



City Commission Meeting

AGENDA

May 23, 2023, 6:00 P.M.

-
- I. **Call to Order of the Regularly Scheduled City Commission Meeting (6:00 p.m.)**
 - A. Pledge of Allegiance
 - B. Invocation
 - II. **Governing Body Comments**
 - A. Commissioner Locke
 - B. Commissioner Cole
 - C. Mayor Sheahan
 - III. **Consent Agenda**
 - A. Approval of Minutes from May 9, 2023, Regular City Commission Meeting
 - B. Approval of Semi-Monthly Bills and Payroll in the amount of \$305,098.38
 - IV. **Regular Business**
 - A. Presentation/Discussion with Burt Peterson and Consideration of Resolution 2023-7 MIH and KHITC Grant Programs.
 - B. Consideration of Engineering Firm to Design and Construct the New Water Treatment Plant.
 - V. **Discussion Items**
 - A. Homeless follow-up/continuation
 - B. North Lake Culvert Project
 - C. Maple Street Project
 - D. Cedar Valley Reservoir Spillway Project update
 - VI. **Informational Items**
 - A. Garnett Farmers' Market Season, hosted by the Garnett Farmers Market, will be held on every Main Street every Thursday from May 4 – October 5.
 - B. The Avenue of Flags, hosted by the Garnett Parks & Recreation Department, will be held at the Garnett Municipal Cemetery May 25-29.
 - C. The Memorial Day Service, hosted by American Legion Post 48 and VFW Post 6397, will be held at the Garnett Municipal Cemetery on May 29.
 - D. "The Charitable Sisterhood of the Second Trinity Victory Church" live dinner theatre, hosted by The Chamber Players Community Theatre, will be held June 2-4 and 8-11.
 - E. The 7th Annual Southland Cruisers Car, Bike & Truck Show, hosted by the Southland Cruisers Car Club, will be held on June 3 on the Town Square.
 - F. The Kart Road Races, hosted by the Garnett Enduro Kart Club, will be held on June 3-4 on the Lake Garnett Road Course.
 - VII. **Citizens to be Heard (Five-Minute Time Limit Per Person)**
 - VIII. **Adjournment**

May 9, 2023

The Governing Body of the City of Garnett met in regular session on May 9, 2023, at 6:00 p.m. with the following individuals present; Mayor, Jason Sheahan; City Commissioners, Jody Cole and Mark Locke, City Manager, Travis Wilson; City Attorney, Terry Solander and City Clerk, Trish Brewer.

CALL TO ORDER

Mayor Sheahan called the meeting to order at 6:00 p.m.

The Pledge of Allegiance was recited, followed by Sam Stoltzfus, Beacon of Truth Church, giving the invocation.

GOVERNING BODY COMMENTS

- *Commissioner Locke* arrived at 6:06 pm

No comments

- *Commissioner Cole*

Wished Mayor Sheahan a Happy Birthday. Inquired as to why the scoreboard is not working. Director Bures stated they had had the electricians come out and the issue is unknown at this time.

- *Mayor Sheahan*

No comments

CONSENT AGENDA

- A. Approval of Minutes from April 25, 2023, Regular City Commission Meeting
- B. Approval of Semi-Monthly Bills and Payroll in the amount of \$251,210.43

Commissioner Locke motioned to approve the Consent Agenda as presented.

Seconded by Commissioner Cole. Motion passed (3) AYE (0) NAY

REGULAR BUSINESS

- **Proclamation declaring May 12, 2023, as Provider Appreciation Day.**

Mayor Sheahan gave the official declaration for May 12, 2023, as Provider Appreciation Day

- **Proclamation declaring May as Mental Health Month.**

Mayor Sheahan gave the official declaration for the month of May as Mental Health Month.

- **Proclamation declaring May 7th-13th 2023, as National Travel and Tourism week.**

Mayor Sheahan gave the official declaration for May 7th-13th, 2023 as National Travel and Tourism week.

- **Consideration of KMGa buyout.**

Mayor Sheahan motioned to approve the buyout amount for KMGa contract in the amount of \$10472.36 and sign the agreement. Seconded by Commissioner Cole. Motion passed AYE (3) NAY (0)

DISCUSSION ITEMS

- **Homeless follow-up/continuation**

Art Black stated there is nothing new at this time.

- **North Lake Culvert Update**

City Manager, Wilson stated the footings have been poured, google pictures will soon be available to view as the project unfolds. Project is on schedule.

- **Cedar Valley Reservoir Spillway Project Update**

City Manager, Wilson stated the Pre-Construction meeting is Wednesday May 10, 2023, at 10:00am with McClure. Project is on schedule.

- **Swimming Pool**

Options for the City pool were discussed in depth and will continue as more information is collected.

- **Parks & Recreation Advisory Board**

Director Bures stated that the Parks & Recreation Advisory Board meet in April. As a board they would like to see the city pool repaired. The pool is scheduled to open this year.

INFORMATIONAL ITEMS

- A. **Garnett Farmers' Market Season, hosted by the Garnett Farmers Market, will be held on every Main Street every Thursday from May 4 - October 5.**
- B. **The 50th Annual Square Fair Crafts Festival, hosted by Garnett BPW, will be held on the Courthouse Lawn on May 13.**
- C. **The Celebration of Service, hosted by Garnett Tourism, will be held on the Town Square and Courthouse Lawn as well as at the Garnett Public Library, on May 18.**
- D. **The Avenue of Flags, hosted by the Garnett Parks & Recreation Department, will be held at the Garnett Municipal Cemetery May 25-29.**
- E. **The Memorial Day Service, hosted by American Legion Post 48 and VFW Post 6397, will be held at the Garnett Municipal Cemetery on May 29.**

CITIZENS TO BE HEARD (FIVE-MINUTE TIME LIMIT PER PERSON)

- Paula Scott, Heart and Soul -- Stated her findings that the citizens rated highly that the pool be fixed.

EXECUTIVE SESSION

Commissioner Locke motioned to go into Executive Session to discuss acquisition of land exception K.S.A. 75-4319 beginning at 7:50pm with the following present: Mayor Sheahan, Commissioner Cole, Commissioner Locke, City Manager Wilson and City Attorney Solander. Regular session will resume at 8:00pm. Seconded by Commissioner Cole. Motion passed AYE (3) NAY (0)

8:00pm Commissioner Cole motioned to extend the Executive Session until 8:03pm. Seconded by Commissioner Locke. Motion passed AYE (3) NAY (0)

8:03pm Mayor Sheahan called regular session back to order.

Mayor Sheahan motioned to approve the land acquisition agreement as presented/discussed. Seconded by Commissioner Cole. Motion passed AYE (3) NAY (0)

ADJOURNMENT

With no further business before the Governing Body, Commissioner Locke made a motion to adjourn the meeting. Commissioner Cole seconded the motion. Motion passed (3) AYE (0) NAY

Meeting adjourned at 8:04p.m.

Mayor

City Clerk

RESOLUTION 2023-7

A RESOLUTION OF THE GOVERNING BODY OF THE CITY OF GARNETT, KANSAS SUPPORTING THE SUBMISSION OF A MIH/ARPA MODERATE INCOME HOUSING GRANT APPLICATION AND SUBMITTAL FOR THE HOUSING INVESTOR TAX CREDIT PROGRAM FROM KANSAS HOUSING RESOURCES CORPORATION FOR THE GARNETT HOUSING NEED.

WHEREAS, the City of Garnett fully supports Confluence Ventures, Inc's developer led application for a Moderate-Income Housing/ARPA grant for the City of Garnett, Kansas from the (KHRC) Kansas Housing Resources Corporation to build much needed housing units for our community.

WHEREAS, the Confluence Ventures, Inc Subdivision MIH/ARPA application will consist of 4 duplex units that will be available for those who qualify as Moderate-Income households located just east of Anderson County Junior Senior High School.

WHEREAS the Housing Investor Tax Credit (HITC) Program authorizes Builders or Developers with projects located in counties with a population of less than 75,000 to apply; and since the Anderson County Population of 7,778 makes Confluence Ventures, Inc. eligible to apply.

WHEREAS, Confluence Ventures, Inc. as the developer of Garnett Housing Need will apply for this round of Kansas Housing Investor Tax Credits from the Kansas Housing Resources Corporation to build quality houses including Moderate Income units to offset the shortage of housing in Garnett which will persist unless additional financial incentives are awarded.

NOW, THEREFOR, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF GARNETT, KANSAS; that the City of Garnett, the Grantee, authorizes Confluence Ventures, Inc. as a developer led project to apply and participate in the upcoming June 1, 2023 round of MIH/ARPA funding and if awarded, the City will enter into a development agreement. Confluence Ventures, Inc. will also seek (KHRC) Kansas Housing Investor Tax Credits based on the City's determination that there is a need and shortage of quality workforce housing.

ADOPTED BY THE GOVERNING BODY OF GARNETT, KANSAS, this _____ day of May 2023.

Mayor

ATTEST:

Patricia Brewer, City Clerk





Statement of Qualifications

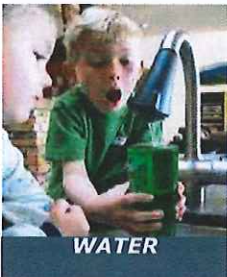
APRIL 25, 2023

**WATER TREATMENT PLANT
CITY OF GARNETT, KS**





When you think Midwest, think intelligent, practical engineering solutions.



We transform and improve communities.

From pre-planning to design to construction administration services, our comprehensive civil design expertise ensures our clients have access to safe, affordable drinking water. Our services include site layout, stormwater management, wetland mitigation, permitting, utility coordination, water distribution and treatment systems.



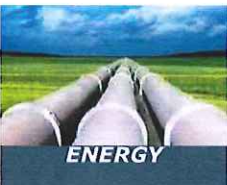
We prevent pollution and keep communities safe.

We work with communities to prevent byproduct pollution from community activities including domestic wastewater from households, municipal wastewater from communities, or industrial wastewater. Our engineering expertise extends to wastewater treatment facilities, erosion management, and inflow and infiltration prevention.



We propel communities into the future.

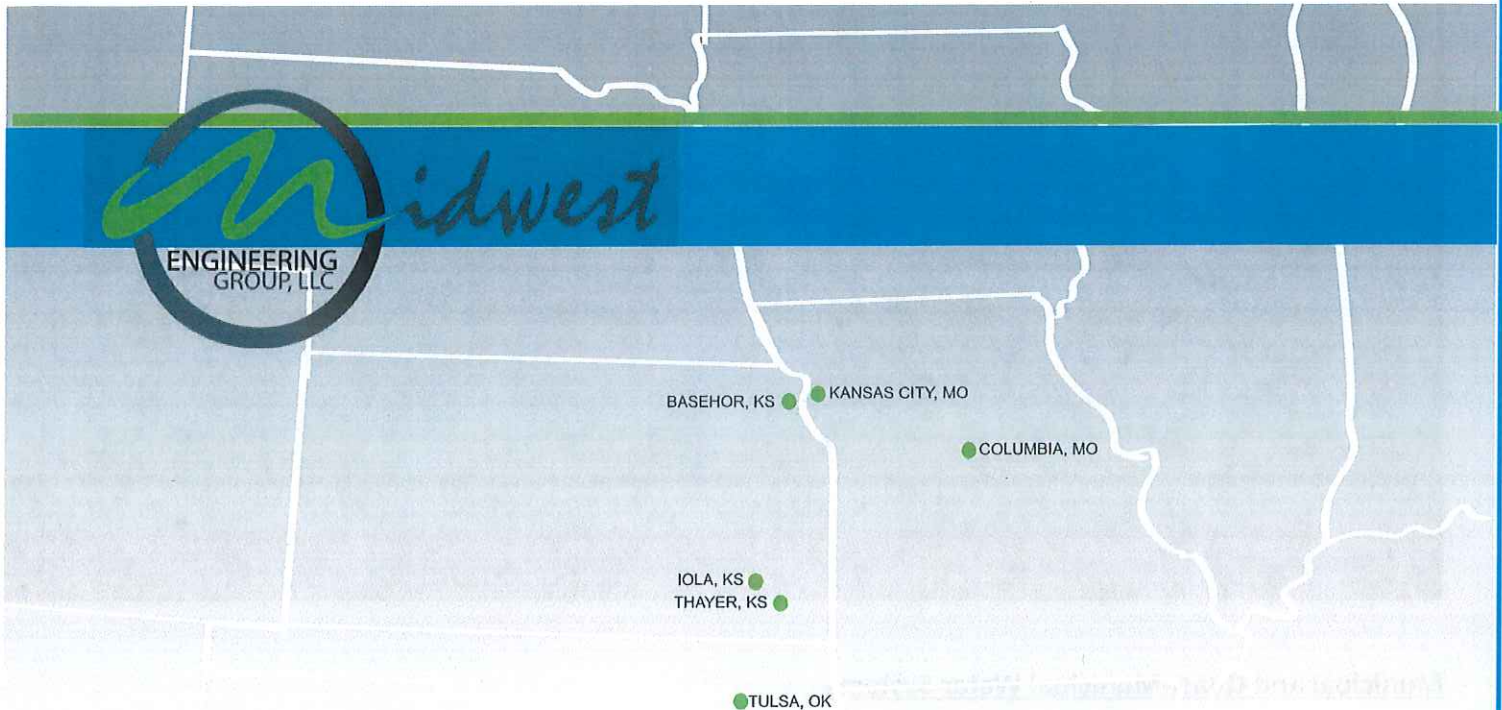
We ensure communities are able to provide safe and environmentally compatible development that allows efficient movement of people and goods. We excel at planning, design, construction, maintenance, and operation of transportation facilities. Our experience consists of arterials, utilities, rural and urban transportation, bridges, culverts, and parking solutions.



We power communities forward.

Our experience in energy transmission and distribution pipeline solutions ensures the operational delivery of hydrocarbons. The successful energy projects we complete carry products from gathering to transmission to distribution systems to individual consumers so that communities always have the on-demand energy they need to thrive and prosper.

Office Locations



we transform communities

Midwest Engineering Group is a contemporary engineering company utilizing modern technology to connect our talented individuals and qualified professionals wherever their physical location. With our main office in Tulsa, Oklahoma we are able to serve our clients with valuable solutions from our headquarters and our satellite offices throughout Oklahoma, Kansas, and Missouri. We have embraced networking technology and the benefits of virtual and remote offices. This approach allows us to stay connected and problem-solve daily through sharing, viewing, and discussing relevant client solutions, data, and information. Our employees are empowered to implement practical solutions and are always accessible and available beyond the normal 9-5 workday. This enables us to respond quickly and efficiently to customer needs, provide high-quality service, and produce a better overall product for our customers.

Midwest Engineering Group employees are equipped with state-of-the-art computers and up-to-date software and equipment resulting in outstanding levels of performance. We utilize the following software: Autodesk AutoCAD Civil 3D for grading and water & sewer design; Autodesk InRoads for 3d Modeling & fly through software & conceptual design; Autodesk Navisworks, a clash detection software; Autodesk Plant 3d for 3d modeling of piping, bill of materials, P&IDs, isometrics, etc.; Bentley Flowmaster for drainage calculation; Bentley WaterGEMS, a water modeling software; ESRI ArcGIS; QGIS, an open-source GIS software; Stahls' Cadworx for 3d modeling of piping, bill of materials, P&IDs, isometrics, etc.; Autodesk ReCap, a point cloud software; Autodesk FormIt -3d drawing and visualization software; Autodesk Vehicle Tracking software; BlueBeam Revu; Google Earth Pro; Microsoft Office Suite: Word, Excel, PowerPoint, Access, etc.; various photo and video editing software including Gimp, Pinnacle Studio, and Sketchup, Adobe Suite including Photoshop, Illustrator and InDesign.

We are able to deliver files formatted as .PDF, .DWG for Autocad, or .SHP for ESRI (if specifically requested). We can also provide WaterGEMS model files in .WTG and .MDB formats.

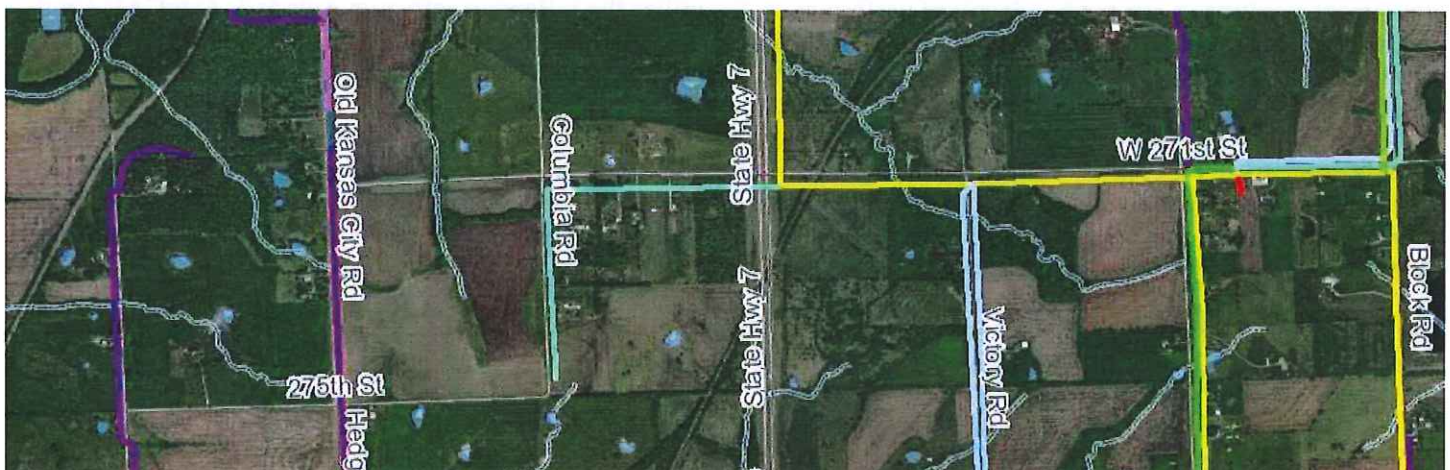
Midwest Engineering Group values traditional American principles of honesty, integrity, respect, and hard work. We are reliable, dedicated people striving to provide you with intelligent and practical engineering solutions. We transform and improve communities.



Municipal and Quasi-Municipal Water Systems

SERVICES:

- Long, short and emergency planning for Municipal, Regional, Rural and Wholesale Water Systems
- Design Memo, Preliminary and Feasibility Reports
- Water Rate and Business Case Analysis
- Regulatory Compliance Strategies and Planning
- Environmental Reports, SWPPP and NOI Permitting
- Public Information and Funding Application Aid
- Water System Hydraulic Modeling and GIS Mapping
- Water System Analysis and Design Including Piping, Pump Stations, Controls and Storage
- Water Storage Analysis and Design
- Water Source - Well, Intake, Purchase Contracts
- Water Treatment Analysis and Design
- 3D Drafting and Modeling for all Booster Pump Stations, High Service Pumps, Filter Galleries, ETC.
- GIS, Survey and LiDAR
- Federal, State and Local Permitting
- Easement preparation and acquisition
- Construction Administration
- ACI Certified Construction Observation



Sanitary & Stormwater Sewer Services



we prevent pollution and keep communities safe

We work with communities to prevent byproduct pollution from community activities including domestic wastewater from households, municipal wastewater from communities, or industrial wastewater. Our engineering expertise extends to wastewater treatment facilities, erosion management, and inflow and infiltration prevention.

SERVICES:

- Long, short and emergency planning for Municipal Sewer Systems
- Facility Plans, Master Drainage Plans, and Preliminary Engineering Reports
- Rate and Business Case Studies
- Regulatory Compliance Strategies
- Environmental Reports, SWPPP and NOI Permitting
- Public Information and Funding Application Aid
- Collection System and GIS Mapping
- Lift Stations, Wet Wells, and Controls
- Lagoons and Detention Basins
- Wastewater Treatment Plants
- 3D Drafting and Modeling for Mechanical Equipment and Piping Systems
- GIS, Survey and LiDAR
- Federal, State and Local Permitting
- Easement preparation and acquisition
- Construction Administration
- ACI Certified Construction Observation

Pipelines



Cross Country Pipelines and Gas Distribution Systems

Midwest delivers pipelines that transport oil, natural gas, petroleum products, and industrial gases for government and private customers. Our services include pipeline engineering and management, pipeline design, yard piping design, planning, civil engineering, drafting, GIS, alignments, permitting, bidding, construction, as-builts, integrity, and project management. We have been integral in building more than 1000 miles of PHMSA pipeline and associated assets.

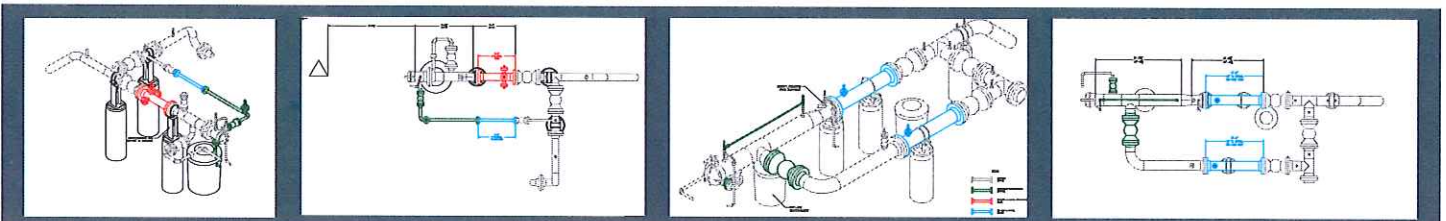
OUR SERVICES:

- Pipeline Engineering, Design and Management
- Alignment Sheets
- Pump and compressor stations
- Site work, Pad layouts, Truck routing
- Integrity Services and Site Layout
- Civil Design
- Regulatory Compliance Strategies and Planning
- Environmental, SWPPP and NOI Permitting
- Water Treatment Analysis Design and Distribution
- 3D Drafting and Modeling for all Launchers, receivers, above-ground valves, metering, regulations, etc.
- GIS, Survey and LiDAR
- Federal, State and Local Permitting
- Easement preparation and acquisition
- Construction Administration
- ACI Certified Construction Observation
- Progressive Design Build with CMAR

Midwest Employees* Have Completed Pipeline Projects For The Following Companies:

Oklahoma Natural Gas
Missouri Gas Energy (Spire)
Occidental
Anadarko
Enable
Sem-Group
Dominion

Legacy Integrity
Pipeline Controls & Services
Magellan
Northern Natural Gas
Enbridge
Ruby Pipeline, LLC



*Work completed while employed by another firm.

Land Development Services



Land Developments of the past have shaped how we live, work and play today. Land planning and development for the future requires an understanding of the full scope and impact that developments have on the past and present. Great land planning is crucial to the success and viability of a project. Midwest professionals are experts at realizing the economic advantages of an infrastructure project balanced with the community and environmental benefits. We pride ourselves on integrating environmentally conscious site designs that are economically sustainable.

OUR SERVICES:

- Feasibility Studies
- Drainage Studies
- Site Selection Analysis
- Site Planning and Design
- Surveying
- Zoning and Permitting
- Platting
- Traffic Impact Analysis
- Procedural Requirements
- Community Engagement
- Marketing, Economic Development and Site Visualization Services
- Entitlement Approvals
- Development Approvals
- Master Planning
- Due Diligence Reports
- Program Management
- Rezoning and Special Use Permit Applications
- Preliminary and Final Site Development Plans
- Construction Management
- Erosion Control and Site Grading Plans
- Utility Coordination
- Charrettes
- Land Development Consulting

SUBDIVISIONS COMPLETED BY MIDWEST EMPLOYEES* INCLUDE:

| | |
|------------------------------|----------------------------------|
| Terrybrook Farms Plat 8 | Timbers @ Clear Creek - 7th Plat |
| Terrybrook Farms Plat 9 | Bristol Highlands - 2nd Plat |
| Cedar Ridge Reserve | Nottingham Villas |
| Wolf Creek Meadows | Mission Ranch South, 3rd Plat |
| Mission Ranch South | Willow Crossings 4th Plat |
| Terrybrook Farms - 12th Plat | Willow Crossings 2nd Plat |
| Terrybrook Farms - 13th Plat | Parkview Apartments |

*Work completed while employed by another firm.

Transportation



we propel communities into the future

We ensure communities are able to provide safe, and environmentally compatible development that allows efficient movement of people and goods. We excel at planning, design, construction, maintenance, and operation of transportation facilities. Our experience consists of roads, bridges, arterials, culverts, urban and rural transportation, and parking solutions.

OUR SERVICES.

- Feasibility Studies
- Drainage Studies
- Site Selection Analysis
- ROW & Easement Negotiation and Acquisition
- Site Planning and Design
- Bridge Design
- Inspection of Bridges and Culverts
- Fracture Critical Bridge Inspection
- Rehabilitation of Existing Bridges and Culverts
- Design of Culverts and Prefabricated Structures
- Hydraulic Analysis of Bridges and Culverts
- Load Rating Analysis

April 25, 2023

City of Garnett
James DePriest
131 West Fifth Avenue
Garnett, KS 66032



Re: Project Approach

As demonstrated in this Statement of Qualifications, Midwest has the experience, expertise and resources available to assist Garnett in this Water Treatment Plant project, but more than that it is a hometown to us. We are excited to use our passion for helping rural Kansas communities be successful in accomplishing intelligent, practical solutions that prepare them for future growth with you. We believe our personal experience with the area and utility providers will be of significant value to you throughout this project.

Midwest Engineering provided a vital role in securing loan and grant funding for the City of Girard for a new water treatment plant and distribution improvements. This process can be replicated to accomplish similar goals for Garnett. The City has shared a plan for a water treatment plant with Midwest (attached). We believe this plan can be modified slightly and executed for under \$16 million. However, by adapting some aspects of this plan, Garnett could utilize funding resources to significantly maximize the value of their dollar using grant funds--providing more service and growth to the surrounding community. Some of the options can be achieved with a project cost between \$10 and \$14 million for water treatment, and the balance of these funds can be used for the distribution system.

Beyond answering the question about the water treatment plant, Midwest would like to recommend a project approach that is comprehensive and proactive toward the future so that every individual consideration is aligned together. We agree that the water treatment plant should be your first consideration as it has reached its life expectancy, but it is important to see how this decision is

interconnected with the rest of your system. **Identifying your purpose and vision for Garnett is our recommended starting position.**

The first decision we ask you to consider is whether the City desires to implement an award-winning water treatment plant regardless of the financial cost, or if you desire good quality water at minimal expense. Either one of these options are acceptable and achievable goals, but this vision must be established first to guide all future decisions.

Next for consideration regarding the vision for this project is whether Garnett desires to meet current city needs and projected growth, or if you desire to expand the scope to the surrounding communities and their needs.

Finally, Garnett will need to consider if this is an isolated project, or if they are willing to include future planning as part of the design. Essentially this means master planning that positions the city to be ready for future growth without extensive financial commitment now.

These three vision considerations will guide the purpose, scope, design and financial aspects of the project. To assist the City in making these decisions, Midwest would like to provide some details that we believe are important to understand.

Garnett is in a unique position that few rural communities in Kansas find themselves in: you have ample raw water supply. This position is becoming rare across Kansas, and therefore will become a very valuable resource in the near future. Several water supplies in the region have reached their maximum capacity on water rights. Beyond their recreational and community benefits for those with a vehicle, boat and Sonic drink, the Cedar Valley Reservoir and North Lake provide ample water supply well beyond the needs of the city. Several rural water districts surrounding Garnett have expressed interest previously in receiving water since they have no production facilities of their own and must rely on distant wholesale suppliers. The opportunity to meet these needs not only benefits Garnett financially, but also develops your position as a leader of growth and economic development resources in the area. We believe this opportunity is a strong factor to consider as you determine the vision of this project.

There are a few aspects that significantly impact financial status in a project. One is economy of scale. Simply put, the larger volume of water the City is able to produce, the less it costs you to do so per unit. This is achieved through efficiency in retention time, chemical costs and labor. Another is master planning. If community demand for water increases, and the plant has been intentionally

designed to accommodate growth, then that demand can easily be met through the benefits of economical development. To summarize this consideration, you can achieve financial goals more easily by building a plant with larger production capacity with minimal increase to out-of-pocket expense. Garnett is uniquely positioned with the capability to do this. **A key indicator for this aspect is identifying the targeted water rate.** We can assist in this process, including utilizing funding sources. Specifically, Garnett should qualify for an Intermediate rate level on a USDA grant.

The final unique position for Garnett is proximity to large economic development. The Panasonic plant being built in DeSoto, and the Semiconductor development at BETO are both commutable distances for the large number of employees projected at both locations. Garnett should experience residential growth in addition to their previous growth, so that the current dip in population does not become a trend.

If the City chooses to adopt a vision to provide good quality water priced with the intention of attracting growth, thus generating revenue through community development, Midwest has provided the following proposal adaptations for your consideration.

- **Location:** The current location of the water treatment plant at the South Lake requires the produced water to be pumped back uphill to the new West water tower. This requires an additional annual electric cost of \$26,000. It also requires extensive landscaping and an upscale building to make it appealing to those playing in the adjacent park. It also is limited for future growth by the park. If the new water treatment plant were placed on available land indicated on the map by the raw water line and 3-Phase Power line, several million dollars in building and site costs can be saved, plus reducing the annual electrical cost. A Proposed Site Plan is attached showing this location, and its proximity to the current raw water line, electrical supply and discharge option. Approximately 2 miles of new 12" water line would need to be run to the West tower, while the existing raw water line can remain for filling the South Lake when needed.
- **Size:** The proposed size of 1.5 MGD covers the need of the ethanol plant and the city but leaves minimal room for growth or potential for wholesale opportunities. If the new water plant was sized to 2 MGD with larger basins, this would provide an economy of scale in the project that allows the rate to remain achievable through increased revenue recognition from the wholesale opportunities. You can also have conversations with potential new industries because you have the required utilities prepared and ready for service.

- **Design:** With the potential opportunity for wholesale production and residential growth, it is helpful to design the plant for future expansion. The attached proposed flow diagram demonstrates how a traditional 2 MGD coagulation/flocculation plant can be designed for future expansion to double in size with the addition of a second train. Not only does this happen in the same facility, but it is achievable without the addition of personnel since they are operating equipment in the same facility.

We believe this recommendation aligns with the tremendous community development we have recently observed in Garnett and prepares your water treatment plant to meet future growth opportunities through residential, commercial and industrial attraction.

However, this is an isolated answer to the question you have asked. As with all significant projects Midwest is involved with, we recommend a full analysis of your system so that this solution can perform optimally, and not be hindered by other facilities that may need attention. This can be done with a Preliminary Engineering Report (PER), and is a great way for us to formally begin our relationship. Not only will it fully analyze your entire system and provide prioritized recommendations for areas of concern or more efficient operation, but it will include the steps needed to approach a master plan design and funding sources available to you. Specifically, it:

- Identifies Problems of Entire System
- Provides Alternative Solutions
- Identifies Funding Sources
- Provides Budgets and Financial Comparisons

This PER is typically \$45,000-60,000 if you choose to have us work with you to develop it.

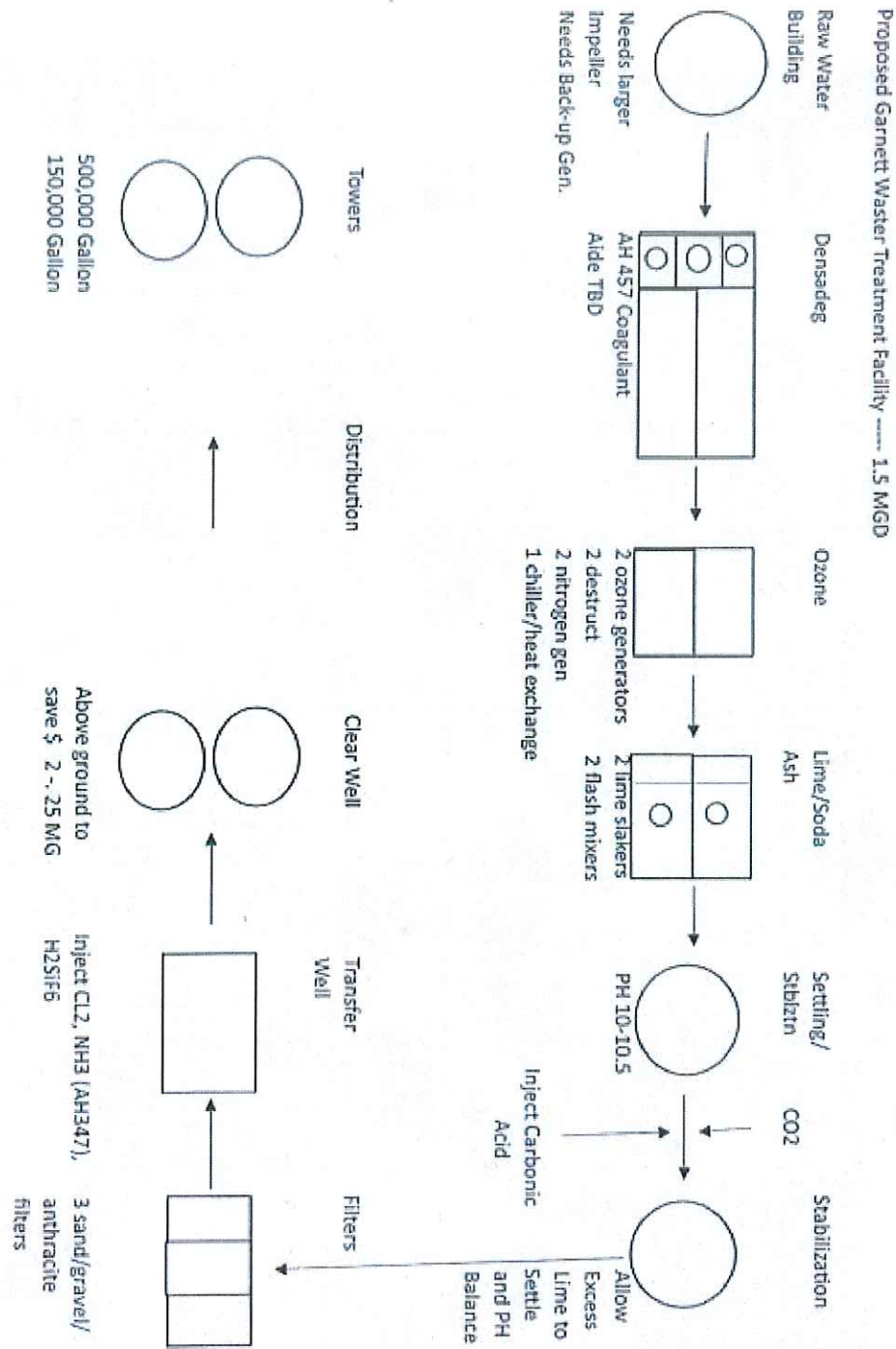
Regardless of whether you decide to continue with the previous proposal aspects or the new one detailed here, Midwest Engineering Group, LLC is committed to working with city staff to achieve their goals as they serve our hometown.

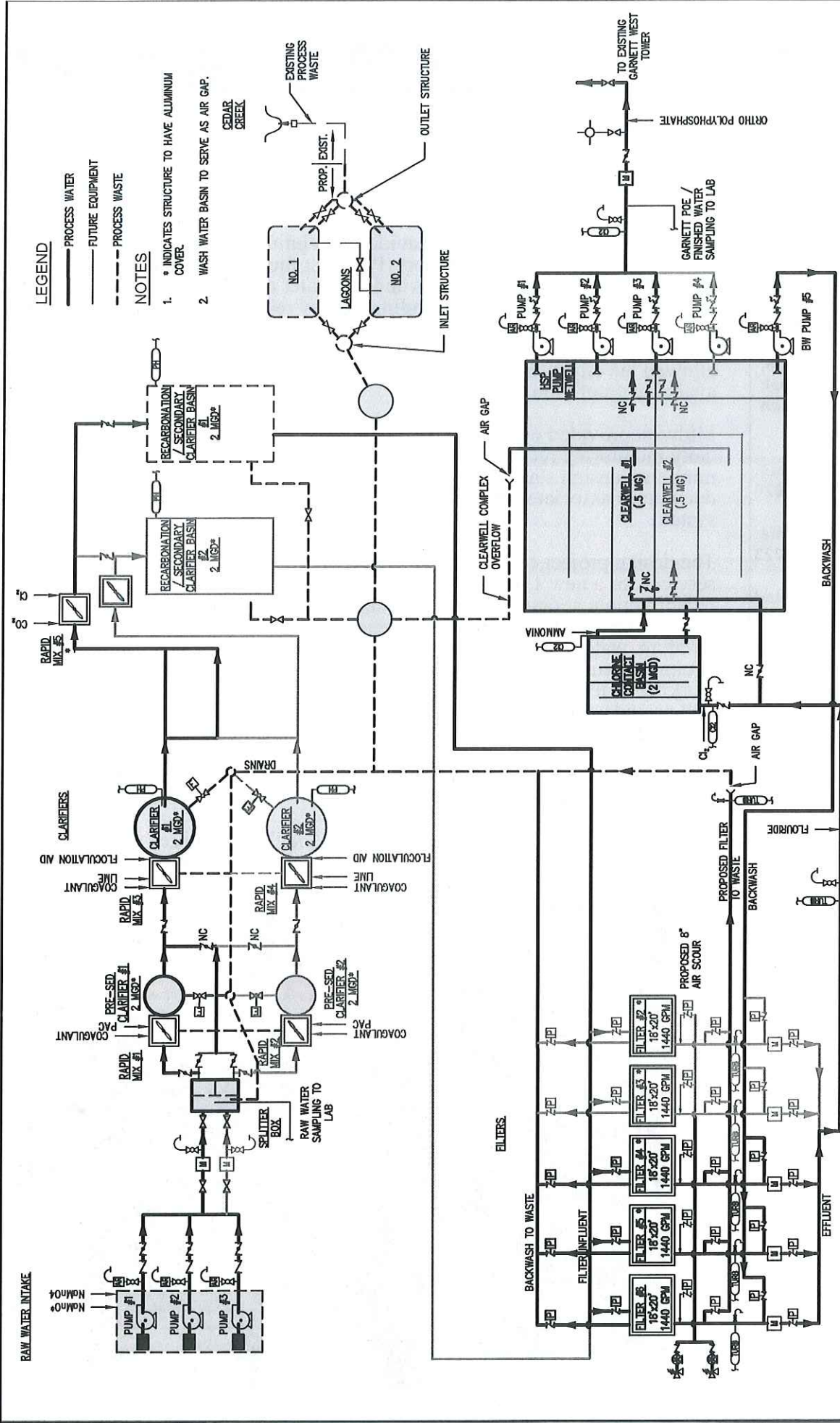
Sincerely,



Danny Coltrane, P.E.

Submitted Design





LEGEND

- PROCESS WATER
- FUTURE EQUIPMENT
- - - PROCESS WASTE

NOTES

1. * INDICATES STRUCTURE TO HAVE ALUMINUM COVER.
2. WASH WATER BASIN TO SERVE AS AIR GAP.

Designed By: DL/C
 Drawn By: DD/S
 Checked By: BTC
 Issue Date: _____



PROPOSED WATER TREATMENT PLANT
 CITY OF GARNETT, KANSAS
 PROPOSED PROCESS FLOW DIAGRAM

PROJECT NO.
 2023-GARNETT-02-001
 FIGURE NO.
 2

P:\2023-GARNETT-02-001\CAD\FLOW DIAGRAM- PROPOSED.DWG
LAYOUT: SHT-3
XREF DWG1: NONE
XREF DWG3: NONE
XREF DWG2: NONE
XREF DWG4: NONE
DATE: 4/25/2023
BY: DEBSMITH

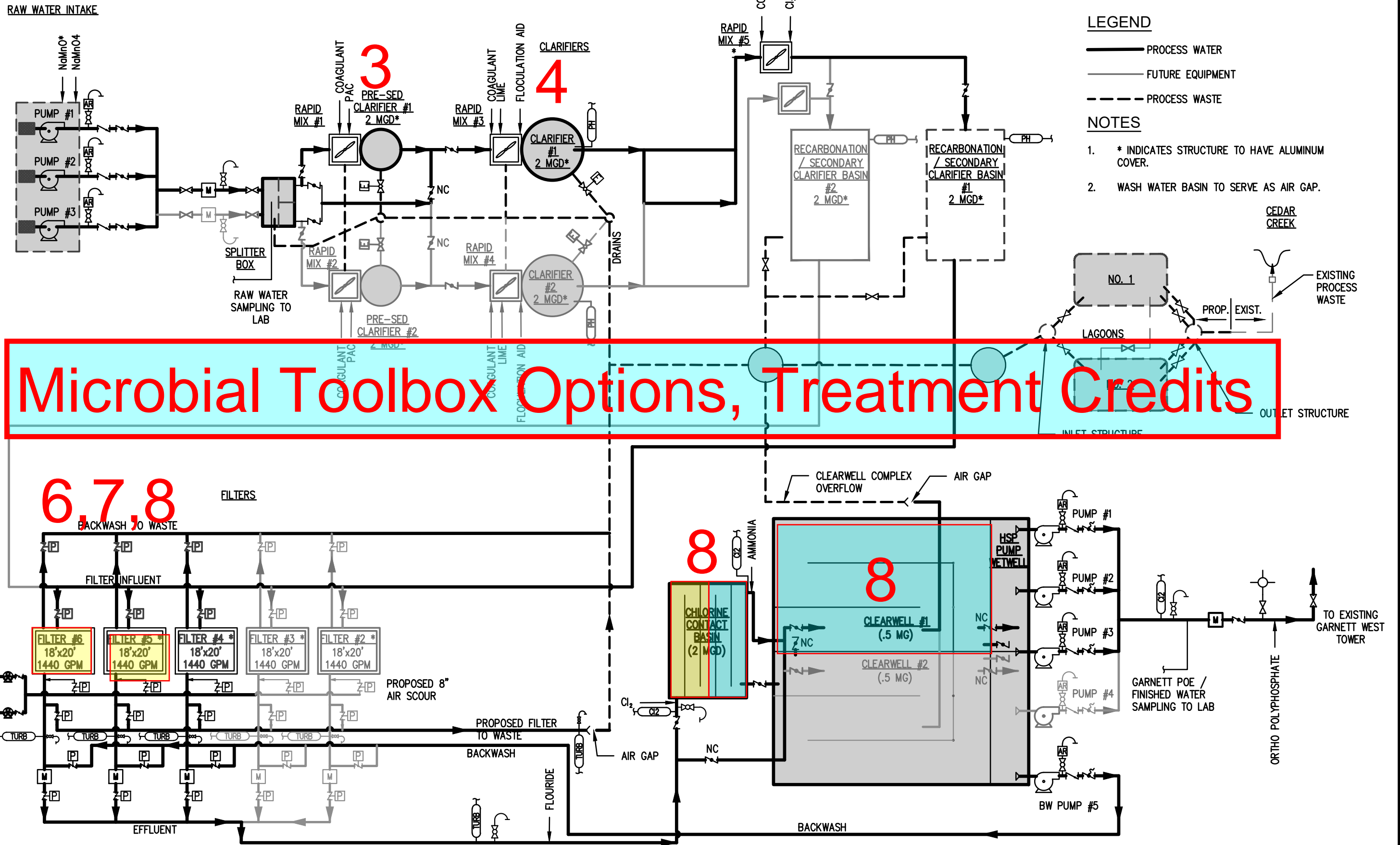


TABLE NO. 8 - CHANUTE PROPOSED CT CALC - CHLORINE CONTACT BASIN AND 1MG CLEARWELL

CT Calculations:

Date: 9/25/2020

Maximum Flow Rate: 4,167 gpm

6 MGD

Temperature: 32.9 °F

0.50 °C

| A | B | C | D | E | F | G | H | I | | J | K | L | M |
|---------------------------|--------------------------|----------------------------|---------------------------------------|---|----|-----------------|--|-----------------------------------|--|---------------------------------|---|--------------------------------|---|
| | | | | | | | | | | Giardia 0.5 Log Inactivation | Viruses 2.0 Log Inactivation | | |
| Disinfection Unit | Minimum Volume (gallons) | Detention Time T (minutes) | Baffling Factor (T ₁₀ / T) | T ₁₀ (Col C X Col D) (minutes) | pH | Residual (mg/L) | Free Cl ₂ Comb Cl ₂ ClO ₂ or O ₃ | CT _{Cal} (Col E X Col G) | | CT _{Req} (EPA Tables) | CT _{Avail} Ratio (Col I / Col J) | CT _{Req} (EPA Tables) | CT _{Avail} Ratio (Col I / Col L) |
| Flocculation Basin | 129,272 | 31.0 | 0.4 | 12.4 | 10 | 0.00 | Combined Cl ₂ | 0.00 | | 0 | 0.00 | 0 | 0.00 |
| Primary Clarifier | 987,376 | 237.0 | 0.3 | 71.1 | 10 | 0.00 | Combined Cl ₂ | 0.00 | | 0 | 0.00 | 0 | 0.00 |
| Secondary Settling Basins | 225,676 | 54.2 | 0.3 | 16.2 | 9 | 0.00 | Free Cl ₂ | 0.00 | | 65 | 0.00 | 6 | 0.00 |
| Filters | 56,018 | 13.4 | 0.7 | 9.4 | 9 | 1.00 | Free Cl ₂ | 9.41 | | 73 | 0.13 | 6 | 1.57 |
| Chlorine Contact Basin | 200,000 | 48.0 | 0.7 | 33.6 | 9 | 3.00 | Free Cl ₂ | 100.80 | | 92 | 1.10 | 6 | 16.80 |
| Clearwell | 500,000 | 120.0 | 0.3 | 36.0 | 9 | 3.00 | Combined Cl ₂ | 108.00 | | 635 | 0.17 | 1243 | 0.09 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | Total Inactivation Needs to be | 3.197 3 | | 38.91 4 |

Presedimentation -.5 log credit removal (3)

Lime Softening - .5 log credit removal (4)

Individual Filter - .5 log credit removal (6)

Combined Filter - .5 log credit removal (7)

Typical Log Inactivation for Midwest Water Treatment Plant Design based on CT's - 3 log credit removal (8)

Typical Potential Total - 5 log credit removal

Design also allow for additional disinfection for an additional - 1 log credit removal

Example 1 CT Calculation Midwest Design

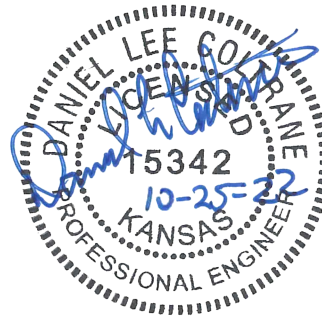
CT Calculations:

Date: 10/25/2022
Maximum Flow Rate: 4.167 gpm 6 MGD
Temperature: 32.9 °F
0.50 °C

| A | B | C | D | E | F | G | H | I | | J | K | L | M |
|---|--------------------------------|----------------------------------|---|---|-----|------------------------|--|--------------------------------------|--|-------------------------------------|--|-----------------------------------|--|
| | | | | | | | | | | Giardia 0.5 Log Inactivation | Viruses 2.0 Log Inactivation | | |
| Disinfection Unit | Minimum Volume (gallons) | Detention Time T (minutes) | Baffling Factor (T ₁₀ / T) | T ₁₀ (Col C X Col D) (minutes) | pH | Residual (mg/L) | Free Cl ₂ Comb Cl ₂ ClO ₂ or O ₃ | CT _{Cal} (Col E X Col G) | | CT _{Req} (EPA Tables) | CT _{Avail} Ratio (Col I / Col J) | CT _{Req} (EPA Tables) | CT _{Avail} Ratio (Col I / Col L) |
| Gravity Filters (1-3) | 11,833 | | | | | | | | | | | | |
| Gravity Filters (4-7)* | 29,621 | | | | | | | | | | | | |
| Gravity Filters Total | 41,454 | 9.9 | 0.7 | 7.0 | 7.8 | 0.80 | Free Cl ₂ | 5.57 | | 49 | 0.11 | 6 | 0.93 |
| Chlorine Contact Basin (Free to First Baffle) | 27,624 | 6.6 | 0.5 | 3.3 | 7.8 | 3.00 | Free Cl ₂ | 9.94 | | 64 | 0.16 | 6 | 1.66 |
| Chlorine Contact Basin (Combined) | 296,210 | 71.1 | 0.5 | 35.5 | 7.8 | 3.00 | Combined Cl ₂ | 106.64 | | 635 | 0.17 | 1243 | 0.09 |
| Clearwell | 1,196,898 | 287.3 | 0.5 | 143.6 | 7.8 | 3.00 | Combined Cl ₂ | 430.88 | | 635 | 0.68 | 1243 | 0.35 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | Total CT _{Avail} Ratio | 1.12 | | 3.02 |
| | | | | | | | | | | Plant Log Inactivation | 0.56 | | 6.04 |
| | | | | | | | | | | Plant Log Removal Credit** | 2.5 | | 2 |
| | | | | | | | | | | Total Log Removal / Inactivation | 3.06 | | 8.04 |
| | | | | | | | | | | Required | 3.00 | | 4.00 |

*Filter #7 Not Included

****Plant Log Removal Credits are based on conventional filtration treatment process removal credits.**



Example 2 CT Calculation Midwest Design

40 CFR § 141.715 - Microbial toolbox options for meeting Cryptosporidium treatment requirements.

(a)

(1) Systems receive the treatment credits listed in the table in paragraph (b) of this section by meeting the conditions for microbial toolbox options described in §§ 141.716 through 141.720. Systems apply these treatment credits to meet the treatment requirements in § 141.711 or § 141.712, as applicable.

(2) Unfiltered systems are eligible for treatment credits for the microbial toolbox options described in § 141.720 only.

(b) The following table summarizes options in the microbial toolbox:

Microbial Toolbox Summary Table: Options, Treatment Credits and Criteria

Source Protection and Management Toolbox Options

(1) Watershed control program 0.5-log credit for State-approved program comprising required elements, annual program status report to State, and regular watershed survey. Unfiltered systems are not eligible for credit. Specific criteria are in § 141.716(a).

(2) Alternative source/intake management No prescribed credit. Systems may conduct simultaneous monitoring for treatment bin classification at alternative intake locations or under alternative intake management strategies. Specific criteria are in § 141.716(b).

Pre Filtration Toolbox Options

(3) Presedimentation basin with coagulation 0.5-log credit during any month that presedimentation basins achieve a monthly mean reduction of 0.5-log or greater in turbidity or alternative State-approved performance criteria. To be eligible, basins must be operated continuously with coagulant addition and all plant flow must pass through basins. Specific criteria are in § 141.717(a)

(4) Two-stage lime softening 0.5-log credit for two-stage softening where chemical addition and hardness precipitation occur in both stages. All plant flow must pass through both stages. Single-stage softening is credited as equivalent to conventional treatment. Specific criteria are in § 141.717(b).

(5) Bank filtration 0.5-log credit for 25-foot setback; 1.0-log credit for 50-foot setback; aquifer must be unconsolidated sand containing at least 10 percent fines; average turbidity in wells must be less than 1 NTU. Systems using wells followed by filtration when conducting source water monitoring must sample the well to determine bin classification and are not eligible for additional credit. Specific criteria are in § 141.717(c).

Treatment Performance Toolbox Options

(6) Combined filter performance 0.5-log credit for combined filter effluent turbidity less than or equal to 0.15 NTU in at least 95 percent of measurements each month. Specific criteria are in § 141.718(a).

(7) Individual filter performance 0.5-log credit (in addition to 0.5-log combined filter performance credit) if individual filter effluent turbidity is less than or equal to 0.15 NTU in at least 95 percent of samples each month in each filter and is never greater than 0.3 NTU in two consecutive measurements in any filter. Specific criteria are in § 141.718(b).

(8) Demonstration of performance Credit awarded to unit process or treatment train based on a demonstration to the State with a State- approved protocol. Specific criteria are in § 141.718(c).

Additional Filtration Toolbox Options

(9) Bag or cartridge filters (individual filters) Up to 2-log credit based on the removal efficiency demonstrated during challenge testing with a 1.0-log factor of safety. Specific criteria are in § 141.719(a).

(10) Bag or cartridge filters (in series) Up to 2.5-log credit based on the removal efficiency demonstrated during challenge testing with a 0.5-log factor of safety. Specific criteria are in § 141.719(a)

(12) Second stage filtration 0.5-log credit for second separate granular media filtration stage if treatment train includes coagulation prior to first filter. Specific criteria are in § 141.719(c)

(13) Slow sand filters 2.5-log credit as a secondary filtration step; 3.0-log credit as a primary filtration process. No prior chlorination for either option. Specific criteria are in § 141.719(d).

Inactivation Toolbox Options

(14) Chlorine dioxide Log credit based on measured CT in relation to CT table. Specific criteria in § 141.720(b)

(15) Ozone Log credit based on measured CT in relation to CT table. Specific criteria in § 141.720(b).

(16) UV Log credit based on validated UV dose in relation to UV dose table; reactor validation testing required to establish UV dose and associated operating conditions. Specific criteria in § 141.720(d).

Relevant Experience

Owner Contact:
Steve Brooks,
Public Works Supervisor
120 N Ozark Street
Girard, KS 66743
cogpw@girardkansas.gov
(620) 238-8519

Midwest Role:
Danny Coltrane:
Project Design;
Dustin Berry:
Plant Design;
Brad Riebel:
Distribution Design

PER Start Date:
August 2020

Design Start Date:
March 2023

**Expected
Completion Date:**
September 2025

Total Project Cost:
\$16,693,000

City of Girard, Kansas Comprehensive Water System Improvements

Project Approach

Midwest Engineering (MEG) provided consulting engineering services to develop a Professional Engineering Report (PER) for the water treatment plant and supply, water storage and booster pumps and the water distribution system. The PER conforms to state and federal funding agency requirements. It includes budgets and negotiation for underwriting with financial calculations and present worth analysis to determine best alternative. This proactive, prioritized approach allowed the city to take advantage of low interest rates (40 year at 2.125%) and available grant funds.

Midwest provided evaluation based on a GIS system, City maps and records, daily monitoring records, ISO reports, audits and financial records, KDHE minimum design standards, previous engineering studies, and various other documents associated with the sewer collection system and water distribution system.

The design project consists of providing design, bid and construction phase services for a new 1 MGD Water Treatment Plant (WTP). MEG is designing well rehabilitation, aerator, rapid mixer, clarifier, recarbonation basin, filters, lime silo/slaker, chemical feed equipment, clearwell, wetwell, high service pumps and building, water treatment plant building, plant piping, controls/SCADA, electrical equipment and backup generator and all necessary appurtenances to complete a working water treatment plant. As part of the construction phase services, MEG will provide a resident project representative for construction observation services during the construction period.

MEG is replacing all non-PVC distribution and service lines within the city which will allow compliance with new federal EPA lead and copper rules.

MEG assisted the City in securing funding via Rural Utilities Service (RUS) by the State and Area staff of USDA Rural Development (RD) in the form of a loan for \$13,300,000 and a grant for \$3,393,000.



Owner Contact:
Dustin Rose
P.O. Box 328
Fredonia, KS 66736
(620) 378-3749
drose@pwwsd23.net

Midwest Role:
Engineer of Record

Design Start Date:
October 2018

Construction Start Date:
March 2021

Construction End Date:
TBD

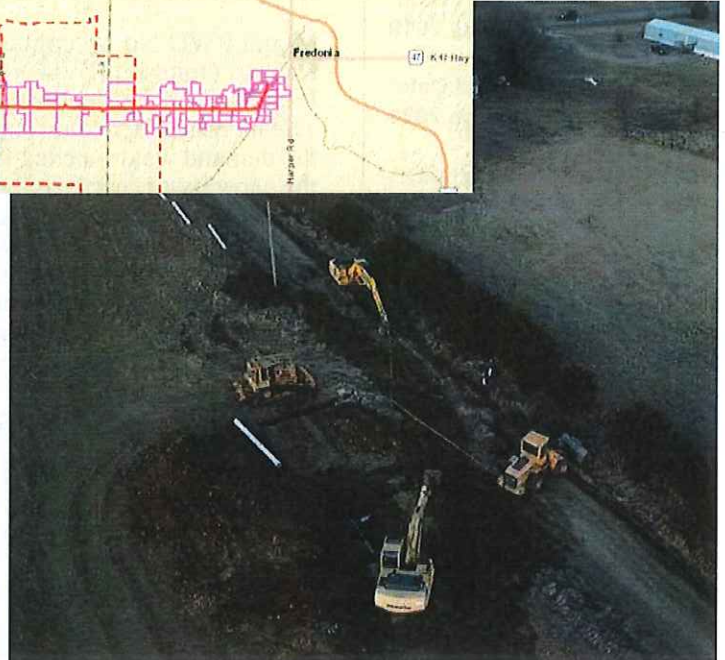
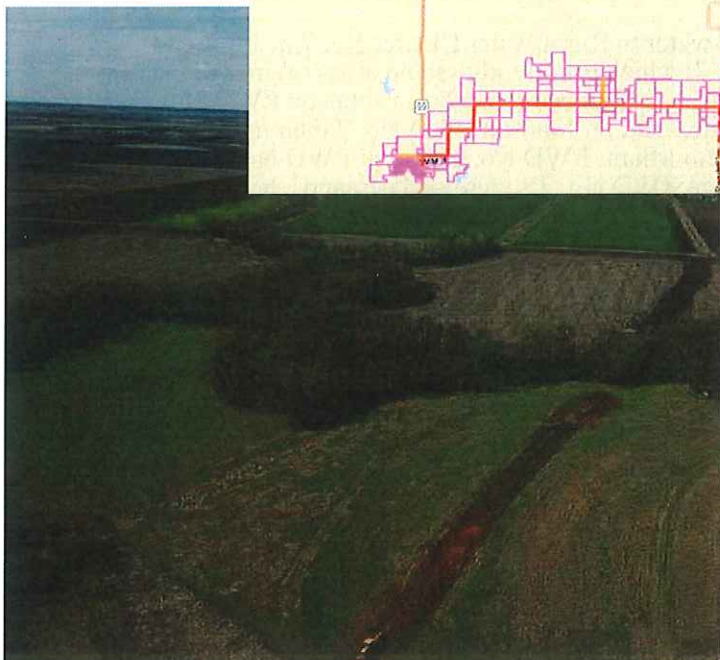
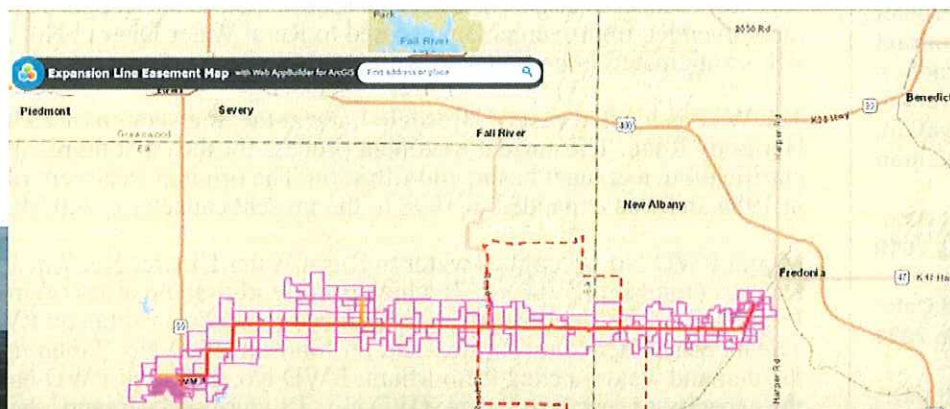
Design Cost
\$415,770

Est. Construction Cost
\$4,650,413

Public Wholesale Water Supply District No. 23 (PWWSD No. 23); Western Expansion Merger Project: 25 mile merger between three entities

In 2018, after several years of debate, PWWSD No. 23 asked, Danny Coltrane, to amend a previous project report to submit to USDA for potential funding of the project to allow PWWSD No. 23 to provide a water supply service to the City of Howard, Kansas and Elk County Rural Water District (RWD) No. 2. The amended project report was successful in obtaining USDA funding and was officially funded.

Midwest was contracted to provide consulting engineering services consisting of project design, easement acquisition, bidding, construction observation and construction administration for the construction of 25 miles of 8" PVC waterline, a new triplex booster pump station, 200,000 pedosphere water storage tank and new SCADA controls. The new supply waterline will include valves, meters, pigging stations and clean outs that will allow PWWSD No. 23 to serve as the primary water supply source for the City of Howard, Kansas and Elk County, Kansas, Rural Water District (RWD) No. 2.





Owner Contact:
Jerry Bennett
 Water District No. 2
 Miami County
 25290 Harmony Road
 Paola, KS 66071
 (913) 783-4325

Midwest Role:
Danny Coltrane:
 Project Design;
Holly Powers: Project
 Management, Contract
 and Construction
 Administration,
 Construction Observation,
 Easement Acquisition

Design Start Date:
 January 2019

Design End Date:
 March 2021

Construction Estimate:
 \$28,000,000

Rural Water District No. 2 Miami County, Kansas Water Treatment Plant Improvements Project - Phase I Capacity upgrades to pretreatment processes, distribution pumps and storage

Water Treatment Plant Improvements: Midwest Engineering Group (Midwest) is providing consulting services for Rural Water District No. 2 Miami County, Kansas, to evaluate water treatment plant (WTP) upgrades by analyzing discharge flow rates, treatment processes, and system storage requirements. The design includes all system upgrades necessary to bring the WTP up to 12 million gallons per day (MGD) capacity to meet ever growing service requirements. The proposed project budget with recommended improvements presented to Rural Water District No. 2 of Miami County, KS is anticipated to be financed with local funds.

The WTP is located east of Hillsdale Lake at the intersection of 253rd Street and Harmony Road. The current treatment process for the existing plant consists of high rate clarification, a contact basin, and filtration. The original treatment plant was constructed in 1984 and was expanded in 1998 to the present capacity of 6.0 MGD.

Miami RWD No. 2 supplies water to Rural Water District No. 7 in Johnson County, Kansas, (Johnson RWD No. 7) which is currently seeing areas of growth in cities of Edgerton and Gardner triggering additional demands on Johnson RWD No. 7's system. The increased demands/requirement on Johnson RWD No. 7 then in turn increases the demand water needed from Miami RWD No. 2. Miami RWD No. 2's WTP has the capacity to supply Johnson RWD No. 7's increased demands, however, storage for Miami's WTP is limited. To ensure Johnson RWD No. 7 can fill their water demand when needed, Midwest is working in conjunction with Miami RWD No. 2 operators and general contractors to explore cost effective alternatives for additional storage at the existing WTP. Midwest is also providing consulting engineering services to evaluate the addition of a new high service pump station and corresponding wet well in anticipation of long-term growth needs for Miami RWD No. 2.

Distribution and Storage: Miami RWD No. 2 serves approximately 300 square miles in northern Miami County. The distribution system consists primarily of ductile iron pipe and PVC pipe ranging in size from 2-inch to 30-inch in diameter. Treated water is pumped to the distribution system from the WTP by six high service pumps at the treatment plant with a firm capacity of 6 MGD.

In addition to providing drinking water to Johnson RWD No. 7, Miami RWD No. 2 also supplies drinking water to Spring Hill, Edgerton, Miami County RWD No. 1, Miami County RWD No. 4, Franklin County RWD No. 1, and additionally provides backup water supply to Louisburg and Paola.



Owner Contact:

Allan Soetaert, Manager,
PO Box 7
Gardner, KS 66030
(913) 856-7375

Midwest Role:

Danny Coltrane:
Project Design;
Holly Powers:
Project Management,
Contract and Construction
Administration,
Construction Observation,
Easement Acquisition

Design Start Date:

March 2019

Design Cost:

Est. \$202,206

Construction Start Date:

May 2022

Engineer's Project

Estimate:

\$2,159,776

Rural Water District No. 7 Johnson County, Kansas Waterline Improvements Project for JO No. 7 & JO No. 6 Merger

In January of 2017 Water District No. 7, Johnson County Kansas (JO7), acquired the water supply system of Consolidated Rural Water District No. 6 and was seeking improvements to enable the districts to physically merge the two independent systems into one seamless potable water supply district. JO7 contracted with Midwest to provide consulting engineering services to design new transmission mains to tie the two systems together for efficient hydraulic operation. The scope of work includes:

1. Install 1.75 miles of new 8" waterline main along Spoon Creek Road and 135th Street and 0.5 miles of new 8" waterline main along Homestead Lane including gate valves, fire hydrants, creek crossing, driveway crossing, and connections to existing mains.
2. Install 1.25 miles of new 8" waterline main along Waverly Road from 105th Street to 115th Street including gate valves, fire hydrants, driveway crossings, and connections to existing mains.
3. Install a new metered connection and connect to the existing main with Rural Water District #4, Douglas County, KS which will include installing 0.83 miles of new 8" waterline main and a metering facility.

Midwest will provide construction administration and observation for the two-month construction schedule. Construction administration will consist of management of payment applications, change orders, wage rate reviews, and producing as-built construction plans. Construction observation will consist of observing daily construction activities performed by the contractor and sub-contractors, as well as daily logging of materials and quantities installed and inspection reports.

Owner Contact:
Dustin Rose
P.O. Box 328
Fredonia, KS 66736
(620) 378-3749
drose@pwwsd23.net

Midwest Role:
Engineer of Record

Design Start Date:
May 2018

Design End Date:
January 2019

Construction Start Date:
June 2019

Construction End Date:
August 2020

Design Cost
\$162,752

Construction Cost
\$1,778,009

Public Wholesale Water Supply District No. 23 (PWWSD No. 23) Waterline Improvements Project: 20 miles of upgraded lines to increase waterline capacity

Midwest provided upgrades to portions of the existing water mains leading to the various Rural Water Districts (RWD) and cities served by PWWSD No. 23. The current lines were inadequate as approximately only 24 of the 106 miles of existing line were sufficiently sized to meet contractual demands, the rest were under-sized.

To provide the district entities with the volume and pressure of water they need to operate efficiently, Midwest worked with PWWSD No. 23 to prioritize and upgrade several parallel lines totaling approximately 20 miles to service all the district entities; 6.5 miles of 10-inch pipe, 4.5 miles of 8-inch pipe, and 8.5 miles of 6-inch pipe. Upgrading the proposed water lines was a major step that allowed all members of PWWSD No. 23 to take their contracted water amounts and reduce field operation and maintenance costs for operators.

Wilson County #4: Wilson County RWD No. 4, and Montgomery County RWD No. 12's existing booster stations were highly inefficient. The friction loss in the existing pipeline was too great to allow both districts to operate their booster pump simultaneously, and did not provide maximum contract or peak hour flow for either entity. The two districts were not able to take water simultaneously, and had to alternate taking water. Midwest worked with PWWSD No. 23 to install a 6-inch line parallel to the first 7 miles which provided additional water flow to both districts, and reduced friction loss enough to allow Wilson #4 to remove their inefficient booster pump from service.

Neosho/Labette #4 Upgrades : The existing water line serving the Neosho/Labette #4 districts was an 8-inch PVC. Friction loss in the 8-inch pipe prohibited adequate amounts required to fill the District's tower during peak hour demands. The existing line was too small to provide adequate flow to meet demands or future customer growth. Midwest Engineering Group worked with PWWSD No. 23 and Neosho/Labette #4 to install a parallel 10-inch water line.

Wilson #10 Upgrades: One branch of the PWWSD 23 distribution system serves the Wilson #10, Wilson #5, Wilson #11, Buffalo, Woodson #1, and Neosho #12 members. The first three miles of line on this branch were 6-inch PVC. This section of pipe was under-sized, and restricted the districts ability to take water for peak usage simultaneously. Woodson #1 and Neosho #12 were the first to see the effect of these undersized lines. Midwest Engineering Group worked with PWWSD No. 23 and Wilson #10 to install a parallel 8-inch water line that increased water volume, and decreased friction loss. This solution allowed these districts to take water simultaneously and better serve their customer needs.





Owner Contact:
Dustin Rose
 P.O. Box 328
 Fredonia, KS 66736
 (620) 378-3749
 drose@pwwsd23.net

Midwest Role:
**Const. Administration/
 Owner's Representative**

Start Date:
December 4, 2017

Est. Completion Date:
October 2019

Const. Administration Fee:
\$800,000

WTP Construction Cost
\$22,626,961

Total Project Cost
\$30,600,000*

**Construction cost per
 production gallon: \$3.77**

Public Wholesale Water Supply District No. 23 (PWWSD No. 23); New Water Treatment Plant - Construction Administration

Midwest provided construction administration for a new 6.0 MGD water treatment plant (WTP) that includes over 1,000 horsepower of pumps, three miles of 18", 16" and 12" waterlines, and over one million gallons of storage. The WTP, located approximately two miles southwest of Fredonia, Kansas, serves 20 entities with a population of over 12,000. The existing WTP experienced multiple major renovations, but still had several problems with operation. There were parts of the treatment plant and equipment that were very old and therefore difficult to repair. Fundamental issues with the process was causing high turbidity to enter the gravity dual media filters. Because the water plant was located on the bank of the Fall River, the treatment plant has been flooded three times causing the inability to produce water during the flood and for about a week thereafter during cleanup. PWWSD No. 23's existing water supply system had issues with the water treatment plant's storage capacity and the distribution system's waterline capacity causing it to be unable to meet the current contractual water usage to some of its members.

Through an agreement with PWWSD No. 23, Danny oversaw the construction administration of the new water treatment facility and advised on upgrades and improvements to the distribution system. Consulting services included daily observation, as-builts, photo directory, material testing, submittals, RFIs, change orders, pay applications, adherence to schedule, monthly meetings, reporting, and other activities necessary of an Owner's Representative.

The new facility allows PWWSD No. 23 to meet current demands of its users, as well as meet demands from merging with additional entities and anticipated future growth.

* Danny Coltrane served as Engineer of Record while design for this project was completed with SKW/McClure

Owner Contact:
Ryan Follmer,
Assistant City Manager
PO Box 907
101 South Lincoln
Chanute, KS 66720
rfollmer@chanute.org
(620) 431-5200

Midwest Role:
Danny Coltrane:
Project Design
Holly Powers:
Project Management

WTP Design Estimate
(PER Only): \$63,000

Design Start Date:
April 2021

Wastewater Collection
System Evaluation
Estimate:
\$120,000

City of Chanute, Kansas **Water Treatment Plant (WTP) Comprehensive Plan** **and Professional Engineering Report (PER)**



The City of Chanute owns its own water utility serving over 9,000 citizens. The City prides itself on the fact that water distribution and treatment have been a part of Chanute's history since 1894. In 2012, a valve dated 1922 was found during a leak repair. That valve is still working and in use. Civic pride notwithstanding, several areas of the plant are in disrepair and in need of maintenance and upgrades.

Midwest provided consulting engineering services to develop a Professional Engineering Report (PER) to review alternatives for the rehabilitation of the City of Chanute's existing water treatment plant (WTP). The PER will include a financial review, a rate review, and projections, as well as demographics and population projections. The data within the PER will be comprehensive enough to be used for obtaining loans and/or acquiring funding from state and local entities for WTP improvements.

Wastewater Collection System Improvements

The City of Chanute was experiencing inflow and infiltration rates 10 to 20 times above the acceptable KDHE levels. Limits are anticipated to be revised by KDHE in 2023 whereby the City will be further out of compliance and face severe penalties.

Midwest is working with the City to develop a 5 to 7-year strategic plan to address deficiencies in the wastewater system. The plan will develop procedures for collecting, processing, and storing attribute data, then identifying and prioritizing inflow/infiltration areas within the wastewater collection system. The collected data will be used to identify deficiencies and prioritize rehabilitation and improvements. The City of Chanute will conduct spot repairs as they are identified. Larger projects will be categorized and completed with all applicable/available loan and grant funds.

To address urgent needs and maximize the City's budget, the improvements will be implemented in phases. The Engineering Design will begin by focusing on the collection system including lift station rehabilitation, gravity line and manhole replacement and rehabilitation. This work will improve the I&I, but will not eliminate it, due to the age of the system. To further reduce I&I in the future, the City will need to develop a procedure for eliminating I&I from the private side of the wastewater collection system. Midwest will then begin the design of Wastewater Treatment Plant (WWTP) main treatment processes including secondary treatment, mechanical biological treatment, and sludge digestion and processing.

Pending 2023 KDHE Permit Regulations, Midwest will work with the City to develop a WWTP Facility Plan/PER to identify and develop treatment alternatives. This will include a projected schedule, operation and maintenance costs, and capital costs to demonstrate the fund-ability of the project. Midwest will begin design on the WWTP headworks including the main lift station, flow measurement, and primary treatment to increase inflow capacity. Next, Midwest will assist the City with the design of the disinfection process including rehabilitating the sand filter and UV system to increase discharge capacity. All new designs will be coordinated with new permit limits from KDHE and new collection flow data.

Owner Contact:
Troy Smith, Operator
PO Box 69
Galesburg, KS 66740
(620) 763-2242

Midwest Role:
Danny Coltrane and
Deb Smith: Project Design;
Holly Powers:
Project Management,
Contract and Construction
Administration,
Easement Acquisition

Rural Water District No. 4 Neosho, Kansas Multiple Projects

Ottawa Rd and Elk Rd Waterline Upgrades Project

Midwest Engineering provided consulting engineering services to Neosho RWD No. 4 for a waterline upgrade project along Ottawa Rd and Elk Rd in Neosho Co. KS. The District needed to upgrade an existing 2" main along Ottawa Rd, north of Parsons, Kansas, to a 4" main in order to increase capacity to current users in the areas. The upgrade along Ottawa Road consisted of the construction of approximately 4.71 miles of 4" PVC, CL200 waterlines with 1,750 ft of 1" service lines; 30 new water valves; 17 cleanouts; 21 relocations of existing water meters with new water meter pits; 10 connections to existing water mains; 13 highway or county road crossings and 7 creek crossings using approximately 3,000 ft of restrained joint casing and carrier pipe.

Neosho RWD #4 desired to install a new 4" PVC, CL200 waterline from Hwy 47 approximately 1.2 miles south along Elk Rd to add an additional supply line to feed into one of their existing distribution waterlines. The extension will consist of approximately 1.4 miles of 4" PVC, CL200 waterline, a new master meter connection with PRV, two (2) county road crossings, and two (2) connections to the existing main.

Design Start Date: June 2019*

Construction Start Date: November 2019

Design Cost: \$6,500 (Design Phase)

End Date: August 2019

Construction Completion Date: December 2019

Estimated Construction Cost Estimate: \$98,000

*This was a KDOT utility relocation project that was scheduled to be completed by the summer of 2017. The original project was put on hold by KDOT in September of 2016, so design of the project was suspended indefinitely for the time being. In June of 2017, KDOT announced the restart of the project so the design of the project was continued and finished.

Water Distribution System Hydraulic Model Update Project

Midwest Engineering is working with Neosho RWD #4 to upgrade their existing hydraulic model to help the district develop an accurate and representative hydraulic model of the existing water distribution system in order to evaluate overall system performance and operational techniques and to replicate the hydraulic capabilities of the system operation. The updated hydraulic model will allow Neosho RWD #4 to plan for improvement that needs to be made to their distribution system to increase water pressure and capacity in certain areas with high demands, determine the cause of various problems within the system, and aid in decreasing water loss. After the hydraulic model is completed MEG will create a project master plan with cost estimates for Neosho RWD #4 for analysis. The master plan will help them determine which projects are critical and to sustain the current and future water distribution system in a more efficient manner.

Design Start Date: July 2019

Construction Start Date: November 2019

Design Cost: \$5,300 (Hydraulic Model Update)

End Date: December 2019

Construction Completion Date: December 2019

\$4,500 (Master Plan with Cost Estimate)

Neosho RWD #4 Pratt Rd Waterline Upgrades Project

Midwest Engineering provided consulting engineering services to Neosho RWD #4 for a waterline upgrade project along Pratt Rd in Neosho Co. KS. Neosho RWD #4 due to the users experiencing low water pressure. The project will consist of upgrading approximately 3 miles of 2" waterline with 4" PVC, CL200 waterline to increase water pressure in this area, five (5) reconnections to existing meters, three (3) county road crossings, and two (2) connections to existing main.

Design Start Date: September 2019

Construction Start Date: November 2019

Design Cost: \$3,500 (Design) \$3,500 (Bidding Services)

End Date: September 2019

Construction Completion Date: December 2019



Owner Contact:
Troy Smith, Operator
PO Box 69
Galesburg, KS 66740
(620) 763-2242

Midwest Role:
Danny Coltrane and
Deb Smith: Project Design;
Holly Powers:
Project Management,
Contract and Construction
Administration,
Easement Acquisition

Rural Water District No. 4 Neosho, Kansas Multiple Projects (CONTINUED)

Water Distribution System Hydraulic Model Update Project

Midwest Engineering is working with Neosho RWD #4 to upgrade their existing hydraulic model to help the district develop an accurate and representative hydraulic model of the existing water distribution system in order to evaluate overall system performance and operational techniques and to replicate the hydraulic capabilities of the system operation. The updated hydraulic model will allow Neosho RWD #4 to plan for improvement that need to be made to their distribution system to increase water pressure and capacity in certain areas with high demands, determine the cause of various problems within the system and to aid in decreasing water loss. After the hydraulic model is completed MEG will create a project master plan with cost estimates for Neosho RWD #4 to analysis. The master plan will help them determine which projects are critical and to sustain current and future water distribution system in a more efficient manner.

Design Start Date: July 2019

Construction Start Date: November 2019

Design Cost: \$5,300 (Hydraulic Model Update)

End Date: December 2019

Construction Completion Date: December 2019

\$4,500 (Master Plan with Cost Estimate)



Owner Contact:
Steve Brooks,
Public Works Supervisor
120 N Ozark Street
Girard, KS 66743
cogpw@girardkansas.gov
(620) 238-8519

Midwest Role:
Danny Coltrane and
Deb Smith: Project Design;
Holly Powers:
Project Management,
Contract and Construction
Administration,
Easement Acquisition

Design Start Date:
January 2019
Design End Date:
April 2020

Design Estimate - (PER
Only): \$20,000
Construction Estimate for
Booster Station:
\$350,000
Construction Estimate
for future Water & Sewer
Improvements:
\$25,000,000

City of Girard, Kansas Water System and Sanitary Sewer Evaluation and Improvements

New West Tower Booster Station Project

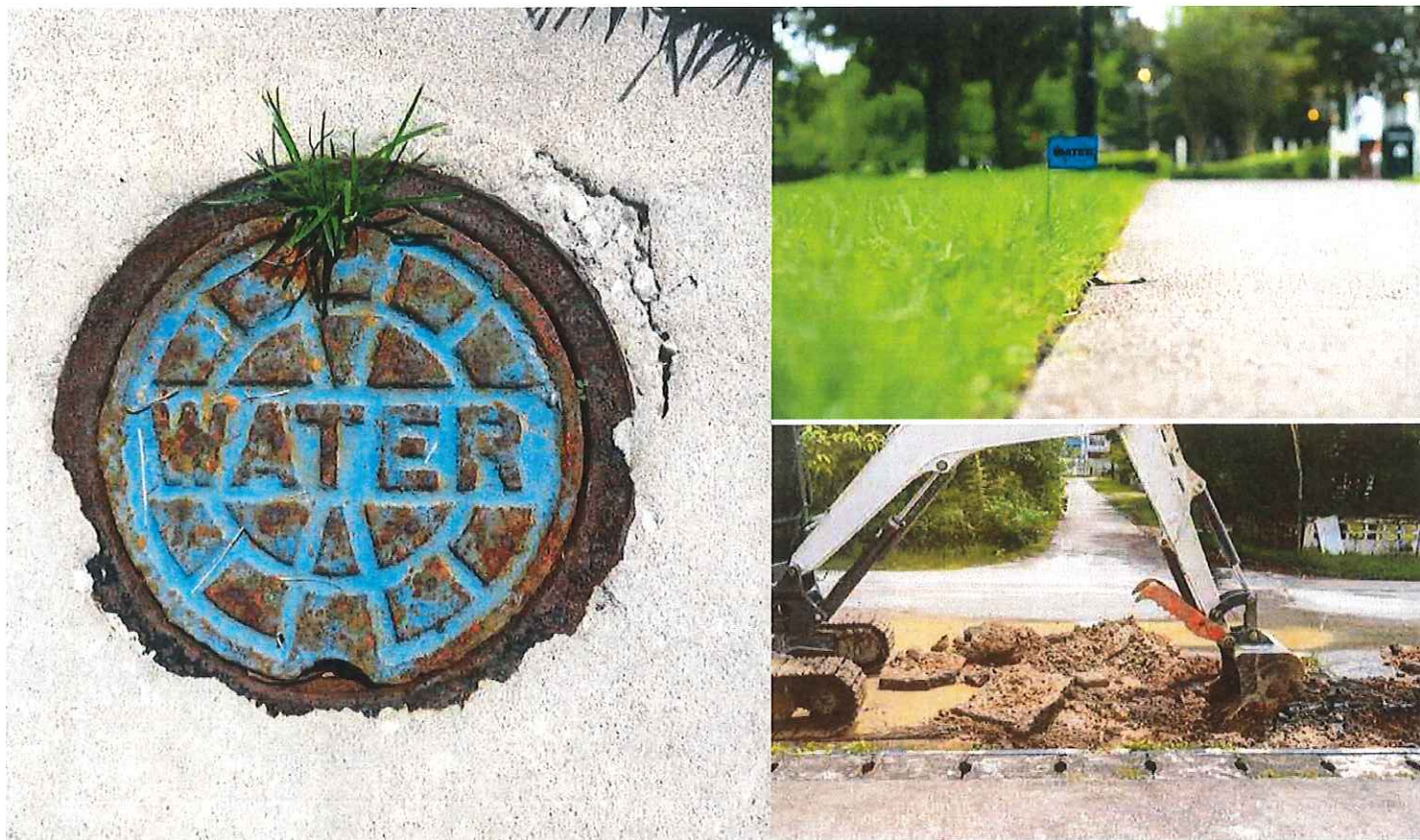
This project, constructing a new booster station includes new duplex booster pump skid, a PRV outlet control valve, associated piping and fittings, a SCADA/communications (Microcom) system, project-specific electrical, a booster pump building (20' x 18'), a chlorine room (10' x 18'), and associated appurtenances.

Midwest Engineering Group was contracted to prepare preliminary Plan Drawings and Specifications for the West Tower Booster Station Project. Midwest prepared final Drawings and Specifications based on Client review, and assisted the Owner in preparation and filing of applications for construction-related permits, as required.

Professional Engineering Report (PER)

Midwest Engineering provided consulting engineering services to develop a Professional Engineering Report (PER) for sanitary sewer improvements for (8) existing lift stations, the sewer collection system within the vicinity of the lift stations, the lagoon system, and a review of the water reuse system for the golf course, water treatment plant and supply, water storage and booster pumps and the water distribution system. The PER conforms to Rural Development Bulletin 1780-2 guideline and CDBG requirements.

Midwest provided evaluation based on a GIS system, City maps and records, daily monitoring records, ISO reports, audits and financial records, KDHE minimum design standards, previous engineering studies, and various other documents associated with the sewer collection system and water distribution system.



Owner Contact:
Curtis Daniels, Chairman
10515 Highway 59
Erie, KS 66733
(620) 433-2898

Midwest Role:
Danny Coltrane:
Project Design;
Holly Powers:
Project Management,
Contract Administration,

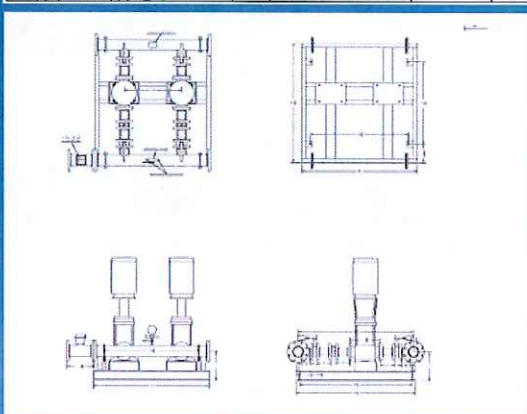
Neosho County Consolidated Water District No. 1 Erie, Kansas

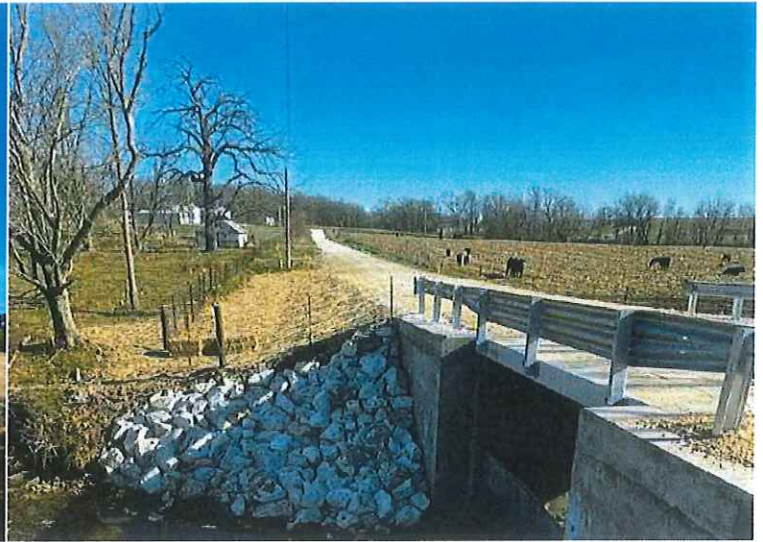
Professional Engineering Report (PER) for Elevated Storage Tank

The distribution system for Neosho CCWD No.1 has had difficulty in recent peak time periods keeping up with customer demands. Midwest Engineering is working with the District to upgrade their existing hydraulic model to help the district develop an accurate and representative model of the existing water distribution system in order to evaluate overall system performance and operational techniques. Midwest incorporates step-by-step calculations that validate the hydraulic model's accuracy and then give recommendations to fix the critical areas that have become apparent within the system as demand increases. The updated hydraulic model will allow the District to plan for improvements that need to be made to their distribution system to increase water pressure and capacity in certain areas with high demands, determine the cause of various problems within the system and to aid in decreasing water loss.

The inability of the District's current system to keep up with demand has resulted in over-use of booster pumps and incurred additional wear and tear on equipment that necessitates continuous operation to compensate. Midwest is working with the District to compare typical usage with KDHE recommendations and recommend a complete solution.

Midwest is exploring solutions with the District including installation of a new elevated storage tank to allow the district to meet current and future demands. The suggested improvements would not only allow the district to meet current demands, but would also allow for foreseeable future growth to sustain current and future water distribution system in a more efficient manner.





Owner Contact:
Joe Kaimann,
Presiding Commissioner
201 Main Street
Troy, MO 63379
636-528-6300
jkaimann@
lincolncountymoclerk.gov

Midwest Role:
Engineer of Record

Design Start Date:
June 1, 2020

Construction Start Date:
April 12, 2021

Construction End Date:
TBD

Design Cost:
\$106,300

Construction Cost:
\$760,730

Lincoln County: Multiple Bridge Replacements

Phelps Lane (aggregate) over a Tributary to Draper New Bridge 1240006:

Midwest Engineering Group worked with Lincoln County to provide engineering services to replace this Non-NBI Structure. Midwest served as the Engineer of Record and services included bridge hydraulics with full design and drafting. The replacement structure is a 26' long single span, consisting of eight adjacent precast concrete box girders (12"x34") on a 20-degree skew L.A. at 0% grade, no slab topping supported by concrete abutment walls with turnback wings on spread footings keyed into bedrock. The PC Beam was designed using BRASS Girder, concrete abutments & wings and spread footings designed using AASHTO & MoDOT EPG design requirements (HL-93 design + MoDOT legal trucks ratings). The bridge opening was designed using surveyed cross sections of basin, streamstats drainage basin & HEC-RAS, based on 2014 Rural Regression Equations, meeting MoDOT's recommended standard of 1' freeboard for a 25-year event.

Gravens Road (asphalt) over Tributary to Cuivre River New Bridge 2330012:

Midwest Engineering Group worked with Lincoln County to provide engineering services to replace this Non-NBI Structure. Midwest served as the Engineer of Record and services included bridge hydraulics with full design and drafting. The replacement structure is a 26' long single span, consisting of nine adjacent precast concrete box girders (15"x34") on a 20-degree skew R.A. at 2% grade, with slab topping supported by concrete abutment encasing driven steel piling. The PC Beam was designed using BRASS Girder, Concrete abutments & wings, slab topping and driven piles designed using AASHTO & MoDOT EPG design requirements. The bridge opening was designed using surveyed cross-sections of basin, streamstats drainage basin & HEC-RAS, based on 2014 Rural Regression Equations, meeting MoDOT's recommended standard of 1' freeboard for a 25-year event.

Martin Road (aggregate) over Campbell Branch New Bridge 3150002:

Midwest Engineering Group worked with Lincoln County to provide engineering services to replace this Non-NBI Structure. Midwest served as the Engineer of Record and services included bridge hydraulics with full design and drafting. The replacement structure is a 26' long single span, consisting of 8 adjacent precast concrete box girders (12"x34") on a 0 degree skew, 3.5% grade, no slab topping supported by concrete abutment walls with turnback wings on spread footings keyed into bedrock. The PC Beam was designed using BRASS Girder, Concrete abutments & wings and spread footings designed using AASHTO & MoDOT EPG design requirements.



Cooper County: Rodeo Drive Culvert Replacement

Owner Contact:
Don Bargary,
Presiding Commissioner
200 Main Street
Boonville, MO 65233
660-882-2228
don.bargary@coopercountymo.
gov

Midwest Role:
Engineer of Record

Design Start Date:
January 25, 2021

Construction Start Date:
April 26, 2021

Construction End Date:
June 8, 2021

Design Cost:
\$15,700

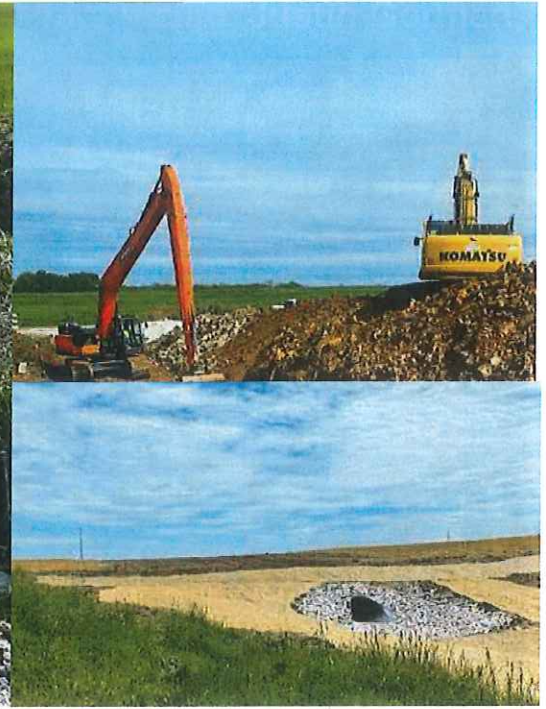
Construction Cost:
\$94,874

Midwest Engineering provided consulting engineering services to Cooper County to replace a deficient culvert on Rodeo Drive. The project consisted of engineering services including an engineering process that identified the condition of the existing culvert and its environs with recommendations for replacement options. The preliminary study included:

- An on-site evaluation of the project including work area and restrictions.
- Road closure assessment and impact during the construction phase.
- An assessment of historic, archaeological and environmental constraints.
- Existing conditions assessment with respect to topography, hydrology, space needs, and land ownership. Identification of all public and private underground and overhead utilities including a preliminary assessment of utility relocation.

Midwest worked with the County to develop a clear understanding of the desired project goals, objectives, timelines, permits, and deliverables. Based on initial assessment, Midwest determined the size and length of the replacement culvert for this site. Services included:

- Excavation plan for the excavation, removal, and proper disposal of the broken-up asphalt and undesirable soil resulting from the project.
- Plan for the excavation, removal, and proper disposal of the existing culvert.
- Plan for the placement, backfilling, erosion control, regrading and reseeding embankments, restructuring and repaving disturbed roadway, and installing guardrails on both sides of road.
- Assisted County with Construction Bid & Selection process
- Provided Construction Inspection Services



Owner Contact:
Cooper County Commission
Don Bargary, Presiding
Commissioner
don.baragary@coopercountymo.
gov

Midwest Role:
Project designed and
managed by
Dustin Berry

Construction Completion Date:
June 2021

Construction Cost:
\$110,000

Cooper County: Rodeo Drive Sinkhole Remediation & Culvert Installation

A sinkhole along Rodeo Drive caused the roadway to become underwater in large rainfalls and its erosion encroaching the roadway. We worked with a geotechnical engineer and contractor to fill a void under the roadway with 18 c.y. of flowable grout to stabilize the roadway. Once stabilized, we drained the area with the installation a culvert under Rodeo Drive and an adjacent west field consisting of approximately 402 LF of 36" diameter dual-wall HDPE pipe, 32 LF of 30" diameter dual-wall HDPE pipe, two riser inlets (12" & 30" diameter dual-wall HDPE pipe) and attachments along with filling an adjacent sinkhole. Shortly after the project completion, the area received a large rainfall, which was handled and allowed traffic to pass safely.





Owner Contact:
Jeff McCann, P.E.
 Chief Engineer
JMcCannboonecountymo.org

Midwest Role:
**Project designed and
 managed by
 Dustin Berry***

Construction Completion
Date: November 2019

Construction Cost:
\$343,997

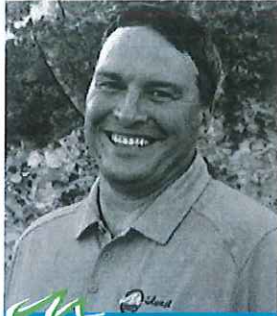
Boone County: E St. Charles Road Bridge No. 3170016 Replacement

E St Charles Rd is an asphalt roadway carrying more than 600 vehicles per day over the Little Cedar Creek approximately 4 miles east of a growing Columbia, MO. The deteriorated multi-CMP structure carried flow under the roadway but often became blocked with debris resulting in an inadequate flow. A challenge to replacing the existing structure was the adjacent intersection of Doziers Station Road and the existing utility corridor along the east side of the stream. Boone County contacted Dustin Berry to discuss a solution to the existing structure's replacement. Dustin designed a 65' long x 26' wide single-span steel bridge with turn-back wings to accommodate the stream's alignment and the intersection's turning radii. The bridge required a 20 degree L.A. skew for smooth streamflow and a 2.5% grade for traffic patterns. The new free-span structure passes the 25-year flood event, resolves the debris issue, and allows traffic to safely use the realigned intersection.

* Dustin Berry served as
 Engineer of Record
 while this project
 was completed
 with another firm

Key Personnel

Daniel L. Coltrane, Jr. P.E., Principal & Owner



Education

B.S. Civil Engineering -
1993
Kansas State University

Professional Registrations

Professional Engineer:
Kansas, Oklahoma,
Missouri

Professional Associations

ACI

As Owner and Principal of Midwest Engineering Group, Daniel Coltrane has more than 25 years of consulting experience. Danny oversees all design work including all phases of land surveying and civil engineering. His range of experience includes all aspects of water and wastewater projects, plat and plan reviews, mapping, hydraulic modeling, oil & gas pipelines, road/ transportation, land development and right-of-way acquisition, construction services, GIS, and studies.

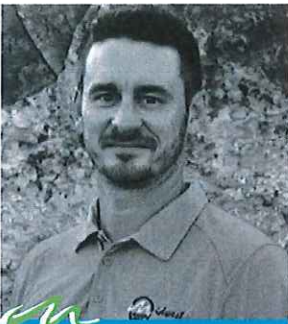
Danny works primarily with municipalities and quasi-municipalities, and has a thorough understanding of regulators and funding administrator operations. He has worked with a variety of funding agencies including private and public sources. Danny's background as a former mayor of a small city uniquely qualifies him to fully address the needs of municipalities. His project experience includes every facet of engineering that a city needs. He takes a multi-discipline approach to his design of water distribution systems, water storage facilities, booster stations, chlorination facilities, control systems and treatment for public potable water systems. Danny is a licensed professional engineer in Kansas, Missouri and Oklahoma. He is a member of the ACI and is ACI certified Grade 1 for field testing concrete and concrete cylinders

Danny has designed and is managing the following relevant projects:

- Multiple Projects-Public Wholesale Water Supply District No. 23 (PWSD No. 23), KS
- WTP Improvements Phase I & II-RWD No. 2 Miami County, Kansas;
- WTP Expansion-City of LaCygne, Kansas
- WTP Rehabilitation-City of Chanute, Kansas
- WTP Rehabilitation -City of Gardner, Kansas
- Water Line Expansion (7 miles)-RWD No. 2 Allen County, Kansas
- Water Line Expansion, Booster Pump Station, Elevated Storage Tank-RWD No. 4, Neosho County, Kansas

Danny has considerable additional project experience available on request.

Dustin Berry, P.E., Project Engineer



Education

B.S. Civil Engineering -
University of Missouri
B.S. CAD - University of
Central Missouri

Professional Registrations

Professional Engineer:
Missouri, Kansas, Iowa,
Oklahoma

NHI Certified Bridge Inspection

Team Leader

NHI Certified Fracture Critical

Bridge Inspector

MoDOT Local Agencies Basic

Training

OSHA General Industry Certification

OSHA Aerial Lift Safety Training

OSHA Confined Space Training

As a project engineer for Midwest Engineering Group, Dustin has 17 years of experience and specializes in project management and design for various types of projects and structures. He provides detailed calculations and specifications for the strength and stability of structures for a variety of projects, including bridge & culvert design, roadway design, structural design, rehabilitation and evaluation, streambank stabilization, and site drainage. Dustin stays abreast of industry best practices and continually researches advanced technology.

Dustin leads his project teams by defining clear goals for all aspects of each project and develops steps for proper execution. He provides detailed specifications for proposed solutions including time and scope involved. Dustin demonstrates flexibility to quickly account for project challenges and manages using best engineering practices balanced with the most cost-effective solution. Dustin routinely collaborates with team members to ensure a plan is in motion to safely build each structure. He manages and oversees construction document preparation for all projects. Dustin also performs site visits for structural evaluations, prepares recommendation reports, and collaboratively works with contractors during the construction process to address questions.

Dustin developed and managed the following relevant projects:

- Bridge No. 6000005 Replacement - Sycamore Creek Road-Boone County, MO
- Bridge No. 1540003 Replacement - Oakland Lane-Cooper County, MO
- Streambank Stabilization - Clarksburg Drive-Cooper County, MO
- RCB Culvert Replacement - Eichelberger Drive-Cooper County, MO
- 2022 On Call Services - Multiple Project-Lincoln County, MO
- Sinkhole Remediation & Culvert Installation; Rodeo Dr-Cooper County, MO
- Bridge #1240006, #2330012, #3150002 Replacements-Lincoln County, MO:
- Aluminum Box Culvert Replacement; Walnut Dr-Cooper County, MO
- Block Retaining Wall Embankment Stabilization; Ferry Rd - Cooper County, MO
- Bridge #6000005 Replacement; Sycamore Creek Rd - Boone County, MO

Brad Riebel, P.E., P.L.S., Design Engineer/Project Manager



Education

B.S. Civil Engineering -
University of Kansas
B.S. Const. Engineering -
Pittsburg State University

Professional Registrations

Professional Engineer &
Professional Land Surveyor:
Kansas

LSTT: State of Missouri

ACI Certifications:
Concrete Field Testing Technician
- Grade I

Brad Riebel is certified as Professional Engineer and a Professional Surveyor. Throughout his 13-year career, he has served as a surveyor, project manager and designer allocating resources, supervising multidisciplinary construction teams, and inspecting completed construction projects. Brad has extensive experience in managing large construction projects with close adherence to construction specifications and standards. Brad routinely performs due diligence on the impact and feasibility of new construction sites. He excels at overseeing all project stages from preliminary layouts to final engineering designs. As a Project Manager, Brad prepares work schedules, and supervises junior engineers, construction managers, workers, technicians, and contractors. Brad is an outstanding senior civil engineer whose expertise results in construction projects that are completed within budget and on time.

Brad's design experience includes various types of land development projects including subdivisions, street and parking lot design, as well as utility design including potable water distribution and sanitary sewer project design. Brad is also a Professional Surveyor and is skilled at Surveying new construction sites and assessing existing structures for upgrades. Surveying tasks included overseeing all land surveying activities completed by survey crew.

Brad capably attends board meetings as required to provide updates to project updates. As a skilled communicator, Brad facilitates discussions with clients as needed on all aspects of the project to maintain schedules and maximize budget allocations. Brad's relevant project experience includes:

- Water Line Expansion (7 miles) - RWD No. 2 Allen County, Kansas
- Water Line Expansion, Booster Pump Station, Elevated Storage Tank - RWD No. 4, Neosho County, Kansas
- WTP Rehabilitation - City of Chanute, Kansas
- Waterline Improvements Project - Rural Water District No. 8, Allen County, KS
- WTP Improvements Phase I & II - RWD No. 2 Miami County, Kansas;
- WTP Expansion - City of LaCygne, Kansas
- WTP Rehabilitation - City of Gardner, Kansas

Robert Stever, P.E., Design Engineer



Education

B.S. Industrial Engineering
Kansas State University

Professional Registrations

Professional Engineer:
Kansas

Certifications:

KDOT Inspection Roads and
Bridge
Concrete testing
NACE CP 1 TESTER
OSHA 10hr

Robert Stever is a Professional Engineer with over 25 years of experience. He has a broad level of project skill ranging from survey, drafting, design, and construction of roads and bridges. His varied experience includes working with sewer and water projects, which included reviewing other discipline drawings for construction compatibility including electrical, structural, and civil site plans.

Robert routinely reviews general project drawing and designs and his design experience includes various types of projects with work ranging from survey, drafting, design, and construction of civil projects including road and bridges. Robert is also experienced with the design of on site layout for housing and industrial sites. Robert specializes in construction design, engineering, specifications, and hydrostatic testing for cross country pipeline projects throughout the United States.

Robert's relevant project experience includes:

- Multi-year project to review existing pipelines for In-line-Inspection feasibility. Design pipeline modifications and supervise construction drawings to facilitate and modify existing pipelines
- Review pipeline projects for compliance with DOT Part 192 and 195.*
- Design and preform Hydrostatic testing of existing pipelines.*
- Construction inspection for KDOT road and bridge projects*.

* Projects completed with another firm



Jeff Zimmerman, P.E., Design Engineer/Project Manager



Education

B.S. Civil Engineering -
Iowa State University

Professional Registrations

Professional Engineer:
Kansas, Missouri, Iowa

LEED GREEN ASSOCIATE
OSHA 30 hour certification
for Construction Safety &
Health

Lenexa Toastmasters Past
Vice President, Membership

Jeff Zimmerman is a Professional Engineer and a LEED Green Associate with more than 12 years of civil engineering experience. He has a broad level of project skill ranging from stormwater management studies to full design of storm sewers, streets, and roundabouts.

As a Project Manager, Jeff ensures project feasibility through continual evaluation of design practicality measured against allocated resources. Jeff demonstrates his management abilities on various civil engineering projects by effectively communicating with colleagues and other team members to ensure maximum cohesion and fluidity on projects. Jeff has an aptitude for forecasting design and construction time frames. He delivers quality projects to each client and continually inspects project sites to ensure they meet relevant codes and are progressing properly.

Jeff is proficient in standard engineering software including AutoCad Civil 3D, Autodesk InRoads, Bluebeam, Sketchup, Navisworks, Kerkythea and Prezi and enjoys working with clients to helping them visualize their ideas through 3D modeling and animation.

Jeff's relevant project experience includes:

- Water Line Improvements - RWD #4; Douglas County, KS
- K-68 Water Line Relocation Phase 2 - RWD No. 2; Miami County, KS
- SWRD Water System Improvements - Southwest Regional Water District, Clarinda, IA
- Water Line Expansion (7 miles) - RWD No. 2 Allen County, Kansas
- Water Line Expansion, Booster Pump Station, Elevated Storage Tank - RWD No. 4, Neosho County, Kansas
- K-68 Water Line Relocation Phase 3 - RWD No. 2; Miami County, KS

Holly Powers, Project Manager



Education

B.S. Engineering Tech. -
2003
Pittsburg State University

Professional Registrations

KDOT Certifications:

Basic Inspection
Environmental Inspection
Asphalt Paving Inspection
Concrete Paving Inspection
Structure Inspection

ACI Certifications:

Concrete Strength Testing
Concrete Field Testing Technician
- Grade I

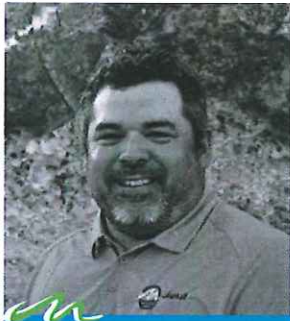
Holly Powers serves as a Project Manager for Midwest Engineering Group. A collaborative team member, Holly's diverse experience includes roles from field operations as a Construction Observer to serving as Project Manager. Her varied duties include client and project management; environmental permit applications; coordination with municipalities, including the preparation of utility agreements using standard forms; development and implementation of road standards and utility permitting for counties and municipalities. Holly is very accomplished at landowner communications during the acquisition and management of easement and right-of-way activities, as well as performing site coordination with regulatory agencies, sub-consultants, and clients.

Holly is proficient at defining project scope, cost estimation, developing specifications; working with construction drawings and plan sets; project bid management including answering questions from contractors during bid process, issuing project addenda and managing bid openings; and providing construction administration, inspection, and construction closeout services.

With over 18 years of technical experience, Holly understands construction and maintenance standards and is adept with Auto CAD, BlueBeam, Auto CAD Civil 3D, Acrobat Professional, Microsoft Office and MasterSpec. Holly has completed the following relevant projects:

- Multiple Projects - Public Wholesale Water Supply District No. 23 (PWSD No. 23), KS
- WTP Improvements Phase I and Phase II - RWD No. 2 Miami County, Paola, KS
- City of Girard, KS - New West Tower Booster Station Project - Girard, KS
- Waterline Improvements - RWD #4; Neosho & Labette Counties, KS
- WTP Expansion - City of LaCygne, Kansas
- WTP Rehabilitation - City of Chanute, Kansas
- WTP Rehabilitation - City of Gardner, Kansas
- Water Line Expansion (7 miles) - RWD No. 2 Allen County, Kansas
- Water Line Expansion, Booster Pump Station, Elevated Storage Tank - RWD No. 4, Neosho County, Kansas

Justin Gorman, Senior CAD Technician



Education

Graduate Level Course -
Drafting Technology:

- AutoCAD
- Civil Drafting with
Surveying

1997
Manhattan Area Technical
College

General Studies

1996
Fort Scott Community
College

Justin Gorman is a talented CAD Technician with Midwest Engineering Group with more than 21 years of experience. Utilizing the latest technology, Justin prepares and edits schemata in a prompt manner to create relevant drawings that serve as the baseline for efficient production processes.

Upon identifying the overall scope of project, Justin meticulously checks engineering documents to ensure that they meet the standards and instructions provided by engineer or client. He is instrumental in providing ideas and suggestions on how initial design can be improved. He routinely takes suggestions from builders and engineers to comprehend initial building design and asks questions to determine the need for building specific structures and develop plausible plans accordingly. He is an expert in drafting designs that are budget-friendly and can be followed within the time lines specified

Justin's experience encompasses a broad range of design types including design of sewer systems, street design plans, subdivisions, and drawing legal and topographical surveys. Justin is a flexible employee and has also served as Survey Instrument Man, Temporary Survey Crew Chief, KDOT Asphalt: Paving Inspection, Sanitary Sewer Inspection, and worked on several energy projects.

Justin has completed the following relevant projects:

- Multiple Projects - Public Wholesale Water Supply District No. 23 (PWWSN No. 23), KS
- Water Line Expansion, Booster Pump Station, Elevated Storage Tank - RWD No. 4, Neosho County, Kansas
- Water Line Expansion (7 miles) - RWD No. 2 Allen County, Kansas
- WTP Rehabilitation - City of Chanute, Kansas
- WTP Rehabilitation - City of Gardner, Kansas
- Oak Street LS Improvements Project - City of Glenpool, OK
- Hickory Street LS Improvements Project - City of Glenpool, OK
- New West Tower Booster Station Project - City of Girard, KS
- WTP Expansion - City of LaCygne, Kansas

Deb Smith, Senior GIS/CAD Technician



Education

A.A. Engineering - 1984
Johnson County Community
College

Professional Registrations

- OSHA 10 Hour Construction
Certification
- ArcINFO, ArcCAD, & ArcView
- Python & ModelBuilder
- WaterGEMS (Hydraulic Modeling)
by Bentley
- GPS Training by Seiler Instruments

Deb Smith is a Senior GIS/CAD Technician with Midwest Engineering Group with more than 30 years of experience. Deb is an expert at AutoCAD and routinely sets up, drafts, converts, produces and edits plans to create drawings for each project. Deb efficiently provides the project team with updates of Architectural CAD/BIM files for use in design drawings. She is adept at troubleshooting potential problems on plans before they materialize as construction issues. She regularly coordinates with project team members in a respectful and productive manner.

Deb ensures all engineering documents meet current regulatory and industry standards. She listens intently to instructions provided by engineer or client and is always helpful in providing ideas and suggestions on how initial design can be improved. Deb has an eye for detail and ensures that her designs are within each project budget and can be constructed within the timelines specified.

Deb has specialized experience in Geographic Information Systems (GIS). She has completed several courses and utilizes these skills on every project. She also excels at water modeling serving various water districts for the past 10 years. Deb has completed the following relevant projects:

- WTP Improvements Phase I and Phase II - RWD No. 2 Miami County, Paola, KS
- WTP Rehabilitation - City of Chanute, Kansas
- WTP Rehabilitation - City of Gardner, Kansas
- Water Line Expansion (7 miles) - RWD No. 2 Allen County, Kansas
- Ottawa Rd and Elk Rd Waterline Upgrades Project - RWD No. 4 Neosho County, KS
- Pratt Rd Addition Waterline Upgrade Project - RWD No. 4 Neosho County, KS
- Waterline Improvements Project of JO#7/JO#6 Merger - RWD No. 7 Johnson County, KS
- Cedar Niles Waterline Extension Project - RWD No. 7 Johnson County, KS
- Waterline Improvements Project - RWD No. 8 Allen County, Kansas
- Multiple Projects - Public Wholesale Water Supply District No. 23 (PWWSN No. 23), KS
- Water Line Expansion, Booster Pump Station, Elevated Storage Tank - RWD No. 4, Neosho County, Kansas

Southeast Kansas Experience

We are experienced with securing funds from many levels of government and private sources. We are familiar with regulatory requirements, including documentation guidelines for U.S. Department of Agriculture Rural Development (USDA-RD), U.S. Economic Development Administration (EDA), Community Development Block Grants (CDBG), and Federal Emergency Management Association (FEMA) to name a few. We will work with you to explore all possible funding options and secure the maximum amount of funding available with the best consideration of interest rate and term obtainable.

Midwest has successfully secured over \$75,000,000.00 in aid, grants, or loan assistance for projects of our clients.

Current Funding for Facilities - Midwest Projects

| Client | Funding Source | Amount | Interest Rate | Term |
|---|-----------------------------|----------------|---------------------|----------|
| RWD No.2, Miami County, KS | State Revolving Fund (SRF) | \$32 million | 1.58% | 30 years |
| PWWSD No. 23, Fredonia, KS Treatment Plant | USDA Funding 45% Grant | \$25 million | 1.875% and 3.25% | 40 years |
| PWWSD No. 23, Fredonia, KS, Western Expansion Line Project | USDA Funding 65% Grant | \$5.5 million | 1.875% | 40 years |
| RWD No. 4, Douglas County, KS | Funding Pending | \$2.3 million | 2.25% | 40 years |
| City of Girard, Kansas | PER - Submitted for funding | CDBG 50% Grant | | |
| RWD No. 4, Neosho KS | USDA Funding 25% Grant | \$12 million | 1.875% | 40 years |

The Midwest Team keep ourselves current on the essentials of federal grants and loans practice, from issues affecting agency decisions, to the award and administration of grants and loans. Each year the federal government awards millions of dollars to state and local government, universities, hospitals and non-profits, and corporations. The selection of programs and recipients is not governed by the traditional rules of government contracting.

We have extensive experience with many legal mechanisms for formalizing relationships between federal and non-federal entities, such as grants, loans, cooperative agreements, educational partnerships, cooperative research and development agreements, and the various forms of contracts. Our knowledge encompasses:

- Background Information
- Varying Types of Grants versus Loans
- Laws and Regulations
- Competing for Funding
- How/When Award is Administered
- Financial and Compliance Issues
- Bonding
- Interpretation and Litigation

We are experienced at navigating the complicated, diverse, and often agency- and program-specific field of federal loan and grant practice. We can assist you with:

- The laws and regulations governing grants, loans, SRF agency authorities, and programs.
- The interpretation, types, and legal nature of grants, loans, and cooperative agreements in comparison to other instruments.
- The funding selection process, with strategies for submitting competitive applications.
- Strategies for combining a grant with a loan if necessary to keep project costs reasonable.
- Managing the award, to include compliance with award conditions and the applicable regulations.

Rural Water District Experience

Danny Coltrane has been working with Rural Water Districts for more than 25 years. He has successfully completed over 250 projects for more than 60 Rural Water Districts and small municipalities in four states. Most recently, Danny has served as a Staff Engineer for the Public Wholesale Water Service District No. 23 in Fredonia, Kansas. In this capacity, he worked directly with the contractor and operating staff of the District daily and served in an on-site advisory capacity to provide oversight and management during the construction of a new 6MGD water treatment plant. Previously, Danny was the engineer of record during all phases of development of this plant from sourcing funding, obtaining right-of-way from land owners, design conceptualization, to construction, and operator training.



Ability to Meet Timelines

It is important for you as an Owner to ensure that the team you select is capable of completing each project for you in a timely fashion. You want to make sure that your project receives the appropriate amount of consideration and that your Engineering Consultant is not distracted by other projects or priorities.

Midwest makes a point of carefully committing our resources to ensure the quality of our work on every project. Our professional reputation and personal pride are at stake and we measure our capacity judiciously to ensure that your project receives the full attention that it deserves. If additional resources are needed, we have partnerships in place to be able to increase capacity as needed and keep projects moving at an increased pace when necessary.

We have evaluated our current workload and scheduling priorities and we have the capacity to ensure that your project will be completed on time, on budget and at the highest level of quality that we can deliver. You have our word on it.



Quality Control / Assurance

At the beginning of each project, Midwest Engineering Group plans and establishes the process-related objectives and determines the processes that are required to deliver a high-quality end product. Our Senior staff each have multiple years of experience, which means they know what challenges can occur on a project and know what steps to take to avoid project pitfalls. They also employ current best practices for every project to ensure the highest quality project.

Due to the size of our company, the licensed Professional Engineers put together the scope of each project. They are responsible for daily monitoring of processes and any modifications to ensure it meets the predetermined objectives. As they are intimately involved throughout the entire project, they are able to quickly implement necessary actions to achieve design improvements.

Through this method, MEG is able to provide consistent quality control/ quality assurance through the entire project. Quality is integral to every employee's every day work ethic and we pride ourselves on providing workable, constructible, value-driven design projects. At the end of each project, our Senior Professional Engineers conduct a final quality control/ quality assurance analysis.

The steps outlined above are repeated to ensure that processes followed in the organization are evaluated and improved on a periodic basis. This allows us to ensure that every project is designed and implemented with correct procedures. This helps significantly reduce problems and errors in the final product.



WATER TREATMENT FACILITY
CITY OF GARNETT, KS

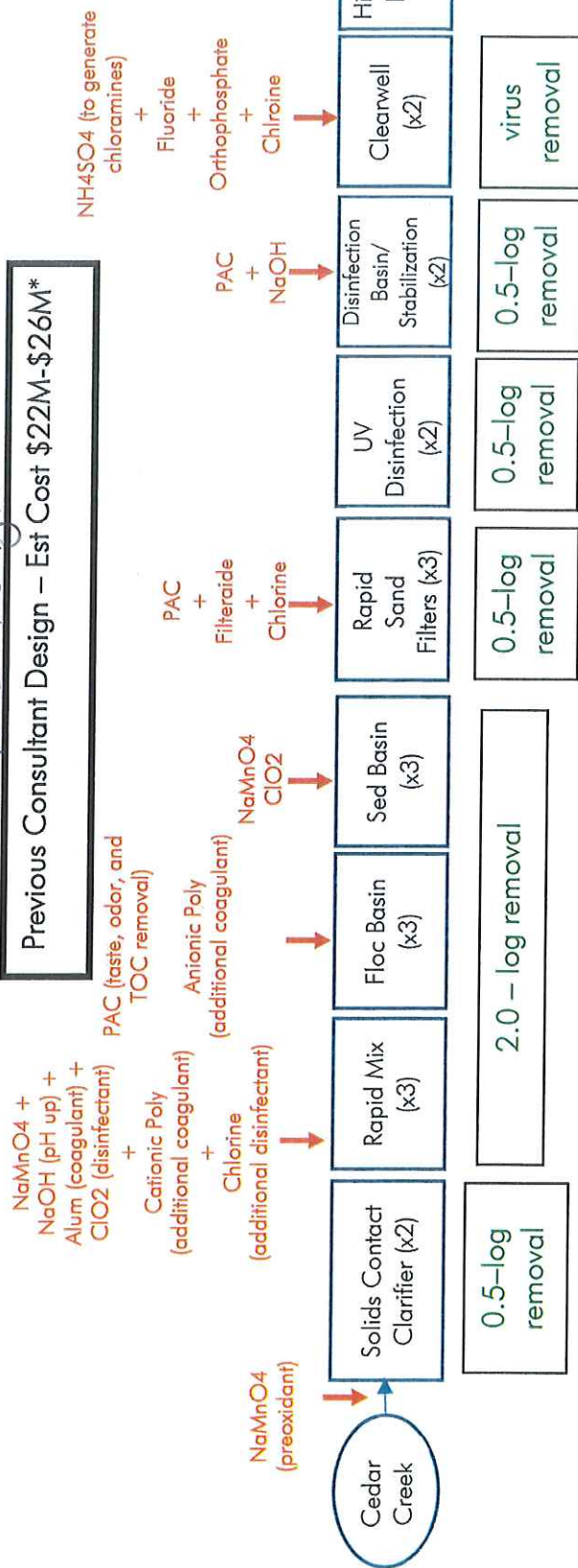
Meeting Agenda
May 3, 2023, 12:00pm

Purpose of Meeting: To discuss the Garnett Water Treatment Facility design and need for the City to implement an operationally efficient and cost-effective water treatment solution which meets current and anticipated future regulatory compliance requirements.

1. Project Success Factors for City of Garnett
 - a. *Familiarity with Process and Ease of Operations*
 - b. *Cost effective design and O&M to minimize impacts to user rates*
2. Water Quality Challenges
 - a. *Manganese*
 - i. *Hardness, although raw water quality levels are not significantly high*
 - b. *4-Log Removal Requirements*
 - c. *Disinfection By-Products (past exceedances)*
3. City Concerns with Water Treatment Facility Design
 - a. Not happy with complexity or layout of proposed design
 - b. Operationally challenging with many (13) chemical feeds
4. Review of Potential Treatment Options & Estimates of Construction Cost
 - a. PEC Proposed Design
 - b. Garnett Staff Identified Design Option
 - c. Potential Treatment Option
 - d. Others
5. Project Schedule
 - a. 4-Log Compliance Schedule – 06/18/2025
6. Plan for Regulatory Compliance & Contaminants of Emerging Concern
 - a. *Cryptosporidium*
 - b. Nitrate?
 - c. Turbidity?
 - d. DBP's?
 - e. PFOS/PFAS/PFOA & Other CEC's?
 - f. *Bromine*
7. Project Financing Strategy
 - a. USDA Water & Waste Disposal Loan and Grant Program - Letter of Conditions
 - b. SRF?
 - c. Others (TIF, Revenue Bonds, Grant Programs)
8. Other Discussion Items?
 - a. *Spillway Project Discussion*
 - b. *Inflow & Infiltration Study*
 - c. *Other?*

PEC Design

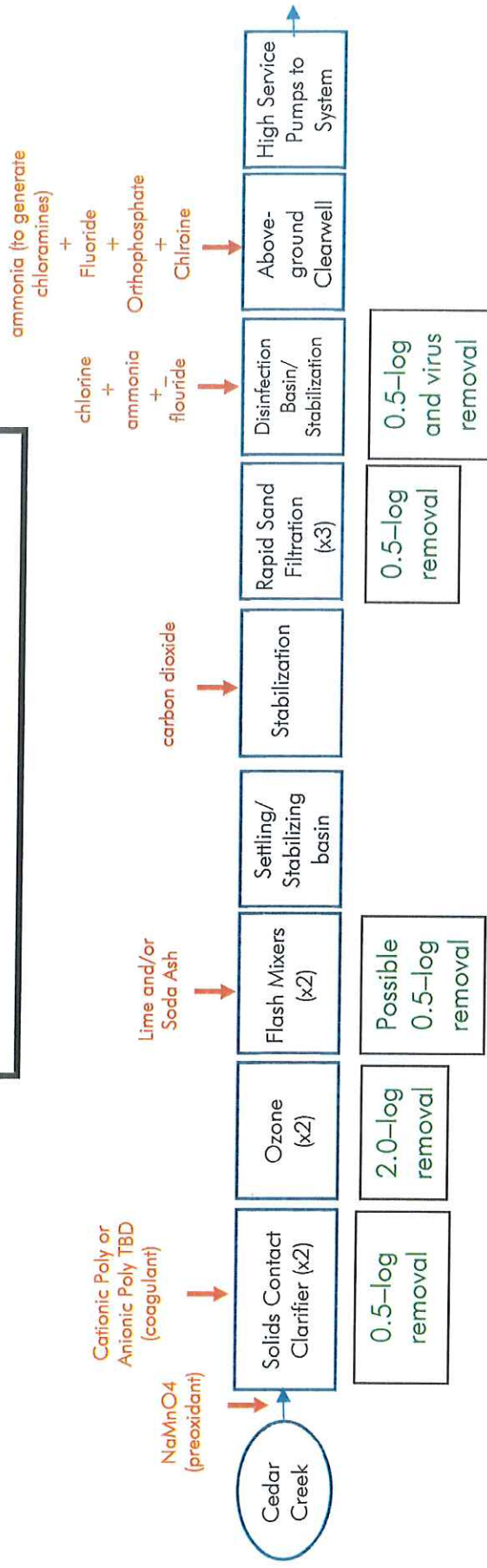
Previous Consultant Design – Est Cost \$22M-\$26M*



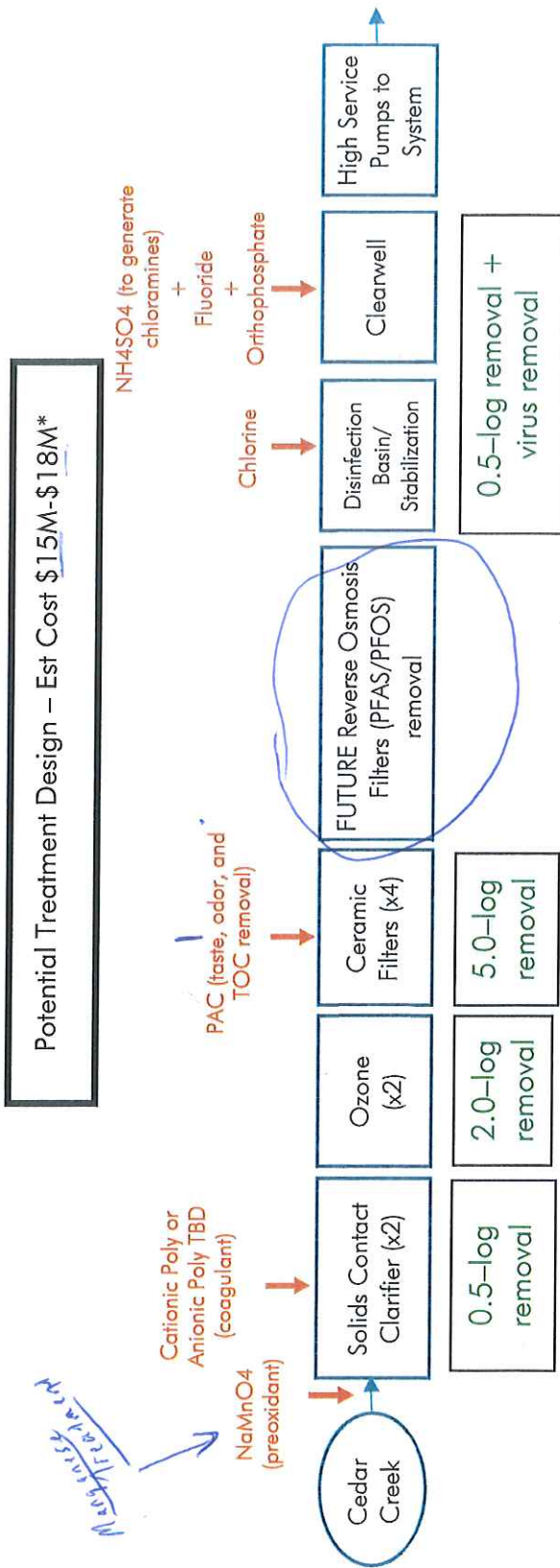
*Estimates completed in present day (2023) values.

4/25/2023

Garnett Staff Proposed Design – Est Cost \$17M-\$21M*



*Estimates completed in present day (2023) values.



EPA

L12 Toolbox manual

Direct Integrity

40 CFR 141.700

Meet the deflection of membranes

direct integrity testing

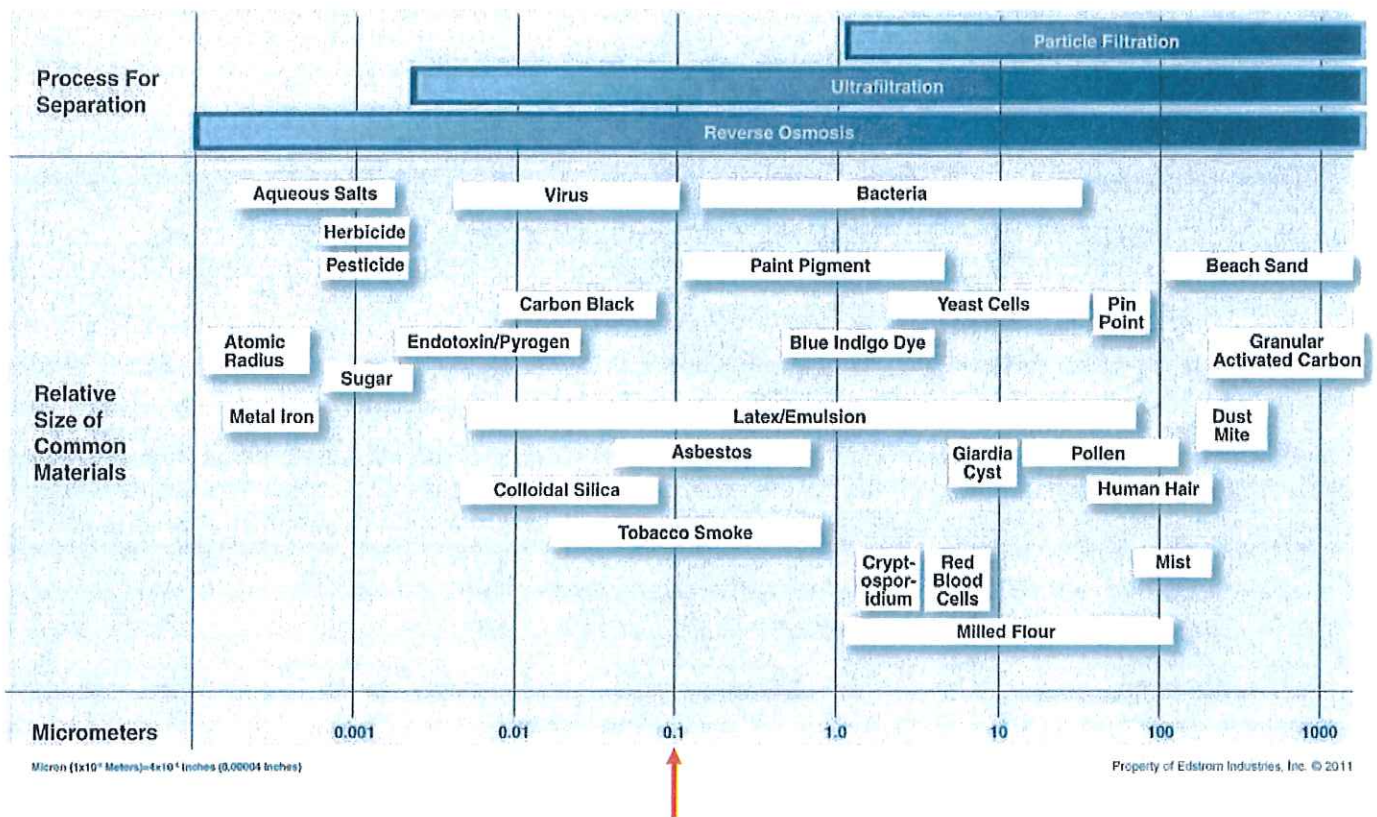
*Estimates completed in present day (2023) values.

4/25/2023

CERAFILTEC TECHNOLOGY CLASSIFICATION

Ultra filtration technologies with a pore size of 0.1 μm are commonly understood as filtration solution to remove suspended solids such as clay and silt, pollen, algae, precipitated metal oxides as well as fractions of colloids. They are also a physical barrier for germs and bacteria and are classified as disinfection solution with typical log removal value (LRV) above 5.

Water Purification Spectrum



WATER PROJECT EXPERIENCE

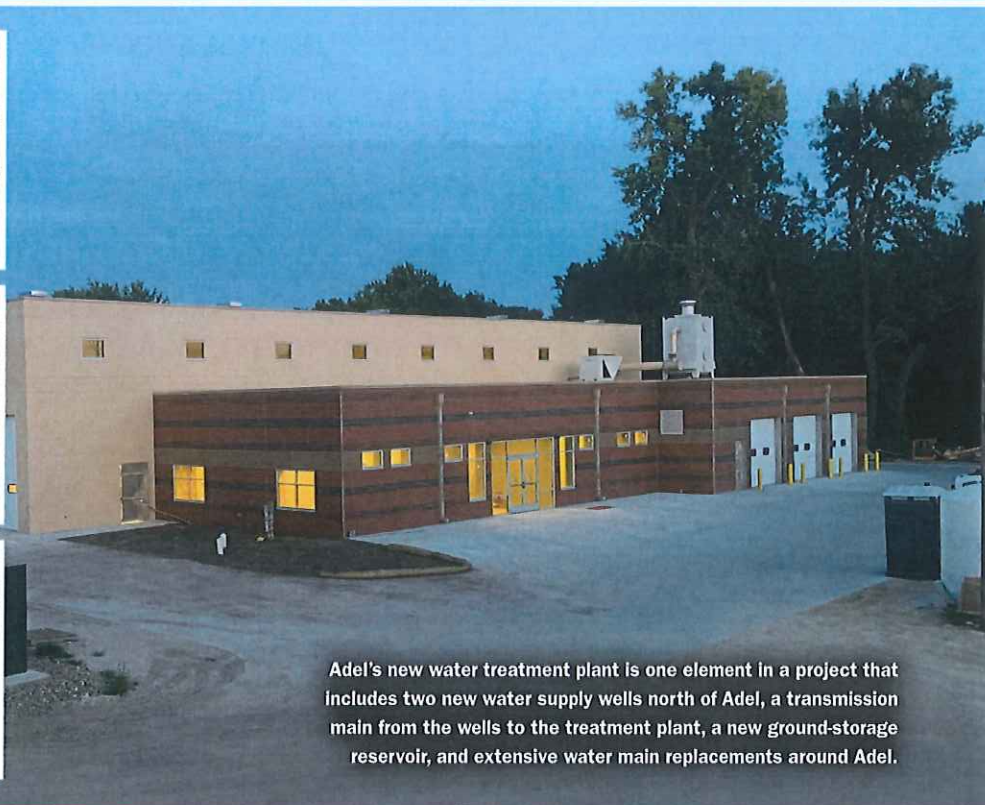
WATER TREATMENT PLANTS

| PROJECT | YEAR | COST (M) | BASIC SERVICES | | | | | OTHER SERVICES | | | | | | | | | | |
|---|----------|----------|--------------------|------------------------|----------------------------|----------------------|--------------------|----------------|------------------|----------------|---------------------|---------------------------------|--------------|--------------------------|-----------------|--------------------------|-----------------|---------------|
| | | | Design Development | Construction Documents | Cost Estimates/Projections | Bidding/Negotiations | Construction Phase | Pre-Design | Record Documents | Warranty Phase | Construction Survey | Resident Project Representation | Legal Survey | Soil Boring Coordination | Erosion Control | Loan Application & Admin | Cost of Service | Rate Analysis |
| Des Moines Water Works | On-Going | 0.8 | • | • | • | • | • | • | • | | • | | | | | | | |
| Princeton, Missouri | On-Going | 1.7 | • | • | • | • | • | • | • | | • | • | | | | • | | • |
| Howard County Regional Water Commission, New Franklin, Missouri | On-Going | 2.0 | • | • | • | • | • | • | • | • | • | | | | | | | |
| Higginsville, Missouri | On-Going | 15.0 | • | | • | | | • | | | | | | | | | | • |
| Schaller, Iowa | On-Going | 4.9 | • | • | • | • | | • | • | • | • | • | • | • | • | • | | • |
| Grinnell, Iowa | On-Going | 30.0 | • | • | • | • | | • | • | • | • | • | • | • | • | • | • | • |
| Hinton, Iowa | On-Going | 7.0 | • | | • | | | • | | | | | | | | | | |
| Le Mars, Iowa | On-Going | 16.5 | • | • | • | • | | • | • | • | • | • | • | • | • | • | | • |
| Remsen, Iowa | On-Going | 6.8 | • | • | • | • | • | • | • | • | • | • | | | | | | |
| Memphis, Missouri | On-Going | 3.4 | • | • | • | • | • | • | • | • | • | • | | • | | • | | |
| Westfield, Iowa | On-Going | 1.2 | • | • | • | • | • | • | • | • | • | • | | • | | • | | |
| Fort Dodge, Iowa | 2021 | 22.5 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | |
| Grimes, Iowa | 2021 | 20.6 | | | | • | • | | • | | • | • | | | | | | |
| Adel, Iowa | 2021 | 13.3 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | • |
| Harlan, Iowa | 2021 | 0.3 | • | • | • | • | • | • | • | • | • | • | | | | | | |
| Blairsburg, Iowa | 2020 | 1.0 | • | • | • | • | • | • | • | | • | • | • | • | • | | | • |
| Wholesale PWSD #23, Fredonia, Kansas | 2020 | 23.0 | • | • | • | • | | • | | • | | | • | | | | | |
| Marshall, Missouri | 2020 | 6.0 | • | • | • | • | • | • | • | • | • | | • | | | | | |
| Worth County, Iowa | 2017 | 1.1 | • | • | • | • | • | • | • | | • | • | • | • | • | | | • |
| Rathbun Regional Water, Centerville, Iowa (Existing Plant Rehabilitation) | 2016 | 1.5 | • | • | • | | | • | • | | | | | | | | | |
| Fonda, Iowa | 2016 | 0.8 | • | • | • | • | • | • | • | • | • | • | | | | • | | |
| Fort Dodge, Iowa (Existing Plant Rehabilitation) | 2014 | 4.0 | • | • | • | • | • | • | • | | • | • | | • | • | • | • | • |
| Rathbun Regional Water, Centerville, Iowa (New Plant) | 2013 | 18.5 | • | • | • | • | • | • | • | | • | • | • | • | • | | | |
| Central Water Systems, Okoboji, Iowa | 2013 | 12.0 | • | • | • | • | • | • | • | | • | • | | • | • | • | • | • |
| Tama, Iowa | 2010 | 1.1 | • | • | • | • | • | • | • | | • | • | | • | • | | | |
| Renwick, Iowa | 2010 | 1.0 | • | • | • | • | • | • | • | | • | • | • | • | • | | | |
| Central Iowa Water, Waverly, Iowa | 2009 | 7.0 | • | • | • | • | • | • | • | • | • | • | | • | • | | | |

Finished Water

A PHOTOGRAPHIC PROFILE

<https://doi.org/10.1002/opfl.1611>



Adel's new water treatment plant is one element in a project that includes two new water supply wells north of Adel, a transmission main from the wells to the treatment plant, a new ground-storage reservoir, and extensive water main replacements around Adel.

ADEL, IOWA, CELEBRATES NEW WATER TREATMENT PLANT

The City of Adel, Iowa, held a ribbon-cutting ceremony and open house on Oct. 14, 2021, to celebrate its new water treatment plant. Due to high-quality schools, amenities, and proximity to the Des Moines metro area, the city has experienced significant population growth. From 2010 to 2020, the city grew nearly 70%, straining its water system's capacity.

To address existing system needs and plan for continued community growth, the city partnered with McClure Engineering Company to complete a water system master plan. Through the master plan study, multiple water treatment techniques were evaluated. Reverse osmosis (RO) membrane treatment was selected because of its modular design, ability to remove multiple contaminants, and life-cycle cost.

Following a successful RO pilot study, design, permitting, and securement of project financing began in late 2017. The facility was bid in spring 2019. The project broke ground that summer, and the plant was operational in March 2021. The new treatment process includes aeration, detention, filtration, RO softening, post-aeration, and chemical addition.

Designed for future growth, the treatment plant's initial capacity is 1.2 mgd. However, capacity can be easily expanded within the existing building footprint by installing additional vertical pressure filters and RO vessels. Full build-out capacity of the new treatment facility is 2.4 mgd. Along with other project elements, including source, storage, and distribution system improvements, the city's recent water utility investments total \$25 million.

PROJECT SPECIFICS

Project Name: New Adel Water Treatment Plant

Operator: Adel Municipal Water Works

Contractor: John T. Jones Construction

Engineer: McClure Engineering

Water Source: Alluvial wells

Technology: Conventional iron and manganese removal followed by RO

Project Cost: \$13.5 million

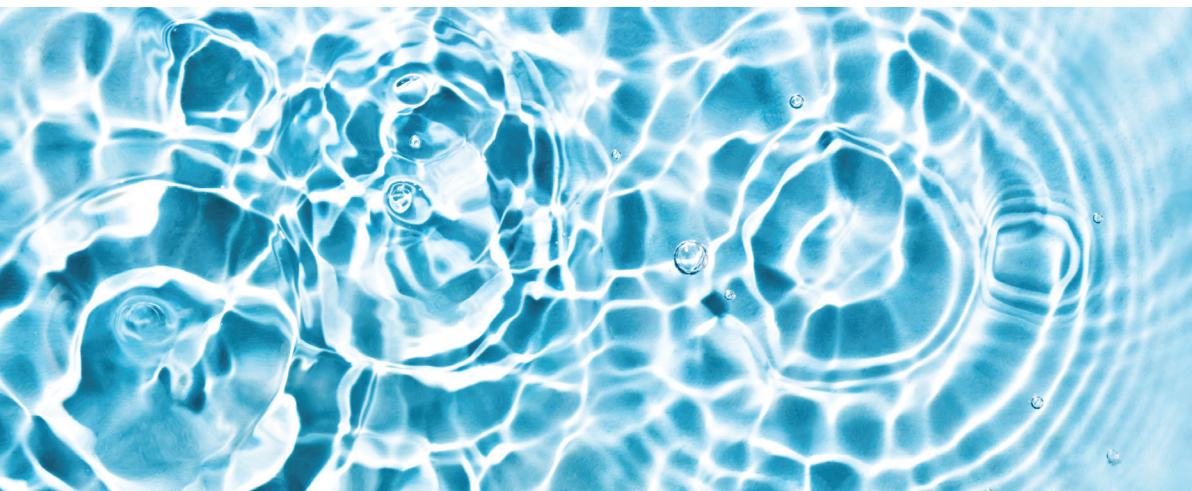
Service: 2.4 mgd

Physical Size: 15,800 ft², five 12-ft.-diameter pressure filters, two RO trains (each rated for 500-gpm permeate flow)

Number of Operators: 3

Special Features: Ability to double water production easily within same footprint with additional pressure filters and a third RO treatment skid. Filters designed for biological manganese removal.

PHOTOGRAPHS: CITY OF ADEL, IOWA



PROPOSAL

1.2 MGD Surface Water Treatment Plant

City of Garnett, Kansas

MAY 22, 2023

CDM
Smith



8080 Ward Parkway, Suite 100
Kansas City, MO 64114
tel: 816-444-8270

May 22, 2023

James DePriest, Public Works Director
City of Garnett
131 W 5th Ave.
Garnett, KS 66032

Subject: CDM Smith Proposal: Approach, Schematic Design, Log Removal KDHE, and
Project Team for New 1.2 MGD Surface Water Treatment Plant

Dear Mr. DePriest:

CDM Smith is pleased to present our qualifications and approach on how we propose to meet the needs of the City of Garnett (City), its Commissioners, and its citizens for a new 1.2 MGD Water Treatment Plant (WTP). Our team has been strategically selected from a deep bench of seasoned professionals, each of whom have experience in key elements of this important project, including Kansas WTP design, WTP permitting, project funding, constructability, cost estimates, equipment selection, procurement challenges, project scheduling, and emerging technologies. We are committed to immediately addressing all KDHE concerns and delivering an engineering report so that accurate cost information for the WTP can be identified to meet your budget.

As your Principal-in-Charge, I will serve as your primary contact and remain actively engaged throughout the entirety of the project. Our project manager, John Brummer, P.E., located in our Kansas City office, has more than 30 years of experience in water projects and has designed several Kansas WTPs. Our commitment to the City is to fast track this engineering report phase as fast as it can be completed. We not only have the expertise required to successfully execute this project, but have a strong bench of internal resources to meet and exceed the City's needs.

The CDM Smith team is ready and willing to meet with City staff and answer any questions. We are prepared to immediately present to the City our standard agreement for these engineering report phase services so we can get started. The City's vision of a new affordable WTP that can meet all regulations for its citizens can be engineered with CDM Smith. We propose five months from notice-to-proceed to complete our review and present the Final Engineering Report. We look forward to the opportunity to partner with the City and develop a new WTP that brings long-lasting value to the City of Garnett, Kansas.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Griffin".

Mark Griffin, PE*
Principal-in-Charge
CDM Smith Inc.

*CA, MO



Table of Contents

Overview of CDM Smith.....1

Relevant Experience 4

Background and Approach 8

Project Team Resumes

Overview of CDM Smith

CDM Smith provides lasting and integrated solutions in water, environment, transportation, energy, and facilitate both public and private clients worldwide. As a full-service engineering and construction firm, we are able deliver exceptional client service, quality results and enduring value across the entire project lifecycle.

Our client base focuses on government, business and industry. The firm is distinguished by our leadership and flexibility in design-build and alternative delivery approaches for environmental and infrastructure projects.

CDM Smith earns more than \$1B in annual revenues and this level of success could not be achieved without the cooperation and commitment of our 5,700 employees across 130 offices worldwide. This reach and depth provides CDM Smith with the size, stability, resources, and local familiarity necessary to successfully undertake a diverse range of projects.

As a result, we offer a complete portfolio of services that includes architectural and engineering design, environmental management and planning, program management, asset management, and construction. Projects range from small, short-term solutions to complex, ongoing environmental and infrastructure management programs, with a common focus: Deliver exceptional client service while building long-term relationships based on quality work and demonstrated follow-through.



providing lasting and integrated solutions in water, environment, transportation, energy and facilities since

1

9

4

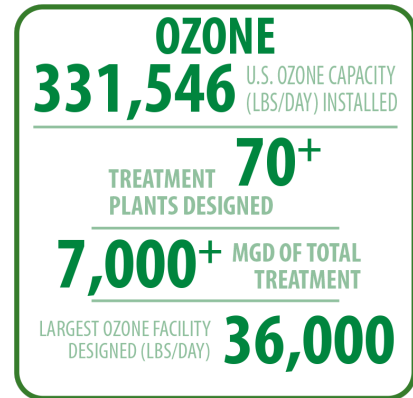
7

| | | |
|--|---|--|
| <p>Celebrating over 75 years of innovative solutions</p> | <p>Drawing on the expertise of 5,500 employees</p>  | <p>Improving lives from 130 offices worldwide</p>  |
| <p>EMPLOYEE-OWNED FIRM. based in Boston, MA</p>  | <p>SAFETY-FIRST culture focused on continuous improvement with TRIR of 0.23</p>  |  <p>All engineering and construction services under ONE roof</p>  |
| <p>Fully integrated construction division with 500 staff.</p> | | <p>ONE firm providing lasting and integrated solutions</p>  |
|  | <p>\$1.3 Billion in annual revenue</p>   | <p>EIGHT full-service Global Resource Centers</p>   |

As one of the largest privately-held consulting engineering firms in the nation, CDM Smith offers the experience of 75 years of lessons learned—ranging from the planning and study of water, wastewater, and stormwater systems to the design and engineering of these systems—as well as construction services through our in-house construction company, CDM Constructors Inc.

Water Services & Treatment

While CDM Smith provides a full range of services, our foundation and core service is water. We provide the complete spectrum of solutions in water management, infrastructure rehabilitation, and water treatment processes. By working closely with each client, CDM Smith is able to design facilities that meet complex drinking water needs, and craft integrated water resource management strategies to help multiple stakeholders make the most of limited resources. ***Nationally, CDM Smith has designed and implemented more ozone treatment capacity than any consultant in the United States.***



Furthermore, our drinking water treatment consulting services range from pilot plant studies and specialized consultation to large complex projects requiring design, services during construction, startup/operations assistance and operator training. We have been instrumental in the innovation, development, and implementation of many “industry firsts” that include: rapid-rate filtration, air-water backwash, porous underdrains and laminar flow sedimentation.

These advancements are tied to the firm’s commitment to research and development. By pioneering tomorrow’s technologies, we have touched nearly every aspect of water quality investigations, treatment technologies, and approaches to treatment plant design. This proven expertise allows us to guide our clients through the maze of conflicting and everchanging regulations with confidence.

Water Resources & Regulations

CDM Smith’s reputation for excellence in the field of engineering water resources has been earned in great part by our knowledge and understanding of the regulatory environment. Recent projects completed have expanded our team’s technical expertise in meeting the stringent requirements of the 1996 Safe Drinking Water Act (SDWA) Amendments and increasing demands on aging facilities, as well as assuring upcoming regulatory compliance with the Stage 2 Disinfectants/Disinfection Byproduct Rule (DBPR) and the Long-Term 2 Enhanced Surface Water Treatment Rule.

CDM Smith offers unsurpassed insight and guidance gained from the study and design of hundreds of similar surface water treatment plants throughout the United States and will continue to leverage those lessons learned to efficiently deliver this project for the City.

Evaluation & Treatment of PFAS Contamination in Water

Companies and municipalities face increasing challenges with per- and polyfluoroalkyl substances (PFAS) in drinking water, surface water, groundwater, biosolids, and other waste streams. CDM Smith draws on our technical knowledge, experience, and innovation to assist clients with identifying and building high performance and cost-effective groundwater and surface water treatment systems to manage PFAS.

Clients benefit from our broad range of services to address PFAS water treatment projects effectively, from initial concept development, through design, construction, and commissioning. We integrate our local design and process engineering capabilities with our global experience from over 75 years of cutting-edge of water/wastewater treatment engineering and construction projects to help meet treatment objectives.

At CDM Smith, we understand the challenges of managing PFAS issues for state, federal, municipal, and private industrial clients. While uncertainties associated with toxicity, treatment technologies, and risk communications exist, CDM Smith is at the forefront of this emerging issue.

Clients have access to CDM Smith's internal laboratory facilities with the necessary equipment and experienced staff to complete treatability studies and advanced Research and Development (R&D) activities, including evaluating and developing PFAS treatment technologies. We can build pilot treatment plants to meet your exact needs at our fabrication facility or through our trusted network of subcontractors.

Industry-leading PFAS Experience



280+
PFAS projects
worldwide



50+
research and
development
projects

210+

PFAS projects
in the U.S.



70+

international
PFAS projects



260+ PFAS
investigation
and treatment
sites



FIRST global
PFAS drinking
water treatment
system using
reverse osmosis—designed
and built by CDM Smith

LARGEST municipal PFAS groundwater
treatment project in the country—designed
and built by CDM Smith for the City of
Anaheim, California

Relevant Experience

Development of Testing and Commissioning Plans for Northwest Water Facility | City of Wichita, Kansas

The City of Wichita is constructing a new water filtration facility known as the Northwest Water Facility. The City entered into a Phase 2 Design-Build agreement with a joint venture known as Wichita Water Partners (WWP) to complete the design and construction of the NWWF Project. WWP has an ongoing process of further developing the project P&ID sheets, design documents and other documents from what was included at the time of entering into that agreement. P&ID and other information will be made available to interested potential proposers subject to a non-disclosure agreement.

The City selected CDM Smith to consult on the development of an acceptable intensive testing and commissioning plan which the City can use in discussions with WWP. This testing and commissioning plan will include aspects of the mechanical testing of all assets, functionality testing of all systems, and acceptance testing to ensure the project work meets all requirements and further City expectations.

CDM Smith's approach to assist the City with the testing and commissioning activities consists of five major tasks: 1) Establish commissioning and testing principles; 2) Prepare commissioning and testing planning memorandum; 3) Prepare commissioning plan; 4) Prepare performance testing plan; 5) Provide project management and quality assurance.



Alternatives Evaluation for the Skowhegan Water Treatment Plant | Skowhegan, Maine

Maine Water Company (MWC) supplies drinking water to customers in Skowhegan, the county seat of Somerset County. MWC's Skowhega WTP is a 1-mgd surface water treatment facility that supplies water to a distribution system featuring some 2,400 service connections in the town of Skowhegan, ME. The original filtration facility was constructed in 1938, with an addition built in 1994 to meet the Surface Water Treatment Rule.

Recent improvements to the Kennebec River Intake and to the Upper Dam outlet structure were completed by others in 2021. However, a report and capital plan authored by others did not include specific recommendations to address WTP deficiencies such as aging electrical power distribution systems, the lack of standby power, non-redundant unit processes such as filter wash water supply, structures approaching 90 years old, treatment process vulnerability to source water quality upsets, future regulatory considerations, and other matters requiring proactive planning.

With the goal of providing reliable, safe drinking water to the Skowhegan community for the long term, CDM Smith was retained by MWC to review the options of making selected improvements to the existing plant versus construction of a new plant on the existing site. CDM Smith's work is intended to provide a professional engineering review of the issues, aid MWC in its capital planning, and recommend a long-term vision for the Skowhegan WTP.



Merrimack River Pumping and Treatment Facilities | Manchester, New Hampshire

Manchester Water Works (MWW) provides drinking water to the City of Manchester, as well as portions of Auburn, Bedford, Derry, Goffstown, Hooksett, and Londonderry, NH, serving approximately 160,000 customers.

MWW's existing conventional Lake Massabesic WTP has an average daily flow of 17 million mgd and the capacity to operate up to 50 mgd. The Lake Massabesic plant was last upgraded per a CDM Smith modernization design in 2006. While operations at the Lake Massabesic WTP have been reliable in service and excellent in quality, MWW's average daily demand is approaching the estimated safe yield (20.5 mgd) of Lake Massabesic. As such, an additional water supply – the Merrimack River - will be needed to meet future demands. MWW turned to CDM Smith to plan and design the new facilities.

Project Background

In 2001, MWW retained CDM Smith (then CDM) to author the *Water Treatment Plant Performance Evaluation and Capital Improvement Plan* project to establish the basis for how the Lake Massabesic WTP should be upgraded as well as determine where MWW's source of additional drinking water supply for the next 20 to 50 years would come from. In that report, the Merrimack River was identified as the most viable future source of drinking water. MWW installed a radial collector well and riverbank filtration, to form the cornerstone of the new plant.

Project Specifics

In June 2018, CDM Smith kicked off the project and began collaborating with MWW evaluating treatment process options. Multiple goal-setting and process selection workshops were conducted. Before proceeding with the design, construction, and commissioning of a new, 7.2 mgd Merrimack River pumping and treatment facilities, MWW retained CDM Smith to develop the Preliminary Design Report.

The 20,000-square-foot facility features automated pumping and treatment facilities, greensand filtration, granular activated carbon (GAC) contactors, ultraviolet (UV) disinfection, a clearwell, and various chemical systems including chloramination, with an estimated construction value of \$33 million. Construction began in spring 2021, with project completion anticipated in spring 2023.



Renderings of the new Merrimack River Pumping and Treatment Facilities, for which construction work in Spring 2021 and is scheduled for completion in 2023.

Additional Experience

The following table provides a snapshot summary of the breadth and depth of CDM Smith's relevant water treatment plant experience.

| Plant / Client / Location | | Northwater Treatment Plant Denver Water (Denver, CO) | Ullrich WTP Austin Water (Austin, TX) | McCarrons WTP St. Paul Regional Water Services (St. Paul, MN) | Dublin Road WTP City of Columbus (Columbus, OH) | Elm Fork WTP Dallas Water Utilities (Dallas, TX) | Rinconada WTP Valley Water (Los Gatos, CA) | Delta Water Supply Project WTP Stockton Municipal Utilities Dept. (Lodi, CA) | Haworth WTP Suez Water NJ (Heworth, NJ) | Toit Filtration Plant Seattle Public Utilities (Seattle, WA) | Fernley Groundwater & Surface Water Plant City of Fernley (Fernley, NV) | Delta-Brentwood WTP Contra Costa Water District (Oakley, CA) | Paul M. Neal WTP Central Lake County Joint Action Water Authority (Lake Bluff, IL) | Springwells WTP Great Lakes Water Authority (Detroit, MI) | Rock Island WTP City of Rock Island (Rock Island, IL) |
|--|---|---|--|--|--|---|---|---|--|---|--|---|---|--|--|
| Capacity (mgd) | | 70 | 160 | 144 | 80 | 330 | 80/105 | 30 | 188 | 120 | 20 | 15 | 25/50 | 540 | 15 |
| Delivery Method* / CDM Smith Role | CMAR / Owner's Rep | ▲ | | | | | | | | | | | | | |
| | DBB / Design Consultant | | ▲ | ▲ | ▲ | ▲ | ▲ | | | | ▲ | ▲ | ▲ | ▲ | ▲ |
| | DBOM / Lead Designer | | | | | | | | | ▲ | | | | | |
| | PDB / Integrated Design-Builder | | | | | | | ▲ | ▲ | | | | | | |
| Services for Design & Construction of a Water Treatment Facility | Overseeing Design / Subconsultants | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Design | | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Engineering Services During Construction / Construction Mgmt. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Permitting | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Commissioning | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Optimization | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Training | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | ▲ | ▲ |
| | Programming | | | | | | | ▲ | | | ▲ | ▲ | | | |
| Development of Commissioning/ Testing Plan | Commissioning Plan / Specifications | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Performance / Acceptance Testing Plan | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Commissioning/ Testing Plan | Development | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Implementation | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Oversight | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Designed and/or Built by CDM Smith | Disinfection | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Solids Contractors / Lime Softening | | ▲ | ▲ | ▲ | ▲ | | | | | | | | | |
| | Coagulation/Clarification | ▲ | | | | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | |
| | Filtration | ▲ | ▲ | | ▲ | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| | Lime Slaking System | | ▲ | ▲ | ▲ | ▲ | | | | ▲ | | | | | |
| | Pumping | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ |
| | Recarbonation | | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | | | | |
| | Storage | ▲ | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ |

*Delivery Methods:

CMAR

Construction Manager at Risk

DBB

Design-Bid-Build

DBOM

Design-Build-Operate-Maintain

PDB

Progressive Design-Build

Background

The City of Garnett needs a new surface water treatment plant (WTP) to replace its aging WTP to increase capacity from 1.0 million gallons per day to 1.5 MGD. The WTP treats raw water released from the Cedar Valley Reservoir to the raw water river intake located about 1-mile downstream from the reservoir outlet structure. This source is the sole source of supply used for treatment to meet drinking water standards. Among the treatment goals are pH adjustment using lime, seasonal taste and odor using PAC, turbidity and color removal, and toolbox of treatment for removal of items like giardia, viruses, and cryptosporidium. The existing WTP was recently placed in Bin 2 by the Kansas Department of Health and Environment (KDHE) for elevated presence of cryptosporidium. The City needs to get an additional 1 log WTP credit for inactivation for cryptosporidium above what the current WTP achieves. The new WTP will need to be designed to ensure 4 log removal and meet all KDHE requirements to obtain approval for construction. The existing WTP has been ruled out as an option for rehabilitation due to age, condition and other factors.

The City has been preapproved by the USDA for a low interest loan in the amount of \$14 Million. A new site has been chosen to build the new WTP west of the existing WTP near Crystal Lake at the adjacent Park. Our understanding is all land acquisition processes have all been fully completed and the City has clear title to all property needed to meet loan financing requirements with no additional work required. The new WTP shall be constructed and commissioned so that when it placed into service it does not interrupt the drinking water supply to its citizens.

The primary items the new WTP will need to be able to treat include Manganese (Mn), taste and odors, cryptosporidium, atrazine and other chemical runoff, blue green algae, and other more traditional requirements at a minimum of 4-log removal. The new WTP will be capable of being modified in the future should emerging contaminants like PFAS show up. Mn has occasionally shown in the raw water, which is suspected of coming from lower zones of the Cedar Valley Reservoir. This is based on the data supporting the Mn problem going away once the sluice lake bypass valve was repaired, thus all water would come from the top of the water strata over the normal overflow weir then flow downstream to the raw water intake. Overall raw water data is needed for a more thorough review on team analysis.

Approach

Timing is critical as KDHE has recently granted the City a 90 day extension to come up with a plan to meet the additional 1-log of treatment removal that must be addressed by June 20, 2023. Our approach will be to narrow down a minimum of two viable options. We will have a work session with City staff to review, collaborate, and confirm the chosen alternatives to meet 4-log requirements and submit for City to submit to KDHE for approval. We have prepared two of those alternatives which we believe both are viable. One is very similar to preferred schematic design of the City. The other was developed and represents an alternative that is likely more cost effective. We have not included any scope of work that may be needed to identify possible short-term modifications to the existing WTP to see if any minor changes in treatment can be completed to add additional log removal thus avoiding possible unwanted KDHE requirements.

The key part of this initial phase of the new WTP project is to create a new Design Engineering Report to identify all necessary design requirements for the new WTP as fast as possible. We have obtained a team of highly qualified staff that understand the urgency and are committed to turn this preliminary design engineering report around ASAP. We are willing to use existing data prepared by the previous WTP design engineering consultant, on the caveat it is accurate and the City authorizes it can be used. This will save some costs and time.

Our detailed scope of work will include a review of the existing raw water intake and pumping. We will review hydraulics and recommend new pumps or pump curves to supply optimum efficiency to the new WTP. A new generator is needed to be located out of the floodway with associated electrical transfer equipment, and telemetry included in the cost analysis.

Raw water data is needed to complete our analysis. Our assumption is that all necessary raw water data is available. More data is likely to be needed such as Bromide, PFAS, TOC, and other data our water team will want to review. We will prepare a data request to obtain all available water quality data. Until we see all the water quality data, we do not know our options and what is useable.

Our team has already reviewed multiple options using our teams experience and knowledge from several previous WTP's. Of particular interest is the fact that our project manager John Brummer has local knowledge of the Densedeg, and schematic process preferred by the City having designed a WTP using source water from the Marais Des Cygnes River. Our review will include collaborative discussion with the City to share our knowledge on the pros and cons of all processes. Our schematic will show all necessary chemicals required, where to be fed and reasons why needed. The processes will be fully vetted and number and sizes of various clarifiers, filters, rates, clear well sizes, and flows determined. Work includes completing a detailed capital cost for the schematic design and the annual operating costs. The CDM Smith team has a complete construction division as we construct WTP's all over. We use their expertise to prepare accurate cost estimates with full knowledge of supply chain issues and other factors that can create delays.

A second alternative schematic is presented which will also be priced out like the City's preferred option. These two options will be presented in Preliminary Engineering Report and vetted during a review meeting with the City. This is where the costs will be presented and solid concepts on what the new WTP has allows the development of much more accurate construction cost estimates and schedule development. Other key items will come out of that meeting will possibly need to further refine things like anticipated laboratory size, administration building offices, meeting room, operator control room, bathrooms, high service pump, etc.

We understand the history the City has with previous cost estimates being constantly increased that eventually helped contribute to the down fall of the previous WTP design. We recommend caution on any early construction cost estimates this early in the process with no engineering report. The engineering report phase is when the cost, schedule, processes, and alternatives come together to paint an accurate picture of the WTP will be all about. When the final design is agreed, we have a team experienced to help sort out financing alternatives. This is where a decision can be more readily made on how to best move forward with Engineering Design Report.

The final deliverable in the Design Engineering Report. All aspects of the WTP design are now defined at the defined maximum, average, and minimum flow rates. A capital cost estimate of the

various schematics is presented along with operational costs. Schematics of chemical feeds, treatment redundancy, 4-log removal, hydraulics for finished and raw water, electrical redundancy, processes and necessary by passes, all needed to meet long-term risk and resiliency. Financing alternatives are defined to meet anticipated construction cost estimates for future detailed engineering design and construction costs. All items identified for further analysis will be defined. Our scope of work is not anticipating a pilot plant will be required as both initial schematic designs are not deemed as new technology and have proven successful implementation.

A recommendation will be presented to City Commissioners with the Design Engineering Report. Included in our recommendation will be enough information to allow the City to see the site layout of the proposed new WTP at an approximate 10% design completion. This is considered sufficient information to now identify an accurate scope of work needed to proceed to the design phase. The initial assumption is the project will proceed as traditional design-build-build. Alternative project delivery methods such as Design Build (DB) where the City hires a single team to do both design and construction as one team. Another option is called Construction Manager @ Risk (CMR), where a guaranteed maximum cost is agreed based on the preliminary design. The City hires the Engineer directly and also hires and contractor directly. KDHE requires an Owners Engineering Representative to ensure the City's has expertise. In all cases these teams work collaboratively, and ideas and suggestions are vetted in detail and risks described to understand potential cost saving ideas. These later two alternatives traditionally save costs and time and should not be ruled out, even with some unfamiliarity with them. In all cases a new agreement would be negotiated as the engineer now knows exactly what is needed to for the new WTP to be designed.

We understand your team has previous experience using ozone as the technology for complying with KDHE's requirements specifically for advanced treatment for cryptosporidium inactivation.

CDM Smith has experience with designing surface water treatment plants similar to Garnett. Our project manager, John Brummer has designed many plants in southwest Kansas similar in size and treatment scheme to that of Garnett's. He and recently assisted a plant in demonstrating to KDHE that Bin 2 requirement to inactivate cryptosporidium with ozone was satisfied.

To keep within the approximately \$14 million budget, we utilize our construction arm CCI for cost estimating. They have a long history of preparing accurate cost estimates and are in tune with the current construction climate. This allows us to check on the anticipated construction cost throughout the project design to stay within budget and eliminate surprises at bid time. We believe that the project can be designed within your budget but may need to employ some cost saving measures.

Some cost saving and value-added measures we have used in the past and identified for your case include:

- Common wall construction
- Combining presedimentation and softening into one step
- Combining the stabilization basin and ozone contact basin into one structure

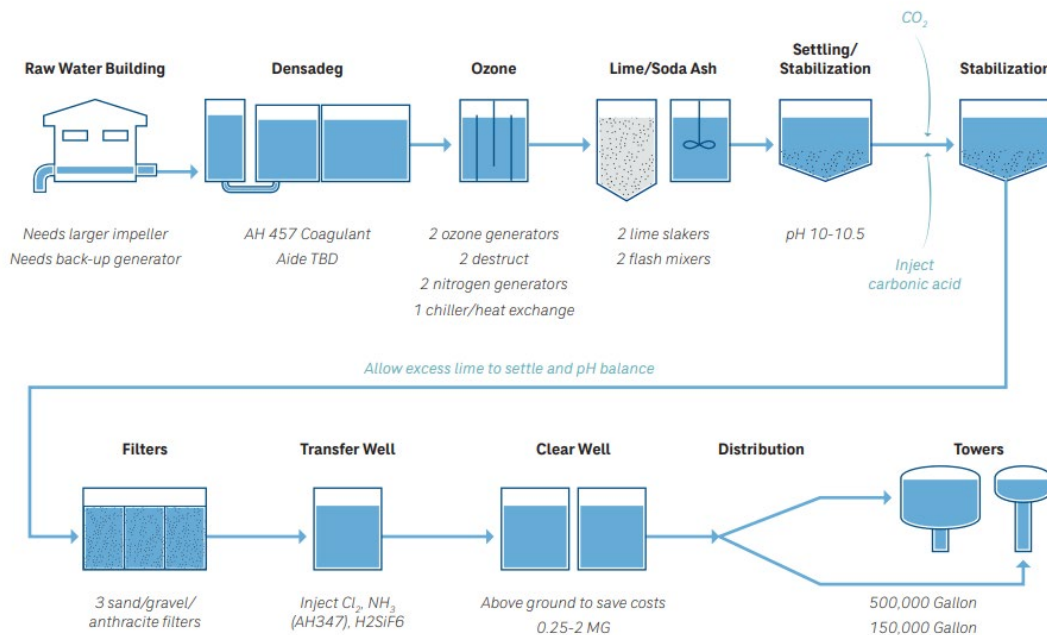
- Confirm reusing elements of the existing plant like the clearwell and HS Pumps are not viable.

Treatment Train Options

The schematic below illustrates the City's preferred proposed treatment process for the new plant. This is a good layout and allows you to get an additional 0.5 log credit for cryptosporidium inactivation credit for presedimentation, unless a breakthrough of turbidity occurs, and 0.5 log additional credit for 2-stage softening. Adding ozone also achieves additional credit should you get placed in a higher bin in the future. With the City's plant getting 3.0 log cryptosporidium treatment credit towards the LT2ESWTR requirement, this should easily allow you to achieve 4.0 log credit.

The optional layout shown below is possible should anticipated costs of the City's preferred schematic design exceed your budget. It would utilize the high-rate clarifier for the first stage of softening. This reduces a treatment step and capital cost. Softening in a Densadeg has

Proposed Garnett Water Treatment Facility - 1.2 MGD

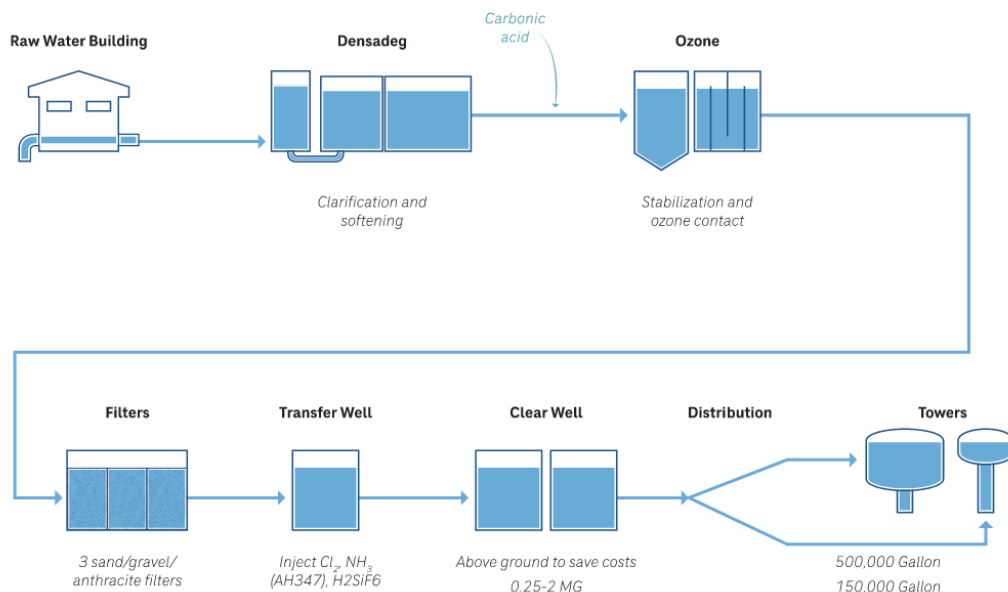


proven successful on surface waters in the area producing a low effluent. In addition, feeding turbidity ozone after softening and recarbonation and prior to filtration, results in a lower ozone demand and allows for the potential for using biologically active filters (BAF). Ozone coupled with biologically active filters have been proven to be an effective combination to remove contaminants of emerging concern. This would give you more tools to work with in the future as regulations change. This option will allow you to achieve the additional 1.0 log removal for cryptosporidium and meet the total 4.0 log removal requirement.

All of the processes from clarification through filtration could be installed with common walls to save on the overall cost, footprint and building size.

Proposed Garnett Water Treatment Facility - 1.2 MGD

Optional Garnett Water Treatment Train



Another option for Garnett to consider is advanced treatment using membranes. It would provide a multiple barrier approach in a very small footprint. Ozone could be used to target manganese removal. This option allows you to take advantage of advanced technology of ultrafiltration followed by reverse osmosis and ultraviolet disinfection using advanced oxidation. A pretreatment step would be recommended for this option at the head of the treatment train for clarification, algae removal and the 0.5 log cryptosporidium credit for presedimentation. This treatment scheme should allow you to get an initial 2.5 log credit for filtration and an additional 2.5 additional log inactivation for a total of 5 log inactivation and would accomplish your water treatment in the smallest footprint possible.

Demonstrating Compliance

For all options, the use of ozone in some capacity would be anticipated. It is a very strong oxidant but does decay rapidly so it is important to design the system covered contact cells accordingly. During design, we will do a bench scale study to predict the additional log inactivation of cryptosporidium based on detention times, temperature and residual ozone. To demonstrate predicted compliance, CDM Smith will use our experience from past designs and a bench scale test with simulated treatment to determine the decay rate of the ozone over time. Then we will use a CT calculation table like the one below in The worksheet below 3 has been helpful on past projects to prove compliance getting that additional 1 log inactivation of cryptosporidium. In this example the calculation is in the worst case, most difficult to treat condition when water temperature is at its lowest.

Additional Log Removal Compliance Example

Peak Flow 1.5 MGD
Temperature 1.7 Deg C
Date:

1050 gpm
35 Deg F

Reactor 1 Residual Ozone 2.5
Reactor 2 Residual Ozone 1.5
Reactor 3 Residual Ozone 0.5

Additional Log Inactivation Crypto 1.27
Required 1

| | | | | | | | | | | | | | | | | | |
|--------------------------------------|--------|-------------|-----------------------------|-------------|------------|--------------|-----|-------------------------------|-------|-------------|-------|-----|---------------------------|-------|-----|----------------|-----------------|
| | Intake | Seg 1 | Raw Water Transmission Line | Seg 3 | Ozone Dose | Seg 3 | RSP | Filter 3 ft depth above media | Seg 4 | CL2 Dose | Seg 5 | RSP | Contact Basin | Seg 6 | RSP | Ground Storage | To Distribution |
| Reactor 1 Volume Gallons | | 28199 | | 16200 | | 6530 | | 7300 | | 150100 | | | 500000 (Full Vol = 1.1MG) | | | | |
| Peak Flow Rate gpm | | 1050 | 1050 | 525 | | 1050 | | 262.5 | | 1050 | | | 1050 | | | | |
| Theoretical Detention Time (min) HDT | | 27 | | 31 | | 6 | | 28 | | 143 | | | 476 | | | | |
| Baffling Condition Factor | | Plug Flow 1 | | Average 0.5 | | Superior 0.7 | | Superior 0.7 | | Average 0.5 | | | Average 0.5 | | | | |
| T10 Min | | 26.9 | | 15.4 | | 4.4 | | 19.5 | | 71.5 | | | 238.1 | | | | |
| Disinfectant Residual(mg/l) | | | | | | 2.5 | | | | | | | | | | | |
| CT Value (mg/l-min) | | | | | | 10.9 | | | | | | | | | | | |
| Reactor 2 Volume Gallons | | 28199 | | 16200 | | 13060 | | 7300 | | 150100 | | | 500000 (Full Vol = 1.1MG) | | | | |
| Peak Flow Rate gpm | | 1050 | 1050 | 525 | | 1050 | | 262.5 | | 1050 | | | 1050 | | | | |
| Theoretical Detention Time (min) HDT | | 27 | | 31 | | 12 | | 28 | | 143 | | | 476 | | | | |
| Baffling Condition Factor | | Plug Flow 1 | | Average 0.5 | | Superior 0.7 | | Superior 0.7 | | Average 0.5 | | | Average 0.5 | | | | |
| T10 Min | | 26.9 | | 15.4 | | 8.7 | | 19.5 | | 71.5 | | | 238.1 | | | | |
| Disinfectant Residual(mg/l) | | | | | | 1.5 | | | | | | | | | | | |
| CT Value (mg/l-min) | | | | | | 13.1 | | | | | | | | | | | |
| Reactor 3 Volume Gallons | | | | | | 19590 | | | | | | | | | | | |
| Peak Flow Rate gpm | | | | | | 1050 | | | | | | | | | | | |
| Theoretical Detention Time (min) HDT | | | | | | 19 | | | | | | | | | | | |
| Baffling Condition Factor | | | | | | Superior 0.7 | | | | | | | | | | | |
| T10 Min | | | | | | 13.1 | | | | | | | | | | | |
| Disinfectant Residual(mg/l) | | | | | | 0.5 | | | | | | | | | | | |
| CT Value (mg/l-min) | | | | | | 6.5 | | | | | | | | | | | |

| | |
|--------------------------------------|---------------------------|
| Reactor Volume 1 | |
| CT 1.0 Crypto | 24.0 |
| Log Inactivation Crypto | 0.45 |
| Reactor Volume 2 | |
| CT 1.0 Crypto | 24.0 |
| Log Inactivation Crypto | 0.54 |
| Reactor Volume 3 | |
| CT 1.0 Crypto | 24.0 |
| Log Inactivation Crypto | 0.27 |
| Total Log Inactivation Crypto | 0.54 + 0.27 = 1.27 |

RSP - Residual Sampling Point

CT calcs for Chlorine and Chloramine not shown for clarity.

Principal-in-Charge, Client Service Leader

Mark Griffin has 37 years of experience in water utility engineering management and consulting engineering, with primary responsibilities focusing on the delivery of potable water capital infrastructure projects. Prior to joining CDM Smith, he worked for WaterONE; the City of Independence, Missouri's Water Department; Missouri American Water (MAW); Tank Industry Consultants; the City of Kansas City, Missouri (as Utility Officer for System Engineering); and most recently, as senior project manager with McClure Engineering (MEC). While working for MEC he was overall project manager for the Cedar Valley Reservoir Auxiliary Spillway Repairs project for the City of Garnett, KS, where he led the process to secure FEMA/KDEM financing in addition to permitting, design, bid, and award.

Prior to CDM Smith

Projects listed below represent three state-of-the-art water treatment plants (WTP) for which Mr. Griffin served as project manager for delivery from planning to construction completion. All WTP's were constructed in Missouri while with MAW.

Project Manager, Ozone Water Treatment Plant, Warrensburg, MO. Responsibilities included: planning, design, permitting, and construction, and project delivery. Project highlights featured pilot plant using GAC filters (which proved not effective due to bio growth), chloramine disinfection with new addition of ammonia, liquid oxygen storage for use in ozone generation using three small ozone generators utilizing side stream injection, raw water for cooling, and ozone destruct units before the addition of phosphate for corrosion control. Other WTP details included: advanced automation, new telemetry instrumentation and controls, diesel backup generator, new laboratory and administration building, new high service pump and valving, raw and finished water transmission mains, and new electrical switchgear lineup using variable frequency drives (VFDs). The WTP needed staged construction improvements while the existing WTP remained in service. The WTP was commissioned as the first WTP approved by the Missouri Department of Natural Resources (MDNR) to use ozone and the first to be permitted for full unattended operation in Missouri.

Project Manager, Greenfield 36-MGD Ground Water Treatment Plant, St. Joseph, MO.

Mr. Griffin managed the delivery of a new 36-MGD greenfield WTP to replace the 100+ year old surface WTP. Work included management of all planning, property acquisition, distribution modeling and modifications, permitting, public engagement, and the consultant-led design and construction of: two 36-inch diameter DIP raw water mains from the new well field, a horizontal collector well and six vertical wells, the 36-MGD ground WTP, and two 36" finished water mains. The WTP included chlorine, ammonia, caustic soda, lime softening, ferric, polymers for filter aid and coagulation, PAC, recycled filter backwash, accessible treatment gallery piping, special WTP HVAC, baffled two compartments clear well, chemical storage areas designed with operations and maintenance concerns, and advanced instrumentation and controls. High service pumps were designed for optimum efficiency at key pumping rates to maximize distribution and

Education

BS – Mechanical Engineering, University of Kansas

Registration

Professional Engineer: MO, CA

Certifications

MO Class A – Water Operations License

MO Class III – Water Distribution Operations License

off-peak energy savings. Water distribution telemetry was redesigned using radios for reliable distribution controls and cost savings. Overall project cost was \$80 million.

Owners Representative, Construction Manager at Risk (CMAR) Project Manager and Owners Representative Engineer. Blendville Water Treatment Plant Expansion and Rehabilitation, Joplin, MO. Mr. Griffin's management duties included land acquisition, environmental assessments, environmental remediation, residential homes demolition, and water distribution modeling. He served as project manager, lead designer, and construction manager for 11,000 feet of new 30-inch water raw water main under a separate contract. The WTP project included pilot testing and the highest-rated plate settlers ever approved by MDNR. Challenges included engineer in charge for the replacement of 16 different 30-inch WTP critical valves that required four separate WTP shutdowns for night work to maintain water service. A new separate 5-MGD WTP was designed and constructed using more state-of-the-art surface water treatment methods including UV for crypto in activation, a 7.5 MW generator, new laboratory, and lagoon for recycled filter backwash.

Additional Experience

Additional WTP experience includes serving as engineering manager for the first design build WTP project approved by the MDNR for the rehabilitation and upgrade to the ground water lime softening plant in Mexico, Missouri. The WTP rehabilitation improvements in Parkville, Missouri included upgrades to lime softening, telemetry, pumping, and residual handling. While with MAW he designed and managed the additional six deep potable water wells for use as dual SOS to mix treated well water in the distribution by using sodium hypochlorite, fluoride, and ammonia treatment at the well head before entry into the water distribution system.

+

John Brummer, PE, DBIA, ENV SP

Senior Project Manager

Mr. Brummer is a senior project manager with 29 years of experience and specializes in water/wastewater, planning, design, construction, and water source development. He is regularly responsible for leading diverse teams in planning, designing, and constructing a variety of water-related infrastructure and process improvements. More specifically, he has successfully guided efforts throughout the region to improve facilities with capacities ranging from 2 mgd to 210 mgd; lift stations from 1,000 gpm to 30 mgd; storage reservoirs up to 2.5 MG; and transmission mains up to 84 inches in diameter. He also serves as a member of the Board of Directors for AWWA. As a result, Mr. Brummer has tremendous amounts of experience delivering critical and complex projects throughout the region, and is well versed in delivering efficient designs and deliverables.

Work Experience

Project Manager, WaterOne Virtual Information Security Services, WaterOne, Lenexa, Kansas. Mr. Brummer is serving as the project manager and is responsible for providing WaterOne with executive-level consulting and information security expertise, akin to that which would be provided by a full-time, in-house Information Security Officer. Key responsibilities include procuring and implementing critical security services, including email, phone, and onsite support. Additional responsibilities include collaborating with WaterOne business units to develop and implement an Information Security Management Program, including policies and procedures that meet the defined standards for information security and cybersecurity strategies.

Project Manager, Kansas City Lime Feed System Improvements, City of Kansas City – Water Services Department, Missouri. Mr. Brummer served as the project manager and was responsible for construction phase services for the lime feed system replacement project for the City's 240-mgd WTP. The project consists of design and construction of railcar unloading, blower and lime slaker and lime feed system replacement.

Project Manager, PRe Water Direct Potable Reuse Project, Village of Cloudcroft (NM). Mr. Brummer served as the project manager and was responsible for the study and pilot demonstration project. The PRe Water project consists of purifying treated wastewater effluent in order to supplement the Village's potable water supply. High-quality effluent produced at the Village's MBR WWTP will be pumped to the tower tank and conveyed to the WTP where it will undergo advanced treatment and blending with the Village's existing water sources to produce potable water for the Village.

Advisor/Technical Reviewer, East Williamson County Water Treatment Plant Expansion, Brazos River Authority, Texas. Mr. Brummer served as an advisor and technical reviewer for the project, which is providing BRA with options to increase the capacity of the East Williamson County WTP in a manner that continues to provide adequate treated water capacity to their customers. The current plan is to expand the plant by 10 mgd. CDM Smith is performing facility assessments and alternative evaluations to determine the most effective plan expansion options for BRA. The goals of the assessment are increased reliability and flexibility and decreased operating costs. CDM Smith reviewed customer contracts to determine the conditions of service, projected

Education

MS, Civil Engineering,
Kansas State University,
1993

BS, Civil Engineering,
Kansas State University,
1992

Registration

Professional Engineer:

- Kansas (1997 / No. 14366)
- Missouri (1999 / No. E-40311)
- Oklahoma No. (2021 / No. 32523)

Certifications

Design-Build Professional,
Design-Build Institute of
America

Envision Sustainability
Professional, Institute for
Sustainable Infrastructure

Professional Affiliations

American Water Works
Association

Missouri AWWA – Chair

Water Environment
Federation

American Membrane
Technology Association

Design Build Institute of
America

population growth within the existing service areas, developed water demand forecasts based on existing customer demand factors, and developed six different expansion alternative process flow diagrams and phasing plans. CDM Smith is also providing construction phase services for the plant expansion and improvements to the existing raw water intake and delivery facilities.

Advisor/Technical Reviewer, 6th & Leavenworth Grit Improvements, City of Omaha, Nebraska. Mr. Brummer served as an advisor and technical reviewer for the project, which is re-commissioning the grit facility due to recent maintenance problems associated with grit material accumulating in the new Leavenworth Pump Station. Improvements to the facility include the diversion structure sluice gate and actuator, adding an overhead bridge crane and clamshell to the grit facility, new grit basin covers and improvements within the basins, and updating odor control and other equipment.

Advisor/Technical Reviewer, Wichita Plant 2 BNR Improvements, City of Wichita, Kansas. Mr. Brummer served as an advisor and technical reviewer for the 30-mgd facility improvement project, which includes upgrades to intermediate pumping, a new centralized BNR structure, modifications to the existing distribution boxes and aeration basins, RAS pumping improvements, improvements to three existing blower buildings and construction of a fourth new blower building, new chemical feed buildings, and WAS improvements that include incorporate of the InDENSE selective sludge wasting technology. The BNR aspects of this project are estimated to have a construction value of approximately \$160-190 million.

Prior to CDM Smith

Water Treatment and Distribution

Booster Pump Station No. 25 OKC

Project Manager, Integrated Ultrafiltration/ Reverse Osmosis Water Treatment Plant, City of Beloit, KS. Project manager for planning, pilot testing and design of an integrated UF/RO water treatment plant for a surface water source. The project consisted of 12 miles of 16-inch raw water line and pump station, high rate clarification pretreatment, Ultrafiltration, and Reverse Osmosis treatment for combined softening and brackish water treatment.

Project Manager, New Water Supply and Treatment Plant, Marais Des Cygnes Public Utility Authority, KS. Project manager for planning and design of a new water supply system including a new raw water intake on the Marais Des Cygnes River, 5 mgd surface water treatment plant, raw water line, 17 miles of finished water line and two 750,000 gallon storage tanks. Corps of Engineers permitting and environmental clearance was a crucial element of the project to stay on schedule.

Project Manager, 42-Inch Water Transmission Main - Booster Pump Station Improvements City of Oklahoma City, OK Project manager for booster pump station improvements and 4,000 linear feet of new 42-inch transmission main. The project goals were to increase the redundancy and resiliency of OCWUT's distribution system through adding transmission mains and booster stations that will create more effective interconnection between the sections of the City served by the Hefner and Draper Water Treatment Plants.

Project Manager, Water Main Improvement Projects, Kansas City Water Services Department, KS. Project manager for six water main replacement projects including improvements. The projects included replacement and improvements of more than 30,000 linear feet of 6-24-inch water mains. The approach taken was to review initial recommendations, investigate alternatives to improve hydraulic characteristics in each area, lay out a preliminary alignment, present the alignment to City staff, walk/drive the preliminary alignments with staff to make necessary field adjustments, and design of the improvements. Work also included utility coordination, coordination with MoDOT for state route crossings, and coordination with other cities like Raytown and Claycomo.

Project Engineer, 30-inch Finished Water Transmission Main, City of Olathe, KS. Designed 29,000 linear feet of water main from the water treatment near Desoto to Clare Road. The entire main was designed without concrete thrust blocks and was designed in conjunction with a future College Boulevard extension.

Project Manager, Elevated Storage Tanks, Boone County Public Water Supply District 9, MO. Project manager for design of two welded steel elevated water storage tanks. Besides the technical design, the project included close coordination with MDNR for regulatory approval and permitting, coordinating with a local airport and the FAA for siting requirements, and working with landowners who opposed the County's site selection.

Project Engineer, Groundwater Supply Wells and Recharge Project, City of Wichita, KS. Project engineer responsible for development and design of a 1,000 gpm well, sloping surface water intake, and groundwater recharge well to take above-base river flow and inject it into the equus beds aquifer for temporary water storage and recovery.

Project Engineer, Elevated Water Storage - Hook Tank, Lee's Summit, City of Lee's Summit, MO. Design of a 3 million gallon composite elevated tank to serve and support development south of Lee's Summit. Design included tank design, tank mixing system, cathodic protection, chlorine residual monitoring, instrumentation and control, interior and exterior lighting, grounding system, roll up door access, drilled pier foundation, ball control valve, 24- and 36-inch connection piping, subsurface investigation, surveying, site grading and drainage. Hydraulic modeling of the distribution system was used to confirm hydraulic grade line recommendations made in the water master plan to provide adequate pressure and fire flow volume for the service area.

Project Engineer, Horizontal Collector Well, City of Olathe, KS. Project engineer responsible for test well drilling, aquifer yield analysis, and design of the City's first 10 million gallon per day horizontal collector well.

Project Engineer, KCKBPU 700,000 Gallon Backwash Tank. Design of a 42 foot diameter, 64 foot tall welded steel standpipe. Design included an auger cast pile foundation and 36-inch yard piping and tank design to replace the existing elevated tank that was damaged by flooding and undermining.

Project Engineer, Raw Water Transmission Main and Surge Analysis, City of Springfield, MO. Designed 30 miles of 36-inch raw water pipeline to transfer water from Stockton Lake to Fellows Lake in Springfield. A hydraulic transient (surge) analysis was performed as part of the design to prevent damaging surge pressures. Soil samples were

taken along the 30-mile route to determine corrosivity of the soil to assist with corrosion resistance design.

Project Manager, Water Development Project, City of Lake Havasu City, AZ. Project manager for planning and design of a new 26 MGD water supply system to replace their aging well system. Design included a new horizontal collector well and variable speed pumps, 15,400 linear feet of 48-inch raw water line, a 1,000 foot directional drill under the river channel, new water treatment plant, 18,000 linear feet of 36-inch finished water line. The project also included pilot testing of ozone, membranes, biological filters, and greensand filters.

Project Manager, Water Supply Wells, Atchison County Wholesale Water Commission, MO. Project manager for drilling and development of new water supply wells for a new drinking water supply and treatment plant.

Project Engineer, Water Transmission Main, KCK Board of Public Utilities, KS. Performed an alignment study and design of 4 miles of 48-inch water transmission main through an established residential area in Kansas City, KS from the Nearman Water Treatment Plant to the ground storage tanks on 59th

Project Manager, Water Treatment Plant and Pump Station Design, City of Burlington, KS. Project manager for a water system evaluation. The study led to the design of a new surface water treatment plant, pump station and sludge dewatering facilities. Worked closely with the city and state regulatory offices for funding requirements, environmental clearance, drinking water regulation compliance, and water rate structuring.

Project Engineer, Water Treatment Plant Improvements, Caracas, Venezuela. Project engineer for an evaluation of the 170 MGD La Guairita Water Plant and the Rio Tuy pretreatment plant.

Project Engineer, Water Treatment Plant, Clarence Cannon Wholesale Water District, MO. Project engineer for design and construction phase services for a 5 MGD expansion of the regional water commission's water treatment plant to double treatment. Coordinated multidiscipline design of pretreatment basin, ozone system, clarifiers, sedimentation basin, gravity filters, and sludge lagoon. The project was completed on time and under budget as construction material costs escalated as much as 16 percent during design.

Project Engineer, Water Treatment Plant, Public Wholesale Water District #13, KS. For design of a new surface water treatment plant for a new water district serving more than 10 cities and rural water districts. Design included pulsating clarifiers, self-backwashing filters and high service pumping.

Project Manager, Woods Chapel Tank, City of Lee's Summit, MO. Project manager for the design of a 2.5-MG composite elevated tank to serve and support development. Design included a life-cycle cost comparison of different tank styles to select the most economical tank based on net present value of future maintenance costs. Tanks evaluated were composite, hydro pillar and spheroidal.

Operator Training Events, Missouri. John has conducted training sessions in the state of Missouri for water and wastewater operators through the Missouri Water and Wastewater Conference (MWWC), Missouri Water Environment Association (MWEA) and the American

Water Works Association (AWWA) where he is currently an officer. He has also conducted vulnerability assessments for communities to identify vulnerability of water, sewer, electric and gas utilities and infrastructure.

Design-Build

Project Manager, National Nuclear Security Administration, New Security Campus, Fire Suppression and Water Supply System, United States Department of Energy, MO.

Responsible for the design of wastewater and domestic and fire suppression water system for a 1.5 million square foot security campus replacing the existing Bannister Federal Complex. The campus includes six buildings, consisting of new manufacturing spaces, laboratories, office space, and warehouses. The project included design of 2,500 feet of 12- and 16-inch lines with three connections to the City water supply, coordination with electric and diesel fired fire pump design, and lead-in piping to laboratories, office buildings, manufacturing buildings and warehouses. A major component of the project was devising a creative way to prove two separate feeds were available from the City of Kansas City, MO through hydraulic modeling in lieu of constructing a large on site storage tank for fire suppression. The project won a 2013 DBIA Merit Award.

Project Manager, Marine and Air Force Military Base Build-up, NAVFAC, Guam.

Responsible for design of all water and wastewater infrastructure including water supply wells, water treatment facilities, and water distribution to support aircraft washing facilities, potable water, fire suppression and sanitary sewers and pump stations to service the barracks and airport.

Project Manager, Mechanical Screen Replacement FID Pump Station, Unified Government of Wyandotte County and Kansas City, KS (UG). Project manager for design build emergency replacement of the mechanical bar screens for the 30 MGD pump station.

Assistant Project Manager, Section 19-2 Pipeline, Tarrant Regional Water District (TRWD), TX. Assistant project manager for 30% design effort of 22 miles of 84 inch steel water line and 3,100 linear feet of tunnels on Section 19-2 to transport water from Lake Palestine to Lake Benbrook. To address the demand for additional water supplies, the TRWD and the City of Dallas Water Utilities (DWU) partnered to design, build and operate a raw water infrastructure to help ensure a long-term water supply.

Project Manager, Strother Field Airport and Industrial Complex, City of Winfield, KS. Project manager for this design-build project to supply new pumps, headworks screen and emergency backup generators for the wastewater treatment plant and pump station.

Designer, I-405 Sepulveda Pass Widening CALTRANS, CA. Responsible for utility relocations for the I-405 Sepulveda Pass Improvements Project, which will add a 10-mile HOV lane and improve supporting infrastructure such as ramps, bridges and sound walls on the San Diego Fwy. (I-405), while widening lanes from the Santa Monica Fwy. (I-10) to the Ventura Fwy. (US 101).

Benjamin J. Finnegan, PE, BCEE

Environmental Engineer, Technical Specialist

Mr. Finnegan is a process engineer and technical specialist with professional experience in the design and optimization of drinking water process and hydraulic systems. In his 14-year career to date with CDM Smith, his experience includes projects for facilities ranging from 0.30 to 1,400 million gallons per day (MGD) of design capacity. He has extensive experience with both conventional design-bid-build and alternative delivery projects including progressive design-build (PDB), engineer-procure-construct (EPC), construction manager/general contractor (CM/GC), and build-own-operate-transfer (BOOT). During his tenure with CDM Smith he has been based out of St. Paul, MN, Chicago, IL and Santiago, Chile.

As one of CDM Smith's technical specialists in water treatment processes, Mr. Finnegan has experience working for clients across the USA and around the globe. His work includes filter designs for the cities of Chicago, Minneapolis, Houston, Santiago, Chile, and Amman, Jordan. Mr. Finnegan has presented at many national conferences on water treatment design and water quality optimization. He has contributed to several Water Research Foundation (WRF) studies including the Biofiltration Guidance Manual for Rapid-Rate Filtration Facilities. As a volunteer engineer, he has provided technical backstopping and engineering services for projects in Honduras, Nicaragua, and Nigeria.

Pre-treatment and Filtration

Project Technical Lead, Fleur Drive WTP Filter Rehabilitation Study, Des Moines Water Works (DMWW), Des Moines, Iowa (December 2021 – December 2022). Mr. Finnegan led the preparation of a filter study and conceptual design report (CDR) detailing the required improvements to upgrade the aging filter process at DMWW's 75 MGD Fleur Drive WTP. Over the course of the study Mr. Finnegan led the project team during on-site filter investigations, hydraulic modeling of the filtration process, improvement alternatives analysis, and conceptual design development.

Filtration Facility Lead, Northeast Water Purification Plant (NEWPP) 320 MGD Expansion, City of Houston, Texas (2016 – present). As part of the Houston Waterworks Team (HWT), CDM Smith is a joint-venture partner to design and build the 320 MGD expansion to the NEWPP for the City of Houston. Mr. Finnegan led the design of two 160 MGD filtration modules totaling approximately \$140 million of construction work to be delivered under two work packages. Upon completion, this will be one of the largest filtration installations in the USA. The filter design consists of twenty-four biologically active 2,300 square-foot filters with 48" anthracite and 12" sand media, four 500 HP multistage centrifugal air scour blowers, three 800 HP backwash pumps, numerous large diameter valves (36" – 84"), large diameter steel piping, and slide gates. Mr. Finnegan developed a novel backwash control strategy to wash filters using the filter backwash pumps even when operating with positive pressure in the ground storage tanks. He also worked closely with CDM Smith hydraulic experts during physical modeling of the filter backwash manifold. He led a multi-disciplinary team of senior engineers, designers, and subconsultants to execute the Filter Module design on-time, on-budget, and within quality standards. He also worked closely with HWT constructors and subcontractors to design to

Education

MS – Environmental Engineering in Civil Engineering, University of Illinois at Urbana-Champaign, 2009

BS – Civil Engineering, University of Illinois at Urbana-Champaign, 2007

Registration

Professional Engineer: Illinois (2012), Iowa, Michigan, Minnesota, Nevada, and Texas

National Council of Examiners for Engineering and Surveying (NCEES) Record

Colegio de Ingenieros de Chile (Inactive) (College of Engineers of Chile)

Certifications

Certification of Portuguese as a Foreign Language (CELPE-BRAS)

Confined Space Entry

Honors/Awards

Board Certified Environmental Engineer (BCEE) – American Academy of Environmental Engineers and Scientists

Languages

English (native), Spanish (fluent), Portuguese (fluent)

meet the project Guaranteed Maximum Price (GMP). To facilitate design efforts and quality reviews, the design was developed in Bentley 3D modeling platform. Mr. Finnegan has subsequently led submittal review efforts for engineering services during construction of the Early Work Package 2 (EWP2) and HWT-procured equipment submittals including filter underdrains, large diameter valves, and vertical turbine pumps.

Filtration Facility Lead, WTP_1.0 Design, Willamette Water Supply Program, Sherwood, Oregon (2018 – present). Mr. Finnegan is the design lead for the filtration process at a new 60 MGD water treatment plant, expandable up to 120 MGD, serving a new water supply entity in the suburbs of Portland, Oregon. CDM Smith is serving as the design engineer on this project which is executed under a construction manager/general contractor (CM/GC) contract. Mr. Finnegan led the conceptual design and process technology selection for (8) 870 sf deep bed (72" GAC over 12" sand) biologically active filters. He is currently leading a team of process engineers during detailed design of the filter underdrains, filter media, backwash troughs, air scour blowers, backwash pumps, butterfly valves, and all hydraulics associated with the filter process.

Process Advisor and Technical Review Committee Chair, Water2025 Pilot and Process Selection Project, City of Westminster, Colorado (2019 – present). Mr. Finnegan is serving as a process advisor for the pilot program to select the treatment process for a new 30 MGD conventional water treatment plant. The pilot is investigating the performance of ozone-enhanced biofiltration in dual media filters with either anthracite and sand or GAC and sand media profiles.

Process Advisor, Warrensburg WTP Biological Filtration Conceptual Design, Missouri American Water, Warrensburg, Missouri (2020 – present). Mr. Finnegan has provided process support and advice for the conceptual design of a biological pressure media filtration system to provide biological removal of sulfide and ozone-produced organic carbon byproducts at a 5 MGD groundwater facility.

Process Advisor, Mark B. Whitaker Filters 11-16 Installation, Knoxville Utilities Board, Knoxville, Tennessee (2018 – present). Mr. Finnegan served as a process advisor for the design of a new 38 MGD filtration facility at the Mark B. Whitaker WTP in Knoxville, TN. In this role he reviewed design calculations and contractor cost estimates as well as provided design guidance based on his experience at recently designed and constructed filter plants. CDM Smith is serving as the design engineer for this project which is executed under a construction manager at risk (CMAR) contract.

Contributor, WRF 4719 Biofiltration Guidance Manual for Rapid-Rate Filtration Facilities (2018 – 2020). CDM Smith worked with a team of biofiltration industry leaders to prepare a Biofiltration Guidance Manual for the WRF. Mr. Finnegan served as the internal project manager for CDM Smith and was a co-author of various sections of the manual.

Project Engineer, Flint WTP Improvements Preliminary Engineering Report, City of Flint, Michigan (2016 – 2017). After the Flint Water Crisis, the City of Flint investigated the rehabilitation of their existing 24 MGD water treatment plant to treat raw Lake Huron water. The preliminary engineering phase was done in a fast track approach with the draft report delivered to the client within three weeks from the notice to proceed. As a process engineer on the team, Mr. Finnegan assisted in the assessment and development of improvements to the ozone, rapid mix, flocculation, high rate sedimentation, biologically

active filters, and residuals handling processes. He also conducted a benchmarking study of Lake Huron utilities to assess anticipated raw water quality and treatment requirements for the Lake Huron water.

Disinfection, DBP Control, and Oxidation Processes

Task Lead, Ozone System Replacement Project, Dallas Water Utilities, Dallas, Texas (2020). Mr. Finnegan produced Division 1 bid specifications for the replacement of the ozone generation and liquid oxygen storage system at the East Side, Bachman, and Elm Fork WTPs.

Technical Review Committee Member, La Ayura WTP Improvements Project, Empresas Públicas de Medellín, Colombia (2019). Mr. Finnegan served as a TRC member for the La Ayura WTP Improvements Project. The project aims to upgrade the 7.2 m³/s (165 MGD) plant through addition of chlorine dioxide pre-oxidation, post filtration UV disinfection, replacement of the plant's lime system for pH adjustment, and various other process improvements.

Project Engineer, Taste and Odor Study, City of Minneapolis, Minnesota (2011). Mr. Finnegan was part of a taste and odor study investigating several processes for geosmin control at Minneapolis' treatment plants, including: chlorine dioxide, potassium permanganate, hydrogen peroxide, ozone, granular activated carbon, and tandem UV-advanced oxidation. Mr. Finnegan prepared a detailed report analyzing the results of the bench-scale studies, developing preliminary process design criteria for treatment alternatives including ozone and GAC, evaluating the feasibility of their implementation, and cost.

Solomon J. Abel, PE

Senior Vice President, Senior Environmental Engineer

Mr. Abel is a Denver-based environmental engineer with 22 years of experience successfully guiding some of CDM Smith's most critical water infrastructure projects to bring value to clients worldwide—across the US, the Middle East, Europe, Latin America, and the Caribbean. He now oversees operations in the West Central Region, providing guidance and support for the development and delivery water and wastewater treatment works, reuse and conveyance systems, pump stations, solid waste, industrial, and drainage improvement projects. Through his leadership role, he brings the authority to ensure that projects or tasks undertaken will have the necessary resources – both financial and personnel – to efficiently complete the project without impacting budget, schedule, or quality. He also regularly assists teams in identifying value-added or cost savings opportunities, as well as in reviewing documents for quality control.

Officer-in-Charge, WaterOne AWIA Risk & Resiliency Assessment & Emergency Response Plan, WaterOne, Johnson County, Kansas. Mr. Abel is serving as the Principal-in-Charge to help guide WaterOne's AWIA response which requires public drinking water suppliers to assess the security and resiliency – both physical and cyber – of their systems in response to all “*natural hazards*” and other forms of “*malevolent*” acts. WaterOne serves customers across 17 cities, 272-square miles, and approximately 425,000 customers. The project will also prepare an ERP that will be certified by the EPA.

Officer-in-Charge, Aquifer Pilot Study, South Metro Water Supply Authority (SMWSA), Greenwood Village, Colorado. Mr. Abel supported the SMWSA team to obtain a Water Supply Reserve Account Grant to evaluate the feasibility of aquifer storage and recovery (ASR) to manage the delivery and use of additional water supplies in their respective systems. The team's work has provided guidance and assistance to SMWSA and its members in their evaluation of using ASR as a viable option to effectively manage their renewable water supplies.

Officer-in-Charge, Water2025 Process Selection, Pilot, and Design, City of Westminster, Colorado. Mr. Abel is providing leadership and resource support for this visionary program for Westminster, providing high-quality water to its customers and transitioning from the Semper Water Treatment Plant to a new 30-mgd water treatment plant. The new plant will ultimately be designed to improve treatment resiliency to address varying water quality conditions impacted by wildfires and other climatic changes, adapt to changing regulatory standards, improve water treatment flexibility, and embrace environmental sustainability and resource stewardship. The team will also be providing expertise and counsel regarding the design and construction of the new WTP.

Officer-in-Charge, Denver Water Owner's Representative Services for the Northwater Treatment Plant, Denver, Colorado. Mr. Abel is supporting the Owner's Representative Team for Denver Water's greenfield North Treatment Plant—a new, state-of-the-art WTP in Jefferson County that will ultimately be capable of treating up to 75 million gallons of water a day, and will be equipped with disinfection technology that will provide more flexibility to react to changes in water quality.

Education

MS – Civil/
Environmental
Engineering, Iowa State
University, 1999

BS – Civil Engineering,
Iowa State University,
1997

Registration

Professional Engineer:
Kansas #16718 (2001)

Languages

Fluent in English and
Spanish; Some Polish

Officer-in-Charge, Denver Water On-Call Engineering Services, Denver, Colorado. Mr. Abel is supporting CDM Smith's On-Call services teams in completion of task orders for Denver Water, including treatment and hydraulics improvements as needed.

Officer-in-Charge, East Cherry Creek Valley (ECCV) Water & Sanitation District North System Phase 3 Expansion, Aurora, Colorado. Mr. Abel is supporting the team providing engineering services for an additional project phase following a successful expansion of a 10-MGD brackish water reverse osmosis (RO) system to reduce water hardness and total dissolved solids. The Phase 3 Expansion will increase the District's renewable water supply up to 20 MGD and will include a new standalone chemical facility, additional treated water pumping capacity, and administrative space for the District's operations team. The process is anticipated to be a high-recovery RO process that recovers approximately 94% of the brackish groundwater supply.

Officer-in-Charge, East Cherry Creek Valley (ECCV) Water & Sanitation District On-Call Engineering Support, Aurora, Colorado. Mr. Abel is supporting the team providing engineering on-call support to ECCV supporting design modifications, improvements, and recommendations related to the RO WTP's chemical storage areas, programming and instrumentation modifications, and equipment.

Officer-in-Charge, Metro Wastewater Reclamation District, PAR 1323 In-Stream Temperature Habitat Improvements, Denver, Colorado. Based on CDM Smith's lessons learned from more than 25 years of hands-on experience completing similar habitat improvements for the District and along more than 20 miles of the SPR, we were awarded PAR 1323 to engage in the evaluation, preliminary design, final design, bidding, and construction phase services for river enhancements—ultimately to reduce in-stream water temperatures, improve and stabilize the aquatic habitat, and achieve regulatory compliance.

Officer-in-Charge, Metro Wastewater Reclamation District PAR 1279 South Platte River Segment 15 Temperature Mitigation Alternatives Analysis and Feasibility Study, Denver, Colorado. Mr. Abel provided resource and team support for completion of this study, focused on developing viable projects for phased implementation to reduce effluent temperatures and achieve compliance with stream standards, including instream habitat projects to improve instream mixing and heat recovery projects within the influent system or at the treatment facility.

Colombia Country Manager; Water and Wastewater Director – Latin America and the Caribbean; Project Manager – Canoas WWTP; Client Service Leader – South America and the Caribbean, 2013 – 2017. Mr. Abel was Colombia Country Manager where he led CDM Smith's Colombia operations. This role included sales, sales planning, and operations; HR/ hiring/ training oversight, including leading the growth of two offices from 10 people to over 80 people; and operations and cost control. He led a team in the creation of a Design Center in Colombia to deliver full design services from Colombia to CDM Smith's global operations.

Mr. Abel worked with, served as, and supervised sales in Colombia plus led numerous other members of the team in pursuing and delivering important wins with local, national and international clients. Key pursuits which he led, participated in, and delivered included the Canoas WWTP; Central Bogota Aqueduct, Sewer, and Stormwater modeling and network expansion; San Andres Integrated Water Management Plan, an emergency

medium term desalination plant and water supply, and long term vision of the Island with a CAPEX of over \$40 Million; Canal del Dique Lock and Sluice Gate, Wetland, and Climate Change Adaptation Design Supervision which will require US\$350 Million; development of the Santa Marta P3 project which will require US\$1 Billion; and others. He is worked with an international mining entity to develop a multi-year, multi-billion-dollar opportunity in Colombia regarding P3 rail concessions, a P3 water concession, and mining and oil and gas operations in multiple locations.

As the Client Service Leader for water, transportation, solid waste, industrial, and renewable energy opportunities in Peru, the Cayman Islands, Trinidad & Tobago, and other countries in the region, Mr. Abel pursued design-build tunneling intake and discharge works for a new 4,000 lps desalination water treatment plant for a mining client in Chile; led and managed the startup of a new silver oxide mine in Peru; operations supervision of the 40 MIGD Desalcott Desalination Plant in Trinidad; and a solid waste consultancy in the Cayman Islands to review WTE disposal options.

Mr. Abel also served as the Project Manager on the design of the US\$1.6 Billion Canoas WWTP, which will serve 7.3 million people in Bogota, Colombia. This greenfield plant is being designed for 365 mgd average flow and a peak flow of 640 mgd. Mr. Abel was responsible for the overall project delivery and client satisfaction, including all hiring, cost and schedule control, and delivery of the conceptual design of primary, secondary, and tertiary treatment; and detailed design of chemically enhanced primary treatment and all solids handling facilities, including thermal hydrolysis, anaerobic digestion and energy recovery. Due to lack of project funding, he worked with national and international government entities and private companies to develop P3 delivery mechanisms.

Project Manager, Puerto Rico Aqueduct and Sewer Authority Program Management Consortium, San Juan, Puerto Rico, 2011-2013. Mr. Abel served as the startup and hardware lead on the Puerto Rico Aqueduct and Sewer Authority's (PRASA's) Automation Program, with the ultimate goal of automating all 120 water treatment plants (WTPs) in Puerto Rico and transforming PRASA from a plant-focused model to a cluster-based organizational model. Mr. Abel managed a team of over 30 engineers from both the United States and Puerto Rico in the programming, integration, and startup of the plants. He coordinated with regional and island-wide operations and maintenance personnel, from regional directors to plant operators, on startup activities, training, and troubleshooting services.

Water Services Director Europe, Warsaw, Poland, 2009-2011. Mr. Abel served as CDM Smith's Water Services Director for Europe, where his key responsibilities included identifying, positioning for, and capturing strategic projects across Europe with a focus on Poland, Germany, Ireland, and Turkey. He led sales management and market development for a wide portfolio of projects, including design-build (DB) work, waste-to-energy (WTE) plants, energy reduction and production projects, water and wastewater infrastructure, and shale gas development. These activities included developing and implementing business development plans, establishing international tender go-no go procedures, developing strategic pursuit plans, and establishing strategic partnerships. Mr. Abel was responsible for winning CDM Smith's first contract in over 15 years in Turkey – a country-wide flood forecasting and early warning system – and was responsible for winning several projects leveraging CDM Smith's global expertise in the Polish market.

Stacy Barna

Principal, Infrastructure Funding Manager

Ms. Barna has 25 years of comprehensive experience in multiple areas of drinking water, wastewater, and financial assistance programs, specializing in water system regulatory compliance, capital improvement and master planning, project financing, asset management, and sustainability initiatives. She has experience interpreting and implementing a variety of federal and state regulations, laws, rules, programs, and policies. Ms. Barna managed the Drinking Water State Revolving Fund (DWSRF) during her tenure at Ohio EPA from 1997-2009 before moving to Texas to oversee all federal and state funding programs at the Texas Water Development Board (TWDB) from 2009-2015. While there, her role evolved from program funding director to assistant executive administrator of the agency.

Since joining consulting in 2015, Ms. Barna has utilized her 19 years of experience at the state funding agencies to assist communities throughout Texas in navigating the TWDB funding process. She has worked alongside a variety of municipal clients including the North Texas Municipal Water District, Riverbend Water Resources District, City of Arlington, Eagle Pass Water Works, Nueces River Authority, San Patricio County, Duval County, Kerr County, City of Cotulla, City of Pearsall, and City of Del Rio to successfully secure and manage more than \$1 billion in project funding.

In addition to securing funds, Ms. Barna's responsibilities have included the coordination and management of all aspects of TWDB-funded projects—from filing the initial interest forms/application through construction administration, project closeout, and final payment to the contractors. She often serves as the main point of contact with TWDB on behalf of the client to achieve fast turnaround times and prompt answers to questions to avoid any potential project delays and receive timely funding.

TWDB Funding Manager, Sister Grove Water Resource Facility, North Texas

Municipal Water District, Texas. Ms. Barna assisted the District with the application and receipt of \$458M from the Clean Water State Revolving Fund (CWSRF) to plan, design, and build the District's new greenfield water reclamation facility. This Construction Manager at Risk delivery method project requires detailed management and communication between the District, design team, constructor, and the TWDB. In our funding management role, we conduct routine meetings with the District, monthly coordination meetings with the District and TWDB, manage communication on behalf of the District with the TWDB including submission of all design and construction documents for review and approval, addressing all Requests for Information (RFIs), tracking all correspondence, and uploading and organizing documentation in the District's database. In addition, during construction our role includes review and audit of Davis-Bacon wage rate reports and verification of documentation with federal Buy American provisions.

TWDB Funding Manager, New Regional Water System, Riverbend Water Resource District, Texas (sub to Pape Dawson).

Ms. Barna oversees the funding coordination in concert with the program management team at Pape Dawson. She is responsible for managing eight funding commitments being closed in four tranches over multiple years. Ms. Barna assists with review on monthly invoices from all members of the program

Education

BS – Environmental Science; Rensselaer Polytechnic Institute

Certifications

American Water Works Association (AWWA) Utility Risk & Resilience Certification

Governor's Executive Development Program, University of Texas

management team and allocates invoice expenses in a monthly outlay request to the TWDB for reimbursement. In addition, Ms. Barna works in concert with the management team to address State Revolving Fund (SRF) eligibility questions and ensure adherence to program requirements to keep the project on schedule and avoid costly missteps. This project is currently in the preliminary design phase. During the next phase, Ms. Barna will review Requests for Qualification (RFQs) and contracts for SRF compliance and manage TWDB coordination for contract and plan/specification reviews.

Project Manager, Financial Assistance for Electrical Improvements at John F. Kubala Plant & Pierce Burch Water Treatment Plant (WTP) Improvements, City of Arlington, Texas. Ms. Barna served as the project manager to develop and submit two financial assistance applications for the City of Arlington for DWSRF assistance. The combined total value of the funding assistance was over \$91M. Ms. Barna's role was to coordinate with City engineering and financial staff to complete all application components, attend meetings with and on behalf of the City with the TWDB, coordinate comments/responses to the TWDB, review specs for compliance language and coordinate completion of the Disadvantaged Business Enterprise forms/documents.

Program Manager, Cotulla Water & Wastewater System Improvements Program, City of Cotulla, Texas. Ms. Barna served as the program manager for the City of Cotulla's water and wastewater improvements program. The program included receiving financing through the DWSRF and Clean Water State Revolving Funds (CWSRFs) to construct water system improvements, wastewater collection system extensions, and improvements to the existing wastewater treatment plant. In addition, under Ms. Barna's direction, the City also applied and received funds through the new Flood Infrastructure Fund offered by the TWDB to complete a flood study and apply for a Letter of Map Revision (LOMR) from Federal Emergency Management Agency (FEMA). Ms. Barna has assisted the City of Cotulla to receive approximately \$10M of funding since 2015.

Funding Lead, DC Water, Lead Free DC, Washington DC. Stacy is currently serving on the DC Program as the funding lead. Stacy's role initial role is to review funding programs that can be utilized for lead service line replacement and make recommendations for funding applications. Stacy will also assist with compiling and submitting funding applications, serve as coordinator with the funding agencies and manage funding and requirements throughout the project.

Technical Advisor, Tillman Ridge SWIFR Grant, St. John's County, Florida. Stacy was the technical advisor for the SWIFR grant application that was prepared and submitted to the United States Environmental Protection Agency (EPA) in February 2023. The project included researching information about St. John's County, compiling information from the City, writing a narrative about the project need and purpose, providing supporting engineering planning information, and drafting a budget and draw plan for the grant application.

Funding Lead, Motts Run WTP Expansion and Rehabilitation, Spotsylvania County, Virginia. Stacy is the funding lead for the upgrade and expansion of the Motts Run WTP from 12 to 24 mgd. Her duties include reviewing potential funding programs and making recommendations to the County, and assisting the County to apply for funding, as needed. The project includes upgrading the raw water pumping, contact basins and rapid mix, high-rate clarification, filtration, clearwell storage, chemical storage and feed, residuals

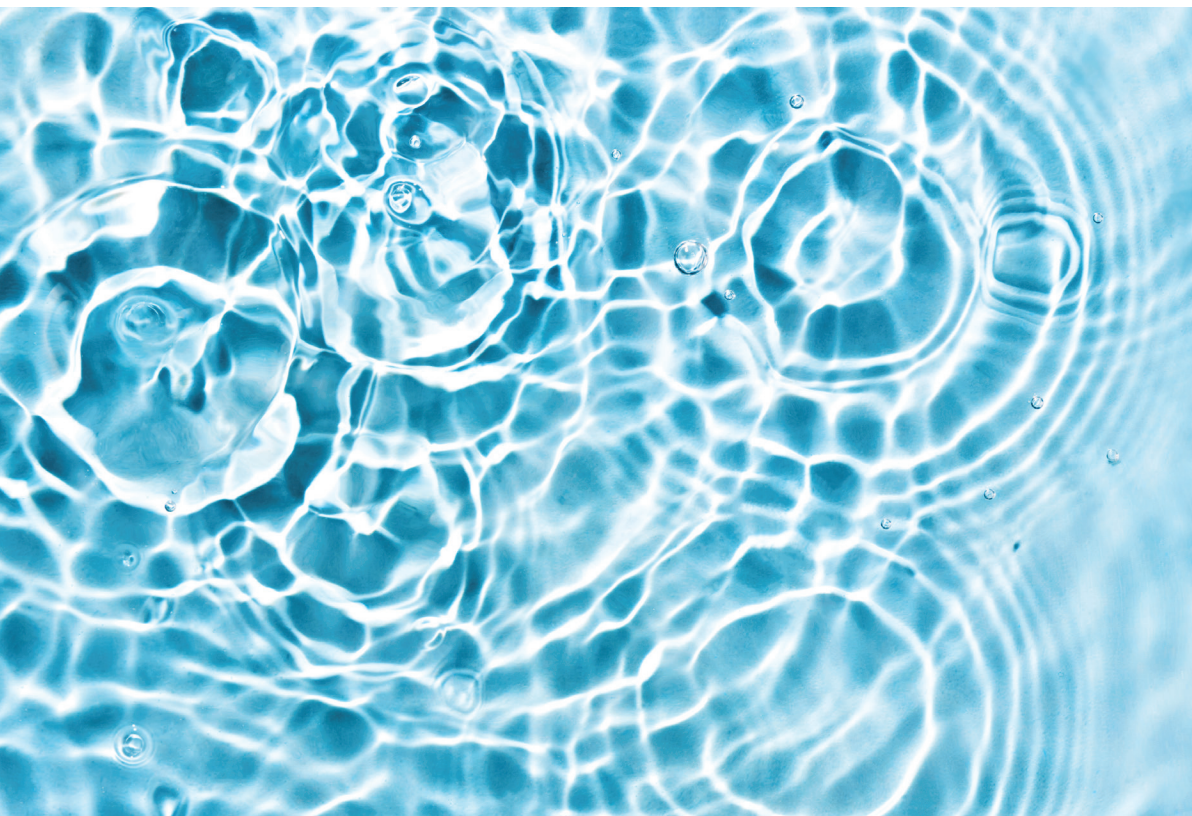
handling, and high service pumping. Our team is providing surveying, permit assistance including site planning, geotechnical investigations, bid phase services, construction phase services, asset management implementation, and operations and maintenance.

Prior to CDM Smith

Assistant Executive Administrator, Texas Water Development Board, Texas. Ms. Barna was responsible for the development and implementation of multiple state and federal financial assistance programs at the TWDB from 2009-2014. During 2014-2015, she was part of the Executive Management Team and helped oversee all Agency operations as the Assistant Executive Administrator. Ms. Barna was responsible for managing multiple staff and programs during her tenure with the TWDB and prior to that at Ohio EPA for almost thirteen years. She has extensive experience as an innovator in funding programs, working diligently with communities, engineers, and other financing agencies to determine the best financing options for communities to complete their water and wastewater projects.

Group Co-chairperson, Alternative Financing & Public Outreach, Texas Water Infrastructure Coordination Committee, Texas. Ms. Barna led the creation and development of the committee in 2010 and served as co-chair through June 2015. TWICC is comprised of federal and state funders, regulators, technical assistance providers and water associations that collaborate to assist and finance water and wastewater projects in Texas. TWICC's purpose is to assist Texas communities with projects related to compliance, public health, water quality and quantity, replacement, and growth.

Ms. Barna dedicated a considerable amount of her time engaging and educating the public about TWICC and how it would benefit Texas communities. She met with water systems and consultants, and was a regular presenter at local, statewide and national water conferences where she would outline the purpose and benefits of coordinating with TWICC. Her efforts resulted in the assistance of over 100 projects throughout the state.



| DEPARTMENT | FUND | VENDOR NAME | DESCRIPTION | AMOUNT_ |
|------------------------|---------|---------------------------------------|----------------------------|-----------|
| GOVERNMENT ADMINISTRAT | GENERAL | ANDERSON CO HIGH SCHOOL | YEARBK BUSINESS CARD AD | 25.00 |
| | | DOLLAR GENERAL CORPORATION | ADMIN SPLIT | 16.12 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 157.73 |
| | | HASTERT, DIANE | KPERS REIMB | 7.72 |
| | | ADAMS JONES LAW FIRM, PA | ASSIST CITY ATTY W/CONTRAC | 280.00 |
| | | NAVRAT'S | ENVELOPES WINDOW/PERMIT | 1,161.84 |
| | | | TOONER YELLOW | 120.99 |
| | | UCI TESTING | CREDIT EMPLOYEE (2) | 90.00- |
| | | VISA - CARD SERVICES | ADOBE ADMIN | 21.59 |
| | | | MICROSOFT ADMIN | 23.10 |
| | | | VISA CHARGES | 336.00 |
| | | | VISA CHARGES | 195.97_ |
| | | | TOTAL: | 2,256.06 |
| | | | | |
| COMMUNITY DEVELOPMENT | GENERAL | DOLLAR GENERAL CORPORATION | COM DEV SPLIT | 7.80 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 126.89 |
| | | SELLERS, TERESA dba MO AND T DJ SERVI | PATRIOTIC MUSIC | 150.00 |
| | | VISA - CARD SERVICES | ADOBE COM DEV | 21.49 |
| | | | MICROSOFT COM DEV | 8.66 |
| | | | VISA CHARGES | 174.78 |
| | | | VISA CHARGES | 15.56- |
| | | | TOTAL: | 474.06 |
| | | | | |
| | | | | |
| PARKS, RECREATION & CE | GENERAL | BSN SPORTS, LLC | FLEX GOAL BALANCE | 697.30 |
| | | | BALL SUPPLY | 3,503.68 |
| | | | BALL SUPPLY | 1,654.84 |
| | | D & S SANITATION LLC | SOCCER/CAMP GROUND TOILET | 170.00 |
| | | | SOCCER/CAMP GROUND TOILET | 170.00 |
| | | GERKEN RENT-ALL, INC | NORTH LAKE TOILETS | 357.50 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | PARKS EQUIP FUEL SPLIT | 1,011.17 |
| | | | PARKS VEHICLE FUEL | 337.05 |
| | | HINES, CHRISTOPHER | REF (4) SOCCER @ 50.00 | 200.00 |
| | | MCSPADDEN, ANGELA | MAR-APR-MAY @ 60.00 | 180.00 |
| | | PEPSI-COLA | CONCESSION (38) DRINKS | 1,805.78 |
| | | VISA - CARD SERVICES | MICROSOFT REC | 2.89 |
| | | | VISA CHARGES | 70.19_ |
| | | | TOTAL: | 10,160.40 |
| | | | | |
| | | | | |
| STREET & STORMWATER | GENERAL | GENERAL MACHINERY & SUPPLY COMPANY | STREET (12) HARD HAT | 50.28 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 435.60 |
| | | | FUEL SPLIT | 853.28 |
| | | | FUEL SPLIT | 508.82 |
| | | SNAP-ON CREDIT | MAY FEES | 46.75 |
| | | INLAND TRUCK PARTS COMPANY | 39MT STARTER 12TOOTH | 604.89 |
| | | LEO'S AUTO SUPPLY, INC. | CAL GREASE | 34.95 |
| | | LUNDGO | CASE LG BLE/A TORK TOWELS | 128.00 |
| | | VISA - CARD SERVICES | MICROSOFT STREET | 0.57 |
| | | | VISA CHARGES | 2.27_ |
| | | | TOTAL: | 2,665.41 |
| | | | | |
| MUNICIPAL AIRPORT | AIRPORT | VISA - CARD SERVICES | VISA CHARGES | 78.21_ |
| | | | TOTAL: | 78.21 |
| LIBRARY | LIBRARY | STIFTER, TYLER | LIBRARY MOWING | 50.00 |
| | | WISE, CLIFTON | LIBRARY MOWING/WEEDDEATING | 45.00 |
| | | LUTZ, CHARLOTTE | LUTZ, CHARLOTTE | 100.87 |

| DEPARTMENT | FUND | VENDOR NAME | DESCRIPTION | AMOUNT |
|-----------------------|---------------|--|----------------------------|-----------|
| | | VISA - CARD SERVICES | VISA CHARGES | 1.87 |
| | | | VISA CHARGES | 20.04 |
| | | | TOTAL: | 217.78 |
| FIRE DEPARTMENT | PUBLIC SAFETY | MFA OIL CO - PETRO CARD 24 | PETRO FUEL CARD SPLIT | 215.03 |
| | | VISA - CARD SERVICES | MICROSOFT FIRE | 2.89 |
| | | | TOTAL: | 217.92 |
| POLICE DEPARTMENT | PUBLIC SAFETY | ANDERSON CO SHERIFF'S DEPT. | INMATE HOUSING | 140.00 |
| | | | LIVE SCAN | 150.00 |
| | | DIGITAL CONNECTIONS, INC. | POLICE COPIER -MONTHLY | 13.24 |
| | | | POLICE COPIER - MONTHLY | 11.03 |
| | | MFA OIL CO - PETRO CARD 24 | PETRO FUEL CARD SPLIT | 1,044.28 |
| | | VISA - CARD SERVICES | MICROSOFT POLICE | 14.44 |
| | | | VISA CHARGES | 5.00 |
| | | | VISA CHARGES | 94.14 |
| | | | VISA CHARGES | 154.38 |
| | | | TOTAL: | 1,626.51 |
| ELECTRIC PRODUCTION | ELECTRIC | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 48.19 |
| | | KMEA (MID-STATES) | REPLACE LTC CONTROLLER/TRA | 3,937.68 |
| | | ST. LUKES HEALTH SYSTEM | EMPLOYEE SCREENING | 115.00 |
| | | UCI TESTING | PRE EMPLOYEEMT - PRETZER | 170.00 |
| | | | TOTAL: | 4,270.87 |
| ELECTRIC DISTRIBUTION | ELECTRIC | ALTEC INDUSTRIES INC. | COVER, BLACK SOFT VINYL | 97.37 |
| | | ANIXTER, INC. | HD POLY W/XARM BRKT | 1,451.76 |
| | | | SWEEP CONDUIT/PVC CONDUIT | 795.96 |
| | | | ARR DIST 3KV | 1,945.00 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 399.95 |
| | | | FUEL SPLIT | 564.92 |
| | | SUBSURFACE SOLUTIONS | REPAIR FOR 5" RING CLAMP | 122.84 |
| | | VISA - CARD SERVICES | VISA CHARGES | 724.21 |
| | | | TOTAL: | 6,102.01 |
| GAS | GAS | GENERAL MACHINERY & SUPPLY COMPANY | GAS (3) HARD HAT SPLIT | 41.98 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 237.72 |
| | | | FUEL SPLIT | 82.20 |
| | | JOHN DEERE FINANCIAL DBA ORSCHELN FARM | MISC TOOLS | 106.55 |
| | | KMGA GAS SUPPLY OPER. FUND | KMGA GAS SUPPLY OPER. BUY | 10,472.36 |
| | | VISA - CARD SERVICES | ADOBE GAS SPLIT | 10.74 |
| | | | MICROSOFT GAS | 0.58 |
| | | | VISA CHARGES | 43.04 |
| | | | VISA CHARGES | 132.69 |
| | | | VISA CHARGES | 449.00 |
| | | | VISA CHARGES | 48.50 |
| | | | TOTAL: | 11,625.36 |
| SANITATION | SANITATION | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 56.99 |
| | | | FUEL SPLIT | 1,091.72 |
| | | | FUEL SPLIT | 36.09 |
| | | UCI TESTING | POST ACCIDENT (REYNOLDS) | 75.00 |
| | | VISA - CARD SERVICES | MICROSOFT TRASH | 0.58 |
| | | | TOTAL: | 1,260.38 |
| WASTEWATER | WASTEWATER | GENERAL MACHINERY & SUPPLY COMPANY | WWTR (2) HARD HATS | 55.98 |

| DEPARTMENT | FUND | VENDOR NAME | DESCRIPTION | AMOUNT |
|----------------------|--------------------|------------------------------------|----------------------------|-----------|
| | | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 269.84 |
| | | HAWKINS, INC. | 450# DNR | 3,015.00 |
| | | JOHNSON COUNTY GOVERNMENT | JCW-W COLI, SINGLE | 35.50 |
| | | VISA - CARD SERVICES | MICROSOFT SEWER | 0.58 |
| | | | VISA CHARGES | 51.37 |
| | | | VISA CHARGES | 19.79 |
| | | | VISA CHARGES | 299.97 |
| | | | TOTAL: | 3,748.03 |
| WATER | WATER | EUROFINS EATON ANALYTICAL, INC | CHLORITE | 75.00 |
| | | GENERAL MACHINERY & SUPPLY COMPANY | WATER (3) HARD HAT SPLIT | 41.99 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 353.37 |
| | | | FUEL SPLIT | 82.60 |
| | | HARVEY, RUSTY | MEAL REIMB WATER CONF | 30.00 |
| | | MUCKLOW, JEFF | MEAL REIMB WATER CONF | 20.00 |
| | | LUNDCO | CSE LG A TORK TOWELS | 69.12 |
| | | MFA OIL CO - PETRO CARD 24 | PETRO FUEL CARD SPLIT | 54.95 |
| | | OLATHE WINWATER WORKS CO. | 420 GAL METER | 1,360.00 |
| | | | WATER LINE/FITTINGS/VALVES | 3,360.00 |
| | | | WATER LINE/FITTINGS/VALVES | 3,534.00 |
| | | PACE ANALYTICAL SERVICES, INC. | PACE ANALYTICAL SERVICES, | 287.50 |
| | | VISA - CARD SERVICES | ADOBE WATER SPLIT | 10.75 |
| | | | MICROSOFT WATER | 0.58 |
| | | | VISA CHARGES | 305.37 |
| | | | VISA CHARGES | 9.42 |
| | | | VISA CHARGES | 173.74 |
| | | | VISA CHARGES | 52.70 |
| | | | VISA CHARGES | 449.00 |
| | | | VISA CHARGES | 48.50 |
| | | | VISA CHARGES | 139.56 |
| | | | TOTAL: | 10,458.15 |
| ECONOMIC DEVELOPMENT | ECONOMIC DEVELOPME | DOLLAR GENERAL CORPORATION | ECO DEV SPLIT | 2.08 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | 56.86 |
| | | VISA - CARD SERVICES | ADOBE ECO DEV | 16.11 |
| | | | MICROSOFT ECO DEV | 2.89 |
| | | | VISA CHARGES | 337.36 |
| | | | VISA CHARGES | 2.98 |
| | | | VISA CHARGES | 109.97 |
| | | | VISA CHARGES | 68.23 |
| | | | TOTAL: | 596.48 |
| PARKSIDE #1 | PARKSIDE #1 | C.E.S. | PKSIDE #1 SPLIT | 33.13 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | GHA FUEL SPLIT | 61.66 |
| | | HECK'S REPAIR & SERVICE | CLEAN DRYER OUT PP1 | 80.00 |
| | | HD SUPPLY,INC | REMAIN BALANCE ORING KIT | 6.40 |
| | | VISA - CARD SERVICES | VISA CHARGES | 747.59 |
| | | | TOTAL: | 928.78 |
| PARKSIDE #2 | PARKSIDE #2 | C.E.S. | PKSIDE 2 SPLIT | 33.13 |
| | | HAMPEL OIL DISTRIBUTORS, INC. | GHA FUEL SPLIT | 61.66 |
| | | HD SUPPLY,INC | REMAIN BALANCE ORING KIT | 6.40 |
| | | VISA - CARD SERVICES | VISA CHARGES | 116.57 |
| | | | TOTAL: | 217.76 |
| PARK PLAZA NORTH | PARK PLAZA NORTH | C.E.S. | PPN SPLIT | 33.12 |

| DEPARTMENT | FUND | VENDOR NAME | DESCRIPTION | AMOUNT_ |
|----------------------|--------------------|----------------------------------|----------------------------|------------|
| | | HAMPEL OIL DISTRIBUTORS, INC. | GHA FUEL SPLIT | 61.66 |
| | | HD SUPPLY, INC | REMAIN BALANCE ORING KIT | 6.41 |
| | | | PPN FILTER (12) | 102.52 |
| | | VISA - CARD SERVICES | VISA CHARGES | 730.74_ |
| | | | TOTAL: | 934.45 |
| CAPITAL IMPROVEMENTS | CAPITAL IMPROVEMEN | MILLER, JOHN & MARGIE | LAND PURCHASE BY AIRPORT | 28,000.00 |
| | | MCCLURE ENGINEERING | CEDAR VALLEY SPILLWAY REPA | 19,383.75 |
| | | MUSSELMAN & HALL CONTRACTORS LLC | CUVLERT 59SO/PARK RD/LAKE | 80,000.00_ |
| | | | TOTAL: | 127,383.75 |

===== FUND TOTALS =====

| | | |
|-----|----------------------|------------|
| 101 | GENERAL | 15,555.93 |
| 102 | AIRPORT | 78.21 |
| 104 | LIBRARY | 217.78 |
| 105 | PUBLIC SAFETY | 1,844.43 |
| 109 | ELECTRIC | 10,372.88 |
| 110 | GAS | 11,625.36 |
| 111 | SANITATION | 1,260.38 |
| 112 | WASTEWATER | 3,748.03 |
| 113 | WATER | 10,458.15 |
| 114 | ECONOMIC DEVELOPMENT | 596.48 |
| 115 | PARKSIDE #1 | 928.78 |
| 116 | PARKSIDE #2 | 217.76 |
| 117 | PARK PLAZA NORTH | 934.45 |
| 118 | CAPITAL IMPROVEMENT | 127,383.75 |

GRAND TOTAL: 185,222.37

| VENDOR SORT KEY | DESCRIPTION | FUND | DEPARTMENT | AMOUNT_ |
|------------------------------------|----------------------------|--------------------|------------------------|-----------|
| ADAMS JONES LAW FIRM, PA | ASSIST CITY ATTY W/CONTRAC | GENERAL | GOVERNMENT ADMINISTRAT | 280.00_ |
| | | | TOTAL: | 280.00 |
| ALTEC INDUSTRIES INC. | COVER, BLACK SOFT VINYL | ELECTRIC | ELECTRIC DISTRIBUTION | 97.37_ |
| | | | TOTAL: | 97.37 |
| ANDERSON CO HIGH SCHOOL | YEARBK BUSINESS CARD AD | GENERAL | GOVERNMENT ADMINISTRAT | 25.00_ |
| | | | TOTAL: | 25.00 |
| ANDERSON CO SHERIFF'S DEPT. | INMATE HOUSING | PUBLIC SAFETY | POLICE DEPARTMENT | 140.00 |
| | LIVE SCAN | PUBLIC SAFETY | POLICE DEPARTMENT | 150.00_ |
| | | | TOTAL: | 290.00 |
| ANIXTER, INC. | HD POLY W/XARM BRKT | ELECTRIC | ELECTRIC DISTRIBUTION | 1,451.76 |
| | SWEEP CONDUIT/PVC CONDUIT | ELECTRIC | ELECTRIC DISTRIBUTION | 795.96 |
| | ARR DIST 3KV | ELECTRIC | ELECTRIC DISTRIBUTION | 1,945.00_ |
| | | | TOTAL: | 4,192.72 |
| BSN SPORTS, LLC | FLEX GOAL BALANCE | GENERAL | PARKS, RECREATION & CE | 697.30 |
| | BALL SUPPLY | GENERAL | PARKS, RECREATION & CE | 3,503.68 |
| | BALL SUPPLY | GENERAL | PARKS, RECREATION & CE | 1,654.84_ |
| | | | TOTAL: | 5,855.82 |
| C.E.S. | PKSIDE #1 SPLIT | PARKSIDE #1 | PARKSIDE #1 | 33.13 |
| | PKSIDE 2 SPLIT | PARKSIDE #2 | PARKSIDE #2 | 33.13 |
| | PPN SPLIT | PARK PLAZA NORTH | PARK PLAZA NORTH | 33.12_ |
| | | | TOTAL: | 99.38 |
| D & S SANITATION LLC | SOCCER/CAMP GROUND TOILET | GENERAL | PARKS, RECREATION & CE | 170.00 |
| | SOCCER/CAMP GROUND TOILET | GENERAL | PARKS, RECREATION & CE | 170.00_ |
| | | | TOTAL: | 340.00 |
| DIGITAL CONNECTIONS, INC. | POLICE COPIER -MONTHLY | PUBLIC SAFETY | POLICE DEPARTMENT | 13.24 |
| | POLICE COPIER - MONTHLY | PUBLIC SAFETY | POLICE DEPARTMENT | 11.03_ |
| | | | TOTAL: | 24.27 |
| DOLLAR GENERAL CORPORATION | ADMIN SPLIT | GENERAL | GOVERNMENT ADMINISTRAT | 16.12 |
| | COM DEV SPLIT | GENERAL | COMMUNITY DEVELOPMENT | 7.80 |
| | ECO DEV SPLIT | ECONOMIC DEVELOPME | ECONOMIC DEVELOPMENT | 2.08_ |
| | | | TOTAL: | 26.00 |
| EUROFINS EATON ANALYTICAL, INC | CHLORITE | WATER | WATER | 75.00_ |
| | | | TOTAL: | 75.00 |
| GENERAL MACHINERY & SUPPLY COMPANY | STREET (12) HARD HAT | GENERAL | STREET & STORMWATER | 50.28 |
| | GAS (3) HARD HAT SPLIT | GAS | GAS | 41.98 |
| | WWTR (2) HARD HATS | WASTEWATER | WASTEWATER | 55.98 |
| | WATER (3) HARD HAT SPLIT | WATER | WATER | 41.99_ |
| | | | TOTAL: | 190.23 |
| GERKEN RENT-ALL, INC | NORTH LAKE TOILETS | GENERAL | PARKS, RECREATION & CE | 357.50_ |
| | | | TOTAL: | 357.50 |
| HAMPEL OIL DISTRIBUTORS, INC. | FUEL SPLIT | GENERAL | GOVERNMENT ADMINISTRAT | 157.73 |
| | FUEL SPLIT | GENERAL | COMMUNITY DEVELOPMENT | 126.89 |
| | PARKS EQUIP FUEL SPLIT | GENERAL | PARKS, RECREATION & CE | 1,011.17 |

| VENDOR SORT KEY | DESCRIPTION | FUND | DEPARTMENT | AMOUNT_ |
|----------------------------|-------------------------------------|--------------------|------------------------|------------|
| | PARKS VEHICLE FUEL | GENERAL | PARKS, RECREATION & CE | 337.05 |
| | FUEL SPLIT | GENERAL | STREET & STORMWATER | 435.60 |
| | FUEL SPLIT | GENERAL | STREET & STORMWATER | 853.28 |
| | FUEL SPLIT | GENERAL | STREET & STORMWATER | 508.82 |
| | FUEL SPLIT | ELECTRIC | ELECTRIC PRODUCTION | 48.19 |
| | FUEL SPLIT | ELECTRIC | ELECTRIC DISTRIBUTION | 399.95 |
| | FUEL SPLIT | ELECTRIC | ELECTRIC DISTRIBUTION | 564.92 |
| | FUEL SPLIT | GAS | GAS | 237.72 |
| | FUEL SPLIT | GAS | GAS | 82.20 |
| | FUEL SPLIT | SANITATION | SANITATION | 56.99 |
| | FUEL SPLIT | SANITATION | SANITATION | 1,091.72 |
| | FUEL SPLIT | SANITATION | SANITATION | 36.09 |
| | FUEL SPLIT | WASTEWATER | WASTEWATER | 269.84 |
| | FUEL SPLIT | WATER | WATER | 353.37 |
| | FUEL SPLIT | WATER | WATER | 82.60 |
| | FUEL SPLIT | ECONOMIC DEVELOPME | ECONOMIC DEVELOPMENT | 56.86 |
| | GHA FUEL SPLIT | PARKSIDE #1 | PARKSIDE #1 | 61.66 |
| | GHA FUEL SPLIT | PARKSIDE #2 | PARKSIDE #2 | 61.66 |
| | GHA FUEL SPLIT | PARK PLAZA NORTH | PARK PLAZA NORTH | 61.66_ |
| | | | TOTAL: | 6,895.97 |
| HARVEY, RUSTY | MEAL REIMB WATER CONF | WATER | WATER | 30.00_ |
| | | | TOTAL: | 30.00 |
| HASTERT, DIANE | KPERS REIMB | GENERAL | GOVERNMENT ADMINISTRAT | 7.72_ |
| | | | TOTAL: | 7.72 |
| HAWKINS, INC. | 450# DNR | WASTEWATER | WASTEWATER | 3,015.00_ |
| | | | TOTAL: | 3,015.00 |
| HD SUPPLY, INC | REMAIN BALANCE ORING KIT | PARKSIDE #1 | PARKSIDE #1 | 6.40 |
| | REMAIN BALANCE ORING KIT | PARKSIDE #2 | PARKSIDE #2 | 6.40 |
| | REMAIN BALANCE ORING KIT | PARK PLAZA NORTH | PARK PLAZA NORTH | 6.41 |
| | PPN FILTER (12) | PARK PLAZA NORTH | PARK PLAZA NORTH | 102.52_ |
| | | | TOTAL: | 121.73 |
| CHECK'S REPAIR & SERVICE | CLEAN DRYER OUT PP1 | PARKSIDE #1 | PARKSIDE #1 | 80.00_ |
| | | | TOTAL: | 80.00 |
| HINES, CHRISTOPHER | REF (4) SOCCER @ 50.00 | GENERAL | PARKS, RECREATION & CE | 200.00_ |
| | | | TOTAL: | 200.00 |
| INLAND TRUCK PARTS COMPANY | 39MT STARTER 12TOOTH | GENERAL | STREET & STORMWATER | 604.89_ |
| | | | TOTAL: | 604.89 |
| JOHNSON COUNTY GOVERNMENT | JCW-W COLI, SINGLE | WASTEWATER | WASTEWATER | 35.50_ |
| | | | TOTAL: | 35.50 |
| KMEA (MID-STATES) | REPLACE LTC CONTROLLER/TRA ELECTRIC | | ELECTRIC PRODUCTION | 3,937.68_ |
| | | | TOTAL: | 3,937.68 |
| KMGA GAS SUPPLY OPER. FUND | KMGA GAS SUPPLY OPER. BUY | GAS | GAS | 10,472.36_ |
| | | | TOTAL: | 10,472.36 |
| LEO'S AUTO SUPPLY, INC. | CAL GREASE | GENERAL | STREET & STORMWATER | 34.95_ |
| | | | TOTAL: | 34.95 |

| VENDOR SORT KEY | DESCRIPTION | FUND | DEPARTMENT | AMOUNT_ |
|--|----------------------------|--------------------|------------------------|------------|
| LUNDCO | CASE LG BLE/A TORK TOWELS | GENERAL | STREET & STORMWATER | 128.00 |
| | CSE LG A TORK TOWELS | WATER | WATER | 69.12_ |
| | | | TOTAL: | 197.12_ |
| LUTZ, CHARLOTTE | LUTZ, CHARLOTTE | LIBRARY | LIBRARY | 100.87_ |
| | | | TOTAL: | 100.87_ |
| MCCLURE ENGINEERING | CEDAR VALLEY SPILLWAY REPA | CAPITAL IMPROVEMEN | CAPITAL IMPROVEMENTS | 19,383.75_ |
| | | | TOTAL: | 19,383.75_ |
| MCSPADDEN, ANGELA | MAR-APR-MAY @ 60.00 | GENERAL | PARKS, RECREATION & CE | 180.00_ |
| | | | TOTAL: | 180.00_ |
| MFMA OIL CO - PETRO CARD 24 | PETRO FUEL CARD SPLIT | PUBLIC SAFETY | FIRE DEPARTMENT | 215.03 |
| | PETRO FUEL CARD SPLIT | PUBLIC SAFETY | POLICE DEPARTMENT | 1,044.28 |
| | PETRO FUEL CARD SPLIT | WATER | WATER | 54.95_ |
| | | | TOTAL: | 1,314.26_ |
| MILLER, JOHN & MARGIE | LAND PURCHASE BY AIRPORT | CAPITAL IMPROVEMEN | CAPITAL IMPROVEMENTS | 28,000.00_ |
| | | | TOTAL: | 28,000.00_ |
| MUCKLOW, JEFF | MEAL REIMB WATER CONF | WATER | WATER | 20.00_ |
| | | | TOTAL: | 20.00_ |
| MUSSELMAN & HALL CONTRACTORS LLC | CUVLERT 59SO/PARK RD/LAKE | CAPITAL IMPROVEMEN | CAPITAL IMPROVEMENTS | 80,000.00_ |
| | | | TOTAL: | 80,000.00_ |
| NAVRAT'S | ENVELOPES WINDOW/PERMIT | GENERAL | GOVERNMENT ADMINISTRAT | 1,161.84 |
| | TOONER YELLOW | GENERAL | GOVERNMENT ADMINISTRAT | 120.99_ |
| | | | TOTAL: | 1,282.83_ |
| OLATHE WINWATER WORKS CO. | 420 GAL METER | WATER | WATER | 1,360.00 |
| | WATER LINE/FITTINGS/VALVES | WATER | WATER | 3,360.00 |
| | WATER LINE/FITTINGS/VALVES | WATER | WATER | 3,534.00_ |
| | | | TOTAL: | 8,254.00_ |
| JOHN DEERE FINANCIAL DBA ORSCHELN FARM | MISC TOOLS | GAS | GAS | 106.55_ |
| | | | TOTAL: | 106.55_ |
| PACE ANALYTICAL SERVICES, INC. | PACE ANALYTICAL SERVICES, | WATER | WATER | 287.50_ |
| | | | TOTAL: | 287.50_ |
| PEPSI-COLA | CONCESSION (38) DRINKS | GENERAL | PARKS, RECREATION & CE | 1,805.78_ |
| | | | TOTAL: | 1,805.78_ |
| SELLERS, TERESA dba MO AND T DJ SERVI | PATRIOTIC MUSIC | GENERAL | COMMUNITY DEVELOPMENT | 150.00_ |
| | | | TOTAL: | 150.00_ |
| SNAP-ON CREDIT | MAY FEES | GENERAL | STREET & STORMWATER | 46.75_ |
| | | | TOTAL: | 46.75_ |
| ST. LUKES HEALTH SYSTEM | EMPLOYEE SCREENING | ELECTRIC | ELECTRIC PRODUCTION | 115.00_ |
| | | | TOTAL: | 115.00_ |
| STIFTER, TYLER | LIBRARY MOWING | LIBRARY | LIBRARY | 50.00_ |
| | | | TOTAL: | 50.00_ |

| VENDOR SORT KEY | DESCRIPTION | FUND | DEPARTMENT | AMOUNT_ |
|----------------------|---------------------------|--------------------|------------------------|---------|
| SUBSURFACE SOLUTIONS | REPAIR FOR 5" RING CLAMP | ELECTRIC | ELECTRIC DISTRIBUTION | 122.84_ |
| | | | TOTAL: | 122.84 |
| UCI TESTING | CREDIT EMPLOYEE (2) | GENERAL | GOVERNMENT ADMINISTRAT | 90.00- |
| | PRE EMPLOYEE MT - PRETZER | ELECTRIC | ELECTRIC PRODUCTION | 170.00 |
| | POST ACCIDENT (REYNOLDS) | SANITATION | SANITATION | 75.00_ |
| | | | TOTAL: | 155.00 |
| VISA - CARD SERVICES | ADOBE ADMIN | GENERAL | GOVERNMENT ADMINISTRAT | 21.59 |
| | MICROSOFT ADMIN | GENERAL | GOVERNMENT ADMINISTRAT | 23.10 |
| | VISA CHARGES | GENERAL | GOVERNMENT ADMINISTRAT | 336.00 |
| | VISA CHARGES | GENERAL | GOVERNMENT ADMINISTRAT | 195.97 |
| | ADOBE COM DEV | GENERAL | COMMUNITY DEVELOPMENT | 21.49 |
| | MICROSOFT COM DEV | GENERAL | COMMUNITY DEVELOPMENT | 8.66 |
| | VISA CHARGES | GENERAL | COMMUNITY DEVELOPMENT | 174.78 |
| | VISA CHARGES | GENERAL | COMMUNITY DEVELOPMENT | 15.56- |
| | MICROSOFT REC | GENERAL | PARKS, RECREATION & CE | 2.89 |
| | VISA CHARGES | GENERAL | PARKS, RECREATION & CE | 70.19 |
| | MICROSOFT STREET | GENERAL | STREET & STORMWATER | 0.57 |
| | VISA CHARGES | GENERAL | STREET & STORMWATER | 2.27 |
| | VISA CHARGES | AIRPORT | MUNICIPAL AIRPORT | 78.21 |
| | VISA CHARGES | LIBRARY | LIBRARY | 1.87 |
| | VISA CHARGES | LIBRARY | LIBRARY | 20.04 |
| | MICROSOFT FIRE | PUBLIC SAFETY | FIRE DEPARTMENT | 2.89 |
| | MICROSOFT POLICE | PUBLIC SAFETY | POLICE DEPARTMENT | 14.44 |
| | VISA CHARGES | PUBLIC SAFETY | POLICE DEPARTMENT | 5.00 |
| | VISA CHARGES | PUBLIC SAFETY | POLICE DEPARTMENT | 94.14 |
| | VISA CHARGES | PUBLIC SAFETY | POLICE DEPARTMENT | 154.38 |
| | VISA CHARGES | ELECTRIC | ELECTRIC DISTRIBUTION | 724.21 |
| | ADOBE GAS SPLIT | GAS | GAS | 10.74 |
| | MICROSOFT GAS | GAS | GAS | 0.58 |
| | VISA CHARGES | GAS | GAS | 43.04 |
| | VISA CHARGES | GAS | GAS | 132.69 |
| | VISA CHARGES | GAS | GAS | 449.00 |
| | VISA CHARGES | GAS | GAS | 48.50 |
| | MICROSOFT TRASH | SANITATION | SANITATION | 0.58 |
| | MICROSOFT SEWER | WASTEWATER | WASTEWATER | 0.58 |
| | VISA CHARGES | WASTEWATER | WASTEWATER | 51.37 |
| | VISA CHARGES | WASTEWATER | WASTEWATER | 19.79 |
| | VISA CHARGES | WASTEWATER | WASTEWATER | 299.97 |
| | ADOBE WATER SPLIT | WATER | WATER | 10.75 |
| | MICROSOFT WATER | WATER | WATER | 0.58 |
| | VISA CHARGES | WATER | WATER | 305.37 |
| | VISA CHARGES | WATER | WATER | 9.42 |
| | VISA CHARGES | WATER | WATER | 173.74 |
| | VISA CHARGES | WATER | WATER | 52.70 |
| | VISA CHARGES | WATER | WATER | 449.00 |
| | VISA CHARGES | WATER | WATER | 48.50 |
| | VISA CHARGES | WATER | WATER | 139.56 |
| | ADOBE ECO DEV | ECONOMIC DEVELOPME | ECONOMIC DEVELOPMENT | 16.11 |
| | MICROSOFT ECO DEV | ECONOMIC DEVELOPME | ECONOMIC DEVELOPMENT | 2.89 |
| | VISA CHARGES | ECONOMIC DEVELOPME | ECONOMIC DEVELOPMENT | 337.36 |
| | VISA CHARGES | ECONOMIC DEVELOPME | ECONOMIC DEVELOPMENT | 2.98 |
| | VISA CHARGES | ECONOMIC DEVELOPME | ECONOMIC DEVELOPMENT | 109.97 |
| | VISA CHARGES | ECONOMIC DEVELOPME | ECONOMIC DEVELOPMENT | 68.23 |
| | VISA CHARGES | PARKSIDE #1 | PARKSIDE #1 | 747.59 |

| VENDOR SORT KEY | DESCRIPTION | FUND | DEPARTMENT | AMOUNT_ |
|-----------------|---------------------------|------------------|------------------|----------|
| | VISA CHARGES | PARKSIDE #2 | PARKSIDE #2 | 116.57 |
| | VISA CHARGES | PARK PLAZA NORTH | PARK PLAZA NORTH | 730.74_ |
| | | | TOTAL: | 6,316.03 |
| WISE, CLIFTON | LIBRARY MOWING/WEEDEATING | LIBRARY | LIBRARY | 45.00_ |
| | | | TOTAL: | 45.00 |

===== FUND TOTALS =====

| | | |
|-----|----------------------|------------|
| 101 | GENERAL | 15,555.93 |
| 102 | AIRPORT | 78.21 |
| 104 | LIBRARY | 217.78 |
| 105 | PUBLIC SAFETY | 1,844.43 |
| 109 | ELECTRIC | 10,372.88 |
| 110 | GAS | 11,625.36 |
| 111 | SANITATION | 1,260.38 |
| 112 | WASTEWATER | 3,748.03 |
| 113 | WATER | 10,458.15 |
| 114 | ECONOMIC DEVELOPMENT | 596.48 |
| 115 | PARKSIDE #1 | 928.78 |
| 116 | PARKSIDE #2 | 217.76 |
| 117 | PARK PLAZA NORTH | 934.45 |
| 118 | CAPITAL IMPROVEMENT | 127,383.75 |

GRAND TOTAL: 185,222.37

TOTAL PAGES: 5

BILLS: \$185,222.37
PAYROLL: \$119,876.01
TOTAL: \$305,098.38