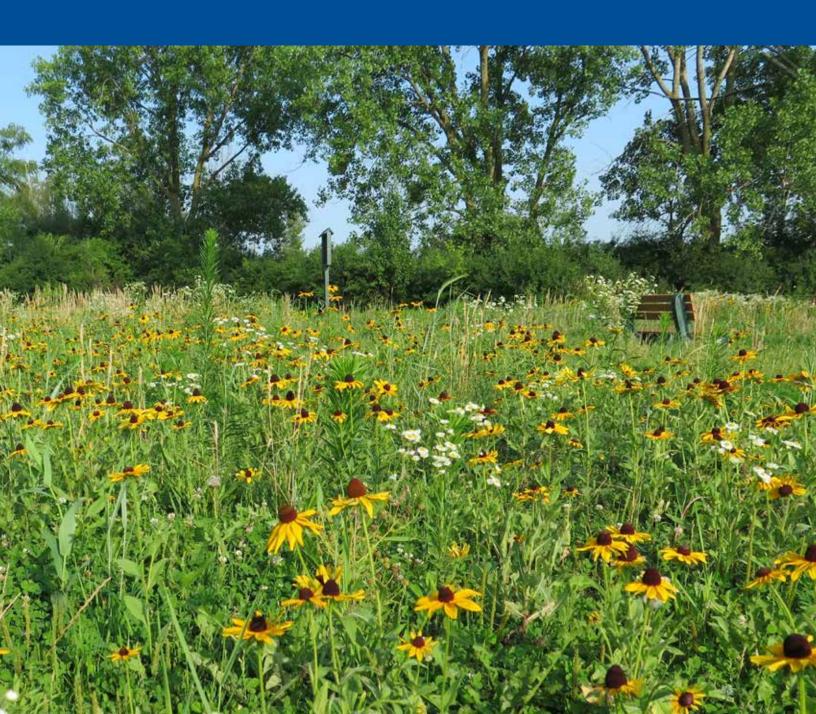
JACOBS°

Operations Management and Facilities Services2017 Annual Operations Report

Village of Carol Stream





Contents

A Message from Project Manager Dan Hughes	1
Executive Summary	2
Wastewater Treatment Facility	3
Repairs	5
WRC Improvements	
Innovations and Technology	10
Training	12
Certifications, Awards, and Accomplishments	13
NPDES Permit	14
Solids Handling	15
Laboratory	16
Maintenance	18
Industrial Pretreatment Program	20
Safety	21
Community Involvement	22
Sustainability	27
Financial Review	28
Summary	29
Exhibits	
Exhibit 1 Actual Effluent Plant Performance	3
Exhibit 2 Facility Removal Efficiency	
Exhibit 3 Influent BOD and TSS Concentrations	4
Exhibit 4 Effluent BOD and TSS Concentrations	4
Exhibit 5 Biosolids Removed from the Past Three Years	15
Exhibit 6 Maintenance Work Order Activity Summary 2017-2018	18
Exhibit 7 IPP Customers	20
Exhibit 8 Natural Gas and Electrical Consumption Comparisons	27
Exhibit 9 2017-2018 Financial Overview	28
Exhibit 10 Capital Improvement Projects May 2017-April 2018	28

i



A Message from Project Manager Dan Hughes



On December 15, 2017, Jacobs Engineering Group Ltd. completed its acquisition of CH2M. Although our company name and ownership changed, our focus on delivering world-class service and our emphasis on safety and sustainable business remains. As a new, combined company we bring you broader resources and provide innovative and cost-effective solutions, with a continued focus and dedication to safety and quality. We are enthusiastic about the future and bringing you the best-in-class talent, solutions, technical excellence, and delivery available in our industry. First and foremost, we remain dedicated to serving you. You have our firm commitment that we are focused on bringing you all the advantages our combination has to offer, serving you well, as we have always done.

Since 1997, the Village of Carol Stream has relied on CH2M, now Jacobs, as your operations partner for wastewater services. We have proudly worked side-by-side with the passionate people who make the Village a vibrant place to live and work. This report highlights some of the accomplishments of our relationship during the past year, as well as initiatives currently underway and planned for 2018.

Carol Stream saw some significant challenges with repairs, capital improvements, local limits, and sewer use ordinance revisions. Jacobs is able to address these challenges by responding with numerous company resources, including leading operations and maintenance (O&M) specialists, engineers, scientists, and members of our compliance team representing more than 2,000 hours of regional and onsite support.

The Jacobs Carol Stream team would like to convey our appreciation to the Mayor, Board, and other Village officials for their support. We understand the importance of being innovative, resourceful, and flexible partners with our clients, to provide the best solutions for wastewater and environmental needs.

We look forward to the opportunity to continue serving the people of Carol Stream. We are committed to the Village of Carol Stream and being good corporate citizens contributing to the betterment of our community.

Thank you for your continued support.

Samiel J. Deeper

Dan Hughes





Executive Summary

Jacobs is pleased to present the Village of Carol Stream with this 2017 annual report, as an overview of activities related to the Village's wastewater facility.

Serving Carol Stream since 1997, we take pride in the projects we deliver and are excited about taking the wastewater operations into the future. Our goal is to provide you with an overview of daily operations, system capabilities improvements, permit compliance, cost containment, and trends as compared with present treatment capacities.

Jacobs leadership and dedication to quality service is evident by specific accomplishments found throughout the report. We will discuss specific actions we initiated to continue our exemplary service to the Village. Our support for the Water Environment Federation (WEF), American Water Works Association (AWWA), Illinois Environmental Protection Agency (IEPA), Fox Valley Operators Association (FVOA) and the U.S. Environmental Protection Agency (U.S. EPA) further demonstrates our focus on environmental issues in the state of Illinois.

In 2017, Jacobs worked closely with the Village, design engineers, contractors, and local industries on many projects involving the Water Reclamation Center (WRC) and Industrial Pretreatment Program (IPP). Below are several examples of this collaboration during the 2017 Capital Improvement Plan (CIP):

- Rebuilt clarifier drive units #1 and #2.
- Excavated and installed valve vault at headworks.
- Rehabilitated Hycor units and replaced drive sprockets and chains.
- Replaced the flooring in the laboratory and painted cabinets.
- Installed new conduit and wiring to screw pump.
- Installed level sensors for sodium hypochlorite and sodium bisulfite tanks with hookup to the supervisory control and data acquisition (SCADA).
- Implemented improvements at the headworks including the installation of a new variable frequency drive (VFD), replaced the screw pump motor, rebuilt the gearbox, and rebuilt the primary screw pump motor.



 $The \ Carol \ Stream \ Team: Will \ King, \ Eric \ Weberski, \ Susan \ Ruta, \ Dan \ Hughes, \ Andy \ Liebman, \ and \ Andy \ Warmus.$





Aerial view of the facilities.

The Carol Stream WRC is a conventional activated sludge plant permitted to treat 6.5 million gallons per day (mgd) average daily flow. Staffed 7 days a week, the plant is continually monitored 24 hours per day. The facility is equipped with an automatic dialing alarm (SCADA) system to notify plant personnel of any emergencies. From May 2017 – April 2018 we operated the WRC well below all required parameters; 85 percent of permitted capacity (mgd), 28 percent of permitted discharge for 5-day biochemical oxygen demand (BOD), and 18 percent permitted discharge of total suspended solids (TSS) (Exhibit 1).

Our average percentage for removal of TSS is 98.6 percent and 98.1 percent for BOD (Exhibit 2).

Exhibit 1
Actual Effluent Plant Performance

Parameter	Average	Limit
Flow (mgd)	5.5	6.5
5-day BOD (mg/L)	<2.8	10
TSS (mg/L)	<2.2	12

Exhibit 2
Facility Removal Efficiency

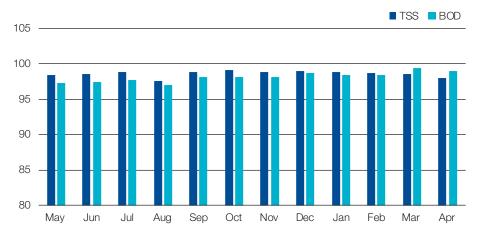


Exhibit 3 depicts influent BOD and TSS concentrations for 2017-2018.

Exhibit 4 depicts effluent BOD and TSS concentrations for permit compliance for 2017–2018.

Statistical process control procedures were established to ensure continuous compliance with National Pollutant Discharge Elimination System (NPDES) permit limitations. The mean cell residence time, sludge age, food to microorganism ratio, and sludge volume index are tracked daily to monitor plant performance. Upper and lower control limits have been established to provide guidance when approaching critical stages in the facility's operation.

Exhibit 3
Influent BOD and TSS Concentrations

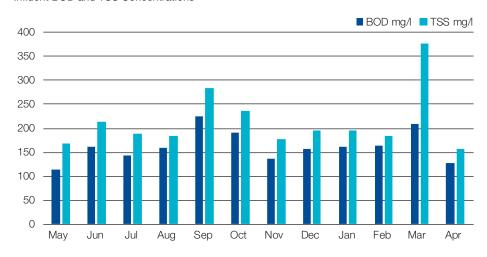
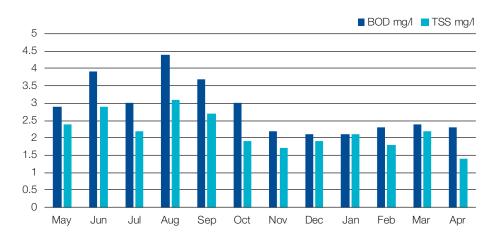


Exhibit 4
Effluent BOD and TSS Concentrations



Repairs

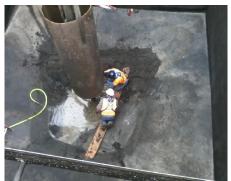
In 2017, the WRC experienced necessary repairs on the following:

- Repaired the grit tank inductor.
- Rehabilitation of two Hycor units.
- Replaced the primary screw pump VFD and rebuilt the motor and gearbox.
- Repaired the aeration basin headers for diffusers.

- Excavated and installed a valve vault.
- Replaced worn sand filter drive sprockets, and fabricated slide gates.
- Replaced clarifier wiers and baffles.



Repairing grit tank inductor.



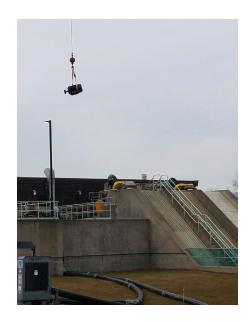


Rehabilitation of the Hycor units.

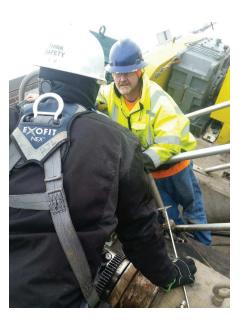




Aeration basin headers for diffusers.











Primary screw pump repairs, coupling, motor, and gearbox replacement.











 $\label{thm:continuous} \mbox{Emergency by pass pumping standing by during primary screw pump repairs during rain event.}$









Valve vault installation at influent drain valve.

WRC Improvements

In 2017, we also completed projects to improve the WRC's appearance. Projects included:

- Installed level sensors for the sodium hypochlorite and sodium bisulfite chemical tanks.
- Replaced flooring and painted cabinets in the laboratory.
- Acquired new signage.
- Removed dead trees onsite.
- Painted the blower building.
- Installed new LED lighting on the exterior of buildings.
- Decommisioned electrical cabinets and obsolete equipment.
- Removed one Spencer blower.



Level sensors installed on sodium hypochlorite and sodium bisulfite chemical tanks.

Innovations and Technology

- Completed infrared imaging of all electrical panels.
- Implemented newly approved laboratory test methods for fecal coliform and ammonia nitrogen.
- Researched solar energy and electric utility vehicles.
- Worked with NRG Curtailment Solutions on energy cost savings.
- Fitted the generator with a catalytic converter.

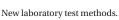






Completing infrared imaging on an electrical panel.









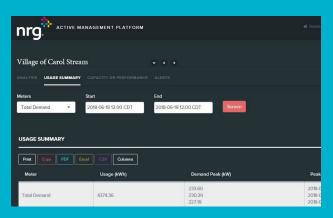




Catalytic converter and controls installed on generator.



The NRG energy demand curtailment program is a voluntary PJM Interconnection program. PJM is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of multiple states including Illinois. The program compensates end-use customers for reducing their electricity use (load), when requested by PJM, during periods of high power prices or when the reliability of the grid is threatened. These customers receive payments from PJM members called Curtailment Service Providers.









NRG energy demand curtailment program dashboard information.

Training

Jacobs places a high priority on safety and provides the necessary equipment and training to comply with federal and state regulations. This protects project personnel, the general public from injury, Jacobs, and the Village from liability.

Jacobs' formal training programs increase staff efficiency and levels of expertise. Our program uses individual training plans, correspondence courses, on-the-job training, and cross-training, which results in a more versatile staff capable of performing a variety of tasks. Accomplishments in 2017 include:

- Lock out/tag out training.
- Electrical training.
- Confined space training.
- CPR/AED/First Aid training.
- Increase in certification Wastewater Operator Class IV.
- Fork lift training.

- Welding/metals fabrication training.
- Ethics and quality training.
- Program of sustainability.
- Fall protection.
- Class in basics of motors and drives.
- Vibration analysis training.



The team participating in CPR/AED/First Aid training.











Dan displays the CSWEA 2018 Treatment Facility Operations Award.

Carol Stream received the George W. Burke, Jr. Facility Safety Award.

Certifications, Awards, and Accomplishments

Our hardworking team received the following certifications, awards, and accomplishments:

- Eric Weberski received his Class IV Wastewater Treatment Works Operator certificate from the Illinois Environmental Protection Agency (IEPA).
- Dan Hughes was recognized by the Central States Water Environment Association (CSWEA) with the 2018 Treatment Facility Operations Award. This is given to one operator per year, in recognition of outstanding performance of a wastewater treatment plant and demonstration of professionalism in the performance of their duties.
- The Illinois Water Environment Association (IWEA) presented Carol Stream with the 2018 George W. Burke, Jr Facility Safety Award in recognition of their excellence in an active and effective safety program and safety record.
- Dan Hughes has been active in the DuPage River Salt Creek Workgroup (DRSCW). He continues to work with multiple entities to meet the goals of the permit with technology for phosphorus and copper control. In addition to being recognized with the CSWEA 2018 Treatment Facility Operations Award, he was elected Secretary of the Illinois Association of Water Pollution Control Operators (IAWPCO).
- Susan Ruta began her fourth year serving the FVOA as Executive
 Officer. She attended several seminars in various topics on
 wastewater. She performed a survey of all dental offices as
 required by the U.S. EPA for amalgam separation and mercury

- discharge. With Dan Hughes, she worked on the submission of permit modification requests with supporting laboratory data to lower the restrictions of the discharge permit, as well as help develop a copper optimization discharge plan.
- Andy Warmus holds both Class I Wastewater and Class A Water licenses. He attended several seminars covering maintenance and reliability, and a training course in Basics of Motors and Drives. He is active in several water and wastewater organizations, namely FVOA, IAWPCO, IWEA, and CSWEA. He also became certified in confined space and arc flash safety.
- Andy Liebmann attended a training course in Vibration Analysis and became recognized as a Level 1 for performing work in this field of operation. He worked on thermographic imaging of all electrical assets for the WRC. He became certified in arc flash safety, and is a Certified Maintenance Reliability Technician.
- Eric Weberski attended a training course in Basics of Motors and Drives and arc flash safety. He became a certified Wastewater Operator Class IV, is active in the FVOA, and is the group's leader on safety training.
- William King is active in the FVOA and works as the group's lead on sustainability and community involvement. He attended arc flash safety training. He initiated contact with ComEd to begin an energy assessment to reduce costs of operating the WRC.

NPDES Permit

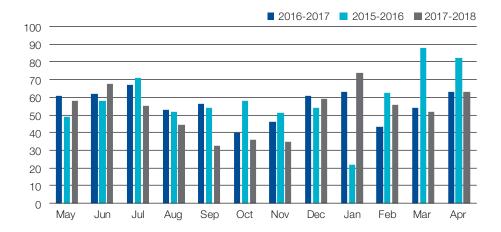


An IEPA Compliance Evaluation Inspection conducted at the Carol Stream WRC NPDES Permit No. II 0026352 by Maureen Brehmer from the IEPA reported no findings. All records were maintained as required by the NPDES permit and in good operating condition. A Copper Discharge Optimization Plan has been developed and updates have been submitted to the state. Collection of data and development of a Dichlorobromomethane (volatile organic compound) study continues to be performed on the discharge. Monitoring for phosphorus and copper discharges continue. Because of the history of compliance, a permit modification request has been approved which lowers testing frequencies for most parameters from three days per week to two days per week. This will result in significant cost-savings for laboratory testing.

Solids Handling

We operate our biosolids treatment processes to reduce volume, facilitate handling and transport, destroy pathogens, and control odor. Exhibit 5 represents the amount of biosolids in dry tons that were removed and pressed from the system; the solids were then hauled to the landfill for disposal. Through plant optimization, a drier sludge is being produced thereby reducing the amount of annual dry solids being transported and saving costs.

Exhibit 5
Biosolids Removed from the Past Three Years



Laboratory

Measuring the environmental impact of treated wastewater to the receiving waters is our main laboratory objective. All sampling we conduct for state and federal permit requirements are performed in-house or sent to a state-certified laboratory for analysis. Our in-house laboratory services perform process control analysis of the activated sludge process and are an integral part of our overall operation of the wastewater treatment system. Our goal is to provide regulatory agencies with reliable, accurate, and up-to-date information to enhance their ability to serve our clients and protect the environment. In 2017, there were more than 2,000 samples taken and tested for compliance with the daily limits of the NPDES permit. Additionally, semi-annual metals samples for effluent, influent, and sludge were collected and tested, as well as priority pollutants. All permitted industries were tested for their individual permits as required by industrial pretreatment regulations.

Required parameters in the permit include:

■ Flow

■ BOD5

■ CBOD5

 \blacksquare TSS

■ Ammonia-nitrogen

■ Dissolved oxygen

■ Total phosphorus

■ Total nitrogen

■ Nitrates and nitrites

Copper

■ Zinc

■ pH

■ Temperature

■ Fecal coliform

■ Total chlorine residual

■ Chloride

Dissolved phosphorus

■ Total Kjeldahl nitrogen

Suspended solids

 \blacksquare Alkalinity

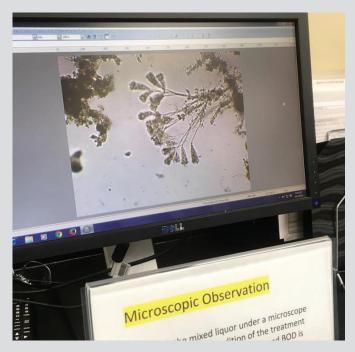
Statistical analysis for each parameter is analyzed and graphed, showing upper and lower control limits. Operations personnel are responsible for entering daily laboratory data into a computerized operational database. The data is transferred into a computerized NPDES form for reporting to the IEPA. Being intimately familiar with daily analytical data, the laboratory is the first line of defense in identifying potential problems associated with permit compliance.



The Carol Stream laboratory is a part of our internal quality control program. We pride ourselves in the quality control measures we take to validate and corroborate our analytical data.

The following list reflects routine minimum standards for Jacobs laboratories:

- Adherence to Jacobs' comprehensive quality assurance/quality control (QA/QC) program for all permit-required analyses, including, but not limited to, precision and accuracy results and corresponding control charts.
- Chain of custody documentation for all samples entering or leaving the facility (internal or external), which are kept in Jacobs bound and numbered books.
- A Chemical Hygiene Plan, including Safety Data Sheets (SDS) for all chemicals and reagents, emergency response, training sign-off sheets, and any site-specific requirements.
- Segregation of existing chemical stock according to chemical compatibility; all chemicals and reagents exceeding the expiration date are discarded according to state and local guidelines.
- Standard operating procedures for all chemical and physical analyses.
- A comprehensive computerized preventive maintenance (PM) program for all laboratory equipment.



Microscopic observation of a sample from the aeration basins.

Maintenance

Cost control through effective PM and corrective maintenance (CM) program is a hallmark of our success. Our ability to provide effective maintenance management is well known and is confirmed by viewing equipment records.

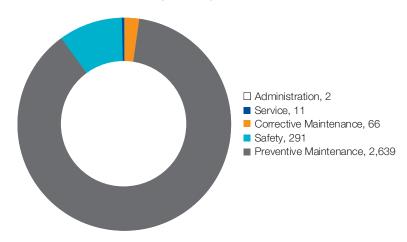
Jacobs' approach to maintenance involves three functions: PM, repair (scheduled and unscheduled), and predictive maintenance (PdM). We have found that by concentrating on PM and PdM, best practice, and reliability centered maintenance activities, we can control costs because warranties are protected.

The Carol Stream maintenance team utilizes Maintenance Connection*, an enterprise asset-management program. The program allows us to better meet the needs of the project and to facilitate efforts to support additional asset-management functions. The Carol Stream maintenance program consists of audits and analyses of equipment condition, warranty status, and repair records. The information gathered from our analysis is used to populate Maintenance Connection* and establishes baselines for ongoing maintenance activities and inventory control. The computerized maintenance management system (CMMS) serves as the pivotal tool for guiding and tracking all onsite CM, PM, general, and emergency maintenance activities.

From May 2017 through April 2018, we completed 3,005 total work orders, 2,639 PM tasks, and 66 corrective repairs at the Carol Stream WRC. A breakdown of maintenance work orders is shown in Exhibit 6.

Several PdM activities performed by the operations staff included using infrared detectors, vibration analyzers, temperature probes, and power/amperage meters. This data is tracked to aid the prediction of possible equipment problems. By taking a proactive maintenance approach, we can prevent breakdowns or the loss of major components. For example, infrared scanners allow us to detect hot spots in electrical equipment that can result from frayed wiring, loose connections, corroded connections, or failing parts. Detecting and repairing these problems, usually at a slight cost, can prevent the total failure of an expensive electrical device. In the past we have shared this equipment with Public Works for use in water pump stations and sewer lift stations. Vibration analyzers allow us to detect and record vibration histories for high speed pumps and motors.

Exhibit 6
Maintenance Work Order Activity Summary 2017-2018



A CMMS is an integral part of the Carol Stream facility. It keeps the staff fully informed of the facility's maintenance and repair status, and ensures that proper maintenance is being performed to protect the Village's capital investment. Presented below is a brief description of our capabilities using the computerized operations and maintenance program (COMPs). Part of COMPs is the PM and CM management system. The program includes the following main areas of information handling, which are necessary for effective maintenance management:

- Equipment and facility item information. This includes location, manufacturer, model and serial numbers, replacement cost, startup data, meter readings, supplier information, nameplate data, recommended spare parts, and notes.
- Documentation of PM procedures.

 This module includes estimated time to perform work; craft or job skill required; budget identification for the work; associate assigned to perform the work; tools, materials, and spare parts
- needed; and instructions for proper and safe repair procedures.
- PM scheduling. This program allows the user to assign appropriate intervals for PM of each piece of equipment according to the manufacturer's standards. The program lists all work to be performed, identifies the due date, and continues to note the PM work until it has been completed. The program also automatically calculates costs based on the labor and materials estimated for the procedures.
- CM tracking. This furnishes the user with a method for tracking performance and cost of CM. Work orders are used in conjunction with this program.
- Staffing information. Employee information regarding name, craft, pay rate, and shift schedules are stored in this program, allowing effective scheduling for PM tasks.

Maintenance Connection® has a very powerful customizable reporting capability, including reports that examine and track all costs associated with maintenance activities, making it easy for us to identify our savings. Each report includes equipment identification and descriptive report:

- Equipment task report.
- CM work order history and summary report.

- Equipment data report.
- PM procedures report.
- Tools report.

- Employee repor.t
- CM work order status report.
- CM performance report.

All reports can be reviewed on screen or printed, and each can be manipulated to suit the user's needs. These reports can be printed quickly and easily if a question arises concerning a particular piece of equipment or the program in general.



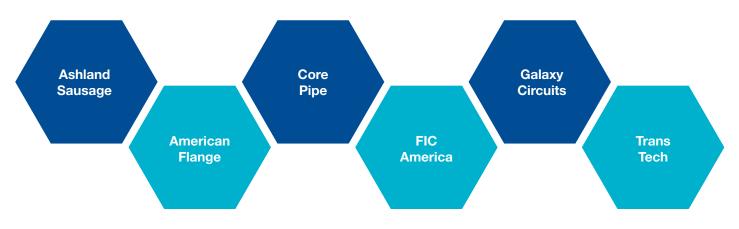




Industrial Pretreatment Program

The Village of Carol Stream's IPP currently is comprised of five categorical industrial users (CIU) and one industrial user. Exhibit 7 is a summary of the IPP.

Exhibit 7
IPP Customers



IPP activities in 2017 include:

- Performed semi-annual metals and priority pollutant testing on effluent, influent, and sludge from the publicly owned treatment works (POTW).
- Performed annual inspections and sampling for the permitted SIUs.
- Updated industrial fact sheets for each permitted industry.
- Prepared new permits for each permitted industry for updated requirements.
- Participated in sponsoring a summer concert series at Carol Stream which included an informative session with citizens regarding wastewater and sustainability.
- Conducted tours for elementary, middle, and high school, and college classes demonstrating wastewater treatment and information on wastewater and water quality.

- Hosted an open house, including information for visitors regarding wastewater and sustainability.
- Participation in the Salt Creek Watershed Study Group.
- Submitted quarterly surcharge billing calculations for BOD; TSS; and fats, oils, and grease (FOG).
- Continued to work with local industries on phosphorus alternatives.
- Continued to sample for copper sources in the collection system.
- Devoted a total of 906 work hours and \$42,543.19 managing the pretreatment program.
- Updated the industrial survey of all businesses in Carol Stream and a survey of all dental offices was completed.
- Submitted the results from local limits sampling and updated sewer use and pretreatment ordinance to U.S. EPA for approval.

Safety



Jacobs places a high priority on safety and provides the necessary equipment and training to comply with federal and state regulations, which protects project personnel and the general public from injury, and Jacobs and the Village from liability.

During 2017, employees at the Carol Stream project implemented the following improvements as part of our safety action plan:

- Updated the facilities site-specific safety plan.
- Expanded and updated the emergency response plan.
- Experienced no Occupational Safety and Health Administration (OSHA) recordable incidents.
- Conducted weekly staff safety meetings and quarterly site inspections to ensure all OSHA regulations are followed.

To remain accident free from known safety hazards, our team also participated in the following:

- Corrected all safety review findings by the end of the contract year.
- Held at least 40 tailgate sessions, totaling 10 hours of safety training for each employee.
- Identified unsafe conditions with monthly inspections by the safety team, and made all project employees aware of unsafe conditions during safety training sessions.
- Completed/reviewed 20 job safety analyses.
- Maintained 100-percent permit compliance.
- Increased state operator certifications.
- Received a minimum of 12 hours of technical training per employee.
- Achieved IEPA compliance.



Community Involvement

Our goal is to continue our growth in the Village of Carol Stream as a civic-minded organization, sensitive to the needs of our community. Our concept is to support local projects and embrace the community as it has so graciously embraced us.

The following list shares several ways our employees have supported organizations, schools, and local groups with environmental efforts and community involvement programs during 2017:

- Participated in the Annual Pond and Stream Sweep Cleanup initiative for Klein Creek.
- Conducted educational tours for several area schools and community groups.
- Participated and sponsored the Carol Stream 2017 Summer Concert Series.
- Participated in Adopt-a-Highway (Birchbark Trail) and have adopted the bicycle path on the northeast side of the WRC.

- Susan Ruta, laboratory supervisor, is executive director of FVOA.
- Participated in the Christmas sharing program, Earth Day, and Prairie Meadow ribbon-cutting ceremony.
- Held the annual Open House in October for residents with guided plant tours, hay rides, touch-a-truck, exhibits from the Conservation Foundation and the Carol Stream Public Library, and free pumpkins for children.
- Hosted electronics and pumpkin recycling.



Prairie Meadow dedication.















Annual Village of Carol Stream WRC Open House in October.

Community Involvement



Glenbard North High School students on Earth Day performing stream sampling and testing, picking up along Klein Creek and the Prairie Meadow, as well as helping put fresh wood chips on the walking path in the meadow.











Students learn about the WRC.

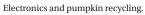
Community Involvement





Christmas sharing program.







Sustainability



At Jacobs, we are committed to developing sustainable business practices. We pledge to develop strategies that enable us to move toward sustainability while enhancing the value to the citizens of Carol Stream. Exhibit 8 highlights our efforts to reduce natural gas and electrical consumption from 2016-2017 to 2017-2018.

We pledge to develop strategies that enable us to move toward sustainability while enhancing the value to the citizens of Carol Stream.

Exhibit 8
Natural Gas and Electrical Consumption Comparisons





Financial Review

This section is an overview of the wastewater treatment system and a summary of rebateable expenditures. We are committed to continuing the same degree of cost containment achieved in 2017-2018 going forward.

The total budgeted amount for labor and benefits during 2017-2018 was \$670,037; actual expenditures were \$609,657.20.

The total budgeted amount for repairs during 2017-2018 was \$60,000; actual expenditures were \$65,418.34.

The total budgeted amount for utilities during 2017-2018 was \$243,198; actual expenditures were \$213,152.62.

The total budgeted amount for biosolids processing and disposal during 2017-2018 was \$160,940; actual expenditures were \$139,485.16.

Jacobs understands the importance of cost containment.

Exhibit 9 differentiates our actual expenditures in repairs, utilities, solids disposal, and labor costs.

Jacobs employees at the Carol Stream project actively participated in the establishment of goals for our 2017-2018 Annual Project Business Plan. Our mission is focused on exceeding the Village's expectations, providing a safe working atmosphere for our employees, and preservation of the environment.

Exhibit 10 lists specific areas of CIPs for 2017-2018.

Jacobs is pleased to have performed our operations under budget, thus **saving the Village of Carol Stream \$50,521.67** in the aggregate of repairs, electrical, and solids disposal costs.

Exhibit 9
2017-2018 Financial Overview

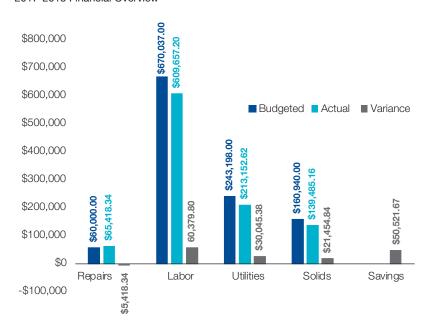


Exhibit 10
Capital Improvement Projects May 2017-April 2018

Process Area	Work Description	Project Total
Valve Vault	Excavate and install valve vault.	\$16,750.00
Screenings	Hycor units 1, 2, 3 replace drive sprockets.	\$44,351.00
Laboratory	Replace laboratory flooring.	\$3,000.00
Chemical Rooms	SBS, Hypo level sensors.	\$2,864.68
Headworks	VFD installation, primary screw pump motor repair and replacement, gear box rebuild, Rain-for-Rent.	\$53,450.59
		\$124,031.27

Summary

In summary, contract year 2017-2018 brought about many challenges for the Carol Stream team, we are excited about tough challenges and solving them in creative and innovative manner. We are also proud of the following accomplishments:

- We take pride in our outstanding track record with safety, known as one of the Jacobs model facilities.
- Working closely with the Village on monitoring the IPP, and exceeding our customers' expectations.
- Proud of our proactive approach to PM and CM.
- Working closely with the Village and consulting engineers on obtaining our new NPDES permit.
- Focusing on improving WRC appearance to protect the environment and provide natural areas.
- Continuing with being a leader in innovation and technology.
- Providing exceptional advanced wastewater treatment.
- Continuing our team efforts with the Village on capital planning and O&M related issues affecting the wastewater treatment facility.



Finished treated effluent into Klein Creek.

We fully understand the importance of the WRC as related to the future growth and development of the Village. We are excited about the challenges we tackle and inspired by the opportunities we see.

www.jacobs.com



JACOBS°