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APWA Chicago Metro Chapter

Volume 54, Issue 4

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Letter from the Chapter President

[Marc Grigas](#), Strand Associates, Inc.

Happy Holidays to all our members! I hope your friends, family, and colleagues take this time to appreciate each other's company and the many fortunes we have in this great country.

One of our main focuses in the last quarter of the year was our annual leadership retreat at Starved Rock. The leadership retreat is where our 2023 branch officers and committee chairs appointed by our incoming President, **Allison Swisher** from the City of Joliet, gather for two days to plan out the coming year. Allison was in charge of planning this year's event and did an outstanding job. We were fortunate enough to have some special guests. Two representatives from APWA National joined us. APWA National understands we are the best Chapter and they want to see us in action, take

our ideas and goals, and share them with other Chapters to better the Association. The Illinois Chapter was also able to join us for one of the mornings as we reflected on the previous year and the coming year's goals. Thank you to all who took the time away from their employers and families to attend this event.

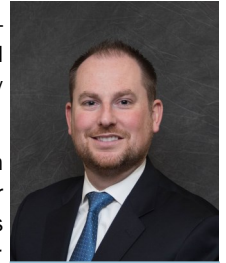
The Chapter held their annual membership meeting and holiday party on December 8th at the Medinah Shriners Banquets. At the membership meeting, the 2023 slate of Chapter officers was voted on and unanimously approved by our membership. Congratulations to all of the Officers and good luck in the coming year. Our Vice President, **Tiffany Engelhardt** from ERA, organized the holiday party and did an outstanding job! She made sure that the 200+ attendees had a festive time including our first annual snow-

man contest and specialty cocktails.

It has been my honor to serve as Chapter President this past year. I was

able to experience firsthand accounts on why we are so successful year after year. This should not be taken for granted. Our members comprised of volunteers, vendors, and sponsors, all play an important role in making us the best Chapter. I ask that you all make three personal commitments this coming year. One, please introduce at least one new person to APWA and encourage them to become a member so they can experience the tremendous value and opportunities the

(Continued on page 4)



Marc Grigas
Chapter President

PWX Chicago 2024

by: Jennifer Hughes, PE, CFM, PWX 2024 Co-Chair, jhughes@oswegoill.org

When we all gather at the annual Holiday Chapter Party this year, there will only be **619 days** remaining until the opening ceremony of PWX 2024. That seems like many days until you realize there are still great plans to be made! We need to finalize the events, sign contracts, and raise funds to support the experience that Chicago is known for providing at PWX. The Chicago Metro Chapter will be hosting PWX at McCormick Place from **August 18-21, 2024**.

We have spoken to many of you who are anxious to volunteer your time for this event. We appreciate that and will be in touch with you shortly after January 2024 as we begin to register volunteers that spring to assist during the event.

What we really need right now is for you to speak to your boss
(Continued on page 5)



Download the Sponsor and Support document from the Chapter webpage

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Marc Grigas
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Chapter Newsletter

Chicago Metro Newsletter is emailed to Chicago Metro members three times per year.

The December issue is mailed.

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Suburban Branch Update

By: Zach Matyja, RJN Group, zmatyja@rjnmail.com
and Matt Cesario, BLA, mcesario@bla-inc.com

Education Committee

Over 60 attendees joined the Suburban Branch on October 25 for a lunch-and-learn presentation at Westwood Tavern in Schaumburg to talk about Lead Service Lines. The presentation featured presenters **Joe Kenney**, the Deputy Director of Public Works with the Village of Glenview and **Kaitlin Wright** from Baxter & Woodman as they provided an update on the laws and regulations governing the replacement of lead service lines, including an update on grant opportunities, upcoming deadlines, and removal methods for the upcoming program. A case study on how the Village of Glenview is educating residents and navigating the requirements was also shared. (By **Zach Matyja**, RJN Group – Education Committee Chair)

Community Outreach

On Wednesday September 28, 2022 the APWA Suburban Branch Outreach Committee held their **Feed My Starving Children** event at the Schaumburg location. We had 8 attendees participate in the packing which was a perfect amount for one packing station and two food runners. APWA helped pack 99 boxes for the two hour shift which in turn provides 21,384 meals and can feed 59 kids for a full year.

This was a great event which provided satisfaction that our organization can help those less fortunate, and we look forward to holding the event again next year! (By **Matt Cesario**, BLA – Community Outreach & Diversity Chair)



Lead service line presentation



Suburban Branch volunteers @ Feed My Starving Children event.



Feed My Starving Children event

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The Good, The Bad, and the Southwest Branch

By: [Eric Neubauer](#), HDR



Eric Neubauer, 2022 Southwest Branch President

Finishing up our 2022 monthly lunchtime meeting presentations, Great Lake Urban Forestry Management presented on September 7th about GIS Mapping for Tree Inventories and Asset Management. Trotter and Associates presented on Lift Station Evaluation and Design on October 4th. And finally, the American Red Cross presented on how they can be a partner during a disaster with Disaster Assessment and Partnerships on November 2nd. I know that many of you will be at the SSWWA/SW Branch Holiday Party on December 9th (Sold out in record time!). I will see you there!

The Good



President (Continued from page 1)

association has for their careers and lives. We know they will not be disappointed. Two, spread the good word to your network that may not be too familiar with public works and advocate for the industry. And finally, commitment to being involved with 2024 PWX whether you are a

Branch by the Numbers (2022)		
Event Attendees	853 in-person	35 virtual
Credit Hours Distributed		452 hours
Scholarships	5 x \$1,500	\$7,500 total

I want to congratulate the Southwest Branch on a very successful year. While we dealt with a resurgence of COVID in January and February, we were still strong throughout the year.

As many of you know, increasing the amount of scholarships given out by the Branch was my goal this year. And I am happy to report that we accomplished that goal and then some (record breaking)! Thanks to all of the Southwest Branch attendees and supporters for making it a great year!

The Bad

Well partner, it has been a great run this year but this will be my final update as President. I want to thank everyone in the Southwest Branch for their support. I have thoroughly enjoyed my time on the Board and getting to know many of you.

The Southwest Branch

Fear not my Friends! Alex Alejandro and Owen Dean will be back next year as President and Vice President respectively. They will be joined by Jon Kjellman as Treasurer and Terry Lusby as Secretary. I have already heard some of the things that they have planned for next year and I can't wait! It is going to be an even better year for the Southwest Branch.

And now, it is time for me to ride off into the sunset. Happy trials and thanks for a great year!

Eric 



volunteer and/or sponsor. We will need your help!

Many thank yous are owed for the success we had this past year. Thank you to all our members who volunteered, participated, and sponsored APWA. A special thank you to the Chapter officers for their tireless efforts for APWA. Thank you to my em-

ployer, Strand Associates, Inc. for allowing me to focus on APWA and supporting me through this journey the past five years. Finally, thank you to all the public works employees that are first responders essential to our everyday lives. You are the backbone of America!


Have a blessed 2023! 

PWX 2024 (Continued from page 1)

about how your organization can be a part of the experience by helping to fund the Chapter's responsibilities. We are raising funds to support the Get Acquainted Party, the hospitality area, volunteer shirts, speaker gifts, and other activities which help make the event sparkle. In exchange for your generous support, your organization will receive recognition at Chapter events and on various platforms. Details regarding funding opportunities may be found on the Chapter's [website](#). For more information, contact [Dave Lawry](#), [Marty Michalisko](#), or [Andres Orrego](#).

While PWX is a national showcase for our industry, hosting it in Chicago provides an opportunity for all members of local organizations, from the most senior leader to the newest technician, to attend for a day at very low cost. Financial support of PWX will help you reach Chicago Metro Chapter members as well as national and interna-

tional attendees.

Thank you in advance for supporting PWX 2024! 

We are raising funds to support the Get Acquainted Party, the hospitality area, volunteer shirts, speaker gifts, and other activities



John Heinz presents the Lake Branch \$25,000 contribution to PWX 24 co-Chairs Michael Millette and Jennifer Hughes.



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Lake Branch Updates

By: Michael Brown, Director of Public Works, Village of Lake Zurich



We're in the final stretch for the year! We had some great events this year visiting several sites throughout Lake County. We had a blast throughout the year networking with our peers, and supporting the local business throughout Lake County.

Please feel free to contact any members of the Lake Branch Executive Committee If you would like to showcase a particular project, or host a networking event in your community in 2023.

In August we held an educational event "Introduction to Plan Reading" hosted by the Village of Buffalo Grove Public Works, with a networking event afterwards at Buffalo Creek Brewery in Long Grove.



Multi County Update October 11th

In September, the Lake Branch held a tour of the award-winning Mundelein Public Works Facility, with a networking event at Tighthead Brewery afterwards in Mundelein. Attendees were provided a tour of the facility from their very own Director of Public Works, **Adam Boeche**, and his Public Works Staff.

In October, the Lake and Suburban Branches partnered to host the annual **Multi County Update** luncheon at Maggiano's Little Italy in Schaumburg. A special thank you to the Speakers for the event- **Chris Snyder**-DuPage County DOT, **Jennifer "Sis" Killen**-Cook County DOT, **Carl Schoedel**- Kane County DOT, and **Shane Schneider**-Lake County DOT.



**Mundelein Public Works Tour
On September 20th**

Next up....



**Scott Fontanez, Village of Buffalo Grove,
United States Marines
1981 – 1987**

Annual Veterans Luncheon at McGonigal's Pub in Barrington on November 15th. This year we recognize **Mr. Scott Fontanez** from the Village of Buffalo Grove Public Works.

Scott served in the Marine Corp Reserves from 1981 to 1987. At the end of his service he was Honorably Discharged as a Corporal, E-4. Scott joined the Village of Buffalo Grove's Public Works team on November 5, 1990 where he currently serves as the Street Section Manager. Oorah! Thank you for your service Scott!

Closing out the year with the annual Lake Branch Holiday Party on December 20th, at Mickey Finn's Brewery in Libertyville. Come out for a little holiday cheer at THE BEST DAMN HOLIDAY PARTY!!

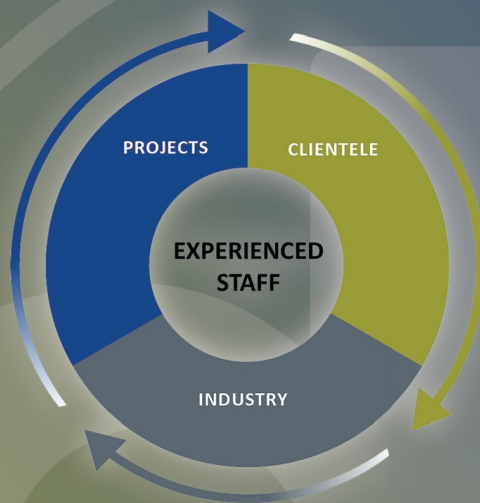
Happy Holidays,

Michael J Brown, DPW Village of Lake Zurich 

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Fox Valley DuKane Tour

By: Brooke Snowe, (snow_b@cityofelgin.org) City of Elgin

On Friday, October 21st, The Fox Valley Branch joined the Precast/Prestressed Concrete Institute (PCI) on a tour of the Dukane Precast plant in Aurora. Dukane fabricates concrete walls for any project from residential to industrial. All their work is done in house with their team of engineers and laborers in the plant. Dukane offers many opportunities to grow within the company and provides work year round with their indoor fabricating facilities. The tour took us on a full build of a wall after it is sent out for production. We saw how

they mix all their concrete on site in three-yard batches particular to each customer's specifications. The concrete then gets transported to the fabrication area, where laborers have already welded the necessary pieces to be included in the walls and pretensioned the steel. Multiple walls are poured at the same time and only take about eight hours to cure enough to be transported to the yard to completely cure. The tour also took us through the steel fabrication shop where steel is inspected, cut and welded to usable parts



for the products. The tour ended with a lunch made by the employees and a coaster made from the concrete used in the plant. Thank you **Ron Rudd** for organizing this event! 

Where are they now?

By: Jim Reynolds, Retired DPW, Northbrook 1967-2007, APWA Top Ten 2002 arizonajmr@gmail.com

Where is he now? Jim Reynolds spent his 40-year public service career in Northbrook, including four years as Assistant Director of Public Works, and his final 30 years as Director. Retiring in 2007, he is a lifetime member of both the APWA and AWWA. He chaired many public works committees at the Northwest Municipal Conference (NWMC). Jim served for three years as the first public works committee chairperson at the Northeastern Illinois Public Safety Training Academy in Glenview, where he also served as a board member. Under his stewardship, many performance-related-achievements of his department were recognized by the Chicago Chapter as well as various branches and nationally during his career. In 2002, Jim was humbled to be named an APWA Top Ten Leader.

After retirement, Reynolds



Jim Reynolds in Gold Canyon, AZ

worked for four years as a Disaster Assistance Employee for FEMA with a focus on assisting public entities with their application. He deployed to a number of locations, including: Northwest Illinois; Southern Illinois; Chicago; Indiana; Missouri; New Jersey, and New York.

Today, Jim is active on two boards. He is Vice Chairman Emeritus at the world-renowned **Boyce Thompson Arboretum**, a 370-acre gem in the Sonoran Desert in Superior, AZ. Jim also serves as Vice Chairman of the **Superstition Mountain Commu-**

nity Facilities District in Apache Junction, AZ where he is in his second 6-year term. The sewer district collects, treats, and recharges groundwater - a source of revenue. Now, the 35+ square mile district is gearing up for major expansion with upcoming construction of "purple pipe", a 24-inch diameter recycled water line to serve a newly annexed 7,800-acre development for construction, irrigation, and recreational pond water for 11,000 new homes.

Living full-time in Gold Canyon, AZ, with his wife, Kally, for the past 10 years, Jim and Kally also served as Supreme Court appointed **CASA's** (court appointed special advocates for kids in the state system) in Pinal County for nine years. In his spare time, he and Kally travel when conditions allow and enjoy concerts. Jim also enjoys walks daily where he collects errant


(Continued on page 10)

Jim Reynolds (Continued from page 9)

golf balls while avoiding rattlesnakes (as a non-golfer, he has “gifted” 1205 DOZEN to others). He tinkers with antique mechanical slot machines on occasion and has recorded vocals to more than 1400 song tracks.

He is pleased to still be upright, happy, and contributing!

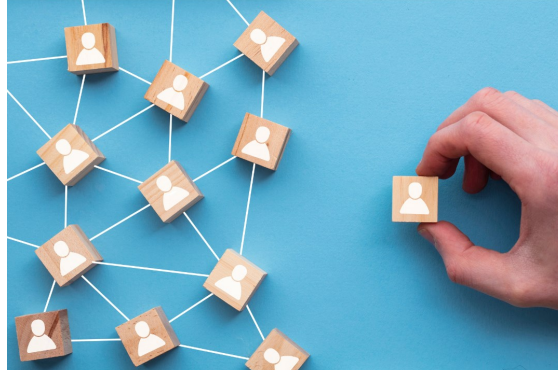
Jim Reynolds Background of APWA and related recognition back in the day:

- APWA Chicago Metropolitan Chapter - Technical Innovation – Wind Energy Commitment, 2007
- APWA National - Exceptional Performance - Safety, 2006.
- APWA Chicago Metropolitan Chapter - Exceptional Performance – Safety, 2005; Exceptional Performance – Journalism, 2005; Exceptional Performance – Adversity, 2005.
- APWA Chicago Metropolitan Chapter Suburban and Lakes Branches – Exceptional Performance in Journalism award for three informational pamphlets (water system, snow policies and safety) – 2004
- APWA Chicago Metropolitan Chapter Suburban Branch – Management Innovation Award for Northbrook Public Works Annual Report and Reference Guide – 2004.
- APWA Chicago Metropolitan Chapter Suburban Branch – Adversity Award (microburst) – 2004
- APWA Chicago Metropolitan Chapter Suburban Branch – joint award with the Northeastern Illinois Public Safety Training Academy - Exceptional Performance in Safety - 2004.
- APWA Chicago Metropolitan Chapter and Suburban Branch – Exceptional Performance in Journalism award for Northbrook Public Works Annual Report and Reference Guide – 2003.
- APWA Chicago Metropolitan Chapter and Suburban Branch – Local Project of the Year for CBD Stream Bank Stabilization and River Corridor Restoration / Bioremediation– 2003
- APWA National Recognition – Top Ten Leader of the Year Award – 2002.
- APWA Chicago Metropolitan Chapter Community Involvement Award – 2002.
- Illinois Arborist Association – Special Recognition – For Efforts in Supporting the Village of Northbrook Tree Preservation Ordinance – 2001.
- APWA National – Exceptional Performance in Journalism Award – 2001.
- City-County Communications and Marketing Association (3CMA) SAVVY Silver Circle Award for Best Publication/Guides – 2001.
- Illinois Section, AWWA and ILEPA Quarter Century Award - 2001.
- National Arbor Day Foundation - Tree City USA Award - 1994-2006.
- APWA National – Samuel A. Greeley Award – 1998.
- APWA Chicago Metropolitan Chapter – Project of the Year Award (water improvements) - 1994.
- APWA Suburban Branch of the Chicago Metropolitan Chapter – Leader of the Year Award - 1989. 

Successful Succession Planning

by: Maxwell Geib, Village of Lincolnshire, Mgeib@lincolnshireil.gov

Staffing an organization can be challenging but can also be successful! Staffing can seem like a revolving door at times but having a good succession plan in place can help keep things consistent and provides staff a resource when dealing with turn-over. Turn-over is the process of employees entering and exiting an organization. Turn-over is a general term used to describe the process, but it has many stages.




Succession planning should be healthy and have heavy staff involvement. When you break down succession planning, you have three major parts, recruitment, onboarding, and retention/retirement. Each of these critical parts are important in their own way when executing a succession plan. Usually, succession planning starts when staff identifies many employees that are in the “retirement range” and start to panic but if we step back for minute and look at the whole organization, a succession plan should include everyone. From your most senior employees to the newly recruited employees. Simply for the

fact that anyone could leave at any time! This is the reasonable mindset you should have when developing a plan. This is where staff involvement is very important.

By allowing staff to be a part of the succession plan, you gain insight on how that position should be filled from their point of view. Let the employee sit in the HR seat for a minute and replace themselves with an ‘ideal candidate’. You take what they’ve shared and find a way to incorporate it into your plan. Once you identify the criteria needed to fill a position, you must ask yourself when can we fill this position? How long can this position stay open? You can assign each employee a vacancy rating. For example, this position is best filled if they “overlap” and the exiting employee can spend time with the new employee. There is “same day” rating for employees that may start on the exiting employees last day. Then, the more common one of “gap in between” rating where the position is vacant for a while. If you at least assign some type of vacancy rating, you and other staff understand how important that position is to the organization. This rating can include years with the organization, technical knowledge, position, and others that may pertain to your organization.

When it comes to retirement, having those employees involved with the process is going to be key to your success. There is one thing that no organization can replace when succession planning and that is “institutional knowledge”. The knowledge of having known where your community has come from over the decades. Knowing who has come and gone from the organization and how the organization has adapted over the years. Knowing the past and present elected officials. Being a part of the organization during times of economic difficulty and uncertainty. This type of knowledge is difficult to pass down and irreplaceable but critical to succession plans. These employees give some of the best insight on what the organization needs when it comes to personnel. Having senior staff involved with recruitment, onboarding and retention/retirement can greatly benefit an organization.

When executing on your succession plan remember to stick to it. All the hard work put into this plan needs to be carried out properly. When issues or new information are found to be with the plan, simply make those changes. This plan is a working document that management is constantly updating and ensuring its effectiveness. Sharing these ideas of how to successfully succession plan may help you but really gives you a reason to look at what you have in place currently. Inclusion is key!! 

Village of Skokie Resident Storm Water Task Force

By: Ann Tennes Director of Marketing and Communications and Russ Rietveld, Director of Engineering

Skokie created and began implementing an innovative, \$85 million storm water management system in the mid-1980s. The system was completed in 1999 and in a fall 1998 article, was championed by *Money magazine* as a progressive model for local government. In total, the system consists of 623 street berms, 93 runoff control facilities, and more than 1,400 flow restrictors that served the Village well until recent repeated, severe storms that culminated in spring 2020. These significant changes in storm and weather patterns, coupled with an aging sewer system, resulted in increased basement flooding and led Village leaders to conclude that it was time to re-evaluate the overall level of protection offered by the existing system, which was designed to provide protection against a 10-year storm event.

After acknowledging the system's failings and committing to restoring the system to its previously-provided level of protection, Village leaders also determined that enlisting resident involvement was critical to an effective and positive outcome. In the wake of growing demands for financial assistance to individual property owners, including residents in the process of identifying the value of possible community-wide system improvements was deemed essential to the process. In September 2020, a 10-person resident task force was convened to advise the Village, and among its members are retired engineers and other professionals who live in the community. The Village retained **Christopher B. Burke Engineering, Ltd.** to model the Village's existing combined sewer system and work with Village staff and the task force to make recommendations for system

improvements.

Creating a hydraulic model to determine how Skokie's sewer system functions during rain events and periods of peak flow proved labor-intensive, requiring system attribute data input for over 168 miles of combined sewer segments, 7,840 man-holes, 1,400 restrictors and 158 flood-control facilities covering 6,340 acres. The required data took several months to compile, encompassing sewer pipe size, slope, elevation and restrictor size obtained through various sources such as the Village's GIS system, paper atlases and as-built drawings. Crews performed field surveys to mine data that could not be obtained from those sources. Once the data was collected, it was reviewed, entered and utilized to develop an accurate hydraulic model which is paramount to

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Chicago Metro Chapter

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SAVE THE DATE

APWA 2023 CHAPTER AWARDS

Thursday, March 16th
11:30am-2pm

Medinah
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Save the Date - Chapter Awards Luncheon
2023 Chapter Awards

Upcoming Events

Chapter Events

- Jan 4, 2022 City Branch 2022 Webinar Sponsorship
- Jan 10, 2023 PFAS: What Public Works Can Expect
- Jan 11, 2023 Southwest Branch January Meeting- Tips for Site Visits of Localized Drainage Issues
- Jan 25, 2023 Suburban Branch: Awards Lunch 2023
- May 8-12, 2023 2023 APWA Illinois Roads Scholar Program - May 8-12, 2023
- May 24, 2022 Purchase Job Postings
- May 24, 2022 International Committee- Australia Study Tour Sponsorship!

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MWRD unveils new system for submitting permit Applications

by: Maureen Durkin, P.E., CFM, Managing Civil Engineer, Metropolitan Water Reclamation District of Greater Chicago

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) is an independent government agency serving approximately 91 percent of the land area of Cook County, Illinois. To carry out its mission of protecting the water environment, the MWRD built wastewater treatment plants and intercepting sewers that convey wastewater from local sewer systems to the treatment plants. Since 1913, the MWRD has issued permits for construction of sewers that are tributary to its interceptors. In 1972, the MWRD began requiring stormwater detention to be provided as part of certain developments. In 2014, the MWRD adopted its Watershed Management Ordinance (WMO), which expanded the scope of activities that require a permit from the MWRD to include development in flood control areas, wetlands, and riparian areas. This has resulted in significantly more developments in Cook County requiring a permit from the MWRD.

MWRD and Permit Databases

In 1991, the MWRD began development of a database to keep track of permit applications and issued permits. This Microsoft Access database was developed by the MWRD but relied on an operating system that was incompatible with Windows 10. After May 2022, the obsolete operating system was no longer supported by Microsoft. Consequently, continued use of the original database would expose the MWRD to significant cyber security risk.

In 2017, the MWRD began planning a system to replace the original database. The new database would need to provide the same functions as the original

database, which included tracking new, and resubmitted permit applications; showing the status of permit applications under review, as well as the status of construction under issued permits; and allowing for assignment staff to review permit applications and monitor issued permits. In addition, given the general trend toward increasingly voluminous permit files, concerns about storage space for permit files, and the industry-wide transition to electronic documents, the MWRD required a database that accommodates electronic permit application submittal and processing.

The MWRD considered purchasing a commercially available, off the shelf product to replace the original database. However, such products have high annual costs for maintenance and upgrades. The MWRD was aware of challenges experienced by peer agencies modifying off the shelf applications to meet their needs during implementation. Furthermore, the new database had to be easily adaptable as operational needs evolve. In light of these concerns, the MWRD decided to build the new database in-house using open-source technologies.

The Information Technology Department (ITD) of the MWRD conducted a needs assessment process to understand and capture critical requirements of each type of user of the original database. Upon completion of this assessment, the ITD began designing the new system. During development, the ITD used the agile scrum methodology to deliver the initial version of the new database, eventually named Watershed Management Permit Application Submittal System (WPASS). Examples of open-source technologies that

were used in the development of WPASS include are [Vue.js](#), [Buefy](#), [Material Design Icons](#), [Apache HTTP server](#). After delivery of the initial version of WPASS, the ITD switched to the use of the Kanban framework and made improvements as required by users on an ongoing basis.



Rollout of WPASS

Testing of preliminary versions of the new system by Engineering Department staff took place during the two-month period preceding the implementation of WPASS. A beta test group consisting of design engineers familiar with the MWRD's permit review process volunteered to test WPASS from the non-MWRD user's perspective. Beta testing occurred in the Spring of 2022 and was largely successful. Since the original database could no longer be used after May 31, 2022, the MWRD decided to go live with WPASS on May 16, 2022.

In the months leading up to the go live date, the MWRD broadcast information about the new system in permit review letters, in permit meetings and during presentations to professional organizations. Two public training sessions were held in early May for non-MWRD users of WPASS. Internal training sessions were also held. Directions about how to submit permit applications were posted on the MWRD website.


The launch of WPASS on May

(Continued on page 24)

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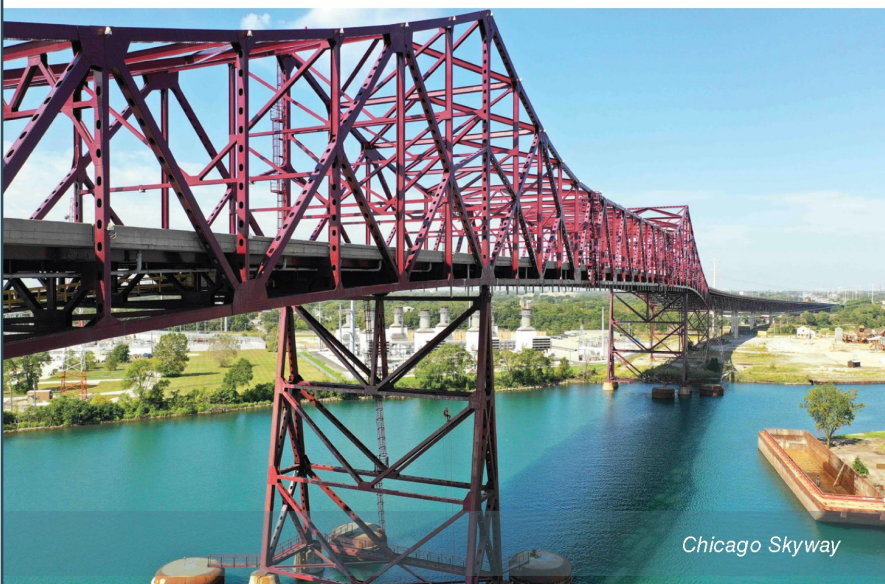
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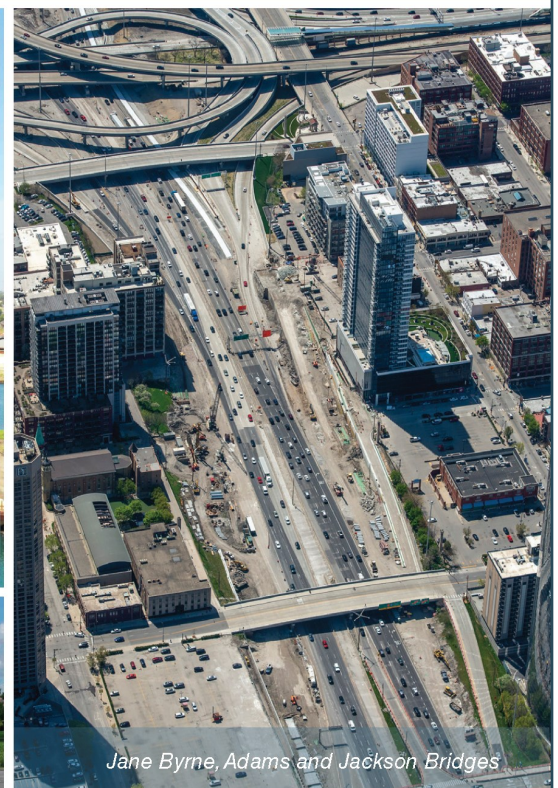
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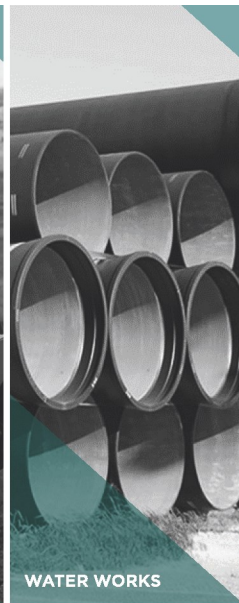
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Consolidation of Sanitary District Results in Real Savings

By: [Joel Sensenig](#), Assistant Director – Lake County Public Works

On September 13, 2022, the Lake County, Illinois Board approved an “Assumption Resolution” as the last legislative action in closing the Lakes Region Sanitary District (the District). Consolidating the District allowed Lake County Public Works (LCPW) to assume all operational services that has led to the

came “from a combination of property taxes (on 11,000 properties), connection and permit fees, and user charges.”¹

Beginning in 1972, the District was chartered to mitigate the pollution of local lakes and tributaries to the Fox River due to failing septic systems. In 1981, there were approximately 1,200 customers served by the Dis-

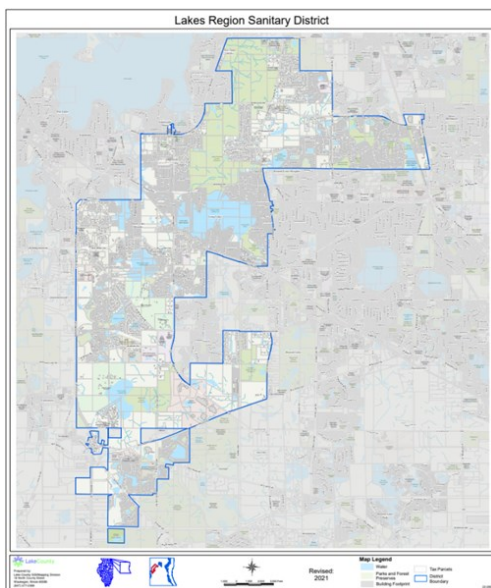
trict, but the area and service grew over the remaining 30 years by the time it was transferred to the County. The County's regional interceptor pipe connects most of the service area for treatment at Fox Lake's Northwest Regional Water Reclamation Facility.

After completing a study in 2017, and receiving legislative authority under 70 ILCS 2805/33.1, the County an-

nage in the process of consolidation by incorporating the 6,000 plus customers into LCPW's billing system. With just over 26,000 existing retail customers, the additional accounts not only increased the billing requirements by 20% but extended the customer base westward to an area that previously represented only a small portion of the County's retail customers. Providing billing support to customers in both incorporated and unincorporated areas within the District required a detailed review of 44 intergovernmental agreements, 14 developer agreements, and the rate structure and coordination with governmental agencies and customers to ensure accuracy and consistent messaging. LCPW's budget and finance manager, contracts manger and billing supervisor played a critical role in ensuring the consolidation efforts were aligned with existing processes and procedures.

Operating efficiencies were a critical planning effort. LCPW has a centralized Engineering Division, Budget and Finance Division, Maintenance Division and three Operation Divisions geographically aligned with one of its three Water Reclamation Facilities (WRF). Each WRF plant supervisor and team maintain a section of the County's system; North Division, Central Division and Southeast Division. The largest section, by land area, is in the North Division. The District is now incorporated into the North Division and LCPW operators manage the area.

The maintenance requirements of the District were included in the overall maintenance operations performed by LCPW's staff



Service area of the District

streamlining of resources and the elimination of the District Tax Levy, saving approximately \$1.2 million in annual tax assessments.

The District, which was in the upper northwest portion of Lake County near Fox Lake, in Illinois and less than six miles from the Wisconsin border, served the area since the 1970s. The system encompassed 17 square miles and collected wastewater for more than 6,000 customers. The service area partially overlapped portions of Fox Lake, Lake Villa, Volo, Round Lake, Round Lake Beach and unincorporated areas adjacent to those communities (reference District Map). Funding for the District

announced the consolidation of the District within the purview of Lake County Public Works (LCPW) in March 2019. For the next three years, the operations and maintenance of the District assets were run by the LCPW while the District Board worked to sell its remaining property and pay off the debt obligations of approximately \$8.5 million. With those actions now completed, the District transferred 20 lift stations, 82 miles of sewer pipe and 2,060 manholes to LCPW while eliminating the need for overhead positions and the District's headquarters building.

LCPW's Budget and Finance Division took on an early chal-

(Continued on page 24)



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Patience [and coordination] is a Virtue

By: Byron Kutz, P.E.; Superintendent of Engineering; The City of Lake Forest

Looking back at the previous articles I have written, and I am starting to realize a trend which is the importance of communication and coordination...spoiler alert... the trend continues. The Deerpath Road corridor construction work over the last few years consisted of three major projects. Two of the projects were funded and constructed by outside agencies although that didn't lessen the need for city involvement, while the third project was a locally funded project. The two outside-agency projects are the **Route 41 Viaduct Pump Station Project** being led by IDOT, and the **ComEd Bike Path Bridge Replacement Project**. The local project was the **Deerpath Road Watermain Project** to replace and upsize the watermain along the Deerpath Road corridor. All three projects are located just east of Route 41 on locally owned Deerpath Road, a critical corridor connecting western Lake Forest to the central business district as well as several schools. Lake Forest has few main east/west corridors so it was crucial to minimize road closures as much as possible, as well as communicating any impacts to the community in advance. The important message the city tried to convey is that all three projects have significant long-term benefit to the community.

The objective of the Route 41 Viaduct Pump Station Project was to mitigate the flooding problem at the Deerpath underpass at Route 41, by constructing a new pumping station at the southwest corner of Ahwahnee Lane and Deerpath Road, as well as installation of two detention ponds just east on Deerpath Road. The underpass previously would flood several

feet in heavy rains causing the road to be closed to vehicles which significantly impacted emergency responders traveling to the nearby Lake Forest Hospital just west of Route 41. Work for this project started in January of 2021, the City will take ownership of the pumping station and detention ponds after the project is complete later this year.

The objective of the ComEd Bike Path Bridge Replacement Project was to replace the pedestrian bridge on Deerpath Road that runs parallel to Route 41 to increase its capacity to support ComEd maintenance vehicles and equipment. Although the bridge carries the Skokie Valley Bike path which is owned by Lake County Department of Transportation, the bridge itself is owned by ComEd as they use this corridor to maintain their transmission lines which parallels the bike path. Prior to the bridge being replaced to handle higher loads, ComEd had to drive several miles out of the way to access lines in this general area. Although the city was heavily involved with plan-review and coordination, ComEd will maintain ownership and maintenance of this bridge in the future. Work for this project started in March of 2022 during spring break and will be substantially complete later this year. The project consisted of a series of lane-closures and full-closures during both demolition and erection of the bridge beams.

In addition to those two outside agency projects, there was also a city watermain project to replace and upsize the watermain within the corridor. Luckily, the City's contractor was flexible with their scheduling and agreed to shift their schedule to

March 2022 during spring break, while most of the community was out of town and therefore lessen impacts. The contractor dedicated almost 20 workers on the project and completed over 90% of the work during the week of spring break.

The communication approach for all projects was to notify early and often through various platforms ranging from traditional mailed letters, Facebook, city website updates, eNews, text/sms alerts, newsletters, and the creation of a stakeholder group consisting of various institutions such as schools and the hospital. City staff met numerous times with ComEd and IDOT representatives the past year to review tentative project construction schedules and encourage a coordinated approach to limit impacts to the community.

The locally funded watermain project is complete while both outside agency projects will be completed by the end of the year.

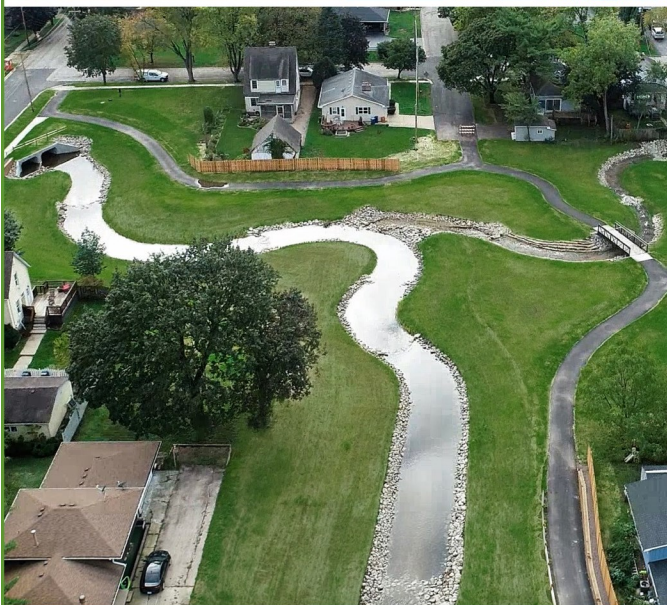
A recommendation for those coordinating multiple projects with outside agencies, is to forge clear lines of communication between the teams, as well as heavily involving the municipality's communications manager to help craft and deliver the message to the community. The city also relied on map visuals throughout the project to clearly convey the different traffic sequences (see Deerpath Road Corridor Projects Map at end of this article). A follow-up letter will be mailed to residents along the corridor following construction to thank residents for their patience, as well as surveying the effectiveness of communication efforts by the city and how it can be improved on outside-

(Continued on page 21)



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Water System Resiliency

By: [Maxwell Geib](#), Utilities Superintendent, Vil. of Lincolnshire mchrist@hrgreen.com


When it's your responsibility to provide drinking water to thousands, water system resiliency is a critical part to the operation.

What makes me sleep at night? Knowing that my system is tight, resilient and I have a strong team of water operators. When we talk about operating a water system, we want to know how the system can handle different situations. The system is usually designed to handle a certain amount of demand and a peak demand in times of need. I determine the systems resiliency by how many emergencies or high demand days the system can handle without distribution disruption. If you're able to handle a water main break, irrigation, and re-filling of water towers and reservoirs all in a 24-hour time frame, then I would say your system is in good condition.

Now if you have a bad week/month with water issues and it takes the system more than a few days to recover, you have some work to do. There are many factors to look at when identifying areas to improve on when becoming more resilient. One of the best tools to have as a water operator would be a "water model" or a hydraulic calibration of the entire water system. This analysis of the system gives you an accurate look at what your system is currently capable of and where improvements can be made. The unique thing about these "water models" is you can make the criteria as strict as you'd like when "grading" the system. For example, if you want to make pipe age a factor or installation method a factor, you can do just that. Depending on the weight of the score, these factors can help you prioritize areas of the system that need the most attention.

The other part of gaining water system resiliency is the staff that

operates the system. You must have confident and competent water operators within your team. This process can be difficult and take a long time to accomplish. Ways to make this happen is by providing routine training, system exercises and quality leadership. There are plenty of opportunities to learn about water systems through the **American Water Works Association (AWWA)**, which is where most operators should start. You'll also need to provide a more personal classroom style training and some hands-on training at your facility. Sit down with your water operator team and work through system operations. Provide different scenarios for staff to work through together. This offers a safe place and time where the pressure isn't there and staff can utilize their resources with each other and comprehend what they're doing. Some people find that it can be difficult to learn during real emergencies. Be a quality leader by offering real feedback on scenarios you've been through. What went right, what went wrong and how you learned from those experiences.

Having a road map of the water system (your "water model") and a strong team, you have the resources to comfortably operate a water system with the knowledge that any issue can be quickly identified and resolved, all while providing drinking water to the community. Getting to know your water system on a personal level and how it works within your community is going to benefit you in every scenario that presents itself. Knowing your weak points, high users, old parts, interconnects, loops, and other areas of the system will help develop resiliency over time. So, the next time you're in your pump house or looking at your water tower, ask yourself if you know how everything works and if it's currently working. 

Skokie Task Force (Cont'd from pg 12)

understanding where and under what conditions the existing sewer system would experience adverse events.

Once built, the model required calibration that included running the model repeatedly using data from eight newly-installed flow meters to record flow, level, available capacity and temperature data during wet and dry weather periods. The placement of these meters was determined based on the location of the Village's six existing flow meters to ensure optimal system-wide flow data collection. The additional flow meters remained in place for several months to test and ensure model calibration accuracy. Once calibration was complete, the final model was

run under different simulated storm conditions to determine system performance and what improvements would be required to reduce the likelihood of adverse sewer system events. The project also included mapping 166 unique responses to a widely-publicized Village Flood Damage Questionnaire to further ensure accuracy of the hydraulic model.

To date, the task force has met twice to discuss sewer system issues and project parameters. In the coming months, the task force will reconvene to review hydraulic modeling results, discuss potential public improvements to address adverse sewer events as well as possible public or private programs that could be implemented to reduce sewer system loading.

Preliminary data obtained from the hydraulic modeling estimates an approximate \$150 million cost for a non-integrated solution that relies solely on public sewer improvements. One possible alternate solution that could be used in conjunction with public sewer improvements would be increased stormwater management requirements on all private development. Alternatively, selected solutions could be further combined with programs to incentivize private improvements such as conversion to overhead sewer or installation of private flood-control devices.

For more information, contact
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Russ Rietveld at:

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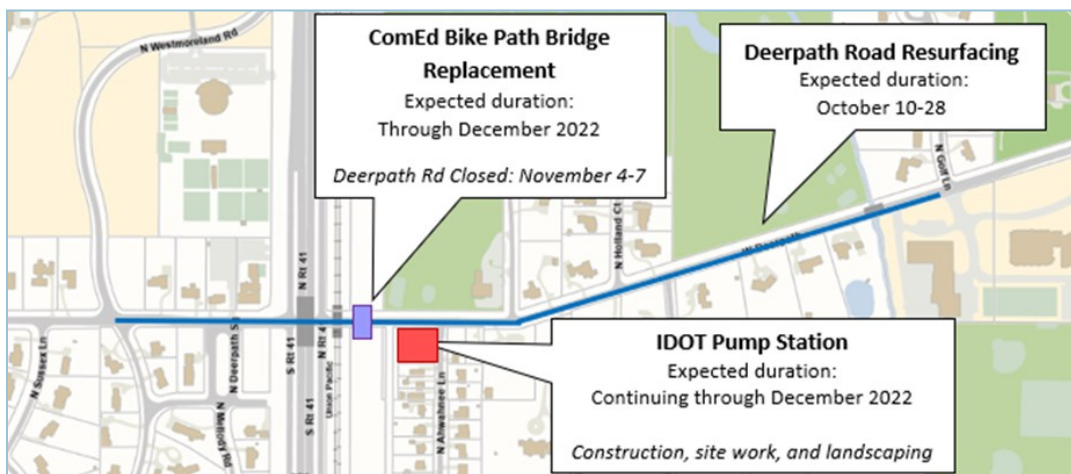
Patience (Continued from page 19)

agency or city projects going forward. The projects surely caused some inconveniences to the community over the last few

years, but the improvements will provide benefits for the next 50+ years. The saying is patience is a virtue, but in this case, it proved to be...coordination is a virtue.

Byron Kutz, P.E., works for the City of Lake Forest and can be reached at:

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Deerpath Road Corridor Projects Map

Using Risk-Assessment to Prioritize Infrastructure Renewal

By: Carolyn Grieves, PE, V.P. of Business Development for Baxter & Woodman, Inc., cgrieves@baxterwoodman.com

Asset Management Programs provide a vital tool to help communities manage existing underground assets and vertical assets, prepare for ongoing growth, and facilitate long-term infrastructure planning. Well-developed asset management processes allow organizations to improve the management, cost effectiveness and operation of existing infrastructure, optimize the life cycle of an asset for maximum results, and provide a transparent process for planning for short- and long-term infrastructure renewal.

There are many asset management software options available for municipal utility use. While purchasing a community-wide asset management software package can be a beneficial investment, there are alternative cost-effective options that utilities can implement that will still produce powerful results. Using existing Geographic Information Systems (GIS) and risk-based asset management principles will result in an adaptable and expandable GIS-Based Asset Management Program.



AWWA benchmark: Water System goals 25 -30 main breaks per 100 miles of main

Building a GIS-Based Asset Management Program

A community that is actively using GIS but can't afford the initial investment of asset management software can achieve excellent results building an

asset management program established on risk-based asset management principles where the Risk of Failure of an asset is calculated as a function of the Likelihood of Failure and the Consequence of Failure. **Risk** is a measure of the relative severity of an event and is a direct function of the likelihood of the failure event occurring and the consequence if the failure event occurs. The **Likelihood of Failure** (LOF) is a gauge of how likely a failure is to occur for a given asset. The **Consequence of Failure** (COF) or criticality, is a measure of the impact of any asset's failure.

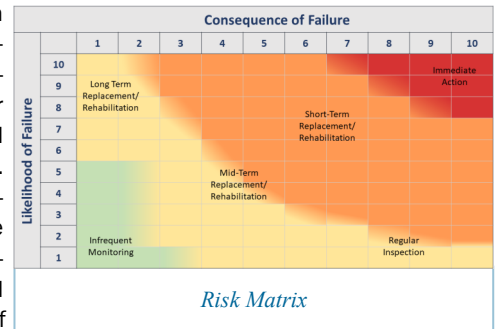
This GIS-based asset management approach provides a community or utility with a system to continually evaluate performance and costs for a sustainable capital investment strategy. This systematic approach uses the community or utility's existing GIS and evaluates the risk of

failure for each infrastructure asset to prioritize short- and long-term capital improvements. A risk score is calculated for every utility with a score ranging from 0-100. The higher the score, the more urgent the project recommendation.

Water System Example

When developing the risk analysis for a water distribution system, the first step is clarifying or updating existing system information in the GIS, including pipe age, material, and diameter. Typical LOF factors can then be evaluated based on what condition information the utility currently tracks or monitors. Some examples of available LOF factors include expected asset

longevity based on pipe material, water main break history and frequency, soil corrosion potential, and lead detection data. Some examples of typical COF factors include locations of priority or sensitive customers (e.g., hospitals or schools), high-volume water users, accessibility, and roadway jurisdiction. A "0-10" numerical rating is established for each of the LOF and COF conditions. Using GIS, the LOF and COF factors are applied to each pipe, resulting in a total Risk score. Once the risk score has been developed, the process is straightforward to update the risk regularly in GIS as conditions change and the system evolves.



Risk Matrix

The risk matrix concept, shown **here**, illustrates the combinations of total risk that can be produced from LOF and COF and the impact that they have on general prioritization. The upper right quadrant (red) depicts an asset ranking of High risk (high LOF and COF), which represents the most immediate priority, whereas the bottom left quadrant (green) represents an asset ranking of Low risk (low LOF and COF). Assets assigned a risk ranking that falls within the top left or bottom right quadrants (yellow) represent assets that will need to be addressed in the

(Continued on page 33)

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MWRD Permits (Cont'd from page 14)

16, 2022 was largely uneventful, which was considered a sign of success. The MWRD continues to implement improvements, but the new system has succeeded in providing the fundamental requirements.

Throughout the development process, the importance of close collaboration between departments was evident. Takeaways from this effort include accepting that the process will take much more time than anticipated. Staff who rely on systems for their work that are undergoing updates should have a back-up plan for how to continue

operations should both the new and original systems be unavailable. Users are the most important part of the implementation of new systems. If the new system does not meet their needs, it must be changed, otherwise it will not be used. Sometimes changing the original scope of work during the project leads to a better result.


Maureen Durkin works for the Metropolitan Water Reclamation District of Greater Chicago and can be reached at durkinm@mwrld.org. 

Sanitary District Savings (Cont'd fr 17)

located in the Village of Libertyville, central to the County's operations. This location allows the Department to perform maintenance throughout the three divisions while operating from a central location for staffing personnel, training, planning, and storing materials and equipment. Responsiveness was improved using an in-house workforce and organic equipment, reducing the need to contract out emergency response and maintenance work orders. In the first year the maintenance staff executed 24 work-orders ranging from cleaning sewer lines to electrical rehabilitation of lift stations. The number of work orders completed in the second year increased to more than 100.

The LCPW Engineering Division provides planning and execution support for more than \$10 million annual Capital Improvements Program. The addition of 20 lift stations and 82 miles of

sanitary sewer required a wholistic review of project prioritization. Of immediate concern was upgrading the 20 lift stations to communicate through a modern, integrated Supervisory Control and Data Acquisition (SCADA) system. This project is in progress and will ensure similar system capabilities with the 87 other lift stations that LCPW operates and maintains.

During this transition, the District facilities were maintained and repaired by LCPW and they are now fully transferred to LCPW. While the District served an important role for 50 years, its function will continue to be supported under an integrated County program. The transition to a consolidated wastewater system is in keeping with the County's strategic goals and aligns with LCPW's mission to "deliver exceptional, financially sustainable, reliable, water and wastewater services in a safe manner while ensuring quality service, public health and environmental stewardship." 

References:

1) Lake County Chronicle, Lakes Region Sanitary District will be dissolved by end of year, By Gregory Harutunian, April 10, 2019

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Grants Help Advance Important Projects

By: Adriana Webb, Engineering Division Manager - Village of Glenview



2022 Stormwater Improvement Project under construction supported by MWRDGC

The Village of Glenview has long recognized that getting capital improvement projects done is an expensive undertaking for a local government alone. The Village realized improving the quality of life in the community takes "spending other people's money" – that is, aggressively pursuing federal, state, county and regional grants. This "outside funding" advances important infrastructure work without having to rely solely on local residents' property taxes.

Since the late 2000s, the Village of Glenview has been especially focused on pursuing grant funding for projects that have included:

- intersection improvements and road widening improving traffic flow
- storm water management controlling storm water runoff in areas prone to flooding
- streetscape beautification and lighting
- adding multi-use paths and sidewalks
- bridge reconstruction
- riverbank stabilization, improving local habitat and water quality
- maintenance projects, such as road and trail resurfacing

Beginning in 2009, Glenview was able to secure almost \$50 million in funding. Another \$10 million was recently secured for the next five years. With this outside funding, projects can be accelerated to meet community needs that otherwise would be too expensive had local revenues been the sole source.

Is there a strategy for successfully pursuing outside funding? Do such funds make projects more efficient? How can they stay on track? Is funding guaranteed? There are a number of factors that can make the pursuit of outside funding successful:

Advanced Planning and Public Input. Granting agencies appreciate if local agencies have a vision, such as a master plan, to serve as a guide during the grant submission process. The Village of Glenview's master planning has included a Village-wide Comprehensive Plan, strategic plan regarding the water supply, downtown revitalization plan, bike and pedestrian plan, as well as, a rolling multi-year Capital Improvement Program that is updated annually to reflect community needs. Collecting public input is a very important component for both putting together a successful project and winning a grant.

Design and Project Management. To make a project attractive and on target consider allocating local resources and funding to complete its first steps, such as preliminary engineering (Phase I) or even final engineering (Phase II). This helps to accelerate the project timeline and boosts the granting agency's confidence the project is moving ahead. It is important that project management consistently maintains grant reporting commitments, along with required grant registrations and necessary updates, meeting current grant requirements.

Leadership and Partnership. For projects beneficial to the community that are governed by other jurisdictions but located within Village borders, becoming a lead agency can make the project more favorable for grant funding and speed up implementation. Also, important projects can be better implemented by reaching out to coordinate with other governmental agencies and partner with other local agencies. Recently, the Village partnered with two separate school districts on much-needed traffic improvements on state and county roads heavily used by two school facilities. To date, improvements have been partially implemented with completion anticipated in the next couple of years.


Local Match and Funding. Allocating funds for a project's local share when putting together the budget for a Capital Improvement Program is important. Typically, 20 to 50 percent local funding will be required for most grants. Building in the local budgeting upfront demonstrates a strong track record and ensures grantee projects are completed.

When a municipality is seeking to fund local improvements with "other people's money," demonstrating it can be a reliable partner takes a good planning process, strong project management and consistent project implementation.

(Continued on page 26)

Grants (Cont'd from page 25)

One of the most recent grants Glenview secured through the U.S. Army Corps of Engineers (Section 219) was for a project completed in 2021 that benefitted almost 100 properties. The neighborhood had originally been constructed without storm sewers. The U.S. Army Corps of Engineers contributed \$1.2 million (75 percent) toward storm sewer infrastructure for the project. Storm water conveyance and inline detention was installed under a Cook County jurisdiction roadway and several local roads, with sewer pipes ranging in diameter from 12 inches to 48 inches. In 2020/21, the Village was also able to resurface a significant existing trail using Illinois Department of Natural Resource funds, which covered 50 percent of this maintenance project.

- Grants the Village of Glenview secured in recent years came from:
- U.S. Army Corps of Engineers - Section 219
- MWRDGC - Metropolitan Water and Reclamation District of Greater Chicago
- CMAQ - Congestion and Mitigation Air Quality
- ITEP - Illinois Transportation Enhancement Program
- IDNR - Illinois Department of Natural Resources
- FEMA/IEPA - Federal Emergency Management Agency/Illinois Emergency Management Agency
- STP - Surface Transportation Program
- STP-Br - Surface Transportation Program - Bridges
- IEPA 319 - Illinois Environmental Protection Agency/Clean Water Act319
- SRTS - Safe Routes to School Program
- Invest in Cook - Cook County Grant Program
- DCEO - Illinois Department of Commerce and Economic Opportunities 

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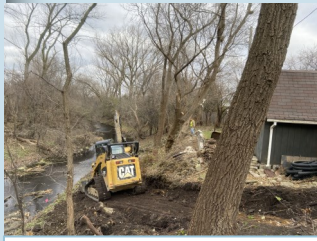


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Restricted Access Stormwater Outfall Repairs

By: Nicole Petrone, V3 Companies



Haul Route

In 2019, the Village of Western Springs retained the services of **V3 Companies** to locate, assess, and document storm sewer outfalls that were significantly deteriorated along Flagg Creek. Mainly due to resident complaints, the Village was aware that several outfalls were not functioning properly and in need of repair or replacement. In most cases the storm sewer ran through neighborhoods, down side yards, and discharged into the creek.



Outfall—Before

A total of 33 outfalls were located and evaluated. In most cases, the flared end sections of the storm sewer had failed. Sections of pipe and structures were found to have collapsed or settled. A majority of the locations experienced severe erosion due to the lack of slope protection.

The Village needed a sustainable fix for these outfalls. However, the biggest challenge lied in the fact that access to each of these outfalls was severely restricted, a common problem for many municipalities that have waterways which are adjacent to neighborhoods.

Once documentation was complete, V3 discussed with the Village options to execute the work and prioritized groups of outfalls based on location and

access. A five-year capital improvement plan was developed and budgeted, with work to start in 2021. The Village initially proposed completing this work in-house, but due to limited staff and specialized knowledge to complete the work, decided on a Design/Build project delivery. A Not-to-Exceed budget was set for each year. The Design/Build delivery allowed for scenarios to be worked out in real time to maximize the number of outfalls that could be repaired each year. Three of the more severe outfalls were selected and repaired in 2021.

A typical Design/Build delivery consists of a single contract with a defined total project budget that is divided into two separate authorizations: the first (Phase I) involves an assessment to gain basic understanding of the project and develop concept/preliminary scope documents, and the second (Phase II) includes final design, permitting, and construction. Because the specifics of the work were undefined due to restricted access, a Design/Build delivery would allow V3 to work within the project parameters to determine appropriate access and complete construction and remediation, all while maintaining budgetary goals. With homes on one side, creek on the other, and a wooded slope along the corridor, accessibility restrictions were a major issue. Coordination with residents was crucial to gaining access to any of these outfall locations in order to define a corridor and develop a solid design plan.


Another purpose behind this Design/Build contract was to save efforts on the design side by working with in-house construction staff to perform some preliminary work — in this case,

to dig out and expose the outfall. This preliminary construction work would allow the design team to meet the design intent while the construction team was able to maneuver plans in order to develop solutions quickly in the field. These solutions could be executed quickly without having to request a formal design change, pricing effort, and Village approval. With these steps eliminated, the contractor and designer were able to work together to determine what actions needed to be taken to execute the work efficiently and deliver the project on-time and within budget.



Outfall

V3's Director of Construction, **Mike Famiglietti**, recommends a Design/Build project delivery whenever a project consists of parameters or logistics that are difficult to design into the project. This may include site conditions that dictate a change in design only after certain information is uncovered during the construction process. "Design/Build is not a fit for every project" states Mr. Famiglietti. "However, if these conditions exist, it can be an effective project delivery that uses funds in a way to maximize the improvements being constructed." Any budgetary savings can be retained by the client, or potentially reallocated towards executing additional work."

The contract to repair the first three outfalls was completed in December of 2021. 



Outfall—After

Reimagined: Village of Niles - Howard Street Revitalization

By: Robert Rado II, PE, Civil Engineer, Village of Niles, rjr@vniles.com

The Village of Niles Howard Street Revitalization Project has been a collaboration years in the making. There were substantial design challenges, significant public outreach, major infrastructure improvements, and finally the culmination of the project consisting of the renovation and reconfiguration of the Howard Street corridor.



Howard Street North Branch Trail Crossing (Before and After with new RRFB)

The project spans Howard Street from Milwaukee Avenue to Lehigh Avenue, covering an approximate distance of 8,200 feet. The land use through the project varies greatly, ranging from commercial to residential to industrial. The existing corridor had limited right-of-way, safety issues, restricted access to the North Branch Trail, a high volume of truck traffic, limited sidewalk, and no bicycle facilities. The main goals of the project were to rehabilitate Howard Street, provide safe non-motorized means of transportation, calm traffic, rehabilitate the pavement, and direct trucks to more suitable routes.

Two major utility improvement projects, water and gas, were completed in advance of the Howard Street project to ensure the underground facilities were up to date and mitigate any potential future issues as much as possible. The approximately \$5.5 million water main project replaced mains and major connections from several blocks west of Milwaukee Avenue to east of Lehigh Avenue. A major storm sewer line including massive 54" diameter pipes on Nordica Avenue and Howard Street with an outlet to the Chicago River was also constructed. This alleviates some major flooding issues and will potentially aid in the execution of future storm sewer projects. People's Gas installed a gas main on Howard Street that required significant coordination with the Village of Niles, the Niles Park District, the City of Chicago, the Illinois Department of Transportation, and others. As part of the gas main project, the Village was able to include a 10' wide shared-use path on Caldwell Avenue from Howard Street north to the LoVerde Recreation Center. This path is part of a larger project concept scheduled to be constructed on Caldwell Avenue and Oakton Street.

The original Howard design addressed several major project needs, but ultimately the Village's team developed and considered several innovative alternatives and decided on a design that provided optimal impact reduction, cost benefit, safety features, and functionality.

The Howard Street project consisted of roadway patching and resurfacing, implementation of a road diet between Waukegan Road and Caldwell Avenue (narrowing of the pavement to one through lane in each direction and a dual left turn lane), construction of on-street and off-street bicycle facilities, introduction of a Rectangular Rapid Flashing Beacon (RRFB) crossing at the North Branch Trail, filling in sidewalk gaps, widening of Howard Street at Waukegan Road to provide separate left turn lanes, roadway lighting from Harlem Avenue to Nordica Avenue, traffic signal modernization at three intersections, and other improvements.

The project was funded with **Congestion Mitigation Air Quality (CMAQ)** grants through the **Chicago Metropolitan Agency for Planning (CMAP)**. The final project cost was \$7.6 million, which included \$6 million in federal funding and a \$1.6 million local match. The project was completed in the spring of 2021.

Project Goals and Highlights:

Minimize Impacts by limiting encroachment of the proposed improvements near private property and reducing the need for large scale land acquisition (reduced acquisition parcels from 71 to 14). Reduce Truck Traffic in the residential sections of Howard Street through the implementation of a road diet that

(Continued on page 30)



Howard Street protected bike lane at west end of road diet.

Construction Efficiency (Cont'd from page 29)

encourages trucks to use more suitable routes. Calm Traffic by improving the existing conditions that allowed for a high probability of speed differential, high speeds, and conflict points. Provide a Safe Environment for Pedestrians and Bicyclists through the creation of bicycle accommodations (on street bike lanes, protected bike lanes, off street shared-use path) and implementation of sidewalk infill. Fill Important Gaps devoid of existing bike/ped accommodations identified by both the Village of Niles' Bicycle and Pedestrian Plan and Northwest Municipal Conference's Multimodal Transportation Plan. Improve the deficiencies of the Howard Street/North Branch Trail Crossing by adding safety features including Rectangular Rapid Flashing Beacons (RRFB), decorative high visibility cross walks, raised medians and refuge islands, and improved signage. Improve the Pavement deteriorating on Howard Street through extensive patching, milling and overlaying, reconfigured usage, and restriping. Upgrade the Utility Infrastructure by replacing water and gas main in advance of the street improvements. Introduce Street Lighting on a portion of Howard Street expanding the Village's lighting network and tying into



Protected bike lanes and RRFB crossing at the North Branch Trail

adjacent lighting projects. Implement long sought after Howard-Waukegan Intersection Safety Improvements by creating dedicated left and right turn lanes and modernizing the traffic signals. Improve the Navigability of the corridor by adding decorative and informative signage features easily directing travelers to key destinations.

The Howard Street Improvement Project presented numerous challenges and incorporated many innovative design features. After the projects substantial completion in the spring of 2021, there has been considerable positive feedback. A preliminary traffic analysis also yielded positive results that include enhanced safety, improved traffic flow patterns, increased bicycle and pedestrian usage and safety, improved level of service, reduced travel speeds at key points, improved queue lengths, reduced truck traffic, etc. Overall, the project

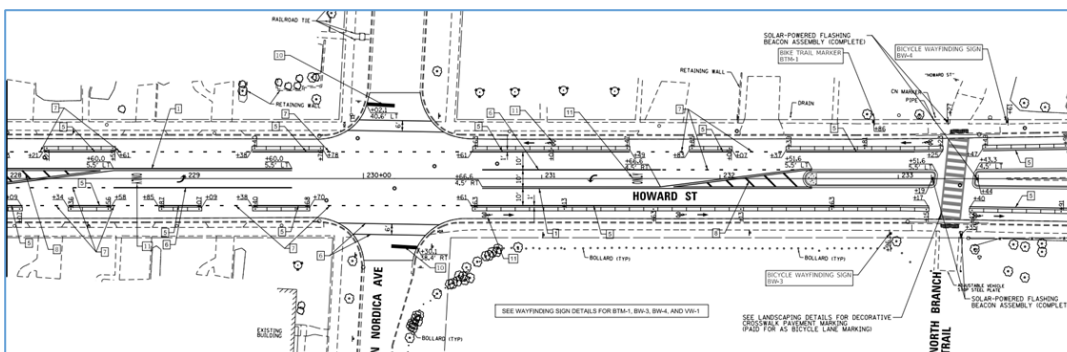
is considered to be a profound success. A special thanks goes out to Village Officials and Staff, CMAQ, CMAP, IDOT, CBBEL, Stanley, Niles Residents, and everyone involved in the project. The Village of Niles is proud to present the Howard Street Project and its many beneficial features to its citizens and the rest of the public. The Village has always and continues to aspire to design and construct projects that improve the community as much as the Howard Street Project has and is projected to do.

Please feel free to send questions or comments on this article to:

Bob Rado, Civil Engineer,
rjr@vniles.com

or

Tom Powers, Interim Director of Public Works, tip@vniles.com



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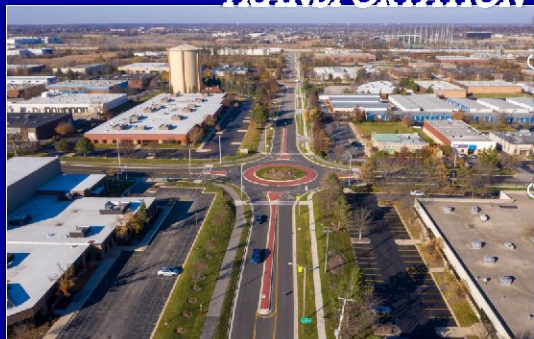
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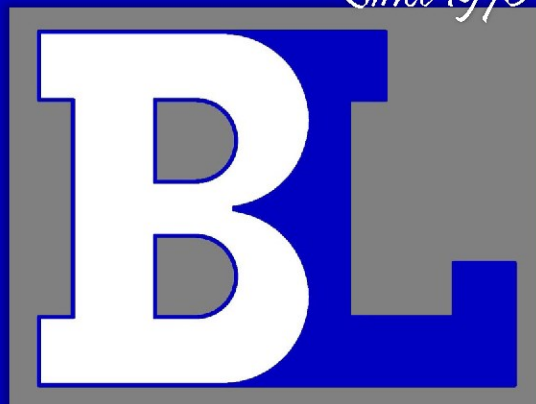
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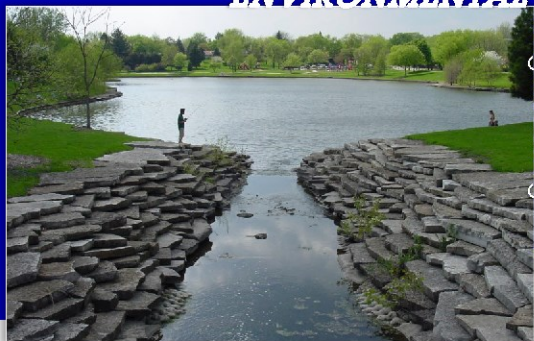
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Risk Assessment (Cont'd from pg 22)

near- to mid-term.

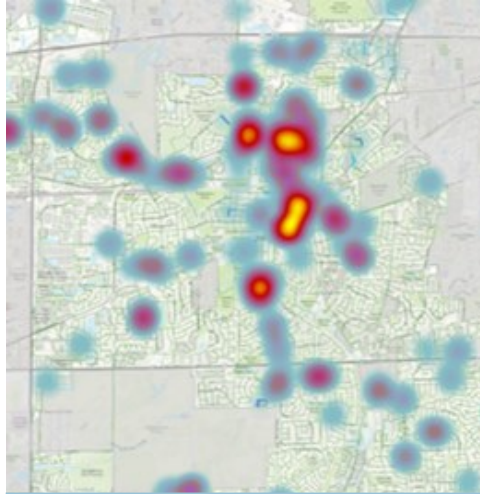
After the Risk of Failure has been calculated for each water main, exhibits such as this hot spot graphic can illustrate areas that have a higher risk of failure and should be prioritized sooner in a community's capital plan. Higher risk areas can be overlapped with proposed roadway or other infrastructure improvements in GIS to develop a priority or capital plan that makes the best use of a community's infrastructure investment dollars.

Conclusion

Over the next five to ten years, many influences will have an impact on the success of your Asset Management Program. Funding availability, staff resources, regulatory updates, and political and community support will play roles in the availability of infrastructure investments. A Risk-Based Asset Management program will provide you with the tools that a utility needs to develop a transparent and defensible plan for infrastructure rehabilitation, replacement, operations, and maintenance.

Carolyn Grievess, PE serves as the Vice President of Business Development for Baxter & Woodman, Inc. and can be reached at

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2022 Chapter Golf Outing Re-cap

By: John Heinz, Senior Construction Manager, CBBEL, jheinz@cbbel.com

It is NOT too early to be thinking about GOLF!! Please mark your calendars for the 2023 Chicago Metro Chapter Golf Outing at Bartlett Hills Golf Club on Thursday June 29, 2023.

The 2022 version was record breaking on numerous fronts. We had a record number of golfers, a record number of SPONSORS and that resulted in a record amount of funds raised for Chapter Scholarships!!!

We cannot thank you all enough for your support and generosity!!

It was a beautiful day with lots of fun and laughs before, during and after golf!!

The records cannot be achieved without the support of the Sponsors who give so generously specifically the following:

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The sponsors provided the donations, and many others provided the much-needed manpower and behind the scenes support to make the day go smoothly. Dan Dinges, DPW in Bartlett and Bob Mitchard, DPW in Algonquin, and several of their crews and equipment were instrumental in getting all the equipment, tables, and chairs to the holes for the sponsors.

Behind the scenes, Beth Urgo from the Bartlett PW Department did an outstanding job taking and organizing all the registrations, and Julie Cahill from CBBEL did all the signage, tickets and notifications. Thank you, Beth, and Julie!

The Golf Committee is second to none and thank you to all of them, Dan Dinges, Tom Talsma, Bob Mitchard, Karen Daulton-Lange, Frank Tripicchio, John Clark, Jenn Anderson, and Phil Lenz. You guys are amazing.


Finally thank you to the staff at Bartlett Hills Golf Club, they are great to work with and always make the day enjoyable.

See you all on Thursday June 29, 2023!! 

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Recognize long-term fellow APWA members with a handsome Membership Anniversary pin! They are provided free of charge from APWA national.

Download the order form from the national APWA website, (search "anniversary pin"), fill it out completely, save it to your computer, then email it as an attachment to ChapterSupport@apwa.net. You can email Chapter Support if you have any questions. 



The Metro

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Save the Date:

[Upcoming 2023 events](#)

Jan 10, Fox Valley, PFAS: What Public Works Can Expect
Jan 11, Southwest, Tips for Site Visits of Localized Drainage Issues
Jan 17, Lake Branch Awards
Jan 25, Suburban Branch Awards

March 16, Chapter Awards Luncheon

April 23-28, Illinois Public Service Institute (IPSI)

June 29, Chapter Golf Outing

May 8-12, Illinois Roads Scholar Program
May 24-25, Chapter Expo (DuPage County Fairgrounds)

August 27-20, PWX San Diego

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