



3100 Alvin Devane Blvd Suite 150
Austin, Texas 78741
Tel: 512.441.9493
www.quiddity.com

August 10, 2022

Mr. Brandon Pritchett
Public Utilities Director
City of Pflugerville
15500 Sun Light Near Way, #B
Pflugerville, Texas 78660

Re: Professional Engineering Services for
Reclaimed Water Master Plan Update

Dear Mr. Pritchett,

Quiddity Engineering, LLC (Quiddity) appreciates the opportunity to present this Proposal for professional engineering services in connection with the City of Pflugerville (the City) *Reclaimed Water Master Plan Update* project (the Project).

PROJECT UNDERSTANDING

Quiddity understands the City desires to develop a Reclaimed Water Master Plan Update report. Quiddity is to perform master planning of infrastructure to distribute direct non-potable, Type I reclaimed water from the City's Central Wastewater Treatment Plant (Central WWTP). This project will include determination of potential customer profiles, coordination with ongoing City CIP projects and development, defining a customer profile that maximizes Central WWTP reclaimed water use, identifying growth planning models and incentive structure(s) for Large Volume Users (LVUs), and development of a Reclaimed Water Capital Improvements Plan (CIP) for 2023 through 2043.

Quiddity understands that the City has undertaken previous endeavors to identify the potential reclaimed water use customer profile, develop plans for reclaimed water treatment and distribution as well as analyze the viability and benefits of direct and indirect, potable and not-potable reuse water uses. The outlined scope of services and basis of compensation hereon will build on data collected in the Reclaimed Water Master Plan by DCS Engineering, LLC, dated January 2015 (*RW Master Plan*) and the Reclaimed Water Feasibility Study by CP&Y, Inc., dated May 18, 2022 (*Feasibility Study*).

The *Feasibility Study* identified the top 17 potential existing reclaimed water customers out of the top 200 largest water users based on presumed large irrigation demands and proximity to the Central WWTP. This scope of work includes reviewing City provided water meter data from the past 5 years to assess the top 200 largest water users and determine potential reclaimed water use candidates that can be added to the LVU list.

The *RW Master Plan* and *Feasibility Study* both addressed future potential customers. The *RW Master Plan*, having been completed in 2015 is likely out of date with the progress of Development throughout the City's service area. The *Feasibility Study* provided overall maps of areas and potential types of



Mr. Brandon Pritchett

Page 2

August 10, 2022

development. This scope of work includes an updated assessment of the future LVU reclaimed water candidates including working with Development Services to identify future development.

It is understood from the *Feasibility Study* and discussions with City staff that Direct Potable Reuse and Indirect Potable and Non-Potable Reuse methods are currently, or will be, under further analysis by others. This proposal is for a Reclaimed Water Master Plan that focuses on expansion and optimization of the City's existing direct non-potable Type I reclaimed water system from its Central WWTP. The scope of services and basis of compensation assumes the City has obtained from its consultants or maintains electronic files of water demand and reclaimed water demand data (in MS Excel), electronic files of exhibits or attachments (in ArcGIS, AutoCAD, or similar format), and GIS shapefiles of its existing reclaimed water system, City limits and other pertinent information to share with Quiddity in order to expedite updating of the Reclaimed Water Master plan.

Based on our understanding of the contract process, this proposal will be included and referenced within the City's *Professional Services Agreement* (the *Agreement*). Quiddity prepared the following scope of services, compensation proposal, and schedule for the City's consideration of approval to be referenced in the *Agreement* as **Attachment A**.

SCOPE OF SERVICES

BASIC SERVICES:

1. Identify Potential Customer Profile:

1.1 Review existing data, authorizations, agreements and reports made available by the City, including:

- Central WWTP reclaimed water quality results for the last 5 years,
- City's historical water usage for the past 5 years,
- City Development projects, including under construction, in permitting, and projects anticipated but still pending
- City's current reclaimed water authorization with the TCEQ
- City's reclaimed water agreements(s) with current customers
- 2015 Reclaimed Water Master Plan
- 2020 Wastewater Master Plan Update
- 2020 Water Master Plan Update
- City's 2021-2024 Strategic Plan
- 2022 Reclaimed Water Feasibility Study



Mr. Brandon Pritchett

Page 3

August 10, 2022

1.2 Identify current City Large Volume Users (LVUs) of potable water that are potential for reclaimed water customers.

- Review City provided 2022 water meter data, through October 2022 to assess the current top 200 largest water users and determine if there are any additional major potential candidates that can be added to the LVU list.
- Develop a LVU questionnaire for assessing customer potential.
- Coordinate with the City on questionnaire and verbally engage LVUs on interest of reclaimed water.
- Catalogue correspondence for City future reclaimed customer polling and tracking.

1.3 Identify future Large Volume Users (LVUs) of potable water that are potential for reclaimed water customers.

- Review and update previous analyses of future LVUs for reclaimed water use. Research and development of future LVUs list shall be limited to developments or properties planned for development that are known and documented with the City Development Services department.
- Develop an LVU questionnaire for assessing customer probability of future reclaimed water use.
- Coordinate with the City Development Services department for Developer contacts and verbally engage utilizing the LVU questionnaire.
- Categorize and catalogue responses for development of incentive structures and City's use in future reclaimed customer polling.

2. Screening-Level Alternative Development and Evaluation:

2.1 Evaluate up to three non-potable reclaimed water uses viable for incorporation into alternative development of reclaimed water distribution system in addition to identified current and projected LVUs, including cooling towers, light industrial use, and water hauling stations.

2.2 Identify potential reclaimed water service areas and develop up to four conceptual alignment alternatives based on planning level cost per demand.

3. Identify Growth Planning and Incentive Structures:

3.1 For up to two preferred alternatives selected from screening level evaluation, identify growth planning components, including:

- Complementary water/wastewater CIP projects for incorporation of main transmission installation and/or easement acquisition.



Mr. Brandon Pritchett

Page 4

August 10, 2022

- Based on land use allocations for commercial/light industrial use, identify up to 5 target markets for high value/demand capacity return and align with the City's 2021 to 2025 strategic plan.

3.2 Develop incentive structure for the following reclaimed water customer categories:

- Residential
- Developers
- Targeted Market

3.3 Identify financing strategies and funding opportunities for the proposed Reclaimed Water Capital Improvements Projects that are available to cities for reclaimed water implementation projects and establish opportunities to be pursued, if applicable. This shall include assessment of bonds, loans, and grants as options.

4. Reclaimed Water System Modeling and Project Implementation Phasing:

4.1 Create reclaimed water system with InfoWater Pro based on selected reclaimed water alternatives.

4.2 Conduct modeling analysis for daily minimum, average and maximum demand conditions for up to three (3) points in time, including ultimate build-out of the Central WWTP service area as defined in the City's Wastewater Master Plan.

4.3 Based on previously defined complementary water/wastewater project, develop draft projects phasing for the reclaimed water distribution system, including brief description and alignment map, CIP costs, and schedule for the two (2) preferred alternatives. This effort shall include assessment of storage and/or re-pressurization facilities and pipeline infrastructure. This effort does not include analyzing the Central WWTP effluent quality as it is understood that is under analysis by others. It is understood the Central WWTP already treats to Type I reclaimed water standards.

4.4 Prepare step-by-step summary of funding opportunities identified and impacts to project costs and schedule of funding reimbursement.

4.5 Present preliminary implementation phasing to City for review, comment, and identification of project "go" triggers, as required.

5. Reclaimed Water Master Plan Update Report and Council Assistance:

5.1 Prepare a draft Reclaimed Water Master Plan Update report for City review and comment.



Mr. Brandon Pritchett

Page 5

August 10, 2022

5.2 Review City provided comments, provide response or incorporation, and finalize Reclaimed Water Master Plan Update report.

5.3 Assist the City in the development of a project summary presentation for City Council and attend one (1) City Council Meeting to answer questions and discuss Master Plan content, as needed.

6. Project Management Services:

6.1 Throughout the duration of the Project, manage project: scope, schedule, quality, staff resources, project documentation, and communications.

6.2 Conduct Project Kickoff Meeting and attend up to 10 regularly scheduled monthly meetings, including preparation of a Meeting Agenda, post-meeting Minutes, and summary of Action Items from the meetings. This scope of work includes up to three (3) in person meetings, at times deemed necessary by Quiddity throughout the project for project coordination and presentation. The remaining meetings will be virtually via TEAMS.

6.3 Conduct a Reclaimed Water Alternative Selection Workshop and Implementation Phasing Workshop, including preparing meeting Agenda, Minutes and Action Items.

6.4 Perform Quality Assurance/Quality Control (QA/QC) for the anticipated duration of the entire project.

SUPPLEMENTAL SERVICES

These services will only be performed if required to complete the project and if authorized by the City, with additional compensation.

7. Additional Reuse Areas and Types of Uses

This proposal does not include analysis of reclaimed water uses outside of the Central WWTP service area. This proposal does not include assessment or review of the viability and benefits of direct and indirect, potable and not-potable reuse water uses.

8. Transient Analysis

This proposal does not include Transient Analysis by Quiddity or a sub-consultant of Quiddity. It is Quiddity's understanding that the City or its Engineer will provide or contract with a firm to provide Transient Analysis of the City's entire pipeline system and provide recommendations to sizing and locations of Air Release / Vacuum Release Valves. If Transient Analysis work is desired to be included with this Project, Quiddity can provide additional scope, compensation, and schedule by separate authorization.



Mr. Brandon Pritchett

Page 6

August 10, 2022

9. Applications for Grant or Loan Funding

This proposal does not include completing or submitting applications for grant or loan funding. Instead, the proposal identifies potential funding strategies and opportunities including grant or loan funding and establishes steps and timelines required for applications. If the City desires Quiddity to assist with, complete or submit applications for grant funding, Quiddity can provide additional scope, compensation, and schedule by separate authorization.

10. Development of Reclaimed Water Ordinances or Rules and Regulations

This proposal does not include development of Reclaimed Water Ordinances or Rules and Regulations. If the City desires Quiddity to assist with, create, or coordinate these items, Quiddity can provide additional scope, compensation, and schedule by separate authorization.

11. Other Additional Engineering Services

This proposal does not include the following items, but they may be needed for the project: alignment alternatives analysis, water quality evaluations, Preliminary Engineering Report(s), Environmental investigations, studies, surveys, or permitting, value engineering, multiple bidding packages or re-bidding of the work. Should any of these services be deemed necessary, Quiddity can provide additional scope, compensation, and schedule by separate authorization.

SERVICES PROVIDED BY THE CITY:

The following services will be provided by the City and the City's Agents:

- Digital copies of all Reports referenced hereon and/or applicable to the project.
- Digital copies of data files relevant to the project.
- Timely review of interim submittals, with legible written comments.



Mr. Brandon Pritchett

Page 7

August 10, 2022

COMPENSATION

Compensation for the SERVICES described above will be on a LUMP SUM BASIS as follows and further detailed on enclosed **Exhibit A**.

<u>SERVICES</u>	<u>Lump Sum Compensation</u>
1. Identify Potential Customer Profile	\$21,250
2. Screening-Level Alternative Development and Evaluation	\$15,255
3. Identify Growth Planning and Incentive Structures	\$17,875
4. Reclaimed Water System Modeling and Project Implementation Phasing	\$34,000
5. Reclaimed Water Master Plan Update Report and Council Assistance	\$25,390
6. Project Management Services	\$35,030
Total Compensation	\$148,800

PROJECT SCHEDULE

Quiddity will complete the scope of services within 340 calendar days from Notice to Proceed as described in **Exhibit B**.



Mr. Brandon Pritchett
Page 8
August 10, 2022

SPECIAL CONSIDERATIONS

This proposal is based on the following special considerations:

1. All work under this proposal shall be subject to the enclosed *Professional Services Agreement* between Quiddity Engineering, LLC and the City of Pflugerville.
2. The proposed fees shall be considered in their entirety for the scope of services. Should you wish to contract with us for only a portion of the work, we reserve the right to negotiate individual scope items on their own merits.
3. This proposal shall be valid for sixty (60) days from this date and may be extended upon approval by this office.

We thank you for the opportunity to submit this Proposal and look forward to working with you. An executed copy of this proposal will serve as our notice to proceed. Please return a signed copy to our office. Should you have any questions, please call 713.777.5337.

Sincerely,

Kyle H Kaspar, PE
Project Manager

Jeff Moller, PE
Vice President

KHK

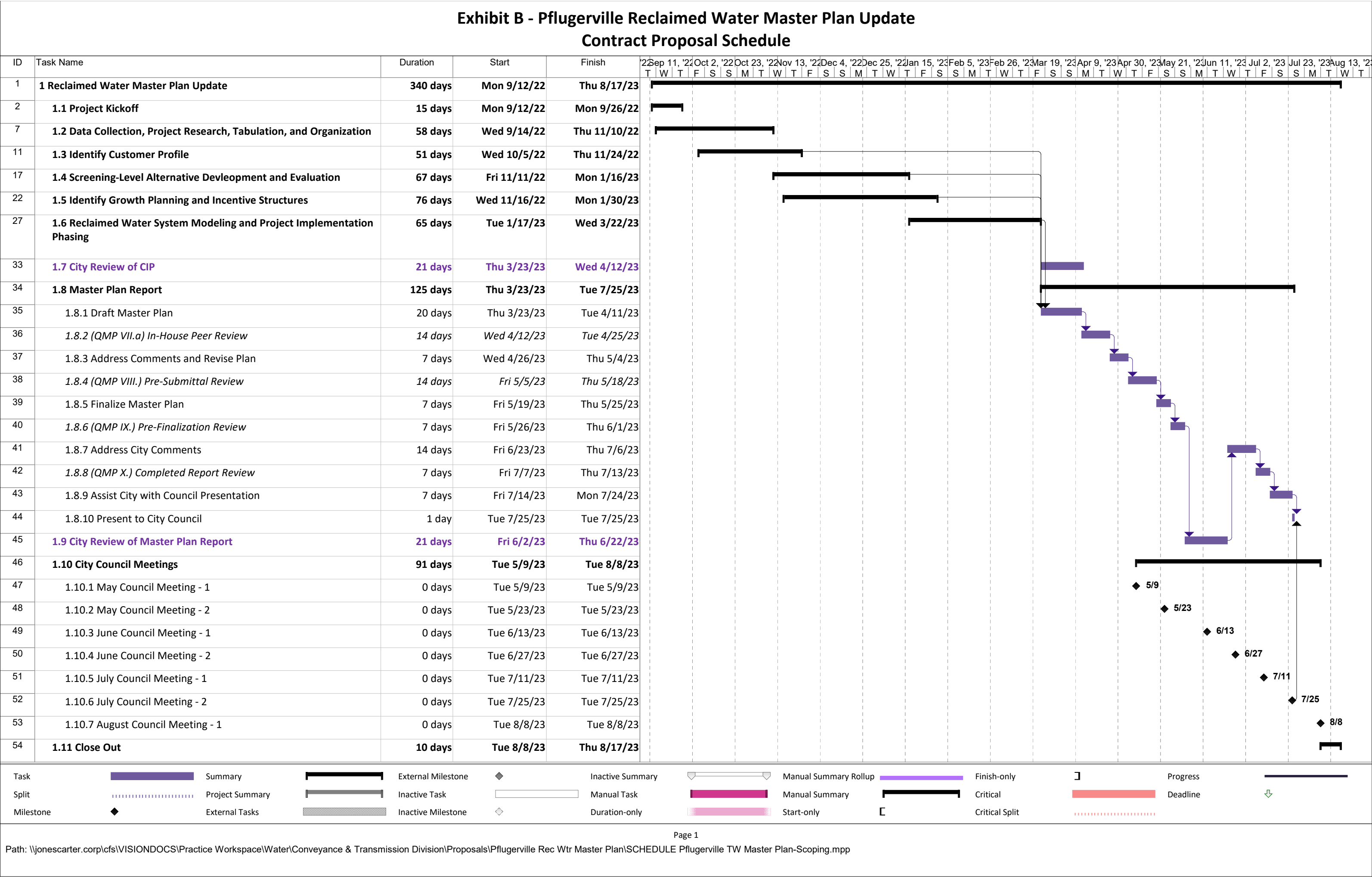
V:\Practice\Water\Conveyance & Transmission\Proposals\Pflugerville\PROPOSAL Pflugerville RW Master Plan Update.docx
Enclosure(s)



Opp / Project No. PP101 5568 00

RECLAIMED WATER MASTER PLAN UPDATE

		Project Principal	QA/QC Manager	Technical Advisor	Project Manager	Design Lead	WWTP Lead	Pipeline Lead	Ord. Lead	Cust Outreach	Developer Liason	EIT	Proj. Admin	Intern	GIS Support	Sub-Total	Other Directs	Total Budget	Task Level Total	
		PL	Prof Eng V	Prof Eng V	Prof Eng IV	Prof Eng III	Prof Eng III	Prof Eng III	Prof Eng IV	Spec. II	Prof Eng III	Des Eng I	Admin II	EA II	GIS II					
		\$295	\$275	\$275	\$255	\$225	\$225	\$225	\$255	\$145	\$225	\$125	\$95	\$85	\$130					
ALL SERVICES		Jeff M.	Nieves A.	Gary R.	Kyle K.	Alan M.	Grady T.	Michael G.	Matt. B	Linda V.	Gemsong R.	Jordan C.	Brittany R.	Luaren S.	Luis A.					
Task 001 - Identify Potential Customer Profile																				
1	Review & Organize Existing Provided Data And Reports				6	8						12		4	8	\$6,210		\$6,210	\$21,250	
2	Identify Existing LVUs				4	10				4		10		2	8	\$6,310		\$6,310		
3	Identify Future LVUs				4	12				4	8	10		4	8	\$8,730		\$8,730		
Total Task 001																				
Task 002 - Screening-Level Alternative Development and Evaluation																				
1	Evaluate up to 3 non-potable alternative uses			2	4	8						12				\$4,870		\$4,870	\$15,255	
2	Identify service areas and 4 conceptual alignments		1		4	14	2	6				20		4	10	\$10,385		\$10,385		
Total Task 002																				
Task 003 - Identify Growth Planning and Incentive Structures																				
1	Identify Growth Planning Components for up to 2 Alternatives		1		4	8				2	4	10				\$5,535		\$5,535	\$17,875	
2	Develop Incentive Structures for customer categories				4	10			2	4	4	10				\$6,510		\$6,510		
3	Identify financing strategies and funding opportunites				4	10			4	2		10				\$5,830		\$5,830		
Total Task 003																				
Task 004 - Reclaimed Water System Modeling and Project Implemenation Phasing																				
1	Build Reclaimed Water Model in Info Water				6	12						24		6	4	\$8,260		\$8,260	\$34,000	
2	Conduct Modeling for 3 Scenarios with 3 Ea Alternatives				6	12						24		6		\$7,740		\$7,740		
3	In complement with W/WW plans, develop Rec Wtr CIP		1		8	10	8	6				18			6	\$10,745		\$10,745		
4	Step-by-Step Summary of funding opportunites, impacts to costs and schedule of funding reimbursement				2	5			2	2		8				\$3,435		\$3,435		
5	Present Preliminary Implementation phasing to City				4	8						8				\$3,820		\$3,820		
Total Task 004																				
Task 005 - Reclaimed Water Master Plan Update Report and Council Assistance																				
1	Prepare draft Reclaimed Water Master Plan and submit to City			4	8	18	4					28			10	\$12,890		\$12,890	\$25,390	
2	Address City Comments		2	2	4	8						10			4	\$5,690		\$5,690		
3	Assist City with presentation and Q&A at City Council Meeting				8	12						12	6			\$6,810		\$6,810		
Total Task 005																				
Task 006 - Project Management Services																				
1	Manage Scope, schedule, quality, staff, project docs, and communications				20	8										\$6,900		\$6,900	\$35,030	
2	Project Kickoff Meeting and Monthly Meetings inc. Agenda, Minutes, Action Items	4	6		22	11						33				\$15,040		\$15,040		
3	Rec. Wtr Alternative Selection Workshop and Implementation Phasing Workshop				8	10						8	4			\$5,670		\$5,670		
4	QA/QC	4	8	4	8	4										\$7,420		\$7,420		
Total Task 006																				
	Hours Subtotal	8	19	12	138	198	14	12	8	18	16	267	10	26	58					
SUBTOTAL ALL SERVICES		\$ 2,360	\$ 5,225	\$ 3,300	\$ 35,190	\$ 44,550	\$ 3,150	\$ 2,700	\$ 2,040	\$ 2,610	\$ 3,600	\$ 33,375	\$ 950	\$ 2,210	\$ 7,540	\$148,800	\$0.00	\$148,800	\$148,800	



SCHEDULE OF HOURLY RATES
Effective 2022

ENGINEERING PERSONNEL		DESIGNERS/DRAFTING PERSONNEL	
	2022		2022
Design Engineer I	\$125	CAD I	\$ 80
Design Engineer II	\$145	CAD II	\$100
Professional Engineer I	\$170	CAD III	\$120
Professional Engineer II	\$195	Designer I	\$130
Professional Engineer III	\$225	Designer II	\$150
Professional Engineer IV	\$255	Designer III	\$170
Professional Engineer V	\$275	GIS I	\$ 95
Practice Leader	\$295	GIS II	\$130
		GIS III	\$160
		GIS IV	\$220
ELECTRICAL ENGINEERING PERSONNEL		SURVEYING PERSONNEL	
Electrical Design Engineer I	\$135	1-Person Field Crew	\$145
Electrical Design Engineer II	\$155	2-Person Field Crew	\$195
Electrical Professional Engineer I	\$185	3-Person Field Crew	\$240
Electrical Professional Engineer II	\$210	4-Person Field Crew	\$270
Electrical Professional Engineer III	\$240	Survey Technician I	\$100
Electrical Professional Engineer IV	\$270	Survey Technician II	\$110
Electrical Professional Engineer V	\$295	Project Surveyor I	\$105
		Project Surveyor II	\$125
		Project Surveyor III	\$145
		Project Surveyor IV	\$175
		Chief of Survey Crews	\$150
		Certified Photogrammetrist	\$175
		Remote Pilot I	\$ 95
		Remote Pilot II	\$130
		Remote Pilot III	\$170
		Visual Observer	\$ 95
		LiDAR Tech	\$105
		Aerial Tech	\$ 90
		Registered Professional Land Surveyor	\$195
		Survey Manager	\$225
CONSTRUCTION PERSONNEL (Includes Mileage)		OFFICE PERSONNEL	
Construction Manager I	\$125	Engineer's Assistant I	\$ 75
Construction Manager II	\$145	Engineer's Assistant II	\$ 85
Construction Manager III	\$170	Engineer's Assistant III	\$ 95
Construction Manager IV	\$190	Admin I	\$ 75
Construction Manager V	\$230	Admin II	\$ 95
Field Project Representative I	\$ 80	Admin III	\$125
Field Project Representative II	\$100	Accounting Manager	\$130
Field Project Representative III	\$120	Corporate/Project Accountant	\$110
Specialist Field Project Representative I	\$135		
Specialist Field Project Representative II	\$145		
Senior Specialist Field Project Representative	\$160		
SPECIALIST			
Specialist I	\$115		
Specialist II	\$145		
Specialist III	\$215		
Specialist IV	\$250		
PLANNING PERSONNEL			
Planner I	\$105		
Planner II	\$145		
Planner III	\$175		
Planner Manager	\$250		