CITY OF GRAND JUNCTION, COLORADO

****

CONTRACT

This CONTRACT made and entered into this 31st day of May, 2019 by and between the **Grand Junction, Colorado,** a government entity in the County of Mesa, State of Colorado, hereinafter in the Contract Documents referred to as the "Owner" and **Garver, LLC** hereinafter in the Contract Documents referred to as the "Firm."

WITNESSETH:

WHEREAS, the Owner advertised that sealed Responses would be received for furnishing all labor, tools, supplies, equipment, materials, and everything necessary and required for the Project described by the Contract Documents and known as **Odor Control Study for Persigo Wastewater Treatment Plant RFP-4601-19-DH**.

WHEREAS, the Contract has been awarded to the above named Firm by the Owner, and said Firm is now ready, willing and able to perform the Services specified in accordance with the Contract Documents;

NOW, THEREFORE, in consideration of the compensation to be paid the Firm, the mutual covenants hereinafter set forth and subject to the terms hereinafter stated, it is mutually covenanted and agreed as follows:

ARTICLE 1

Contract Documents: It is agreed by the parties hereto that the following list of instruments, drawings, and documents which are attached hereto, bound herewith, or incorporated herein by reference constitute and shall be referred to either as the "Contract Documents" or the "Contract", and all of said instruments, drawings, and documents taken together as a whole constitute the Contract between the parties hereto, and they are fully a part of this agreement as if they were set out verbatim and in full herein:

The order of contract document governance shall be as follows:

a. The body of this contract agreement
b. Negotiated Terms and Conditions/Scope of Services etc.
c. Solicitation Documents for the Project; **Odor Control Study for Persigo Wastewater Treatment Plant;**
d. Firms Response to the Solicitation (Scope of Services and Not to Exceed amount superseded by item b of this section)

e. Services Change Requests (directing that changed Services be performed);
f. Field Orders
g. Change Orders.

ARTICLE 2

Definitions: The clauses provided in the Solicitation apply to the terms used in the Contract and all the Contract Documents.

ARTICLE 3

Contract Services: The Firm agrees to furnish all labor, tools, supplies, equipment, materials, and all that is necessary and required to complete the tasks associated with the Services described, set forth, shown, and included in the Contract Documents as indicated in the Solicitation Document.

ARTICLE 4

Contract Time: Time is of the essence with respect to this Contract. The Firm hereby agrees to commence Services under the Contract on or before the date specified in the Solicitation from the Owner, and to achieve Substantial Completion and Final Completion of the Services within the time or times specified in the Solicitation.

ARTICLE 5

Contract Price and Payment Procedures: The Firm shall accept as full and complete compensation for the performance and completion of all of the Services specified in the Contract Documents, the Not to Exceed amount of **Ninety-Seven Thousand Seven Hundred Fifty-Four and 95/100 ($97,750.00).** If this Contract contains unit price pay items, the Contract Price shall be adjusted in accordance with the actual quantities of items completed and accepted by the Owner at the unit prices quoted in the Solicitation Response. The amount of the Contract Price is and has heretofore been appropriated by the Grand Junction City Council for the use and benefit of this Project. The Contract Price shall not be modified except by Change Order or other written directive of the Owner. The Owner shall not issue a Change Order or other written directive which requires additional Services to be performed, which Services causes the aggregate amount payable under this Contract to exceed the amount appropriated for this Project, unless and until the Owner provides Firm written assurance that lawful appropriations to cover the costs of the additional Services have been made.

Unless otherwise provided in the Solicitation, monthly partial payments shall be made as the Services progresses. Applications for partial and Final Payment shall be prepared by the Firm and approved by the Owner in accordance with the Solicitation.

ARTICLE 6

Contract Binding: The Owner and the Firm each binds itself, its partners, successors, assigns and legal representatives to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contract

Documents constitute the entire agreement between the Owner and Firm and may only be altered, amended or repealed by a duly executed written instrument. Neither the Owner nor the Firm shall, without the prior written consent of the other, assign or sublet in whole or in part its interest under any of the Contract Documents and specifically, the Firm shall not assign any moneys due or to become due without the prior written consent of the Owner.

ARTICLE 7

Severability: If any part, portion or provision of the Contract shall be found or declared null, void or unenforceable for any reason whatsoever by any court of competent jurisdiction or any governmental agency having the authority thereover, only such part, portion or provision shall be effected thereby and all other parts, portions and provisions of the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, City of Grand Junction, Colorado, has caused this Contract to be subscribed and sealed and attested in its behalf; and the Firm has signed this Contract the day and the year first mentioned herein.

The Contract is executed in two counterparts.

CITY OF GRAND JUNCTION, COLORADO

DocuSigned by:
By: Duane Hoff Jr., Senior Buyer – City of Grand Junction 5/31/2019 | 11:26 MDT
9F709E79568F14BC...
Duane Hoff Jr., Senior Buyer Date

Garver, LLC

DocuSigned by:
By: John Kuosman, Senior Project Manager – Garver, 5/31/2019 | 11:25 MDT
2329B6DD516748E...
John Kuosman, Senior Project Manager Senior Project Manager Date

Request for Proposal
RFP-4601-19-DH

Odor Control Study for Persigo Wastewater Treatment Plant

RESPONSES DUE:
February 15, 2019 prior to 3:30 PM MST
Accepting Electronic Responses Only
Responses Only Submitted Through the Rocky Mountain E-Purchasing System (RMEPS)
https://www.rockymountainbidsystem.com/default.asp
(Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor MUST contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)

PURCHASING REPRESENTATIVE:
Duane Hoff, Senior Buyer
duaneh@gjcity.org
(970) 244-1545

This solicitation has been developed specifically for a Request for Proposal intended to solicit competitive responses for this solicitation, and may not be the same as previous City of Grand Junction solicitations. All offerors are urged to thoroughly review this solicitation prior to submitting. Submittal by **FAX, EMAIL or HARD COPY IS NOT ACCEPTABLE** for this solicitation.

REQUEST FOR PROPOSAL

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Section

REQUEST FOR PROPOSAL

SECTION 1.0: ADMINISTRATIVE INFORMATION & CONDITIONS FOR SUBMITTAL

1.1 Issuing Office: This Request for Proposal (RFP) is issued by the City of Grand Junction. All contact regarding this RFP is directed to:

RFP QUESTIONS:
Duane Hoff, Senior Buyer
duaneh@gjcity.org

1.2 Purpose: The purpose of this RFP is to obtain proposals from qualified professional firms to provide an odor control study for the Periso Wastewater Treatment Plant and within the wastewater collections system.

1.3 The Owner: The Owner is the City of Grand Junction and is referred to throughout this Solicitation. The term Owner means the Owner or his authorized representative.

1.4 Compliance: All participating Offerors, by their signature hereunder, shall agree to comply with all conditions, requirements, and instructions of this RFP as stated or implied herein. Should the Owner omit anything from this packet which is necessary to the clear understanding of the requirements, or should it appear that various instructions are in conflict, the Offeror(s) shall secure instructions from the Purchasing Division prior to the date and time of the submittal deadline shown in this RFP.

1.5 Submission: Please refer to section 5.0 for what is to be included. ***Each proposal shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (https://www.rockymountainbidsystem.com/default.asp).*** *This site offers both "free" and "paying" registration options that allow for full access of the Owner's documents and for electronic submission of proposals. (Note: "free" registration may take up to 24 hours to process. Please Plan accordingly.)* Please view our "**Electronic Vendor Registration Guide"** at http://www.gjcity.org/business-and-economic-development/bids/ for details. For proper comparison and evaluation, the City requests that proposals be formatted as directed in Section 5.0 "Preparation and Submittal of Proposals." Submittals received that fail to follow this format may be ruled non-responsive. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline. **800-835-4603**).

1.6 Altering Proposals: Any alterations made prior to opening date and time must be initialed by the signer of the proposal, guaranteeing authenticity. Proposals cannot be altered or amended after submission deadline.

1.7 Withdrawal of Proposal: A proposal must be firm and valid for award and may not be withdrawn or canceled by the Offeror for sixty (60) days following the submittal deadline date, and only prior to award. The Offeror so agrees upon submittal of their proposal. After award this statement is not applicable.

1.8 Acceptance of Proposal Content: The contents of the proposal of the successful Offeror shall become contractual obligations if acquisition action ensues. Failure of the successful Offeror to accept these obligations in a contract shall result in cancellation of the award and such vendor shall be removed from future solicitations.

1.9 Addenda: All questions shall be submitted in writing to the appropriate person as shown in Section 1.1. Any interpretations, corrections and changes to this RFP or extensions to the opening/receipt date shall be made by a written Addendum to the RFP by the City Purchasing Division. Sole authority to authorize addenda shall be vested in the City of Grand Junction Purchasing Representative. Addenda will be issued electronically through the Rocky Mountain E-Purchasing website at www.rockymountainbidsystem.com. Offerors shall acknowledge receipt of all addenda in their proposal.

1.10 Exceptions and Substitutions: All proposals meeting the intent of this RFP shall be considered for award. Offerors taking exception to the specifications shall do so at their own risk. The Owner reserves the right to accept or reject any or all substitutions or alternatives. When offering substitutions and/or alternatives, Offeror must state these exceptions in the section pertaining to that area. Exception/substitution, if accepted, must meet or exceed the stated intent and/or specifications. The absence of such a list shall indicate that the Offeror has not taken exceptions, and if awarded a contract, shall hold the Offeror responsible to perform in strict accordance with the specifications or scope of work contained herein.

1.11 Confidential Material: All materials submitted in response to this RFP shall ultimately become public record and shall be subject to inspection after contract award. **"Proprietary or Confidential Information"** is defined as any information that is not generally known to competitors and which provides a competitive advantage. Unrestricted disclosure of proprietary information places it in the public domain. Only submittal information clearly identified with the words "***Confidential Disclosure***" and uploaded as a separate document shall establish a confidential, proprietary relationship. Any material to be treated as confidential or proprietary in nature must include a justification for the request. The request shall be reviewed and either approved or denied by the Owner. If denied, the proposer shall have the opportunity to withdraw its entire proposal, or to remove the confidential or proprietary restrictions. Neither cost nor pricing information nor the total proposal shall be considered confidential or proprietary.

1.12 Response Material Ownership: All proposals become the property of the Owner upon receipt and shall only be returned to the proposer at the Owner's option. Selection or rejection of the proposal shall not affect this right. The Owner shall have the right to use all ideas or adaptations of the ideas contained in any proposal received in response to this RFP, subject to limitations outlined in the entitled "Confidential Material". Disqualification of a proposal does not eliminate this right.

1.13 Minimal Standards for Responsible Prospective Offerors: A prospective Offeror must affirmably demonstrate their responsibility. A prospective Offeror must meet the following requirements.

- Have adequate financial resources, or the ability to obtain such resources as required.

- Be able to comply with the required or proposed completion schedule.
- Have a satisfactory record of performance.
- Have a satisfactory record of integrity and ethics.
- Be otherwise qualified and eligible to receive an award and enter into a contract with the Owner.

1.14 Open Records: Proposals shall be received and publicly acknowledged at the location, date, and time stated herein. Offerors, their representatives and interested persons may be present. Proposals shall be received and acknowledged only so as to avoid disclosure of process. However, all proposals shall be open for public inspection after the contract is awarded. Trade secrets and confidential information contained in the proposal so identified by offer as such shall be treated as confidential by the Owner to the extent allowable in the Open Records Act.

1.15 Sales Tax: The Owner is, by statute, exempt from the State Sales Tax and Federal Excise Tax; therefore, all fees shall not include taxes.

1.16 Public Opening: Proposals shall be opened in the City Hall Auditorium, 250 North 5th Street, Grand Junction, CO, 81501, immediately following the proposal deadline. Offerors, their representatives and interested persons may be present. Only the names and locations on the proposing firms will be disclosed.

SECTION 2.0: GENERAL CONTRACT TERMS AND CONDITIONS

2.1. Acceptance of RFP Terms: A proposal submitted in response to this RFP shall constitute a binding offer. Acknowledgment of this condition shall be indicated on the Letter of Interest or Cover Letter by the autographic signature of the Offeror or an officer of the Offeror legally authorized to execute contractual obligations. A submission in response to the RFP acknowledges acceptance by the Offeror of all terms and conditions including compensation, as set forth herein. An Offeror shall identify clearly and thoroughly any variations between its proposal and the Owner's RFP requirements. Failure to do so shall be deemed a waiver of any rights to subsequently modify the terms of performance, except as outlined or specified in the RFP.

2.2. Execution, Correlation, Intent, and Interpretations: The Contract Documents shall be signed by the Owner and Contractor. By executing the contract, the Contractor represents that they have familiarized themselves with the local conditions under which the Work is to be performed, and correlated their observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by any one, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment, services and other items necessary for the proper execution and completion of the scope of work as defined in the technical specifications and drawings contained herein. All drawings, specifications and copies furnished by the Owner are, and shall remain, Owner property. They are not to be used on any other project.

2.3. Permits, Fees, & Notices: The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work. The Contractor shall give all notices and comply with all laws, ordinances, rules,

regulations and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be adjusted by approximate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility and shall bear all costs attributable.

2.4. Responsibility for those Performing the Work: The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all other persons performing any of the work under a contract with the Contractor.

2.5. Payment & Completion: The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents. Upon receipt of written notice that the work is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when they find the work acceptable under the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided in the Contract Documents. Partial payments will be based upon estimates, prepared by the Contractor, of the value of Work performed and materials placed in accordance with the Contract Documents. The work performed by Contractor shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of work in the applicable community. The work and services to be performed by Contractor hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations.

2.6. Protection of Persons & Property: The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct by the Contractor in the execution of the work, or in consequence of the non-execution thereof by the Contractor, they shall restore, at their own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner.

2.7. Changes in the Work: The Owner, without invalidating the contract, may order changes in the work within the general scope of the contract consisting of additions, deletions or other revisions. All such changes in the work shall be authorized by Change Order/Amendment and shall be executed under the applicable conditions of the contract documents. A Change Order/Amendment is a written order to the Contractor signed by the Owner issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time.

2.8. Minor Changes in the Work: The Owner shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents.

2.9. Uncovering & Correction of Work: The Contractor shall promptly correct all work found by the Owner as defective or as failing to conform to the contract documents. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Owner's additional services thereby made necessary. The Owner shall give such notice promptly after discover of condition. All such defective or non-conforming work under the above paragraphs shall be removed from the site where necessary and the work shall be corrected to comply with the contract documents without cost to the Owner.

2.10. Acceptance Not Waiver: The Owner's acceptance or approval of any work furnished hereunder shall not in any way relieve the proposer of their present responsibility to maintain the high quality, integrity and timeliness of his work. The Owner's approval or acceptance of, or payment for, any services shall not be construed as a future waiver of any rights under this Contract, or of any cause of action arising out of performance under this Contract.

2.11. Change Order/Amendment: No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All amendments to the contract shall be made in writing by the Owner.

2.12. Assignment: The Offeror shall not sell, assign, transfer or convey any contract resulting from this RFP, in whole or in part, without the prior written approval from the Owner.

2.13. Compliance with Laws: Proposals must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements. Contractor hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, required by law.

2.14. Debarment/Suspension: The Contractor herby certifies that the Contractor is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Governmental department or agency.

2.15. Confidentiality: All information disclosed by the Owner to the Offeror for the purpose of the work to be done or information that comes to the attention of the Offeror during the course of performing such work is to be kept strictly confidential.

2.16. Conflict of Interest: No public official and/or Owner employee shall have interest in any contract resulting from this RFP.

2.17. Contract: This Request for Proposal, submitted documents, and any negotiations, when properly accepted by the Owner, shall constitute a contract equally binding between the Owner and Offeror. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or

agreements, either written or oral, including the Proposal documents. The contract may be amended or modified with Change Orders, Field Orders, or Amendment.

2.18. Project Manager/Administrator: The Project Manager, on behalf of the Owner, shall render decisions in a timely manner pertaining to the work proposed or performed by the Offeror. The Project Manager shall be responsible for approval and/or acceptance of any related performance of the Scope of Services.

2.19. Contract Termination: This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of services; (3) acceptance of services or, (4) for convenience terminated by either party with a written *Notice of Cancellation* stating therein the reasons for such cancellation and the effective date of cancellation at least thirty days past notification.

2.20. Employment Discrimination: During the performance of any services per agreement with the Owner, the Offeror, by submitting a Proposal, agrees to the following conditions:

2.20.1. The Offeror shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, citizenship status, marital status, veteran status, sexual orientation, national origin, or any legally protected status except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Offeror. The Offeror agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

2.20.2. The Offeror, in all solicitations or advertisements for employees placed by or on behalf of the Offeror, shall state that such Offeror is an Equal Opportunity Employer.

2.20.3. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

2.21. Immigration Reform and Control Act of 1986 and Immigration Compliance: The Offeror certifies that it does not and will not during the performance of the contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, *et.seq.* (House Bill 06-1343).

2.22. Ethics: The Offeror shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.

2.23. Failure to Deliver: In the event of failure of the Offeror to deliver services in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Offeror responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.

2.24. Failure to Enforce: Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to

enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.

2.25. Force Majeure: The Offeror shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions, and acts of God beyond the control of the Offeror, unless otherwise specified in the contract.

2.26. Indemnification: Offeror shall defend, indemnify and save harmless the Owner and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Offeror, or of any Offeror's agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from proposal award. Offeror shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.

2.27. Independent Firm: The Offeror shall be legally considered an Independent Firm and neither the Firm nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Firm, its servants, or agents. The Owner shall not withhold from the contract payments to the Firm any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Firm. Further, the Owner shall not provide to the Firm any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.

2.28. Nonconforming Terms and Conditions: A proposal that includes terms and conditions that do not conform to the terms and conditions of this Request for Proposal is subject to rejection as non-responsive. The Owner reserves the right to permit the Offeror to withdraw nonconforming terms and conditions from its proposal prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.

2.29. Ownership: All plans, prints, designs, concepts, etc., shall become the property of the Owner.

2.30. Oral Statements: No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this document and/or resulting agreement. All modifications to this request and any agreement must be made in writing by the Owner.

2.31. Patents/Copyrights: The Offeror agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Offeror for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this RFP.

2.32. Venue: Any agreement as a result of responding to this RFP shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.

2.33. Expenses: Expenses incurred in preparation, submission and presentation of this RFP are the responsibility of the company and can not be charged to the Owner.

2.34. Sovereign Immunity: The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.

2.35. Public Funds/Non-Appropriation of Funds: Funds for payment have been provided through the Owner's budget approved by the City Council/Board of County Commissioners for the stated fiscal year only. State of Colorado statutes prohibit the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved. Therefore, anticipated orders or other obligations that may arise past the end of the stated Owner's fiscal year shall be subject to budget approval. Any contract will be subject to and must contain a governmental non-appropriation of funds clause.

2.36. Collusion Clause: Each Offeror by submitting a proposal certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all proposals shall be rejected if there is evidence or reason for believing that collusion exists among the proposers. The Owner may or may not, at the discretion of the Owner Purchasing Representative, accept future proposals for the same service or commodities for participants in such collusion.

2.37. Gratuities: The Contractor certifies and agrees that no gratuities or kickbacks were paid in connection with this contract, nor were any fees, commissions, gifts or other considerations made contingent upon the award of this contract. If the Contractor breaches or violates this warranty, the Owner may, at their discretion, terminate this contract without liability to the Owner.

2.38. Performance of the Contract: The Owner reserves the right to enforce the performance of the contract in any manner prescribed by law or deemed to be in the best interest of the Owner in the event of breach or default of resulting contract award.

2.39. Benefit Claims: The Owner shall not provide to the Offeror any insurance coverage or other benefits, including Worker's Compensation, normally provided by the Owner for its employees.

2.40. Default: The Owner reserves the right to terminate the contract in the event the Contractor fails to meet delivery or completion schedules, or otherwise perform in accordance with the accepted proposal. Breach of contract or default authorizes the Owner to purchase like services elsewhere and charge the full increase in cost to the defaulting Offeror.

2.41. Multiple Offers: If said proposer chooses to submit more than one offer, THE ALTERNATE OFFER must be clearly marked "Alternate Proposal". The Owner reserves the right to make award in the best interest of the Owner.

2.42. Cooperative Purchasing: Purchases as a result of this solicitation are primarily for the Owner. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide by the specifications, terms, conditions and pricings established in this Proposal. The quantities furnished in this proposal document are for only the Owner. It does not include quantities for any other jurisdiction. The Owner will be responsible only for the award for our jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office or use their purchasing card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The Owner accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.

2.43. Definitions:

2.43.1. "Offeror" and/or "Proposer" refers to the person or persons legally authorized by the Consultant to make an offer and/or submit a response (fee) proposal in response to the Owner's RFP.

2.43.2. The term "Work" includes all labor, materials, equipment, and/or services necessary to produce the requirements of the Contract Documents.

2.43.3. "Contractor" is the person, organization, firm or consultant identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.

2.43.4. "Sub-Contractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term sub-contractor is referred to throughout the contract documents and means a sub-contractor or his authorized representative.

2.44. Public Disclosure Record: If the Proposer has knowledge of their employee(s) or sub-proposers having an immediate family relationship with an Owner employee or elected official, the proposer must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the Owner.

SECTION 3.0: INSURANCE REQUIREMENTS

3.1 Insurance Requirements: The selected Firm agrees to procure and maintain, at its own cost, policy(s) of insurance sufficient to insure against all liability, claims, demands, and

other obligations assumed by the Firm pursuant to this Section. Such insurance shall be in addition to any other insurance requirements imposed by this Contract or by law. The Firm shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to this Section by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.
Firm shall procure and maintain and, if applicable, shall cause any Subcontractor of the Firm to procure and maintain insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to The Owner. All coverage shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by the Firm pursuant to this Section. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. Minimum coverage limits shall be as indicated below unless specified otherwise in the Special Conditions:

(a) Worker Compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this Contract, and Employers' Liability insurance with minimum limits of:

ONE MILLION DOLLARS ($1,000,000) each accident,
ONE MILLION DOLLARS ($1,000,000) disease - policy limit, and
ONE MILLION DOLLARS ($1,000,000) disease - each employee

(b) General Liability insurance with minimum combined single limits of:

ONE MILLION DOLLARS ($1,000,000) each occurrence and
ONE MILLION DOLLARS ($1,000,000) per job aggregate.

The policy shall be applicable to all premises, products and completed operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground (XCU) hazards. The policy shall contain a severability of interests provision.

(c) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than:

ONE MILLION DOLLARS ($1,000,000) each occurrence and
ONE MILLION DOLLARS ($1,000,000) aggregate

(d) Professional Liability & Errors and Omissions Insurance policy with a minimum of:

ONE MILLION DOLLARS ($1,000,000) per claim

This policy shall provide coverage to protect the contractor against liability incurred as a result of the professional services performed as a result of responding to this Solicitation.

With respect to each of Consultant's owned, hired, or non-owned vehicles assigned to be used in performance of the Work. The policy shall contain a severability of interest's provision.

3.2 Additional Insured Endorsement: The policies required by paragraphs (b) above shall be endorsed to include the Owner and the Owner's officers and employees as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the Owner, its officers, or its employees, or carried by or provided through any insurance pool of the Owner, shall be excess and not contributory insurance to that provided by Contractor. The Contractor shall be solely responsible for any deductible losses under any policy required above.

SECTION 4.0: SPECIFICATIONS/SCOPE OF SERVICES

4.1. General/Background: The City of Grand Junctions operates the 12.5 million gallon per day rated Persigo Wastewater Treatment Plant (WWTP) and an extensive wastewater collections system consisting of approximately 588 miles of sewer lines and 29 lift stations. The City has received nuisance odor complaints that have been attributed to the Persigo WWTP and various locations within the collections system. The odor complaints vary in description, frequency, duration, and intensity. The City records limited documentation of the nuisance odor complaints that are received.

The original design and construction of Persigo WWTP included multiple Virotrol Scrubber systems for odor control which were utilized in the headworks, primary clarifier, and sludge blending buildings. The scrubbers were designed for use with a chemical oxidant (NaOCL, $KMnO_4$, H_2O_2, etc.) and included an oxidant neat tank, dilution tank, fan, mist nozzles, and a baffled scrubber. Shortly after installation one of the scrubbers was modified to treat sewer gases from the influent flume and gases released at the siphon just west of Persigo Wash, which were piped via a dedicated "sewer gas line" to the scrubber. However, within 5 years, by the mid-1980s, all the Virotrol Scrubbers systems were decommissioned because at that time nuisance odor complaints within the vicinity of the plant were minimal, the scrubber systems were unpleasant and costly to operate, and the scrubbers were limited in odor control effectiveness.

In 1995 with further improvements in 1998, a chemical feed station was constructed at 2549 River Road (approximately 5.5 miles upstream of Persigo WWTP) to feed ferrous chloride into the collections system. The ferrous chloride feed station was installed to mitigate odor issues and prevent hydrogen sulfide corrosion of the concrete interceptor between the feed station and Persigo WWTP. However, in recent years the interceptor between the ferrous chloride feed station and the Persigo WWTP has been CIPP lined which prevents hydrogen sulfide corrosion. Currently, the ferrous chloride is fed only to mitigate nuisance odors and keep atmospheric hydrogen sulfide levels low for staff safety in the headworks and primary clarifiers buildings at the Persigo WWTP. The original ferrous chloride chemical tanks were replaced in 2010 after 12 years of operation. The current tanks have been in-service going on 9 years and are approaching the end of their useful service life. Additionally, as shown in the attached document, the price of ferrous chloride has significantly increased in the last two years.

New odor control facilities will need to consider:

- Staff safety and health.
- Telemetry. Communication with the plant is important to monitor and control operations.
- Life cycle position of existing ferrous chloride feed station
- Potential current and future regulatory considerations for discharge limits at the WWTP such as alkalinity, TDS, and/or iron impacts.
- Potential presence of other odiferous compounds (e.g., mercaptans)
- Current air exchange rates in headworks and clarifier buildings.
- Plans for replacement of aeration blowers with more energy-efficient turbo blowers. Potential for foul air to be used for aeration air.

4.2. Project Objectives: The objective of this project is to perform an engineering investigation that will quantify the sources of odor and then identify and evaluate alternatives to provide odor control at the Persigo WWTP and within the wastewater collections system.

4.3. Special Conditions/Provisions:

- **Price/Fees:** Pricing shall be established as "a cost not to exceed price", and shall be all inclusive, to include, but not be limited to: labor, materials, equipment, travel, drawings, engineering work, shipping/freight, licenses, permits, fees, etc.

  Provide a not to exceed price using Solicitation Response Form found in Section 7, **accompanied by a complete list of costs breakdown.**

  All fees will be considered by the Owner to be negotiable.

- **Proposed Schedule:**

1. June 2019, Task 1-3 of this RFP complete in preparation for 2020 budget setting process.
2. Winter of 2019, City advertises a RFP for Consultant selection to design and produce a construction package with plans and specifications that will address the odor issues within the Persigo Sewer system. Construction plans and specifications completed by the end of March 2020. (Not Part of this current RFP)
3. Construction of improvements to Persigo Sewer System begins in Summer 2020. (Not Part of this current RFP)

- **Attached Documents:**
  1. Historic ferrous chloride usage
  2. H_2S monitoring data at headworks building

4.4. Scope of Services: The scope of services includes the following:

Task 1: Project Management and Coordination

Project Initiation: Develop and prepare a project schedule to meet the proposed

project time frame and complete assigned tasks. The schedule shall show individual tasks described in the scope of work for the project and identify key milestone dates. The Consultant Project Manager (Consultant PM) shall maintain and update the project schedule as the work proceeds. Consultant PM will be assigned to this project for the duration of the work.

Project Team Coordination: The City PM and the Consultant PM shall maintain ongoing communication about the project on a frequent and regular basis. Consultant PM shall provide:

- Copies of pertinent written communications, including electronic (email) correspondence
- Early identification of potential problems

Progress Meetings: The City and Consultant shall meet, either in person or by telephone conference calls, at regularly scheduled Project Working Group Meetings held at approximate two-week intervals throughout the project. Meetings shall include consultant PM, City PM, Wastewater Services Manager, and other stakeholders as necessary. The Project Working Group Meetings shall be used to coordinate the work effort and resolve any outstanding issues or problems. The meetings shall focus on the following topics:

- Activities completed since last meeting
- Problems encountered or anticipated
- Late activities/activities slipping behind schedule
- Solutions for unresolved or newly identified problems
- Schedule of upcoming activities
- Information on items required.

The Consultant PM shall prepare a written summary report of the general discussions held including all action items assigned. This scope assumes six (6) Project Working Group Meetings via conference call.

Reporting Requirements: The Consultant PM shall provide the following on a routine basis:

- Bi-weekly status

Task 2: Collect, Review, and Organize Existing Information

Collect, review, and organize data needed to understand, and to the extent possible quantify, where current odors originate and determine where past odors likely originated. Review documents and information including but not limited to:

- Nuisance odor compliant records.
- Site visit to specific areas in the wastewater collections system and Persigo WWTP attributed to nuisance odor complaints.
- Interviews with Persigo staff.
- Shop drawings and O&M manuals for pump stations, siphons, ferrous chloride feed station, etc.

- Operating data including: chemical and energy use, ferrous chloride specifications and purchasing information, hydrogen sulfide atmospheric measurements in headworks and primary clarifiers.
- City of Grand Junction easement and property ownership records for specific locations within the collections system.

If the consultant identifies any data gaps, provide recommendations for additional data collection to support study and/or design phases of the project.

Potential Deliverables:

1. Draft and final technical memorandum summarizing the understanding of all odors and a list of odor sources from the Persigo collections and WWTP.

Task 3: Alternative Analysis Odor Reducing and Eliminating Strategies
From the information in Task 2, the Consultant shall conduct an alternatives analysis that will develop a basis of design, identify and evaluate three (3) to four (4) alternatives, and recommend a preferred alternative or combination of alternatives if odor control is recommended at multiple areas. Task 3 shall include but not be limited to:

- Develop Evaluation Criteria Matrix with input from Persigo staff
- Prepare a preliminary basis of design report for the alternative evaluation
- Identify and evaluate alternatives
- Develop conceptual designs of alternatives
- Develop life cycle cost estimates for each of the alternatives (capital and operating)
- Prepare and facilitate an alternative evaluation workshop
- Complete Evaluation Criteria Matrix for alternatives
- Finalize basis of design report for the preferred alternative

Potential Deliverables:

1. Preliminary and final basis of design report for preferred alternative.

4.5. RFP Tentative Time Schedule:

• Request for Proposal available:	January 30, 2019
• Inquiry deadline, no questions after this date:	February 8, 2019
• Addendum Posted:	February 12, 2019
• Submittal deadline for proposals:	February 15, 2019
• Owner evaluation of proposals:	February 18-22, 2019
• Final selection:	February 27, 2019
• Contract execution:	March 6, 2019
• Work begins no later than:	March 11, 2019

4.6. Questions Regarding Scope of Services: All questions regarding this Request for Proposal shall be directed by email to Duane Hoff. All inquiries shall clearly identify the name of the firm and the authorized representative, the RFP number and Title, and all questions to which the responses shall be made.

Any interpretations, corrections and changes to this RFP or extensions to the opening/receipt date shall be made by a written Addendum to the RFP by the City Purchasing Division. Sole authority to authorize addenda shall be vested in the City of Grand Junction Purchasing Representative. Addenda will be issued electronically through the Rocky Mountain E-Purchasing website at www.rockymountainbidsystem.com. Offerors shall acknowledge receipt of all addenda in their proposal.

Duane Hoff Jr., Senior Buyer
duaneh@gjcity.org

SECTION 5.0: PREPARATION AND SUBMITTAL OF PROPOSALS

Submission: ***Each proposal shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (https://www.rockymountainbidsystem.com/default.asp).*** *This site offers both "free" and "paying" registration options that allow for full access of the Owner's documents and for electronic submission of proposals. (Note: "free" registration may take up to 24 hours to process. Please Plan accordingly.)* Please view our "**Electronic Vendor Registration Guide"** at http://www.gjcity.org/BidOpenings.aspx for details. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline **800-835-4603**). For proper comparison and evaluation, the City requests that proposals be formatted as directed in Section 5.0 "Preparation and Submittal of Proposals." Offerors are required to indicate their interest in this Project, show their specific experience and address their capability to perform the Scope of Services in the Time Schedule as set forth herein. For proper comparison and evaluation, the Owner requires that proposals be formatted **A** to **F**:

A. **Cover Letter:** Cover letter shall be provided which explains the Firm's interest in the project. The letter shall contain the name/address/phone number/email of the person who will serve as the firm's principal contact person with Owner's Contract Administrator and shall identify individual(s) who will be authorized to make presentations on behalf of the firm. The statement shall bear the signature of the person having proper authority to make formal commitments on behalf of the firm. By submitting a response to this solicitation the Contractor agrees to all requirements herein.

B. **Qualifications/Experience/Credentials:** Proposers shall provide their qualifications for consideration as a contract provider to the City of Grand Junction/Mesa County and include prior experience in similar projects.

C. **Strategy and Implementation Plan:** Describe your (the firm's) interpretation of the Owner's objectives with regard to this RFP. Describe the proposed strategy and/or plan for achieving the objectives of this RFP. The Firm may utilize a written narrative or any other printed technique to demonstrate their ability to satisfy the Scope of Services. The narrative should describe a logical progression of tasks and efforts starting with the initial steps or tasks to be accomplished and continuing until all proposed tasks are fully described and the RFP objectives are accomplished. Include a **time schedule** for completion of your firm's implementation plan and an estimate of time commitments from Owner staff.

D. **References:** A minimum of three (3) **references** with name, address, telephone number, and email address that can attest to your experience in projects of similar scope and size.

E. **Fee Proposal:** Provide a "not to exceed price" using Solicitation Response Form found in Section 7, **accompanied by a complete list of costs breakdown.**

F. Additional Data (optional): Provide any additional information that will aid in evaluation of your qualifications with respect to this project.

SECTION 6.0: EVALUATION CRITERIA AND FACTORS

6.1 Evaluation: An evaluation team shall review all responses and select the proposal or proposals that best demonstrate the capability in all aspects to perform the scope of services and possess the integrity and reliability that will ensure good faith performance.

6.2 Intent: Only respondents who meet the qualification criteria will be considered. Therefore, it is imperative that the submitted proposal clearly indicate the firm's ability to provide the services described herein.

Submittal evaluations will be done in accordance with the criteria and procedure defined herein. The Owner reserves the right to reject any and all portions of proposals and take into consideration past performance. The following parameters will be used to evaluate the submittals (in no particular order of priority):

- Responsiveness of submittal to the RFP
- Understanding of the project and the objectives
- Experience/Required Skills
- Necessary resources
- Strategy & Implementation Plan
- References
- Fees

Owner also reserves the right to take into consideration past performance of previous awards/contracts with the Owner of any vendor, contractor, supplier, or service provider in determining final award(s).

The Owner will undertake negotiations with the top rated firm and will not negotiate with lower rated firms unless negotiations with higher rated firms have been unsuccessful and terminated.

6.3 Oral Interviews: The Owner may invite the most qualified rated proposers to participate in oral interviews.

6.4 Award: Firms shall be ranked or disqualified based on the criteria listed in Section 6.2. The Owner reserves the right to consider all of the information submitted and/or oral presentations, if required, in selecting the project Contractor.

SECTION 7.0: SOLICITATION RESPONSE FORM

RFP-4601-19-DH Plant Odor Control Study for Persigo Wastewater Treatment Plant

Offeror must submit entire Form completed, dated and signed.

1) Not to exceed price to provide all labor, services, supplies, equipment, travel, etc. necessary for the Plant Odor Control Study for Persigo Wastewater Treatment Plant per specifications:

NOT TO EXCEED PRICE $_____

WRITTEN:_____dollars.

The Owner reserves the right to accept any portion of the work to be performed at its discretion

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The undersigned has thoroughly examined the entire Request for Proposals and therefore submits the proposal and schedule of fees and services attached hereto.

This offer is firm and irrevocable for sixty (60) days after the time and date set for receipt of proposals.

The undersigned Offeror agrees to provide services and products in accordance with the terms and conditions contained in this Request for Proposal and as described in the Offeror's proposal attached hereto; as accepted by the Owner.

Prices in the proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a proposal for the purpose of restricting competition.
- The individual signing this proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of _____ percent of the net dollar will be offered to the Owner if the invoice is paid within _____ days after the receipt of the invoice.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: _____.

It is the responsibility of the Proposer to ensure all Addenda have been received and acknowledged.

_____	_____
Company Name – (Typed or Printed)	Authorized Agent – (Typed or Printed)
_____	_____
Authorized Agent Signature	Phone Number
_____	_____
Address of Offeror	E-mail Address of Agent
_____	_____
City, State, and Zip Code	Date

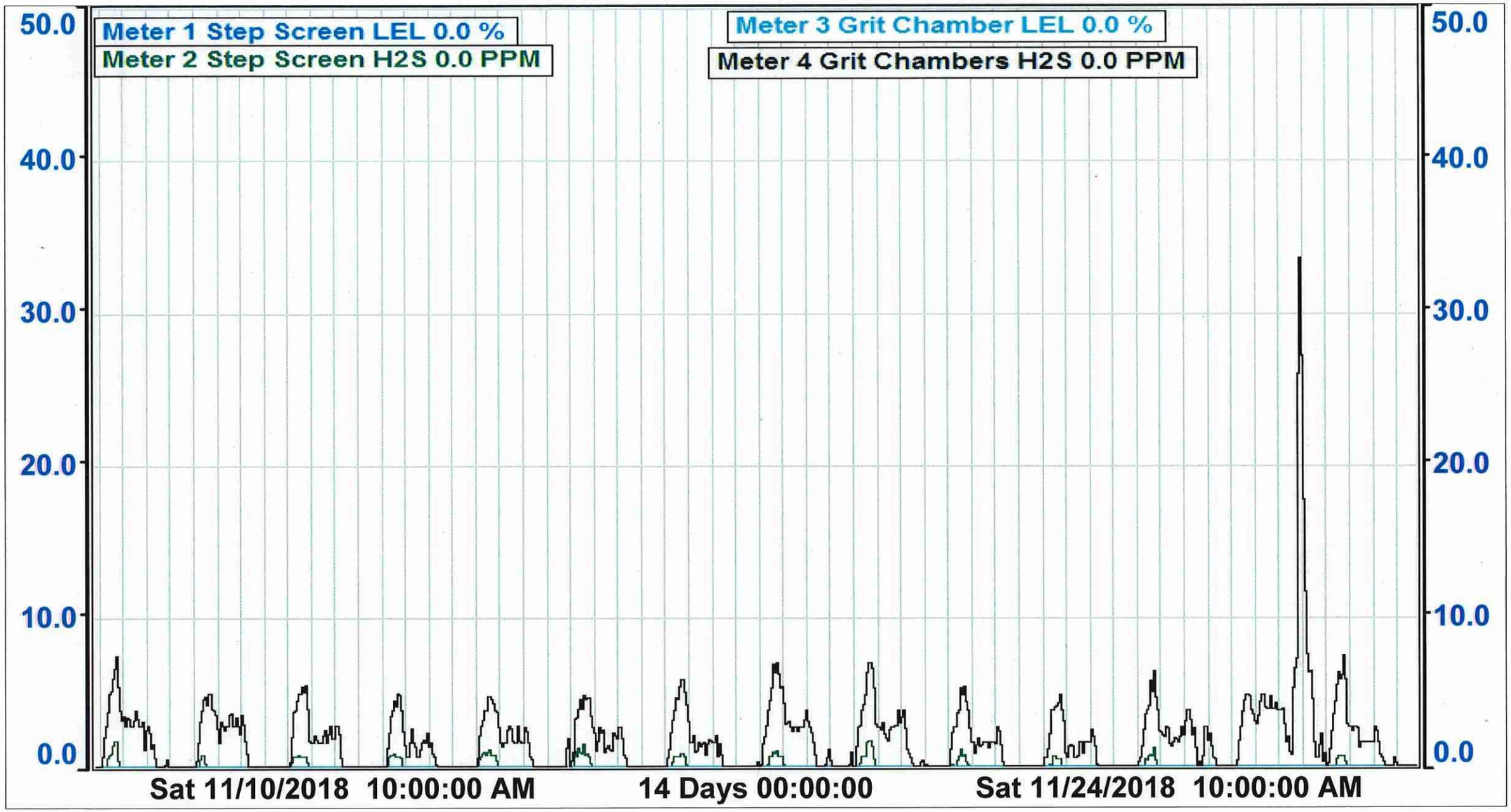
Historic Ferrous Chloride Usage

Ferrous feed for h2s control at the Persigo wastewater plant

Year	Dry tons ordered	Annual pounds of ferrous ordered	Annual influent flow in million gallons	Average Pounds of Ferrous per million gallons	$ per million gallons	$/year
1995						
1996	72.11	144,220	2799	52	$ 8.13	$ 22,762.71
1997	79.13	158,260	2828	56	$ 10.63	$ 30,064.63
1998	69.85	139,700	2812	50	$ 11.13	$ 31,304.02
1999	82.09	164,180	2800	59	$ 13.39	$ 37,481.21
2000	45.99	91,980	2898	32	$ 8.27	$ 23,975.99
2001	75.66	151,320	2828	54	$ 12.92	$ 36,539.14
2002	65.15	130,300	2882	45	$ 9.06	$ 26,111.94
2003	71.02	142,040	2790	51	$ 10.11	$ 28,216.96
2004	99.00	198,000	2849	69	$ 13.69	$ 38,995.24
2005	88.08	176,156	2914	60	$ 11.91	$ 34,703.08
2006	98.30	196,622	2909	68	$ 13.31	$ 38,729.37
2007	106.72	213,719	2928	73	$ 14.36	$ 42,047.60
2008	112.17	224,343	3064	73	$ 19.75	$ 60,505.66
2009	149.68	299,194	3071	97	$ 33.35	$102,405.10
2010	85.57	171,175	2872	60	$ 22.64	$ 65,033.20
2011	95.36	190,741	2718	70	$ 29.18	$ 79,300.10
2012	77.37	154,739	2751	56	$ 23.91	$ 65,764.50
2013	84.438	168876	2801	60	$ 25.50	$ 71,431.37
2014	82.85	165700	2784	60	$ 26.97	$ 75,075.89
2015	114.48	228960	3076	74	$ 34.85	$107,185.41
2016	89.07	222775	3057	73	$ 34.84	$106,498.40
2017	89.07	178119	3089	58	$ 29.39	$ 90,775.44
2018	102.53	205070	3180	64	$ 40.36	$128,339.23
2019						
2020						
Last 3 yr Average	94	201988	3109	65	$ 34.86	$108,537.69

1995 Started feeding Ferrous at west side on May 24, 1995. Started feeding Ferrous at the dump site at Persigo on May 5, 1995.
2008 Price increase in may 2008 from $394/DT to $630/DT
2009 Price increase in may 2009 from $630/DT to $760/DT
2011 Price increase March 2011 from $760/DT to $850/DT
2013 Price increase January 01, from $850/DT to $895/DT $45/DT or 5.3% increase
2014 Price increase October 2014 from $895/DT to $929/DT $34/DT or 3.66%
2015 Price increase October 2015 from $929/DT to $956/DT $27/DT or 2.91%
2016 No pirce increase in 2016
2017 Price increase as of May 2017 from $956/DT to $998/DT. $42.00/DT or 4.4%
2018 Price increase 2018 from $998/dt to $1220/dt or 22.24% increase due to transportation $
2018 Second price increase in November 2018 from $1220/DT to $1951/DT 60%
2019 2019 Price is $1951/DT

H_2S Monitoring Data at Headworks Building


Meter 1 Step Screen LEL 0.0 %
Meter 2 Step Screen H2S 0.0 PPM
Meter 3 Grit Chamber LEL 0.0 %
Meter 4 Grit Chambers H2S 0.0 PPM
50.0
40.0
30.0
20.0
10.0
0.0
Sat 11/10/2018 10:00:00 AM
14 Days 00:00:00
Sat 11/24/2018 10:00:00 AM

CITY OF GRAND JUNCTION
ODOR CONTROL EVALUATION
PROPOSED PROFESSIONAL SERVICES FEE

	GARVER															
	LABOR							EXPENSES								
TASK	E-6	E-5	E-4	E-3	E-2	CAD TECHNICIAN	ADMIN	MILEAGE	Two Week ODALOG® RENTAL		Two week ACCRULOG® DIFFERENTIAL PRESSURE LOGGER		Two Week FENCELINE (LOW RANGE) H2S MONITOR		TRAVEL & LODGING
Unit Price (Hidden Row)	$ 246	$ 217	$ 178	$ 158	$ 130	$ 115	$ 88		Quantity	$ 300	Quantity	$ 325	Quantity	$ 840	
Task 1 - Project meeting, feasibility walkthrough, review of plans, general project management; preparation of sampling plans	8			24			16	$ 472							$ 200
Task 3 - Collection System General Source Identification and Characterization	3			32	16		6	$ 472	8	$ 2,400	5	$ 1,625			$ 600
Task 4 – Persigo WWTP Source Identification and Characterization (Rentals for one month; timing for rentals concurrent with Tasks 2 & 3)	4			28	12			$ 944					3	$ 2,520	$ 800
Task 5 – Evaluate Best Practices to mitigate characterized odors				28	16	18	3	$ 472							$ 200
Task 7 – Conceptual Evaluation of Using Odorous air for Secondary Treatment Aeration	4														
Task 8 - Conference Call to Discuss Odor Implications related to the Ridges Lift Station Alternatives Analysis	3														
Task 9 - Summary Report	2			24	4	8	8								
Totals	24	0	0	136	48	26	33								
Garver subtotal	$ 51,855.00														

	PERKINS ENGINEERING CONSULTANTS, INC.												
	LABOR						EXPENSES						
TASK	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	GRADUATE ENGINEER	CAD TECHNICIAN	ADMIN	MILEAGE	TRAVEL	HANDHELD INSTRUMENTS	DRAGGER TUBES	AIR PUMPS	SULFUR AND AMINE SERIES ANALYTICAL & SHIPPING	LAMOTTE TEST KIT FOR LIQUID SULFIDES
Unit Price (Hidden Row)	$ 205	$ 195	$ 165	$ 120	$ 80	$ 70							
Task 4 – Persigo WWTP Source Identification and Characterization (Rentals for one month; timing for rentals concurrent with Tasks 2 & 3)	10	6	20		6	2	40	898	50				
Task 5 – Evaluate Best Practices to mitigate characterized odors			20				40	449	100	200			250
Task 7 – Conceptual Evaluation of Using Odorous air for Secondary Treatment Aeration			24	8		2	40	898	50	100	120	600	
Task 8 - Conference Call to Discuss Odor Implications related to the Ridges Lift Station Alternatives Analysis	18		16	8	8		40	449					
Task 9 - Summary Report	8		16	6	6								
	4		4										
Totals	4		10	12	8								
	44	6	110	34	28	4							
Perkins subtotal	$ 39,913.00												

Total Proposed Compensation	$ 97,754.95

Air Management and Odor Control Study - Persigo Wastewater System

APPENDIX A – SCOPE OF SERVICES

1. Task 1 - General Project Management and Sample Plan Development

Generally, the scope of services includes engineering support required to identify the highest priority Persigo Wastewater System air management and odor control improvement opportunities, identify approaches to be implemented by the system to continuously improve its air management and odor control approaches, and to scope future capital, operations, and maintenance projects that can be implemented by the City to address the improvement opportunities.

Project Management for the entire project includes meeting scheduling and coordination with City staff, project schedule development and tracking, project scope development and tracking, subcontractor coordination, and monthly reporting and invoicing.

Project Management includes an initial phone interview with City Staff to identify all potential evaluation sites described in greater detail in subsequent scope sections. It also includes a project kickoff meeting that includes a feasibility walkthrough at all proposed evaluation sites where sampling or data logging is proposed to assess safety, accessibility, ability to open covers, potential community impacts, suitability for monitoring, and other factors affecting the feasibility of the proposed monitoring..

Garver will deliver a draft sampling plan within 5 working days after all of the following have occurred:

- Notice to Proceed
- Project kickoff meeting and feasibility walkthrough
- Receipt of the following City provided information:
    - City identified Collection System investigation locations (5 locations)
    - City identified Persigo Liquids Stream investigation locations (5 locations)
    - City identified Persigo Solids Stream investigation locations (3 locations)
    - City identified Persigo Fenceline investigation locations (3 locations)
    - Available data from City MSA meters in the two locations and proximate area
    - City GIS Data and background mapping for investigation areas.
    - City As-built drawings of equipment, structures, and system configuration upstream and downstream of investigation areas.
    - Meeting with City staff (Collections System Supervisor, Wastewater Maintenance Supervisor, Environmental Lab Manager, and Industrial Pretreatment Supervisor) to understand and quantify the constraints to develop the sampling plan.

Project Management also includes sample equipment ordering, collection, and return.

2. Task 3 - Collection System General Source Identification and Characterization

Garver will work with City staff to systematically investigate five (5) locations within the Persigo Collection System that are suspected as potential sources of odor. This investigation will be completed in the same 2-week period with Task 4 to economize on equipment rental costs. This task will be sequenced and staggered to make most efficient use of equipment and City staff. The investigation will include the following elements:

- Review City GIS data and available as-built drawings to understand the collection system

configuration upstream and downstream of investigation areas

- Meet with City pretreatment staff to understand potential dischargers upstream and downstream of the evaluation areas
- Review written City safety procedures and meet with City staff to understand operations procedures for any operations that may involve traffic control or other site specific safety requirements.
- Implement the agreed-upon sampling program.
    - It is assumed that 8 Odalog® units of varying ranges will be used for 2 weeks in tasks 3 and 4 and deployment of the units will be coordinated with Task 4.
    - Five evaluation sites will be considered, but some of the sites may require multiple units. The Odalog® units will be installed in and removed from manholes by City staff as directed by Garver.
    - It is also assumed that five liquid phase sulfide samples will be collected each week; one from each site. City staff will collect and analyze the liquid phase samples.
    - It is assumed that 5 differential pressure units will be used each week for a total of two weeks. The differential pressure units will be installed in and removed from manholes by City staff as specified by Garver.
    - It is assumed that City personnel will be made available to open and close all manholes needing access for this work.
- It is assumed that City personnel will be responsible for any traffic control necessary to support the testing effort.
- Investigation results will be tabulated and mapped to show the H2S concentration and collection system pressure gradient across each of the nine investigation locations.

The City will summarize all investigation results within 10 working days of the last evaluation date

3. Task 4 – Persigo WWTP Source Identification and Characterization

Garver will work with City staff to systematically investigate five (5) liquid stream locations, three (3) solids stream locations, and three (3) fenceline locations at and immediately proximate to the Persigo WWTP that are suspected as potential sources of odor. When possible, this investigation will be completed in parallel with Task 3 but will also be sequenced and staggered to make most efficient use of equipment and City staff previously mobilized in previous tasks. The investigation will include the following elements:

- Review City as-built drawings to understand the treatment system of investigation areas
- Review written City safety procedures and meet with City staff to understand operations procedures for any site specific operations and maintenance safety requirements.
- Establish a sampling program and schedule to quantify and characterize H2S, air emission rates, Ammonia, mercaptans, dimethyl sulfide, dimethyl disulfide, and other potentially important odors as correlated with the investigation locations.
- Implement the agreed-upon sampling program.
    - It is assumed that 8 rented Odolog units described in Task 3 will be deployed by Garver team personnel and removed, turned off, and returned by City staff as specified by Garver.
    - It is assumed that fenceline monitoring will take two weeks and that 3 Acrulog units will be used for both weeks. The Acrulog units will be installed in and removed by City staff

as specified by Garver.

- It is also assumed that a total of five liquid phase sulfide samples will be collected and that City staff will collect and analyze the liquid phase samples.
- It is also assumed that one Glass Vacuum Bottle Sample and one Sorbent Tube sample will be collected and analyzed. Gaver team staff will collect the sample.

- Investigation results will be tabulated and mapped to show the H2S concentrations across the Persigo Plant site.

The City will provide all City-collected data within 5 working days of the last collection date

4. Task 5 – Evaluate Best Practices to mitigate characterized odors.

Garver will work with the City to establish evaluation criteria for ranking potential mitigation alternatives. Ranking criteria can include factors such:

- Potential nuisance conditions on adjacent properties.
- Employee safety and comfort
- Impact on corrosion
- Equipment and Electronics impact
- Capital Cost
- Operating Cost
- O&M impact

Each of these factors will be prioritized and weighted for use in a subsequent weighted screening matrix evaluation.

Garver will then use a generalized technology screening matrix that summarizes the technologies available within the industry and their relative strengths and weaknesses in different applications to rapidly identify potential mitigation approaches for all odor sources identified in Tasks 3 and 4. Worker comfort, health and safety will be a key emphasis in evaluating mitigation approaches.

A workshop will be held with City staff to review the shortlisted approaches identified from the technology screening matrix and gain consensus on which of the shortlisted options will be further developed.

Shortlisted options will be further evaluated for unit sizing, loading, and dose rates to establish pricing for a benefit/cost evaluation for each source to be mitigated and with a focus on worker safety including:

- Code Review: A review of applicable codes for each facility (e.g.,OSHA, NEC, NFPA, CDPHE, etc.) to characterize applicable codes, hazard classifications, grandfather clauses, and industry standards/ best practices.
- Controlled and Uncontrolled Areas: An assessment will be performed to determine the feasibility and cost effectiveness of identifying opportunities to defined controlled and uncontrolled areas. Where practical, defining such areas minimizes worker, exposure, risk and enhance the worker environment.
- Air Movement Assessment: The following analyses will be completed to identify air movement issues in enclosed buildings housing wastewater treatment processes:
  - Smoke Testing.

- Air Supply and Exhaust Direction Evaluation – Targets providing fresh supply air so workers constantly experience fresh air across their person and prevents odors from being dragged across the worker.
- Longest flow path between supply and exhaust and identifies any potential areas of air stagnation.

Cost/risk evaluations will be evaluated and ranked based on city established Odor Control Objectives and evaluation criteria and a final recommendations workshop will establish the phasing and timing of recommended improvement projects. In addition, Garver will recommend two opportunities for the City to complete a pilot evaluation of the recommended alternative which is described further in Task 6. Draft recommendations will be provided within 15 working days of receipt of all testing results and will include a planning level opinion of probable cost.

Recommendations will be reviewed by the City and finalized within 10 business days following a review meeting with the City.

No detailed design drawings or specifications are assumed in this scope for recommended improvements, Garver can develop a scope and fee estimate for the design work to be completed as a subsequent task order.

5. Task 7 – Conceptual Evaluation Of Using Odorous Air For Secondary Treatment Aeration

Garver will complete a technical memorandum that rapidly evaluates the site specific efficacy of using odorous air from the headworks and covered primary clarifiers for use in the existing secondary treatment aeration system. The TM will include the following:

- Potential odorous air flow rates needed from the headworks and covered primary clarifiers in order to achieve fume capture and maintain a slight vacuum on the structures during normal operations.
- Comparison of the odorous airflow rates with historical diurnal and seasonal process airflow demands
- Summary of air conveyance requirements to secondary process blowers and any blending requirements with atmospheric air
- Summary of potential blower and aeration system impacts using odorous air
- Comparison of potential aeration system impacts using odorous air using existing centrifugal blowers and proposed high-speed turbo blowers based on published operating curves
- Summary of potential system modifications needed to deal with corrosive air and condensate management
- Summary of anticipated O&M impacts.

Garver will deliver a draft TM for Task 2 within 20 working days after all data in Task 4 is received.

6. Task 8 – Conference Call to Discuss Odor Implications related to the Ridges Lift Station Alternatives Analysis

Garver will participate in a City scheduled conference call between the City and its consultant on the Force Main abandonment study to understand the system operation of the Ridges Lift Station and the alternatives that are being considered to modify its operation. Garver will provide an initial assessment of potential odor impacts with each alternative and the steps needed to better characterize the odor impacts. Garver will summarize the discussion topics in an email following the call.

It is assumed that Garver's role will be limited to the conference call and summary email. Garver can develop a scope and fee estimate to support any additional work to be completed as a subsequent task order.

7. Task 9 - Summary Report

Garver will prepare a Summary report documenting the work done in all previous tasks including a project description, opinion of probable cost, and recommended implementation timing for all recommended air management and odor mitigation projects prioritized by the City.

Garver will deliver the draft report 15 working days after the completion of the last task and will conduct a review workshop to receive the City's comments on the draft.

Garver will deliver the final draft 15 working days after receipt of draft comments workshop.

8. Project Deliverables

The following will be submitted to the Owner, or others as indicated, by Garver:

A. 3 hard copies of the Sampling Plans, Pilot Plans, TMs, and Draft Summary Report
B. 5 hard copies of the Final Summary Report.
C. Electronic files for all submittals.
D. Power Point Presentations for each workshop

9. Extra Work

Extra work has been identified within each task above. Garver can develop a scope and fee estimate to support any additional work to be completed as a subsequent task order.

10. Assumed Schedule

The following is a summary of the assumed Project Schedule associated with this scope of work:

- Notice To Proceed before May 2019
- Draft Sampling Plan to City (2nd week in May)
- Order Rental Meters (3rd week in May)
- Finalize Sampling Plan (4th week in May)
- Execute Sampling Plan (month of June)
- Evaluate Best Practices for Mitigation (Month of July)
- Develop Pilot Plans and complete blower evaluation (Month of July)
- Draft and Final Report (Month of August)

Contract Terms and Conditions

5.1 Instruments of Service

GARVER's instruments of service provided by this agreement consist of the printed hard copy reports, drawings, and specifications issued for the Assignment or Project; whereas electronic media, including CADD files, are tools for their preparation. GARVER will furnish to the Owner both printed hard copies and electronic media. In the event of a conflict in their content, however, the printed hard copies shall take precedence over the electronic media.

GARVER's electronic media are furnished without guarantee of compatibility with the Owner's software or hardware.

Owner shall have ownership of the printed hard copy drawings and specifications and the electronic media delivered to Owner by GARVER for the sole purposes of using the same for the Project for which they were provided. Notwithstanding the foregoing, the Owner shall only have an irrevocable, royalty free, and non-exclusive license for the use of the underlying intellectual property, but only in the operation and maintenance of the Project or Assignment for which they were provided. Use of these materials for modification, extension, or expansion of this Project or on any other project, unless under the direction of GARVER, shall be without liability to GARVER and GARVER's consultants.

Because data stored in electronic media form can be altered, either intentionally or unintentionally, by transcription, machine error, environmental factors, or by operators, it is agreed that the Owner shall indemnify, defend, save harmless GARVER, GARVER's consultants, and the officers and employees of any of them from and against any and all claims, liabilities, damages, losses, and costs, including but not limited to costs of defense, arising out of changes or modifications to the data in electronic media form in the Owner's possession or released to others by the Owner and for any use of the electronic media and printed hard copy drawings and specifications outside the license granted by this provision.

5.2 Opinions of Cost

Since GARVER has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s)' methods of determining prices, or over competitive bidding or market conditions, GARVER's Estimates of Project Costs and Construction Costs provided for herein are to be made on the basis of GARVER's experience and qualifications and represent GARVER's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but GARVER cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from estimates prepared by GARVER.

The Owner understands that the construction cost estimates developed by GARVER do not establish a limit for the construction contract amount. If the actual amount of the low construction bid exceeds the construction budget established by the Owner, GARVER will not be required to re-design the project without additional compensation.

5.3 Underground Utilities

GARVER will not provide research regarding utilities and survey utilities located and marked by their owners as provided for in this agreement.

5.4 Insurance

GARVER currently has in force, and agrees to maintain in force for the life of this Contract, the following minimum schedule of insurance:

Worker's Compensation	Statutory Limit
Automobile Liability	
(Combined Property Damage and Bodily Injury)	$500,000.00
General Liability	
(Combined Property Damage and Bodily Injury)	$1,000,000.00
Professional Liability	$2,000,000.00

5.5 Indemnity Provision

Subject to the limitation on liability set forth in Section 5.7, GARVER agrees to indemnify the Owner for damages, liabilities, or costs (including reasonable attorneys' fees recoverable under applicable law) to the extent the damages and costs are found to be caused by the negligent acts, errors, or omissions of GARVER, its subconsultants, or any other party for whom GARVER is legally liable, in the performance of their professional services under this contract.

The Owner agrees to indemnify GARVER for damages, liabilities, or costs (including reasonable attorneys' fees recoverable under applicable law) to the extent the damages and costs are found to be caused by the negligent acts, errors, or omissions of the Owner, its agents, or any other party for whom the Owner is legally liable, in the performance of their professional services under this contract.

In the event claims, losses, damages, or expenses are found to be caused by the joint or concurrent negligence of GARVER and the Owner, they shall be borne by each party in proportion to its own negligence.

Owner agrees that any claim or suit for damages made or filed against GARVER by Owner will be made or filed solely against GARVER or its successors or assigns and that no member or employee of GARVER shall be personally liable to Owner for damages under any circumstances.

5.6 Design without Construction Phase Services

It is understood and agreed that GARVER's Scope of Services under this Agreement does not include project observation or review of the Contractor's performance or any other construction phase services, and that such services will be provided by the Owner. (OR - In the event GARVER's Scope of Services under this agreement is not amended to include project observation or review of the Contractor's performance or any other construction phase services,) The Owner assumes all responsibility for

interpretation of the Construction Contract Documents and for construction observation and supervision and waives any claims against GARVER that may be in any way connected thereto.

In addition, the Owner agrees, to the fullest extent permitted by law, to indemnify and hold GARVER harmless from any loss, claim or cost, including reasonable attorneys' fees and costs of defense, arising or resulting from the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Construction Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of GARVER.

If the Owner requests in writing that GARVER provide any specific construction phase services and if GARVER agrees in writing to provide such services, then they shall be compensated for the work as Additional Services.

5.7 Limitation of Liability

In recognition of the relative risks and benefits of the project to both the Owner and GARVER, the risks have been allocated such that the Owner agrees, to the fullest extent permitted by law, to limit the liability of GARVER and its subconsultants to the Owner and to all construction contractors and subcontractors on the project for any and all claims, losses, costs, damages of any nature whatsoever or claims for expenses from any cause or causes, so that the total aggregate liability of GARVER and its subconsultants to all those named shall not exceed GARVER's the greater of the total fee for services rendered on this project or professional liability insurance proceeds received up to the limit set forth above. Such claims and causes include, but are not limited to negligence, professional errors or omissions, strict liability, breach of contractor warranty, and indemnity obligations.

Notwithstanding any other provision to the contrary in this Agreement or a Work Authorization and to the fullest extent permitted by law, neither Owner nor Garver shall be liable, whether based on contract, tort, negligence, strict liability, warranty, indemnity, error and omission, or any other cause whatsoever, for any consequential, special, incidental, indirect, punitive, or exemplary damages, or damages arising from or in connection with loss of power, loss of use, loss of revenue or profit (actual or anticipated), loss by reason of shutdown or non-operation, increased cost of construction, cost of capital, cost of replacement power or customer claims, and Owner hereby releases Garver, and Garver releases Owner, from any such liability.

5.7.1 Hazardous Materials

Nothing in this agreement shall be construed or interpreted as requiring GARVER to assume any role in the identification, evaluation, treatment, storage, disposal, or transportation of any hazardous substance or waste. Notwithstanding any other provision to the contrary in this Agreement or a Work Authorization and to the fullest extent permitted by law, Owner shall indemnify, defend and save GARVER and its affiliates, subconsultants, agents, suppliers, and any and all employees, officers, directors of any of the foregoing, if any, from and against any and all losses which arise out of the performance of the Services and relating to the regulation and/or protection of the environment, including, without limitation, losses incurred in connection with characterization, handling, transportation, storage, removal, remediation, disturbance, or disposal of hazardous material, whether above or below ground.

5.8 Mediation

The Owner and GARVER agree that any and all discussions resulting from this clause are confidential. As they may apply to the presiding rules of evidence, negotiations pursuant to this clause shall not imply admission of responsibility or guilt for the aggravating action, but shall be regarded as compromise, resolution attempts, and settlement negotiations.

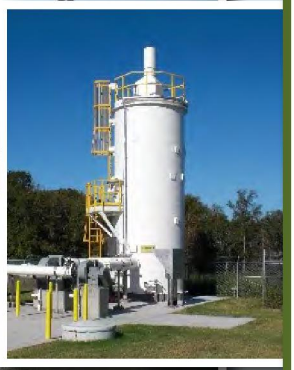
The Owner and GARVER agree to, through good faith efforts, first attempt to resolve all conflicts that arise out of or related to this Agreement, through direct discussions involving senior and/or executive management representatives from their respective organizations. It is a requirement of this clause for this condition be attempted prior to the use of other dispute resolution processes. If the respective representatives are unable to develop a compromise resolving the dispute, such that it is satisfactory to both parties within thirty (30) calendar days after a party delivers a written notice of such dispute, then further mediation processes shall begin, as described herein.

If direct discussions fail to resolve the dispute, the Owner and Garver further agree to pursue non-binding mediation unless the parties mutually agree otherwise.

The Owner and GARVER further agree to use their reasonable best efforts to include a similar mediation provision in all agreements with independent contractors and consultants retained for the project and to require all independent contractors and consultants and in all agreements with subcontractors, subconsultants, suppliers or fabricators so retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those agreements.

CITY OF Grand Junction COLORADO

The Garver/Perkins team experience combined with a partnered and programmatic approach, clears the air around the Persigo systems operations and fortifies community confidence in City infrastructure excellence.



ODOR CONTROL STUDY
for
PERSIGO WASTEWATER TREATMENT PLANT

RFP-4601-19DH

GARVER | PERKINS ENGINEERING CONSULTANTS, INC.

FEBRUARY ■ 2019

CONTENTS

5251 DTC Parkway, Suite 405
Greenwood Village, CO 80111
TEL: 303.721.6932
www.GarverUSA.com

February 15, 2019

City of Grand Junction Colorado
Attn: Mr. Duane Hoff, Senior Buyer
250 North 5th Street
Grand Junction, CO 81501

RE: RFP-4601-19-DH — Odor Control Study for Persigo Wastewater Treatment Plant

Dear Selection Committee:

The City of Grand Junction's leadership and staff have consistently demonstrated the unique ability to align teams to work collaboratively and efficiently, solving your most pressing challenges. As a standing industry leader, this has made the high-quality infrastructure services you provide the backbone connecting your community. However, running a full-service utility with fiscally responsible methods, while continuing focus on providing your growing community with sustainable infrastructure, comes with unique challenges, like odor control planning.

We understand this Odor Control Study is the next step on a journey of continuous improvement and will allow you to build upon your legacy of providing outstanding utility infrastructure service. Garver looks forward to the opportunity of working as an extension of your team to serve the community of Grand Junction. Planning projects of this nature require the strategic alignment of critical perspectives to develop the best plan possible. The Garver/Perkins team will facilitate City staff input to create a customized odor control program that ensures community confidence in City infrastructure services is maintained.

Our team commits the full capability and extent of our firm resources to Grand Junction. We differentiate ourselves through our ability to provide outstanding odor control planning in conjunction with exceptional customer service. Successful utility odor planning projects must simultaneously meet financial, schedule, best practice implementation, odor characterization, stakeholder engagement, collaboration, and customer service outcomes to deliver the intended community benefit. We have strategically teamed with Perkins Engineering Consultants (PECI) to execute this project. Together, our experts will provide our full cadre of industry leaders to you, providing the expertise in both project delivery and odor control needed to make this project successful and sustainable for years to come. Through our odor control engineering expertise and project delivery prowess, our team provides you with a depth of resources and ability to partner with you in successfully controlling odor within the Persigo Wastewater System. Our relationship with Perkins Engineering resides in a strong foundation of previous working experience. This experience of working together means we have clear lines of communication and a solid understanding of team capabilities.

We have the ability to provide rapid response locally! Project Manager, John Kuosman, PE, has experience as a former utility director and knows the right resources to engage, the right time to engage them, and the right questions to ask that will allow the Garver/Perkins team to efficiently work within the City of Grand Junction's organizational structure. In the last year, Garver has added resources to the Colorado team, including **Jeff Maier, PE, and Tyler Harbin, PE.** We have also added three additional staffing resources within the last eight months and will continue to grow the Colorado office. Together, the Garver/Perkins team can provide the resources and rapid response needed to provide the City of Grand Junction with the best planning solutions.

The following proposal will tell you about the Garver team and what drives our passion. If you have any questions or would like to know more about Garver, please contact John at (720) 202-8751 or JAKuosman@GarverUSA.com.

Your Project Partner,
Garver

John A Kuosman

John Kuosman, PE
Senior Project Manager

SECTION 1.

Qualifications / Experience / Credentials

GARVER | PERKINS ENGINEERING CONSULTANTS, INC.

A | QUALIFICATIONS/EXPERIENCE/CREDENTIALS

MEET YOUR PROJECT PARTNERS!

The Garver/Perkins team will evaluate and characterize existing odor issues, identify best practices to efficiently address those issues, and support you in developing an ongoing odor control program. **Our focus centers on creating cost-effective, sound solutions for long-term operational efficiency while maintaining community and environmental responsibility.** We take pride in our ability to tailor our process in order to meet the City of Grand Junction's unique goals and needs through creative planning and scheduling. The Garver/Perkins team has a successful track record of delivering projects in partnership with municipalities across the country. We attribute this success to our team's approach to deliver high quality, advanced studies that provide long-term solutions to our communities.

GARVER

As part of our strategic, organic growth model, Garver recently opened its Denver office ,led by Colorado Water Team Lead John Kuosman, PE. John brings 20+ years of experience in the Colorado water industry and a passion to serve utilities in his home state.

Our local knowledge combined with trusted staff relationships will provide the right solutions for this project!

As a 100-year-old multi-disciplined engineering, planning, architectural, and environmental services firm, Garver is committed to delivering quality practices, progressive methods, and honorable relationships. Our clients' trust serves as the cornerstone of our business. We adopt their visions to deliver projects founded on sound, technically innovative designs, creative solutions, cost effective services, and versatile customer care. Our value proposition lies in our ability to customize our approaches and services that achieve your goals and exceed your expectations.

PERKINS ENGINEERING CONSULTANTS, INC.

Perkins Engineering Consultants, Inc. (PECI) was founded in 2005 and serves clients with its expertise in odor and corrosion management, including sewer ventilation dynamics, fan testing, odor dispersion modeling, master planning, odor abatement design, and performance testing. PECI is a small but nimble firm with substantial experience in odor and corrosion management and specialized regulatory assistance for municipal wastewater facilities. PECI's key personnel have presented numerous technical papers on corrosion rehabilitation, odor management, sewer ventilation, and air release valve rehabilitation. **Mark Perkins serves as vice chair of the WEF Air Quality and Odor Control Committee and brings 37 years of experience to the team.** PECI's key offices are located in Arlington and Austin, Texas — each with direct flights into Grand Junction. Perkins Engineering personnel are licensed in Colorado, Texas, Oklahoma, California, Washington, North Carolina, Arkansas and Louisiana.

PECI is widely known for its specialized experience in the area of odor and corrosion control. Experience includes field assessment of odors, predictive dispersion modeling, design, and system performance verification. They have served as both a prime consultant and a subconsultant to numerous national and regional firms, including some of the world's largest design firms.

OUR TEAM IS STRUCTURED FOR SUCCESS

Our team brings a history of successfully delivering studies of similar scope across the country. What drives that success is our ability to integrate and leverage the wisdom of your City professionals. Below is a table demonstrating our team's organizational structure. Our unique structure has been carefully thought-out to coordinate and align with the City of Grand Junction at critical interface points. **Our team composition allows us to leverage the value of multiple perspectives to establish the best plan possible and serve as an extension of your staff, eliminating potential communication and scheduling issues.**

	Grand Junction	Garver / Perkins Team
Core Leadership Team **(All Phases)** • Project Management • Technical Leadership • QA/QC	Kurt Carson *Wastewater Services Manager* Jay Vancil *Wastewater Operations Supervisor* Bill Etcheverry *Collection Systems Supervisor* Larry Brown *Wastewater Maintenance Supervisor*	John Kuosman *Senior Project Manager* Mark Perkins *Deputy Project Manager* Randy McIntyre *Principal-in-Charge*
Phase 1a— Source Identification	Jackson Trappett *GIS Manager* Stephen Storz *Industrial Pretreatment Supervisor*	Trevor Stull *Garver GIS Specialist* Jeff Maier *Infrastructure Practice Lead* Charlotte Smith *Perkins Project Engineer*
Phase 1b— Source Characterization	Jo Holcomb *Environmental Lab Manager*	Tyler Harbin *Garver Project Engineer* Justin Angel *Perkins Project Engineer*
Phase 2— Implement Best Practices	Lee Cooper *Project Engineer* Trent Prall *Public Works Director* Randi Kim *Utilities Director*	Core Team Leadership
Phase 3— Continuous Improvement via Transparent Community Communication	City Manager's Office: *Health, Community, and Safety*	Core Team Leadership

Garver's Project Manager, John Kuosman historically served as the Director for 2 of the 3 largest wastewater utilities in Colorado, equipping him with a unique understanding of municipal processes and requirements needed in order to successfully deliver projects. *John's diverse water industry career has ranged from engineering consultant, operations engineer, operations and maintenance director, all the way to utility director. In every one of these roles, John has successfully helped public utilities frame complex business, financing, stakeholder outreach, and technical challenges; define and articulate process improvement and management plans; and efficiently leverage cross-organization resources to produce results.*

OUR TEAM EXPERIENCE — A PROVEN TRACK RECORD OF SUCCESS

Since the majority of wastewater treatment plant projects include odor and corrosion control evaluations, the Garver/Perkins team of engineers has become extensively familiar with mitigating air management issues and a multitude of potential odor control solutions. Our engineers evaluate air management in all stages of the treatment process including: pipelines, lift stations, pumps, wet wells, valves, gates, and other facilities that may have odor control and corrosive environment issues. Below is a sampling of projects that our team has chosen to demonstrate the experience of the team. Additionally, we have provided a list of just a portion of our extensive odor and corrosion abatement projects, showing the depth of experience we bring to the table!

Odor and corrosion issues will be evaluated at each part of the Persigo Wastewater System to reduce public impact.

100 MGD Headworks Replacement ■ *Grand Prairie, TX*

Project Owner:
Trinity River Authority

Year Completed:
Ongoing

Relevant Features:
- Headworks Odor Control
- Fume Capture & Management
- Screening Conveyance & Handling
- Rehabilitation of Existing Facilities

The Garver / Perkins team is currently working together on design of a new 100 MGD fine screening facility for the Trinity River Authority's Central Regional Wastewater System treatment plant, which serves portions of Dallas, Fort Worth, and 22 other cities.

The new facility will replace an aging in-ground facility that has been plagued with hydraulic capacity, odor, ragging, and severe corrosion problems. Garver is serving as prime consultant for this project which will feature six fine screens, tightly-covered screen channels with special corrosion-resistant linings, screenings conveyance, compaction and loadout equipment, and a 13,000 CFM biotrickling filter for odor abatement. Multiple odor containment and treatment technologies were evaluated during the preliminary design phase.

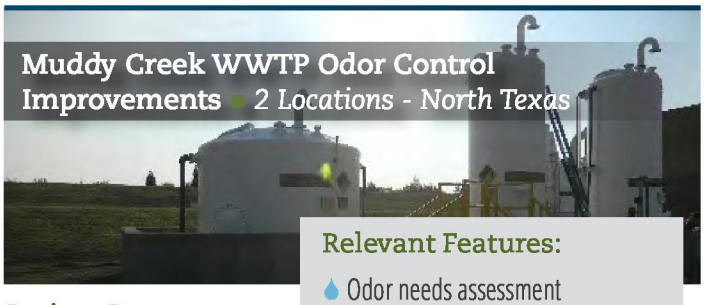
Tupelo Bayou WWTP Odor Control Improvements ■ *Faulkner County, AR*

Project Owner:
Conway Corporation

Year Completed:
2016

Relevant Features:
- Odor control improvements

Performed design services and construction support services for an odor control improvements for the Tupelo Bayou Wastewater Treatment Facility in Conway, Arkansas. The project included a new odor control system for the primary clarifiers, including new covers, fans, ductwork, control panels, and SCADA connections. In addition, the project included a replacement odor control system for the belt filter press building to provide an improved odor control system for odors associated with the operation of belt filter presses.



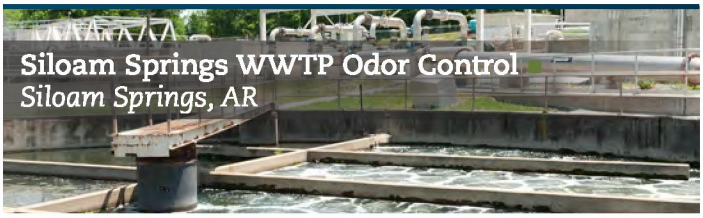
Muddy Creek WWTP Odor Control Improvements ■ *2 Locations - North Texas*

Project Owner:
North Texas Municipal Water District

Year Completed:
2019 *(estimate)*

Relevant Features:
- Odor needs assessment
- Odor control design for headworks, primary treatment, and biosolids handling
- Corrosion mitigation

PECI was responsible the evaluation, design and construction assistance for odor abatement and screening improvements to this 10 MGD WWTP serving two cities. A new 4200 cfm biotrickling filter was designed to handle air from the plant's influent lift station and from two sludge holding tanks. Chemical tanks associated with packed tower scrubber systems serving the plant's headworks structure were replaced. In a more recent project, a new biotrickling filter has been designed to eliminate foul air from the plant's primary clarifiers from being routed through the plant's process air blowers. The second biotrickling filter is scheduled to be constructed in 2019.



Siloam Springs WWTP Odor Control ■ *Siloam Springs, AR*

Project Owner:
City of Siloam Springs

Year Completed:
2013

Relevant Features:

- Odor control improvements

In response to maximizing the remaining funding from the $24 million Revolving Loan Fund, odor control alternatives were evaluated at the City of Siloam Springs Wastewater Treatment Plant. Specifically, the headworks is located merely feet from a walking trail at John Brown University and separated by a wood privacy fence. Evaluated odor data, conducted workshops with the Owner and defined alternatives and concepts for odor control improvements. To maximize the remaining funding, components of the system was installed by the Owner. Because of the budget constraints, ease of installation, simplistic operation and nominal requirements for operation and energy use, biofilter odor control technology (packaged pre-engineered systems) was selected for this project. These improvements will be made to the headworks, influent flow channel and screening and grit removal facilities.

Improvements include:

- Package odor scrubber system complete with associated blowers and media with provisions for future polishing
- Prefabricated metallic cover systems
- PVC and FRP ducting
- Aluminum grating and diamond plate fabrications

Norman South Water Reclamation Facility Phase 2 Improvements ■ *Norman, OK*

Project Owner:
City of Norman

Year Completed:
2018

Relevant Features:

- Odor control improvements

Working with the Norman Utilities Authority (NUA), Garver designed improvements for the Phase 2 expansion of Norman's Water Reclamation Facility from 12 MGD to 17 MGD. These include modified screening operation, advanced flow split with peak flow bypass, primary clarification rehabilitation, added aeration capacity/high-efficiency turbo blowers, secondary clarification, VFD-controlled RAS/WAS pumping, UV disinfection, post aeration, a new parallel 66-inch outfall line, odor control, solids thickening, anaerobic digestion, and site-wide backup power supply.

For the conceptual report, a tiered approach was developed for addressing odors at the plant, allowing the flexibility in choosing proposed project features that will be included in the expansion of the WWTP to align with available funding. The first tier targets the most nuisance areas of odor: headworks, primary sludge thickening, and primary clarifiers. The second tier targets WAS thickening and digested sludge dewatering area. The third tier would target additional treatment of captured odors areas, junction boxes, and certain areas around the anaerobic digesters. Real estate is a premium at the site, and minimum footprint will be available for the odor treatment. Treatment options identified for further evaluation are biological scrubbers, chemical scrubbers, and activated carbon scrubbers as polishing units.

Odor Control Improvements For Biosolids Handling Areas ■ *Garland, Tx*

Project Owner:
City of Garland, TX

Year Completed:
2017

Relevant Features:

- Odor control master planning
- Odor dispersion modeling
- Evaluation of odor control technologies
- Chemical feed
- Sewer ventilation
- Design of multiple odor control units for solids handling areas

PECI was responsible for the evaluation, planning, and design of multiple odor control units within the City's 40 MGD Duck Creek WWTP and its 24 MGD Rowlett Creek WWTP. This assignment involved characterization and quantification of odors from multiple process units, dispersion modeling to assess the effectiveness of alternate treatment technologies and approaches, and ultimately involved design of a combination of biological and absorptive treatment units for foul air from two in-plant lift stations, aerated sludge holding tanks, centrifuges, a truck loading bay, and a cake storage area. The odor control components totaled approximately $7.3 million and were part of a larger solids handling project totaling $24.3 million.

More recently the City retained PECI for a more comprehensive odor a valuation at its 40 MGD Duck Creek Plant. Underway now, this evaluation includes full-scale testing of chemicals for intermittent odor control at a 10 acre peak flow storage basin and other treatment units a scrubber to maintain a vacuum in upstream gravity sewer head spaces, and other odor control and corrosion improvements.

Odor & Corrosion Abatement Experience - *Partial Listing*

PERKINS ENGINEERING CONSULTANTS, INC

CLIENT	LOCATION	PROJECT	GARVER CLIENT	COLLECTION SYSTEM / INFLUENT PUMP STATION	DISPERSION MODELING	HEADWORKS	EQUALIZATION BASIN	PRIMARY CLARIFICATION	AEROBIC DIGESTION	SLUDGE DEWATERING/ STORAGE	CHEMICAL FEED	CAPACITY (MGD)
City of Garland	Garland, TX	Rowlett Creek WWTP Biosolids Area Odor, Corrosion and Rehabilitation Design*	✔	●	●	●		●	●	●		24
City of Lewisville	Lewisville, TX	Odor Dispersion Model and Odor Abatement Planning at WWTP and Locations Within Collection System	✔	●	●	●	●			●		14
City of Garland	Garland, TX	Duck Creek WWTP Plant-Wide Odor Abatement Assessment	✔	●	●	●	●	●	●	●	●	40
City of Garland	Garland, TX	Odor control master plan, dispersion model, and chemical pilot test 40 MGD Duck Creek WWTP	✔	●		●	●	●	●		●	40
Cuidad De Mexico	Mexico City	Odor Dispersion Model for New WWTP In Mexico City*				●	●	●	●	●	●	N/A
City of Lewisville	Lewisville, TX	Odor Dispersion Model and Odor Abatement Planning at WWTP and Locations Within Collection System	✔	●	●	●	●			●		14
Trinity River Authority	Grand Prairie, TX	Rehabilitation of Four Odor Control Biofilters, Including Replacement of Rock Bottoms with Fabricated	✔	●		●		●				162
North Texas Municipal Water District	Plano, TX	Concrete Restoration, Odor Control Cover System Upgrade, and Addition of Three Biotrickling Filter Systems	✔		●			●		●		36
Confidential Industrial Client	California & Colorado	Evaluation of H2S generation and odor control needs for mining wastewater process							●		●	0.01
North Texas Municipal Water District	Mesquite, TX	Design of Odor Control for Sludge Storage and dewatering Facilities*	✔						●	●		31
North Texas Municipal Water District	Lucas, TX	Dispersion Model Development and Design of Odor Control System to Serve Primary Clarifier and Plant headworks Area	✔			●		●				36
North Texas Municipal Water District	Wylie, TX	Design of Odor Control Improvements for Main Lift Station and Aerated Sludge Tanks at Muddy Creek WWTP	✔	●		●						10
Confidential Industrial Client	Dallas, TX	Assessment of Odor Abatement Needs for Processor of Grease Trap and Other Industrial Wastes							●		●	0.2
North Texas Municipal Water District	Richardson, TX	Dispersion Model Development and Design of Odor Control System to Serve Primary Clarifier Area and Main Lift Station	✔	●	●	●		●				1.5
Multiple Private-Sector Clients	Texas	Development of Nuisance Odor Prevention Plans for TCEQ Review and Approval to Address Buffer Zone Issues		●		●					●	N/A
City of Rockwall	Rockwall, TX	Design of odor control systems for multiple small lift stations	✔	●							●	1-2
City of Hutto	Hutto, TX	Odor Dispersion Modeling , Public Outreach Assistance, and Odor Control System Design for New Hutto South WWTP*			●	●				●		2
City of Granbury	Granbury, TX	Design of WWTP Odor Control Improvements*		●		●						2
San Jacinto River Authority	Woodlands, TX	Collection System Odor and Ventilation Evaluation	✔	●		●						4
City of Raleigh	Raleigh, NC	Odor characterization and control system design for siphon structure and major lift station*		●		●						40
Northeast Ohio Regional Sewer District	Cleveland, OH	Dispersion modeling was conducted to illustrate the impact of odors at different vent pipe elevations and emission rates.*		●	●							N/A

EDUCATION

MS, Civil Engineering

BS, Civil Engineering

MBA

REGISTRATIONS

Professional Engineer: Colorado, No. 36319

GETTING TO KNOW JOHN

John is a Colorado Springs native, an eagle scout, an avid yogi, and has climbed more than 30 of Colorado's "14ers" (mountains with summit elevations higher than 14,000 feet above sea level). His biggest vice is buying and sporting an extensive collection of Converse sneakers ("Chucks"). He is inspired to serve his wife, children, and community, showing through action, the value of hard work, service, and kindness.

GARVER

John Kuosman, PE

Project Manager

John Kuosman will serve as the City of Grand Junction's dedicated project manager for this project. John combines his 20 years of experience and extensive knowledge of the local water utilities with the expertise of Garver's water professionals spread across the country. A lifelong Colorado resident, John has earned degrees from the Colorado School of Mines and the University of Colorado at Denver, and has spent the last two decades serving various roles in the local water industry. In that time, he successfully led the planning, permitting, design, and construction of a $400 million satellite treatment facility; and has held the role of utility director for two of the three largest wastewater treatment utilities in Colorado. His specialties include team building, evaluating new water supplies, optimizing existing infrastructure, and delivering countless other improvements through a variety of delivery methods. He has dedicated his professional life to improving the local water facilities in Colorado, while also preserving invaluable natural resources.

PROJECT EXPERIENCE

CITY OF ENGLEWOOD - DIRECTOR OF THE SOUTH PLATTE WATER RENEWAL PARTNERS ■ Englewood, CO

- Director of a regional clean water utility serving 300,000+ customers for 21 connecting agencies. Principally responsible for making core business recommendations to a Supervisory Committee and two city councils.
- Responsible for discharge permit compliance for the 3rd largest water renewal facility in Colorado, a staff of 86 FTE, and a $17 million annual operating budget (excluding capital improvements).

METRO WASTEWATER RECLAMATION DISTRICT, DIRECTOR OF OPERATIONS AND MAINTENANCE ■ Denver, CO

- Served on an executive team making core business recommendations to a 36-member board of directors serving 1.8 million regional clean water utility customers.
- Managed a cross-functional department with a staff of 25 FTE and a $4.5 million annual operating budget.

METRO WASTEWATER RECLAMATION DISTRICT, NORTHERN TREATMENT PLANT PROGRAM MANAGER ■ Denver, CO

Lead and managed eight multi-agency teams responsible for the permitting, design, construction, and startup of the District's award-winning first satellite treatment facility in Brighton, Colorado. The $417 million NTP program was awarded the DBIA and ACEC National Awards of Excellence and included the following:

- The Northern Treatment Plant, a 24 MGD advanced wastewater treatment facility
- The South Platte Interceptor, a 7-mile gravity pipeline to convey the flow to the new plant

Mark Perkins, PE

Deputy Project Manager

Mark Perkins has 37 years of professional experience in permitting, planning, design, and construction administration for municipal water and wastewater facilities. Much of Mark's practice over the last 20 years has focused on odor and corrosion management in wastewater treatment facilities. He has been active in state and national committees addressing odor issues and has presented numerous technical papers related to odor and corrosion management, including characterization of sludge odors at land application sites, collection system ventilation dynamics, ventilation rate determination, and liquid chemical introduction and control. He has been responsible for odor control master plan development at numerous wastewater treatment facilities.

Mark has assisted clients with acquisition of over 70 wastewater discharge permits and in satisfying a number of enforcement orders – several nuisance-odor oriented.

He's also been responsible for planning and design of wastewater facilities totaling nearly $1 billion.

EDUCATION

BS, Civil Engineering
MBA

REGISTRATIONS

Professional Engineer: Colorado, Texas, Arkansas, Oklahoma, Washington, North Carolina

Mark has managed municipal wastewater odor and corrosion control projects for the Cities of Waxahachie, Raleigh, N.C., Garland, Granbury, Grapevine, Grand Prairie, San Marcos, Dallas, Fort Worth, Frisco, Amarillo, Wichita Falls, Hutto, Louisville, Austin, Houston (Atascocita Joint Operations Board), the San Jacinto River Authority, and at multiple locations for the North Texas Municipal Water District and the Trinity River Authority. ***He has managed odor and corrosion master plans for over a dozen major wastewater systems, has overseen significant corrosion remediation in concrete structures in numerous cities, and has designed dozens of odor abatement systems.***

He has overseen evaluations of biosolids odors and development of biosolids testing techniques at two 100+ MGD plants, developed and participated in fan tests for ventilation of long reaches of gravity sewers, has supervised rehabilitation of air valves on large-diameter force mains, and assisted with odor evaluations for several confidential industrial and commercial clients.

As the City considers the development of an on-line sensor program, the following simulation shows the real-time tracking of malodorous air plumes with changing meteorologic conditions. This type of modeling can be leveraged to drive operational decisions to mitigate community impacts of odor as conditions change.

GETTING TO KNOW MARK

Although a Texas resident, Mark has been an avid skier for over 40 years. He enjoys golf, hunting, fishing, and other outdoor activities. His wife and son are also engineers, and his daughter is a Certified Safety Professional working for an international energy services company. His two-year old granddaughter calls him "Poo Paw" because of the nature of his profession!

PERKINS ENGINEERING CONSULTANTS, INC.

Mark currently serves as vice chair of the WEF Odor and Air Quality Committee. He has been an invited speaker on odor and corrosion management issues, including sewer ventilation, at conferences and nationally-broadcast webinars.

EDUCATION

MS, Civil and Environmental Engineering

BS, Civil Engineering

REGISTRATIONS

Professional Engineer - Texas No. 64930
Board Certified Environmental Engineer, 05-20069

GARVER

Randy McIntyre, PE, BCEE

Principal-in-Charge

Randy McIntyre has 34 years of experience covering a variety of engineering projects, including water and wastewater distribution and collection, water and wastewater treatment plants, pump stations, pipeline design and rehabilitation, facility operations, odor control, stormwater improvements, channelization, stream and lake quality monitoring, and floodplain studies. He also has experience in environmental projects and street/highway design, as well as construction management, surveying, and land rights.

GETTING TO KNOW RANDY

Randy still occasionally drives a used car he bought in high school, a 1972 Triumph TR6. "You have to be your own mechanic, but it's easy to work on – only has 3 electrical fuses!"

EDUCATION

BS, Civil and Environmental Engineering

REGISTRATIONS

Professional Engineer - Colorado, No. 38908

GARVER

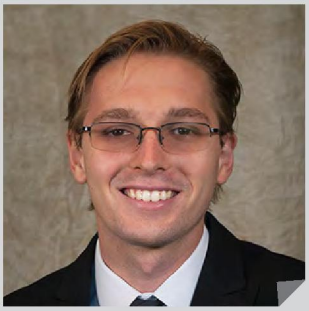
Jeff Maier, PE

Project Engineer

Jeff Maier is the Infrastructure Practice Leader based out of Garver's Denver office. He is responsible for business development, client services, and providing technical expertise for a variety of trenchless rehabilitation technologies, advanced pipeline condition assessment methods, and asset management strategies. **As part of this role, Jeff understands Air Management in collection systems and the impacting symptoms of odor issues and corrosion.** Jeff previously worked for over 10 years as an engineer with the Metro Wastewater Reclamation District (MWRD) in Denver, CO. He has over 19 years of project management and engineering design experience, primarily in the water and wastewater industry. He is recognized as an expert in the fields of advanced condition assessment and trenchless rehabilitation of pipelines, manholes, and wastewater facility structures.

GETTING TO KNOW JEFF

Jeff was an elite level alpine ski racer, and while he was fast, he was not fast enough to forego an engineering career that lead him to become one of North America's leading experts in water and wastewater pipeline condition assessment and trenchless rehabilitation.



Trevor Stull, EIT
GIS Specialist

Trevor Stull is a project engineer on Garver's Water team. He has project experience leveraging GIS in hydraulic modeling and master planning of water distribution systems, and sewage systems.

EDUCATION

BS, Civil Engineering

GARVER

GETTING TO KNOW TREVOR

In his free time, Trevor competes professionally in flowboarding competitions. Flowboarding is surfing on manmade sheet wave technology.

Charlotte Smith, PE
Project Engineer

Charlotte Smith has 18 years of experience assisting clients with the design of numerous water and wastewater plant expansions, evaluating water and wastewater process alternatives, completing municipal and industrial permit applications, conducting odor abatement master plans, planning pilot studies, as well as conducting odor abatement master plans, off-site odor consequence evaluations and emissions modeling.

Charlotte completed an odor abatement evaluation for Lewisville's Prairie Creek WWTP, where she designed numerous odor control and preliminary treatment improvements including a new bioscrubber and conversion from aerated to vortex grit removal basins. Charlotte also completed a collection system odor abatement evaluation for Lewisville, which included smoke testing and other sampling to identify odor hot spots and evaluating control scenarios for each hot spot. She coordinated a Corrosion Management Plan project, off-site odor monitoring project and two pilot studies evaluating the effectiveness of adding iron salts and Peroxide Regenerated Iron-Sulfide Control™ for the Trinity River Authority. She has modeled no action as well as the impact of various treatment technologies for over ten treatment facilities including three North Texas Municipal Water District wastewater treatment facilities as well as San Antonio Water System Medio Creek and the Cities of San Marcos, Denton and Lewisville wastewater treatment facilities. She has completed dispersion models for new plants proposed in Hutto, Texas and in Mexico City, as well as for a major biosolids process upgrade for the City of Garland and for a conveyance tunnel in Cleveland, Ohio. She assisted the Trinity River Authority with installation of a real-time odor monitoring system, integrating live meteorological data with measurement from numerous odor sensors.

EDUCATION

ME, Civil and Environmental Engineering

BS, Chemical Engineering

REGISTRATIONS

Professional Engineer - Arkansas

PERKINS ENGINEERING CONSULTANTS, INC.

GETTING TO KNOW CHARLOTTE

Charlotte enjoys yoga and traveling, often combining the two by visiting different studios when traveling to unfamiliar places.

EDUCATION

ME, Environmental Engineering

BS, Biological Engineering

REGISTRATIONS

Professional Engineer - Arkansas, Colorado, Texas

PERKINS ENGINEERING CONSULTANTS, INC.

Justin Angel, PE

Project Engineer

Justin Angel has five years of experience as an environmental engineer. His work experience includes preparing preliminary engineering reports and studies, environmental assessments, detailed designs, specifications, contract documents, opinion of probable construction costs, bidding assistance, and construction administration.

Justin has designed various odor control systems including carbon media systems and biotrickling filters and performed odor control planning studies. **Justin has served as the design engineer for odor control systems ranging from passive 100 CFM systems to 16,500 CFM forced air systems.** He has also participated in the development and implementation of sampling protocols implementation for various wastewater treatment plant odor control studies. The typical data collection Justin has performed for these wastewater treatment plant studies ranges from liquid sulfide testing, odorous air characterization, to multiweek hydrogen sulfide monitoring. Justin has also developed sampling protocols and gathered data for large-scale collection system ventilation studies that determine the amount of required air to be pulled into an odor control system for the desired upstream and downstream zone of influence.

GETTING TO KNOW JUSTIN

Justin is a loyal Arkansas Razorbacks fan and says he watches every football and basketball game, no matter how bad the teams are. He spends most of his spare time woodworking, gardening, reading, and learning how to become a better photographer.

EDUCATION

BS, Civil Engineering

REGISTRATIONS

Professional Engineer - Alabama No. 35605

GARVER

Tyler Harbin, PE

Project Engineer

Tyler Harbin is a project manager on in Garver's Colorado office. Tyler has more than 6 years of experience, is a licensed Professional Engineer, and will contribute as part of the Source Characterization Program.

GETTING TO KNOW TYLER

Tyler is an avid mountain biker in several disciplines: Downhill, Enduro, XC, and Marathon. He was the Arkansas Mountain Bike Championship Series state champion in 2017 and runner up in 2018. He also completed the 2018 Arkansas Enduro Series in 2nd place overall.

SECTION 2.

Strategy & Implementation Plan

GARVER | PERKINS ENGINEERING CONSULTANTS, INC.

B | STRATEGY & IMPLEMENTATION PLAN

Most people think of the "water side" of wastewater collection and treatment services. Air management is often overlooked and represents an equally critical part of managing complex collection and treatment systems. There are significant potential health and safety concerns as well as less than desirable working environments that can develop as a result of insufficient attention to air management. Just meeting code requirements does not guarantee worker effectiveness and comfort. Odor generation, particularly if it is in the wrong part of the system, can be a symptom of broader hydraulic and air management issues within the system. Unmanaged odor issues within a collection and treatment system can result in human health, financial, and community confidence impacts.

For the City of Grand Junction, the wastewater collection and treatment system includes more than 30 City staff, nearly 600 miles of sewer lines, 29 lift stations, and a high-performing wastewater treatment plant in a rapidly growing, redeveloping, and infilling community. Managing a system of this size and complexity requires a comprehensive approach to avoid the pitfalls that can occur with insufficient air management practices. The City of Grand Junction is being very proactive by initiating this odor control study as it represents a critical first step in establishing a sustained air management program. Over time, Grand Junction will continue to sustain the community confidence it has garnered through its highly-efficient management of the wastewater collection and treatment system by systematically creating a program to:

1. Identify and Characterize Odor Sources
2. Implement Best Practices to Mitigate the Characterized Odor Sources
3. Transparently Communicate with the Community and Continuously Address Odor Issues

The end result of implementing this type of comprehensive program is that the "air becomes clearer" and the community's confidence is ensured around the collections and treatment services the City provides. ***This process is shown graphically in the figure below.***

WE WILL IDENTIFY AND CHARACTERIZE ODOR SOURCES

The Garver/Perkins Team will work with the City to systematically identify, characterize and prioritize its existing major odor sources before making any technical application recommendations. This upfront work will allow for the City to customize solutions based on site specific conditions and avoid the typical inefficiency pitfalls of generic "rule of thumb" approaches.

Some odors are easy to measure, while others are significantly more time consuming and expensive. Our team will guide the City through the available options and costs to arrive at a cost effective but meaningful characterization plan.

The Garver/Perkins team will apply the Leverage Existing Assets First (LEAF) mindset to rapidly identifying sources of odor within the system. The first asset to be leveraged is the experience and perspective of the City personnel who have very successfully operated and maintained the system for decades. The Garver/Perkins team will facilitate feedback from your O&M professionals to rapidly catalog their perspective of the major sources of odors, any repeatable seasonal changes, and any changes that have occurred over time. City O&M staff will also be able to relate past responses to historical odor complaints and share their experience interfacing with the public on odor issues.

The second asset that should be leveraged is the City's comprehensive GIS platform. The Garver/Perkins Team will facilitate a workshop that includes City Engineering, O&M, and Information Systems personnel to begin to "mine" the GIS system in order to rapidly identify points in the collection system where odors could be released as a result of system configuration. Gravity sewers, when flowing partially full under normal operating conditions, pull air along the headspace by gravity. The greatest air volumes often occur at lower wastewater flow rates.

Surface-level smoke tests and differential pressure measurements can help identify pressurized headspaces in collection systems. Pressurization can sometimes be measured well over a mile upstream of a headspace constriction point.

Although different variables impact each sewer, the greatest air movement typically occurs when a free-flowing gravity sewer is operating at approximately 35% full. Inverted siphons, grade changes, hydraulic jumps, and sags in the pipe grade can constrict or block the headspace. While wastewater continues to flow freely, air can become pressurized when the headspace becomes constricted. Air eventually seeks a path out of the pressurized headspace, sometimes a mile or more upstream of the constriction point. The workshop will identify drop structures, lift station wetwells, force-main discharges, slope changes, siphons, and all the pipe segments that have been CIPP-lined. A simple hydraulic model, run at both average and peak flows, can be a valuable screening tool in identifying potential headspace constriction locations. Lined sections, particularly if the driver for lining was corrosion mitigation, can indicate an underlying air management issue that can manifest in odor generation. All of these elements that can contribute to odor generation and these "hot spots" can be compiled and assigned their own data layer for continued evaluation. In addition, any documented historical odor complaints can be inventoried and documented within the GIS and plant site map. In this manner, O&M expertise and experience, system configuration "hot spots" and historical odor complaints can be compiled, and the major focus areas for this study can be shown graphically. **This work will also provide benefits for the City going into the Sewer Basin Study planned for 2019. Odor issues can be symptomatic of air management issues within a system which often have a root cause in hydraulic constraints, and can be a predictor of more costly corrosion problems. Systematically identifying and mapping the odor issues on a plant site plan and within your GIS system provides valuable information going into the Sewer Basin Study.**

TESTING APPROACH TO SAMPLING

Malodorous compounds typically associated with sewers are generally comprised of oxygen, sulphur, or nitrogen and commonly include inorganic gases (ammonia, hydrogen sulfide), mercaptans, other organic sulphur compounds, and volatile fatty acids. These compounds have a wide range of characteristic odors, and their existence in wastewater systems is largely a function of the biological processes occurring in the system.

Sampling and testing to characterize odors can be simple or complex. Hydrogen sulfide, often the primary odorant in raw wastewater, can be relatively easily logged on a continuous basis by data loggers left in place for days or weeks. Diurnal trends can be ascertained, and valuable information can be relatively easily gathered. Ammonia, mercaptans, dimethyl sulfide, dimethyl disulfide, and other potentially important odors can also be measured, but continuously-logging instruments are not commercially available for these compounds, so discreet samples must be taken, either in canisters or bags for processing in an off-site laboratory, or through hand-held gas detection tubes. While this testing can provide valuable information, it involves more labor, higher analytical costs, and only a short-term "snapshot," so it is important to make sure such samples are both representative and meaningful. **The Garver/Perkins team will work with your Collection Systems Supervisor, Wastewater Operations Supervisor, and Environmental Lab Manager in order to put together a sampling plan to further characterize the odor in a manner that produces meaningful, actionable and affordable information.** Hydrogen sulfide can, in some cases, serve as a surrogate indicator for odors in general. In other instances, particularly with sludge dewatering and storage operations, other odorants may need to be quantified. The Garver/Perkins team can provide the instruments and resources needed to completely implement the plan, or work in collaboration with your team to leverage capability of City staff and City equipment to conserve budget. **The Garver/Perkins team has seen instances where City staff involvement in an odor sampling plan like this can serve to launch an ongoing odor characterization program that is run independently by City staff after the project is over.**

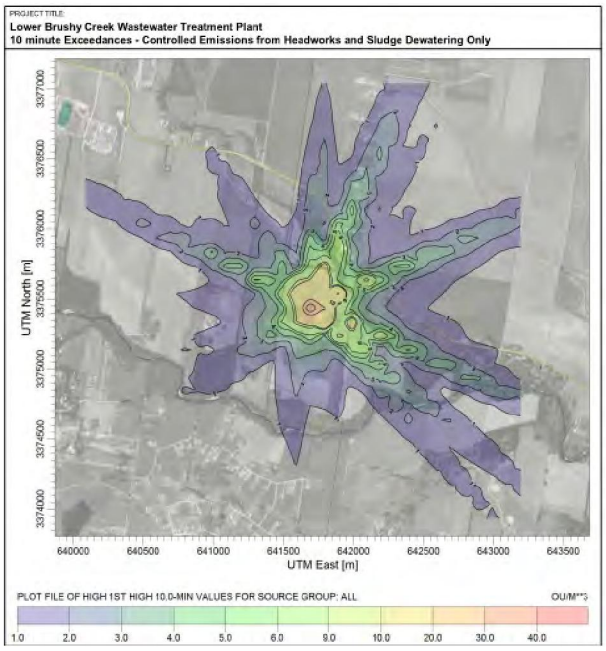
Flux hood and vacuum chamber measuring specific emission rate from primary clarifier effluent trough

This is especially true as the City is considering investments in real-time process control instrumentation at the Persigo plant to help optimize plant operations. **Becoming familiar with the instruments and analysis procedures for odor characterization on this project could be leveraged to establish an instrumentation team to calibrate and consistently apply the benefits of real-time information to City operations.** Establishing a long-running database of odor levels over time and having the ability to quickly characterize odor events and complaints with City staff is invaluable when communicating on odor issues within your community and demonstrating the City's commitment to holistically manage the collection and treatment system as a good neighbor. This data can be logged and mapped within the GIS and can be used as an environmental factor that is considered in asset management analyses.

Collection System Sampling and Characterization:
Collection system sampling most often consists of deployment of dataloggers to continuously monitor both vapor-phase hydrogen sulfide and differential pressure. Liquid-phase hydrogen sulfide dataloggers have recently been introduced to the market, but very few U.S. installations exist, and the instruments are significantly more costly than vapor-phase loggers. Selection of manholes, lift stations, junction boxes, and other monitoring sites will be communicated with the City through a sampling plan memorandum and will target areas where odor issues are suspected and where practical solutions are envisioned. The sampling will be structured to provide design data for either vapor phase (possibly including mechanical ventilation) or liquid-phase treatment.

Fenceline (ppbv) H2S monitors can be deployed to assess potentially detectable odor levels at the plant fenceline and in surrounding neighborhoods.

Plant Sampling and Characterization:
Persigo Plant Site odors can be first characterized by a subjective survey with plant staff during a plant walkthrough. This can be followed by a sampling program that measures odor D/T, ORS, and continuous OdaLog® H2S testing. Results can be used with airflow rates and basin sizes to determine emission rates, which can be modeled to estimate offsite migration of odors and identify major odor sources for mitigation. Each source within the plant can be modeled as either a point source (typically a building or covered unit with a discreet emission location) or an aerial source (most often a larger, uncovered basin). Emission rates can be estimated using textbook values; this approach streamlines the sampling and testing tasks and helps validate "relative" comparisons of control technology selections, but can sometimes over or understate site-specific emission rates by an order of magnitude. The costs and benefits of sampling and testing, and the uses of models produced, will be discussed with the City prior to embarking on a sampling plan. Model results incorporate surrounding topography, a full year of local meteorological data, and plant-specific emission rates, to the extent available, to show the distance, intensity and frequency of predicted odor events, both under current conditions and with each proposed upgrade.



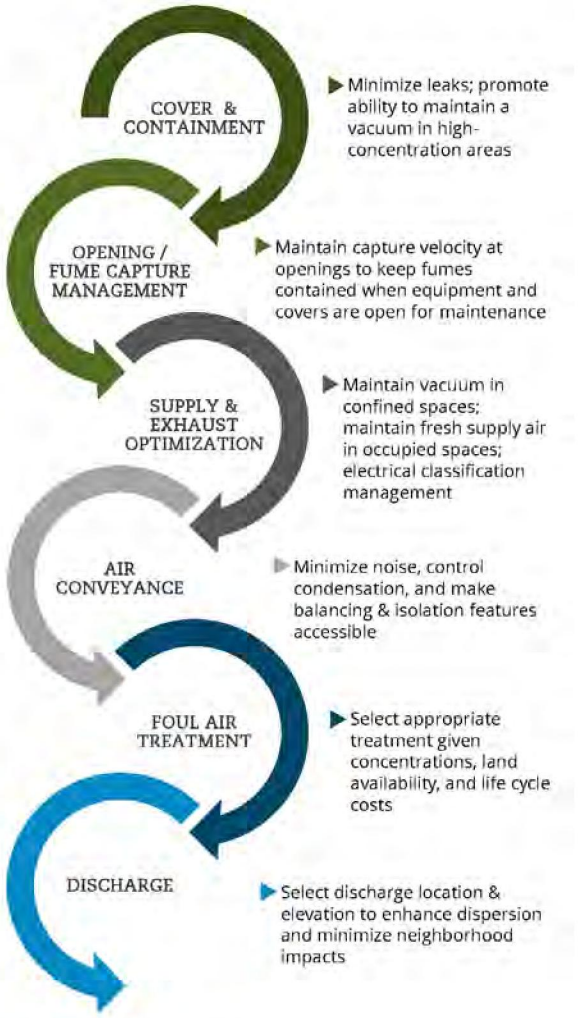
Dispersion modeling can be used to identify and visualize limits of odor control issues within your community.

WE WILL IMPLEMENT BEST PRACTICES TO MITIGATE THE CHARACTERIZED ODOR SOURCES

In the wastewater industry today, there are a few broad categories of best practices to address odor generation issues. Very often these best practices offer different benefits as characterized in the table on the following page. A complete odor mitigation solution will often include improvements in several of these best practice categories.

Odor Mitigation Best Practice Categories	
Mitigation Feature	Potential Benefits
1 Cover	✓ **Reduces the size/cost of the odor control system** by confining odors to smallest possible volume. ✓ **Provides better worker** environment by minimizing exposure.
2 Contain	✓ **Reduces size/cost of the odor control system** by managing odors in smaller controlled areas. ✓ **Reliable odor evacuation** for a given ventilation rate. ✓ **Lower overall capital costs** of facilities. ✓ **Corrosive/explosive hazard areas are contained** to smaller areas thus eliminating need for adoption facility-wide.
3 Convey	✓ **Prevents odor leaks** because foul odor is conveyed under vacuum, not pressure. ✓ **Enhanced worker comfort** and no "dead spots" through effective air movement design
4 Treat	✓ **All odor compounds at source(s) are treated.** Technology selection is based on odor characteristics. ✓ **Complete buy-in from O&M staff** through our collaborative screening/ selection process. ✓ **Lowers overall life cycle costs.** ✓ **Simplifies operations and maintenance** through system selection and design.
5 Discharge	✓ **Prevents offsite impacts** by air dispersion model validation.

Within each of these best practice categories exists a myriad of specific technological products or services offerings. The Garver/Perkins team keeps an updated generalized screening of the technologies available within the industry and their relative strengths and weaknesses in different applications. **Worker comfort, health and safety will be a key emphasis in evaluating technical approaches to air management.** Unfortunately, we have found there is no "silver bullet" solution that economically and efficiently covers every possible odor issue. In fact, many "solutions" when incorrectly applied, can actually create bigger issues than the one they were employed to address. For example, adding iron salts into the collection system can be effective for odor control, but may have negative effects on downstream treatment biological processes. That said, the Garver/Perkins team has proven that knowing the location of the odor source, the chemical composition of malodorous gas mixtures, the odor thresholds and intensity, the mechanisms by which odorants are generated in sewers and the combination of best practices and technologies to apply to the situation, is the only way to developing optimal odor-mitigation program. **The Garver/Perkins team will use the odor source characterization information developed previously and overlay their mitigation technology screening matrix to "short list" the technological approaches that will make the biggest impact. These shortlisted approaches will be further developed for unit sizing, loading, and dose rates to establish pricing for a benefit/cost evaluation for each source to be mitigated.**



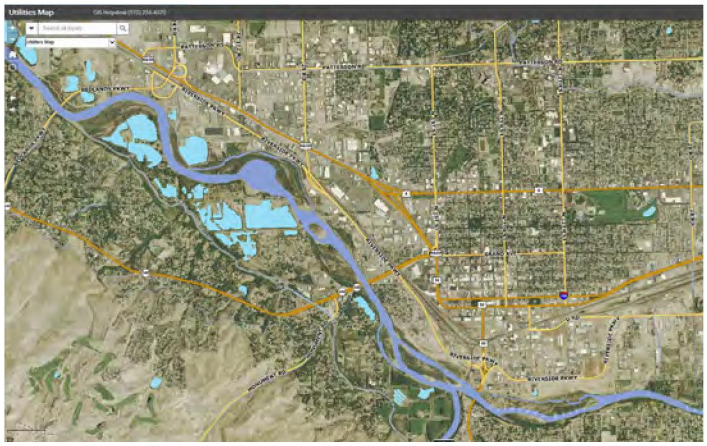
Shortlisted options will also be further evaluated with a focus on worker safety including:

- ☑ Comprehensive Code Review. Perform a detailed code review for each facility (e.g., OSHA, NEC, NFPA, etc.) to characterize applicable codes, hazard classifications, grandfather clauses, and industry standards/ best practices.
- ☑ Controlled and Uncontrolled Areas Evaluation. Perform an assessment to determine the feasibility and cost effectiveness of identifying opportunities to defined controlled and uncontrolled areas. Where practical, defining such areas minimizes worker, exposure, risk and greatly enhances the worker environment.
- ☑ Potential chemical feed, either on a daily basis or on selected days based on meteorological predictions.
- ☑ Air Movement Assessment. The following analysis can be completed to identifying air movement problems:
  - Smoke Testing.
  - Exhaust Low, Supply High. Ensures workers constantly experience fresh air across their person and prevents odors from being dragged across the worker.
  - Longest flow path between supply and exhaust. Minimizes short circuiting and guarantees effective use of ventilation.
  - Redirection of supply air. Ensures air flow movement within larger spaces and prevents "dead zones".

The final step in implementing best practice is to ensure that all cost/risk evaluations are completed with a system-wide consideration, and established Odor Control Objectives, as shown in figure 1 on the next page. One of the biggest risks in implementing any new odor-mitigation strategy is that its impact is hard to immediately quantify in the field. This lack of instant feedback can lead to its inefficient use and in some cases complete abandonment of the system. In our experience, this usually occurs when frontline staff who operate and maintain the systems are not trained in a way that allows them to understand why the equipment was installed and how to quantify the benefits of its operation. Those who specify and procure new odor-mitigation facilities often miss a crucial step when it comes to installing those new facilities – they don't translate the "why" to those who touch them every day or show them where to look to see the benefits. They expect the O&M staff to see the need for change and view the change just as they do. They allow their enthusiasm for progress and potential improvements to get in the way of the important work of fleshing out the plan with their people. They often miss that the formulation of the plan impacts the implementation of the plan. **Mitigating system-wide impacts by involving critical stakeholders is the process selection process represents a significant forward step to an asset management approach.**

OUR TEAM WILL TRANSPARENTLY COMMUNICATE WITH THE COMMUNITY & CONTINUOUSLY ADDRESS ODOR ISSUES

This odor control study will allow the City of Grand Junction to identify, characterize, and establish a program to mitigate odor issues defined within the scope of this project. Considering the criticality of wastewater collection and treatment service to the vitality of a community, the City has an opportunity to move beyond the boundaries of this project and create a more programmatic approach to addressing odor within the system. This programmatic approach is founded on establishing a transparent way to communicate with the community about odor, to highlight what the City has done to mitigate odor, and the City's continuous improvement mindset toward furthering the efficient and cost effective mitigation of odor. **As part of that programmatic approach, the City has an opportunity to develop intentional community touch points around odor as a way to highlight just how sophisticated its collection and treatment operations are.** For example, the City could develop an on-line odor reporting portal that is connected to the City's website and GIS portal. This odor-reporting tool can be used by the public as well as City staff. If it is a public-generated notification, City staff could be issued work orders to respond to those reports and can use a City-run sampling and analysis program to characterize the odor complaint. City staff could be required to complete proactive seasonal odor monitoring campaigns as well and log the data findings through the reporting portal. **The data could be recorded in the GIS system and mined as part of asset management analytics used to prioritize City infrastructure expenditures.**



In addition, the odor reporting platform can establish a feedback protocol in order to connect with the citizen. Each of these community feedback points that originated in an odor "complaint" represents an opportunity to educate the community about the challenge and complexity of operating and maintaining a collection and treatment system and to talk about the investments the City has and will continue to make in odor mitigation work. **The end result of implementing this type of comprehensive program is that the "air becomes clearer," and the community's confidence is ensured around the collections and treatment services the City provides.**

Figure 1- Example of Odor Control Objectives

"Air changes per hour" is a critical criterion for electrical classification, but can sometimes be an insufficient criterion for determining exhaust airflows. Maintaining capture velocities at openings and accounting for air displaced due to water movement is vital in order to prevent migration of fumes with high hydrogen sulfide concentrations into worker-occupied areas. Separate pressurization of control rooms, similarly, helps prevent corrosion of expensive electronics.

SECTION 3.

References

GARVER | PERKINS ENGINEERING CONSULTANTS, INC.

C | REFERENCES

As with any project, success depends on more than just technical know-how. We know our work speaks to our capabilities and service, and we base our reputation on what our clients and peers say about us, not what we say about ourselves. Our reputation and positive feedback from clients testify to our service, and we encourage you to contact any of our client references listed under each project to verify the quality of our work and our ability to coordinate and deliver your projects on time and within budget. **References for specific wastewater-related projects have been provided below.**

REFERENCE | 1

City of Garland, Texas
200 N. Fifth Street
Garland, TX 75040

Contact:
William Gase
Wastewater Treatment Director
(972) 205-2874
WGase@GarlandTX.gov

Reference Project:
Odor Control Improvements at Biosolids Handing Areas

Full description provided for this project on page 4.

REFERENCE | 2

Conway Corporation
650 Locust Street
Conway, AR 72034

Contact:
Greg Dell
Chief Operating Officer
(501) 450-6093
Greg.Dell@ConwayCorp.com

Reference Project:
WWTP and Collection System Improvements

REFERENCE | 3

Trinity River Authority (TRA)
5300 S. Collins Street
Arlington, TX 76018

Contact:
Matt Jalbert
Engineering, Planning, and Development
(817) 493-5100
JalbertM@TrinityRA.org

Reference Project:
CRWS Headworks and Fine Screen Facility

This project is a currently underway by the Garver/Perkins team.

Full description provided for this project on page 3.

> *I wanted to take a moment and express our thanks to Garver for its service and work with Fort Sill. I've had the privilege of working with the Garver team and truly appreciate their services and expert knowledge. Your employees complete their work on time and with quality and precision. We look forward to continuing to work with Garver in the future as we improve and expand our water and wastewater systems.*
>
> - Tony Burrow, Former American Water Enterprises, Inc. Capital Project Manager/ Utility Engineer

> *Garver has provided engineering services for several road and wastewater projects in the City of Frisco with an eye or mindset for what would be in the best interest of the City, whether it be a design detail, construction process, or maintenance basis.*
>
> - Art Hartle, City of Frisco, TX

SECTION 4.

Fee Proposal

GARVER | PERKINS ENGINEERING CONSULTANTS, INC.

D | FEE PROPOSAL

The Garver/Perkins team is committed to providing the City the value of our experience and efficiency in delivering a programmatic approach in alignment with your fiscal responsibilities. As such we are prepared to complete this Odor Control Study for a not-to-exceed price of $93,000. We have made many assumptions to derive this cost estimate and will work in close collaboration with you to adjust the scope to deliver the scope items that are of the highest value to City staff and the community you serve. The following represents how we have established our fee estimate in line with the RFP.

To this end, we recommend the city consider task order contracting in order to establish scope and fee alignment as project understanding develops. We recommend an initial task order through phase 1A, a second task order for phase 1B, and a final task order to complete the project. There are many ways to characterize odors and the scope of issue mitigation is not fully understood until characterization is complete. A task order approach aligns with our approach to maximize the value that the City and community receive in each project phase.

We are not insistent on task order contracting and suggesting it only as a value-add for the City. We look forward to the opportunity to work with your staff to implement the contracting mechanism chosen for this project.

We recommend the City consider task order contracting in order to establish scope and fee alignment as project understanding develops.

A task order approach aligns with our approach to maximize the value that the City and community receive in each project phase.

GARVER/PERKINS TEAM FEE PROPOSAL

Project Phase	Labor Hours	Labor Expenses	Non-Labor Expenses including Perkins	Subtotal and Total
Project Management	16	$3,400	$500	**$3,900**
Phase 1A: Source Identification & Mapping	60	$11,000	$4,000	**$15,000**
Phase 1B: Source Characterization	78	$17,600	$27,500	**$45,100**
Phase 2: Evaluate Best Practices	48	$9,000	$14,500	**$23,500**
Phase 3: Tracking and Communication	24	$5,000	$500	**$5,500**
Subtotals and Total	**226**	**$46,000**	**$47,000**	**$93,000**

SECTION 7.0: SOLICITATION RESPONSE FORM

RFP-4601-19-DH Plant Odor Control Study for Persigo Wastewater Treatment Plant

Offeror must submit entire Form completed, dated and signed.

1) Not to exceed price to provide all labor, services, supplies, equipment, travel, etc. necessary for the Plant Odor Control Study for Persigo Wastewater Treatment Plant per specifications:

NOT TO EXCEED PRICE $ 93,000

WRITTEN: Ninety three thousand **dollars.**

The Owner reserves the right to accept any portion of the work to be performed at its discretion

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The undersigned has thoroughly examined the entire Request for Proposals and therefore submits the proposal and schedule of fees and services attached hereto.

This offer is firm and irrevocable for sixty (60) days after the time and date set for receipt of proposals.

The undersigned Offeror agrees to provide services and products in accordance with the terms and conditions contained in this Request for Proposal and as described in the Offeror's proposal attached hereto; as accepted by the Owner.

Prices in the proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a proposal for the purpose of restricting competition.
- The individual signing this proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of _____ percent of the net dollar will be offered to the Owner if the invoice is paid within _____ days after the receipt of the invoice.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: 1.

It is the responsibility of the Proposer to ensure all Addenda have been received and acknowledged.

Garver, LLC	Steve Jones, PhD, PE
Company Name – (Typed or Printed)	Authorized Agent – (Typed or Printed)
	314.269.1057
Authorized Agent Signature	Phone Number
5251 DTC Parkway, Suite 405	SMJones@GarverUSA.com
Address of Offeror	E-mail Address of Agent
Greenwood Village, CO 80111	February 15, 2019
City, State, and Zip Code	Date