PROFESSIONAL SERVICE AGREEMENT BETWEEN SANTA FE COUNTY AND HDR ENGINEERING, INC. FOR WATER AND WASTEWATER MASTER PLANNING SERVICES

THIS AGREEMENT is made and entered into this 13th day of June 2017, by and between **SANTA FE COUNTY**, hereinafter referred to as the "County" and **HDR ENGINEERING, INC.** whose principal address is **2155 Louisiana Blvd. NE, Suite 9500, Albuquerque, NM 87110-5483** hereinafter referred to as the "Contractor".

WHEREAS, pursuant to NMSA 1978, Section 13-1-112, the County issued Request for Proposal No. 2017-0220-PW/IC (RFP) for Water and Wastewater Master Planning Services for the Santa Fe County Public Works Department; and

WHEREAS, the County requires a multi-year assessment of infrastructure needs in the urban/semi-urban areas surrounding the City limits; and

WHEREAS, the Contractor is a licensed engineering firm who can provide professional and competent water and wastewater master planning services for Santa Fe County; and

WHEREAS, the County requires the services of the Contractor and the Contractor is willing to provide these services and both parties wish to enter into this Agreement.

NOW, THEREFORE, it is agreed between the parties:

1. SCOPE OF WORK

The Contractor shall provide, without limitation, the following services in accordance with Scope and Fee proposal dated May 25, 2017, attached hereto as Exhibit A:

- **A.** Project management, administration and coordination.
- **B.** Potable water utility master plan.
- **C.** Prepare a wastewater utility master plan.
- **D.** Analyze and prepare water and wastewater utility cost of service study and rate analysis and reports.
- **E.** Present the water and wastewater master plan to the Board of County Commissioners.
- **F.** Present the rate and impact fee study to the Board of County Commissioners.
- **G.** Provide software training and technical support to County staff on the use of the software and hydraulic model.

2. ADDITIONAL SERVICES

A. The parties agree that all tasks set forth in Section 1 (Scope of Work), of this Agreement shall be completed in full to the satisfaction of the County in accordance with professional standards and for the amount set forth in Section 3 (Compensation, Invoicing and Set-off), of this Agreement, and for no other cost, amount, fee or expense.

B. The County may from time to time request changes in the scope of work to be performed hereunder. Such changes, including any increase or decrease in the amount of the Contractor's compensation, which are mutually agreed upon by and between the County and the Contractor, shall be incorporated in a written amendment to this Agreement.

3. COMPENSATION, INVOICING AND SET-OFF

A. In consideration of its obligations under this Agreement the Contractor shall be compensated as follows:

1) County shall pay to the Contractor in full payment for services satisfactorily performed in accordance with the costs and fees detailed in Attachment A to Exhibit A.

2) The total amount payable to the Contractor under this Agreement shall not exceed **three hundred eighty four thousand two hundred forty five dollars ($384,245.00) exclusive** of New Mexico gross receipts tax.

3) This amount is a maximum and not a guarantee that the work assigned to be performed by Contractor under this Agreement shall equal the amount stated herein. The parties do not intend for the Contractor to continue to provide services without compensation when the total compensation amount is reached. The County will notify the Contractor when the services provided under this Agreement reach the total compensation amount. In no event will the Contractor be paid for services provided in excess of the total compensation amount without this Agreement being amended in writing.

B. The Contractor shall submit a written request for payment to the County when payment is due under this Agreement. Upon the County's receipt of the written request, the County shall issue a written certification of complete or partial acceptance or rejection of the deliverables for which payment is sought.

1) The County's representative for certification of acceptance or rejection of contractual items and services shall be **Michael K. Kelley, Public Works, Director,** or such other individual as may be designated in the absence of the County representative.

2) The Contractor acknowledges and agrees that the County may not make any payment hereunder unless and until it has issued a written certification accepting the contractual services or deliverables.

3) Within 30 days of the issuance of a written certification accepting the services or deliverables, the County shall tender payment for the accepted items or services. In the event the County fails to tender payment within 30 days of the written certification accepting the items or services, the County

shall pay late payment charges of one and one-half percent (1.5%) per month, until the amount due is paid in full.

C. In the event the Contractor breaches this Agreement, the County may, without penalty, withhold any payments due the Contractor for the purpose of set-off until such time as the County determines the exact amount of damages it suffered as a result of the breach.

D. Payment under this Agreement shall not foreclose the right of the County to recover excessive or illegal payment.

4. EFFECTIVE DATE AND TERM

This Agreement shall become effective as of the date of the last signature by the parties and shall terminate one year later, unless earlier terminated pursuant to Section 5 (Termination) or Section 6 (Appropriations and Authorizations). The County has the option to extend the term of this Agreement in one year increments not to exceed four years in total.

5. TERMINATION

A. Termination of Agreement for Cause. Either party may terminate the Agreement based upon any material breach of this Agreement by the other party. The non-breaching party shall give the breaching party written notice of termination specifying the grounds for the termination. The termination shall be effective 30 days from the breaching party's receipt of the notice of termination, during which time the breaching party shall have the right to cure the breach. If, however, the breach cannot with due diligence be cured within 30 days, the breaching party shall have a reasonable time to cure the breach, provided that, within 30 days of its receipt of the written notice of termination, the breaching party began to cure the breach and advised the non-breaching party in writing that it intended to cure.

B. Termination for Convenience of the County. The County may, in its discretion, terminate this Agreement at any time for any reason by giving the Contractor written notice of termination. The notice shall specify the effective date of termination, which shall not be less than 15 days from the Contractor's receipt of the notice. The County shall pay the Contractor for acceptable work, determined in accordance with the specifications and standards set forth in this Agreement, performed before the effective date of termination but shall not be liable for any work performed after the effective date of termination.

6. APPROPRIATIONS AND AUTHORIZATIONS

This Agreement is contingent upon sufficient appropriations and authorizations being made for performance of this Agreement by the Board of County Commissioners of the County and/or, if state funds are involved, the Legislature of the State of New Mexico. If sufficient appropriations and authorizations are not made in this or future fiscal years, this Agreement shall terminate upon written notice by the County to the Contractor. Such termination shall be without penalty to the County, and the County shall have no duty to reimburse the Contractor for expenditures made in the performance of this Agreement. The County is expressly not committed to expenditure of any funds until such time as they are programmed, budgeted, encumbered and approved for

expenditure by the County. The County's decision as to whether sufficient appropriations and authorizations have been made for the fulfillment of this Agreement shall be final and not subject to challenge by the Contractor in any way or forum, including a lawsuit.

7. INDEPENDENT CONTRACTOR

The Contractor and its agents and employees are independent contractors and are not employees or agents of the County. Accordingly, the Contractor and its agents and employees shall not accrue leave, participate in retirement plans, insurance plans, or liability bonding, use County vehicles, or participate in any other benefits afforded to employees of the County. Except as may be expressly authorized elsewhere in this Agreement, the Contractor has no authority to bind, represent, or otherwise act on behalf of the County and agrees not to purport to do so.

8. ASSIGNMENT

The Contractor shall not assign or transfer any interest in this Agreement or assign any claims for money due or to become due under this Agreement without the advance written approval of the County. Any attempted assignment or transfer without the County's advance written approval shall be null and void and without any legal effect.

9. SUBCONTRACTING

The Contractor shall not subcontract or delegate any portion of the services to be performed under this Agreement without the advance written approval of the County. Any attempted subcontracting or delegating without the County's advance written approval shall be null and void and without any legal effect. Subcontractors or consultants that are approved by the County are listed on Exhibit B, attached hereto.

10. PERSONNEL

A. All work performed under this Agreement shall be performed by the Contractor or under its supervision.

B. The Contractor represents that it has, or will secure at its own expense, all personnel required to discharge its obligations under this Agreement. Such personnel (i) shall not be employees of or have any contractual relationships with the County and (ii) shall be fully qualified and licensed or otherwise authorized or permitted under federal, state, and local law to perform such work.

11. RELEASE

Upon its receipt of all payments due under this Agreement, the Contractor releases the County, its elected officials, officers, agents and employees from all liabilities, claims, and obligations whatsoever arising from or under or relating to this Agreement.

12. CONFIDENTIALITY

Any confidential information provided to or developed by the Contractor in the performance of this Agreement shall be kept confidential and shall not be made available to any individual or organization by the Contractor without the prior written approval of the County.

13. PUBLICATION, REPRODUCTION, AND USE OF MATERIAL; COPYRIGHT

A. The County has the unrestricted right to publish, disclose, distribute and otherwise use, in whole or in part, any reports, data, or other material prepared under or pursuant to this Agreement.

B. The Contractor acknowledges and agrees that any material produced in whole or in part under or pursuant to this Agreement is a work made for hire. Accordingly, to the extent that any such material is copyrightable in the United States or in any other country, the County shall own any such copyright.

14. CONFLICT OF INTEREST

The Contractor represents that it has no and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of its obligations under this Agreement.

15. NO ORAL MODIFICATIONS; WRITTEN AMENDMENTS REQUIRED

This Agreement may not be modified, altered, changed, or amended orally but, rather, only by an instrument in writing executed by the parties hereto. The Contractor specifically acknowledges and agrees that the County shall not be responsible for any changes to Section 1 (Scope of Work), of this Agreement unless such changes are set forth in a duly executed written amendment to this Agreement.

16. ENTIRE AGREEMENT; INTEGRATION

This Agreement incorporates all the agreements, covenants, and understandings between the parties hereto concerning the subject matter hereof, and all such agreements, covenants and understandings have been merged into this written Agreement. No prior or contemporaneous agreement, covenant or understandings, verbal or otherwise, of the parties or their agents shall be valid or enforceable unless embodied in this Agreement.

17. NOTICE OF PENALTIES

The Procurement Code, NMSA 1978, Sections 13-1-28 through 13-1-199, imposes civil and criminal penalties for its violation. In addition, New Mexico criminal statutes impose felony penalties for bribes, gratuities, and kickbacks.

18. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE

A. The Contractor agrees to abide by all federal, state, and local laws, ordinances, and rules and regulations pertaining to equal employment opportunity and unlawful discrimination. Without in any way limiting the foregoing general obligation, the Contractor specifically agrees not to discriminate against any person with regard to employment with the Contractor or participation in any program or activity offered pursuant to this Agreement on the grounds of race, age, religion, color, national origin, ancestry, sex, physical or mental handicap, serious medical condition, spousal affiliation, sexual orientation, or gender identity.

B. The Contractor acknowledges and agrees that failure to comply with this Section shall constitute a material breach of this Agreement.

19. COMPLIANCE WITH APPLICABLE LAW; CHOICE OF LAW

A. In performing its obligations hereunder, the Contractor shall comply with all applicable laws, ordinances, and regulations.

B. Contractor shall comply with the requirements of Santa Fe County Ordinance 2014-1 (Establishing a Living Wage).

C. This Agreement shall be construed in accordance with the substantive laws of the State of New Mexico, without regard to its choice of law rules. Contractor and the County agree that the exclusive forum for any litigation between them arising out of or related to this Agreement shall be state district courts of New Mexico, located in Santa Fe County.

20. RECORDS AND INSPECTIONS

A. To the extent its books and records relate to (i) its performance of this Agreement or any subcontract entered into pursuant to it or (ii) cost or pricing data (if any) set forth in this Agreement or that was required to be submitted to the County as part of the procurement process, the Contractor agrees to (i) maintain such books and records during the term of this Agreement and for a period of six years from the date of final payment under this Agreement; (ii) allow the County or its designee to audit such books and records at reasonable times and upon reasonable notice; and (iii) to keep such books and records in accordance with generally accepted accounting principles (GAAP).

B. To the extent its books and records relate to (i) its performance of this Agreement or any subcontract entered into pursuant to it or (ii) cost or pricing data (if any) set forth in this Agreement or that was required to be submitted to County as part of the procurement process, the Contractor also agrees to require any subcontractor it may hire to perform its obligations under this Agreement to (i) maintain such books and records during the term of this Agreement and for a period of six years from the date of final payment under the subcontract; (ii) to allow the County or its designee to audit such books and records at reasonable times and upon reasonable notice; and (iii) to keep such books and records in accordance with GAAP.

21. INDEMNIFICATION

A. The Contractor shall defend, indemnify, and hold harmless the County and its elected officials, agents, and employees from any losses, liabilities, damages, demands, suits, causes of action, judgments, costs or expenses (including but not limited to court costs and attorneys' fees) to the extent caused by and resulting from or directly or indirectly arising out of the Contractor's performance or non-performance of its obligations under this Agreement, including but not limited to the Contractor's material breach of any representation or warranty made herein.

B. The Contractor agrees that the County shall have the right to control and participate in the defense of any such demand, suit, or cause of action concerning matters that relate to the County and that such suit will not be settled without the County's consent, such consent not to be unreasonably withheld. If a conflict exists between the interests of the County and the Contractor in such demand, suit, or cause of action, the County may retain its own counsel to represent the County's interest.

C. The Contractor's obligations under this section shall not be limited by the provisions of any insurance policy the Contractor is required to maintain under this Agreement.

22. SEVERABILITY

If any term or condition of this Agreement shall be held invalid or non-enforceable by any court of competent jurisdiction, the remainder of this Agreement shall not be affected and shall be valid and enforceable to the fullest extent of the law.

23. NOTICES

Any notice required to be given to either party by this Agreement shall be in writing and shall be delivered in person, by courier service or by U.S. mail, either first class or certified, return receipt requested, postage prepaid, as follows:

To the County:
Santa Fe County Public Works
Attn: Public Works Director
P.O. Box 276
Santa Fe, New Mexico 87504-0276

To the Contractor:
HDR Engineering, Inc.
Attn: Chris Rodriguez, Vice President
2155 Louisiana Blvd, NE, Suite 9500
Albuquerque, NM 87110-5483

24. CONTRACTOR'S REPRESENTATIONS AND WARRANTIES

The Contractor hereby represents and warrants that:

A. This Agreement has been duly authorized by the Contractor, the person executing this Agreement has authority to do so, and, once executed by the Contractor, this Agreement shall constitute a binding obligation of the Contractor.

B. This Agreement and Contractor's obligations hereunder do not conflict with Contractor's corporate agreement or any statement filed with the New Mexico Secretary of State on Contractor's behalf.

C. Contractor is legally registered and is properly licensed by the State of New Mexico to provide the services anticipated by this Agreement and shall maintain such registration and licensure in good standing throughout the duration of the Agreement.

25. FACSIMILE SIGNATURES

The parties hereto agree that a facsimile signature has the same force and effect as an original for all purposes.

26. NO THIRD-PARTY BENEFICIARIES

This Agreement was not intended to and does not create any rights in any persons not a party hereto.

27. INSURANCE

A. General Conditions. The Contractor shall submit evidence of insurance as is required herein. Policies of insurance shall be written by companies authorized to write such insurance in New Mexico.

B. General Liability Insurance, Including Automobile. The Contractor shall procure and maintain during the life of this Agreement a comprehensive general liability and automobile insurance policy with liability limits in amounts not less than $1,050,000.00 combined single limits of liability for bodily injury, including death, and property damage for any one occurrence. Said policies of insurance shall include coverage for all operations performed for the County by the Contractor; coverage for the use of all owned, non-owned, hired automobiles, vehicles and other equipment, both on and off work; and contractual liability coverage under which this Agreement is an insured contract. Santa Fe County shall be a named additional insured on the policy.

C. Workers' Compensation Insurance. Engineer shall comply with the provisions of the Workers' Compensation Act.

D. Malpractice/Errors and Omissions Insurance. Engineer shall procure and maintain during the life of this Agreement professional liability (errors and omissions) insurance with policy limits of not less than $1,500,000.00 per occurrence, $2,500,000.00 per aggregate.

E. Increased Limits. If, during the life of this Agreement, the Legislature of the State of

New Mexico increases the maximum limits of liability under the Tort Claims Act (NMSA 1978, Sections 41-4-1 through 41-4-29, as amended), Engineer shall increase the maximum limits of any insurance required herein.

28. PERMITS, FEES, AND LICENSES

Contractor shall procure all permits and licenses, pay all charges, fees, and royalties, and give all notices necessary and incidental to the due and lawful performance of its obligations hereunder.

29. NEW MEXICO TORT CLAIMS ACT

No provision of this Agreement modifies or waives any sovereign immunity or limitation of liability enjoyed by County or its "public employees" at common law or under the New Mexico Tort Claims Act, NMSA 1978, Section 41-4-1, et seq.

30. CAMPAIGN CONTRIBUTION DISCLOSURE FORM

The Contractor agrees to compute and submit simultaneous with execution of this Agreement a Campaign Contribution Disclosure form approved by the County.

31. SURVIVAL

The provisions of following paragraphs shall survive termination of this Contract; INDEMNIFICATION; RECORDS AND INSPECTION; RELEASE, CONFIDENTIALITY, PUBLICATION, REPRODUCTION, AND USE OF MATERIAL; COPYRIGHT; COMPLIANCE WITH APPLICABLE LAW; CHOICE OF LAW; NO THIRD-PARTY BENEFICIARIES; SURVIVAL.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date of last signature by the parties.

SANTA FE COUNTY:

Henry P. Roybal, Chair
Santa Fe County Board of County Commissioners

ATTESTATION:

Geraldine Salazar,
Santa Fe County Clerk

6-13-2017
Date

Approved as to form:

Gregory S. Shaffer
Santa Fe County Attorney

6-12-17
Date

Finance Department Approval:

Don D. Moya
Santa Fe County Finance Director

6-12-17
Date

CONTRACTOR:

6/13/17
Date

By: CHRIS RODRIGUEZ, PE
(Print Name)

Its: MANAGING PRINCIPAL
(Print Title)

EXHIBIT A

May 25, 2017

Ms. Iris Cordova
Senior Procurement Specialist
Santa Fe County Public Works Utility Division
102 Grant Avenue
PO Box 276
Santa Fe, New Mexico 87504-0276

Subject: **Santa Fe County On-Call Engineering Services**
Project No. 2017-0220-PW/IC for the Utility Master Plan Project – Revision 2

Dear Ms. Cordova:

HDR Engineering, Inc. (HDR) appreciates the opportunity to submit this proposal to Santa Fe County (County) for professional engineering services for the Utility Master Plan Project. This scope and fee proposal is based on the information provided in RFP No. 2017-0220-PW/IC.

PROJECT UNDERSTANDING AND APPROACH

The Santa Fe County (County) Board of County Commissioners (BCC) re-adopted the Sustainable Land Development Code (SLDC) via Ordinance #2016-9. The Code provides a legal framework for implementing land development and growth management policies of the County's Sustainable Growth Management Plan initially adopted in 2010 and re-adopted in 2016.

This BCC action, combined with the new customers acquired by the Santa Fe County Public Utilities (SFCU) through the City of Santa Fe (City) - County annexation agreements requires that the County have a multi-year assessment of infrastructure (defined herein as roads, utilities, emergency response services and parks and open space) needs in the urban/semi-urban areas surrounding the City limits (Project Area). Independent water systems also need to be included in the planning effort.

Santa Fe County wishes to develop a Utility Master Plan for expansion of the existing utility systems within Sustainable Development Area – 1 (SDA-1) and the Utility Service Area. The Utility Master Plan will include a review of all existing distribution and collection systems and structures related to the Water Distribution and Transmission Systems and Sanitary Sewer Collection and Wastewater Treatment Systems. The plan will relate the future development and expansion of these systems to the ultimate build out of future development plans and visions for the County. The plan will identify required improvements for the existing system, future requirements for infrastructure upgrades, extension of major services and the upgrade of capacities with the County's existing systems for a period of 20 years.

The Utility Master Plan will consist of a Water Utility Master Plan, Wastewater Utility Master Plan, and a Water and Wastewater Utility Cost of Service Study and Rate Analysis that will identify the upgrades and infrastructure improvements required for present and future development over the next 20 years. The plan will include a proposed schedule and cost for all identified improvement projects.

The Utility Master Plan Project will include the following:

- Completing a review of all existing County water and wastewater infrastructure while incorporating the utility components of Santa Fe County's Infrastructure Build-Out Plan

such as road and highway alignments, zoning, density, future development, population projections, water demand, sewer demand, etc.
- Completing a review of existing privately owned and operated infrastructure (water and sewer) for possible acquisition by the County.
- Incorporating planning relevant planning information from the Preliminary Engineering Report (PER) for the Quill WWTF.
- Analysis of water supply and storage for the next 20 years with recommendations for the expansion of capacity and infrastructure and alternate sources of water.
- Evaluation of reclaimed water storage and distribution.
- Development of a comprehensive Capital Improvement Program (CIP) including cost estimates and phasing for all utility infrastructure (i.e. water, sewer, reclaimed water, plant expansion) to accommodate future growth of systems for the next 20 years. The CIP plan will be established at 5, 10, and 20 year milestones.
- Completing a Cost of Service Study and Utility Rate Analysis for water, sewer, and reclaimed water rates with recommendations for what rates the County should implement including provisions for future increases to support future utility needs and consideration of funding sources such as bonds, grants, loans, rates, impact fees, utility expansion charges, etc.

SCOPE OF SERVICES

The following tasks provide a description of the services that will be provided as part of this project.

Task 1 – Project Management, Administration and Coordination

This task includes the management activities required to ensure the project is completed on time and within budget, and addresses the County's goals. The following activities will be included with this task:

- Prepare a Project Management Plan (Project Guide) outlining the project scope, team organization, schedule, communications information, and QA/QC approach summary for internal team members
- Coordination with internal team members
- Preparation of monthly invoices
- A Project Approach and Resources Review (PARR) completed by a senior staff member not involved in the project development.
- Regular management and business reviews throughout the duration of the project as part of HDR's QA/QC process.

This task also includes the attendance of project meetings and preparation of any necessary documentation (agendas, meeting summary notes, etc.). HDR will attend four (4) project status and/or submittal review meetings at the County's offices in Santa Fe. All other meetings will be conducted via conference call.

Deliverables:

- Meeting Agendas
- Meeting Summary Notes
- Monthly Invoices

Task 2 – SFCU Potable Water Utility Master Plan

HDR will evaluate the existing water system and associated facilities to identify any deficiencies. Recommendations will be made for necessary improvements and/or replacement of facilities that may be required. HDR will also develop and evaluate alternatives to expand the water distribution system and facilities to meet additional needs of an expanded service area and additional capacity requirements for future conditions.

Subtask 2.1 - Gather and Review Existing Data

This task will be completed to compile all available information on the water distribution system. HDR will collect and review all available information provided by the County including previous reports, facility plans, hydraulic modeling, metering records, water production records, O&M data, records, logs, system maps and "As-Built" drawings.

The County will provide HDR with copies of the most recent mapping of the water distribution system in electronic format (AutoCAD and/or GIS). The map should show the different pressure zones within the County as well as the location of all water supply and distribution system facilities including wells, treatment facilities, pumping stations, storage reservoirs, master metering points, pressure reducing valves, normally closed isolation valves, and all water mains including the pipe diameter, material, and date of installation.

HDR will perform an overall review of the maps and check for inconsistencies with other existing sources of information. HDR will make corrections to the mapping data as necessary and review any modifications with the County.

The County will provide HDR with operational data from the SCADA system (e.g., tank levels, well production rates, pump station operating data, PRV settings, and system operating pressures).

HDR will visit the water distribution system facilities (wells, pumping stations, pressure regulating stations, and storage reservoirs) as necessary to obtain and/or verify information for the development of the hydraulic model.

The County will also provide HDR with information on areas of the water system where customers have experienced chronic low pressure, high pressure, and/or issues with water supply.

As a part of this task HDR will also coordinate with the City of Santa Fe as necessary to obtain information on existing interconnections and City water system facilities that are pertinent to the evaluation of the County's water distribution system.

Subtask 2.2 - Evaluate Existing Water Use Data

The County will provide historical water treatment, well production and water billing data in electronic format (i.e. MS Excel or MS Access) for the past 3 years. HDR will review the historical to determine:

- Historical average day and maximum day usage in the system as well as peaking factors.
- Historical amount of water use by customer category (i.e. residential, commercial, industrial, irrigation, etc.) if the historical data is organized by customer category.

HDR will complete a comparison between the production and consumption data to determine the rate of non-revenue water in the system.

Deliverables:

- Spreadsheet summarizing historical water production and usage, peaking factors and summary of non-revenue water

Subtask 2.3 – Build a Water Distribution System Hydraulic Model

The City of Santa Fe recently completed a Water Transmission and Storage System Master Plan in 2009. As a part of the project, the City created a new computer hydraulic model of the City's water system using the H2OMAP Water software available from Innovyze. To maintain compatibility and facilitate exchange of information with the City of Santa Fe, the hydraulic model of the County's water distribution system will be created using InfoWater Software developed by Innovyze.

HDR will coordinate with the City of Santa Fe as necessary to obtain information on the City's existing water system hydraulic model and it's applicability to the County's Potable Water Utility Master Plan.

All pipes larger than four inch diameter will be included in the hydraulic model. Smaller diameter pipelines may be included if necessary to maintain connectivity of the system. The hydraulic model will also include all fire hydrants within the distribution system.

The physical components of the water distribution system will be entered into the hydraulic modeling software. Details about the piping network, storage tanks, booster pumps, and pressure control valves will be entered into the model.

The County will provide topographic information (i.e. 1-ft or 2-ft contours) for use in establishing the elevations throughout the water system service area. It is assumed that no survey data will need to be obtained for development of the water distribution system hydraulic model. Any surveying required for development of the water distribution system hydraulic model will need to be completed as an additional service.

Deliverables:

- Hydraulic Model of Water Distribution System

Subtask 2.4 - Field Testing and Model Calibration

The hydraulic model will be calibrated for a steady-state simulation based on operation of the system for a typical maximum day demand condition.

This task will include the County providing operating data for the water system from SCADA and/or other sources (e.g., tank levels, well production rates, pump station operations, and system pressures) for use in calibrating the model for model validation.

If sufficient data is available HDR will develop a diurnal consumption curve for the County's water distribution system using the operating provided from the SCADA system.
Field testing will be completed as necessary to obtain data for use in calibrating the hydraulic model. Field testing may include fire hydrant flow testing, pump performance testing, pressure readings, and/or flow monitoring to obtain calibration data for validating the accuracy of the hydraulic model. It is assumed County staff will be responsible for obtaining any field data required for model calibration.

Based on guidance from HDR, the County will perform fire hydrant flow testing to obtain field data for use in calibrating the hydraulic model. It is anticipated that at least one fire hydrant flow test per pressure zone will be completed. The hydraulic model will be reviewed to determine if smaller pressure zones can be calibrated without acquiring field data. Larger zones may require more than one test. The overall number of fire hydrant flow tests completed will be proportional to the size of the pressure zone. For the purposes of this proposal, it is assumed that it will be necessary to conduct up to ten (10) fire hydrant flow tests.

HDR will prepare a memorandum outlining the field testing to be completed for review and comment by County staff. The memorandum will include the type, number, and location of proposed tests for flow measurement, loss of head, pressure observation, and pump performance.

The County's Public Works Department O&M staff will provide the equipment and tools necessary for completion of the field testing and will complete all of the field testing. If necessary, HDR will provide assistance to the County's staff during the performance of field testing.

HDR will use the operating data provided by the County in combination with the data collected as a part of field testing to calibrate the hydraulic model. To calibrate the model HDR will make comparisons between the flows and pressures calculated by the model with the operating data and field measurements of flow/pressure obtained by the County. HDR will adjust various model parameters until the behavior of the model is representative of the actual system operation. The goal of the model calibration will be to make adjustments to the model so the results produced from the model simulation match field operating data within reasonable accuracy in accordance with industry accepted standards.

HDR will complete comparisons for the 10 fire hydrant flow tests to be conducted. If it is determined that additional flow tests must be conducted to achieve the level of calibration required for the hydraulic model, the comparison of these flow tests will be completed as an additional service.

HDR will complete a Model Calibration Memorandum detailing the results and conclusions of the field testing and model calibration. The Model Calibration Memo will include a discussion of the field testing results as well as exhibits, tables, graphs and charts to demonstrate the results of the model calibration effort.

Deliverables:

- Field Data Collection Memo based on data provided by Santa Fe County
- Model Calibration and Results Memo

Subtask 2.5 – Existing System Modeling

The hydraulic model of the water system will be analyzed for various demand conditions including average day demand, maximum day demand, and peak hour demand. A steady-state simulation will be performed for evaluating the existing system.

The water distribution system will be evaluated for excessive headloss, low / high operating pressures and other potential problems in the distribution system. Evaluation criteria for the water

system will be based on the County's existing design standards for the water distribution system. The following items will be evaluated utilizing the hydraulic modeling results.

Service Levels
Review the configuration of the distribution system and the boundaries of each service level (pressure zone). Investigate the potential for pressure zone boundary adjustments to mitigate high and/or low-pressure problems. Make recommendations for any appropriate modifications.

Distribution System Components
Evaluate and determine the adequacy of the existing pumping stations, storage tanks, and pressure reducing stations. Report all deficiencies and recommend corrective measures.

Pumping and Storage
Evaluate the relationship between existing pumping and storage facilities and report on the adequacy of this relationship and provide recommendations for corrective measures.

System Interconnections
Evaluate capacity of inter-connections with neighboring water supply entities such as the City of Santa Fe and Buckman Direct Diversion Project and provide recommendations for improvements.

HDR will coordinate with the City of Santa Fe as necessary to obtain information on the existing interconnections and their ability and/or limitations with respect to supplying the County's water distribution system.

Water Supply Facilities
Evaluate data provided by the County regarding the water supply facilities (i.e. groundwater wells, treatment facilities, etc.) within the County and provide recommendations as they relate to the water supply requirements for the existing system.

Fire Hydrant / Fire Flow Assessment
HDR will complete an assessment of the number of fire hydrants, locations, and placement to verify compliance with state and local requirements. HDR will make recommendations for improvements to remediate any determined deficiencies.

Required fire flows will be defined for different parts of the service area and HDR will use the hydraulic model to complete a fire flow analysis for the system and identify potential problem areas. The fire flow analysis will be completed using the automated fire flow calculation features of the hydraulic modeling software. The fire flow analysis will be completed to determine the available fire flow at each hydrant in the system during a typical maximum day demand condition assuming "firm" pump station capacity and tank levels at the bottom of their normal operating range.

HDR will prepare figures and a table showing the calculated available fire flow for all fire hydrants in the system. HDR will make recommendations for improvements needed to correct fire flow deficiencies.

Subtask 2.6 - Develop Current System Improvement Plan
Based on the results of the hydraulic modeling, HDR will identify system deficiencies and make recommendations regarding the water distribution, transmission, treatment, supply and storage

needs to assure that water service in the Project Area meets the County's SLDC and national water utility standards.

Deliverables:

- Table of Recommended Improvements for Existing System

Subtask 2.7 – Future System Modeling
The hydraulic model of the water system will be expanded to include identified areas of future growth.

The County will provide information with respect to the areas of likely growth including all available land use, zoning, demographic data, and housing / population projections. HDR will review and tabulate information from the County regarding future planned development and areas of growth that are anticipated for the water system. Based on the information received from the County HDR will develop a map of future areas of growth and indicate the relative magnitude of growth anticipated in each area.

HDR will coordinate with the City of Santa Fe as necessary to obtain information related to future growth that may impact the County's water distribution system.

HDR will establish the estimated future average day, maximum day, and peak hour water demands based on the population projections and historical water use characteristics of the water distribution system for a 5-, 10-, and 20-year planning horizon. HDR will establish future demands associated with each land use, review with County staff, and incorporate into the water distribution system model. HDR will summarize the water demand projections and the procedures used in determining the future demands in a memorandum to be submitted to County staff. County staff will review and approve the future demand projections for compatibility with their expectations.

HDR will evaluate the future water system configuration. The computer simulations will include various demand conditions including maximum day and peak hour demand. The future water system will be evaluated for excessive head losses, low or high pressures, and other potential problems in the distribution system. It will include an overall assessment of the hydraulic capabilities of the system to meet the future demands for the 20 year planning period. HDR will make an assessment of existing storage capacity and production capacity to determine if it is adequate to support potential future growth.

HDR will review the County's supply sources including well facilities, interconnections with the City of Santa Fe, the Buckman Direct Diversion Project and/or other potential supply sources to develop a water supply strategy necessary to meet the anticipated water demands over the 20 year planning period.

Using the modeling results, HDR will identify the necessary expansions to the existing water distribution system to meet future demands over the 20 year planning period.

Subtask 2.8 - Develop Future System Improvement Plan
Based on the results of the future system modeling, HDR will identify all system components that will require improvements in 5, 10, and 20 years. HDR will make recommendations for improvements to remediate any determined deficiencies for the future system.

Deliverables:

- Table of Recommended Improvements for Future System

Subtask 2.9 – Cost Estimates and Improvement Phasing Plan
Improvements identified from completion of the existing and future system modeling will be itemized and HDR will develop an estimated construction cost for each improvement identified. A logical phasing plan will be developed for the improvements. HDR will prioritize the construction of improvements as a part of 5-, 10-, and 20-year capital improvement plan (CIP). The CIP will provide for phased construction and will include a priority schedule for planning purposes.

Deliverables:

- 5-, 10-, and 20-year CIP with planning level cost estimates and improvement phasing plan

Subtask 2.10 – Prepare Water System Master Plan Report
The Water System Master Plan Report will be based on the execution of all preceding tasks. Based on the information collected, reviewed, evaluated, and summarized in previous tasks, HDR will create a Draft Water System Master Plan Report discussing the results of the study and the recommended system improvements.

The Draft Water System Master Plan Report will include a discussion of each task, executive summary, table of contents, and any appendices as appropriate. The Master Plan will identify the locations and sizes of facilities needed to correct current system deficiencies and to meet the anticipated future growth. The location and capacity of all recommended water system improvements including suggested alignments of major mains will be identified. The Master Plan will include opinions of probable construction cost for all major system improvements and a review of funding mechanisms that may be used to fund proposed improvements.

HDR will prepare and submit five (5) copies of the Draft Water System Master Plan Report for review by the County. The County will review the Draft report and provide HDR with comments. A project meeting will be conducted with County staff to review the Draft Master Plan Report. Based on review comments received, revisions to the Draft report will be made. The Final Water System Master Plan Report will be assembled and five (5) copies will be submitted to the County.

Deliverables:

- Draft and Final Water System Master Plan Report

Task 3 – SFCU Wastewater Utility Master Plan

HDR will evaluate the existing wastewater collection system facilities to identify any sewer mains with insufficient hydraulic capacity. Recommendations will be made for necessary improvements and/or replacement of facilities that may be required. HDR will also develop and evaluate alternatives to expand wastewater collection facilities to meet additional needs of an expanded service area and additional capacity requirements for future conditions.

Subtask 3.1 – Gather and Review Existing Data

The purpose of this task will be to gather all available information on the existing wastewater collection system which will serve as the foundation for development of the hydraulic model and the resulting recommendations that will be included in the Wastewater Utility Master Plan Report.

HDR will collect and review existing reports, records, logs, system maps and "As-Built" drawings for the County's existing wastewater collection system and facilities. The focus of this task will be to compile all available physical system information (i.e. sewer main size and pipe inverts) for the wastewater collection system.

The County will provide HDR with their current AutoCAD and/or GIS mapping data for the wastewater collection system which will include:

- Location of all sanitary sewer mains and interceptors including pipe diameter, length, material, year of installation, and points of connection.
- Location of all wastewater system features including manholes, lift stations and treatment facilities.
- Parcels, streets with annotation, boundary for service area, zoning, landuse, buildings, and address points.

HDR will review the County's existing AutoCAD mapping and GIS database to identify the information available. Where inconsistencies are present in the existing sources of information, HDR will perform field reconnaissance, as necessary, with support from County staff to verify the data.

As a part of this task HDR will also interview key County staff concerning past and current wastewater collection system issues. The purpose of the interviews will be to collect information from operations staff on how the wastewater collection system typically operates.

Following the review of all information provided, HDR will prepare a brief memorandum listing those areas where data is insufficient and establishing the priority for obtaining additional data. HDR will work with the County to develop a plan for obtaining any missing data.

It is anticipated that it will be necessary to obtain survey data (rim and invert elevations) for approximately 100 manholes. HDR will utilize the services of a subconsultant to obtain the survey data.

As a part of this task HDR will also coordinate with the City of Santa Fe as necessary to obtain information on existing City wastewater collection system facilities pertinent to the evaluation of the County's wastewater collection system.

Subtask 3.2 - Design Standards Review
HDR will review the County's current policy on basic design and planning requirements including: pipeline sizing, maximum and minimum sewer line velocities, depth of flows, and facility construction. The design standards will be reviewed and recommendations for modifications will be made, based on standard industry practices and tailored to the County's wastewater collection system needs. As the County grows, these criteria will provide a level of consistency in the planning, design and construction of future system components.

Deliverables:

- Memo summarizing County Design Standards and Recommended Modifications

Subtask 3.3 – Review Existing Flow Data for Quill WWTP
The County will provide HDR with any updates to flow data from the Quill WWTP since initially received for PER. HDR will review the flow data to develop and compile statistics on the existing flows for the WWTP including:

- Average Annual Flow
- Minimum Monthly Flow
- Maximum Monthly Flow
- Average Daily Flow
- Minimum Daily Flow
- Maximum Daily Flow

The WWTP flow data will be one of the primary sources for use in developing the flow projections to be used in evaluating the hydraulic capacity of the wastewater collection system.

Deliverables:

- Spreadsheet summarizing historical wastewater flows

Subtask 3.4 – Develop Population and Flow Projections
Using the County's existing mapping data, HDR will develop a map delineating the service area for the wastewater collection system. The map will also depict the zoning and/or landuse for all areas serviced.

After development of the map is completed, HDR will meet with staff from the County to review the existing service area and obtain information on future approved and/or planned developments as well as other areas that may be served by the wastewater collection system in the future. After meeting with County staff, HDR will update the map to show the future areas to be serviced.

HDR will also coordinate with the City of Santa Fe as necessary to obtain information related to future growth that may impact the County's wastewater collection system.

HDR will also obtain and review population projections for the County completed by the University of New Mexico (UNM) Bureau of Business and Economic Research (BBER). In combination with the WWTP flow data, the population projections will be used to develop equivalent per-capita flow rates to be used in the estimating the wastewater flows for the existing and future systems.

HDR will develop population projections for the existing and anticipated future service area of the wastewater collection system. For the existing service area HDR will estimate wastewater flows based on population and equivalent per-capita flow rates. For future undeveloped areas, HDR will develop flow projections for the projected service area growth using zoning and landuse data in combination with equivalent per-capita flow rates.

Deliverables:

- Spreadsheet with Population and Flow Projections for Existing and Future Systems

Subtask 3.5 – Develop Spreadsheet Model of Wastewater Collection System
The wastewater collection system model will be developed for all gravity sewers in the system.

The physical data (i.e. manhole rim and invert elevations, pipe diameter, pipe material, etc.) for the wastewater collection system will be based on information obtained from the County's existing AutoCAD, and GIS mapping, "As-Built" drawings and supplemented by the survey data that will be collected. The information will be tabulated in a spreadsheet.

The spreadsheet will be set up to evaluate the hydraulic capacity for each pipe using the Manning's equation for gravity pipe flow and will determine the depth of flow, velocity, and depth-to-diameter (d/D) ratio. These values will then be compared to the County's design standards and/or other industry standards to identify portions of the system where hydraulic capacity may be limited.

Deliverables:

- Pipe Capacity Summary Spreadsheet

Subtask 3.6 – Existing System Evaluation
Results from the existing condition model run along with information gathered from staff interviews will be used to identify the existing system problem areas. Potential deficiency areas that will be identified in the modeling process include surcharged pipe locations, and low / high pipeline velocities. Identifications of system capacity restrictions and deficiencies will be based on the design criteria established from the review of the County's design standards.

As a part of this task, HDR will collect design information and interview County staff to assess station capacity and identify facility deficiencies for all lift stations within the wastewater collection system. Any recommended improvements will be identified in conjunction with the evaluation of the existing system.

Deliverables:

- Table of Recommended Improvements for Existing System

Subtask 3.7 - Future System Evaluation
As a part of this task HDR will develop preliminary alignments and layouts for the wastewater collection system needed to serve future areas of expansion. The County will provide input and identify future areas of expansion based upon past and projected patterns of community growth and development.

HDR will then complete calculations to determine the sizing of future sewer mains to be constructed. Sizing for future wastewater collection system mains and interceptors will be based on the County's design standards.

HDR will also evaluate any improvements to existing sewer mains that may be needed as a result of future development.

The County will provide HDR with topographic data for use in determining the alignment and layout for future wastewater collection system facilities.

Deliverables:

- Table of Recommended Improvements for Future System

Subtask 3.8 – Wastewater Collection System Capital Improvement Plan and Implementation Plan Development

A plan for implementing the recommended improvements for the wastewater collection system will be prepared. Non-monetary criteria including environmental impacts will be established for evaluating the recommendations for the wastewater collection system. A list of evaluation criteria will be developed by HDR for review and approval by the County. The recommended improvements will be evaluated and a priority ranking system will be developed.

The CIP will identify SFCU wastewater utility collection, transmission, treatment, effluent disposal/reuse and solids handling needs to assure that wastewater service in the Wastewater Service Area meets the County's SLDC and federal wastewater utility standards. The CIP will include a description of the recommended projects, planning level capital cost estimates for each improvement identified and their priorities. A CIP schedule spreadsheet will be developed that includes prioritization and a plan for implementation of recommended improvements.

Deliverables:

- 5-, 10- and 20-Year CIP with planning level cost estimates and improvement phasing plan

Subtask 3.9 – Wastewater System Master Plan Report

A Wastewater Master Pan Report will be prepared presenting the existing and future problems identified based on the analysis of the wastewater collection system. The document will be structured similar to the following outline:

- Executive Summary
- Model Development
- Wastewater Collection System Hydraulic Capacity Evaluation
- Recommended Improvements
- Capital Improvement Plan and Implementation Schedule
- Capital Improvement Summary

The Wastewater System Master Plan Report will include planning level cost estimates and detailed maps showing the sewer service areas and recommended improvements to aid County staff with their review. HDR will prepare and submit five (5) copies of a Draft report for review by the County. The County will review the Draft report and provide HDR with comments. Based on review comments received, revisions to the Draft report will be made. The Final Report will be assembled and five (5) copies will be submitted to the County.

Deliverables:

- Draft and Final Wastewater System Master Plan Report

Task 4 – SFCU Water and Wastewater Utility Cost of Service Study and Rate Analysis

The following subtasks are designed to use the information developed from the Water and Wastewater Utility Master Plan documents to develop cost-based water and wastewater rates and

impact fees using generally accepted rate setting methodologies and industry best practices, tailored to the specific and unique circumstances of the County's water and wastewater systems.

Subtask 4.1 - Initial Cost of Service (Kick-Off) Meeting

The purpose of this task is to bring the HDR project team, County management and staff together, at the start of the Water and Wastewater Utility Cost of Service Study and Rate Analysis in order to gain a mutual understanding of the goals, objectives, issues and concerns related to cost of service study. This meeting will be primarily used to discuss the overall goals and objectives of the cost of service study, and at the same time, discuss any key issues associated with the study.

Deliverables:

- Identification of objectives, issues and concerns by both parties.
- Face-to-face meeting to get the cost of service study off to a positive start.

Subtask 4.2 - Rate Study Data Collection
As a part of this task HDR will review and assess the County's existing water and wastewater financial and rate data, and provide a written data request detailing the data required to complete the cost of service and impact fee study.

HDR will provide a written data request to the County prior to the initial cost of service kick-off meeting so that it can be discussed at the meeting and any problem areas quickly resolved. The data and information requested for this study should be, for the most part, readily available information (e.g. financial, statistical, customer, etc.). The County will gather the cost of service data requested in the written data request provided by HDR.

Deliverables:

- An initial written data request to the County.
- Identification of any data constraints for the water and wastewater cost of service analysis.

Subtask 4.3 - Financial/Rate Setting Policy Review
The establishment of written financial and rate setting policies is an industry best practice. HDR will review the current financial/rate setting policies to determine the current policies which are in place. If there are no policies currently established HDR will provide recommendations on prudent financial planning and rate setting criteria for use within the cost of service study.

The County's current written financial and rate setting policies will be reviewed as a part of this subtask. These policies establish the financial targets for financial planning purposes (e.g. minimum debt service coverage ratios, minimum reserve funding, etc.). If the County currently does not have a specific financial policy for an area, HDR will provide a recommendation on the prudent financial planning criteria for use within the cost of service study. This task is not intended to develop a detailed set of written financial policies, but rather gain an understanding of the policies which are in place and determine any additional policies or financial planning guidelines which may be appropriate for the County to develop and adopt at a later date.

As a part of this task the County will provide HDR with a copy of any current written financial policies as they relate to water and wastewater financial planning and rate setting.

Deliverables:

- A summary of the current written financial policies as they relate to water and wastewater financial planning and rate setting.
- Recommendations on any additional financial/rate setting policies for financial planning or rate setting.

Subtask 4.4 - Financial Capability and Funding Plan Review of the Master Plan CIP
The Water and Wastewater Utility Master Plans are designed to provide a list of CIP projects for a 5-year, 10-year and 20-year time period. To assess the financial viability of the CIP, a high level financial capability and funding plan will be developed for each CIP.

The completion of the Water and Wastewater Utility Master Plans will develop a list of capital improvement projects (CIP) for a 5-year, 10-year and 20-year period. As a part of this subtask, HDR will provide an initial and high-level review of the financial capability and funding plan associated with each CIP. This screening is intended to identify any financial constraints

associated with a particular CIP by identifying the estimated impacts to long-term borrowing, annual debt service payments, rate impacts and impacts to the County's key financial planning criteria (debt service coverage, reserves and annual CIP funding from rates).

Based upon the initial screening, HDR and the County may need to adjust the master plan CIP for a particular utility to address the issues of financial viability and rate impacts. This subtask is an iterative process and once this subtask is complete, the 5-year funding plan developed within this task will be utilized in Subtask 4.5; the Revenue Requirement Analysis.

As a part of this task the County will review funding plan for the 5-year, 10-year and 20-year CIPs and provide HDR with comments.

Deliverables:

- A high-level review of the financial capability of the water and wastewater CIP
- A preliminary funding plan for the 5-year, 10-year and 20-year CIP.

Subtask 4.5 - Revenue Requirement Analysis

Using a "generally-accepted" rate setting methodology, HDR will develop the water and wastewater revenue requirements for a projected five-year period. HDR will develop the analyses for each utility in the context of any County financial planning policies. The analysis will utilize the County's budgeting documents and the results from Subtask 4.44 for the CIP funding plan. As appropriate, HDR will develop any needed rate transition plans.

The development of the water and wastewater revenue requirement analyses is the first major analytical portion of the comprehensive rate study process. This portion of the study entails reviewing, for each utility, the various sources of funds (revenues) and comparing them to the applications of funds (expenses) for the utility. This subtask considers the prudent and proper funding for O&M and capital expenditures for each utility, and determines the need for any rate adjustments over the time period selected.

For this portion of the study, the following approach and key methodological assumptions will be utilized.

Selection of a Test Period – A five-year projected time period is proposed (e.g. FY 2018/19 – FY 2022/23).

Method of Accumulating Costs – A "cash basis" methodology will be utilized which is comprised of O&M, taxes, debt service and capital improvements funded from rates, which are summed to equal the total revenue requirement.

Accumulation of Revenues and Expenses – Revenue requirements are composed of two major types of costs; operational and capital expenses. Operational costs are generally escalated from current budgeted levels and adjusted for any extraordinary expenses. To project capital costs, HDR will utilize the results from Subtask 4 which provided the preliminary funding plan for the 5-year CIP for each utility. In developing the revenue requirements, consideration will also be given to the County's financial policies and any other financial planning criteria.

Once a draft of the revenue requirements for each utility has been developed, an internal project meeting with the County will be held to review the analysis. This meeting is intended to review the

overall methodology used, but more importantly, review the analyses on a line-by-line basis to confirm with the County the data and assumptions used with the analysis.

Given the projection of revenues and expenses, a summary of the revenue requirements can be provided. The summary provides an understanding of the overall level of rate adjustments needed to adequately and sustainably support the County's water and wastewater utilities. Given a better understanding of the overall magnitude of any needed rate adjustments, HDR will work with the County to develop a rate transition plan to smoothly implement any needed rate adjustments.

To support completion of this task the County will:

- Provide "as needed" assistance to explain the County's data and information as it relates to developing the revenue requirements.
- Provide "as needed" data refinements or additional data needs as determined during the process of developing the revenue requirements.
- Attend a one-half day project meeting to review the draft revenue requirement analysis.

Deliverables:

- Development of a projected water and wastewater revenue requirement analysis for a projected five-year period that considers the necessary operating and capital needs of each utility.
- If needed, a transition plan to "phase in" any needed rate adjustments.
- Recommendations regarding key financial indicators (debt service coverage, capital replacement, reserve levels, etc.).
- A one-half day project meeting to review the draft revenue requirement analysis.

Subtask 4.6 - Cost of Service Analysis
As a part of this task HDR will develop an average embedded cost of service study to equitably allocate the revenue requirements of the water and wastewater systems to the customers served by the County.

In simplified terms, a cost of service study attempts to equitably allocate the revenue requirements of each utility between the various customer classes of service (e.g. residential, multi-family, commercial, etc.). In developing the cost of service, the following approach and key methodological assumptions will be utilized.

Selection of Test Period – Allocating FY 2018/19 projected revenue requirements for cost of service purposes, for each utility, would appear to be appropriate.

Functionalization and Classification of Expenses – The next step in the cost of service analysis is to functionalize the data. Functionalization refers to the arrangement of cost data into its basic cost categories (e.g. for the water utility, source of supply/production, treatment, transmission, distribution, etc.). It is presumed that this will be accomplished within the County's chart of accounts (i.e., accounting system). Classification of the functionalized costs segregates the costs to the various categories of why the costs were incurred (e.g. flow, capacity, customer, etc.). Classification will review the methodology to be used (e.g. base/extra-capacity, commodity/demand, combined method, etc.). HDR will review with the County their current use of the commodity/demand method for water.

Determination of Classes of Service – HDR will review the existing classes of service with the County to determine whether additional classes of service are needed for cost of service purposes.

Allocation of Expenses – Once the classes of service have been determined, the process of developing allocation factors is undertaken. In developing the allocation factors, HDR will develop factors that are "fair and equitable" to all customers, and rely upon County-specific data, where available.

Summary of the Cost of Service – From the above process, a summary page of the cost of service study for each utility is provided. The summary page for the cost of service study compares the difference between the current level of rate revenues received from each class of service, and the allocated cost of service for each class. The cost of service will also provide average unit costs, or cost-based water and wastewater rates, which are important to the development of final rate designs.

For completing this subtask the County will:

- Attend an internal project meeting to review the findings and results of the cost of service analyses for each utility.
- Provide any "as needed" data refinements or additional data needs as determined during the process of developing the cost of service analysis
- Deliverables as a Result of Subtask 6 – Cost of Service Analysis. From the work accomplished above, the deliverables for this subtask will be as follows:
- Review of the current customer classes of service for the water and wastewater utilities and determine any revisions for cost allocation purposes.
- A "fair and equitable" allocation of the revenue requirements to the various classes of service for the County's water and wastewater systems.
- A summary of the average unit costs (cost-based rates) for the various customer classes of service for the water and wastewater utilities.
- An internal project meeting to review the draft cost of service analysis.

Subtask 4.7 - Rate Design Analysis
HDR will utilize the cost information developed as a part of the previous subtasks and develop water and wastewater rate design options for possible adoption by the County. Review any alternative rate designs that meet the County's rate design goals and objectives (e.g. conservation, revenue stability, etc.).

HDR will begin by reviewing the County's rate design goals and objectives (e.g., simple to administer, encourage efficient use, stable revenues, etc.). HDR will also review the current rates to confirm how well they meet the County's rate design goals and objectives. From that review, HDR will develop up to three rate designs for each class of service and utility. For each rate design developed, a bill comparison and graph will be provided that shows a comparison between the present bill and the proposed bill at various levels of usage. Bill comparisons are useful in assessing the potential impacts to a wide variety of customers.

The County will discuss with HDR the County's rate design goals and objectives and complete review of any rate design alternatives for appropriateness.

Deliverables:

- Review of the County's current water and wastewater rates and development of various rate design alternatives.
- Bill comparisons and graphs for the rate design alternatives developed.

Subtask 4.8 - Development of Water and Wastewater Impact Fees
Based upon the updated CIP from the master plan, develop cost-based water and wastewater impact fees.

Impact fees are a one-time assessment (fee) against new or expanded development to pay for the cost of infrastructure required to provide service (i.e. accommodate development). Water and wastewater impact fees provide a means for balancing the cost requirements for new utility infrastructure between existing ratepayers and new customers connecting to (i.e., impacting) the water and wastewater system The portion of existing plant and future capital improvements that will provide service (capacity) to new customers is included within the water and wastewater impact fee. In establishing the fee, the current assets are brought up to current replacement value. The proposed future assets are reviewed for that portion which will provide capacity for expansion. Those components, when taken together, establish the value of the County's water and wastewater assets for use within the impact fees. Next, the number of equivalent residential units (ERU) is determined. The total value divided by the total ERUs establishes an impact fee for a single ERU. From that valuation, a schedule of impact fees can be developed, typically on the basis of the customer's meter size.

For purposes of establishing impact fees, HDR will develop a separate and distinct report from the rate study report.

The County will review with HDR the County's current assets and review the draft impact fee analysis.

Deliverables:

- Development of cost-based water and wastewater impact fees.
- A written report of the findings, conclusions and recommendations from the impact fee study.

Subtask 4.9 - Rate Study Report
HDR will provide a written report to summarize the findings, conclusions, and recommendations of the water and wastewater rate study.

Upon completion of the rate analysis, HDR will develop a separate and stand-alone draft written report of the rate study. The written report is intended to be comprehensive in nature and document all of the activities undertaken as a part of the project, along with our findings, conclusions and recommendations.

HDR will provide five (5) hardcopies of the draft final report and an electronic copy (PDF). The County will review and the draft report and provide HDR with comments. Any comments, suggestions or corrections from the County concerning the Draft report will be incorporated into the Final report. HDR will provide the County with five (5) copies of the Final report along with a PDF and Word version of the report.

Deliverables:

- Draft and Final Rate Study Report

Task 5 – Public Presentations

Subtask 5.1 – Water and Wastewater Master Plan Presentations
This task includes providing a presentation of the findings and recommendations of the water and wastewater collection system master plans to the County Commission. Prior to the presentation a preparation meeting will be held with the consultant team and County staff to discuss the format and information to be provided to the County Commission.

HDR will make a presentation of the Final Water and Wastewater System Master Plan Reports to the County Commission.

Subtask 5.2 – Rate Study Public Presentations
HDR will provide public presentations of the findings, conclusions and recommendations from the County's comprehensive water and wastewater rate study.

These public presentations will be provided to the County's Board and the topics will be as follows:

- Review of the draft findings, conclusions and recommendations of the rate study
- Review of the draft findings, conclusions and recommendations of the impact fee study
- Public presentation of the rate study and impact fee study for a public hearing on adoption of proposed rates and fees.

HDR will develop all handout materials for the public presentations. The County will Review and comment on any proposed handouts for public workshops or meetings.

HDR has assumed three public presentations of the findings, conclusions and recommendations of the study. Should additional public meetings/presentations be required, they will be provided on a time and materials basis.

Deliverables:

- One (1) public presentation with the County's Board to present the results of the water and wastewater master plans.
- Up to three (3) public presentations with the County's Board during the rate study process to gain policy direction and present the results to the public.

Task 6 – Software Training and Technical Support
As a part of this task, HDR will provide up to three (3) days of technical training at the County offices to instruct County staff on the use of the software and hydraulic model.

HDR will also provide an additional 40 hours of technical support. The technical support may occur in short time increments over 6 months after delivery of the final model and the initial training.

ASSUMPTIONS / CLARIFICATIONS / EXCEPTIONS

In addition to assumptions listed in the body of the scope of work, the scope, fee and schedule proposed in this work assignment proposal have been developed based on the following.

1. The proposed scope of work is limited to field surveying of existing sewer manholes as described in the scope of work. Field surveying for additional utility location and topographic mapping is not included in the scope of work. Any additional surveying will be completed as a supplemental service for an additional fee.
2. The proposed scope of work does not include any subsurface utility engineering (SUE) which would consist of potholing to determine the size and type of material of the existing utility infrastructure and field surveying to determine the horizontal and vertical location of existing utility infrastructure. If SUE is required, it will be completed as a supplemental service for an additional fee.
3. The proposed scope of services does not include any sanitary sewer flow monitoring to verify existing wastewater flows in the wastewater collection system. If sewer flow monitoring is needed, it will be completed as a supplemental service for an additional fee.
4. Santa Fe County staff will be responsible for completing field pressure and fire hydrant flow testing to be used for calibrating the water distribution system hydraulic model.

SUBCONSULTANT SERVICES

The following subconsultant services will be required for completion of the project.

Surveying

HDR will subcontract with Cobb Fendley to complete field surveying and obtain rim and invert elevations for all MH's to be included in the Wastewater Utility Master Plan. The scope of work for the project includes completing survey for up to 100 existing manholes.

ESTIMATED FEE

The Utility Master Plan will be performed on a lump sum. The proposed total lump sum for the work is $384,245, exclusive of New Mexico Gross Receipts Tax (NMGRT). The table below provides a summary of the associated fee estimate for this work assignment. Invoicing will occur monthly based on the percent of work completed during the prior month.

Task	Description	Total Cost
1	Project Management, Coordination and Administration	$24,005
2	Water Utility Master Plan	$102,013
3	Wastewater Utility Master Plan	$79,004
4	Water and Wastewater Utility Cost of Service Study and Rate Analysis	$88,331
5	Public Presentations	$16,329
6	Software Training and Technical Support	$22,663
	Subtotal	**$332,346**
	Direct Expenses	$20,000
	Subconsultant Services incl. Markup @ 10% - Surveying	$31,900
	Total Estimated Project Cost (excluding NMGRT)	**$384,245**

SCHEDULE

We anticipate the project can be completed within 9 months following the receipt of a written Notice to Proceed, not including Federal, State, or observed holidays, or County review time. The final project schedule will be determined and coordinated after the Notice to Proceed and additional coordination discussions with the County.

Our goal is to provide a project scope that addresses the County's specific needs and goals. If you have any questions or would like additional information, please contact our Project Manager, Ed DuBois, or Chris Rodriguez at (505) 830-5400. We look forward to working with you and your staff on the Utility Master Plan Project.

Sincerely,

HDR Engineering, Inc.

Chris Rodriguez, P.E.
Managing Principal / Associate VP

Ed DuBois, P.E.
Project Manager

ATTACHMENT 'A'

Santa Fe County
Dept. of Public Works - Utility Division

Water and Wastewater Utility Master Plans and Water/Wastewater Utility Cost of Service Study and Rate Analysis

TASK NO.	DESCRIPTION	STAFF MEMBERS								TOTAL HOURS	TOTAL COST
		Principal	QA/QC	Project Manager	Staff Engineer	Senior Financial Analyst	Financial / Rate Analyst	CADD	Admin		
Task 1. Project Management, Administration and Coordination											
1.1	Project Management, Administration, Coordination and Meetings	40	0	50	0	0	0	0	40	130	$ 24,005
	Subtotal Task 1	40	0	50	0	0	0	0	40	130	$ 24,005
Task 2. Water Utility Master Plan											
2.1	Gather and Review Existing Data	0	0	8	24	0	0	0	0	32	$ 3,569
2.2	Evaluate Existing Water Use Data	0	2	24	40	0	0	0	0	66	$ 8,514
2.3	Build a Model of the Water Distribution System	0	8	16	0	0	0	24	0	48	$ 8,192
2.4	Field Testing and Model Calibration	0	8	16	24	0	0	0	0	48	$ 7,522
2.5	Existing System Modeling	0	4	40	80	0	0	16	0	140	$ 17,427
2.6	Develop Current System Improvement Plan	0	2	8	16	0	0	4	0	30	$ 3,953
2.7	Future System Modeling	0	4	40	60	0	0	16	0	120	$ 15,667
2.8	Develop Future System Improvement Plan	0	2	4	20	0	0	0	0	26	$ 3,113
2.9	Cost Estimates and Improvement Phasing Plan	0	2	4	16	0	0	0	0	22	$ 2,761
2.10	Prepare Water System Master Plan Report	0	8	80	80	0	0	20	40	228	$ 31,294
	Subtotal Task 2	0	40	240	360	0	0	80	40	760	$ 102,013
Task 3. Wastewater Utility Master Plan											
3.1	Gather and Review Existing Data	0	0	8	16	0	0	0	0	24	$ 2,865
3.2	Design Standards Review	0	4	8	20	0	0	0	0	32	$ 4,485
3.3	Review Existing Flow Data for Quill WWTP	0	2	4	8	0	0	0	0	14	$ 2,057
3.4	Develop Population and Flow Projections	0	2	12	20	0	0	0	0	34	$ 4,569
3.5	Develop Spreadsheet Model of Sewer Collection System	0	8	24	40	0	0	24	0	96	$ 13,170
3.6	Existing System Evaluation	0	4	40	60	0	0	8	0	112	$ 14,739
3.7	Future System Evaluation	0	4	24	40	0	0	8	0	76	$ 10,066
3.8	Wastewater Collection System CIP and Implementation Plan	0	4	12	16	0	0	0	0	32	$ 4,841
3.9	Wastewater System Master Plan Report	0	4	60	60	0	0	16	24	164	$ 22,232
	Subtotal Task 3	0	32	192	280	0	0	56	24	584	$ 79,004
Task 4. Water and Wastewater Utility Cost of Service Study and Rate Analysis											
4.1	Initial Cost of Service (Kick-Off) Meeting	0	8	8	0	8	0	0	2	26	$ 5,626
4.2	Rate Study Data Collection	0	0	0	0	16	16	0	1	33	$ 4,779
4.3	Financial/Rate Setting Policy Review	0	2	0	0	16	16	0	1	35	$ 5,403
4.4	Financial Capability and Funding Plan Review of the Master Plan CIP	0	2	0	0	24	40	0	1	67	$ 9,530
4.5	Revenue Requirement Analysis	0	2	0	0	24	64	0	1	91	$ 12,229
4.6	Cost of Service Analysis	0	8	0	0	24	48	0	2	80	$ 11,800
4.7	Rate Design Analysis	0	2	0	0	16	32	0	1	51	$ 7,202
4.8	Development of Water and Wastewater Impact Fees	0	6	0	0	48	96	0	4	154	$ 21,726
4.9	Rate Study Report	0	6	8	0	16	20	0	8	60	$ 10,034
	Subtotal Task 4	0	36	16	0	192	332	0	21	597	$ 88,331
Task 5. Public Presentations											
5.1	Water and Wastewater Master Plan Presentations	8	2	20	8	0	0	0	0	38	$ 6,976
5.2	Rate Study Public Presentations	8	0	8	8	24	8	0	0	56	$ 9,353
	Subtotal Task 5	16	2	28	16	24	8	0	0	94	$ 16,329
Task 6. Software Training and Technical Support											
6.1	Software Training	0	24	24	40	0	0	0	0	88	$ 15,381
6.2	Technical Support	0	0	40	0	0	0	0	0	40	$ 7,262
	Subtotal Task 6	0	24	64	40	0	0	0	0	128	$ 22,643
	Total Tasks 1 through 6	56	134	590	696	216	340	136	125	2,293	$ 332,346
	Direct Expenses										$ 20,000
	Subconsultant Services										
	Cobb Fendley (Surveying) $ 29,000										
	10% Markup $ 2,900										$ 31,900
	Total Project Cost (excluding NMGRT)										$ 384,245

Fee Summary

$	199,009	Potable Water Utility Master Plan
$	185,237	Wastewater Utility Master Plan
$	384,245	Total

EXHIBIT B
SANTA FE COUNTY
CONSULTANT LIST

PROJECT NAME: Water and Wastewater Utility Master Plan

CIVIL ENGINEERING SERVICES Company Name: Consultant Name: Address: Ph. No.: Fax No.: E-mail:	TRAIL DESIGN SERVICES Company Name: Consultant Name: Address: Ph. No.: Fax No.: E-mail:
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