CITY COUNCIL AGENDA
March 12, 2024, 6:00 P.M.
116 Main St., Fountain
Register to attend virtually @
www.fountaincolorado.org

1) Call to Order

2) Pledge of Allegiance

3) Roll Call

4.1) Presentations
- Pikes Peak Regional Building Presentation (Greg Dingrado, PPRBD)

4.2) Board/Commission/Committee

5) Correspondence, Comments and Ex-Officio Reports

6) Public to be Heard
Citizens may address the Council on items that are not on the agenda. Council may not be able to provide an immediate answer but will direct staff to follow up. Out of respect for the Council and others in attendance, please limit your comments to five (5) minutes or less.

7) Consent Agenda
All items listed under the Consent Agenda are considered routine and will be approved with one motion. There will be no separate discussion of these items unless a Council Member or citizen so requests, in which case the item may be removed from the Consent Agenda and considered separately, at the discretion of Council. ***(Est. time-3 min)***

A. Approval Of The February 27, 2024, City Council Meeting Minutes (S. Huffman)
B. Resolution 24-006, A Resolution To Establish A Plan To Stabilize The Water Fund. (D. Blankenship)

8) Old Business

9) New Business
A. Consideration Of Items Removed From The Consent Agenda
B. Resolution 24-007, A Resolution Authorizing Task Order #2 Under The Professional Service Agreement Between The City Of Fountain And Respec Company, LLC For Design And Permitting Of The Fountain Reservoir Project Utilizing El Paso County Arpa Grant Funds. (T. Murphy est. 5 min.)

10) City Council Agenda Requests

11) Announcement of Executive Session

12) Adjourn

A (Administrative Action) QJ (Quasi-Judicial Action) L (Legislative Action)

NEXT REGULAR COUNCIL MEETING
March 26, 2024

Regular City Council Meeting

Consent –7A
Council Meeting Minutes

March 12, 2024

Summary Information

Title:
APPROVAL OF THE FEBRUARY 27, 2024, CITY COUNCIL MEETING MINUTES

Initiator: City Clerk Huffman	☒ Council Action
Presenter: City Clerk Huffman	☐ Council Information
Legal Review: ☐ Yes ☒ No	☐ Report to Council

Summary Overview and List of Attachments:
The attached minutes were compiled as the result of the February 27, 2024, City Council Meeting Minutes

Attachments: Above Referenced Meeting Minutes

Background Information

Strategic Plan Priority (if applicable):
- ☐ **Facilitate responsible development, building reasonable capacity to meet future community needs.**
- ☐ **Diversify city financial resources and invest**.
- ☐ **Provide reliable access to public safety services.**
- ☐ **Improve the quality and availability of parks and recreation opportunities**

Recommendation

Staff recommends approval.

Proposed Motion

Motion to approve shall be included under the consent agenda.

CITY COUNCIL MEETING
February 27, 2024

1) Call to Order

Mayor Thompson called the meeting to order at 6:00P.M.

2) Pledge of Allegiance

The pledge of Allegiance was recited.

3) Roll Call

Roll call found the following members present:
Mayor Thompson
Mayor Pro Tem Rick
Council Member Herzberg
Council Member Applegate
Council Member Hinton

The following members notified staff of their absence:
Council Member Duncan
Council Member Estes

4 (1) Presentations

- **Department Update: Tech Services**

Technology Services Director Godwin updated the Council on the completed projects, what they are currently working on now, and the roadmap looking forward for the Technology Department. She covered the challenges surrounding best practices versus regulations and mandates.

Mayor Pro Tem Rick asked for an update on why there was not a live YouTube feed of the meeting. Ms. Godwin explained that there were some changes being made to the Council Chambers and all the technology was not able to be fully re-connected to allow for the streaming.

Council Member Hinton expresses his appreciation for the Technology Department.

- **Sunnyside Market Presentation**

CEO of Care & Share Nate Springer, shared their mission to provide food to communities, and gave an overview of how partnerships are working in surrounding communities. The partnership provides space and facilities while they provide the food service. He feels this will be a great model moving forward with the Sunnyside Market. He stated how Care & Share is reimaging food in the community, and they want to make food services sustainable in all communities.

Mayor Pro Tem Rick offered his time to assist in any outreach.

Council Member Hinton inquires about how many people they serve. Mr. Springer responded that the model set up is the key to success to serve approximately 300-500 families a day.

4 (2) Board/Commission/Committee Appointments

- Economic Development Commission (EDC) Appointments

Economic Development / Urban Renewal Director explained that the new year for EDC starts in March, and that three members have given their resignation. She gave an overview of the three applicants.

Council Member Herzberg made a motion to appoint the three applicants, seconded by Council Member Rick. All members voted yes (5-0); the motion carried.

5) Correspondence, Comments and Ex-Officio Reports

Deputy City Manager Evans reported that the bridge on Hwy 85/87 will be replaced due to storm damage and that maintenance will continue till 2025.
Mr. Evans added that the changes to the Council Chambers are ADA improvements.

Fire Chief Grahm gave on update on the hiring process and that they have 3 qualified candidates moving forward. He reported the large number of calls department wide recently.

Police Chief Cristani shared that they have hired a new officer, and another one will be going to Pennsylvania for K9 training.

Council Member Applegate reported that he attended the PPRBD meeting and that building counts are low.

Mayor Thompson reported that City Manager Trainor sent a letter individually to all the Council that he received from the Home Ownership Opportunity Alliance. They are requesting Cities to sign in support for Senate Bill 24-106 for construction reform and the effects on middle income and first-time home buyers. This bill is to help make strides in the right direction to allow builders to have the right to remedy any issues. All Council Members support the signing of the bill.
Mayor Thompson also received a letter from the Denver Metro Mayors Caucus to sign in support of the same Bill so she will sign that also.
She stated that we would be supporting Senate Bill 24-112 that lays out the steps of Bill 24-106 if passed.
She attended PPACG meeting and they are still discussing the Long Range Transportation Plan, The, Specialized Transit Committee for disabled and senior riders, Pikes Peak Library District is discussing the master plan for facilities, and the Transportation Safety Committee meeting showed the #1 concern of drivers nationwide, is aggressive drivers.

6) Public to be Heard

John Langley, American Legion updated council on upcoming events at their facility to include the Legions 115th birthday, Easter egg hunt, and 2024 Memorial Day service.

Resident, Robert Dodson, expressed his concerns with the cost to upgrade his utility service amp to his home. City Manager Trainor will reach out directly to him to discuss it.

Resident, Andrew Vanderwig, expressed his frustrations with City Staff and asked the Council to instruct the staff to communicate with his attorney and other professionals working on his project.

The O'Brien Home Team shared about an adult community Easter egg scavenger hunt beginning March 8th – 28th.

7) Consent Agenda

A. Approval Of the February 13, 2024, City Council Meeting Minutes

Mayor Pro-Tem Rick made a motion to approve the consent agenda, seconded by Council Member Applegate. All members voted yes (5-0); the motion carried.

8) Old Business

There were no items to present

9) New Business

A. Consideration Of Items Removed From The Consent Agenda

There were no items removed.

B. Resolution 24-005, A Resolution Amending Exhibit "D" Of Resolution 22-023, For Costs Incurred In The Administration And Processing Of License Fees, Service Charges, Applications, Permits, Vehicle Inspection Fees And Other Fees And Charges And Authorizing The Waiver Or Reduction Of Certain Fees Or Charges

Commander Racine explained that since the department purchased Body Worn Cameras, they have received a large amount of Criminal Justice Record requests for footage. He explained that the recordings are criminal records and under state statutes there are qualifications that allow the release of records. He introduced Sydney Tillman, the department's Digital Media Technician, and explained that one request could take from 4 hours to 2 weeks to complete the "Blurring" or Redaction processes. He is requesting a flat nonrefundable fee with an hourly rate.

Mayor Thompson inquired about what would be redacted. Commander Racine explained anything pertaining to juveniles, radio traffic, or computer screens are the most common.

A discussion was held including the amount of unclaimed requested records after redactions have been completed, state statutes that allow for criminal records with the required timeline to complete the requests, consequences from mandated legislation, and actual time spent on the requests. What is available to victims and other means for them to obtain the records other than through the Police Department. Suggestions were made to require partial or full payments upfront prior to redacting the videos.

Chief Cristiani stated that a dedicated Digital Media Technician will be requested for the Police Department in the future for the number of requests.

It was determined that additional information would be needed to decide on the fees and how they would be collected.

Council Member Herzburg made a motion to table the item to the March 26, 2024 meeting, seconded by Mayor Pro Tem Rick. All members voted yes (5-0); the motion carried.

C. Resolution 24-007, A Resolution To Award The Construction Contract For The Southwest Link Transmission Main Project To Pate Construction Co., Inc. In The Amount Of $5,940,701 And Authorize Expenditures For A Total Not To Exceed Amount Of $6,534,771.

Water Engineer Murphy shared the background information for the Southwest Link Transmission Main Project from 2006 master plan to the accelerated need in 2018-2022 with the creek and the I-25 pipe failures. He explained how the project has become multiphase with active development sites. He talked about the exiting layout of the water systems low zone and where the critical crossings and failure points are. The purpose of the project includes immediate benefits such as system redundancy and resilience, improved fire protection, enhanced water quality to southeast customers and eliminating low zone bottleneck to maximize the system capacity. The future benefits include integration with future reservoir project by the southwest tank, aligns with future growth areas to the southeast, and it will be sized for full-system buildout.
The project has been a total of three phases with this proposal the third phase. He covered the project timeline from May 2021 to the current public bid process. There were a total of nine contractors who submitted a bid, and the low bid was from Pate Construction Company. Staff reviewed Pate 's qualifications, references, and experience and recommends awarding the construction contract to Pate Construction for the bid amount of $5,940,701. Staff is requesting authorization to fund a 10% contingency for change orders and unexpected conditions.

Mayor Pro Tem Rick asked how the pressure would stay consistent when moving from a 30-inch pipe to a 36-inch pipe. Mr. Murphy explained how the pressure is a standard number from the tank and the pipe size will not affect the pressure.

Council Member Herzberg stated that she appreciates the presentation and how future focused this project is. She thanked him for the funding breakdown he provided and considering the additional 10%.

Mayor Thompson inquired about the strategic connections for future development. Mr. Murphy explained how one of the property owners has undeveloped land where an easement was needed. The negotiation was to allow him to tap into the water line in exchange for a no cost easement. They do not want to cut into the pipe later so they have installed a connection for this purpose. Connection fees will be assessed at development through the water tap fees.

Residents expressed their concerns about traffic impacts during construction, and when the new development in the future is built out, would the pressure to Countryside be affected. Mr. Murphy explained that there will not be any traffic impact or road closures for this phase, and that the pressure would not be affected with he development.

D. Update To City Council And The Public On The 2022-2024 Strategic Plan

Administrative Services Director Trylch gave an update to the Council on the 2022-2024 Strategic Priorities. He covered the items that have been completed, the status of the ones still in progress, and those that are not going to be and why they have been removed or postponed.

Deputy City Manager Evans gave a status update on the City road projects.

Mayor Pro Tem Rick stated he has a background in business and is familiar with vision statements. It usually summarizes where you want to go. He read a few into the record for examples and pointed out that ours is made of paragraphs and could not be explained in a summarized version. He asked staff to revise it and asked for others' ideas. After a discussion among staff and council it was suggested that maybe we include a "slogan" before or above the Vision Statement. City Manager Trainor made a recommendation for staff to develop a few ideas and bring back them back to the Council.

10) City Council Agenda Requests

There were no requests.

11) Announcement of Executive Sessions

There were no executive sessions requested.

12) Adjourn

There being no further business, Mayor Thompson declared the meeting adjourned at 9:03 P.M.

_____ _____

Deputy City Clerk Mayor

Regular City Council Meeting

Consent –7B

Water Fund Stabilization Plan

March 12, 2024

Summary Information

Title: **RESOLUTON 24-006, A RESOLUTION TO ESTABLISH A PLAN TO STABILIZE THE WATER FUND.**

Initiator : Dan Blankenship, Utilities Director	☒ Council Action
Presenter: Dan Blankenship, Utilities Director	☐ Council Information
Legal Review: ☐ Yes ☒ No	☐ Report to Council

Summary Overview and List of Attachments: The purpose of this item is to request City Council approval of Resolution 24-006 establishing a plan to stabilize the Water Fund.

Attachments: Resolution 24-006

Background Information

The City's financial system is comprised of three primary funds: 1) General Fund, 2) Electric Fund, and 3) Water Fund. The Water Fund has historically struggled to maintain an appropriate level of operating reserve and routinely relies upon loans from the Electric Fund to balance the books at year-end. Despite increases to water rates from 2010 to 2020, the financial demands placed on a growing system have outpaced the revenues needed to meet those demands. Future rate increases will be needed to operate and maintain the water system to ensure continued reliability for the City's existing customers, while also ensuring that the cost burdens associated with growth are not placed on our existing ratepayers. Attempting to stabilize the Water Fund with rates would result in significant increases that would overburden the rate payers.

Rather than add to the rate payers' burden, to stabilize and build an appropriate operating reserve in the Water and Electric Funds, staff has developed a recommended plan that includes the following actions:

- Temporary waiver of the utilities' payment in lieu of franchise fee to the General Fund.
- Permanent reallocation of indirect costs charged for general government services, (such as Finance, HR, Legal, Administration, etc.) to more accurately reflect the actual cost of the services provided to the utilities, as determined by periodic allocation studies.
- Applying the interest earned on the City's ARPA allocation for Water projects to the Water Fund.
- Transferring all GID#2 related water funds to the Water Fund.
- Applying the National PFAS litigation settlement to the Water Fund.

The recommended Council action establishes separate Operations and Maintenance (O&M) Reserve accounts in both the Water and Electric Funds, which will be part of each of the respective Fund cash balances but shall be accounted for and reported separately in the annual certified financial reports. The monies that are generated by the actions described above, will be set aside in the respective O&M Reserve accounts until such time that the combined utilities (Water and Electric) O&M Reserve accounts meet the City's utility loan requirements and bond covenants. Once the combined utilities O&M reserves meets the loan requirements and bond covenants, only the water payment in lieu of franchise fee will continue to be waived, if appropriated by Council, until such time that the Water Fund has established an O&M Reserve account equal to 3 months of water operating expenses.

In addition to stabilizing the Water Fund by establishing an appropriate O&M Reserve, it is recommended that the services of rate consultant be obtained to perform a cost of service study to determine if the current water rates are adequate to meet the revenue requirements of the water utility. If the current rates are found to be inadequate, a rate design shall be performed that will enable the City to set a rate structure that will adequately fund the current and expected (next 3 to 5 years) revenue requirements of the City's existing water system.

Furthermore, it is recommended that the water connection fees be evaluated to determine if they are adequate to recover the costs associated with future customers connecting to the City's water system. If the current water connection fees are found to be inadequate, a new connection fee will be calculated that will enable the City to adequately cover the costs associated with new connections to the City's water system.

Strategic Plan Priority (if applicable):

- ☐ F**acilitate responsible development, building reasonable capacity to meet future community needs.**
- ☐ D**iversify city financial resources and invest**.
- ☐ P**rovide reliable access to public safety services.**
- ☐ **Improve the quality and availability of parks and recreation opportunities**

Recommendation

Staff recommends that the City Council approve Resolution 24-006, the Water Fund stabilization plan.

Proposed Motion

Motion to approve shall be included under the consent agenda.

RESOLUTION 24-006

A RESOLUTION TO ESTABLISH A PLAN TO STABILIZE THE WATER FUND

WHEREAS, in 2002 the City Council of the City of Fountain established the "City of Fountain Electric, Water and Wastewater Utility Enterprise" by passage of Ordinance 1167; and

WHEREAS, the City of Fountain provides electric and water services to customers within and outside of the Fountain City Limits via the Enterprise; and

WHEREAS, the City has an obligation to the community and rate payers to operate the electric and water systems in a financially responsible manner to ensure quality and reliable services that meet all applicable standards and requirements; and

WHEREAS, the City Council has authorized the issuance of debt to meet the financial needs of the electric and water utility systems and those debt obligations require that the City maintain within the enterprise funds a reserve to ensure that monies are available for debt payments should operating revenues decline; and

WHEREAS, the City of Fountain desires to eliminate the Water Fund's reliance on the Electric Fund's fund balance to meet reserve requirements using all appropriate resources available, for the benefit of ratepayers.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Fountain, Colorado, acting by and through the City of Fountain Electric, Water and Wastewater Utility Enterprise, as follows:

Section 1. The City Council hereby declares the actions needed to stabilize the Water Fund to be a financial priority of the City and hereby commits the resources necessary to fund the Utilities Operations & Maintenance (O&M) Reserve.

Section 2. The City Council hereby establishes accounts in both the Water Fund and the Electric Fund to be known as Operations & Maintenance (O&M) Reserve. The monies in each of the respective O&M Reserve accounts shall remain as part of each Fund's cash balance but be reported in the Annual Certified Financial Reports as a separate line item.

Section 3. To ensure compliance with the City's loan and bond obligations, the combined O&M Reserve accounts shall be restored to an amount equal to 3 months combined operating expenses, excluding depreciation. To restore the required combined O&M reserve, the City Council hereby approves the following actions:

a) Elimination of the 2024 electric payment in lieu of franchise fee to the General Fund (Municipal Code Sec. 3.08.030.) and directs an equal amount within the Electric Fund to be placed into the Electric O&M Reserve.

b) Directs the amount of the previously eliminated (2023 and 2024 budget approval) 2023 and 2024 water payments in lieu of franchise fees (5% of gross water fund revenues) to be placed into the Water O&M Reserve.

c) Pursuant to the recently completed Cost Allocation Study, directs staff to prepare a 2024 budget amendment for Council approval to implement the reallocation of the Water Fund and Electric Fund indirect costs and to place an amount equal to the reduction of indirect costs in each Fund into the respective O&M Reserves.

d) Pursuant to the recently completed Cost Allocation Study, directs staff to make appropriate end-of-year adjustments to the 2023 budget to credit $1.045 million from the General Fund to the Water Fund and Electric Funds to be placed in the respective O&M Reserve accounts, the basis of which is calculated from the difference in cost allocation between the newly developed cost allocation methodology and the previous established methodology.

e) Directs staff to transfer $294,600 of ARPA interest received in 2023 and 75% of all future ARPA interest received until all ARPA funds appropriated to Water Capital projects has been spent into the Water Fund and to place an equal amount into the Water O&M Reserve.

f) Directs staff to transfer all GID#2 water related funds as of 12/31/2023 to the Water Fund and to place an equal amount into the Water O&M Reserve.

g) Upon receipt of pending National PFAS litigation settlement, directs staff to deposit the proceeds into the Water Fund and to place an equal amount into the Water O&M Reserve.

All actions stated above shall continue to occur, subject to appropriation, until such time that the City has established a combined O&M Reserve Fund in an amount equal to 3 months combined operating expenses, excluding depreciation, at which time all stated actions shall cease, unless otherwise specified in this or subsequent Resolutions.

Section 4. Upon the satisfactory completion of Section 3 above, the Water Fund O&M Reserve balance shall be established in an amount equal to 3 months of water operating expenses, excluding depreciation. To establish the required Water O&M reserve, the City Council hereby commits to the following actions:

a) Elimination of the annual water payment in lieu of franchise fee to the General Fund (Municipal Code Sec. 3.20.030.) and directs an equal amount (5% of gross water fund revenues) to be placed in the Water O&M Reserve.

All actions stated above shall continue to occur, subject to appropriation, until such time that the Water Fund has established an O&M reserve equal to 3 months of water expenses, excluding depreciation, at which time all stated actions shall cease.

Section 5. Upon satisfactory completion of Sections 3 and 4 above, any funds in excess of the requirements established may be appropriated by the City Council for expenses required for the operation and maintenance of the City's water and electric

systems. However, at no time shall the cash balance of the Water O&M Reserve and the Electric O&M Reserve drop below an amount equal to 3 months of operating expenses, excluding depreciation in each respective Fund, without prior Council approval.

FURTHERMORE, BE IT RESOLVED by the City Council of the City of Fountain, Colorado, as follows:

Section 6. The City Council hereby directs staff to obtain the services of a rate consultant and enter into a professional services agreement to perform a cost of service study to determine if the current water rates are adequate to meet the revenue requirements of the water utility and, if not, to perform a rate design that will enable the City to adequately fund the current and expected (next 3 to 5 years) revenue requirements. Upon completion, the cost of service study and rate design shall be presented to the City Council for review and action if necessary.

Section 7. The City Council hereby directs staff to review the current water connection fees and determine if the fees are adequate to recover the costs associated with future customers connecting to the City's water system. Upon completion, the review shall be presented to the City Council for action if necessary.

Done this 12th day of March 2024.

_____
Sharon Thompson, Mayor

ATTEST:

_____
Silvia Huffman, City Clerk

Regular City Council Meeting

New Business –9A

Items removed from Consent Agenda

March 12, 2024

Summary Information

Title:

CONSIDERATION OF ITEMS REMOVED FROM THE CONSENT AGENDA

Initiator: City Clerk	☒ Council Action
Presenter: City Clerk	☐ Council Information
Legal Review: ☐ Yes ☒ No	☐ Report to Council

Summary Overview and List of Attachments:

Any Items removed from the Consent agenda for further discussion shall be heard under this item.

Previous Action by City Council:

Attachment:

Background Information

Strategic Plan Priority (if applicable):

- ☐ **Facilitate responsible development, building reasonable capacity to meet future community needs.**
- ☐ **Diversify city financial resources and invest**.
- ☐ **Provide reliable access to public safety services.**
- ☐ **Improve the quality and availability of parks and recreation opportunities**

Recommendation

Staff recommendations

Proposed Motion

"I move to approve"

Regular City Council Meeting

New Business-9B

Approval of Task Order #2 for Fountain Reservoir Design

March 12, 2024

Summary Information

Title:

RESOLUTION 24-007, A RESOLUTION AUTHORIZING TASK ORDER #2 UNDER THE PROFESSIONAL SERVICE AGREEMENT BETWEEN THE CITY OF FOUNTAIN AND RESPEC COMPANY, LLC FOR DESIGN AND PERMITTING OF THE FOUNTAIN RESERVOIR PROJECT UTILIZING EL PASO COUNTY ARPA GRANT FUNDS.

Initiator : Taylor Murphy	☒ Council Action
Presenter: Taylor Murphy	☐ Council Information
Legal Review: ☒ Yes ☐ No	☐ Report to Council

Summary Overview and List of Attachments:

This Task Order will continue the work initiated by Task Order #1 under Resolution 23-018 for preliminary design. Task Order #2's scope will advance design of the various project elements to the 60%/90% design stage and complete permitting on applicable project components. All design costs will be reimbursed by El Paso County through the ARPA Grant awarded for this project in 2022.

Attachments:
Resolution 24-007
RESPEC Task Order #2 for Engineering and Permitting (34 pages)
Fountain Reservoir Project Exhibit Map

Background Information

The 2021 Water Master Plan identified Fountain's most critical water need as Treatment Infrastructure to convert the City's raw water rights into potable water. One of the most immediate projects to achieve this goal is the Fountain Reservoir Project, situated on existing property in the Southwest corner of the City.

In October of 2021 the Utilities Department enlisted RESPEC (formerly JDS Hydro) to perform a 'Concept and Feasibility Study' of the Fountain Reservoir project to identify potential challenges and assess its viability. That study determined that the project was feasible and could provide treated water for significant levels of future buildout in the city utilizing existing water rights and city assets. The Study provided a high-level conceptual design and cost estimate.

RESPEC Company was selected as one of three Utilities Department 'on-call' Engineers through a competitive Qualifications-Based Selection (QBS) process in early 2023, selected from a list of nine (9) engineering companies that submitted. This 'on-call' designation allows them to be competitively awarded Task Orders for design projects in a manner that streamlines the process and timeframe for selecting consultants while still complying with City, State and Federal procurement requirements. RESPEC was selected to perform the study and design of the Fountain Reservoir project due to long-time staff familiarity with the project and experience treating Fountain Creek water.

In April 2023 the City Council approved Resolution 23-018 awarding Task Order #1 to RESPEC for preliminary Engineering Design and permitting, with focus on the Creek Diversion design and the on-site Water Treatment process. These two project elements are the longest schedule items on the project's critical path, owing to the lengthy permitting time required by the regulatory bodies and the lengthy water quality monitoring period necessary to refine the treatment. The work under this Task Order #1 is nearly complete with a clear definition of the treatment process and initiation of the Army Corps in-stream permitting for the Diversion.

Task Order #2 being presented now, with a cost of $1,063,838, will advance the technical design of the following project components to 60% or 90% (varies by component), and will initiate permitting of all elements that can be pursued without having a construction date:

- Raw Water Diversion structure in Fountain Creek;
- Raw Water Pump Station to move water West from the Creek;
- Raw Water pipeline from the Creek to the Reservoir, crossing I-25 and BNSF Railroad;
- On-site Water Treatment Plant;
- Finished Water Pipe from Treatment Plant to Storage Tank;

Design of the on-site reservoir and waterproof lining will be issued under an upcoming Task Order #2a owing to the specialty engineering work needed, which is still being procured.

Having a clearly defined and 'shovel-ready' project is critical to making serious and competitive applications for State and Federal Grant opportunities. Additionally, Utilities Department staff has found that having a refined cost estimate and project scope is vital to having successful negotiations with potential P3 private funding partners. The completion of this Task Order #2 work will give the City a partially-permitted 60%/90% project design, which will greatly enhance our ability to seriously pursue Grants and other construction funding sources as opportunities arise.

All City of Fountain expenses under this Task Order #2 will be reimbursed by El Paso County. In August of 2022 the City was awarded $2,147,652 of reimbursable Grant funding for this project through El Paso County's ARPA allocation. This money must be obligated to a specific expense by December 31, 2024, and fully expended by June 1, 2026. With award of this Task Order #2, the City will have obligated or expended $1,746,098 on engineering design, permitting, surveying, and legal water court expenses supporting the project. This will leave $401,554 of reimbursable funding left to allocate for the future Task Order #2a and other applicable expenses as the need arises before the end of 2024.

Strategic Plan Priority (if applicable):

☒ F**acilitate responsible development, building reasonable capacity to meet future community needs.**
☐ D**iversify city financial resources and invest**.
☐ P**rovide reliable access to public safety services.**
☐ **Improve the quality and availability of parks and recreation opportunities**

Recommendation

Staff recommends that the City Council approve Resolution 24-007 authorizing Task Order #2 with RESPEC Company, LLC for Design and Permitting of the Fountain Reservoir Project.

Proposed Motion

Motion to approve Resolution 24-007 authorizing Task Order #2 under the Professional Service Agreement between the City of Fountain and RESPEC Company, LLC for Design and Permitting of the Fountain Reservoir Project utilizing El Paso County ARPA Grant funds.

RESOLUTION 24-007

A RESOLUTION AUTHORIZING TASK ORDER #2 UNDER THE PROFESSIONAL SERVICE AGREEMENT BETWEEN THE CITY OF FOUNTAIN AND RESPEC COMPANY, LLC FOR DESIGN AND PERMITTING OF THE FOUNTAIN RESERVOIR PROJECT UTILIZING EL PASO COUNTY ARPA GRANT FUNDS.

WHEREAS, the City of Fountain's 2021 Water Master Plan identified Water Treatment Infrastructure as a bottleneck in water supply that limits future growth; and

WHEREAS, Utilities staff has identified the Fountain Reservoir project as a means of increasing the City's water treatment capacity by leveraging existing water rights and city-owned properties; and

WHEREAS, RESPEC Company LLC has already performed feasibility studies and conducted preliminary engineering work for the Fountain Reservoir project under the previous Task Order #1 with the City; and

WHEREAS, the City has begun exploring various means of funding construction of the project to provide new treated water supplies as quickly as possible to support new growth without burdening existing ratepayers; and

WHEREAS, the City will be able to make more competitive Grant and other funding applications by having a comprehensively designed project with permits and detailed cost estimates completed; and

WHEREAS, the City has received $2,147,652 of ARPA funding from the County for this Project which can be used to reimburse all the design and permitting expenses and prevent placing a financial burden on existing ratepayers; and

WHEREAS, the City Council of the City of Fountain desires to authorize Task Order #2 to RESPEC Company LLC in the amount of $1,063,838 to advance the engineering design of the Fountain Reservoir Project to a 60%/90% design stage and secure relevant permits to support pursuit of project funding opportunities.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Fountain, Colorado, as follows:

1. That the Mayor, City Manager or other representative of the City delegated by the Mayor or City Manager are hereby authorized to execute the Task Order #2 with RESPEC Company LLC for Design and Permitting of the Fountain Reservoir Project.

2. That the above authorization extends to all related documents necessary to achieve the identified goals and outcomes.

Done this 12th day of March, 2024.

_____
Sharon Thompson, Mayor

ATTEST:

_____
Silvia Huffman, City Clerk

TASK ORDER

This is a Task Order under the "Professional Service Task Order Agreement for Fountain Water Engineering On-Call" (Agreement) between the City of Fountain, Colorado (City) and RESPEC Company, LLC (Engineer), dated January 27, 2023. In accordance with Paragraph 3 – Task Order, all work to be carried out under this Task Order shall be subject to the terms and conditions of the Agreement.

The Scope of Services under this Task Order is identified in the following document, attached hereto:

- Task Order #2 – Scope of Services: Engineering and Permitting for New Water Source (33 pages, dated February 2, 2024)

The Compensation for this Task Order is based on the submitted Scope and Cost Estimate, not to exceed $1,063,838.00 in fees and reimbursable expenses.

Task Order Date: March 12, 2024.

City of Fountain

By:_____

Printed Name and Title:_____

The above person's signature verifies his/her authority to execute this Task Order on behalf of the City.

Engineer: RESPEC Company, LLC

By:_____

Printed Name and Title:_____

The above person's signature verifies his/her authority to execute this Task Order on behalf of the Engineer.

SCOPE OF SERVICES

City of Fountain
Engineering and Permitting for New Water Source
Task Order #2
February 2, 2024

BACKGROUND

The City of Fountain is developing a renewable, local water source to add a supply source for its drinking water system, which improves reliability and provides excess water to support growth and development. The project will be completed in two major phases:

1. Design and installation of the raw water delivery system, water treatment plant, and potable delivery line to the City system
    a. This includes a diversion structure, waterline, access road, and pump facility. The diversion structure will be placed into Fountain Creek, and the raw water delivery system will be constructed on land adjacent to Fountain Creek on three parcels owned by the City on the east side of I-25.
2. Design and installation of a reservoir to provide 2,000 acre-feet of surface storage on a 605.76-acre parcel of land west of I-25

The water will be diverted from Fountain Creek to the raw water pump station, where it will be pumped through a pipeline routed under I-25 and the Burlington Northern and Sante Fe Railroad (BNSF) through several properties owned by others to the parcel west of I-25. The water will either be used to fill the proposed reservoir or pumped directly to the water treatment plant. The City's Utilities and Operations Center is located on the parcel of land west of I-25 in the northwest corner. The land was previously used for gravel mining and includes several gravel pits, which the City will convert to a reservoir for water storage.

This scope is the second task order for this project. Task Order 1 included a siting analysis and 30% design for the diversion structure, an initial submittal for the 404 permit, raw water testing, preliminary design of the treatment system, and definition of permitting requirements for the water project.

SUMMARY OF THE PROJECT COMPONENTS INCLUDED IN THE SCOPE OF SERVICES

- Raw Water Pump Station
    - 30% Design
    - 60% Design
    - El Paso County Site Development Plan Submittal
- Raw Water Pipeline
    - 30% Design, including surge analysis and definition of easements
    - 60% Design for I-25 and BNSF Crossing
    - Initial Submittal to Colorado Department of Transportation (CDOT)for I-25 Crossing
- Finished Water Pipeline

- 30% Design, including surge analysis and routing

- Diversion Structure
  - Fish Passage Hydrology and Structural Design
  - 60% Design
  - 90% Design
  - Permitting Support
- Water Treatment Plant
  - Monthly and Quarterly Water Quality Sampling.
  - Process Design to further define construction and operation and maintenance costs for the water treatment plant, focusing on impacts of water quality testing, definition of pumping requirements, and estimates of residuals.
  - 30% Site Design for site utilities, grading and drainage, and reservoir intake taken to a level to allow for further refinement of cost estimates for construction and operation and maintenance.
  - 60% Site Design to include site utilities, grading and drainage, and reservoir intake design.

A more specific scope of services follows.

SPECIFIC SCOPE OF SERVICES

CLIENT-PROVIDED SERVICES (OR CLIENT'S CONSULTANT)

The following services are required by the City to enable RESPEC Company, LLC (RESPEC) to complete the design services scope as outlined:

1. **Surveying.** Provide legal descriptions required for easements, control, and topographic surveying of the diversion, raw water pump station, raw water pipeline corridor, and water treatment plant site. RESPEC will provide direction to the surveying subconsultant, as required.
2. **Geotechnical Investigation.** Provide a geotechnical investigation and associated reports for the raw water pump station, raw water pipeline corridor, and water treatment plant site to include recommendations for foundation design. RESPEC will provide direction to the geotechnical subconsultant, as required.
3. **Subsurface Utility Engineering (SUE).** Provide SUE services to include a private locating service (if required) to mark any existing utilities on the sites and add the location of the utilities to the survey base file (provided in a digital AutoCAD file). Pothole any existing utilities in the raw water pipeline corridor and provide reports indicating the utility depth.
4. **Permitting Fees.** Payment of any required permitting fees, including Fountain Creek Watershed Flood Control and Greenway District and El Paso County Planning.

OVERALL PLANNING

1. Track Project Progress and Schedule
   a. Update the overall project schedule created in Task Order 1 and *advise the City on the timing of project elements to reach desired completion dates*.
2. Schedule and attend *monthly meetings* with the City. Prepare the meeting agenda and record significant discussions and agreements achieved. Distribute the meeting minutes to attendees.

3. Estimate Overall Project Cost
    a. Roll up project costs from all components and *estimate quarterly and yearly costs* to construct the overall project.
    b. Provide project phasing options for project completion.
4. Consult on constructability, design parameters, and operational concerns.
5. Assist in managing overall project planning, implementation, and design.

Table 1. Overall Planning Cost Estimate

	Task	Cost
1	Project Progress and Schedule Tracking	$4,180
2	Monthly Meetings	$12,430
3	Overall Project Cost Estimates	$10,450
4	Consult on constructability, design parameters, and operational concerns	$3,800
5	Assist in managing overall project planning, implementation, and design	$3,800
	Total	$34,660

RAW WATER PUMP STATION

RAW WATER PUMP STATION 30% DESIGN

The engineer will conduct a preliminary design of the proposed pump station, including all site utility, drainage, grading, building footprints, pumping processes, and hydraulics. This subtask shall include:

1. Final System Hydraulics
    a. Define final required station pressure and flowrate.
    b. Size internal pipes, fittings, and valves.
    c. Provide a process flow diagram and design memorandum.
2. Preliminary Site Layout
    a. Develop a preliminary site plan to include site drainage, road access, and utilities.
    b. Existing/proposed utility layouts.
3. Building Architectural Design
    a. Architecture concept presentation (architectural profiles).
4. Building Structure
    a. Preliminary floor and wall layouts and roof framing plan.
    b. Single preliminary overall building section with wet well.

    Assumptions: Structural framing will consist of concrete spread footing foundations and/or mat foundation slab supporting concrete wet well walls, a first-floor concrete slab, concrete masonry walls, and pre-designed/pre-manufactured wood roof truss framing.
5. Equipment/Piping
    a. Pump style review (options). Present options to the City for review and comment.
    b. Piping configuration. Present options to the City for review and comment.
6. Electrical

a. Electrical loads will be estimated and coordinated with power and telecom service utilities requirements, and information will be provided to the client to begin coordination of bringing power to the site.
b. Preliminary electrical site plan, one-line diagram, and panel schedule completed.
c. Interior electrical and communications equipment and clearance requirements estimated for space planning.
d. Cost and delivery schedule of major equipment provided for client information.

7. Heating Ventilation and Air Conditioning (HVAC)
   a. Heating and Ventilation Air requirements will be estimated.
   b. Preliminary electrical requirements will be provided.

RAW WATER PUMP STATION 30% DELIVERABLES

- 30% Preliminary Design Drawings: Site Layout, Building Footprints, Site Civil (including Grading/Drainage), Electrical One-Line Diagram and Site Plan, Architectural Sheets
- 30% Contract Specifications
- Design Memorandum
- 1st Estimate of Probable Costs

RAW WATER PUMP STATION 60% DESIGN

The engineer will continue with the preliminary design of the proposed pump station and will begin to include all structural, electrical, plumbing, and mechanical processes. This subtask shall include:

1. Project Coordination
   a. *Coordination/Meetings* – RESPEC will attend meetings bi-weekly and as needed with the project team and the City to ensure our services comply with project goals, share and obtain general information, and obtain updated information.
   b. *30% Design Submittal Meeting* – RESPEC will meet with the City and finalize the selection of the pumping system, architectural details, and all pertinent information regarding the proposed pump station.
2. Site Layout
   a. Definition of site drainage, road access, and site grading.
   b. Proposed utility layouts.
3. Building Architectural Design
   a. Selection of building materials.
   b. Selection of building footprint.
   c. Definition of architectural components.
   d. Architecture concept presentation (architectural profiles).
   e. COMCheck filled out and requirements defined to meet applicable energy code.
4. Building Structure
   a. Preliminary concrete masonry wall design.
   b. Preliminary wet well design, mat foundation, and trolley beam design.

c. 60% Design drawings for floor and wall layouts, roof framing plan, building sections, and equipment slab support.

Assumptions: Structural framing will consist of concrete spread footing foundations and/or mat foundation slab supporting concrete wet well walls, a first-floor concrete slab, concrete masonry walls, and pre-designed/pre-manufactured wood roof truss framing.

5. Equipment/Piping/Surge Analysis
   a. Selection of pumping system and style.
   b. Selection of piping system configuration.
   c. *Surge analysis* completed using Bentley Hammer; design and selection of surge mitigation if required.
6. Electrical
   a. Selection of electrical equipment and preliminary panel schedule completed.
   b. One-line diagram updated to reflect selected equipment and loads confirmed.
   c. Preliminary instrumentation and control conduit plan.
   d. Electrical site plan updated.
7. Mechanical
   a. HVAC system designed.
   b. Building penetrations defined.
   c. Electrical loads confirmed.
   d. COMCheck filled out to meet requirements of applicable energy code.
8. Permitting
   a. Prepare all components required by the El Paso County Site Development Plan as follows:
      i. Letter of Intent
      ii. Construction Drawings (Plans/Profiles)
      iii. Site Development Plan
      iv. Building Elevation Plans
      v. Drainage Letter/Drainage Report
      vi. Grading and Erosion Control Plan and Checklist
      vii. Erosion and Stormwater Quality Control Permit (ESQCP)
      viii. Storm Water Management Plan (SWMP) and Checklist
      ix. PBMP Applicability Form
      x. Lighting Plan
      xi. Initial CLOMR Submittal and Status of Floodplain Development Permit

RAW WATER PUMP STATION 60% DELIVERABLES

- 60% Preliminary Design Drawings: Site Layout, Building Footprints, Site Civil, Grading/Drainage, Architectural Sheets
- Surge Analysis Report
- Site Development Plan Submittal
- 60% Contract Specifications
- 2nd Estimate of Probable Costs

Table 2. Raw Water Pump Station Cost Estimate

	Task	Cost
30% Design		
1	Final System Hydraulics	$10,225
2	Preliminary Site Layout	$7,840
3	Building Architectural Design	$2,840
4	Building Structure	$19,470
5	Equipment/Piping	$10,420
6	Electrical	$6,800
7	HVAC	$5,560
	Subtotal	*$63,155*
60% Design		
1	Project Coordination	$9,080
2	Site Layout	$9,840
3	Building Architectural Design	$9,600
4	Building Structure	$31,785
5	Equipment/Piping/Surge Analysis	$40,250
6	Electrical	$45,300
7	Mechanical	$9,300
8	Permitting (Site Development Plan)	$13,920
	Subtotal	*$169,075*
	Total	**$232,230**

RAW WATER PIPELINE

The engineer will conduct a preliminary design of the proposed raw water pipeline. This subtask shall include:

1. 30% Design Drawings – Prepare the initial profile design of the pipeline using survey data and the SUE report provided by the City; develop the hydraulic, surge, and pressure sustaining systems; define locations of air/vac vaults and hydrants.
2. Outline design of sand and debris flushing system, which will be located between the raw water pump station intake and diversion box.
3. Develop preliminary crossing sections and design. Based on survey data, SUE utility locates, and the geotechnical report, define the crossing location and provide a preliminary plan and profile design of the pipeline.
4. Define easement boundaries and assist with easement acquisition – Work with surveyor on legal description definitions. Assist the City in coordination with owners on easement acquisition. Review easement agreements as requested.
5. 90% Design Drawing – Further develop the design based on easements acquired by the City of Fountain for the raw water alignment.
6. 30% contract specifications
7. Crossing Submittal Package to CDOT – Prepare raw water pipeline crossing under I-25 submittal package for CDOT to include the following:

a. Letter of Request
b. Application
c. Environmental Clearances (cultural resources, paleontological, wildlife resources)
d. Traffic Control/Insurance Statements
e. Bore Plan and Profile

8. Construction Cost Estimate

RAW WATER PIPELINE DELIVERABLES

- 30% Design Drawings
- Easement Boundary Definition
- 30% Contract Specifications
- 90% Design Drawings
- CDOT Submittal Package for I-25 Crossing
- Construction Cost Estimate

Table 3. Raw Water Pipeline Cost Estimate

	Task	Cost
1	30%/90% Profile Design of Pipeline	$26,780
2	Design of Sand and Debris Flushing System	$10,600
4	I-25/BNSF Crossing Design	$16,500
5	Easement Boundaries/Support for Acquisitions	$6,500
	Total	$60,380

FINISHED WATER PIPELINE

The engineer will conduct a preliminary design of the proposed finished water pipeline. This subtask shall include:

1. 30% Design Drawings – Based on the survey and SUE report provided by the City, prepare the initial profile design of the pipeline for the entire route. Define locations of air/vac vaults and hydrants.

FINISHED WATER DELIVERABLES

- 30% Design Drawings
- Construction Cost Estimate

Table 4. Finished Water Pipeline Cost Estimate

	Task	Cost
1	30% Plan and Profile Design of Pipeline	$17,910
2	Cost Estimate	$1,900
	Total	$19,810

DIVERSION

The diversion design components will include the following

1. Fish Passage Facility Design
2. 60% Design Services
3. 90% Design Services
4. Permitting Support

FISH PASSAGE FACILITY DESIGN

Fountain Creek is a 120-km tributary of the Arkansas River that is representative of similar low-gradient reaches in the Great Plains ecoregion. At the proposed project location, Fountain Creek is characterized by wide, sandy channels with a high sediment load prone to morphological fluctuation within the floodplain because of an extremely flashy hydrograph. Fountain Creek's assemblage of native fish is largely intact. Within the lower reaches of the creek, the fish species of concern include the flathead chub (*Platygobio gracilis*) and the Arkansas darter (*Etheostoma cragini*). These native, small-bodied fish require diverse habitats throughout their life cycle, and providing connectivity between different habitats is vital to maintaining their populations. Moving upstream from Fountain Creek's confluence with the Arkansas River, the first barrier encountered is the Owens-Hall diversion structure. This diversion, located approximately 2,100 ft downstream of the proposed diversion structure, was improved with a fish passage facility in 2014.

The proposed diversion structure spans the entire channel width, with a structure height approximately 4 to 5 feet above the existing downstream channel bed. The current design, which is similar in scale to the Owens-Hall diversion, would present a barrier to the upstream migration of the target species. Spatial constraints at the Owens-Hall diversion, coupled with the limited swimming abilities of the target species and a corresponding maximum grade of 2% for passage, resulted in the use of a pre-fabricated, modular structure (Longrie-Fecteau fish passage structure [LFFPS]). Comparable site and passage criteria constraints at the proposed diversion make the LFFPS, or similar structure, an ideal candidate to facilitate fish passage.

This scope of services describes the design development process, from initial evaluation of fish passage design criteria through completion of final plans, specifications, and estimate (PS&E) documents.

RESPEC will accomplish the following tasks under this scope of services:

1. Review fish passage design criteria for target species.
2. Develop design hydrology for fish passage structure.
3. Design a fish passage structure design (30%, 60%, 90% PS&E submittals).
4. Prepare final (100%) PS&E (ready for incorporation into Bid Documents).

These tasks are described in more detail as follows.

RESPEC will coordinate with Colorado Parks and Wildlife (CPW) and the U.S. Army Corps of Engineers (USACE) to request feedback on the fish ladder design and provide comment responses, as needed.

1. Review of Fish Passage Design Criteria for Target Species

RESPEC will review available research data and information regarding documented swimming capabilities of the target fish species: flathead chub (*Platygobio gracilis*) and Arkansas darter (*Etheostoma cragini*). This information will be used to develop appropriate design metrics for the fish passage structure. Specifically:

a. *Evaluate available swimming capability data for target species*, including sustained and burst swimming speeds. Assess ranges of body sizes (length, mass) for various life stages of the target fish species and relationships to required depths and flow velocities within the fish passage structure.

b. Based on biometric capabilities and physical habitat requirements, *develop design parameters for the fish passage structure,* including structure slope and required flow depths and velocity within ranges suitable for fish passage during specified passage periods.

c. Deliverable:

i. Note: Summary of fish passage structure design criteria will be included in Basis of Design memorandum, to be submitted following completion of Task 2.

2. Develop Design Hydrology for Fish Passage Structure

RESPEC will complete a hydrologic analysis at the proposed diversion location to determine both flood flows for different recurrence intervals (structure integrity) and lower flows when fish passage is most likely to occur. Standard operating conditions for the diversion (diversion timing, volumes) would also be assessed in conjunction with the fish passage flows.

a. *Complete analysis of stream gage records on Fountain Creek*. Existing USGS stream gages above (#07105800, Fountain Creek at Security, CO) and below (#07106000, Fountain Creek near Fountain, CO) the diversion structure location would be evaluated as significant tributaries enter Fountain Creek between the two gages. Determine flood flows for various recurrence intervals at the proposed diversion site.

b. *Develop fish passage design flows that satisfy the fish passage design criteria determined in Task 1.* In general, fish passage is typically not required during extremely low or high flows when fish are not expected to be migrating. High and low flow values are evaluated to ensure minimum water depth and maximum flow velocity criteria are also met. Passage flows are defined in terms of exceedance flows, which are obtained from flow duration curves. Exceedance flows specific to the target species and age classes will be determined. Typically, for low flows, the 90 to 95% exceedance flows are calculated; for high flows, the 5 to 10% exceedance flows during the months of adult migration are calculated.

c. Deliverable:

i. Basis of Design memorandum, to include fish passage structure design criteria including design hydrology.

3. Fish Passage Structure Design (30%, 60%, 90% PS&E Submittals)

RESPEC will complete the design of the fish passage structure (anticipated to be LFFPS, or similar). Design development will include both hydraulic and structural requirements that ensure fish passage criteria are satisfied, and the structure will be sound through the range of anticipated flows within Fountain Creek. Submittals for review will occur at 30%, 60%, and 90% design completion and will include PS&Es.

a. *Hydraulic analysis:* Develop a two-dimensional (2D) standard step-backwater flood model in the latest version of HEC-RAS. Evaluate fish passage structure performance through a

range of design flows, to include both fish passage flows and flood event flows. In particular, flow velocities and depths within the fish passage structure are critical to ensure fish movement. Flow velocities and depths at the downstream entrance to the fish passage structure are also critical for attracting fish into the structure.

b. *Structural analysis:* Determine fish passage structure configuration and dimensions and detail the structural components of the design. Including concrete specifications and reinforcement. Evaluate sub-structure conditions and design appropriate foundation elements. If a modular structure is selected, determine itemization of structure components, connections between pieces and connections to the proposed diversion structure.

c. *Other flood return intervals, in addition to the 100-year event, will be evaluated* to determine the approximate frequency of event, and locations where, flows could leave the defined channel and flow overland creating a potential channel avulsion flood hazard.

d. Deliverables:

i. 30% PS&E package. Upon receipt of review comments from the City, CPW, and other project stakeholders, RESPEC will prepare a written Response to Comments memorandum.

- 60% complete PS&E package, to include incorporation of design feedback received during the 30% review, as relevant. Upon receipt of review comments from the City, CPW, and other project stakeholders, RESPEC will prepare a written Response to Comments memo.
- 90% complete PS&E package, to include incorporation of design feedback received during the 60% review, as relevant.

ii. Assumptions:

- Stakeholder review of PS&E design packages and return of comments to RESPEC will occur in 30 days or less. RESPEC will provide a written Response to Comments memorandum within 14 days thereafter.
- All engineering drawings will be produced in AutoCAD. Electronic drawing files will be provided to the City. Printed drawing sets for design review purposes to be half-scale (11×17-inch) sheets.

4. Final (100%) PS&E

RESPEC will produce a final PS&E package that includes all plans and technical specifications necessary for project construction and is a suitable format for inclusion within the Contract Documents for project bidding. An Engineer's Opinion of Probable Construction Cost will be provided for the final (100% complete) design of the fish passage structure (anticipated to be LFFPS, or similar).

a. Deliverable:

i. Final (100%) PS&E package.

DIVERSION 60% DESIGN SERVICES

1. Project Coordination

a. *Progress and Coordination Meetings* – RESPEC will attend meetings weekly and as needed with the project team and the City to ensure our services comply with project goals, share and obtain general information, and obtain updated information.

b. *Site visit* – Observe other similar structures along Fountain Creek.

2. 60% Functional Flow Design

   a. *Develop a preliminary design of the weir/crest functional hydraulics* and hydraulic flow through the diversion. Provide the design basis to be used in hydraulic and structural design.

3. 60% Structure Hydraulic Design

   a. *Review Geotechnical Report* – RESPEC will review the geotechnical report provided by Vivid Engineering to understand the hydraulic soil properties needed to complete the geomorphic stability of the diversion structure.

   b. *2D Hydraulic Model Development* – RESPEC will develop a 2D hydraulic model using the Surface-water Modeling System (SMS) produced by Aquaveo in conjunction with Sedimentation and River Hydraulics – Two Dimension (SRH-2D) software produced by the Bureau of Reclamation. These models are appropriate for this application because their sediment transport capabilities and momentum-based approach allow for detailed hydraulic and scour modeling. RESPEC will produce existing and proposed conditions models to inform the hydraulic and scour analysis of the proposed diversion structure. This effort will include modeling design alternatives over a range of flows and hydraulic conditions to determine the parameters necessary to complete the geomorphic and hydraulic design of the diversion structure and bank armoring.

   c. *Geomorphic and Hydraulic Design of Diversion Structure and Bank Armoring* – RESPEC will use the hydraulic output from the model developed in 3(b) in conjunction with guidance developed in FHWA HEC-20, HEC-23, and the MHFD USDCM. Make design recommendations for channel grading and armoring, seepage cutoff, and scour estimates for the design of the diversion structure foundations.
   Assumptions:
   -Effective Federal Emergency Management Agency (FEMA) hydrology will be used. No new hydrology will be developed.
   -The diversion structure will be designed to withstand hydraulic forces up to a 100-year flood.

   d. *Prepare 60% Hydraulic Plans and Specifications* – RESPEC will prepare all drawings, details, and specifications required to convey the 60% design of the proposed diversion structure developed in subtask 3 (c).
   Assumptions:
   - Drawings will be provided in AutoCAD (.dwg) format. Other formats such as MicroStation will not be provided.
   - 5 to 10 plan sheets will be required to convey the hydraulic design.
   - Specifications will only be provided for the hydraulic subset of the plans.

   e. *Prepare 60% Quantities and Cost Opinion* – RESPEC will calculate all direct and "information only" quantities necessary to complete the hydraulic work. Tabulations will be coordinated among the team to ensure quantities are not double counted.

   f. *Prepare 60% Hydraulic Design Report* – RESPEC will develop a report to document the design process and decisions made to arrive at the 60% design submittal.

4. 60% Structural Design

   RESPEC assumes that the structural framing will consist of concrete spread footings or drilled pier foundations supporting concrete foundation walls/ogee crest, a concrete base slab and

walls for the collection weir box, a low flow gate chute area concrete slab and walls, concrete wingwalls, and concrete supports for the fish ladder. Assume that the drop structure will consist of grouted rock with a grouted rock stilling basin (both non-structural), except for the low-flow gate chute area, which will be reinforced concrete. Under this subtask, RESPEC will:

a. Provide consultations and *preliminary sections regarding structural system* alternatives for the diversion structure.
b. Provide consultations and *preliminary sections regarding alternative seepage cutoff* approaches and impacts on the structural system for the diversion structure.
c. *Establish differential water elevations* in relation to hydraulic diversion design for use in design.
d. Establish applicable seismic design parameters.
e. *Establish loads and design criteria* for the diversion structure, wingwalls, and water collection weir box.
f. Prepare 60% Structural Plans and Specifications to include:
    i. General structural notes
    ii. Foundation plan
    iii. Diversion structure plan
    iv. Enlarged plan of water collection weir box and low flow gate chut and fish ladder area
    v. Overall diversion structure sections
    vi. Water collection weir box sections
    vii. Low-flow gate chute and fish ladder sections
    viii. Interconnection details
    ix. Low-flow gate connection details
    x. Retaining walls
    xi. Downstream cutoff wall

DIVERSION 60% DESIGN DELIVERABLES

- 60% Hydraulic and Structural Plans and Specifications
- 60% Hydraulic Quantities and Cost Opinion
- 60% Hydraulic Design Report

DIVERSION 90% DESIGN SERVICES

1. Project Coordination
    a. *Progress and Coordination Meetings –* RESPEC will attend meetings weekly and as needed with the project team and the City to ensure our services comply with project goals, share and obtain general information, and obtain updated information.
2. 90% Functional Flow Design
    b. *Finalize the design of the weir/crest functional hydraulics* and hydraulic flow through the diversion. Provide the design basis to be used in hydraulic and structural design.
3. 90% Structure Hydraulic Design

c. *Finalize 2D Hydraulic Model Development* – Based on feedback and comments received under Task 1. RESPEC will finalize the 2D hydraulic model developed in subtask 1.2.3. Hydraulic modeling of the final design configuration will occur under this task.

d. *Finalize Geomorphic and Hydraulic Design of Diversion and Armoring* – Based on feedback and comments received under Task 1, RESPEC will finalize the design recommendations for channel grading and armoring, seepage cutoff, and scour estimates for the design of the diversion structure foundations developed under subtask 1.2.3.
Assumptions:
-Effective FEMA hydrology will be used. No new hydrology will be developed.
-The diversion structure will be designed to withstand hydraulic forces up to a 100-year flood.

e. *Prepare 90% Plans and Specifications* – RESPEC will prepare all drawings, details, and specifications required to convey the 90% design of the proposed diversion structure developed in subtask 2b.
Assumptions:
- Drawings will be provided in AutoCAD (.dwg) format. Other formats such as MicroStation will not be provided.
- 5 to 10 plan sheets will be required to convey the hydraulic design.
- Specifications will be provided as a special provision to the CDOT specification.

f. *Prepare 90% Quantities and Cost Opinion* – RESPEC will calculate all direct and "information only" quantities necessary to complete the hydraulic work. Tabulations will be coordinated among the team to ensure quantities are not double counted.

g. *Prepare 90% Hydraulic Design Report* – RESPEC will develop a report to document the design process and decisions made to arrive at the 90% design submittal.

4. 90% Structural Design

This subtask will include refining sections regarding the structural system for the diversion structure. RESPEC assumes that the structural framing will consist of concrete spread footings or drilled pier foundations supporting concrete foundation walls/ogee crest, a concrete base slab and walls for the collection weir box, a low-flow gate chute area concrete slab and walls, concrete wingwalls, and concrete supports for the fish ladder. The drop structure is assumed to consist of grouted rock with a grouted rock stilling basin (both non-structural), except for the low-flow gate chute area, which will be reinforced concrete.

a. Review of 60% client comments and related revisions.

b. *Confirm diversion structure and wall layouts* with hydraulic diversion design and address any scour concerns.

c. *Confirm loads and design criteria* for the diversion structure, wingwalls, and water collection weir box.

d. Prepare 90% Structural Plans and Specifications to include:

i. General structural notes

ii. Foundation plan

iii. Diversion structure plan

iv. Enlarged plan of water collection weir box and low-flow gate chut and fish ladder area

v. Overall diversion structure sections

vi. Water collection weir box sections
vii. Low-flow gate chute and fish ladder sections
viii. Interconnection details
ix. Low flow gate connection details
x. Retaining walls
xi. Downstream cutoff wall

DIVERSION 90% DESIGN DELIVERABLES

- 90% Plans and Specifications
- 90% Quantities and Cost Opinion
- 90% Hydraulic Design Report

DIVERSION PERMITTING SUPPORT

1. Environmental Permitting
   a. *Section 404 Permitting Coordination and Support* – RESPEC will coordinate internally to provide quantities of impacts to aquatic resources relevant to the Section 404 permit resulting from the proposed diversion ***structure***. The IP application was submitted to USACE in November 2023 and included the items listed in Task Order 1. Comments from USACE are expected any day because the usual review timeframe (30 to 45 days) is complete. Items anticipated to be needed for the next IP submittal include an alternatives analysis, water bypass plan, public notices, and agency consultation.
   b. *Compensatory Mitigation Plan, Colorado Stream Quantification Tool (CSQT) Assessment* – Provided by Corvus Environmental Consulting LLC (Corvus) as a subconsultant to RESPEC. Please see Appendix A for Corvus's proposed scope of work and assumptions.
   c. *CSQT Analysis Coordination and Support* – RESPEC will work with Corvus to establish parameters for the existing and proposed river configuration necessary to complete the CSQT analysis. RESPEC will work with Corvus to supply hydrologic and hydraulic data for input into the CSQT. We will also conduct an internal review of Corvus's deliverables and coordinate between the USACE, Corvus, and the rest of the project team on mitigation options and any required design changes.
2. CLOMR Application Development and Submittal
   a. *Duplicate Effective, Corrected Effective, and Existing Conditions Modeling* – RESPEC obtained the effective Fountain Creek HEC-RAS model during Phase 1 of the diversion structure design process and will use this model to prepare models needed for the diversion structure CLOMR application. The effective model will be updated with the design survey and LiDAR information available in the public domain to create a corrected effective and existing conditions model.
   b. *Proposed Conditions and Floodway Modeling* – RESPEC will incorporate the hydraulic conditions developed during the design of the *proposed* diversion structure to create a proposed conditions model representing the updated effects on the Fountain Creek floodplain. The floodplain in the project vicinity contains a regulatory floodway. RESPEC will analyze updated floodway encroachments resulting from the proposed project.

c. *Prepare Effective FEMA Data Comparison Documentation* – Based on the final hydraulic configuration developed during the design of the proposed *diversion* structure, RESPEC will update the effective FEMA floodplain documentation to reflect the proposed changes to the Fountain Creek floodplain in the form of updated data tables, water surface profiles, and floodplain plan view extents.

d. *Local Agency Coordination* – RESPEC will coordinate the proposed floodplain changes with the City and the Fountain Creek Watershed Flood Control and Greenway District to ensure the project meets the goals and vision for the Fountain Creek corridor and properties adjacent to the proposed diversion structure.

e. *Prepare CLOMR Report* – RESPEC will prepare the *report* and attachments required by FEMA to document the proposed project and its impacts on the Fountain Creek regulatory floodplain. This report will serve as the basis for the CLOMR application.

f. *Submit CLOMR Application to FEMA for Review – RESPEC* will assemble and submit all materials required by FEMA to initiate a CLOMR review process. This submittal is expected to occur after the 90% design phase is complete.
Assumptions:
- Response to FEMA comments will occur under a subsequent task order and is not included in this task.
- This task assumes a comparison to the current effective Fountain Creek HEC-RAS model and does not include a comparison to any other studies.

3. Section 401 Water Quality Certification

A. *Section 401 Certification Application to CDPHE for Review* – Because the project requires a Section 404 Individual Permit, a Section 401 Water Quality Certification is required. The application will include a description of Best Management Practices (BMPs), information on the timing and proposed process of in-stream construction *activities*, and a copy of the IP application, which contains maps and engineered drawings of the proposed action. If the CDPHE has comments on the Section 401 application, RESPEC will work to address these concerns.

DIVERSION PERMITTING SUPPORT DELIVERABLES

- CLOMR Application to FEMA
- Section 401 Certification Application to CDPHE
- Section 404 Permitting and Coordination

Table 5. Diversion Cost Estimate

Task		Cost
Fish Passage Facility Design		
1	Review of Fish Passage Design Criteria for Target Species	$6,205
2	Develop Design Hydrology for Fish Passage Structure	$2,840
3	Fish Passage Structure Design (30%, 60%, and 90% PS&E Packages)	$41,660
4	Final (100%) PS&E	$5,620
	Subtotal	*$56,325*
60% Design Services		
1	Project Coordination	$17,250
2	60% Functional Flow Design	$4,600
3	60% Hydraulic Design	$80,400
4	60% Structural Design	$61,015
	Subtotal	*$163,265*
90% Design Services		
1	Project Coordination	$10,925
2	90% Functional Flow Design	$4,600
3	90% Hydraulic Design	$53,290
4	90% Structural Design	$51,980
	Subtotal	*$120,795*
Permitting Support		
1a	Section 404 Permitting Coordination and Support	$12,040
1b	Compensatory Mitigation Plan, CSQT Analysis by Corvus Environmental Consulting LLC	$46,389
1c	CSQT Analysis Coordination and Support	$5,600
2	CLOMR Application Development and Submittal	$52,750
3	Section 401 Water Quality Certification	$4,320
	Subtotal	*$121,099*
	Total	$461,484

WATER TREATMENT PLANT

The engineer will complete the process design of the water treatment portion of the project and 30% building and site design. The water treatment portion consists of all treatment facilities, backwash, residual management systems, and disposal ponds. The water treatment plant components will include intake, raw water equalization, and residuals management systems that are expected to include evaporation ponds and backwash recycle facilities. Substantial progress toward a 30% design is already complete. This task will build on that work. This subtask shall include:

PROCESS DESIGN

1. Project Coordination – RESPEC will attend meetings weekly and as needed with the project team and the City to ensure our services are in compliance with project goals, share and obtain general information, and obtain updated information.
2. Water Quality Sampling and Testing – RESPEC will collect monthly water quality samples of a reduced set of parameters and three quarters of full water quality panels (Q2, Q3, and Q4 2024). A full water quality panel will be collected quarterly. This scope includes ordering bottles, travel and mileage to the site, sample collection, and laboratory analysis fees. As the results of the water quality analysis are received, RESPEC will update the City on the parameters of concern and advise on any changes in required treatment.
    a. *Monthly Parameters* – 24 months of testing for cryptosporidium is required to define the bin for the source water. If favorable, a lower bin classification could result in reduced treatment requirements. Additional parameters will be collected monthly when on site to improve the accuracy of process design.

       Hardness, Nitrate, Oxidation Reduction Potential, (ORP) Total Organic Carbon (TOC), Turbidity, Total Alkalinity, Dissolved Organic Carbon (DOC), Field pH and Temperature, *E. coli*, Total Coliform, Giardia, and Crytosporidium
    b. *Quarterly Parameters* – Per-and polyfluoroalkyl substances (PFAS), metals including lithium, Volatile Organic Compounds, Radioactivity, Disinfection Byproducts

       General Chemistry: Total Cyanide, Total Kjeldahl Nitrogen, True Color, Specific Conductance, Fluoride, Phosphorus, Sulfide, Ultraviolet Absorption at 254 nm, pH, Total Suspended Solids (TSS), and Dissolved Oxygen (DO)
3. Define Pumping Requirements – Update the draft hydraulic profile of the treatment process as defined in Task Order1 as site design and grading proceeds to define pumping needs for cost estimation.
4. Update Initial Estimates of Residuals – As additional water quality data are gathered, update the process model (based on the process defined in Task Order 1) and provide improved estimates of residual quantities utilizing process modeling program.
5. Cost Estimate/Phasing – Provide a *construction cost estimate* to construct the process as defined in Task Order 1, referenced by the process flow diagram in Figure 1. Estimate *operation and maintenance costs* for the plant.
    a. Provide two construction cost estimates—one for constructing a plant capable of 3.0 MGD and a second assuming a two-phase construction of the plant, with each phase constructing capacity for 1.5 MGD supply.
    b. Provide two estimates for operation and maintenance costs for the water treatment plant—one for a plant capable of 3.0 MGD and a second for a plant capable of 1.5 MGD.
6. *Assumptions* – The treatment process is generally assumed, as shown in Figure 1.

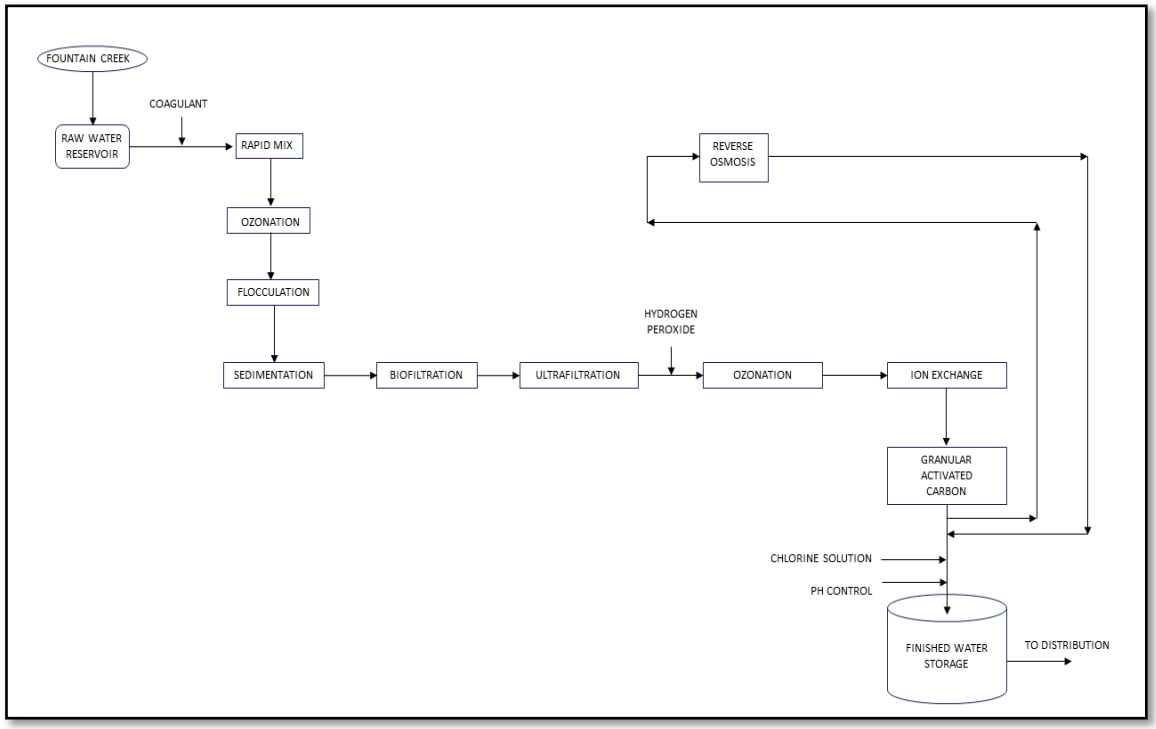

Figure 1. Water Treatment Process as Defined in Task Order 1

WATER TREATMENT PLANT PROCESS DESIGN DELIVERABLES

- Monthly and quarterly sampling including sample collection and analysis.
- Updated water quality memorandum outlining analysis of water quality results and any recommended changes to the water treatment process.
- Hydraulic profile with the definition of required pumps to provide water treatment.
- Updated estimate of residuals based on additional water quality parameters.
- Construction cost estimates for design flowrates of 1.5 and 3.0 MGD.
- Operation and maintenance cost estimates for flowrates of 1.5 and 3.0 MGD.

WATER TREATMENT PLANT 30% SITE DESIGN

1. 30% Treatment Plant Site Design Layout – Further development of initial site layout provided in Task Order 1 to include:
    a. *Preliminary Grading and Drainage Analysis* – Provide preliminary grading and access road definition. Estimate of runoff and advise if a detention structure is required.
    b. *Water Treatment Plant Intake Structure Design* – Provide a memorandum outlining alternatives for intake design to include reservoir outlet, raw water pipeline from reservoir to plant, raw water tank, or forebay design parameters.
    c. *Preliminary layout of on-site wastewater treatment system,* including site plan with leach location and sizing.
    d. *Preliminary alignment of potable water extension* to the water treatment plant.

2. Reverse Osmosis Waste Stream Handling – Outline options for handling brine waste streams from the reverse osmosis process required to remove TDS. The expected solution is on-site brine drying ponds.
    a. Provide preliminary sizing and layout of brine-drying ponds.
    b. Outline rules and regulations required to use ponds for disposal.
    c. Provide a cost estimate for construction of drying ponds and operation and maintenance.
3. Architecture Concept Presentation – Provide one preliminary elevation view of the water treatment plant building.
4. 30% HVAC
    a. Define code and safety requirements for HVAC system.
    b. Estimate HVAC requirements and provide preliminary electrical requirements.
5. 30% Estimate Electrical Loads and Footprint – Estimates will be based on the treatment process defined in Task Order 1.
    a. Coordinate with power and telecom service utilities (City-owned power) to define requirements. Provide the City with extension requirements and cost estimates.
    b. Estimate the footprint of interior electrical and communications equipment and clearance requirements estimated for space planning.
    c. Define preliminary electrical site plan and major loads in a draft one-line diagram.
    d. Provide cost and delivery schedule of major equipment.

WATER TREATMENT PLANT 30% SITE DESIGN DELIVERABLES

- 30% Preliminary Design Drawings: Site Layout, Building Footprints, Site Civil (including Grading/Drainage), Electrical One-Line Diagram and Site Plan, Architectural Sheets.
- Construction Cost Estimate to include electrical, HVAC, grading, drainage, and erosion control of site and drying ponds.
- 1st Estimate of Operation and Maintenance Costs for the Water Treatment Plant.

WATER TREATMENT PLANT 60% SITE DESIGN

1. 30% Design Review Meeting with City of Fountain
2. 60% Treatment Plant Site Design Layout – Take 30% Design to 60% per input from the City
    a. Grading and Drainage – Provide drainage report, stormwater management plan, grading and erosion control drawings, and access road drawings to be used in site development plan submittal.
    b. Water Treatment Plant Intake Structure Design
        i. 60% Design of option chosen following 30% drawing/memorandum
        ii. Plan and elevation views of the raw water intake and pump system from reservoir
        iii. Preliminary raw water alignment from intake to plant
        iv. Preliminary raw water tank or forebay design
    c. 60% design of on-site wastewater treatment system – Drawings and specifications (no electrical and instrument and controls detail sheets will be provided)
    d. 60% design of potable water extension – Plan and profile drawings

WATER TREATMENT PLANT 60% SITE DESIGN DELIVERABLES

- 60% Design Drawings:
  - Site Civil including grading/drainage, access road plan and profile
  - Water Treatment Plant Intake Structure Design
  - On-site Wastewater Treatment System Drawings and Specifications
  - Potable Water Line Extension
- Refined Construction Cost Estimate to include 60% Design

Table 6. Water Treatment Plant Cost Estimate

	Task	Cost
Water Quality Sampling and Analysis		
1	Water Quality Sampling Review and Interpretation	$5,630
2	Water Quality Collection/Analysis Quarterly	$11,304
3	Water Quality Collection/Analysis Fees Monthly	$23,849
	Subtotal	*$40,784*
Process Design		
1	Project Coordination	$7,600
2	Define Pumping Requirements	$8,240
3	Updated Estimate of Residuals	$3,160
4	Cost Estimate/Phasing	$9,800
5	Updated Water Quality Memorandum	$10,400
6	Hydraulic Profile/Pump Memorandum	$13,100
	Subtotal	*$52,300*
Water Treatment Plant 30% Site Design		
1	Prelim Grading and Drainage Analysis	$20,000
2	Prelim Reservoir Intake/Pump Design	$14,760
3	OTWS Prelim Design	$10,650
4	Potable Water Extension	$9,200
5	Architecture Concept	$7,420
6	30% HVAC	$12,000
7	30% Electrical	$25,000
8	30% Treatment Plant Site Design Drawings	$5,000
9	Construction Cost Estimate	$22,250
	Subtotal	*$126,280*
Water Treatment Plant 60% Site Design		
1	30% Design Review Meeting	$9,840
2	60% Treatment Plant Site Design Drawings	$15,150
3	Refined Construction Cost Estimate	$10,920
	Subtotal	*$35,910*
	Total	$255,274

TOTAL PROPOSED FEE

Description	Cost
Overall Planning	$34,660
Raw Water Pump Station	$232,230
Raw Water Pipeline	$60,380
Finished Water Pipeline	$19,810
Diversion	$461,484
Water Treatment Plant	$255,274
TOTAL	$1,063,838

TIME OF PERFORMANCE

Task	Date
Diversion Structure	
60% Design Complete	May 15, 2024
90% Design Complete	August 15, 2024
CLOMR Application Submitted	August 15, 2024
Raw Water Pump Station	
Preliminary Site Plan	March 15, 2023
Pump Options and Configuration	April 4, 2024
Easements Defined	May 31, 2024
30% Design Complete	October 1, 2024
60% Design Complete	November 15, 2024
El Paso County Site Development Plan Submitted	November 15, 2024
Raw Water Pipeline	
Preliminary Profiles Issued with Easements Defined	May 15, 2024
Surge Analysis Issued	August 20, 2024
30% Design including surge analysis and definition of easements	September 10, 2025
60% Design for I-25 and BNSF Crossing Complete	December 10, 2024
Initial Submittal to CDOT for Crossing	December 10, 2024
Finished Water Pipeline	
Preliminary Profiles Issued with Alignment Defined	June 30, 2024
Surge Analysis Issued	August 20, 2024
30% Design Issued	September 10, 2024
Water Treatment Plant	
Process Design	May 15, 2024
30% Site Design	August 15, 2024
60% Site Design	October 15, 2024

This scope is valid for a period of 90 days from the date of this proposal.

PAYMENT TERMS

- The work described herein to be **"Time and Materials"** will be invoiced monthly as work progresses.
- **Cost and Reimbursables** will be included, as they are incurred on the monthly invoices.
- If additional work not included in this scope of services is requested, RESPEC will provide a revised scope and estimate of the increased fees.
- RESPEC will not exceed the quoted fee without prior written authorization from the City of Fountain.

EXCLUSIONS/CONDITIONS

- Bid or Construction Administration
  - This is anticipated to be required but a separate task order and scope will be provided for these services after planning and preliminary design is complete.
- Third-party testing, including but not limited to, potholing to locate existing utilities on site. RESPEC to coordinate these efforts, but Client will be responsible for fees charged by consultants.
- Permit Fees *(PPRBD submittal fees and any other permitting fees that may arise)*
- Building design services excludes licensed architectural services
- Detailed instrument and controls (I&C) design is not included in this scope. RESPEC will provide a performance specification of required I&C services for the raw water booster pump station. RESPEC can provide these services if requested.
- The following are expected to be provided by the client (or client's consultant) and are not included in this scope:
  - Fees for surveying or legal description preparation
  - Geotechnical investigation and recommendations
  - SUE services to include fees for private utility locators, potholing of any utilities crossed and survey fees to add the utility locations to survey base files
- Water rights analysis
  - General coordination and support of efforts by others is included but RESPEC assumes the City will rely on its water rights consultants.

2024 BILLING RATE SCHEDULE

COLORADO SPRINGS WATER STAFF

Position	Hourly Rate
Principal / Practice Leader	$235
Principal / Sr. Project Manager	$215
Structural Project Manager	$210
Sr. Project Manager	$205
Project Manager	$190
Sr. Project Engineer	$180
Project Engineer	$165
Sr. Designer	$155
Staff Engineer III	$145
Staff Engineer II	$135
Staff Engineer I	$125
Engineering Technician III	$125
Engineering Technician II	$115
Engineering Technician I	$105
Administrative Support	$85
Engineering Intern	$75

INFRASTRUCTURE STAFF (ELECTRICAL/MECHANICAL/STRUCTURAL)

Position	Hourly Rate
Principal Elec. Eng	$250
Senior Elec. Eng	$205
Project Elec. Eng	$170
Staff Elec. Eng	$160
Elec. EIT	$130
Senior Eng Tech	$140
Structural Project Manager	$225
Structural Project Engineer	$180
Structural EIT Engineer	$125
Structural Technician	$115
Mechanical Project Manager	$194
Mechanical Project Engineer	$147
Mechanical Drafting	$116
GEC Project Manager	$190
GEC Project Engineer/Tech	$165

Expenses	
Mileage	Regulatory Rate
Postage/Courier	At Cost
Vendor Printing and Binding	At Cost
Other Expenses	At Cost

Statement of Work

Fountain Creek Diverter Project

404 Permitting Support

December 21, 2023

Presented to:

RESPEC

Prepared by:

CORVUS

Environmental Consulting LLC

Project Information Summary

CORVUS Client Name	RESPEC
Client Project Manager	Sarah Itz
Project Purpose	The City of Fountain proposes to build a diversion structure in Fountain Creek, approximately 2,000 feet upstream of the Colorado Springs Utilities' Owens & Hall diversion structure.
Project Proponent	City of Fountain
Location	Along Fountain Creek between I-25 and Old Pueblo Road, about 1.5 miles south of I-25 and South Santa Fe Avenue intersection. • 38.652292, -104.693491
CORVUS Project Role	CORVUS' role will be to provide Clean Water Act Section 404 permitting support for the proposed improvements.

Study Area

The Study Area is understood to encompass the area shown in red below.

Tasks

Note: Tasks highlighted in grey are not included in this Statement of Work (SOW) at this time. If it is determined later that these tasks are required, a separate scope and fee will be provided.

Task 1a. Review of Current Project Documentation – CORVUS will review current project documentation provided by RESPEC, including (but not limited to) the Individual Permit and Hydrology report as it pertains to the Colorado Stream Quantification Tool (CSQT) assessment.

Task 1b. Omitted

Task 2-5. Omitted

Task 6. Compensatory Mitigation Plan – Based on CORVUS' current understanding, the project anticipates greater than 0.1-acre (4,356 square feet) of total impacts to Waters of the US (WOTUS), including permanent impacts over 0.03-acre (1,306 square feet) to waters. Compensatory mitigation will likely be required. CORVUS will draft a Compensatory Mitigation Plan (CMP) that includes items described in 33 CFR 332.4 paragraphs (c)(2) through (c)(14). This task includes up to four internal meetings to discuss mitigation options with the project team.

Mitigation options may include onsite mitigation (construct wetlands via grading and planting vegetation) or the Client's purchase of wetland banking credits to offset permanent impacts to wetlands/WOTUS (if available). If pursuing on-site mitigation, CORVUS assumes the client will provide grading plans designed to achieve appropriate hydrology (with input from CORVUS).

Task 6a. CSQT Assessment– The CSQT is a spreadsheet-based calculator approved for use by the U.S. Army Corps of Engineers (USACE) to determine if proposed stream impacts would result in a permanent loss of Functional Feet (FF) (as opposed to linear feet) after completion of a project and therefore possibly require mitigation. In accordance with the Colorado Mitigation Procedures (COMP) v2, the Project team will utilize the appropriate Debit Options, including Debit Option 1 which uses the CSQT to calculate the change in condition at an impact site by comparing the difference between the existing and proposed condition. Other Debit Options may be used, if applicable.

The assessment of at least five specific parameters (within the "Reach Hydrology and Hydraulics" and "Geomorphology" Functional Categories) is required at all project sites evaluated for CWA Section 404 purposes, including Reach Runoff, Floodplain Connectivity, Lateral Migration, Bed Form Diversity, and Riparian Vegetation. Assessing these five parameters provides consistency between impacts and compensatory mitigation and allows for a more consistent accounting of functional change.

CORVUS will work collaboratively with the Client to complete data collection and analysis of the required metrics within each of the five required CSQT parameters for the study area(s). The following sub-tasks address data collection and analysis for the Existing Condition Assessment/Score and Proposed Condition Assessment/Score for the five required CSQT parameters, including Reach Runoff, Floodplain Connectivity, Lateral Migration, Bed Form Diversity, and Riparian Vegetation. The specific metrics used to assess these five parameters will be decided as we develop the Project's CSQT approach. The parameters/metrics assessed may change, depending on the existing conditions in each area. **Table 1** shows the five required CSQT parameters and associated metrics, as well as each party that may be responsible for completing the work associated with each parameter and metric for **BOTH Existing and Proposed Conditions at each site**:

Table 1. Proposed CSQT Parameters, Metrics, and Corresponding Datasheets

Parameter	Metric(s)	Datasheet(s)	Party Responsible
Reach Runoff	Land Use Coefficient (D) AND Concentrated Flow Points (F)	Field Value Documentation Form (Hydrology & Hydraulics) AND Project Reach Form Section II(b)	CORVUS
Baseflow Dynamics	Velocity (D) AND Average Depth (F)	Field Value Documentation (Hydrology & Hydraulics)	RESPEC ***
Floodplain Connectivity*	Bank Height Ratio (F) AND Entrenchment Ratio (F)	Field Value Documentation (Hydrology & Hydraulics)	RESPEC ***

Parameter	Metric(s)	Datasheet(s)	Party Responsible
Lateral Migration**	Dominant Bank Erosion Hazard Index/Near Bank Stress (BEHI/NBS) AND Percent Streambank Erosion (F) OR Percent Armoring Metric (F) OR Greenline Stability Rating (F)	Field Value Documentation Form (Geomorphology) AND Project Reach Form Section II(c)	CORVUS
Bed Form Diversity	Pool Spacing Ratio (F) AND Pool Depth Ratio (F) AND Percent Riffle (F)	Field Value Documentation Form (Geomorphology)	CORVUS (existing) and RESPEC (proposed)
Riparian Vegetation	Riparian Extent (D/F) AND Percent Native Cover (F) AND Woody Vegetation Cover (F) OR Herbaceous Vegetation Cover (F)	Field Value Documentation Form (Geomorphology) AND Riparian Extent Form AND Riparian Veg Form	CORVUS

(D) indicates metrics are calculated using desktop methods; (F) indicates metrics are calculated or verified using field methods.
** Informed through data collected during either the Rapid Survey or the Detailed Survey.*
*** If a project proposes to armor an eroding bank (as determined by BEHI/NBS), the Percent Erosion metric should be substituted for dominant BEHI/NBS in calculating the proposed condition score; the BEHI/NBS metric would not be applied to an armored bank.*
**** CORVUS to provide guidance/support for existing condition Baseflow Dynamics and Floodplain Connectivity field data collection needs.*

In addition to the parameter-specific data forms, other analyses and forms not directly associated with specific parameters and metrics are required for the completion of the CSQT submission. Some of these items are only required for Existing Conditions. These additional items are presented in **Table 2** below:

Table 2. Proposed CSQT Parameters, Metrics, and Corresponding Datasheets

Additional Calculation/Value	Form	Party Responsible
Determination of Existing and Proposed Bankfull Width	Quantification Tool AND Bankfull Verification Documentation	RESPEC
Valley Type and Reference Stream Type	Project Assessment	CORVUS with support from RESPEC

Additional Calculation/Value	Form	Party Responsible
Process Drivers Information	Project Assessment	CORVUS with support from RESPEC
Site Information and Reference Selection	Quantification Tool	CORVUS with support from RESPEC
Catchment Assessment	Catchment Assessment	CORVUS
Bankfull Verification	Bankfull Verification Documentation	RESPEC***
Sub-Reach Survey Method (Rapid Survey OR Detailed)*	Longitudinal Profile Form** / Cross Section Form** OR Rapid Survey Form*	CORVUS with support from RESPEC
Flow Alteration Module****	Flow Alteration Module Form	RESPEC with support from CORVUS

**Used to inform the Floodplain Connectivity and Bed Form Diversity parameters.*
***Not a required form in the CSQTv1.*
**** CORVUS to provide guidance/support for Bankfull Verification field data collection needs.*
***** The Flow Alteration Module may be required by the U.S. Army Corps of Engineers.*

Subtask 1. CSQT Approach Memorandum – CORVUS will review the project area and current design plans to determine the appropriate approach to the CSQT assessment. CORVUS will work with the design team and the Client to understand the current conditions and conditions proposed in the design. CORVUS will draft a memorandum (memo) that discusses the Project, reach/sub-reach determination, and selected parameters/metrics. This memo will be submitted to the USACE for their concurrence prior to in-field data collection.

Subtask 2. Remote Desktop Analysis and Fieldwork Prep –This task includes executing the desktop portion of the method for the Reach Runoff and Riparian Extent metrics and preparing the necessary data, forms, and materials to complete the CSQT fieldwork.

Subtask 3. CSQT Field Data Collection – CORVUS will execute the method for collecting CSQT Lateral Migration, Bed Form Diversity, and Riparian Vegetation parameter and metric data as described in the *Colorado SQT and Debit Calculator User Manual (Version 1)*. For the impact areas, this task includes sampling no more than three reaches with representative sub-reach lengths and no more than 48 riparian vegetation plots required in total.

Subtask 4. CSQT Data Summary, Analysis, Form Completion, and Mapping – Following the site visits, CORVUS will analyze and summarize CSQT data for the chosen parameters for the existing and proposed conditions and complete all applicable data forms per reach. Figures will be collaboratively prepared between CORVUS and the Client.

Subtask 5. CSQT Project Report – There is no formal requirement to submit a report for the CSQT effort. However, through CSQT consultations with multiple USACE Project Managers,

CORVUS has found that a CSQT Project Report has provided clarity on the methods, data analysis, results, and proposed scoring of the CSQT parameters and metrics, and has demonstrated a reduction in post-submittal USACE comments and consultation. CORVUS will take the lead on drafting the CSQT report and work collaboratively with the Client to complete all required content.

Task 6b. FACWet Analysis – When permanent adverse impacts to wetlands are anticipated, the COMP v2 specifies that a Functional Assessment of Colorado Wetlands (FACWet) analysis is completed and submitted to assist in determining wetland functions impacted and compensatory wetland mitigation ratios. Based on the results of the delineation and proposed impacts to WOTUS, if it is determined that FACWet is required, CORVUS will conduct a FACWet analysis on wetlands within the property and provide FACWet data forms and mapping with the 404 application submittal.

Task 7. Revegetation Plan – Based on the conceptual and 60 percent design plans, CORVUS will develop a planting plan that includes native seed mixes, containerized live plants, and willow stakes (if needed) appropriate for the anticipated hydrological regime throughout the corridor. The plan will include the development and placement of designated planting zones based on the anticipated hydrologic gradient from the stream edge to the limits of construction. CORVUS will work closely with the design team to optimize the site conditions needed to establish compensatory wetland mitigation areas to offset the anticipated impacts due to the project. The plan will include site-specific notes and specifications for topsoil stockpiling, soil amendments, seedbed preparation, and seeding and mulching. CORVUS will also collect soil samples in the Project area and send them for testing to a reputable soil testing lab to determine suitable plant species and soil amendments. CORVUS will expense the cost of soil tests to the Client. CORVUS anticipates collecting no more than four soil samples.

Task 8. Agency Coordination – This task involves coordination with the USACE, and other agencies if required. This task includes a pre-application meeting, requests for more information after permit submittal, and coordination regarding mitigation (if required).

Task 9. Design Meetings and Coordination – This task involves meeting with the Client to discuss design as it relates to permitting implications. Approximately 6 meetings are included.

Task 10. Project Coordination and Management – This task includes general coordination with the team and time spent by CORVUS on quality control, project setup, and managing project budget, schedule, and billing.

Deliverables

The following deliverables will be completed for this project:

- CMP for submittal to USACE
- CSQT Package (in collaboration with the Client) for submittal to USACE

Assumptions

The following assumptions have been made for this project:

- The Client will be responsible for preparing the Individual Permit (IP), including project plans and WOTUS impacts, and other permitting documents not explicitly discussed in this SOW.
- The CSQT assessment includes no more than 3 reaches.
- Additional non-required CSQT parameters or metrics are not required by the USACE.
- Unless otherwise requested by the Client, all CORVUS deliverables will be provided in digital format such as Portable Document Format (PDF), Microsoft Word, or other suitable format.

Change Management Process

In the event revisions to the study area and/or the Statement of Work tasks are determined necessary or desirable, either by CORVUS or the Client, CORVUS will coordinate with the Client Project Manager to determine if a formal request for contract modification is necessary. CORVUS will not perform work not described in this Statement of Work or a revised Statement of Work without written authorization from the Client.

Cost

CORVUS will perform the tasks described for the estimated costs in the attached cost proposal. CORVUS bills on a time-and-materials basis, with expenses such as postage, copies, and equipment rental billed at cost, and sub-consultants billed at 6% markup.

Estimate

Date 12-22-2023
Project 23-110 - Fountain Creek Diverter Project

Client
RESPEC Engineering
720 South Colorado Blvd. Suite 410 S
Denver, CO 80246
Attn:

Project Totals

Task	Estimate	Previous	Grand Total
1a - Project Documentation Review	$924.00	$0.00	$924.00
1b - Delineation Site Visit / Data Mgmt	$0.00	$0.00	$0.00
2 - ESA Compliance	$0.00	$0.00	$0.00
3 - AJD	$0.00	$0.00	$0.00
4 - Pre-construction Notification	$0.00	$0.00	$0.00
5 - Cultural Resources (PM)	$0.00	$0.00	$0.00
6 - CMP	$3,944.00	$0.00	$3,944.00
6a - CSQT	$21,650.00	$0.00	$21,650.00
6b - FACWet	$0.00	$0.00	$0.00
7 - Revegetation Plan	$0.00	$0.00	$0.00
8 - Agency Coordination	$1,452.00	$0.00	$1,452.00
9 - Design Meetings and Coordination	$1,716.00	$0.00	$1,716.00
10 - Project Coordination and Management	$2,970.00	$0.00	$2,970.00
Labor Subtotal	$32,656.00	$0.00	$32,656.00
Direct Expenses	$1,563.00	$0.00	$1,563.00
Total	**$34,219.00**	**$0.00**	**$34,219.00**

Direct Expenses Details

Direct Expense	Quantity	Price	Total
GPS	4	$150.00	$600.00
Mileage	900	$0.67	$603.00
Soil Samples	4	$90.00	$360.00
Subtotal			**$1,563.00**

Estimate

Labor Total	$32,656.00
Direct Expenses Total	$1,563.00
Total Estimate	**$34,219.00**
Previous Contract Amount	$0.00
Grand Total Budget	**$34,219.00**

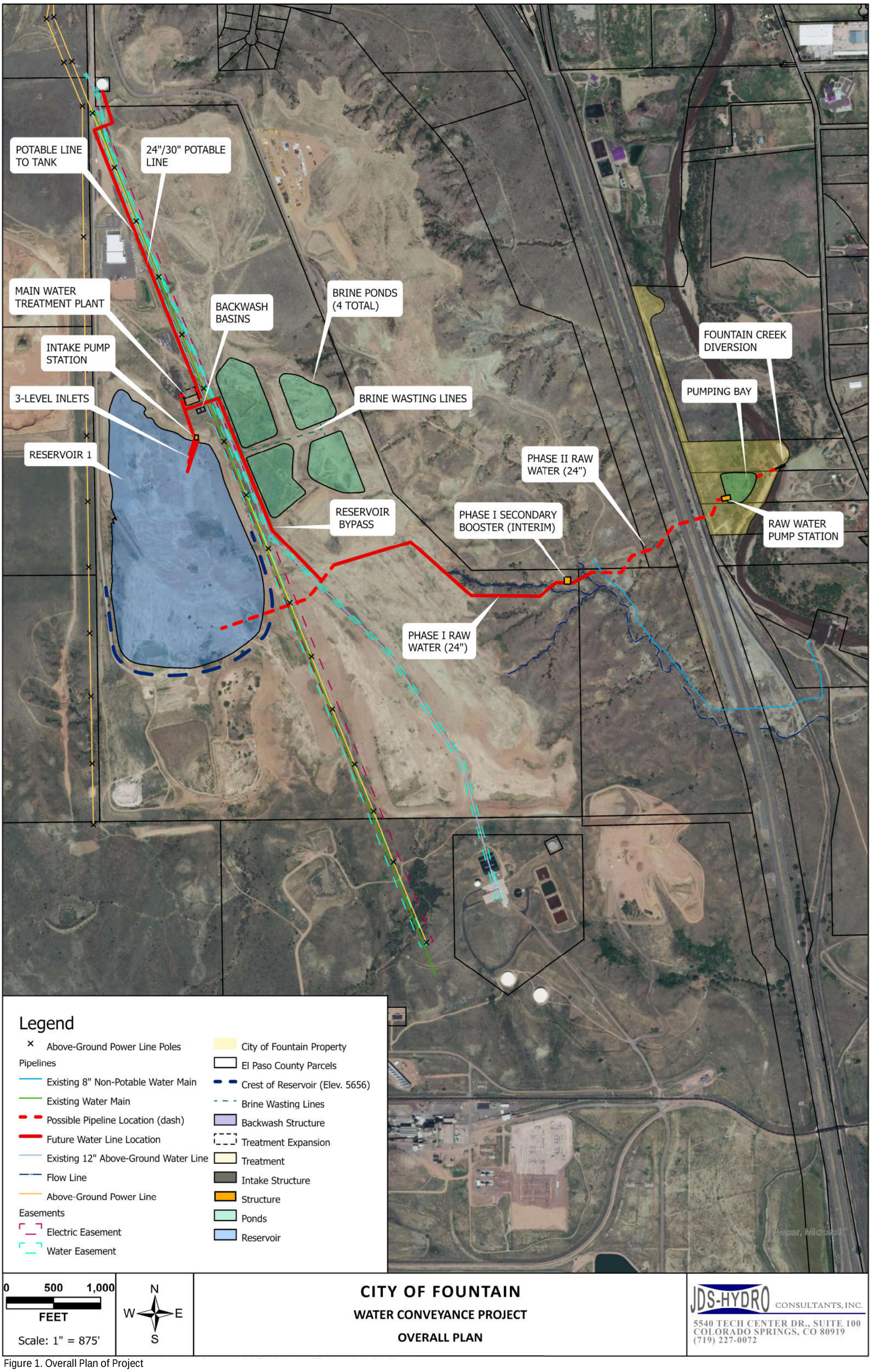

Figure 1. Overall Plan of Project