











Request for Proposals for the Town of Grand Lake Stormwater Management Plan

March 30, 2023

LETTER OF INTEREST/SIGNATURE PAGE

Town of Grand Lake 1026 Park Avenue Grand Lake, CO 80447

IMEG is excited to offer you our services for a **Stormwater Management Plan**. We have carefully read your RFP and we have provided the necessary information to demonstrate our ability to achieve a plan to improve the quality of water reaching your adjacent lakes. IMEG provides a level of focus and dedication that assures success for project planning, design, and implementation—and we offer our expertise to your Town and the residents you serve.

We are a full-service civil engineering firm with an in-depth knowledge of municipal and public works projects augmented by our knowledge of all aspects of stormwater Top 10 Engineering Firm in the U.S. (BD+C) Top 50 Greenest Firm in the U.S. 75 Locations 2,200 Employees

100% Employee-Owned

engineering. For more than 100-years our firm has provided engineering expertise to municipal organizations throughout the nation, and we are proud to offer our team of highly qualified professionals with many years of experience in stormwater engineering and floodplain management to your staff at the Town of Grand Lake.

We would like to exceed your expectations as we start a professional relationship with you by thinking beyond the project's initial design—to constructability and long-term maintenance, anticipating both expected and unusual circumstances. We will help to identify alternative funding sources, maximizing your capital budget and helping you develop a community that is more resilient to natural disasters. Most importantly, everything we do for you will have a focus on value, quality, communication, and customer service. We will endeavor to anticipate your needs, as our professional relationship prospers—and will bring a unique, very hands on approach to our serving your unique Town. We will be there for you providing the support and professional services you are seeking—whenever and wherever you need us.

We are confident that the team we have assembled has the technical expertise, experience, resources, and knowledge to complete your project on time and within budget. Each IMEG team member firmly embraces a philosophy of becoming an extension of your staff. We intend to surpass your expectations through dedication to quality, professional integrity, and service excellence. Under your staff's direction we will collaborate throughout the project to ensure that the Town of Grand Lake and your stakeholder's interests are kept in mind every step along the way.

We encourage you to visit our corporate website at **www.imegcorp.com** to learn more about our employee-owned philosophy and to take a tour through the many successful projects we have completed.

Thank you for your consideration,

Sincerely,

Tylest

TAYLOR GOERTZ, PE PRINCIPAL-IN-CHARGE | CLIENT EXECUTIVE (AUTHORIZED TO BIND THE COMPANY)

7600 E Orchard Road, Suite 250-S Greenwood Village, CO 80111 P: 303.796.6000 E: Taylor.C.Goertz@IMEGcorp.com



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SECTION 1

PROJECT UNDERSTANDING AND APPROACH



1. PROJECT UNDERSTANDING AND APPROACH

The 671-acre Town of Grand Lake is one of Colorado's premier mountain towns. Sited between Rocky Mountain National Park and the Three Lakes area, the Town of Grand Lake is the western gateway to Rocky Mountain National Park, its truly stunning. The Town is benefitted by a 2020 Comprehensive Plan, and a Wildfire Protection Plan. These plans are useful tools in the preparation of a Stormwater Management Plan. The Comprehensive Plan includes this important Vision Statement "The Town of Grand Lake will protect its natural environment, preserve its history, and enhance its economic vitality to ensure quality of life for its residents, businesses, and visitors". In preparing a Stormwater Master Plan for the study area in the Town of Grand Lake, IMEG will endeavor to identify measures to help the Town of Grand Lake in protecting that vision.

IMEG staff are aware of the challenges faced by a small Colorado mountain community dealing with burn scars associated with wildland fire. We know that the East Troublesome Fire burned 187,964 acres and forced the evacuation of Grand Lake, causing the loss of hundreds of structures. IMEG knows that a fire event creates a myriad of issues for a tourist driven economy , we know Grand Lake is deep in post fire recovery efforts, and we would love the opportunity to be a small part of your impressive recovery effort

Members of the IMEG team have first hand experience with post fire runoff, and played key roles in identifying stormwater mitigation needs and securing numerous grants for stormwater improvements for the City of Manitou Springs in Southern Colorado. IMEG served as City Engineer for five years following the Waldo Canyon Fire, and the City's Flood Recovery Manager/ Public Works Director that served the City of Manitou Springs in those post fire years is now a member of our team. In the weeks immediately following the Waldo Fire, each storm would bring new issues, including being a top story for the local press each time it rained. Fortunately no lives were lost, and only a handful of residential structures were lost. Sited in the floodplain downstream of the burn scar, the historic downtown and City Hall were often evacuated in those early months as a precautionary measure. Roads leading into Manitou Springs were also frequently closed, as bridges were overtopped with sediment laden floodwaters. Tourists were afraid to visit, and many businesses closed.

Through IMEG's direct involvement and oversight of the recovery effort, Manitou Springs residents and businesses were relieved from the devastating residual impacts of the Waldo Canyon Fire. The stormwater mitigation measures that were implemented have been tested by large storms, and the 150 historic structures and 17 historic bridges in Manitou Springs are no longer threatened by flooding. IMEG staff members prepared DOLA funded master plans for critical infrastructure, and helped the City manage over \$16 million dollars of post-fire flood recovery projects.

Similar to the issues you face from Little Columbine Creek, the hydrophobic soils created by the Waldo Canyon fire created

flood related issues in Manitou Springs for approximately three years. Sediment management became a top priority. Impacts were devastating for the first year. The first spring after the fire revegetation of small growth occurred (aided by volunteers and forest restoration groups), though the burn scar remains behind as a reminder still, ten years later. To further augment the IMEG teams experience, we have teamed with AGW. Founded in 1972, A. G. Wassenaar, Inc. (AGW) is a privately owned, multi-disciplined consulting engineering firm specializing in the geosciences and environmental services. With a staff of over 100, their services include, geotechnical engineering, materials testing, construction observations, automated data collection, radon mitigation services, asbestos and lead consulting, soil and groundwater investigations and remediation and industrial hygiene services. AGW has extensive experience with industrial hygiene evaluations following fire events and provided soil sampling and data interpretation around remediated homes following the Marshall Fire in 2021. Sampling was conducted in general accordance with Town of Superior and Boulder County requirements, as well as EPA guidelines.

Manitou's dramatic comeback from the Waldo Canyon Fire earned it the nickname "The Little Town That Could". Fountain and Monument Creeks are running clear again, no longer bearing an ash laden sediment load from the Waldo Canyon watershed. Tourism is fully restored, and It's been a long time since flooding in Manitou Springs was on the local news.

Knowing how to prioritize and make projects more appealing to alternate funding agencies is another service we offer. IMEG has successfully secured BRIC funding for the Town of Morrison which will be utilized to scope mitigation projects and augment their recently completed Hazard Mitigation Plan. We have secured funding for the Town of Golden that will allow the preparation of a Stormwater Master Plan that will identify mitigation projects to protect their downtown area. In addition, on behalf of the Town of Johnstown, we have applied for funding to a Stormwater Master Plan which is under consideration at this time by FEMA. While gaining funding is never promised, we believe our experience helps small communities compete with agencies that have full time staff focusing on attaining alternative funding.



Figure 1: Burn Scar (photo credit Hugh Carey, Colorado Sun)

Preparing a Stomwater Management Plan for the Town of Grand Lake is something the IMEG team is ready for and capable of producing. We know our experience will result in a product that will serve your beautiful community well, one that will use lessons learned as a powerful tool to guide the process from well thought out concepts into construction. Preserving the natural beauty of Grand Lake though low impact measures will be our top priority. Involving your residents and small business owners will also be a critical aspect of the Stormwater Management Plan preparation process, their experience with the post-fire reality is valuable, and public buy-in to proposed risk reduction measure is a critical aspect of project success.

For ease of ranking/review we will address our approach to each of the tasks and deliverables you have in the ordeer you have outlined in the RFP as follows:

TASK 1: INVENTORY:

IMEG's approach to data gathering begins with meeting with your key staff and in determining where data gaps may exist. We will review the as-built information you may have on file regarding existing storm water facilites and augment this information through on-the-ground data capture. Our GIS staff and surveyors are experts at this type of data capture, and they will adeptly produce a data base of all storm drain facilities, including pipe diameters, manhole locations and inverts. If needed, we will capture ground elevations with a drone, something we have done on numerous projects. IMEG has teamed with AGW, a fire runoff experienced geotechnical group that will exxpertly assess existing soil condiitions and provide a report in advance of mitigation facility scoping. **Key deliverables:**

DATA COLLECTION:

Topographic Mapping using collected LIDAR data, ground survey at locations where stormdrain facility inverts are needed and to augment LIDAR data as needed. A GIS Dashboard that will reflect system data in a comprehensive fashion, and will teach your team how to modify the Dashboard as mitigation projects are completed.

SOIL AND WATER QUALITY ASSESSMENT AND MONITORING REPORT:

Water Quality

In order to provide baseline water quality data prior to implementing any stormwater solutions, AGW will collect samples from various project locations and measure the following parameters in the field:

- total suspended solids
- bacteria count/identification
- dissolved oxygen
- pH
- temperature
- clarity

Additional compounds in surface water runoff may be evaluated, including dissolved metals, nitrates/nitrites, Perand Polyfluorinated Substances (PFAS), and/or petroleum hydrocarbons.

The results of these measurements will guide IMEG's approach to sediment and runoff capture and containment.

Soil Characteristics

AGW will advance soil borings in select locations to evaluate soil characteristics which will be used to evaluate low impact development solutions and other best management practices. Characteristics evaluated will include:

- soil type
- horizons
- percolation
- topography

Additional compounds in soil may be evaluated, including metals, nitrates/nitrites, Per- and Polyfluorinated Substances (PFAS), and/ or petroleum hydrocarbons.

Monitoring Report

AGW will prepare a Pre-Construction Water Quality Assessment and Soil Characteristics Report which will be utilized to evaluate water quality mitigation needs as outlined in Task 2.

PROGRESS REPORTING

IMEG will facilitate monthly progress meetings to assure your staff and the public are apprised of findings, and to assure the project's schedule and scope are followed. We will provide a formal progress report at each meeting in the Town's preferred format. Meeting minutes will be produced and made available for review and approval by the team.



TASK 2: ANALYSIS

IMEG will carefully evaluate the existing stormwater conveyance and street system in the study area. Our team will evaluate water quality and monitoring needs. We will develop mitigation alternatives that provide implementable and maintainable solutions and summarize them in a detailed report and with a user friendly GIS dashboard. We will develop a Public Engagement Plan that assures collaboration with key stakeholders. Through our data gathering efforts we will analyze the existing stormwater system, and determine condition and capacity of the existing stormwater conveyance system. We will determine the system's deficiencies; determine area impacted and area served and utilize this information to develop and prioritize mitigation alternatives. *Key Deliverables:*

EXISTING STORMWATER SYSTEM EVALUATION AND ANALYSIS:

 IMEG will prepare all topographic mapping and a hydrologic analysis of the watershed in the post fire environment, appropriately accounting for the sediment that is present in stormwater runoff following a catastrophic fire. We will utilize the bulked flow volume developed and prepare a hydraulic analysis of the conveyance facilities such as culverts and bridges that are currently in place in the study area. We will determine where deposition and overtopping can be expected. Following the existing system hydrologic and hydraulic evaluation, we will initially focus on determining use of low impact solutions are viable, and on what restoration actions can be accomplished quickly in the upper watershed to reduce the amount of ash laden sediment reaching the Shadow Mountain Reservoir.

PRE-CONSTRUCTION WATER QUALITY REPORT AND MONITORING STATION SITING:

- AGW will utilize water quality information obtained in Task 1, above, to determine what pollutants are present in stormwater and to assist in development of a Water Quality Monitoring Plan, which will recommend locations and quantities of monitoring equipment necessary for ongoing water quality evaluation both upstream and downstream of proposed stormwater solutions.
- Temporary and permanent monitoring locations will be integrated into the GIS Dashboard produced by our team. Monitoring will continue for their recommended period after mitigation measures are in place.

PROPOSED STORMWATER ALTERNATIVE REPORT:

 We will prepare a report that summarizes all initial findings in a clear and concise fashion that can be readily understood by all stakeholders. This report will provide alternatives for stormwater runoff mitigation, with a focus on low-impact solutions. The identified alternates will address the post fire initial year conditions that are maintainable for Town crews, and will provide alternatives that can serve the Town after the danger of post fire runoff is abated with young growth possibly with a multi-use function. We will be particularly focused on implementable alternatives that address woody debris, as this can create system failure as quickly as ash laden sediment. We know what solutions have worked in the past, and which are more susceptible to failure from these challenges and our report will include a facility prioritization matrix that makes alternative selection easier for your decision makers.

PUBLIC OUTREACH AND ENGAGEMENT PLAN:

• IMEG will immediately develop a Public Engagement Plan in order to assure collaboration with key stakeholders including the Forest Service, Fire Districts, Three Lakes Watershed Association, local residents, business owners, and the Town's key staff and governing body. We will invite post fire restoration volunteer groups such as Team Rubicon to the table, so that their experience in ladder fuel and standing dead reduction can be brought in and utilized immediately. We will reach out to ad hoc groups and homeowner's associations such as the Grand Lake Estates HOA, and pull stakeholder's together through conducting on-line, email and mailed surveys and with informative community workshops. We will maintain transparency and encourage input throughout the project by making project information available on an interactive public page developed by our GIS team, and integrated into the Town's current website.



TASK 3: STORMWATER MANAGEMENT PLAN PRELIMINARY DESIGN

IMEG will prepare a Preliminary Stormwater Management Plan with Concept Level Construction Documents for the selected mitigation alternatives. Preliminary Cost Estimates will be included to aid in securing funding for these projects. To accurately provide our fee, we have conceptualized the probability that we will be identifying two low impact sediment basins (one exigent), design of one woody debris capture facility (exigent), and preliminary design of up to three conveyance facilities which may include a combination of catchment and stilling basin designs, improvements to existing conveyance capacity through culvert upsizing, stormdrain pipe placement to reduce street conveyance burden, combined with outlet stilling design at the reservoir. It is important for you to be aware that if design of multiple facilities is required, our fee proposal would be impacted—until alternatives are identified we recommend that the scope of services and design fee for anything other than exigent projects are not negotiated at this time. We have provided a concept level design fee for the selected alternatives as outlined, but discourage execution of the preparation of final design and construction document design contract until alternatives are selected based on the Stormwater Management Plan/Report. Many grants are available that cover facility design costs, and separating design and construction for all alternatives until funding is secured may be the preferred path for these projects, and the path we recommend based on our prior experience. In developing the preliminary design, all conceptualized projects will be compliant with local, state and federal code. **Key Deliverables:**

- · Preliminary Stormwater Management Plan/Report
- Preliminary Operations and Maintenance Manual
- Concept Level Plans for selected alternatives (sediment basins, debris trap, water quality pond, outlet protection at reservoir inlet, etc)
- 30% complete Engineering Design Plans, Construction Documents and Specifications for exigent projects (sediment and woody debris capture)
- Funding Matrix summarizing alternative funding sources

TASK 4: STORMWATER MANAGEMENT PLAN FINAL DESIGN

Where an exigent project (1) is needed to protect water quality, IMEG will produce a final Operations and Maintenance Plan, Final Construction Improvement Plans and Final Construction Documents and aid the Town in bid document production. You are no doubt aware that there is federally designated Special Flood Hazard Area that is not benefitted by a detailed study, so the final hydraulics for the exigent alternative will need to demonstrate no-rise in the base flood elevation (which we will determine in our hydraulic analysis), if a rise is unavoidable, FEMA allows a 1' rise in Zone A. The Town will be required to notify FEMA within 6-months of any changes to this mapped floodplain. We anticipate that an exigent project would include "off-line" sediment and debris capture in order to avoid placement in the mapped floodplain, this will be determined in the earlier Tasks associated with this RFP making impacts to the floodplain difficult to fully and accurately assess in a proposal response.

In seeking funding and in budgeting for future improvements, the Town should consider getting the approximate Zone A special flood hazard area remapped in order to establish a regulatory floodway and improve floodplain management in the conveyance area, new facilities could be mapped in this effort and therein meet FEMA regulation for notification of changes. Please note that these services are not included in our scope for this project, as they could potentially be grant funded. For non-exigent projects, the Town is advised to secure grant funding based on our Preliminary Design Plans and preliminary cost estimates, and issue a separate RFP for the development of final design plans and construction documents. This will assure that you remain with federal procurement guidelines, and be able to fully recuperate a large percentage of the associated design and construction costs. IMEG staff will assist the Town with grant writing and grant administration. We have not included construction plan and document preparation in our scope for non-exigent projects at this time for these reasons. Key Deliverables:

- Complete Stormwater Management Plan/Report
- Complete Operations and Maintenance Plan
- Complete Engineering Plans and Specifications for exigent projects (2)
- Issue Bid Documents for exigent projects
- Complete Grant Applications (3) for non-exigent projects



Figure 2: Current Regulatory Flood Map

PROJECT SCHEDULE

RESPONSIBLE PARTY

IMEG Team

AGW Company-Geotech Specific Task

Town of Grand Lake																																
Project Milestones																																
own of Grand Lake	Year		-						2023					_								-		202	4							
Stormwater Master Plan Little Cottonwood Creek	Month		May	J	une	July	'	August	Se	eptember	Oct	tober	Nove	ember	Decer	mber	Janua	ary	Februa	ry	March		pril	Ma	<u>у</u>	June	4	July	Augu	ist	September	
	# of Weeks	1 2	3 4 5	5 6 7	8 9 1	0 11 12	13 14 1	15 16 17	18 19 :	20 21 22	2 23 24 2	25 26 27	7 28 29	30 31	1 32 33	34 35 3	36 37 38	3 39 40	41 42 43	3 44 45 -	46 47 48	49 50 5	<u>1 52 53</u>	54 55 !	56 57 58	59 60 61	62 63	64 65 66	67 68 (<u>89 70 71</u>	72 73 74	75
ASK ITEM ONE: PROJECT COORDINATION																																
Jotice to Proceed 5/1/23		*																														
ask 1-1: Kick-Off Meeting with Town and IMEG 5/10/2022		۲																														
ask 1-2: Present initial (30% draft) to TOGL staff for initial content concurrence												*	E																			1
ask 1-3: Community Engagement Public Workshop to present conceptualized alternatives																																
ask 1-4: Preparation of Community Engagement Plan and Website updates																																
ask 1-5: Coordination with stakeholder groups																																
ask 1-6: 50% Progress Meeting with TOGL staff																																
ask 1-7: 75% Complete: Community Engagement Public Workshop Presentation Public Review	Complete																															\square
ask 1-8: 100% Complete Stormwater Master Plan: Presentation to Town Council																									*							\square
ask 1-9: 100% Complete Exigent Project Engineering Plans and Construction Documents Comp	lete: Issue RFB																															*
ask 1-10: Monthly Project Progress Meetings (Includes Agendas and Minutes)																																\square
ASK ITEM TWO: Data Collection, GIS Dashboard Development, Soil Survey an	d Report																															
ask 2-1: Gather historic plans, reports, as-builts from Town staff																																
ask 2-2: Review collected data and determine if gaps exist where field surveying will be needed	1																						++-				+++			++-		
ask 2-3: Field verification of existing contributing drainage areas and flow patterns																											+++					
ask 2-4: GIS Dashboard with existing facilities and floodplain																											+++					\square
ask 2-5: GIS Dashboard Updates to reflect alternatives, selected alternatives, and exigent projec	ots																															\square
ask 2-6: Soil Survey, Soil Report, Water Quality Assessment																																\square
ASK ITEM THREE: Water Quality Report, Scientific Modeling, Development of	Mitigation Alte	rnative	s, Mast	er Plan	Report																											
ask 3-1: Hydrologic Analysis-model existing conditions	Ŭ																															
ask 3-2: Preliminary existing facility capacity calculations and preliminary hydraulic model of Littl	e Columbine Cree																															
ask 3-3: Water Quality Monitoring																																\square
ask 3-4: Field survey to fill existing condition data gaps																																
ask 3-5: Master Plan Narrative																																
ask 3-6: Identification of mitigation alternatives and exigent projects																															′	\square
ask 3-7: Town staff review –30% Complete Stormwater Master Plan w/Alternatives Identified														*	•								\rightarrow					+++			+++	\vdash
ask 3-8: Revise to reflect Town staff comments																		+ $+$ $+$		+ $+$ $+$			++-	+ $+$ $+$			+++	+++	++++	\rightarrow	+++'	1
ask 3-9: Hydrologic Analysis Future for alternatives selected (ID and delineate future subbasins)																												+++			<u>+'</u>	\square
ask 3-10: Stormwater conveyance capacity calculations-reflecting new projects or upgrades to e	existing system																											+++			<u>+ + '</u>	\square
ask 3-11: Concept Level drawings all mitigation improvement projects with preliminary cost esti	imates																														+'	\square
ask 3-12: 75% Complete Public Comment Draft–Town Staff and Public Review																				*												\square
ask 3-13: Revise to reflect Town staff and public review comments																																\square
ask 3-14: Field survey to fill information gaps at exigent project locations																																\square
ask 3-15: Revise hydraulic analysis to reflect staff and publicly approved exigent projects and fut	ture mitigation pro																														+++	\square
ask 3-16: Preparation of Operations and Maintenance Manual for mitigation projects																															+'	\square
ask 3-17: 90% complete updated SDMP to staff for review																															+'	\square
ask 3-18: Address final staff and stakeholder comments on Stormwater Master Plan and O&M F	Plan																															لــــــــــــــــــــــــــــــــــــــ
FASK ITEM FOUR: Engineering Plans and Construction Documents																																
ask 4-1: Prepare 75 % Complete Construction Improvement Plans for selected Exigent Projects																																\square
ask 4-2: Town staff and stakeholder review of 75% Complete Construction Improvement Plans																																\square
ask 4-3: Address comments and advance plans to 90% Complete																																\square
ask 4-4: Preparation of Technical Specifications																																\square
ask 4-5 Town Staff Review of 90% Complete Plans and Specifications																																\square
ask 4-6: Permitting (does not include FEMA)																																\square
ask 4-7: Address Comments, Final QA/QC, prepare Bid Package for Exigent Projects																																\square
ASK ITEM FIVE: FUNDING SOURCE ID FOR STORM DRAINAGE MASTER PLA	AN AND PROJE	CTS		·																			The second se				فترفعه	The second seco				
ask 5-1: Funding Source Matrix and Report																																
ask 5-2: Grant Applications for Design and Construction of Non-Exigent Alternatives																							++									
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Once finalized, this Project Schedule will be managed and discussed at monthly project meetings to assure milestones are met.

SIMILAR EXPERIENCE



MUNICIPAL EXPERIENCE

IMEG has vast experience with municipal capital improvement projects. Our team is well-versed in managing municipal contracts and providing engineering services while serving as an extension of the organization.

Provided below are current on-call type contracts and other municipalities/water districts we have provided services for in the past.

CURRENT CLIENTS

CENTRAL CITY *NEW*

On Call Civil Engineering & Land Surveying and Development Plan Review Services

CITY OF BOULDER *NEW*

Stormwater and Flood Management, Hydroelectric Power Engineering and Design Services

CASTLE PINES METROPOLITAN DISTRICT - 5 YEARS

On Call Civil Engineering & Land Surveying and Development Plan Review Services

Potable Water Infrastructure, Sewer Collection, Storm Water, Transportation, Trails, Etc.

CITY OF GOLDEN - 35+ YEARS

On Call Civil Engineering & Land Surveying

Potable Water Infrastructure, Non-Potable Water Infrastructure, Storm Water, Sewer Collection, Transportation, Trails, Parks, Etc.

CITY OF LONE TREE - 20+ YEARS

On Call Civil Engineering & Land Surveying and Development Review Services

Storm Water, Transportation, Trails, Parks, Etc.

TOWN OF JOHNSTOWN - 20+ YEARS

On Call Civil Engineering & Land Surveying and Development Review Services

Potable Water Infrastructure, Non-Potable Water Infrastructure, Storm Water, Sewer Collection, Transportation Projects

PARK MEADOWS METROPOLITAN DISTRICT - 20+ YEARS

On Call Civil Engineering & Land Surveying Project Management, Asset Management

TOWN OF MORRISON - 9 YEARS

On Call Civil Engineering & Land Surveying and Development Review Services

Potable Water Infrastructure, Non-Potable Water Infrastructure, Sewer Collection & Treatment, Transportation Projects



Ancillary Services

- Risk Assessment
- Drone Flights
- Grant Writing
- Master Plans for Critical Infrastructure
- Capital Improvement Planning
- Environmental Services
- Emergency Assistance during natural disasters
- Bridge Assessments
- Scientific modeling of system hydraulic performance
- 3-D models of water/wastewater pump stations
- Representation of clients to regional partners

PAST CLIENTS

BACA GRANDE WATER & SANITATION DISTRICT, CRESTONE, CO CITY OF MANITOU SPRINGS, CO CITY OF RAWLINS, WY CITY OF ROCKY FORD, CO CITY OF TORRINGTON, WY CITY OF WRAY, CO PARKER WATER & SANITATION DISTRICT, PARKER, CO TODD CREEK METROPOLITAN DISTRICT, BRIGHTON, CO TOWN OF FOWLER, CO TOWN OF LAGRANGE, WY TOWN OF LUSK, WY

CITY OF PICO RIVERA MASTER PLAN UPDATE

Pico Rivera is completing the process of updating the master plans, including the Water Master Plan, Wastewater Collection Master Plan and the Storm Drain Master Plan. The City entered into a contract to develop these updates, as well as the City's Urban Water Management Plan.

The Water Master Plan includes the update to the existing GIS system, development of a hydraulic model, and site inspections for the water treatment plants and pumps. The plan also evaluated the current population projection, water demand estimates and water supply availability. The conclusion of the plan will include an evaluation of the City's Budget and development of a CIP.

The Wastewater Collection Master Plan is similar to the Water Master Plan, but the available data is somewhat limited. The original master plan's hydraulic model is not available, nor is the GIS. IMEG is building the GIS from information provided from LA County, to be incorporated into a new hydraulic model. This hydraulic model was used in combination with the meters installed within the system to determine what areas within the system witnesses inflow and infiltration issues.

The Storm Drain Master Plan is a new master plan. The original evaluation of the storm drain system was developed in the 1960's. IMEG is developing a new GIS system using as-builts and available documentation, which will then be incorporated into a hydraulic model. This hydraulic model was, then, used to in combination with the hydrology model to evaluate the current capacity of the system.

The GIS database developed from these three master plans will be used in the field using City-provided toughbooks, allowing staff immediate access to the systems.

All three of the Master Plans involved the development of hydraulic models. The Water Master Plan used the City's GIS system to develop an InfoWater model. Both the Wastewater Collection and the Storm Drain Master Plans utilized InfoSWMM. The sewer system had to be developed using strictly as-built information, since a GIS was not available. This effort resulted in having negative slopes within the model. To resolve this, IMEG provided field survey to more accurately determine the correct slopes.Services included assisting the City in updating their Emergency Response Plan with specific and outlined responses for a variety of situations to protect their staff and provide a safer and more secure work environment.

A Risk and Resilience Assessment was completed finding and addressing numerous gaps in their physical, material, IT, and employee security.

Additional services included:

- Policy and procedure review for emergency response plan
- Gap Analysis
- Jurisdictional Crime analysis and report
- Risk and Resilience Assessment and Report

Our team also assisted the City in creating a *"getting back to business"* plan after an emergency situation.

IMEG also provided a **AWIA Risk and Resilience Assessment and ERP** review to discover and address gaps in their security systems.



Соѕт	\$950K
COMPLETION	On-Going
Services	Civil, Water & Wastewater, Security Risk and Resilience Assessment (RRA) Emergency Response Plan (ERP)
Reference	Monica Heredia Deputy Director (City Engineer) Public Works Department 6615 Passons Blvd. Pico Rivera, CA 90660 O: 562.801.2436 E: mheredia@pico-rivera.org

PICO RIVERA, CA

TOWN OF JOHNSTOWN North Service Line

SEWER INTERCEPTOR INSTALLATION

Since the inception of the Town of Johnstown in 1902, infrastructure and planning needs have changed significantly. Much of IMEG's role in finding innovative solutions to the Town's needs include using the existing facilities to the highest best use, upgrading facilities where there is a clear need, and prioritizing the improvement needs for the interceptor design phasing and constriction.

Interceptor design by its very nature serves the larger communities needs for public health, wastewater treatment, and financial growth capacity in the community. This is especially true in rural areas where improvements and development that happen within the community can affect the entire community. By planning for future development needs, the Town can address demands from the community in an orderly and cost-effective manner, that uses public resources efficiently and responsibly to continue to promote the quality of life that the Town of Johnstown is known for.

IMEG worked directly with the CMAR to evaluate and prioritize the community's needs. This included review of existing capacity issues, pending development applications needing sewer service upgrades, evaluation of timing and priority to establish a phasing program and timeline. This planning effort served as the basis for creating a successful strategy for bringing infrastructure online in a timely and cost competitive way. In addition, IMEG worked closely with the Town's contractor to evaluate system constructability, establish means and methods for project delivery, and timing of resources for the project construction needs. Everyone involved in the project had a voice from the first day of planning the project.

The capacity of the existing sewer system is undersized for both the current demand and the anticipated future development in the Town's statutory growth boundary. In addition, there are several local developments that are restricted for development until such time as the Town's sewer capacity issues could be addressed. In order to create a system with sufficient capacity to handle the short term and longer vision loads on the system, IMEG worked closely with the Town to evaluate alternatives to upgrade the sewer system, manage immediate demand pressures, and facilitate future growth in the area.

This project involved installing a deep interceptor sewer on the north side of the Town of Johnstown, to extend from west of I-25 to the Central Wastewater Treatment Plant on the east side of the City. This is an approximate length of 40,000 linear feet. This route generally slopes from west to east, however there are a few localized low/high points which necessitated a lift station. One of the planning elements for this project was to eliminate as many lift stations as possible in consideration of the Town's long-term maintenance requirements.



Соѕт	\$27 million
COMPLETION	2022
SERVICES	Civil, Structural, Mechanical, Electrical, Survey
Reference	Ellen Hilbig, Utilities Director 970.578.9619 / ehilbig@iohnstownco.gov

As part of the North Interceptor planning, there was an existing lift station, servicing the Corbett Glen neighborhood, which could be decommissioned with the installation of the deep sanitary sewer. This was replaced with a large lift station near Colorado Blvd and WCR 50, known as the WCR 50 Lift Station. The interceptor, lift station, and associated force mains were designed to serve the ultimate build-out of the town long into the future. The gravity sewer ranges from 12" to 30", the lift station is rated for 6 MGD, and there are two parallel 12" force mains which have approximate length of 1,500 linear feet. The lift station and force mains were designed for incremental expansion for a 40-yr buildout. Along the 40,000 linear feet route, obstructions include the Great Western Railroad, Colorado State Highway right of way, and private properties including agricultural, industrial, and residential land uses. IMEG worked closely with the Town to evaluate alternatives for the construction of a new force main system, extension of a gravity sewer to the wastewater treatment plant, and minimize impacts from over depth sewer construction, and private property interests.

JOHNSTOWN, CO

TOWN OF JOHNSTOWN CENTRAL SERVICE LINE

SEWER INTERCEPTOR INSTALLATION

The Town of Johnstown was founded in 1902. Infrastructure and planning needs have changed significantly since the inception of the Town. Much of IMEG's role in finding innovative solutions to the Towns needs include using the existing facilities to the highest best use, upgrading facilities where there is a clear need, and prioritizing the improvement needs for the interceptor design phasing and constriction.

Some of the goals for the project included eliminating lift stations and force mains where possible to minimize long term operational costs and maintenance needs. This was done by replacing the existing undersized lift station serving the immediate development area and replacing it with a wet well and lift station with expansion capacity to serve the ultimate development limits for the Town long into the future.

As part of the future phase planning efforts, IMEG is able to decommission an existing lift station further upstream by installing a gravity interceptor as part of the Phase 2 component that dramatically improves the service area that can be addressed, and eliminate an older lift station facility in the process.

Interceptor design by its very nature serves the larger communities needs for public health, wastewater treatment and financial growth capacity in the community. This is especially true in rural areas where improvements and development that happen within the community can affect the entire community. By planning for future development needs, the Town can address demands from the community in an orderly and cost-effective manner, that uses public resources efficiently and responsibly to continue to promote the quality of life that the Town of Johnstown is known for.

IMEG worked directly with the Town of Johnstown to evaluate and prioritize the communities needs. This included review of existing capacity issues, pending development applications needing sewer service upgrades, evaluation of timing and priority to establish a phasing program and timeline. This planning effort served as the basis for creating a successful strategy for bringing infrastructure online in a timely and cost competitive way.

In addition, IMEG worked closely with the CMAR to evaluate system constructability, establish means and methods for project delivery, and timing of resources for the project construction needs. Everyone involved in the project had a voice from the first day of planning the project.

The capacity of the central interceptor for the lower reaches of the sewer system is undersized for both the current demand and the anticipated future development in the Town's statutory growth boundary. In addition, there are several local developments that are restricted for development until such time as the Town's sewer capacity issues could be addressed. In order to create a system with sufficient capacity to handle the short term and longer vision loads on the system, IMEG worked closely with the Town to evaluate alternatives to upgrade the sewer system, manage immediate demand pressures, and facilitate future growth in the area.

Among the challenges were obstructions along the sewer alignment that include the Little Thompson River, the Great Western Railroad, Colorado State Highway right of way, and private properties including agricultural, industrial, and residential land uses. IMEG worked closely with the Town to evaluate alternatives for the construction of a new force main, extension of a gravity sewer to the wastewater treatment plant, and minimize impacts from over depth sewer construction, and private property interests.

Size	Service Area, appx 16 square miles Phase 1 appx 8,600-lf Phase 2 appx 11,000-lf Phase 3 appx 20,000-lf
Соѕт	Overall construction budget \$35 million
COMPLETION	Phase 1 - Fall 2021 Phase 2 - Winter 2021 Phase 3 Design - Winter 2021 Phase 3 Construction - 2022/23
SERVICES	Civil, Survey, Structural, Electrical
Reference	Ellen Hilbig, Utilities Director 450 S. Parish Ave Johnstown, CO 80534 P: 970.578.9619 E: ehilbig@johnstownco.gov

Johnstown, CO





CITY OF GOLDEN Annual Utility Replacement Programs

Golden, CO



ANNUAL ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION SERVICES

IMEG provides annual engineering design and construction administration services for utility replacement within the City of Golden. Each year a prioritization of water and sanitary sewer lines that need to be constructed, replaced or rehabilitated based on gaps in the service area, inadequate capacity, and/or pipe condition are identified.

These waterlines are typically old and no longer provide adequate capacity. The existing sanitary sewer lines typically have issues with infiltration, age, and/or corrosion. The damaged sanitary sewer pipe is removed and replaced with new pipe. In locations of high traffic volume, difficult access, and where the pipe is not overly damaged, cured-in-place pipe (CIPP) has been used with a high success rate. New and possibly larger pipelines are installed while the existing waterlines are abandoned in place.

Over the last three years, over 13,000-If of CIPP has been installed as an option to the traditional remove and replace strategy. The storm sewer projects are more likely to alleviate drainage issues within the community.

Design sizing of these storm sewers includes drainage flow calculations and cost/benefits analysis. This service has been provided to the City of Golden since 1988.

Соѕт	Annual Sewer Budget Varies from Approximately \$500,000 - \$1 million
COMPLETION	On-Going
Services	Engineering Design and Construction Administration Services, Water Pipelines, Sanitary Sewer Lines, Storm Sewer
Reference	Dan Hartman, Public Works Director City of Golden Public Works Department 1445 10th Street Golden, CO 90401 O: 303.384.8150 E: dhartman@cityofgolden.net

CITY OF MANITOU SPRINGS Ute Trail Water Main Replacement

MANITOU SPRINGS, CO





WATER DISTRIBUTION SYSTEM AND WASTEWATER COLLECTION SYSTEM

IMEG worked with the City of Manitou Springs to evaluate the water distribution system and the wastewater collection system. During this evaluation, we recommended improvements to be made across the City.

These improvements included on South Path, E. Fountain Place, and Ute Trail. For the portion along Ute Trail, IMEG coordinated efforts with the City, evaluated runoff and stormwater impacts and made recommendations to water and sewer impacts. Recommendations included installing a new 6-inch water main and replacing the existing sewer main with 6-inch PVC. For a full evaluation of the project site, IMEG utilized drone methodology to survey large areas at once.

Соѕт	\$650K
COMPLETION	2018
Services	Civil, Water Distribution System, Wastewater Collection System
Reference	Sara Hartley Former Hazardous Mitigations Officer 301 S. Park Ave. Helena, Montana 59601 O: 719.492.3914 E:nokolisara@gmail.com

CITY OF MANITOU SPRINGS WATER MASTER PLAN

MANITOU SPRINGS, CO



IMEG's master plan involved the evaluation of the entire water system, including the raw water reservoir, water treatment facilities, and distribution system. Two models were created and interconnected using a proprietary "Dashboard" tool, allowing the City to evaluate the system under specific conditions, such as drought events. Using the Water Distribution Model, IMEG evaluated the efficiency, water age, velocities, and pressure throughout the entire system and make improvement recommendations to the City.

One of the main discussion points in the Master Plan was on the existing 2 MG tank that provided water to 70% of the City. This tank had never been taken offline for maintenance because there was no known by-pass line, meaning that most of the City would be without water. To remediate this issue, our team recommended that the City install a new 750,000-gallon water tank that will act as a redundant tank to the existing 2 MG tank, allowing it to be taken offline for maintenance. IMEG alongside Gene Schaefer with SDG conducted an analysis to determine the most beneficial location and material for the new storage tank.

This work lead the IMEG team into an on-call engineering contract with the City in which we provided both water and wastewater design, development and system reviews, SOP development along with other services.

Соѕт	\$98,940
COMPLETION	2019
SERVICES	Civil, Master Planning, System Evaluation, Regulation Development, Utilities Design
Reference	Sara Hartley Former Hazardous Mitigations Officer 301 S. Park Ave. Helena, Montana 59601 O: 719.492.3914 E:nokolisara@gmail.com

PROJECT EXPERIENCE

		RECENT PROJEC	CT EXPERIENC	CE		
		QUICK G	GLANCE			
No.	Contact Info:	Title of Example Project	Client	Budget/Year	% Complete	RFQ CATEGORY TYPE
1	А	Johnstown Farms WW Lift Station (8.3 MGD) (Design and CM)	Johnstown	\$3,500,000/2020	100%	Project Management Services
2	А	Weld County Rd. 50 WW Lift Station (6.68 MGD) (Design and CM)	Johnstown	\$3,300,000/2022	90%	Project Management Services
3	А	Central Phase I WW Collection System (Design and CM)	Johnstown	\$7,500,000/2021	100%	Project Management Services
4	А	Central Phase II WW Collection System (Design and CM)	Johnstown	\$11,500,000/2022	90%	Project Management Services
5	В	Stormwater Design Standards	Johnstown	\$35,000,000/2022*	15%	Stormwater Facility Design
6	В	Alt. Funding Applications for Stormwater Master Plan	Johnstown	\$33,000,00072022	10%	Grant Procurement
7	В	Alt. Funding Applications for Transportation Master Plan	Johnstown	5,000/2022*	10%	Grant Procurement
8	D	Recycle Yard and Iowa Street Pond Improvements	Golden	\$345,000/2020	100%	Stormwater Facility Design
9	D	Washington Street and New Loveland Mine Park Pond Improvements	Golden	\$497,000/2021	100%	Stormwater Facility Design
10	С	Pinery Lift Station (.1 MGD)	Starwood LA, LLC	\$250,000/2021	100%	Project Management Services
11	D	Water Treatment Plan Improvements (5 projects)	Golden	\$5,000,000/2017-2021*	100%	Project Management Services
12	D	Alt. Funding Application for Stormwater Master Plan	Golden	\$7,500/2022*	60%	Grant Procurement
13	E	Wastewater Master Plan and Capital Improvement Plan	Manitou Springs	\$65,000/2018*	100%	Project Management Services
14	А	Floodplain Management Services/Development Review	Johnstown	TMNTE*	Ongoing	Floodplain Administration
15	F	Stormwater Master Plan	Pico Rivera	\$120,000/2019*	100%	Stormwater Facility Design
16	F	Water System Master Plan	Pico Rivera	\$85,000/2019*	100%	Project Management Services
17	D	Water System Master Plan and Capital Improvement Plan	Manitou Springs	\$140,000/2017*	100%	Project Management Services
18		Floodplain Management Services/Development Review	Morrison	TMNTE*	Ongoing	Floodplain Administration
19	G	Water System Master Plan	LaGrange, WY	\$100,000/2021	100%	Project Management Services
20		FEMA BRIC Scoping Project Application and Grant Mgmt	Morrison	\$7500/2022*	80%	Grant Procurement
21		Water Service Extension (Morrison to Red Rocks)	Morrison	\$1,000,000/20	100%	Project Management Services
22	Н	Floodplain Management Services/Development Review	Central City	TMNTE*	Ongoing	Floodplain Administration
23	С	Utility Replacement Projects (1 per yearlast 5 years)	Golden	\$5,000,000/2016-2021	100%	Stormwater Facility Design
24	J	58 Detention Ponds (Conformity Assessments and Modification Design)	Castle Pines Metro	\$60,000/2018	100%	Stormwater Facility Design
25	D	Ute Trail Sewer Main Replacement	Manitou Springs	\$65,000/2018	100%	Project Management Services
26	K	Water, Sewer, Stormwater GIS	Silverthorne	\$750,000/2007-2022	Ongoing	GIS Development
27	L	Water, and Sewer GIS	Ken Caryl Ranch	\$350,000/2016-2022	Ongoing	GIS Development
28	М	Water, Sewer and Stormwater GIS and Planning	Lyons	\$140,000/2013-2022	Ongoing	GIS Development and Planning
				*study or design only		

Project Categories Key
WW Force Main
WW Lift Station
WW Gravity Main
Potable Water System Project
Floodplain Administretion and/or Stormwater Facility Design
Alternative Funding/Grant Management
Stormwater Facility Design
Master Plan

PROJECT REFERENCES

Doug Gossett, Town Engineer, 970-829-7878

B B

D

F

Kurt Jones, Project Manager, (303) 858-9997

Ann Beierle, Public Works Director, (303) 384-8153

D Joseph Lammers, Civil Engineer-CFM, (303) 384-8156
 D Ann Beierle, Public Works Director, (303) 384-8153
 E Sara Hartley, Recovery Manager (former), (719) 492-3914

Luis Osuna, Assistant City Engineer, (562) 801-4364

 G
 Bruce Perryman, AVI, (307) 634-6017

 H
 Lisa Remhildt, Special Projects, (303) 582-5251 ext.31

Kara Winters, Town Manager, (720) 643-3454

Jason LeTellier, CPMD Superintendent, (303) 688-8330 KZach Margolis, Utilitiy Director, (970) 262.7344 Tim Anderson, District Manager, (303) 979-7424 MEric Jaap, Engineer, (307) 721-5345







3. QUALIFICATIONS Key Project Staff and Resumes



SUBCONSULTANT

AGW, Inc. Geotechnical Engineer

NO MEMBERS OF OUR TEAMS WILL BE REPLACED DURING THE DURATION OF AWARDED PROJECTS WITHOUT APPROVAL FROM THE TOWN OF GRAND LAKE.



Taylor Goertz, PE

PIC PROJECT MANAGER | CIVIL ENGINEER

Taylor has more than 23 years of varied experience in planning, engineering, management, and construction in site development engineering. His experience includes a wide variety of tasks including public works services, water and wastewater conveyance, stormwater and detention facilities, roadways, recreational facilities, and entertainment projects.

PROJECT HIGHLIGHTS

- Cadre General Contractors, Centennial, CO, Stormwater Management Plan
- Castle Pines Metropolitan District, Castle Rock, CO, Crestone Way Widening and Water Line Replacement, Included Design of Curb & Gutter, Asphalt, and Storm Improvements
- · City of Central City, CO, Miscellaneous On-Call Engineering Services
- City of Golden, CO, 2020 Water and Sanitary Sewer Infrastructure Replacement
 Improvements
- City of Golden, CO, 2021 Miscellaneous On-Call Engineering Services
- City of Golden, CO, 2021 Miscellaneous Planning Projects
- City of Golden, CO, 2022 Stormwater Detention Pond Retrofit Improvements
- City of Golden, CO, 2022 Utility Replacement
- City of Golden, CO, Water Quality Improvements
- City of Torrington, WY, Torrington, WY, Water Master Plan and Detailed Engineering Analysis of Town Water Supply
- Kolorado River Ranch, LLC, Gypsum, CO, Master Plan/Design for Improvements on 2,000 Acre Ranch, Including Stormwater Management Systems, Regulatory Permitting, Wetlands Delineation, Ranch Headquarters, Lodge & Accessory Dwelling Unit Design & Construction, Grading Plans & Roadway Improvements
- Lola's House LLC, Cherry Hills Village, CO, 15 Cherry Hills Drive, Grading and Stormwater Management Plans for New House Construction
- RTP Company, Orange, TX, Site Stormwater and Wastewater Evaluation
- Town of Johnstown, CO, Complete New Storm Water & Drainage Design Standards
- Town of Johnstown, CO, Wastewater Master Plan
- Town of Morrison, CO, On-Call Flood Plain Administrative Services and Misc.
 Development Review Services

Experience 23 Total, 23 with IMEG

Education

Colorado School of Mines, BS Civil Engineering

Registrations

Professional Engineer Colorado (40237)

Affiliations

APWA Colorado Asphalt Paving Association Leadership Douglas County Association



Shelley Cobau, CFM SENIOR CIVIL TECHNICAL SPECIALIST

Shelley has over 38 years experience with local governments with a focus on public services, planning, design, plan review, and implementation of both capital and land development projects ranging from large community master plans to small commercial developments and infrastructure projects both in the public and private sectors. Shelley has studied surveying, hydrology, hydraulics, civil engineering, floodplain management, emergency management and continuously seeks to broaden her educational experience.

PROJECT HIGHLIGHTS

- City of Pico Rivera, CA, Urban Water Management Plan Update
- City of Pico Rivera, CA, Water, Sewer and Storm Drain Master Plan
- City of Las Vegas, NV, Review and final approval of some 3000 technical drainage studies for projects including the Luxor, Bellagio, Excalibur, Del Web's Summerlin and Hard Rock hotels, and \$250M of annual capital projects
- City of Golden, CO, Grant Writing Support for Lena Gulch, Floodplain, Storm Water Mitigation Project
- City of Manitou Springs, CO, Stormwater Master Plan, Water Distribution Master Plan, and Waste Water Conveyance Master Plan
- City of Manitou Springs, CO, Management of numerous capital improvement projects including major street beautification/rehabilitation projects, pedestrian and historic bridges
- City of Santa Fe, NM, Santa Fe River Watershed Action Strategy
- Santa Fe County, NM, Sustainable Land Development Plan, Film Ordinance, Floodplain Ordinance, Home Based Business Ordinance
- Santa Fe County, NM, Galisteo Watershed Rangers Program, designed and implemented an education program focused on sustainable development for 4th grade students
- SERCO/FEMA DR-4440-SD, South Dakota Mitigation Specialist for declared disaster in South Dakota. Completed mitigation reviews and site visits.
- Southern Sandoval County Arroyo Flood Control Authority, NM, Stormwater Facility Master Plan. Rainfall Event and Data System (READS) Rainfall Record and Rain Gauge Implementation
- Town of Johnstown, CO, 40,000-If Sanitary Sewer Expansion North Phase 1 Sewer Interceptor Design, Including Lift Station and Force Main
- Town of Johnstown, CO, Sanitary Sewer Expansion Phase 1
- Town of Morrison, CO, As-Needed Miscellaneous Engineering
- Town of Morrison, CO, Hazard Mitigation Plan Assistance/BRIC grant

Experience

39 Total, 3 with IMEG

Education

Denver Institute of Technology, AAS Cartography

Registrations

Certified Floodplain Manager (CFM) No. US-17-10010

Certifications

Project Manager Certification

Affiliations

Association of State Floodplain Managers American Public Works Association CASEM



Glendon Berrett, PE

CIVIL ENGINEER

Glendon has vast experience in engineering, design, construction, and management services for both municipal and private clients. He has worked on the design of many diverse projects for water & wastewater treatment facilities, water distribution, sanitary sewer collection and conveyance, storm water improvements. Glendon's diversity of projects provides him with broad based technical abilities in design, coordination skills for interdisciplinary projects, as well as construction administration skills.

PROJECT HIGHLIGHTS

- Castle Pines Metropolitan District, Castle Pines, CO, Storm Sewer Improvements, Orofino Drive
- Castle Pines Metropolitan District, Castle Rock, CO, Crestone Way Widening and Water Line Replacement, Included Design of Curb & Gutter, Asphalt, and Storm Improvements
- City of Golden, CO, 2020 Water and Sanitary Sewer Infrastructure Replacement
 Improvements
- City of Golden, CO, 2021 Water and Sewer Utility Replacement Design
- City of Golden, CO, 2022 Stormwater Detention Pond Retrofit Improvements
- City of Golden, CO, Grant Writing Support for Lena Gulch, Floodplain, Storm Water Mitigation Project
- City of Golden, CO, Groundwater Redundancy Planning
- City of Golden, CO, Rimrock Drive Trailhead Access Design, Including Street Narrowing, Trail Access Features, a Restroom Facility, Storm and Detention/Water Quality Improvements
- City of Golden, CO, Storm Sewer Improvements, Corp. Circle
- City of Golden, CO, Storm Sewer Improvements, Iowa-Washington
- City of Golden, CO, Various Storm Improvements
- City of Golden, CO, Vidler Water Collection Tunnel System Pipeline Replacement
- City of Golden, CO, Water Quality Improvements
- Kolorado River Ranch, LLC, Gypsum, CO, Master Plan/Design for Improvements on 2,000 Acre Ranch, Including Stormwater Management Systems, Regulatory Permitting, Wetlands Delineation, Ranch Headquarters, Lodge & Accessory Dwelling Unit Design & Construction, Grading Plans & Roadway Improvements
- Town of Morrison, CO, Raw Water Infrastructure Review & Coordination

Experience

23 Total, 23 with IMEG

Education

Colorado School of Mines, BS Civil Engineering

Registrations

Professional Engineer Colorado (39284) Wyoming (10713)

Affiliations

American Water Works Association American Council of Engineering Companies of Colorado



Thu Lam, PE SENIOR CIVIL ENGINEER

Thu brings over 9 years of civil engineering experience in the design and project management of various underground utilities and facilities projects. Thu has worked in various roles as a project manager on the owner's side (Southwest Gas, City of Brighton) as well as a field and office engineer on the contractor's side (Kiewit). Her experience includes the design, scheduling, and project management of gas pipelines, underground utility crossings, and water and wastewater facilities.

PROJECT HIGHLIGHTS

- City of Brighton, CO, New 20 MGD Water Treatment Plant
- City of Golden, CO, 2023 Water Treatment Facility Improvements
- City of Phoenix Water Services Department, AZ, Created Multiple Utilities Crossings Exhibits for Water Services
- Hilltop Brothers, LLC, Parker, CO, Fields Development Sewer Lift Station
- Los Angeles County Metropolitan Transportation Authority, CA, 12.3 miles of Gold Line extension from Glendora to Montclair
- · Orange County Sanitation District, CA, Two Sanitization Tanks and Associated Piping at Truck Loading Bay Odor Control
- Southwest Gas Corporation, Victorville, CA, 10 miles of high pressure and distribution pipelines replacement on Big Bear Blvd
- Town of Johnstown, CO, Miscellaneous Referral Reviews

Experience

9 Total, <1 with IMEG

Education

Cal Poly Pomonoa, BS Civil Engineering

Registrations

Professional Engineer Colorado (0059576) California (92718)

Training

InfoWater Pro Primevera P6



Paige Coufal Civil Design Engineer

Paige has seven years of experience across a wide range of civil engineering projects. She has been involved in the design of water and wastewater treatment facilities, evaluation and improvement to raw water, potable water, wastewater, and stormwater systems, site development, as well as roadway and trail improvements. Her time with IMEG has provided her with a broad base of technical abilities in design and management for interdisciplinary projects.

PROJECT HIGHLIGHTS

- · City of Golden, CO, Complete New Storm Water & Drainage Design Standards
- City of Golden, CO, Detention Pond Improvements (Including GESC/SWMP)
- City of Golden, CO, 2021 Water and Sewer Utility Replacement Design
- City of Golden, CO, Grampsas Parking Lot Conversion, Including Storm Drainage and Water Quality Improvements
- City of Golden, CO, Groundwater Redundancy Planning
- City of Golden, CO, Guanella Reservoir Revegetation and Update of Stormwater Mitigation Plan
- City of Golden, CO, Rimrock Drive Improvements, Trail Addition, Storm Improvements, and Angled Parking
- City of Golden, CO, Storm Sewer Improvements, Corp. Circle
- City of Lone Tree, CO, Timberline Storm Sewer, Lodgepole
- · City of Manitou Springs, CO, 2018 Water Main Replacement
- City of Pico Rivera, CA, Urban Water Management Plan Update
- City of Pico Rivera, CA, Water, Sewer and Storm Drain Master Plan
- Elizabeth Parks & Recreation District, Elizabeth, CO, Casey Jones Park Master Plan
- Kolorado River Ranch, LLC, Gypsum, CO, Master Plan/Design for Improvements on 2,000 Acre Ranch, Including Stormwater Management Systems, Regulatory Permitting, Wetlands Delineation, Ranch Headquarters, Lodge & Accessory Dwelling Unit Design & Construction, Grading Plans & Roadway Improvements
- RTP Company, Orange, TX, Site Stormwater and Wastewater Evaluation
- Stonegate Village Metropolitan District, Parker, CO, Potassium Permanganate and Green Sand Filter Evaluation
- Town of Morrison, CO, Hazard Mitigation Plan Assistance/BRIC grant

Experience

7 Total, 7 with IMEG

Education

Colorado School of Mines, BS Geological Engineering

Affiliations

American Water Works Association



Karrie Johnson, PWS

Senior Environmental Specialist

Karrie Johnson has 16 years of natural resources experience. She has particular expertise in wetland delineation, with widespread experience in South Dakota and Minnesota. Ms. Johnson is also highly skilled in 404 permitting, mitigation planning, monitoring, and maintenance. Her expertise also includes biological inventories, hydrogeomorphic assessments, floristic quality assessments, and wetland bank developments.

PROJECT HIGHLIGHTS

- City of Brandon, SD, East Side Trunk Sewer Jurisdictional Determination and Wetland Delineation
- City of Brandon, South Dakota, Split Rock Creek Bank Stabilization Construction -Monitoring and Reporting for Topeka Shiners and Habitat
- City of Mitchell, SD, Dry Run Creek Channel and Drainage Clean out
- City of Sioux Falls, Sioux Falls, SD, Wetland Delineation, Jurisdictional Determination, HGM and 404 Permitting for Sewer Line Placement
- Clark County Highway Department, Willow Lake, SD, Survey, Traffic Impact Study, Environmental Services, and Design of the Reconstruction of Clark County Road 38
- CSAH 16, Pipestone County, MN, Wetland Delineation of Nine Wetlands and Stream Crossings
- Environmental Scientist for Environmental Resources Management for a 2,500-Acre Wetland Delineation, Union County, SD
- Monitoring of More than 40 Wetland Mitigation Projects and Stream Restoration Projects for City, Land Developers, and Private Landowners
- South Dakota Department of Transportation Wetland Delineation
- · South Dakota Department of Transportation wetland Site Monitoring
- Spring Creek, Lincoln County, SD, Wetland Delineation
- U.S. Army Corps of Engineers, Lincoln County, SD, Spring Creek Mitigation Plan Development
- Various City, Land Developers, and Private Landowners, Nationwide, US, Monitoring More than 40 Wetland Mitigation and Stream Restoration Projects
- Wetland Delineation and Assessment of Natural Resources for LG Everist Quarry/ Plant Master Plan, Ortonville, MN
- Wetland Delineation for Meridian Behavioral Health, Pine City, MN
- Wetland Delineation for Spring Creek, Lincoln County, SD
- Wetland Delineation of Nine Wetlands and Stream Crossings, CSAH 16, Pipestone County, MN
- Wetland Hydrogeomorphic (HGM) Assessment for 82 Wetlands Along 21 miles of Road for the South Dakota DOT

Experience

19 Total, 10 with IMEG

Education

BS, Resource Management, University of Wisconsin - Stevens Point AAS, Natural Resources Central Lakes College, Brainerd, MN

Certifications

Professional Minnesota Wetland Delineator WDCP-2010 Cert. #1194

Affiliations

Society of Wetland Scientists



James Ness, pe

Jim provides complete project management services including preliminary design, construction documentation and construction administration. Projects include remodeling of existing facilities, police facilities, municipal maintenance buildings, fire stations, and modifications to existing facilities. Jim has experience working on projects that require the extra attention to structures subjected to extensive wear and tear.

PROJECT HIGHLIGHTS

- Arapahoe County Water Wastewater Authority, Centennial, CO, Water & Wastewater One-Story Office Renovation
- Castle Pines Metropolitan District, Castle Rock, CO, Miscellaneous Engineering Services
- City of Central City, CO, Miscellaneous On-Call Engineering Review Services for Development
- City of Central City, CO, Miscellaneous Utility Plan/Other City Reviews
- City of Englewood, CO, Little Dry Creek Drainageway and Culverts
- City of Garden City, KS, 0.5 MG Water Tank
- City of Golden, CO, 2021 Miscellaneous On-Call Engineering Services
- City of Golden, CO, 2021 Miscellaneous Planning Projects
- City of Golden, CO, 2021 Water and Sewer Utility Replacement Design
- · City of Golden, CO, 2022 Utility Replacement
- City of Golden, CO, Water and Sewer Utility Replacement Design
- City of Golden, CO, WTP Improvements Post Fire Resiliency Project
- Elizabeth Parks & Recreation District, Elizabeth, CO, Casey Jones Park Master Plan
- Hilltop Brothers, LLC, Parker, CO, Fields Development Sewer Lift Station
- Jefferson County Public Schools Construction Management, Conifer, CO, Design to replace an existing raw water diversion structure on a stream supply with potable water
- Town of Johnstown, CO, Sanitary Sewer Expansion, Central Phase 1 2,600 linear feet of gravity sewer. 8 MGD lift station with 6,000 linear feet of 12-inch and 16-inch parallel force mains
- Town of Johnstown, CO, Sanitary Sewer Expansion, North Phase 1 40,000 linear feet of 12-inch to 30-inch gravity sewer. 6 MGD lift station with 1,500 linear feet of two parallel 12-inch force mains

Experience 39 Total, 29 with IMEG

Education

University of Colorado at Denver, MS Structural Engineering South Dakota School of Mines and Technology, BS Civil Engineering

Registrations

Professional Engineer Colorado (26120)

Affiliations

SEAC AISC Tilt-Up Concrete Association



Trip McLaughlin

GIS Engineer

Trip has over 25 years in the GIS industry. He has earned his GISP and is a Certified Esri Desktop Professional. Trip has experience in public and private organizations architecting GIS solutions which are tailored to the organizational needs while following industry best practices. Trip provides support to local utility systems for GIS solutions and works to employ strict in-house review and control methodologies to provide accurate and quality solutions which will also address future needs.

PROJECT HIGHLIGHTS

- Antea Group, Various Locations, Cloud GIS Implementation
- Carbon County, WY, NG911 Data Migration
- City of Albany, NY, Energov Implementation
- City of Big Bear Lake, CA, On-Call GIS Services
- City of Centennial, CO, Strategic Planning
- City of La Junta, CO, GIS Support Services
- City of La Junta, CO, GIS Support Services
- City of Laramie, WY, Utility Network Model Development
- City of Las Cruces, NM, ArcGIS Enterprise Support
- City of Louisville, CO, GIS Support Services
- City of Pico Rivera, CA, Utilities GIS Development
- City of Superior, CO, GIS Support Services
- Consolidated Mutual Water Company, CO, GIS Support Services
- Gilpin County, CO, GIS Support Services
- Greater Nashville Apartment Association, TN, Market Analytics and Application
 Development
- Juab County, UT, Parcel Management
- Little Thompson Water District, CO, GIS Support Services
- New Fortress Energy, NY, GeoEvent Server
- Park County, CO, GIS Support Services and Application Integrations
- Town of Avon, CO, Drone Collection
- Town of Bennett, CO, CIP and GIS Support
- Town of Breckenridge, CO, GIS Support
- Town of Morrison, CO, GIS Support
- Town of Silverthorne, CO, GIS Support Services
- · Vail Resorts, Various Locations, Data and Application Development

Education

26 Total, 1 with IMEG

Experience

University of Denver, BA and MA Geography University of Denver, BS Environmental Science

Registrations

GISP Certification Esri Certified Desktop Professional



Karlie Sharp

GIS Analyst

Karlie, a GIS Analyst, works closely with clients to develop data, workflow solutions, and scripting to automate processes to improve efficiencies in organizations. Karlie works with a number of clients providing ArcGIS Enterprise management. She helps clients on a daily basis develop solutions using the ArcGIS Online platform for internal and public facing uses. Her experience in assessing workflows and development of applications which are easy to use and maintain ensures the clients of IMEG's GIS web-based interfaces are optimized to their needs. She has provided data development services for water and sanitation utilities, community development departments, LiDAR extractions for land developments, and environmental analysis and maps for land reclamation projects.

PROJECT HIGHLIGHTS

- City of Chelsea, MI, Chelsea, MI, Spark Exhibit for Assistance Grant Application
- City of Fort Lupton, CO, Fort Lupton, Ward Analysis
- City of Lone Tree, CO, Lone Tree, General Consultation for City Public Works and Planning Departments,
- City of Lone Tree, CO, ArcSDE Data Design and rebuild
- City of Louisville, CO, Complete GIS Support, Custom scripts, ArcGIS Enterprise, Energov Management
- City of Pico Rivera, CA, Sewer, Storm System development, ArcGIS Online Applications
- Gilpin County, CO, GIS Support, ArcGIS Enterprise Management
- Greater Nashville Apartment Association, TN, Application and Data Development
- Homestead Water District, Water System Development, ArcGIS Online
 Applications
- Las Animas County, CO, GIS Support
- San Juan Water District, NM, Enterprise Management, Asset Management Integration, App Development
- Town of Bennett, CO, Utility and CIP Development with online dashboards, Permitting Integration
- Town of Frisco, CO, Community Development
- Town of Frisco, CO, Complete Support for all Departments
- Town of Silverthorne, CO, ArcGIS Enterprise, Custom Scripts, Asset Management Integrations, Support for all Town Departments
- Town of Superior, CO, Data Development, ArcGIS Online Applications
- Vail Resorts, Electric Department Data Design and development, Terrain Modeling for Grooming Plans, General Support

Experience 6 Total, 1 with IMEG

Education

University of West Florida, MS, GIS and Business Administration Florida Atlantic University, BS, Geology

Registrations

GIS Certificate



Michael Cregger, PLS

LAND SURVEYOR

Michael has vast land surveying services to municipalities throughout Colorado on a variety of land survey related projects, as well as providing support for a full range of engineering projects. His involvement includes research of the boundaries, easements and right-of-ways of the properties that make up the project, coordinating the field surveys and mapping that is needed for both land survey issues and design. Michael also prepares exhibits and legal descriptions for easements, right-of-ways and parcel descriptions, and coordinates the preparation of subdivision plats, condominium maps and other documents as required by the governmental entities involved. He also coordinates the surveying for projects during the construction phase.

PROJECT HIGHLIGHTS

- Castle Pines Metropolitan District, Castle Pines, CO, Storm Sewer Improvement, Orofino Dr.
- Castle Pines Metropolitan District, Castle Rock, CO, Crestone Way Widening and Water Line Replacement, Included Design of Curb & Gutter, Asphalt, and Storm Improvements
- City of Central City, CO, Miscellaneous On-Call Engineering Services
- City of Golden, CO, 2021 Miscellaneous Planning Projects
- City of Golden, CO, 2021 Water and Sewer Utility Replacement Design
- City of Golden, CO, 2022 Stormwater Detention Pond Retrofit Improvements
- City of Golden, CO, Grampsas Parking Lot Conversion, Including Storm Drainage
 and Water Quality Improvements
- City of Golden, CO, Guanella Reservoir Revegetation and Update of Stormwater Mitigation Plan
- City of Golden, CO, Rimrock Drive Trailhead Access Design, Including Street Narrowing, Trail Access Features, a Restroom Facility, Storm and Detention/Water Quality Improvements
- City of Golden, CO, Various Storm Improvements, Detention Pond improvements, Storm Collection Piping replacement and realignments
- City of Lone Tree, CO, General Consultation for City Public Works and Planning
 Departments
- City of Lone Tree, CO, Storm Drain Improvements, PMD/Acres Green
- City of Pico Rivera, CA, Water, Sewer and Storm Drain Master Plan
- Kolorado River Ranch, LLC, Gypsum, CO, Master Plan/Design for Improvements on 2,000 Acre Ranch, Including Stormwater Management Systems, Regulatory Permitting, Wetlands Delineation, Ranch Headquarters, Lodge & Accessory Dwelling Unit Design & Construction, Grading Plans & Roadway Improvements
- RTP Company, Orange, TX, Site Stormwater and Wastewater Evaluation

Experience

45 Total, 42 with IMEG

Education

University of Missouri at Columbia, BS Fisheries and Wildlife

Registrations

Professional Land Surveyor Colorado (PE.22564)

Affiliations

NSPS Professional Land Surveyors of Colorado



Experience

42 Total, 1 with IMEG

Education

Pennsylvania State University, AAS Survey Technology

Registrations

Professional Land Surveyor Colorado (25361) Wyoming (9690) North Dakota (8065)

Training

OSHA 30 OSHA 10

Mike Compton, PLS

Land Surveyor

Mike has been practicing Land Surveying for over 42 years for both public and private sector organizations worldwide. He is proficient in High Accuracy horizontal and vertical control surveys, land acquisition, right of way documentation, mapping, and engineering surveys. Mike's construction experience includes staking of bridges, roadways and pipelines as well as subdivision infrastructure. Mike's experience was integral part of several 3D scanning projects including: Cargo area of C5 Galaxy airframes for Lockheed Martin, Sinton Road Bridge beneath I-25, and Colorado Avenue for the City of Champions approach.

PROJECT HIGHLIGHTS

- Castle Pines Metropolitan District, Castle Rock, CO, Crestone Way Widening and Water Line Replacement, Included Design of Curb & Gutter, Asphalt, and Storm Improvements
- Castle Pines Metropolitan District, Castle Rock, CO, Misc. Engineering Services
- Castle Pines Metropolitan District, Castle Rock, CO, Well Improvements
 Topographic Survey
- City of Golden, CO, 2021 Miscellaneous On-Call Engineering Services
- City of Golden, CO, 2022 Stormwater Detention Pond Retrofit Improvements
- City of Golden, CO, 2022 Stormwater Detention Pond Retrofit Improvements
- City of Golden, CO, 2022 Utility Replacement
- City of Golden, CO, Grampsas Parking Lot Conversion, Including Storm Drainage and Water Quality Improvements
- City of Golden, CO, Rimrock Drive Trailhead Access Design, Including Street Narrowing, Trail Access Features, a Restroom Facility, Storm and Detention/Water Quality Improvements
- City of Golden, CO, Various Storm Improvements, Detention Pond improvements, Storm Collection Piping replacement and realignments
- Elizabeth Parks & Recreation District, Elizabeth, CO, Casey Jones Park Design of Sewer Main and Additional Camp Site, Analysis and design of a sanitary sewer service extension to allow for direct connection at campsites to the existing waste station service at the park
- Town of Johnstown, CO, Sanitary Sewer Expansion, Central Phase 2, 11,000 linear feet of 15-inch to 21-inch gravity sewer
- Town of Johnstown, CO, Sanitary Sewer Expansion, North Phase 1 40,000 linear feet of 12-inch to 30-inch gravity sewer. 6 MGD lift station with 1,500 linear feet of two parallel 12-inch force mains



3. QUALIFICATIONS SUBCONSULTANT RESUMES



RESUME JOSEPH D. GIFFORD, C.I.H. Principal Project Manager

EDUCATION:

B.S., Environmental Health/Industrial Hygiene, Colorado State University, 1988 with honors

CERTIFICATION:

Certified Industrial Hygienist, American Board of Industrial Hygiene (Certification #8716 Comprehensive Practice)

MEMBERSHIP:

Engineers without Borders - USA American Industrial Hygiene Association (AIHA) Rocky Mountain Section - AIHA American Chemical Society American Conference of Governmental Industrial Hygienists (ACGIH) Colorado Association of Methamphetamine and Mold Professionals (CAMMP) American Indoor Air Quality Council

EXPERIENCE:

Mr. Gifford is a Certified, Senior Industrial Hygienist at A. G. Wassenaar, Inc. in Denver, Colorado. He directs a staff of professional industrial hygienists, engineers and scientists providing consulting and assistance to industry, government and the public in health, safety and environmental matters. As a principal at A. G. Wassenaar he is directly involved in client services, our employee training, database development, industrial hygiene and environmental services.

Mr. Gifford has compiled over fifteen years of occupational health, safety and environmental consulting experience. This experience includes emergency response, environmental sampling, and industrial hygiene management in both private industry and government facilities. Projects have included facility-wide health and safety audits, noise monitoring and engineering controls, heat stress monitoring and air sampling for regulated contaminants. Mr. Gifford has managed industrial hygiene projects throughout the United States and Canada. Projects have included indoor air quality assessments, workman's compensation surveys, industrial assessments and monitoring, and program development. Mr. Gifford has assisted industry in OSHA compliance, exposure air sampling, emergency response, waste management, and comprehensive safety programs.

Mr. Gifford has taught Indoor Air Quality and Industrial Hygiene for the University of Minnesota, Northern Arizona University, Colorado State University, University of Alaska-Anchorage, and the Environmental Protection Agency. A Certified Instructor of the NIOSH 582 courses.

By providing on-going RCRA waste management and minimization audits for companies throughout Colorado, Mr. Gifford has been able to reduce disposal and inventory costs for clients. He has provided and directed hazardous waste sampling, characterization, profiling and brokering for both private and public agencies. Mr. Gifford has managed and directly performed DOT compliance audits, OSHA compliance audits, Cal-OSHA compliance audits, RCRA waste management audits and multi-media audits.

Mr. Gifford has directed the emergency response and clean-up of a listed, illegal dump site and provided expert witness assistance for the benefit of the client. Through negotiation with the regulatory agency and client counsel; the site received full closure, with no additional work required.



RESUME JULIE A. BRUNGARDT Senior Project Manager

EDUCATION

Bachelor's Degree in Environmental Studies, University of Colorado, Boulder, CO, 2002

EXPERIENCE

Ms. Brungardt began working with A.G. Wassenaar, Inc. in May 2003. She was hired as a staff environmental scientist for the Environmental Department. Responsibilities include the following:

Industrial Hygiene

Mold growth and moisture intrusion evaluations in response to water losses Initial and conformance mold inspections of basement subfloor and crawl spaces Indoor air quality investigations pertaining to mold and fungal growth Inspections following fires in residential or commercial buildings

Asbestos

Air Monitoring Specialist (AMS) duties for asbestos abatement projects Asbestos surveys of commercial and residential buildings Asbestos sample collection including soil and building materials Oversight of soil disturbance of regulated asbestos contaminated soil (RACS) in accordance with 6 CCR 1014-3 §6.0 Section 5.5

Lead Based Paint Lead based paint testing within commercial and residential buildings

Phase I

Site assessments for both buyers and sellers of commercial, industrial and residential real estate

TRAINING AND CERTIFICATIONS

Colorado State Certified Asbestos Building Inspector Colorado State Certified Air Monitoring Specialist Meets the CABI and AMS training / experience requirements of 6 CCR 1014-3 §6.0 Section 5.5.3. National Environmental Health Association, Residential Radon Measurement Provider

MEMBERSHIPS

American Industrial Hygiene Association Colorado Environmental Professionals Association



RESUME RACHEL A. PETERSON, P.G. Environmental Department Manager

EDUCATION

B.S., Geology, University of Alaska Fairbanks, 2001

EXPERIENCE

Ms. Peterson has over 20 years of experience in the environmental consulting and compliance industry, performing and managing diverse soil, groundwater, vapor intrusion, and remediation projects. Clients include homebuilders; oil & gas operators; industrial, commercial and retail developers; municipalities; and open space coalitions, among others. Management duties performed include: the organization of project teams; planning, scheduling and coordination of geologic and hydrogeologic investigations; and preparing proposals and technical reports. She is directly involved in client services, recruiting and hiring, employee training, teambuilding, and driving culture and innovation.

Ms. Peterson's specialties include Phase I Environmental Site Assessments, Soil and Groundwater Investigations and Remediation, Vapor Mitigation, Oil and Gas Regulatory Assistance, Groundwater and Risk Assessment Modeling, Underground Storage Tank Removal, Stormwater Compliance, Underground Storage Tank Compliance and Removal, and Leadership Development.

TRAINING AND CERTIFICATIONS

State of Wyoming - Licensed Professional Geologist, No. PG-3747 National Radon Proficiency Program (NRPP) Radon Measurement Professional: ID 11123-RMP National Radon Proficiency Program (NRPP) Radon Mitigation Professional: ID 111232 RMT CO Licensed Radon Mitigation Professional RMT .0000081 40 Hour OSHA Environmental Health and Safety for Hazardous Waste Site Operations American Red Cross and National Safety Council standard first aid and CPR training Oilfield Safety Training Stormwater Management and Erosion Control

MEMBERSHIPS

Colorado Environmental Management Society National Ground Water Association Society of Women Environmental Professionals Professional Women in Building Council – HBA of Metro Denver Rocky Mountain - American Association of Radon Scientists and Technologists – Board Member The Energy Leadership Institute – Founding Board Member



RESUME TOD E. KRAMER, M.S. Senior Industrial Hygienist

EDUCATION

Colorado State University, Fort Collins, Colorado 80523 Master of Science, Environmental Health/Industrial Hygiene, May 1997

Colorado State University, Fort Collins, Colorado 80523 Bachelor of Science, Microbiology, May 1988

EXPERIENCE

Mr. Kramer has served as a Senior Industrial Hygienist with A.G. Wassenaar, Inc. since 1997. He has a foremost interest in client satisfaction and worker health and safety. Specific experience includes:

- Perform industrial hygiene exposure assessments and assist in implementing appropriate control methodology
- Conduct occupational safety audits and recommend proper control measures
- Develop functional health and safety programs for a wide array of needs
- Prepare clear, concise reports detailing work performance, analytical results, and practical recommendations
- Conduct office and task oriented industrial ergonomic evaluations
- Train a variety of disciplines in areas such as Hazard Communication, Ergonomics, Construction Safety, Respiratory Protection, Confined Spaces, and Asbestos Awareness
- Evaluate Indoor Air Quality issues in both residential and occupational settings
- Assess potentially life-threatening atmospheric conditions and other hazards associated with entry into permit required confined spaces
- Perform moisture evaluation and microbiological sampling of moisture impacted residential and commercial properties
- Perform smoke and fire particulate evaluations in residential and commercial properties to assist in remediation and re-occupancy of fire impacted buildings
- Manage projects requiring interaction and coordination between building owners, building occupants, property managers, and various construction trades
- Prepare environmental reports, such as SARA Title Three Tier Two
- Interpret environmental and occupational regulations and aid in regulatory conformance
- Interact with local, state, and federal agencies

EXPERIENCE cont.

- Act as an expert witness in legal matters including deposition and trial testimony
- Perform comprehensive building surveys for asbestos and lead products, design appropriate response actions, and prepare contract documents and work specifications
- Conduct regulatory air monitoring and project oversight on a wide range of asbestos and lead abatement projects
- Perform oversight of soil disturbance of regulated asbestos contaminated soil (RACS) in accordance with 6 CCR 1014-3 §6.0 Section 5.5

TRAINING AND CERTIFICATIONS

State of Colorado Certified Asbestos Building Inspector/Management Planner

State of Colorado Certified Air Monitoring Specialist

State of Colorado Certified Asbestos Project Designer

Meets the CABI and AMS training / experience requirements of 6 CCR 1014-3 §6.0 Section 5.5.3. NIOSH 582 – Sampling and Evaluation Airborne Asbestos Dust (McCrone Research Institute) Microscopical Identification of Asbestos (McCrone Research Institute)

MEMBERSHIPS

American Industrial Hygiene Association, National Member American Industrial Hygiene Association, Rocky Mountain Section Member



COMPANY RESOURCES

3. QUALIFICATIONS

ABOUT Us

WWW.IMEGCORP.COM



IMEG is a leading U.S.-based engineering design firm that delivers a rare combination — the broad expertise of a national leader with the personal relationships and deep collaboration of a local firm.

Our civil specialties are municipal engineering, land development & surveying, building engineering, transportation, and construction observation. Our team's strength is found in our **deep bench of more than 400 professional civil engineers and land surveyors** dedicated to building strong regional connections and reaching beyond the status quo. We bring extensive national, regional, and local knowledge to every client relationship – with a commitment to deliver high quality, cost-effective outcomes through a collaborative and flexible project approach. Key differentiators include:

- Successful, timely delivery of projects
- Accurate, efficient data collection
- Involvement from project initiation to project completion
- · State-of-the-art technology and equipment
- Latest training and certification
- Ability to "fast-track" projects
- Single point-of-contact project management

We are employeeowned and results driven with a passion for transforming environments and communities through high-performance design and infrastructure.

AT-A-GLANCE

- Top 10 Engineering Firm in U.S. (BD+C)
- 100% Employee-Owned
- Full-service Engineering & Consulting
- •75+ Locations
- 2,400 Team Members
- •600+ Licensed Engineers
- \$383M in Annual Revenue
- #71 / Top 500 Design Firm List (ENR)

CIVIL SERVICES

- ADA Compliance Engineering
- Bridges, Retaining Walls & Culvert
 Design
- Construction Administration
- Drainage, Hydraulics & Hydrology
- Feasibility Studies
- Land Development & Site Design
- Major Highway & Transportation
 Design
- Municipal Infrastructure
- NBIS Bridge Management
- Permitting (Federal, State, & Local)
- Project Management
- Subsurface Utility Engineering (SUE)
- Survey, Drones & 3D Scanning
- Water & Wastewater Engineering



WHO IS IMEG?

IMEG is an engineering design firm specializing in building highperformance structures. infrastructure, and strong regional relationships. As a national firm, we've intentionally localized our focus to serve carefully chosen regions and markets, allowing us to put relationships and communicates first, without sacrificing expertise.

With a combined firm history that dates back over 100 years, IMEG Corporation (IMEG), grew from several firms coming together under one uniting vision: people-centered engineering. As a national engineering and design consulting company, we have intentionally localized our focus to serve carefully chosen regions and markets, allowing us to put relationships and communities first, without sacrificing expertise. IMEG's culture is centered around local relations supported by a deep national bench. Our team of professionals

includes over 1800 members nationwide and 45 employees in Colorado, with 10 focused on Civil Engineering Services just in our Greenwood Village office (200 nationally).

Our Colorado team has recently added a team of four GIS professionals to augment our civil engineering services; this team has a substantial history of working with front range municipalities to further augment the services we offer. We have eight regional civil teams, and we can draw on the expertise from each team if needed to solve complex engineering problems. This deep bench assures that we bring the best and brightest to the project table as we serve you. We believe in the IMEG Civil Differentiators, and this dedication shines through each step of the way from project concept to project completion.

KEY DIFFERENTIATORS INCLUDE

- Successful, timely delivery of projects
- Accurate, timely, efficient data collection
- Quality Control and Quality Assurance (QC/QA)
- Involvement from project initiation to project completion
- State-of-the-art technology and equipment
- Latest training and certification
- Most cost-effective methods
- Ability to "fast-track" projects
- Single point-of-contact project management



IMEG brings to the Town of Bennett a team of knowledgeable project engineers and floodplain managers whose drainage and engineering expertise cohesively come together to solve issues the Town may be facing now—in the built environment--with an approach that is also mindful of future needs. The team's seasoned style and knowledge of local issues will be geared toward scientific accuracy, while being budget conscious, and finally by being sensitive to providing maintenance solutions versus creating maintenance issues.

As you look through this RFP response, you will see that our experienced team has prepared Stormwater Master Plans, developed detailed master and capital plans for municipal infrastructure and facilities, designed and overseen major capital projects, provided design and project management of numerous stormwater facilities, successfully secured and managed grantsall exceeding the level of expertise you expect when you select a consultant. IMEG's team includes Certified Floodplain Manager's that have prepared and provided review of FEMA CLOMR and LOMR submittals, GIS Professionals that compile data and create user friendly interfaces. We have surveyors on staff that can complete any aspect of surveying including topographic surveying to augment digital data, easement documentation, warranty deed preparation, and preparation of FEMA Elevation Certificates. We also have a Subsurface Utility Engineering team that helps us to assure the accuracy of every project we design, and our Tech Ops group offers professionally piloted drone flights to survey or memorialize any project. Rounding out our team is our security services group, who makes sure critical municipal infrastructure is protected from security threats.

IMEG's team members have secured millions of dollars in alternative funding for Front Range communities from agencies such as FEMA, GOCO, USDA, NRCS, and CDPHE. We have also secured and managed CDBG funding for a variety of projects. We are experts in preparing funding applications using programs such as FEMA GO and EM Grants, and we provide all aspects of grant management from securing funding to applying for reimbursement requests after the funding is awarded.

We are a united, people-centered engineering firm. We put relationships and communities first, without sacrificing expertise or quality.

IMEG also has a proactive and well-regimented quality control process that is used for all of our projects and would be applied to each project assigned as well – steps and milestones are adapted based on delivery method and the result is a high quality deliverable that your staff and the project's selected construction contractor can trust. Most importantly we know how to communicate with you and your constituents even in the most difficult of circumstances, such as the current COVID19 pandemic or during periods of natural disaster, such as flooding and fire.

We encourage you to visit our website at **www.imegcorp.com** and see our client testimonials, impressive array of projects, and detailed information about our many state of the art programs.



WHY CHOOSE IMEG?

- Proven Track Record
- Depth of Experience
- State of the art technology and equipment
- Quality Control and Quality Assurance
- > Cost Effective Solutions Management

GEOGRAPHIC INFORMATION SYSTEM (GIS)



IMEG has a full-service line of GIS offerings and seeks to improve organizational efficiencies through the use of GIS. We are an Esri Business Partner and have earned the State and Local Government and System Ready Specialties from Esri as well as being an authorized Esri Marketplace Provider. In addition, IMEG is an authorized Eos GPS retailer to compliment our service offerings.

Our GIS team at IMEG is equipped to take our clients through the lifecycle of GIS. We offer strategic planning services to identify the needs of the organization and develop a roadmap for the future of the GIS. Our data development services use industry standard data models and best practices development methodologies to provide accurate deliverables. To aid in efficient data developments, IMEG uses scripted processes to aid in repetitive tasks. When necessary, we provide field collection services with high accuracy GPS units and drones (UAV) to aid in data developments.

IMEG provides complete ArcGIS Online solutions from the development of applications to dashboards and field workflows using the suite of mobile applications from Esri. IMEG works with clients to create a real time GIS where data collected in the field flows into the GIS in a seamless process. We provide ArcGIS Hub configurations to allow the sharing of data and information to the public as well as internal deployments through the ArcGIS Online platform.

Using ArcGIS Enterprise opens the entire suite of Esri products to organizations. IMEG works with clients to develop the network architecture plan for the server configuration both cloud hosted and on-premise. We provide implementation and update services where our staff will configure the entire ArcGIS Enterprise environment including servers, Portal for ArcGIS and the enterprise databases. We work with our clients to develop the user roles and permissions along with connections to Active Directory when appropriate.

To ensure our clients' success, we provide training on the solutions we provide as well as Esri products and workflows. These may be onsite or remote services depending on the need. We also offer ongoing support services for all aspects of the GIS.







ArcGIS System Ready Specialty

GRANT WRITING & ADMINISTRATION Expertise & Services



IMEG's grant writing service is a great way to secure funds for a variety of municipal and government agency projects. Our professionals identify opportunities and know how to write grant applications effectively.

SERVICES

- Research
- Writing
- Grant Administration

GRANT ADMINISTRATION

- Budget development, management, reporting
- Environmental clearance, compliance, closeout
- Relationship creation and maintenance with local, state, federal representatives, landowners

PROJECT TYPES

- Brownfield identification, cleanup and redevelopment
- Frontline service outfitting such as:
 - Police and fire department equipment firetrucks, police cars, personal protective equipment, radios/communication devices, thermal imagery equipment
- Feasibility studies
- Engineering design
- Park and trail improvements
- Riverfront and dock development
- Comprehensive planning
- Infrastructure development/improvement for: Water, sewer, stormwater, broadband, bike/ trailways