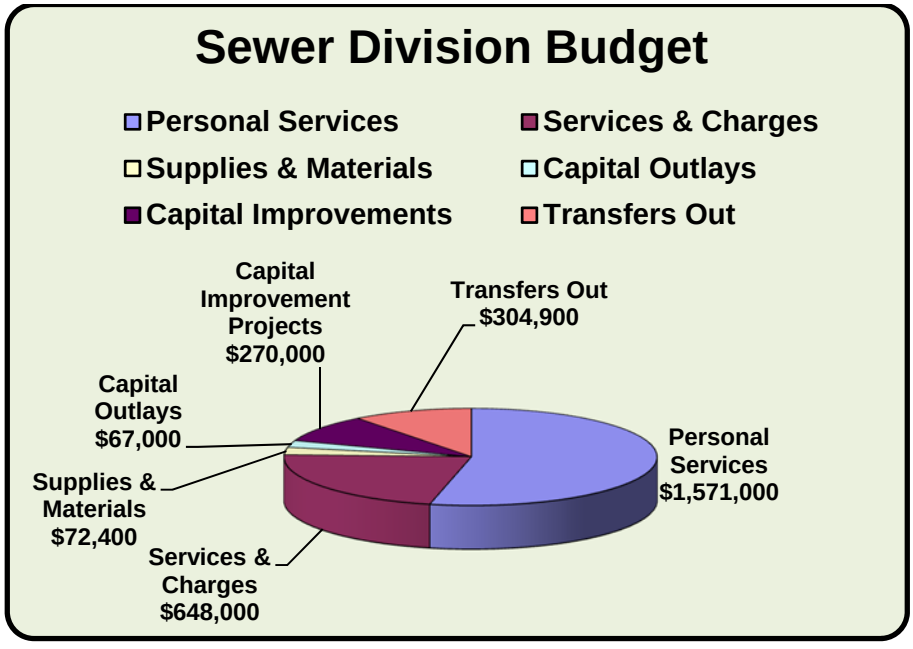
Sewer Division

Sewer Division

The Sewer Division is responsible for the operation and maintenance of all sanitary and storm sewer collection and conveyance systems and related pumping facilities within the corporate limits. Responsibilities also include sanitary sewer infiltration and inflow mitigation, elimination of detrimental industrial discharges and rear yard drainage issues.

These duties are accomplished by a crew of one foreman, and six maintenance workers.

Foreman:	Sean Quinn
Maintenance Worker III:	Joe Muraglia Jim Rhoads
Maintenance Worker II:	Clois Wayne Doron, Jr.
Maintenance Worker I:	Andrew Ancy Nick Pentrelli Mike Tovella



Within its boundaries the Village has over 120 miles of sanitary sewer of various sizes to include 2,500 manholes structures. The design of the system also mandates that eleven lift stations be employed to elevate the waste due to topography differences.

Lift Station	Address	Design Capacity
Ellsworth	737 Ellsworth Avenue	600 GPM
Farmwood	910 Surrey Road	193 GPM
Foxdale	1436 Autumn Trail	236 GPM
Friars Cove	215 Kingston North	250 GPM
Fullerton Avenue	505 West Fullerton	300 GPM
Harvard Avenue	701 South Harvard	478 GPM
Kingery West	895 E. Fullerton	103 GPM
Oak Knoll	233 S Villa	803 GPM
OPUS	2160 Executive Drive	300 GPM
Route 53	145 Route 53	50 GPM
Westridge	1274 Itasca Road	300 GPM

Also within the Village boundaries there are 73 miles of storm sewer of various materials and sizes. This system has 1,400 manholes and over 2,200 inlets of various types. As all storm conveyance systems discharge into an open waterway (Salt Creek, Westwood Creek, or DuPage River), this Division maintains three storm water pumping stations and one dam and pump station.

Pumping Station	Address	Design Capacity
Diversey Avenue	7 South Villa Avenue	142,000 GPM
Myrick Avenue	9 South Villa Avenue	14,000 GPM
Farmwood Storm	Heather Court	25,000 GPM
Westwood Creek Dam/Pump	715 North Addison Road	225,000 GPM

Services Provided by the Sewer Division

		FY 15-16	FY 16-17	FY 17-18	FY 18-19
1.	Residential Service Requests (Blockages/Flooding)	378	414	376	440
2.	Excavations of Residential Laterals (Tree Root Intrusion)	41	32	35	28
3.	Residential Laterals Electrically Rodded and/or Televised(Tree Root Intrusion)	1,135	1,236	995	827

Services Provided by the Sewer Division – Continued

		FY15-16	FY16-17	FY17-18	FY18-19
4.	Rear Yard Drainage Systems Installed	9	6	5	6
5.	Lineal Feet of Storm Sewer Flushed and Cleaned	18,400	23,545	24,875	31,600
6.	Catch Basins & Curb Inlets Cleaned (Vacuum Cleaned)	560	600	731	564
7.	Cubic Yards of Debris Removed	341.55	266.5	258.5	137
8.	Lineal Feet of Sanitary Sewer Flushed & Cleaned	328,595	318,142	401,440	340,523
9.	Lineal Feet of Combined Sewer Flushed & Cleaned	40,990	40,900	41,100	41,000
10.	Combined Sewer Inlets (Cubic Yards of Debris Removed)	15	8	10	2

Resident Request Responses

Each property is connected to the Village sanitary sewer via a 6-inch underground pipe called a "lateral." These laterals are the responsibility of the Village of Addison up to the outer edge of the public sidewalk. Flows can become compromised or blocked due to several issues.

Common causes for sewer backups are blockages caused by misuse – paper products, grease or non-biodegradable objects put into the system. Another problem is tree root intrusion into the lateral through leaking joints or failed pipe. If the offending tree is on Village property (Village of Addison Right-of-Way) the Village will rectify the blockage.

Geographic Information Systems (GIS)

The Sewer Division is also responsible for collecting utility data as part of the Village of Addison's Geographic Information System (GIS) mapping program. The Division collects the exact location of sewer structures, such as manholes and curb inlets, through the use of handheld satellite GPS units.

The collection of data helps to create more accurate maps of the Village's sewer utilities, and allows for the integration of powerful database information into a digital mapping system.

Sanitary Sewer line replacement project

The Village of Addison budgeted for the replacement of over 1,000 lineal feet of sanitary sewer main lines in the Byron/Jo Anne/Goldengate area. Thru our annual mainline televising schedule, Sewer Division employees found a large amount of sanitary main line deficiencies in an area that had been incorporated in the past and that was adopted into the Village city limits years ago. An outside contractor was hired to replace the sanitary sewer mains with PVC piping and do all landscaping duties.

Myrick Ave. storm lift station

The Village of Addison budgeted funds to replace Myrick Ave. storm lift station and replace it with a new submersible lift station capable of pumping 14,000 gpm of stormwater from the Normandy Manor subdivision



.

Sewer Division sewer line high velocity cleaning maintenance

The Village of Addison budgeted funds in order to purchase another high velocity flusher to aid in the cleaning of all sanitary, storm, and combination sewer lines throughout the town on an annual basis.

Annually maintenance is performed at the Westwood Creek Pump and Dam Storm Station. The Village hires a private contractor to pull and inspect one out of the three pumps per year. Oil is changed along with any other minor repairs as needed. Each of the existing three pumps convey approximately 75,000 gallons of water per minute. This station was installed in 1994 to help alleviate flooding upstream and along the Westwood Creek area.