COUNCIL INFORMATION PACKET

Council Meeting

Monday

January 8, 2024

6:00 p.m. MDT

TOWN OF COLORADO CITY
MEETING NOTICE

Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the Colorado City Town Council and to the general public that the Town Council will hold a meeting open to the public on **Monday January 8, 2024**, at 6:00 p.m. at the **Colorado City Town Hall, 25 South Central Street,** Colorado City, Arizona.

AGENDA:

1. Call to Order
2. Roll Call
3. Pledge of Allegiance
4. Minutes of Previous Meeting(s)
5. Public Comments / Informational Summaries
6. Town Manager & Department Reports to the Council & 2023 Town Review
7. PUBLIC HEARING for Town of Colorado City Culinary Water Master Plan Update
8. Zoning Map Amendment – Parcel 404-53-601 from RE-1A Residential Estate to R1-12 Single Family Residential
9. Zoning Map Amendment -- Parcel 404-53-341 from R1-20 Single Family Residential to R-2 Multi-Family Residential
10. Zoning Map Amendment-- Parcel 404-53-530 from RE-1A Residential Estate to R1-8 Single Family Residential
11. Consider Resolution Adopting Related Parties Policy
12. Consider Appointment of Town Clerk and Deputy Town Clerk
13. Consider Resolution Updating Wells Fargo Bank Signers
14. Second Reading of Ordinance Amending Town Code Title III, Chapter 31, Section §31.41 Purchasing
15. Consider Adoption of Ordinance Amending Town Code Title III, Chapter 31, Section §31.41 Purchasing
16. Discussion and Possible Action for the Town to lend its support to the Arizona State Senate and becoming involved non-monetarily in the pending litigation against the Biden Administration over Designation of Baaj National Monument.
17. Executive Session for Discussion and Consultation with Legal Counsel for Legal Advice in Accordance with A.R.S. 38-431.03(A)(3)&(4).
18. Budget Report and Order to Pay Due Claims
19. Council Comments
20. Adjournment

Agenda items and any variables thereto are set for consideration, discussion, approval or other action. All items are set for possible action. The Town Council may, by motion, recess into executive session, which will not be open to the public, to receive legal advice from the Town's attorney(s) on any item contained in this agenda pursuant to ARS § 38-431.03 (A) (3)(4), or regarding sensitive personnel issues pursuant to ARS § 38-431.03 (A) (1), or concerning negotiations for the purchase, sale or lease of real property; ARS § 38-431.03 (A) (7). One or more Council members may be attending by telephone. Agenda may be subject to change up to 24 hours prior to the meeting. Persons with a disability may request a reasonable accommodation by contacting the Town Clerk at 928.875.2646 as early as possible to allow sufficient time to arrange for the necessary accommodations. Town of Colorado City Council Meeting Agenda.

Town of Colorado City
COUNCIL MEETING AGENDA
STAFF SUMMARY REPORT
Monday January 8, 2024

6:00 p.m.

4. Minutes of prior meetings — Page 1

Presented are the minutes of the December 11, 2023 and December 20, 2023 meetings that needs to be reviewed and approved by the Council.

RECOMMENDATION Motion: _____ 2nd: _____ Vote:___/___
Motion to approve the minutes of the November 13, 2023, meeting.

5. Public Comment

The chairperson of the meeting should outline the rules of public comment and the time limit imposed according to the following guidelines:

Anyone from the public is invited to make a comment at this time. Please step up to the podium and state your name for the record. There is a standard time limit of three minutes per person. Although we welcome and invite your comments, no discussion or response from the Council is required and individuals should not anticipate any.

According to Arizona law (A.R.S. § 38-431.01(H) the only action that may be taken as a result of public comment will be limited to directing staff to study the matter or scheduling the matter for further consideration and decision at a later date.

6. TOWN MANAGER & DEPARTMENT REPORTS — Page 8

1. Airport Manager & Advisory Committee – LaDell Bistline Sr.
2. Building Department-- Andrew Barlow
3. Police Department/ Dispatch – Robb Radley
4. Public Works/ Landfill– John T. Barlow
5. Utility Department – Jerry Postema
6. Administration Department – Vance Barlow
7. Magistrate Court -- Barbara Brown
8. State of the Town, 2023 review – Mayor Ream

Department reports should be treated like public comment and limited to clarifying questions directing staff to study the matter or scheduling the matter for further consideration and possible action at a later date.

The Mayor should affirmatively close the regular meeting and open the public hearing — **Page 36**

7. PUBLIC HEARING for Town of Colorado City Culinary Water Master Plan Update

ARS 9-463.05 requires a public hearing at least 30 days prior to the adoption of the land use assumptions and infrastructure improvements plan. The land use assumptions and infrastructure improvements plan were reviewed by the Town Council at a work session held

October 30, 2023. On November 8, 2023, a notice of a public hearing was posted for January 8, 2024.

Included in the packet is the infrastructure improvements plan, the summary and recommendation from the infrastructure improvements advisory committee which were received on Friday December 29, 2023.

No action will be taken on the matter at this time. Action is scheduled for the February 12, 2024, Town Council meeting.

After the public hearing the Mayor should affirmatively close the public hearing and reopen the regular meeting.

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8. Consider Zoning Map Amendment -- Parcel 404-53-601 from RE-1A Residential Estate to R-12 Single Family Residential Page 111

The Planning Commission considered the request for zoning map amendment by William Timpson at the January 2, 2024, Planning Commission meeting and unanimously recommended approval.

The developer's intent of this rezone is to develop a flag lot for a single family residential.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/___

Motion to adopt Ordinance 2024-02 approving rezoning Parcel 404-53-601 from RE-1A Residential Estate to R-12 Single Family Residential

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9. Consider Zoning Map Amendment – Parcel 404-53-341 from R1-20 Single Family Residential to R-2 Multi-Family Residential Page 114

The Planning Commission considered the request for zoning map amendment by Jared Bistline at the January 2, 2024, Planning Commission meeting and after some discussion on the location unanimously recommended approval.

The developer's intent of this rezone is to develop a duplex on a portion of the existing approximately half acre lot.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/___

Motion to adopt Ordinance 2024-03 approving rezoning Parcel 404-53-341 from RE-1A Residential Estate to R-2 Multi-Family Residential

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10. Consider Zoning Map Amendment – Parcel 404-53-530 from RE-1A Residential Estate to R1-8 Single Family Residential Page122

The Planning Commission considered the request for zoning map amendment by Zayco, LLC and after considerable discussion and a recommendation that the Town amend the lot with requirement for R1-8 Single family residential unanimously recommended approval.

The developer's intent of this rezone is to develop several smaller lot residential units.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/__

Motion to adopt Ordinance 2024-04 approving rezoning Parcel 404-53-530 from RE-1A Residential Estate to R1-8 Single Family Residential

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11. Consider Resolution Adopting Related Parties Policy **Page 130**
Presenter: Vance Barlow Town Manager

This is an annual requirement per ARS §38-503, which states that political subdivisions other than school districts may purchase through members of their governing bodies, without using public competitive bidding procedures, supplies, materials and equipment not exceeding three hundred dollars in cost in any single transaction, not to exceed a total of one thousand dollars annually, from a member of the governing body if the policy for such purchases is approved annually.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/__

Motion to adopt Resolution 2024-01 establishing procedures for purchasing from the Mayor and any member of the Council

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12. Consider Appointment of Clerk and Deputy Clerk **Page 131**
Presenter: Vance Barlow, Town Manager

Town Clerk Rosie White has tendered her resignation as Town Clerk effective December 31, 2023. She will continue to work for the Town in an administrative capacity doing the payroll and assisting with other duties as needed.

When Shirley Zitting and Sarah LaCorti were hired in July 2023 it was with the understanding that when Rosie made this move Shirley would be appointed Town Clerk and Sarah Deputy Town Clerk. Shirley was appointed Deputy Town Clerk on July 17, 2023.

Both Shirley and Sarah have been learning and performing the duties of the office and it is the recommendation of the Town Manager that Shirley Zitting be appointed Town Clerk and Sarah LaCorti as Deputy Town Clerk.

The position of Town Clerk is an FLMA exempt position. The position of Deputy Town Clerk is not an FLMA exempt position.

It is recommended that the Salary for Shirley be set at $52,632.80 and the rate for Sarah be increased from $18.50 per hour to 20.35 per hour.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/___

Motion to appoint Shirley Zitting as Town Clerk for the Town of Colorado City and set her salary at $52,632.80.

Motion to appoint Sarah LaCorti Deputy Town Clerk for the Town of Colorado City at a rate of $20.35 per hour.

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13. Consider Resolution Updating Wells Fargo Bank Signers **Page 140**
Presenter: Vance Barlow, Town Manager

The policy for the Town is to have two signatures on every check, the Town Clerk and one other. We are recommending that the Council remove Rosaleta White, as she is no longer the Town Clerk, and add Shirley Zitting as a signer and retain Mayor Howard Ream, Councilmember John Chatwin and Town Manager Vance Barlow as signers.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/__

Motion to adopt Resolution 2024-02 Updating Town of Colorado City Wells Fargo Bank Signers

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14. Second Reading of Ordinance Amending Town Code Title III, Chapter 31, Section §31.41 Purchasing Page 141
Presenter: Town Manager Vance Barlow

This proposed amendment to the Town Code, which designates the Town Manager as the purchasing agent for the Town, had a first reading at the December 11, 2023, Town Council meeting and is presented for a second reading in the adoption process.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/___

Motion to read Ordinance 2024-01 adopting amendments to the Town Code Title III, Chapter 31, Section §31.41 Purchasing in full.

After the motion is passed the Town Clerk should read the ordinance in full into the record.

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15. Consider Adoption of Ordinance Amending Town Code Title III, Chapter 31, Section §31.41 Purchasing
Presenter: Town Manager Vance Barlow

After the second reading the Town Council can adopt Ordinance 2024-01 adopting amendments to the Town Code Title III, Chapter 31, Section §31.41 Purchasing.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/__

Motion to Adopt Ordinance 2024-01 adopting amendments to the Town Code Title III, Chapter 31, Section §31.41 Purchasing.

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16. Discussion and Possible Action for the Town to lend its support to the Arizona State Senate and becoming involved non-monetarily in the pending litigation against the Biden Administration over Designation of Baaj National Monument. Page 143
Presenter: Mayor Howard Ream

The Arizona State Senate is intending to pursue litigation against the Biden Administrations designating the Baaj National Monument in northern Mohave County and Coconino County. This was the Biden Administration's 5th monument designation in two and a half years under the antiquities act. A fact-finding phase is currently in progress, with a goal of filing suit against the Biden Administration.

Enclosed in the packet is a press release from Senate President Warren Peterson and the Resolution the Town Council approved in May 2023 opposing the designation of the Baaj National Monument.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/___

Motion to approve the Town of Colorado City lending its support and becoming involved non monetarily in the pending litigation against the Biden Administration for designation of a massive new national monument in violation of the U.S. Constitution, outside of the intent of the Antiquities Act, and in the absence of credible scientific data.

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17. Executive Session for Discussion and Consultation with Legal Counsel for Legal Advice in Accordance with A.R.S. 38-431.03(A)(3)&(4).

This item will need to be discussed in executive session with legal counsel.

RECOMMENDATION Motion:_____ 2nd:_____ Vote:___/___

Motion to go into executive session for discussion and consultation with legal counsel for legal advice in accordance with A.R.S. 38-431.03(A)(3)&(4).

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18. Budget Report and Order to Pay Due Claims Page 149
Presenter: Vance Barlow, Town Manager

The Budget Report and Payment Approval Report is presented for review and approval.

RECOMMENDATION Motion: _____ 2nd: _____ Vote:___/___
Motion to pay the due claims as they become due.

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19. Council Comments
This time is for any Council Member to bring up other items for awareness. The Council will not be able to take action on items brought up at this time. The Council can direct staff to do additional research on matters and/or schedule them for action on a future agenda.

Per State Statute (A.R.S §38-431.02(K)(2) The public body does not propose, discuss, deliberate or take legal action at that meeting on any matter in the summary unless the specific matter is properly noticed for legal action.

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20. Adjournment

SUMMARIZED MINUTES OF THE TOWN OF COLORADO CITY COUNCIL MEETING HELD MONDAY, DECEMBER 11, 2023, AT 25 S CENTRAL STREET, COLORADO CITY, ARIZONA

The meeting was called to order at 6:00 p.m. by Mayor Howard Ream.

Roll call showed present: Mayor Howard Ream, Vice Mayor Dalton Barlow, and Council Members: John Chatwin, Jerusha Darger, Alma Hammon, and Nathan Burnham. Thomas Holm was excused.

The Pledge of Allegiance was led by Mayor Howard Ream.

MINUTES OF PRIOR MEETINGS

The minutes of the November 11, 2023 meeting were presented for approval.

A motion was made by Nathan Burnham to approve the minutes of the November 11, 2023 meeting. The motion was seconded by Alma Hammon, and all voted in favor.

PUBLIC COMMENTS

No Public Comments

DEPARTMENT REPORTS

The department reports were in the information packet. Vance Barlow answered questions and clarified the reports.

Airport
Building
Police
Public Works/Parks
Utilities
Town Manager

Fiscal Year 2021-2022 Financial Audit Presentation by Hinton Burdick

Hinton Burdick presented and answered questions.

Ratify Appointment(s) to the Town of Colorado City Municipal Airport Advisory Board.

Mayor Howard Ream thanked previous board members, Dan Barlow, and Jeffery Jessop, for their service on the Airport Advisory Board.

Mayor Howard Ream swore in Jared Zitting and Steven Black as new members of the Airport Advisory Board.

A motion to ratify the appointment of Jared Zitting and Steven Black to the Airport Advisory Board for a six-year term ending December 31, 2029, was made by Alma Hammon, and seconded by Jerusha Darger. All voted in favor.

Consider Creekside Park Preliminary Plat

Presented for Council Consideration is a preliminary plat, submitted by Creekside Park, LLC, for a 55-unit townhome subdivision located between Hammon Street and Barlow Street North of Academy and South of Arizona.

The Town Council approved the zoning to an R2 Residential at the March 13 Council meeting.

On November 6, 2023, the Planning Commission reviewed the proposed preliminary plat and after considerable discussion recommended that the Town Council approve the preliminary plat.

After the preliminary plat is approved the developer will complete the construction drawings that will be reviewed and approved by staff prior to construction. After the construction is completed, the developer will submit a final plat with as built for final approval and recording.

Vice Mayor Dalton Barlow brought up questions about water retention and water impact fees.

Mayor Howard Ream had questions regarding parking for the proposed townhomes.

Richard Hammon addressed the council regarding their questions.

A motion to approve the preliminary plat for Creekside Park Subdivision on condition that the water flow modeling be completed and approved prior to construction drawings being approved was made by Nathan Burnham and seconded by Alma Hammon. All voted in favor.

First Reading of Ordinance Amending Town Code Title III, Chapter 31, Section §31.41 Purchasing

As part of the process for updating the Town of Colorado City Purchasing Policy a need to make a minor amendment to the Town Code was identified. When the Town Code was first adopted there was not a Town Manager position and so the Town Treasurer was designated as the purchasing agent for the Town. The recommendation was to designate the Town Manager as the purchasing agent for the Town.

This amendment to the Town Code has been reviewed by the Towns legal counsel.

First reading of the Ordinance Amending Town Code Title III, Chapter 31, Section §31.41 Purchasing was done by Shirley Zitting.

A motion to read Ordinance 2024-01 adopting amendments to the Town Code Title III, Chapter 31, Section §31.41 Purchasing in full was made by Alma Hammon and seconded by Dalton Barlow. All voted in favor.

Consider Resolution Updating Purchasing Policy for the Town of Colorado City

The Town of Colorado City purchasing policy was last updated in 2010. Staff has reviewed the policy and presented to the Council for consideration an updated purchasing policy which raises some of the limits and clarifies some areas that were ambiguous in the existing policy.

The significant changes are:

- Designating the Town Manager as the Purchasing Agent for the Town.
- Raises the amount that requires a formal bidding process from $25,000 to $50,000.
- Provides for a local preference

A motion to adopt Resolution 2023-32 updating the Town of Colorado City purchasing policy was made by John Chatwin and seconded by Nathan Burnham. All voted in favor.

Consider Personnel Policy 6 Attendance and Leaves Update.

In working with the employees on personal leave questions there were a couple of places in the policy that were ambiguous. Staff has reviewed the policy proposed a few edits to make it clearer.

Motion to approve updates to Personnel Policy 6 Attendance & Leaves was made by Alma Hammon and seconded by Jerusha Darger. All voted in favor.

Consider Financing for Police Vehicles.

In October 2021 the Town Council approved the use of Risk Management Fund funds for internal financing subject to certain limitations and Town Council approval.

The limitations were:

- Approval of the Town Council
- Maximum three-year payback
- Minimum interest rate at current municipal lease with minimum of 3.99%
- Fund balance maintained at $800,000 or higher.

The Town budgeted for two police vehicles. The vehicles were purchased in July and are now getting upfitted for service. (There was a considerable delay in getting the necessary parts for upfitting delivered).

The staff requested permission to make a loan, not to exceed $170,000 from the RMF and spread the cost of the two vehicles and the upfitting over three fiscal years. The proposed loan amount would leave a balance of $828,000 in the fund.

Motion to adopt Resolution 2023-33 authorizing a loan from the Risk Management Fund to the general fund in an amount not to exceed $170,000 for the purchase and

upfitting of two police vehicles was made by Alma Hammon and seconded by Mayor Howard Ream. All voted in favor.

Consider Updated Intergovernmental Agreement with Mohave County Agencies for Arizona Department of Administration, Grants and Federal Resources (ADOA-GFR) Arizona 911 Grant Program

On May 10, 2021, an IGA with the ADOA-GFR and Mohave County and the other municipalities in Mohave County was approved and entered into by the Town. The IGA provided that each of the participating agencies would be the fiscal agent for the grant in different years. After working on the process for two years the parties to the IGA decided that it would be in the best interest of all to have one agency be the fiscal agent going forward and that Mohave County would be the fiscal agent for the 911 grant funding.

The IGA has been updated to reflect that the change has been reviewed by legal counsel and is ready for Town Council action.

Motion to approve the updated IGA with Mohave County Agencies for Arizona Department of Administration, Grants and Federal Resources (ADOA-GFR) Arizona 911 Grant Program and authorize the mayor to sign the same was made by Jerusha Darger and seconded by Alma Hammon. All voted in favor.

Executive Session for Discussion and Consultation with Legal Counsel for Legal Advice in Accordance with A.R.S. 38-431.03(A)(3)&(4

A motion to excuse Executive session was made by Mayor Howard Ream and seconded by Jerusha Darger. All voted in favor.

Budget Report and Order to Pay Due Claims

Town Manager Vance Barlow presented the Budget Report and Shirley Zitting touched on some of the items in the Payment Approval Report as was presented for review and approval. The Council has reviewed the budget report and a detailed report of the due claims.

A motion to accept the budget and pay the due claims as they become due was made by Nathan Burnham and seconded by Alma Hammon. All voted in favor.

COUNCIL COMMENTS

Council Member John Chatwin inquired about how to bring awareness to the city residents regarding the City's Street Side Ordinance.

The meeting was Adjourned at 7:20 p.m.

CERTIFICATION

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the regular meeting of the Town Council of Colorado City held on the 11th day of December 2023. I further certify that the meeting was duly called and held and that a quorum was present.

Dated December 11, 2023

_____

Town Clerk

SUMMARIZED MINUTES OF THE TOWN OF COLORADO CITY COUNCIL WORK SESSION HELD WEDNESDAY, DECEMBER 20, 2023, AT 25 S CENTRAL STREET, COLORADO CITY, ARIZONA

Meeting was called to order at 5:00 p.m. by Mayor Howard Ream who led the group in the Pledge of Allegiance

Roll call showed present: Mayor Howard Ream, Vice Mayor Dalton Barlow, and Council members Alma Hammon, John Chatwin, Nathan Burnham, Thomas Holm, and Jerusha Darger.
Staff present: Town Manager Vance Barlow, Town Clerk Rosie White, and Deputy Clerk Shirley Zitting and Sarah La Corti

Discussion was had on Ratifying the Appointment to Joint Utility Board

Mayor Ream explained to the Council that in studying the Arizona Statutes relating to impact fees, it spelled out that the infrastructure Improvements Advisory Committee members could not be employees of the Town. The IGA expressly stated that some of the duties of the Joint Utility Board are to review the land use assumptions, the infrastructure needed and the costs for system expansion and potential impact fees.

Rick White, who had served on the Board for the Town was also employed by the Town in the Streets and Roads Department.

The decision was made to remove him from the Joint Utility Board and appoint James Broadbent to fill his place on the Board.

A motion to ratify the appointment of James Broadbent to the Utility Board to finish the term ending December 31, 2025, was made by Nathan Burnham, and seconded by Thomas Holm. All Council Members voted in favor.

Consider Appointment of Infrastructure Improvements Advisory Committee.

Town Manager Vance Barlow addressed the Council stating that ARS §9-463.05 G requires that the Town appoint an infrastructure Improvements Advisory Committee or have a biannual audit by qualified professionals who are not involved in the development of the plan. (all of ARS §9-463.05 is in the packet for your reading pleasure).

One of the duties of the Joint Utility Board is to perform that function. The Town had only appointed three of the five members and so it was thought prudent to have the Town Council formally appoint all members of the Board for this purpose as it related to the Town.

The motion to appoint the Joint Utility Board consisting of Ezra Nielson, Sterling Jessop Jr., Theil Cooke Jr., Jesse Barlow, and James Broadbent to the Infrastructure Improvements Advisory Committee for the Town of Colorado City was made by Mayor Howard Ream and Seconded by Alma Hammon. All Council Members voted in favor.

ADJOURNMENT 5:08

CERTIFICATION

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the work session of the Town Council of Colorado City held on the 20th day of December 2023. I further certify that the meeting was duly called and held and that a quorum was present.

Dated this 8th day of January 2024.

_____

Town Clerk

TOWN OF COLORADO CITY
P. O. Box 70 ✳ Colorado City, Arizona 86021
Phone & TDD: 928-875-2646 ✳ Fax: 928-875-2778

AIRPORT MANAGER'S REPORT

January 01, 2024

Airport Operations

Total recorded operations for December 2023, were 1181. December 2022 traffic counts were 582.

Fuel sold for December 2023: Jet A = 582 gallons, Avgas = 1329 gallons.

Private Hangars:

LaDell filled out all the form 7460s (Notice of Proposed Construction) for the 7 new hangars. The number of new hangars is actually 7, not the 9 originally reported. This is because Dodeca and Alliance hangars are now combined into one larger hangar. Also the presently existing Zitting Construction hangar was listed as a new hangar, but it is already standing. We have not yet submitted the form 7460s, even though they are filled out, because we are waiting for contact information from Lance Weaver who has decided to go ahead with his hangar even though he felt that the lease fees were too high. We want to send all these forms in one package to FAA.

Construction can start now even though the 7460s need to be approved by FAA before we begin building vertical.

We are still waiting for the infrastructure fee costs from the Town Manager before we can sign lease agreements with the 7 prospective tenants.

Runway 29 Taxiway

The taxiway project is now complete except for the lighting. The electrical components were expected to be delivered about halfway through the month of December. We are now told it will be about the middle of January.

Airport Maintenance

Last month the FAA came and re-certified the AWOS station and LaDell Sr. as the authorized technician. The wind reporting has been missing quite often from the transmitted information. LaDell has spent some time troubleshooting this intermittent problem. About 2 weeks age he ordered a new wind sensor which has just arrived and will be installed in place of the present sensor which appears to be faulty.

Also the rotating beacon has one of the two lights malfunctioning. This problem will be addressed in the very near future.

FBO Report

Westwing Aviation has continued to be very busy with inspections and repairs. We have been slowly catching up with our backlog since Wyatt has come to work. Things are going well with Westwing Aviation all in all.

Respectfully submitted,

LaDell Bistline Sr.
Airport Manager.

ACIP – **A**irport **C**apital **I**mprovement **P**lan(ning)
ADO – **A**irports **D**istrict **O**ffice
CATEX – Categorical **Ex**clusion
AWOS – **A**utomated **W**eather **O**bservation **S**ystem

TOWN OF COLORADO CITY
P. O. Box 70 ✳ Colorado City, Arizona 86021
Phone & TDD: 928-875-2646 ✳ Fax: 928-875-2778

BUILDING OFFICIALS REPORT

January 3, 2024

There are 16 building permits that are in plan review. There are 8 permits that are approved and are pending payments. There are 75 applications that have been started but not yet submitted. 8 permits have been issued within the last month. 15 permits have been completed and closed out, which includes 22 new family dwellings.

The Third building in the Cottonwood Village project has been issued the Certificate of Occupancy.

Construction is continuing on the Plus one building in Hildale. The existing part of the building was upgraded, and temporary occupancy has been permitted.

COLORADO CITY CDBG GRANT MANAGEMENT

Regional Account (RA)

The Hildale Street project is in the final stages of construction. The major things that still need to be completed is the light poles and some street signs. Delivery of the light poles has been delayed and still may be a couple more weeks to get them here. The contract completion date is January 31st and may need to be extended. There is a small punch list of items from the engineer that was sent to the contractor.

State Special Projects (SSP)

I have met with the engineer on the Central Street improvement project. We are looking to have bid documents and an approval from ADOH to start the bid ads sometime mid-March, with a bid opening in April, and bid award for the May Council meeting.

We are still trying to gather some mapping and location identifications for the environmental review on the Fire Hydrant project.

Respectfully submitted,

Andrew J. Barlow, CBO
Building Official

Colorado City Police Department
Hildale City Police Department
Courage-Compassion-Integrity

Robbins A. Radley
Chief Marshal

Police Department Report **December 2023**

Patrol: In Colorado City officers took 153 cases and in Hildale City 113 cases. Traffic citations in Colorado City 10 with 40 warnings, and Hildale City had 23 citations and 57 warnings.

Dispatch:

Update on: A formal intergovernmental agreement will be coming between the Town of Apple Valley and the dispatch center. The agreement is a requirement and will be similar in nature as our IGA with Hildale City for dispatch services. At this time the first draft is under review by both Town's attorneys in hope that in January an agreement may be reached.

Administration: A year end report and review will be prepared for January's Council, but here is a snap shot of calls for service in 2022 versus 2023: Hildale City 2022 = 1323 Colorado City 2022 - 1814, Hidale City 2023 (up to 12/26/23) = 1824 and Colorado City = 2456. This is equal to an approximate 25% increase in calls for service from 2022 to 2023.

Thank you to both City Councils and Managers for your continued support. A special thank you to outgoing members of City Council for your years of service.

Attached is a department picture. Note: there are a few members missing from the photo due to covering assignments and illness.

Thank you, *Robbins A. Radley*

Public Works Report

December 22, 2023

Cleaned the creek crossing culverts on Central Street at the creek crossing so the water can flow under. Straightened up and repaired the bent railing on Richard Street crossing.

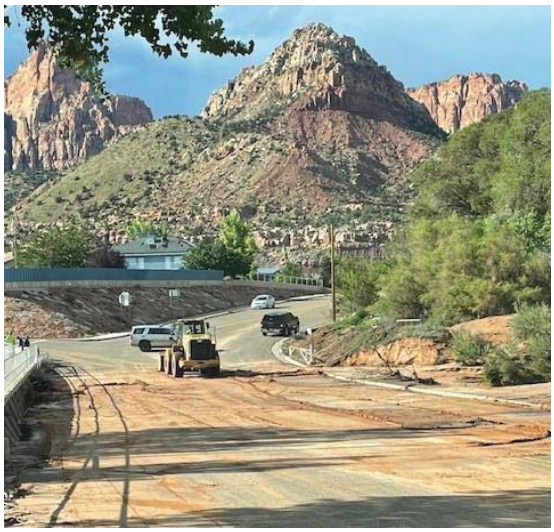
Paul got the front loader truck running with a little more work on the packer it will put to work so we can have a backup truck.

We spent 3 weeks filling the large crack and alligator cracking with mastic tar on the taxiways on the airport and willow street south of Arizona Ave.

Repaired the hole on the south side of Hildale Street creek crossing and spent time doing pothole repair around town. We are working on making our streets better.

Thanks for the opportunity to help improve our community.

Public Works Director



Parks Department Report

Date: January 3, 2024

HERITAGE PARK

We haven't had to do a lot of work in Heritage Park as it is winter, and the parks are mostly dormient.

We continue to have loose dogs in our parks. We walk through cleaning up and dealing with the problem.

LAURITZEN PARK

We have done a little weeding in this park. We used the ditch witch to stir up the sand in the playground area to remove and prevent weeds.

We were able to repair the stall walls in the men's restroom so that we could re-open the restroom building. We need to replace the roofing as soon as possible. The interior will need some fixing up after the roof is repaired. This can wait until a future fiscal year if need be. They are functional now.

POLICE DEPARTMENT

The grounds at the police department have been winterized so there has been no activity there for us.

STREET PARK STRIPS

I have been working over the streets to determine the best direction, and development to extend our irrigation well line to tie in the existing water system to the well and remove it from the culinary water system.

(Before) looking west from Central Street

The utility company washing out the storm drain under Central Street.

On University Avenue, along the north curb and storm drain on the west side of Central Street, has been buried for several years. Our well line extension will need to be directly behind the curb, so we have been cleaning it up with the minnie and, with the help of the utility department and the jetter truck have flushed it out.

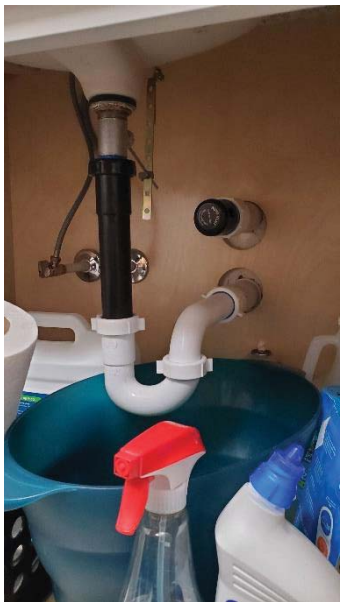
(After) Looking east on University Avenue towards Central Street. We removed the trees, dirt, and ground litter.

Parks Department Report

TOWN OFFICE GROUNDS

The Irrigation Well extension on the town office grounds is complete. This connection removed the town office grounds from the culinary water and put it on the irrigation well.

BUILDING MAINTENANCE



Vent installed horizontally.

The new restroom in dispatch was having a problem with no hot water. On inspection the hot water valve under the sink has been off since the remodel was finished. The problem is now fixed. Also, in this bathroom there has been an unusually high amount of odor. On inspection it was discovered that the "under sink" vent was installed horizontally instead of vertically. The plumber responded quickly and fixed this issue.

Vent re-installed vertically.

IRRIGATION WELL HOUSE

Weve been running the heater in the well house to protect the plumbing.

- *Heber white*

Utilities Monthly Report
December 2023

Gas Operations:

Gas staff have been rebuilding the regulators at the Natural Gas Gate Station in Hildale.

(Colorado City Natural Gas Gate Station)

Sewer Operations:

The Utility Crew cleaned approximately 3,650 feet of sewer main line this month. The meter at the Sewer Lift Station serving Centennial Park was calibrated and is now working accurately. The SMART Cover has worked as hoped for providing pre-alarming for higher-than-normal flows in the Centennial Park sewer system and allowing staff to respond proactively to the increased flows at the Lift Station. The damaged pumps have been replaced and/or repaired and are all back in service.

Sewer Headworks Project

Aardvark Underground Inc. has completed the construction work on the Sewer Headworks project. The city staff are coordinating an equipment start-up and training on January 8th, 2024. Once the equipment and start-up are complete, the City will have a ribbon cutting ceremony for the project.

Water Operations:

The Water Treatment Plant is operating at optimum levels for removal of iron and other constituents. Colorado City/Mohave County and Hildale held a groundbreaking ceremony for the Mohave County, Arizona ARPA Grant Water Project for new Well #25 on December 20th, 2023 at the Water Treatment Plant. Mayor Ream and the guest of honor, Mohave County Board of Supervisors Chairman, Travis Lingenfelter participated in the groundbreaking and spoke about the project and funds. Council members from Colorado City, Hildale and the Utility Advisory Board were in attendance and participated in the groundbreaking.

Grants and Administration:

Staff are working on completing the Arizona Department of Environmental Quality (ADEQ) permitting for the Academy Well and Well 17. During a site visit and routine sampling in November of the community wells, Utah DEQ informed us the two wells were not fully permitted and the communities will need to receive permits from the state agencies to use the wells for drinking water.

The Water Master Plan, Facilities Plan and the Impact Fee Study have been reviewed and recommended to the City and Town Councils for adoption.

The Rate Study, through the Rural Community Assistance Corporation (RCAC), is now substantially complete and will be available for discussion on the rate structure and timing of the increases in early 2024. The rate options will be discussed and reviewed by the Utility Advisory Board and further action will follow based on the comments and any follow-up work which may be requested. The project is being funded through the United States Department of Agriculture – Rural Development (USDA-RD)

Staff have been working on design and cost for the installation of a Booster Pump Station to eliminate the low-pressure zone in the southwest portion of Hildale. The consulting engineer is looking at the best options to place the booster pumps to provide the best location and have the greatest positive impact to the system by using hydraulic modeling. The booster pumps will allow construction of buildings and provide increased fire flows for the area.

Staff are working with the Water Infrastructure Finance Authority (WIFA) Loan/Grant, for the maintenance of the 600,000 (6K) gallon and 800,000 (8K) gallon tank. The 6K tank needs to be taken out of service and the inside cleaned, painted and placed back in service. The 8K tank needs cathodic protection installed and the exterior cleaned and painted.

Staff is working on energy efficiency programs for the wells and treatment plant by installing Variable Frequency Drives (VFD), the investigation includes finding grants for the purchase and installation of the VFD's.

Utilities staff are researching the conversion of the current gas and water meter reading system with an updated version that will provide better service and reliability. The current system, Badger Meter, has discontinued the gas meter portion of the sales and moved the reading platform to a cloud application using a third-party vendor, Amazon. Staff recommend moving to a generic reading system that can be used on all existing meters. The price for conversion and the reading devices would be significantly cheaper than making a change to another meter and reading company. Once the costs have been received, a presentation and recommendation will be provided to the Board and Councils.

Staff are continuing to work on the Water and Gas reports to show the use by each community and the non-revenue amount to account for all the uses of the water and gas from the system. They will be included in future reports and there will be a running amount for each fiscal year for comparison and reporting to the appropriate regulatory agencies.

TOWN OF COLORADO CITY
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Town Manager Report to the Council

January 4, 2024

Honorable Mayor & Council

The food for home consumption tax went into effect on September 1, 2023, and with some preliminary analysis it appears that it is generating approximately $30,000 per month which is very close to the estimates that were made for budgeting purposes.

We have filed the Section 218 forms and have not heard back yet, it could take several months, we will be working on the retirement plans and bringing some recommendations to the Council as we can. We are recommending that the Town increase the contribution into the 457(b) plan to 10% as the budget anticipated a greater contribution into retirement beginning mid fiscal year.

The Airport East Taxi-way project is still paused as the light components are on back order and are expected to be received and installed before the end of January. The Hildale Street CDBG street improvement project still has the streetlights to install and a few touch up items to be completed.

The Culinary Water CIP and impact fee analysis was sent to the DOJ for review, as required by the injunctive order, and are waiting for their response.

On December ___ a groundbreaking ceremony was held at the water treatment for the ARPA subrecipient grant from Mohave County. The plan is to post for bids for both the wells and the pipeline before the end of January with construction to be completed by end of May.

We are currently seeking quotes for pouring a concrete cap on Academy Avenue crossing with the expectation that it will be completed this fiscal year.

Sometime has been spent on the legal issues involving the Town.

A lot of time is spent on planning & zoning questions and meeting with developers, etc. Staff are meeting, almost daily, with landowners and developers with questions on the development of various projects, etc.

I want to express my gratitude for the Department Heads who are taking an active role in overseeing and managing their departments and budgets as well as all the Staff and Employees that are making the Town work and providing municipal services to the citizens of the area.

Thank You

Vance Barlow, CPM,
Town Manager

January 4, 2024

Achievements at the Colorado City Municipal Airport during the year of 2023.

1- A 7-foot-high perimeter fence was installed around the East side of the airport. (Phase II of the fencing project.) This fence completes the security fence around the entire airport. This Phase includes an underground fabric to a depth of 4 feet to prevent coyotes and other animals from gaining airport access by digging under the fence. The west side (Phase I of this project, completed in 2022, did not contain the underground barrier. Installation of that barrier is included in our 5-year ADOT/FAA plan and should be installed soon.

2- The Colorado City Airport was named Arizona Airport of The Year by ADOT in the spring of 2023. We received this award because of the improvements that have recently been made, as well as our Airshows/Fly-Ins that have taken place over the last 3 years. The paperwork and application for this award was accomplished by Airport Committee member, Darlene Stubbs who also put together and coordinated the necessary arrangements for the Airshows. She also solicitated and received funding for the event from various sponsors in and near our community.

3- We held the Airshow/Fly-In on Saturday, September 30, 2023. Weather was somewhat un-cooperative with winds, which shortened some of the aerobatic performances and airplane rides, but we still had attendance of approximately 2500 people, and we considered the event a great success!

4- The parallel taxiway project construction plans and documents for runway 11/29 (Phase I of this FAA funded project) were completed early in 2023. The Actual construction of the taxiway to runway 29 was substantially completed in the fall of 2023. The lighting of that taxiway still needs to be installed and is scheduled to be completed in January of 2024. The taxiway is in use and fully functional at the present time, even though it is unlighted. Pilots and airport users are delighted for this much needed improvement.

5- Much effort was exerted to build 7 new corporate sized hangars on the Northeast side of the airport. Preliminary plans have been produced by working with our consultants, Woolpert Consultants and Aliiance Consultants. Tenants have been lined up to enter leases with the city to build these hangars. In the Fall of 2024, we received CATEX approval to install the hangars. We are now making construction plans to put in the infrastructure of water, sewer, and electricity. We are hoping that during the coming year much of the construction can be accomplished for these much-needed facilities. This will help to bring in additional funds to the City coffers. There is much demand in our area for aircraft storage space.

Thanks to City officials and Council members for being Aviation pro-active and supporting our airport!

LaDell Bistline

Airport Manager

Town of Colorado City

TOWN OF COLORADO CITY
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To the Mayor, Town Council, and Town Manager of the Town of Colorado City

The joint Building Department of Colorado City and Hildale is dedicated to excellent service to the community. Often the Building Department is the first contact some folks have with the city. It can set the attitude for other interactions with another department. We receive many phone calls and emails that are for Planning and Zoning, Utilities, and Public Works.

2023 was a good year for the Building Department. We have issued 112 building permits which is also 112 plan reviews. We have made 560 inspections with 74 final inspections. A Certificate of Occupancy has been issued for 87 new family dwellings. Which includes 3 multiplex buildings.

The accomplishments of the Building Department cannot be claimed only from the department. The accomplishments are largely the efforts of developers, contractors, and homeowners.

Some notable projects for 2023 are:

- Ridgeline Storage Facility
- Common Grounds Thrift Center
- Cottonwood Village
- CCUSD North Auditorium Remodel
- Cliff View Townhouses
- CCUSD Trades Building
- Plus One
- Colorado City Town Office Remodel
- Colorado City Radio Tower

Some of these projects are still unfinished.

I now have 16 Certifications from the International Code Council. I was issued a certificate for Certified Building Official on September 15, 2023. It was an 11-year effort.

A complete CDBG project usually is at least a three-year undertaking. In 2023 we were awarded an SSP grant for the South-Central Street Improvements. We started construction and are around 80% complete on the Hildale Street Improvements. We have started the process of public participation and an environmental review in anticipation of applying for an SSP grant in 2024.

Respectfully submitted,

Andrew J. Barlow, CBO

Building Official

HILDALE - COLORADO CITY FIRE DEPARTMENT

Fire Chief's Report to the Board

December 19, 2023

ADMINISTRATIVE ACTIONS: Kevin attended a "Listening Session" in St. George hosted by the Utah Department of Public Safety regarding the transition of the Office of EMS from the Department of Health and Human Services to DPS by next July. The move is by legislative mandate. DPS representatives asked to hear from agencies what they see is important to change or continue and the bureau functions are moved under the new umbrella of DPS.

The Washington County LEPC meetings were held on December 7.

The mandatory reporting to Centers for Medicare & Medicaid Services was submitted by the November 30 deadline. This is a new requirement for ground ambulance services to provide comprehensive financial data including volunteer hours and facility costs. Hildale Fire Department was among the quarter of all agencies nationally that were selected just prior to the pandemic and was giving an extension. Colorado City FD is on the list to report for the current year. The report was a combined effort by GCS Billing, Daniel S. Barlow, Mary Barlow, Stacie Knudson, and Mildred Barlow.

TRAINING REPORT: One evening was used to catch up those who had missed the mandatory emergency driver refresher and also the SCBA timing and crawl-through evaluation. 68% of our responders participated in the EVO update and 60% of firefighters have completed the SCBA evaluation.

Special Operations training was a hazmat decon corridor drill set up at Station 1.

Both the MCC Paramedic and EMT classes have completed. Two department members completed the year-long Paramedic program and graduated. Five current members completed the EMT class. Seven other class members may be interested in applying for membership. Kevin and Lily also assisted with the NREMT testing for the Richfield Paramedic class.

The curriculum and schedule for the Firefighter Recruit Academy have been drafted. We will have 11 candidates, Kanab FD one, Hurricane Valley FD two, and Apple Valley FD two for a total of sixteen in the academy.

MAINTENANCE REPORT: The replacement motor for A110 was finally delivered. The project required that the mechanics take the entire cab of off the chassis. It is expected to take several more weeks to complete the job.

A great deal of effort has been put into cleaning Station 1 in preparation for the year-end dinner. All staff members and several volunteers put in two full days of cleaning, organizing and clearing out old outdated medications and medical supplies.

FIRE PREVENTION: The CPR Training Center certified 12 CPR/First-Aid students. Five department members were provided a new ACLS class.

Fire Prevention activity continued with several commercial inspections. Two more of the Cottonwood Village Apartments buildings came on line after fire system tests.

OTHER: Two structure fire mutual aid responses were made into Hurricane.

About 50% of our transports have been going to the new IHC Hurricane ED with about 50% directly to St. George Regional Hospital.

RESPECTFULLY SUBMITTED:

Kevin J. Barlow, Chief

Colorado City Police Department
Hildale City Police Department
Courage-Compassion-Integrity

Robbins A. Radley
Chief of Police

Arizona (928) 875-9170
Utah (435) 874-2240

Police Department Report **2023 year end report**

This report will cover some of the highlights of the 2023 Year's accomplishments.

Patrol: Over all the number of incidents patrol officers have been assigned to has risen from a total number of 3,137 in 2022 to 4,334 in 2023. Respectively this is 1,835 incidents in Hildale City and 2,499 in Colorado City which is a 27% increase in incidents officers have been involved in. Driving Under the Influence (DUI) arrests are up 69% this year as well. Our K9 handler and K9 Becca completed their dual purpose certifications, now both are patrol and drug certified. K9 Becca celebrated right out of training by finding a large quantity of drugs while assisting a Mohave County Deputy on a traffic stop. We are lucky to have a K9 program and look forward to their continued successes.

Dispatch:

It has been an extremely busy few years for the dispatch center, this year especially as new next generation 911 phone services were implemented with all new 911 phone service equipment being installed. The center also received new radio consoles bringing the daily use consoles number to four seats with the ability to expand to seven seats over time. These four seats serve Fire, EMS and Police calls for service and all of our dispatchers are required to be certified in each discipline.

Grant funding through the State of Arizona provided us the opportunity for the new consoles as well as all new "back-hall" radios, a new 110 foot tower with new microwave antennas that reach out to radio repeaters that also received new microwave antennas. We are grateful to the engineers and installers who built and installed the new system.

Administration: This year was most notably marked by the changing of the police department name from the Colorado City Marshal's Office to Colorado City Police Department in Arizona and Hildale City Police Department in Utah. The name change required a refresh of department logos. The badges were changed, but kept the Marshal's star, now placed over the police shield which allows us to retain the historical nature of the department. The police patches were changed as well as the vehicle decals, again retaining in the design as much of the prior logos as possible.

We have added social media to help us with community outreach and to disseminate information. Part of what will be added in the near future will be a running update on the animals that are in animal impound and how to contact animal services regarding animal issues.

With the assistance of our community allies the first fall dance was hosted by the police department in the street in front of the department. There were well over 400 people in attendance with some great food,entertainment and dancing.

We have added a new Intoxilyzer 9000 machine to process DUI drivers. We have also added a new glass fingerprint scanner to our intake and processing area. Both of these machines enable our officers to be more efficient in doing their work. These machines also serve the Mohave County Deputies and our area DPS Troopers as the machines are set up for their use as well.

A traffic radar and digital sign trailer was added. This allows for traffic to have a visual accounting for their speed in the areas where the trailer is parked. The trailer has software which helps show traffic patterns and allows for traffic survey information to be collected.

This year we have also added an in house victim's advocate. We believe our neutral position in the cities will allow for victims of crime to be served as they go through the judicial process when they might have otherwise passed on receiving services. Like anything we add to our services provided there will be a period of growth and learning that comes with it, yet we feel we are in the best position to provide such services and we look forward to the balance it brings to serving everyone in the community.

Every year we participate with all of the law enforcement agencies in the county in Shop with a Cop. The program has been very successful and we look forward to the program extending into our area more in the future.

Thank you, *Robbins A. Radley*

PARKS DEPARTMENT YEAREND SUMMARY

Date: January 3, 2024

The things we have achieved this year in the parks and streets and roads (Park strips) in 2023:

1- We have maintained the Lauritzen and Heritage Park grounds by:
   - A- removing weeds
   - B- maintaining sprinklers
   - C- mowing
   - D- edging and trimming
   - E- fixing water leaks
   - F- added a freezeless hydrant (Lauritzen Park)
   - G- repaired restrooms from vandalism and reopened to public (Lauritzen Park)
   - H- repaired fence and added gates to playground at Heritage Park
   - I- treated the outside of Heritage Park Conference building for spider mites. (ongoing)
   - J- dealing with vandalism (cleaning it up quickly) and maintaining a presents at the parks to discourage it

2- We have maintained the planter strips along our major streets by:
   - A- pruning trees
   - B- sprayed weeds along street sides
   - C- fixing water leaks (South Central bored holes all through our water system throughout town) repaired system from Bees Market to Johnson avenue
   - D- running the flail mower with the tractor, along the street sides where it would fit
   - E- running a lawnmower where the flail mower wouldn't reach
   - F- extending our irrigation main line on Hildale Street, north two blocks
   - G- replumbed the planter strip along the north side of east University and around the Cottonwood Village subdivision
   - H- plumbed the town office grounds onto the irrigation well and removed it from watering on the culinary system
   - I- Installed saddles on our 6" irrigation well water line and extended a line out from under area where new sidewalk was to be poured along east side of Mohave Avenue along the north curb for one block

3- We have done building maintenance during the remodel by:
   - A- removing furniture
   - B- being on call for the contractors for info and light duty moving and clearing rooms
   - C- heating and ventilation as needed
   - D- shuffling offices to stay ahead of the contractor and keep the office open
   - E- storing off premise office equipment and returning it as needed

- *Heber White, Michael Bergamo, Rickie White*

Utilities 2023 Accomplishments

Since May of 2023 the following documented accomplishments have been started and/or completed by the Utility Department to provide high level operations and service for the benefit of the communities. Since the successful transition in May of 2023, the department and staff have worked on many projects, some for existing residents and others for new development. Reporting and communication have increased between the department and regulatory agencies to meet compliance with all community, county, state and federal requirements.

Staff have been working on additional programs and in higher level capacities to meet the regulatory requirements. During this time, staff have taken on additional responsibility. There was a loss of personnel during 2023 with the exiting of two (2) full-time employees and the hiring of one (1) full-time employee. Beginning next year, 2024, staff will be at optimum levels for the needs of the communities.

Listed below are the accomplishments for May – December of 2023:

1. Submitted a grant for Natural Gas Safety Improvements
2. Repair and painting of the interior of the 800,000-gallon tank
3. Re-drilling of Well #21 and replumbing for use in the summer
4. Repaired Well #10 in June by replacing pump, motor, wiring and piping
5. Worked on inventories for Colorado City Wells for insurance
6. Worked on 2022 audit for Hildale
7. Completed Natural Gas inspections for Utah
8. Completed Natural Gas inspections for Arizona
9. Inspected the “Deep Well” for water quality
10. Found a hole in the side of the casing on the “Deep Well”
11. Contacted Utah state Water Division for permits and funds for the leaking Deep Well Casing repair

12. Contacted and requested price quotes from local Well Companies to make the repair on the “Deep Well” casing
13. Repaired the leak in the casing of the “Deep Well”
14. Worked on the request from BLM for reasons why water was needed form the BLM property
15. Received a grant from Utah Drinking Water Division for the Water Master Plan update and worked on the Master Plan
16. Worked on the Water Rates case with Rural Communities Assistance Corporation which is paid for by the USDA-RD
17. Conducted RFQ for Engineering Firms for On Call Engineering Services
18. Worked with several developers for Utility Service on new subdivisions
19. Completed the Natural Gas conversion for Arizona
20. Completed and assessment of the existing malfunctioning SCADA System
21. Received quotes for replacement of the antiquated SCADA system
22. Working on completing the conversion to the new meter reading system
23. Received a $150,000 grant from the Utah Division of Drinking Water to complete the Lead, Copper Rule revision inventory of the water system
24. Conducted a complete inventory of the water meters in the system against the meter reading and billing system making several updates to account for water use

25. Completed an Environmental Protection Agency (EPA) self-assessment for the sewer system Capacity Management and Operations Maintenance (CMOM) federally required plan
26. Developed and started operations on the CMOM plan for the sewer system
27. Received quotes on cleaning, repairs and painting of the two (2) water tanks – 600,000 gallons interior and exterior and 800,000 gallons exterior – including a Cathodic Protection Program for the tanks
28. Apply to Water infrastructure Finance Authority (WIFA) Arizona for funding of the water tanks and SCADA system
29. Completing the Mohave County ARPA Grant Water Project for two (2) wells and replacement of the raw water line to the Water Treatment Plant
30. Completing the Headworks Project at the Lagoons with Sewer Impact Fee and Operation funds
31. Completion of the drilling of the new Well #17
32. Received approval for the Utah Gas Inspection
33. Received approval for the Arizona Gas Inspection
34. Working on the FY2023 Hildale Audit
35. Creating Effective Practice Guidelines (EPG) for all Departmental work processes (formerly known as Standard Operating Procedures - SOP's)
36. Received training for Backflow Prevention and received certifications for the Backflow Program as required by federal and state laws
37. All staff – weekly Safety Program
38. All staff – Annual training and updates to maintain certification for Natural Gas, Propane Gas, Water, Sewer, CDL, Federal Court Mandated Training, etc.

The list is not all inclusive but gives a high-level overview of the work and accomplishments of the Department over the majority of 2023.

A special Thank You to **Nathan Fischer** for his leadership and work on all the programs while still working on the day-to-day operations. His contributions are invaluable to the Department and the communities.

Mitch Jessop for his hard work and dedication on the Natural Gas Conversion, Natural Gas Inspections with Utah and Arizona and starting the electronic

tracking and files for all the Natural Gas requirements for daily, weekly, monthly and annual reporting.

James Moodie for the work on the Natural Gas and Propane programs in both communities and dealing with outside agencies. His work on improving the systems are valuable to the success of the system and the program.

Alvey Fischer for his work in conducting the EPA CMOM Self Inspection and creating the CMOM Program and Tracking system.

Athena Cawley for her help in setting up the electronic filing system for the department, for the work on the Natural Gas Flyers and working on the Utility Advisory Board meetings and agendas.

Ralph Johnson for his work on the annual Customer Confidence Report (CCR), which is an annual report required by federal and state laws, overseeing and conducting the sampling program for the communities.

A special Thank You to our newer employees **Troy Hammon** and **Dan Fischer** for the dedication and commitment to the department and the communities. They are the ones learning about our system and bringing new ideas for our operations.

TOWN OF COLORADO CITY
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To the Mayor, Town Council, and Town Manager of the Town of Colorado City:

The Town Clerk's office is often the first contact the public has with the Town. We are responsible for business licensing, animal licensing and impound processing, tax & revenue issues, elections, meetings (with agenda preparation, posting, etc.), town records, fingerprinting services, etc. This office is also responsible for the financial management revenue tracking, accounts payable, payroll processing and monitoring the budgets. We are responsible for how the public funds are used.

Over the past year, we have seen many changes in the Clerk's office. We started the remodel of the building in December 2023 and were working out of 2 offices in the main building from December to the end of June 2023. We played fruit basket upset for about 6 months. In May, Donna Black resigned from the Deputy Clerk position. She was willing to stay until we trained in someone to fill her place, for which we were very grateful. She has continued to help throughout the year on various occasions. We trained in Sylvia Williams to help in Accounts Payables, and she did a fine job for a few months but then resigned on September 30th.

In May we hired Ethel Cooke as a front desk receptionist. We also hired Leannah Pledger as a janitor. Then, in June, we hired Shirley Zitting and Sarah LaCorti to begin working as our Deputy Clerk/HR and Accounts Payable Clerk. They started on July 1st, the same day that the Clerk's office moved back into the newly remodeled building. We have had much to learn, and it seems we have a very good crew. The staff have learned quickly. Below I have listed some of the changes we have made and upgrades we have been able to accomplish since the first of 2023:

Field Print- Our fingerprints were not available for a time as our equipment was too old and we were not able to upgrade the software. We contracted with Field Print, and they sent us a cart with computer, scanners, and equipment to roll the prints for them. Citizens must go to their website and pay the fees and we receive compensation for rolling the prints.

Animal Licensing- We have implemented a system that is helping us track the animal licensing and impounds. It's not perfect but we have upgraded the forms and standardized the process. It is working very well.

Updates to Personnel Policies

Elections Trainings- Shirley, Sarah, and Rosie went to the AMCA annual training in Fountain Hills

New Computers- We have purchased new computers for the Clerk, Deputy Clerk, and the Accounts Payable Clerk

We got a Grill- Mayor Ream got a grill for the employees to use. The remodel has made a big difference in staff morale.

TOWN OF COLORADO CITY
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Over the past 6 months, I have been focusing on training Shirley, Sarah, and Ethel. My goal is to standardize all the processes we can so anyone can process payments, make purchase orders, process animal impounds and licenses, business licenses, etc. We have the opportunity to serve the citizens in a very unique way because we know how to do the "nitty gritty" stuff that many people don't even know exists.

This office simply couldn't function without our staff. In making a summary of 2023, I would like to tell you about the Clerk's Office and who is working for you:

Deputy Town Clerk: Shirley has done a very good job learning HR and the Clerk's Office regime. She is very willing to pick up and learn all she can. She has already taken the time to get her Election's Officer training from the Secretary of State's office. She is thorough, quick, and dedicated to doing the job right. She has the ability to listen and that is a gift. It has truly been a privilege to work with her.

Accounts Payable/ Administrative Assistant: Sarah is never busy because she is such an organized and quick learner. I believe I can speak for everyone in the office that Sarah is a mastermind. She picked up payables with no problem, receivables were just like a party to her, and she is every day anxious to understand more. She will be coordinating the mandatory training for the upcoming year for the Town. She's so nice to have around and we are glad to have her.

Front Desk Receptionist: Ethel is steady and dedicated. She is very kind to our customers but follows the rules in every way. She is learning a lot and is willing and genuine. We appreciate her diligence. She asks lots of questions, not because she doesn't know, but because she likes to make us feel needed when really, we know, "she's got this".

Janitor: Leannah is everyone's favorite employee. I always tell her that her job is the most important because if she didn't do her job, no one else would come to do theirs. She's very willing to take care of us and we appreciate all she does.

I would like to thank these people for their willingness to learn and take on the load they have taken for it is not a light one. This office has never functioned so smoothly since I took the Clerk's seat in 2018. Now, I look forward to being a support to them as they take the reigns and move forward in 2024. I thank the Council for allowing me to work with them and be involved in the city government. I would mostly like to thank Vance, for helping me and teaching me and working with me for the past 19 years. It has truly been a privilege to work with him.

Utility Advisory Board Recommendation Memorandum

To: Hildale City Manager & City Council/Colorado City Town Manager & Town Council

From: Hildale/Colorado City Utility Advisory Board Chair, Ezra Nielsen

Date: December 29, 2023

Cc: Jerald A Postema, Utility Director, Nathan Fischer, Utility Superintendent, Athena Crawley, Utility Administrative Assistant, Sirrene Barlow, City Recorder, Rosie White, Town Clerk

Re: **Review of the Hildale City & Town of Colorado City Culinary Master Plan, Infrastructure Plan and Water Impact Fee**

On December 20, 2023, 6:00 pm at Hildale City Hall at the regularly scheduled meeting of the Utility Advisory Board, the members reviewed and took public questions on the proposed Water Master Plan, Water Impact Fee Facilities Plan as presented by Sunrise Engineers dated October 2023.

A motion was made and approved unanimously by the board to recommend the City and Town Councils to adopt the Water Master Plan and Water Impact Fee Facilities Plan.

The Board makes this recommendation based on the requirements being met in compliance with Arizona **ARS 9-463.05** and Utah State **UCA 11-36a** Statutes for Impact Fees.

Further, in compliance with **ARS 9-463.05, Subsections D & G,** we, as the appointed Infrastructure Improvements Advisory Committee, have reviewed the land use assumptions and have determined the assumptions are in conformance with the general plan of the municipality. We further advise the municipality (Colorado City) to adopt the updated and revised land use assumptions, infrastructure improvements plan and development fee.

As the Utility Advisory Board and Infrastructure Improvements Advisory Committee we will review and provide recommendations annually to the municipalties.

HILDALE CITY & TOWN OF COLORADO CITY
CULINARY WATER MASTER PLAN UPDATE

October 2023

PREPARED BY:

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Washington, UT 84780
TEL: 435-652-8450
FAX: 435-652-8416

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Blaine Worrell, P.E.
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State of Utah No. 13229751

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Appendices

I. INTRODUCTION

Hildale City is located along Highway 59 in Washington County in southwestern Utah. The Town of Colorado City is neighboring Hildale, just across the border in Arizona. The water system is shared and funded by both communities and is operated and maintained by the Hildale Colorado City Utility Department. This plan was created with coordination from staff from Hildale City, the Town of Colorado City and the Hildale Colorado City Utility Department.

Hildale City Completed a Culinary Water Master Plan Update in 2020 which was an update to their 2014 Plan. The City has contracted with Sunrise Engineering to complete an update to the 2020 plan. While this is a shorter window between plans than is typical, the city has recognized that conditions and future projections have changed significantly in that short time period. The intent of this update is to account for these changes.

The culinary water system has been analyzed under the State of Utah Division of Drinking Water guidelines to determine the current system status and to evaluate possible system needs as the community grows during the next 20 years. As part of this plan, Sunrise Engineering, Inc. has recommended some improvements to the culinary water system and has developed a potential financing plan that will help Hildale City and the Town of Colorado City obtain the necessary funds for the recommended improvements.

This plan also serves as the Impact Fee Facilities Plan for Hildale and Colorado City and includes an Impact Fee Analysis.

This report does not analyze water rights or a secondary water system. This plan also does not include a user rate analysis.

II. SYSTEM USERS' ANALYSIS

A. LENGTH OF PLANNING PERIOD

It is typical for a Master Plan to use a 10 or 20-year planning period. For example, the first year of a 10-year planning period would be the year 2024 with the 10th and final year being 2033. This plan will use fiscal years and will assume a 20-year (2024-2043) planning period for recommended improvements. This period will allow an adequate evaluation of the system for potential infrastructure improvements or other needs. Revenue sources should be carefully evaluated each year as budgets are set by the city council.

B. PROJECTED GROWTH RATE

An important element in the development of the water system and capacity analysis is the projection of the city's population growth rate on an annual basis. This projection gives the planner an idea of the potential future demands on the culinary water system for the length of the planning period.

Projecting the number of future culinary water connections can be a subjective process. The most effective method of estimating the number of future connections is by analyzing past historical numbers of connections and census records. Because Hildale and Colorado City utilize the same water system, the census records and past numbers of connections of both Hildale and Colorado City were included in the analysis. In the past five years the communities have seen a fluctuation of positive and negative growth rates. Due to this fluctuation, analyzing the historical growth rates is an inaccurate method of predicting future growth for these communities. Figure II-1 below shows the historic population in both communities.

Figure II-1: Historic Population

Calandar Year	Hildale Population	Colorado City Population	Total Population	Est. Growth Rate	Number of Connections
2018	2,916	4,825	7,741	0.21%	863
2019	2,910	4,836	7,746	0.06%	763
2020	2,727	4,531	7,258	-6.30%	799
2021	2,825	4,694	7,519	3.60%	855
2022	2,931	4,871	7,802	3.76%	1,113

In the past couple of years, the growth rate in both communities has changed drastically. At the time of the previous plan, the communities anticipated minimal to no growth for the first few years of the planning window. However, in the past few years the communities have seen a significant increase in number of connections, and there are multiple new developments that are in various stages of construction and planning that are anticipated to come to each community in the planning window. Development is anticipated to continue at a high rate for the length of the planning window. This abrupt change in growth is one of the main reasons that the City is updating their culinary water master plan after only a few years.

staff and elected officials from both communities looked at the upcoming developments in different stages in the approval process to determine a realistic number of anticipated new connections in future years. The number of anticipated new connections was used to determine a growth rate. In the discussions with staff from each community, it was determined that based on the expected timeline of new developments, a higher than typical growth rate will be assumed over the 20-year planning period. The following growth rates were used for this study:

- 2024-2028 (first 5 years) – 10% per year
- 2029-2033 (second 5 years) – 12% per year
- 2034-2038 (third 5 years) – 10% per year
- 2039-2043 (last 5 years) – 8% per year

C. PROJECTED POPULATION & NUMBER OF CONNECTIONS

Based on the forecasted growth rates referenced above, the number of connections the City will need to plan for can be calculated with the compound interest formula shown below.

$$F = P(1 + i)^N$$

F = Future Population P = Present Population
i = Projected Growth Rate N = Years

This equation was used to project the community population and number of connections for each year in the planning period. Figure II-2 below shows a summary of the growth rate analysis. Appendix A shows the full analysis.

Figure II-2: Growth Rate Analysis Summary

Calandar Year	Est. Growth Rate	Hildale Population	Colorado City Population	Total Population	Hildale Connections	Colorado City Connections	Total Connections
2023		3,224	5,358	8,582	435	790	1,224
2024	10.0%	3,547	5,894	9,440	478	869	1,347
2025	10.0%	3,901	6,483	10,384	526	956	1,481
2026	10.0%	4,291	7,132	11,423	578	1,051	1,630
2027	10.0%	4,720	7,845	12,565	636	1,156	1,792
2028	10.0%	5,192	8,629	13,822	700	1,272	1,972
2029	12.0%	5,816	9,665	15,480	784	1,425	2,208
2030	12.0%	6,513	10,825	17,338	878	1,596	2,473
2031	12.0%	7,295	12,124	19,419	983	1,787	2,770
2032	12.0%	8,170	13,578	21,749	1,101	2,001	3,103
2033	12.0%	9,151	15,208	24,359	1,233	2,242	3,475
2034	10.0%	10,066	16,729	26,794	1,357	2,466	3,822
2035	10.0%	11,073	18,401	29,474	1,492	2,712	4,205
2036	10.0%	12,180	20,241	32,421	1,641	2,984	4,625
2037	10.0%	13,398	22,266	35,663	1,806	3,282	5,088
2038	10.0%	14,738	24,492	39,230	1,986	3,610	5,596
2039	8.0%	15,917	26,452	42,368	2,145	3,899	6,044
2040	8.0%	17,190	28,568	45,758	2,317	4,211	6,528
2041	8.0%	18,565	30,853	49,418	2,502	4,548	7,050
2042	8.0%	20,050	33,321	53,372	2,702	4,912	7,614
2043	8.0%	21,654	35,987	57,641	2,918	5,305	8,223

It is important to understand that projected growth rates are not the cornerstone of this plan. If the number of system connections projected is reached earlier or later than anticipated, future improvements to support growth may come either earlier or later.

D. PROJECTED EQUIVALENT RESIDENTIAL UNITS (ERU)

The water system is made up of multiple connection types. Hildale City and the Town of Colorado City report their different connections to the state as either residential, commercial, industrial, or institutional. Figure II-3 shows a summary of the number of connections by type.

Figure II-3: Total Number of Units Per Connection Type

Year	Residential	Commercial	Industrial	Institutional	Total
2018	730	71	24	37	862
2019	667	66	18	12	763
2020	695	70	20	14	799
2021	742	75	23	15	855
2022	939	98	28	48	1,113
2023	1,033	108	31	53	1,224

Each of these different connection types uses different amounts of water at different rates. In order to properly analyze the systems usage, the number of connections are converted to equivalent residential units (ERU). This is done by taking the usage per connection of each connection type and dividing by the usage per connection of residential connections. Figure II-4 and Figure II-5 show the ERU per connection type and the total number of ERUs. This plan will use the number of ERUs instead of number of connections.

Figure II-4: ERUs Per Connection Type

Residential	Commercial	Industrial	Institutional
1.0	1.4	1.1	1.7

Figure II-5: Total Number of ERUS Per Connection Type

Year	Residential	Commercial	Industrial	Institutional	Total
2018	730	71	14	33	848
2019	667	90	23	26	806
2020	695	114	14	32	855
2021	742	109	22	51	923
2022	939	142	32	82	1,195
2023	1,033	156	35	90	1,314

Applying the growth rates that were established in Figure II-2 to the number of ERUs, the projected number of ERUs can be found for the end of the planning period.

Figure II-6: Projected Number of ERUs

Calandar Year	Est. Growth Rate	Number of ERUs
2023		1,314
2024	10.0%	1,446
2025	10.0%	1,590
2026	10.0%	1,749
2027	10.0%	1,924
2028	10.0%	2,117
2029	12.0%	2,371
2030	12.0%	2,655
2031	12.0%	2,974
2032	12.0%	3,330
2033	12.0%	3,730
2034	10.0%	4,103
2035	10.0%	4,513
2036	10.0%	4,965
2037	10.0%	5,461
2038	10.0%	6,007
2039	8.0%	6,488
2040	8.0%	7,007
2041	8.0%	7,568
2042	8.0%	8,173
2043	8.0%	8,827

E. AVERAGE CULINARY WATER USAGE

The State of Utah Public Drinking Water regulations require public water system to meet requirements based upon usage. These requirements are found in the State R309 Code. The code provides a standard usage based upon the types of connections serviced in a system. For a standard residential connection, the code says to assume an average day usage of 400 gallons per day (gpd) per ERU. Historical usage data was provided by Hildale City and that usage was compared against the 400 gpd to check if it would adequately represent the usage in the city's system.

The historical usage from the city was from meter data over the past 5 years (2018-2022). To check against the usage indicated in the State's R309 Code, the average usage per ERU was calculated from the historical usage. The total average usage over the past 5 years was divided by the average number of ERUs and then converted to gpd/ERU as shown in the calculations below.

285,751,000 gallons / 925 ERU = **308,833 gallon/ERU/year**
308,833 gallon/ERU/year / 365 days/year = **846 gpd/ERU**

Figure II-7 shows a summary of the average usage and historical data that is explained above.

Figure II-7: Hildale & Colorado City Historical Usage Summary

Year	Total Usage (Thousand Gallons)	Number of Connections	Usage per Conn (gpd/conn)	Number of ERUs	Usage per ERU (gpd/ERU)
2018	303,105	862	963	848	979
2019	251,780	763	904	806	856
2020	285,109	799	978	855	914
2021	279,736	855	896	923	830
2022	309,026	1,113	761	1195	709
5-Year Avg:	285,751	878	900	925	846
This Master Plan will use a historic daily usage of 846 gpd/ERU					

The 846 gpd/ERU average usage calculated from the City's historical usage is significantly higher than the usage that is indicated for use in the State Code. This is because the average household size in the communities of Hildale City and Colorado City are larger than the average household size in the rest of the state. Because of the larger usage per ERU, this plan will determine usage demand from the historical usage instead of the numbers from the State Code. This method will result in a more realistic analysis and is the more conservative of the two methods.

The calculations in this report will be based on the historical average usage of **846 gpd/ERU** (0.59 gpm/ERU). It is recommended that future improvements be sized based on this average usage.

F. PEAK DAY DEMAND CULINARY WATER USAGE

Peak Day Demand (PDD) is defined by the Utah Administrative Code as the "anticipated water demand on the day of the highest water consumption". The state code uses 800 gpd/ERU for a peak day demand of a standard residential unit which is twice the average day demand. Therefore, it can be assumed that the PDD for this plan is double the 846 gpd/ERU average demand calculated above. Doubling the average usage results in a peak demand of **1,692 gpd/ERU** (1.18 gpm/ERU).

G. PEAK INSTANTANEOUS DEMAND CULINARY WATER USAGE

Peak Instantaneous Demand (PID) can be described as the highest demand at any one instance in the system. This can be determined based on hourly usage if such data is available. Where hourly usage data does not exist, which is the case of this study, the State Code uses the following method to calculate the PID:

Indoor Usage:

$$Q_{peak\ indoor} = 10.8\ x\ N^{0.64}$$

Where N is the number of connections and Q is the flow in gpm

Outdoor Usage:

$$Q_{peak\ outdoor} = N\ x\ Irr.Acreage\ x\ Demand\ Factor$$

Where N is the number of connections, Irr. Acreage is the average area that is irrigated throughout the system and the Demand Factor is based on the zone given in Table 510-7 of R309-510 of the Utah Administrative Code.

This calculations results in a PID of 2,444 gpm for the year 2024.

H. CONSERVATION

This plan assumes a conservation rate of 0.5% per year over the planning period. This conservation factor is used to represent any conservation efforts from the city, existing connections, or new connections. This rate also takes into account the decrease in average household size that is accompanying the community's current growth. This conservation results in the following demands at the end of the planning window.

- ADD (2043) = 766 gpd/ERU
- PDD (2043) = 1,531 gpd/ERU

The conservation factor is not used for the PID. As mentioned above, the PID is the highest demand on the system at any given moment. Conservation efforts do not have a major impact on the amount of water that could be used at any given moment.

III. WATER SOURCE CAPACITY ANALYSIS

A. EXISTING WATER SOURCE

To analyze source capacity, all available culinary water sources must first be identified. These sources are listed in Figure III-1. The flow capacity numbers were acquired from the Hildale City Colorado City Utility Department.

Figure III-1: Hildale and Colorado City Existing Water Sources

Name/#	Flow (CFS)	Flow (gpm)
	Wells	
4	0.265	119
8	0.134	60
10	0.189	85
11	0.178	80
17*	0.334	150
19	0.223	100
21	0.446	200
22	0.223	100
24	0.178	80
Academy	0.512	230
Power Plant**	0.000	0
Subtotal	**2.683**	**1204**
	Springs	
Jans Canyon	0.036	16
Maxwell Canyon	0.143	64
Subtotal	**0.178**	**80**
Total Source	**2.861**	**1284**

*Well 17 is currently being refurbished and is anticipated to produce 150 gpm once it is finished.
**Power Plant Well can produce 244gpm but is currently not plumbed to the treatment plant so it is unavailable and not counted as a source.

Listed spring flows are relatively constant. These springs were developed from a horizontal bore into the Navajo sandstone formation. The springs are currently used for Maxwell Park and a fill station. With the springs being used for these non-culinary uses the culinary system does not realize the full 80 gpm associated with the springs. These uses are unmetered, so it is not known what percentage of the spring water goes into the culinary water system.

B. EXISTING REQUIRED WATER SOURCE CAPACITY

The Utah State Code R309-510-7 states that a water system's source needs to meet "the anticipated water demands on the day of the highest water consumption which is the Peak Day Demand". The PDD was determined Section II.F as 1,692 gpd/ERU. The source capacity demand for the water system was calculated by multiplying the PDD from Section II.F by the total number of ERUs existing in the system. The results of the analysis are presented in gallons per minute. The results of this analysis are shown in Figure III-2 and the calculation is shown in Appendix B.

Figure III-2: Required Source Capacity (Existing Conditions)

Total Required Source Capacity	1,699 gpm
Total Existing Source Available	1,284 gpm
Existing Source Capacity Deficit	-415 gpm

C. PROJECTED REQUIRED WATER SOURCE CAPACITY

The projected culinary water source capacity required at the end of the planning period is determined from the same factors explained in Section III.B, but the projected number of ERUs is inserted into the calculations instead of the number of existing ERUs. The results of the analysis are shown below in Figure III-3, Figure III-4, and Figure III-5.

Figure III-3: Required Source Capacity (5-year Planning Period)

Total Required Source Capacity	2,438 gpm
Total Existing Source Available	1,284 gpm
Existing Source Capacity Deficit	-1,154 gpm

Figure III-4: Required Source Capacity (10-Year Planning Period)

Total Required Source Capacity	4,186 gpm
Total Existing Source Available	1,284 gpm
Existing Source Capacity Deficit	-2,902 gpm

Figure III-5: Required Source Capacity (20-Year Planning Period)

Total Required Source Capacity	9,387 gpm
Total Existing Source Available	1,284 gpm
Existing Source Capacity Deficit	-8,103 gpm

D. RECOMMENDED WATER SOURCE CAPACITY IMPROVEMENTS

The analysis above shows that the existing available source is not sufficient to accommodate a peak day demand. The historical experience has been that during peak summer months with the system running at full capacity, the City is unable to provide enough water. Without being able to provide enough water to meet system demand the water levels in the storage tanks gradually drop during summer months affecting available fire flow and water pressures. This has caused both communities to enact water restrictions during summer months for the last several years.

Source availability improvements are needed now as well as in upcoming years. Hildale City and The Town of Colorado City have performed multiple studies over the years looking at different ways to improve the quantity and quality of available source. These studies, as well as this plan, provided a number of recommended improvements. This plan includes the recommendations from these studies. However, these improvements do not provide enough sources to cover the required source capacity in the planning windows.

In order to increase the available source to meet the projected required source this plan assumes that a significant number of new wells will need to be drilled. In addition to the recommended improvements from previous studies, this plan recommends additional well fields to be installed at the 0-5 year, 6-10 year, and 11-20 year windows. These well fields are included as 6 single projects with one well field for each community in each of the planning windows. The following assumptions were used in calculating the number of needed wells:

- Each well has a flow of 120 gpm, the average flow of all existing wells.
- The required flow for each window's well field is the source deficit at the end of each planning period.
- Since Utah requires water rights to be purchased to drill new wells, this plan assumes a 70:30 split of Arizona to Utah wells to save on costs.
- The number of wells required was found by taking the total required flow divided by the average flow per well, then multiplied by the respective percentage to split the number of wells between the two states.

It is recommended that a well-sitting study be performed to try and provide the best possible locations to drill new wells. Because locations are not specified for these additional wells, the wells are not shown in the recommended improvements map in Appendix D.

1. 1 TO 5 YEAR IMPROVEMENTS

- Treatment Plant Wells – The quickest available option to help increase source capacity is to drill additional wells in the Arizona side of the system. This portion of Arizona is an open basin and does not require obtaining water rights to drill and use a well. The City is currently working on a study to evaluate the locations of these two wells. The preliminary idea is to drill the wells at the treatment plant. Based on the output of existing wells, it is anticipated that these wells will produce roughly 80 gpm for the shallow well and 120 gpm for the deep well. The well study will help refine these estimated flows.

- Trailhead Well 1 – The City is looking at drilling additional wells in the nearby canyons to the northeast. The water from these canyons would be obtained from different geologic formations than their current wells. The hope is that the water quality is similar to the Jans and Maxwell Canyon springs. The Trailhead Well 1 would be located on City owned property by the Squirrel Canyon Trailhead. This well would provide additional source to the town but primarily will act as a test to determine potential quantity and quality of water. It is estimated that this well could produce 175 gpm. These wells are in Utah and will require water rights to drill and use the well. The City currently has water rights that can be transferred to use the proposed well.

- 5-Year AZ Well Field – It is anticipated that this project will comprise of 5 wells producing a total of 600 gpm

- 5-Year UT Well Field – It is anticipated that this project will comprise of 2 wells producing a total of 240 gpm

2. 5 TO 10 YEAR IMPROVEMENTS

- Trailhead Well 2- If the Trailhead Well 1 proves to be a successful route for obtaining additional source, it is recommended that the City continue to pursue this source with an additional well on the city owned land next to the Squirrel Canyon Trailhead. This well and all future wells up the canyon will require obtaining additional water rights. This Well is also estimated to produce 175 gpm.

- 10-Year AZ Well Field - It is anticipated that this project will comprise of 7 wells producing a total of 840 gpm

- 10-Year UT Well Field - It is anticipated that this project will comprise of 3 wells producing a total of 360 gpm

3. 10 TO 20 YEAR IMPROVEMENTS

- Hildale Groundwater Project Phase I - If the Trailhead Wells are successful at producing good quality water, this plan recommends that additional wells be drilled in the area Northeast of Hildale. These wells would be located on BLM property and would require environmental studies and going through BLM's process (such as a SF299 application and Plan of Development) for obtaining Right-of-Way on BLM land. The City has already begun working through this process with the help of the Washington County Water Conservancy District. Based on the best available information that the City has, it is estimated that this project would produce roughly 350 gpm. The exact location of these wells will be determined through coordination with the City and BLM.

- Hildale Groundwater Project Phase II- This phase involves drilling two additional wells in different location than Phase I but in the same general BLM owned area. Phase II would require the same BLM process and need for additional water rights. This phase is also estimated to produce roughly 350 gpm.

- Hildale Groundwater Project Phase III – This phase is similar to first two and involves additional wells in the BLM owned area Northeast of Hildale. It is estimated that this phase will produce 175 gpm.

- 20-Year AZ Well Field - It is anticipated that this project will comprise of 28 wells producing a total of 1680 gpm

- 20-year UT Well Field - It is anticipated that this project will comprise of 12 wells producing a total of 1440 gpm

These recommended improvements are summarized in Figure III-6. Appendix D includes an exhibit showing the location of these improvements.

Figure III-6: Summary of Recommended Source Improvements

Name/#	Flow (CFS)	Flow (gpm)	Est. Year Installed
Wells			
Treatment Plan Shallow	0.178	80	2024
Treatment Plant Deep	0.267	120	2024
Trailhead Well 1	0.390	175	2025
1-5 Year AZ Well Field	2.139	960	2028
1-5 Year UT Well Field	0.802	360	2028
Trailhead Well 2	0.390	175	2028
Hildale Groundwater Project PH I	0.780	350	2032
6-10 Year AZ Well Field	2.406	1,080	2033
6-10 Year UT Well Field	1.070	480	2033
Hildale Groundwater Project PH II	0.780	350	2036
11-20 Year AZ Well Field	6.150	2,760	2039
11-20 Year UT Well Field	2.674	1,200	2039
Hildale Groundwater Project PH III	0.390	175	2040
Total Projected New Source	18.416	8,265	

The estimated schedule for the recommended improvements is based on available data and current funding that is available/projected. Constructing projects with the timing shown will take several years for the source capacity to exceed the minimum source capacity required. It is recommended that the early projects be pushed forward as much as possible as funding options become available.

E. SOURCE CAPACITY SUMMARY

Figure III-7 and Figure III-8 show the comparison between the available source capacity and the projected required source capacity. The available source capacity in Figure III-8 represents the source capacity available with the implementation of the recommended improvements including the various new wells required in each planning window.

Figure III-7: Projected Source Capacity with Existing Conditions

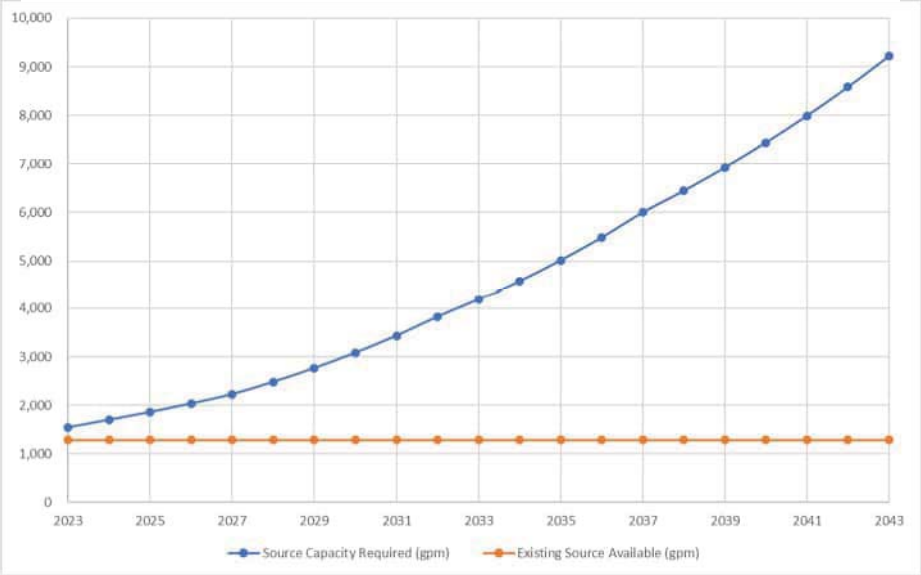
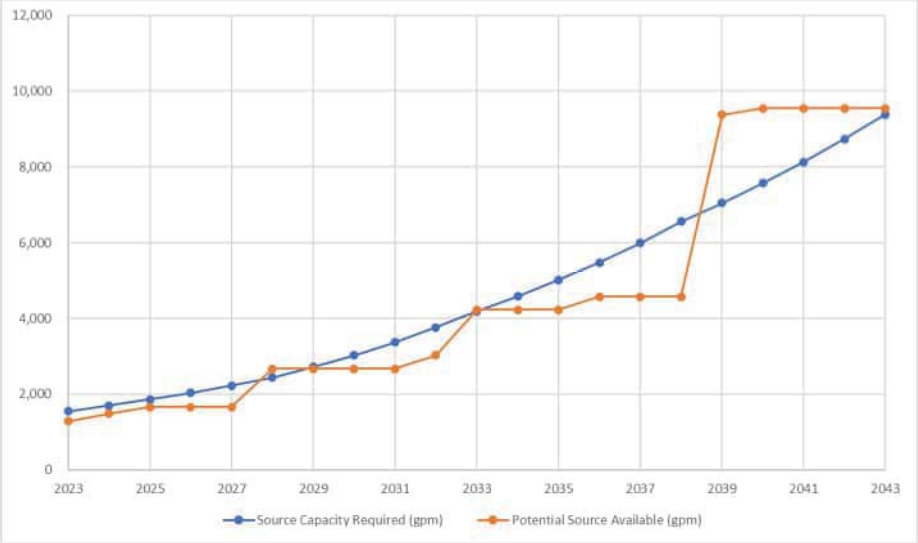


Figure III-8: Projected Source Capacity with Recommended Improvements



IV. WATER STORAGE CAPACITY ANALYSIS

Water storage capacity requirements are found in the State of Utah Public Drinking Water Regulations, R309-510. These regulations require storage for the community's culinary water system to meet one full day's average use requirement for all connections in the community in addition to fire flows for a minimum of two hours and emergency storage as deemed necessary.

A. EXISTING WATER STORAGE CAPACITY

There are currently four existing water storage tanks. These tanks are identified in Figure IV-1 below. The Saddle Tank is higher than the other three, and it receives water from the springs. The outlet to the Saddle Tank is near the top of the tank allowing unpressurized outflow. In an emergency, there is a valve that can be opened to utilize the storage in the tank. The other three tanks all have the same high-water elevation and receive water from the wells through the treatment plant.

Figure IV-1: Storage Capacity Summary

Existing Tank	Available Storage (gal)
Saddle Tank	60,000
800,000 Gallon Tank	800,000
600,000 Gallon Tank	600,000
Elm Street Tank	1,000,000
Total Existing Storage Capacity	2,460,000

B. EXISTING REQUIRED WATER STORAGE CAPACITY

As shown in Section II-E, average water usage per ERU also known as the Average Day Demand (ADD) in the water system is 846 gpd/ERU. In general, fire flow requirements are set by the local Fire Authority or are based on building size and type of construction. This plan uses the same minimum fire flow as the previous plans of 1,500 gpm.

The required storage capacity was calculated by multiplying the ADD by the total number of ERUs currently existing in the system. When compared with the system's total storage capacity summarized above, the calculation shows that the City has surplus total storage capacity under current conditions. The results of this analysis are shown in Figure IV-2.

Figure IV-2: Required Storage Capacity (Existing Conditions)

Total Required Storage Capacity	1,414,151 gal
Total Existing Storage Available	2,460,000 gal
Existing Storage Capacity Surplus	1,045,849 gal

C. PROJECTED REQUIRED WATER STORAGE CAPACITY

The projected culinary water storage capacity required at the end of the planning period is determined from the same factors explained in Section IV.B, but the projected number of ERUs is inserted into the calculations instead of the number of existing ERUs. The results of the analysis are shown below in Figure IV-4 and Figure IV-5.

Figure IV-3: Required Storage Capacity (5-Year Planning Window)

Total Required Storage Capacity	1,755,036 gal
Total Existing Storage Available	2,460,000 gal
Existing Storage Capacity Surplus	704,964 gal

Figure IV-4: Required Storage Capacity (10-Year Planning Window)

Total Required Storage Capacity	3,194,071 gal
Total Existing Storage Available	2,460,000 gal
Existing Storage Capacity Deficit	-734,071 gal

Figure IV-5: Required Storage Capacity (20-Year Planning Window)

Total Required Storage Capacity	6,938,975 gal
Total Existing Storage Available	2,460,000 gal
Existing Storage Capacity Deficit	-4,478,975 gal

The current storage capacity is not able to provide enough water for the 10- and 20-year windows. Therefore, improvements will be required in the future.

D. STORAGE CAPACITY CHALLENGES

The storage capacity analysis results show that the city has adequate storage for their current needs. However, with the growth the City is expecting, the required storage will surpass the currently available storage capacity. In addition, there are still some concerns and shortcomings with the existing storage facilities.

- During summer months water operators have expressed concerns that because they are barely able to meet system demands with the wells during the day, they are not able to keep the tanks full and therefore do not have the full available storage shown in the calculation above.

- The water system consists of a single pressure zone. There are multiple areas around the community within each of the community's' limits that are at an elevation higher than the maximum elevation the existing tanks can serve.

E. RECOMMENDED WATER STORAGE CAPACITY IMPROVEMENTS

Improvements need to be made to provide storage for the projected growth. An analysis was done to determine the location of the ERUs at the end of the planning period based on the available information regarding upcoming development mentioned in Section II.B. The system was divided

into six regions and the total projected ERUs were placed in their corresponding region. This resulted in the following total projected ERUs per region:

- Northeast: 251 ERUs
- Northwest: 5,304 ERUs
- Central East: 376 ERUs
- Central West: 345 ERUs
- Southeast: 1,629 ERUs
- Southwest: 327 ERUs

The results of this analysis was used to determine the location and size of the recommended storage improvements. Using the minimum sizing requirement of 846gpd/ERU a storage requirement was calculated for each region. This results in the following approximate storage required for each region:

- Northeast: 200,000 Gallons
- Northwest: 4,200,000 Gallons
- Central East: 300,000 Gallons
- Central West: 270,000 Gallons
- Southeast: 1,300,000 Gallons
- Southwest: 260,000 Gallons

The areas that require the most storage is the Northwest and Southeast. The existing tanks are able to provide the storage required for the other four regions. To reach the required storage the system needs storage in the following locations:

- Northwest: 4,000,000 Gallons
- Southeast: 500,000 Gallons

This additional 4.5 million gallons of storage will reach the states minimum sizing requirements. To provide emergency storage this plan also recommends an additional 1 million gallons of storage. This plan recommends 4 different storage projects be installed within the planning period to provide this additional storage. The recommended projects are as follows:

1. 1 TO 5 YEAR IMPROVEMENTS

- Sandhill Tank 1 – This tank would be constructed above the Elm Street tank to create a higher-pressure zone that would cover the area north of Utah Ave and east of the highway. This project would include a booster pump to get water to the tank and valving to create the new pressure zone. It is recommended this tank be at least a 2-million-gallon tank.

2. 5 TO 10 YEAR IMPROVEMENTS

- Trailhead Tank - This tank would be installed on the same site as the two wells recommended in the same area near Squirrel Canyon in Section III-D. This tank would serve

two purposes. First, it would collect the water from the proposed Trailhead Well and eventually the Hildale Groundwater Project wells. The second purpose is to create a higher-pressure zone on the northeast side of Hildale. This pressure zone would serve the existing and new building up the canyons north of Williams Ave. This plan recommends the tank capacity to be 500,000 gallons, but the capacity should be reevaluated after the City receives results on how much water can be obtained from the Trailhead Well 1.

3. 10 TO 20 YEAR IMPROVEMENTS

- Sandhill Tank 2 – Recently Hildale City annexed land west of the previous city limits. there are new developments in preliminary planning stages for this area and it is anticipated that these developments will be started within the planning window. This tank would be used to serve development in this area. This plan uses a recommended storage capacity of 2,000,000 gallons and anticipates that the tank will be located in a similar area and elevation as the Sandhill 1 tank. As these developments progress further down the planning stages it is recommended that the size and location of this tank be reevaluated.

- South Concrete Tank – In the southeast region of Colorado City, additional storage is required to provide storage for the new developments that are anticipated to be built in the area. It is recommended that the tank be 1,000,000 gallons and installed to be at the same elevation as the existing tanks.

These recommended storage improvements are summarized in Figure IV-5. Appendix D includes an exhibit showing the location of these improvements.

Figure IV-6: Summary of Recommended Storage Improvements

Proposed Tank	Available Storage	Est. Installation Date
Sandhill Tank 1	2,000,000	2025
Trailhead Tank	500,000	2028
Sandhill Tank 2	2,000,000	2034
South Concrete Tank	1,000,000	2038
Total Projected New Storage	5,500,000	

F. STORAGE CAPACITY SUMMARY

Figure IV-7 and Figure IV-8 show the comparison between the available storage capacity and the projected required storage capacity. The available storage capacity in Figure IV-8 represents the storage capacity available with the implementation of the recommended improvements.

Figure IV-7: Projected Storage Capacity with Existing Conditions

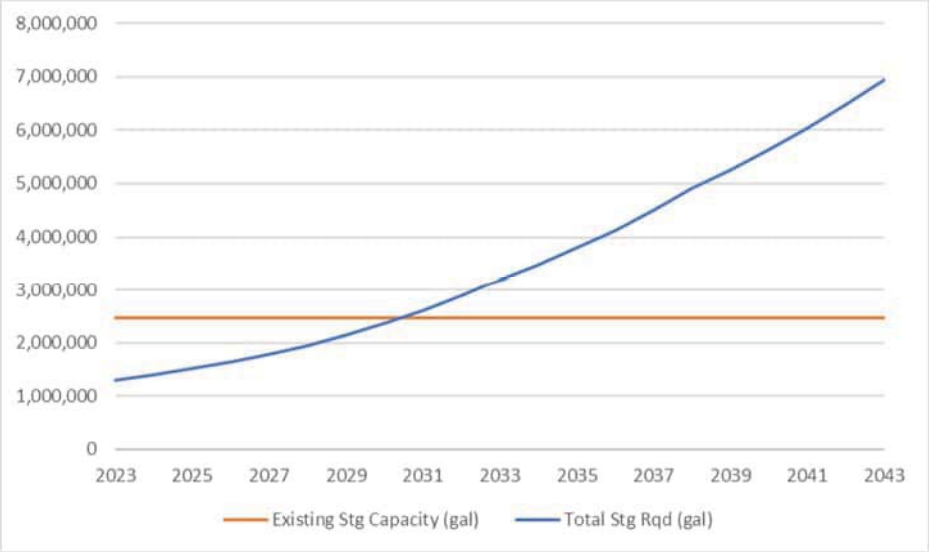
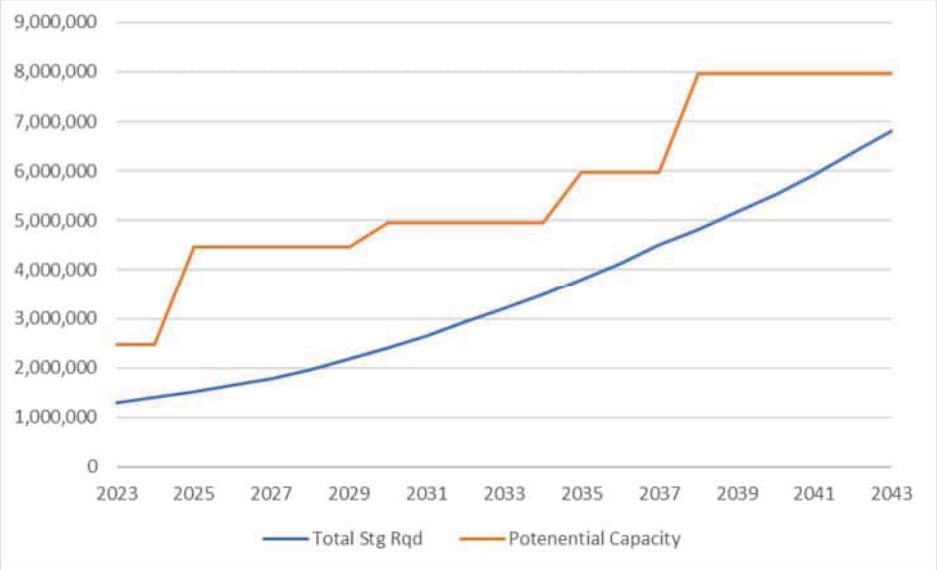


Figure IV-8: Projected Storage Capacity with Recommended Improvements



V. WATER TREATMENT REQUIREMENTS AND ANALYSIS

A. GENERAL REQUIREMENTS

The State of Utah Public Drinking Water Regulations, in accordance with the National Safe Drinking Water Act, have adopted "primary" regulations for the protection of public health and "secondary" regulations related to the taste and aesthetics. The regulations recommend that all culinary water sources have provisions for continuous disinfection. Hildale/Colorado City have a culinary water treatment facility to treat the existing wells in an effort to meet the State's requirements.

B. EXISTING TREATMENT FACILITIES

The existing culinary water treatment plant uses a greensand filtration process which includes injecting the water with potassium permanganate. The plant contains 6 pressure vessels designed to operate in parallel and treat 2,400 gpm. However, based on available data and communicating with the City, the plant has the capacity to treat approximately 2,000 gpm. The treatment plant needs to be able to treat more than the PDD so the system doesn't run out of water. Figure V-1 below shows how the treatment plant capacity compares to the PDD.

Figure V-1: Required Treatment Capacity (Existing Conditions)

Total Required Source Capacity	1,699 gpm
Total Existing Source Available	2,000 gpm
Existing Source Capacity Surplus	301 gpm

C. PROJECTED WATER TREATMENT CAPACITY

As the communities continue to grow, the demands on the system will grow as well. The treatment plants will need to accommodate the increasing PDD. Below is an analysis of the projected treatment capacity.

Figure V-2: Projected Required Treatment Capacity (5-Year Planning Window)

Total Required Source Capacity	2,438 gpm
Total Existing Source Available	2,000 gpm
Existing Source Capacity Deficit	-438 gpm

Figure V-3: Projected Required Treatment Capacity (10-Year Planning Window)

Total Required Source Capacity	4,186 gpm
Total Existing Source Available	2,000 gpm
Existing Source Capacity Deficit	-2,186 gpm

Figure V-4: Projected Required Treatment Capacity (20-Year Planning Window)

Total Required Source Capacity	9,387 gpm
Total Existing Source Available	2,000 gpm
Existing Source Capacity Deficit	-7,387 gpm

The treatment plant will not be able to treat enough water beyond the 5-year planning window. Improvements will need to be made to the treatment capacity in the near future.

D. RECOMMENDED WATER TREATMENT FACILITY IMPROVEMENTS

As mentioned before, the treatment plant has a surplus in the existing conditions but will need to be improved within the next few years. The following recommendations are made to improve the treatment capacity:

1. 1 TO 5 YEAR IMPROVEMENTS

- Raw Water Transmission Line - The raw water transmission lines which carry water from the wells to the treatment plant should be improved. These lines are old, undersized, and estimated to have iron and other mineral deposits adhering to the pipe. It is possible the amount of flow going to the treatment plant is restricted by these deposits. It is recommended that a new 12" transmission line be installed in Richard St. to convey water from the wells south of the treatment plant. It is also recommended that access points be installed that allow water operators to flush and clean out the lines on the new line and on the remaining existing raw water lines.

- Small Treatment Plant – The treatment capacity needs to be increased within the 5-year planning window, so it is recommended that a new treatment plant be constructed. This plant is recommended to treat approximately 1,000 gpm. There is no specific location selected for this plant, however it is recommended that it be built near the Power Plant well so that it can be incorporated into the culinary water system.

2. 6 TO 10 YEAR IMPROVEMENTS

- Additional Treatment Capacity Phase I - With the previous plant implemented, the treatment facilities be at a deficit again in the 6-10-year window. An additional 2,500 gpm will need to be added. This can be accomplished by either expanding the previous plant or building an entirely new plant. For planning purposes this report assumes that a new treatment plant will be constructed. There is no location selected for a new plant, but once a well site study has been completed, it's recommended that the location be central the additional wells that are constructed.

3. 11 TO 20 YEAR IMPROVEMENTS

- Additional Treatment Capacity Phase II – In this planning window, an additional 4,000 gpm is necessary to be able to treat enough water for the system. There is no direct recommendation for this, however some options include improving previous treatment

plants or constructing a new plant. The EOPC in Appendix C shows the cost of constructing a new plant.

VI. WATER DISTRIBUTION SYSTEM ANALYSIS

The State of Utah Public Water Regulations, R309-105-9, states three pressure conditions which must be met to demonstrate adequate service capacity of a system. These conditions are:

- At least 40 psi must be retained as residual pressure in the distribution system under a Peak Day Demand (PDD).
- At least 30 psi must be retained as residual pressure in the distribution system under Peak Instantaneous Demand (PID)
- At least 20 psi must be retained as residual pressure in the distribution system under PDD plus fire flow conditions.

A. EXISTING DISTRIBUTION SYSTEM ANALYSIS

The existing PDD and PID were calculated in Section II. These flows are shown below:

- PDD – 1,692 gpd/ERU = 1,699 gpm with the existing number of ERUs
- PID – 2,444 gpm

As mentioned in Section IV.B, this report used a fire flow of 1,500 gpm.

The existing Hildale and Colorado City culinary water distribution system has been modeled using the computer program WaterGEMS by Bentley Systems, Inc. For the existing system network there are areas which provide less than the required 40 psi of pressure for PDD, areas that provide less than 30 psi for PID, and areas that do not provide adequate fire flow. For the most part, the deficiencies in each of these requirements fall in the same areas of the system. Exhibits showing the areas of low pressure and fire flow are located in Appendix D. Below is a summary of these areas:

- Northwest Hildale (area between Utah Ave. and the Elm Street tank) - This area suffers from poor fire flow, lack of hydrants, and low pressure during PDD and PID. Fire flows in this area have been modeled as low as 253 gpm during PDD. This is largely the result of proximity to the elevation of the Elm St. tank. Pressures during PDD and PID are as low as 17 psi and 14 psi respectively.

- Northeast Hildale (area north of Jessop Ave. and west of Carlin St.) – This area suffers from poor fire flow, lack of hydrants, and low pressure during PDD and PID. Fire flows in this area have been modeled as low as 175 gpm during PDD. This is largely the result of proximity in elevation to the tanks, smaller line sizes, and lack of looping. Pressure during PDD and PID are as low as 27 psi and 21 psi respectively.

- East Colorado City (Between Edson Ave. and E Johnson Ave.) – This area suffers from poor fire flow and slightly low pressures during PDD and PID scenarios. Fire Flows have been

modeled as low as 544 gpm during PDD. This is largely due to the elevation of the area being too close to the same elevation of the existing tanks.

B. PROJECTED DISTRIBUTION SYSTEM ANALYSIS

The projected distribution system analysis is performed using the same assumptions as in the existing system analysis, except that the projected number of connections for the 20-year planning window is inserted into the calculations. The results of this calculation for both PDD and PID are shown below:

- PDD – 1,531 gpd/ERU = 9,387 gpm with the projected number of ERUs
- PID – 11,412 gpm

The same water model that was used to examine the existing distribution system was used to analyze the scenarios of the projected system at the end of the 20-year window. According to the model, the only area of the system not meeting the conditions of R309-105-9 at the end of the planning period is the East Colorado City area. There are no additional areas of concern that arise in the existing system.

C. FIRE HYDRANTS

State regulations require all new fire hydrants to be served from 8" diameter or larger pipelines unless it can be proven through the use of modeling that 6" lines are sufficient. There are a number of existing hydrants in the system that are on 6" or smaller pipes.

State requirements also state that hydrant spacing be no more than 500 feet. There are numerous locations throughout the system where additional fire hydrants are required to meet the 500-foot maximum spacing.

D. RECOMMENDED DISTRIBUTION SYSTEM IMPROVEMENTS

From the system deficiencies observed in the analysis, this plan recommends the following improvements:

1. 0 TO 5 YEAR IMPROVEMENTS

- Fire Hydrants – Install additional fire hydrants to meet the minimum required spacing. In placing these new hydrants, some smaller lines will need to be replaced with 8" lines to meet the requirements mentioned above. It is recommended that this project replace all undersized lines which are not already included in the other improvements. This project would help bring the system into compliance with fire flow requirements.

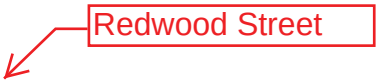
- Upper Pressure Zone Improvements – Install a new 8" diameter water main on Jessop Ave and Newell Ave from Juniper St. to Redwood St. This will provide looping and help create the pressure zone that will be implemented with the new Sandhill Tank 1. This project involves disconnecting 6 North/South lines in Utah Ave so all flow going south will flow through one PRV connecting the two pressure zones.

  Northwest Hildale Transmission Line – As mentioned in previous sections, the City of Hildale has recently annexed new land west of the current city boundary. Currently there is no water infrastructure in place to provide water to this area. A transmission line would need to be installed from the Sandhill 1 tank west to the new development areas. this plan assumes that this would need to be a 16" line from the sandhill 1 tank to the edge of the new annexation area.

E. 5 TO 10 YEAR IMPROVEMENTS

- Canyon St Line – Install a new 8" water main in Canyon St. from Memorial St. to Newel Ave. This would provide looping to the northeast Hildale area and help mitigate some of the low pressures and low fire flows. This water main would also act as a trunkline for delivering water from the new wells in the Hildale Groundwater Project and the Trailhead Wells.

- Hildale St Line – Install a new 8" water main along Hildale St from Academy Ave to Cooke Ave. This will provide looping to northern Colorado City and provide an additional line crossing the river.



F. 10 TO 20 YEAR IMPROVEMENTS

- Transmission Line to Airport – Install a new 12" line extending south on Township Ave towards the airport. The purpose of this line is to provide water service to potential commercial and industrial developments.

- Southwest Hildale Transmission Line – As the area west of Hildale City is developed, an additional transmission line should be constructed to provide additional looping to the system. The size and exact location of this line will depend on the timing and location of new development in the west side of the City. Depending on how the area develops it is possible that this project will be installed in the earlier planning window instead of the Northwest Hildale Transmission Line.

These recommended improvements are summarized in Figure VI-1. Appendix D includes an exhibit showing the location of these improvements.

Figure VI-1: Summary of Recommended Distribution Improvements

Proposed Improvement	Est. Installation Date
Fire Hydrant Project	2024
Upper Pressure Zone Improvements	2025
Northwest Hildale Transmission Line	2025
Hildale St. Line	2026
Canyon St. Line	2028
Southwest Hildale Transmission Line	2030

VII. WATER AVAILABILITY

A major concern for the community is long term availability of their water source. With the ongoing drought, this is a concern for most, if not all, communities in the surrounding counties. The following are ideas that the City could investigate to potentially lengthen the availability of water in the area. These ideas are not recommended improvements but starting points for future conversations.

1. WATER CONSERVATION PROGRAM

Implementing a water conservation program is a good way to reduce current water usage and prolong water availability as well as defer the need for some water infrastructure improvements. A conservation program is cheap in that it does not require any construction of infrastructure prior to implementation. Below is a potential list of items that could be included in such a program:

- Provide education on how much water local grasses and trees require and encourage residents to limit outdoor watering to not exceed what is needed.
- Perform a "water audit" on city owned irrigation to determine if outdoor water use could be reduced on city owned property.
- Look into capturing rainwater for outdoor watering. (This would require some investigation on how much water Utah and Arizona will allow to be captured and used)
- Provide incentives for residents to change their existing landscaping to something which requires less water such as Xeriscape.

2. CONSTRUCTION WATER

Currently construction water is typically obtained from fire hydrants. This means that the construction in town is typically using culinary water for construction. This may not be a major usage of the culinary water system, but there may be some inexpensive options to provide non culinary grade water for use as construction water.

The Power Plant Well is currently unavailable for use in the culinary water system. This well could be setup with a connection to provide non culinary grade construction water. While this option does alleviate some strain from the culinary water system, it is still using the same aquifer (source) that the culinary water system is using.

G. RECYCLE BACKWASH WATER AT TREATMENT PLANT

Part of the process of the existing treatment plant includes backwashing the filters occasionally with clean, culinary grade water. Currently the backwash water is sent into the sewer system which is common in many similar plants. It is possible to capture the backwash water, reuse a portion of it, and send it back through the plant. This option saves a minimal amount of water, backwashes do not happen frequently, and they do not use a large amount of water per backwash. However, this adjustment would save water and should be considered when making future improvements to the treatment facility.

H. SECONDARY WATER SYSTEM

Implementing a secondary water system would be a major benefit to the culinary water system. A secondary system in Hildale/Colorado City would reduce the culinary water use by roughly 40%. This reduction would greatly help with the deficiencies discussed in previous sections of this plan. However, constructing a new water system from the ground up is not cheap, and the added irrigation user rate needed to implement a new system would increase most customer water bills. It is possible to install a complete system in phases or install a small system just for parks or specific high outdoor use areas.

I. WASTEWATER REUSE

Treating wastewater for reuse is an option that would provide more water which is not coming from the same sources as the culinary water system. Treating wastewater sufficiently to be used for human consumption is very expensive and not likely practical for Hildale/Colorado City. However, reuse could be used for things such as construction water or irrigation for parks and agriculture that is not for human consumption. Treatment to this level is cheaper and may provide a cost-effective alternative for the city.

VIII. SUMMARY OF RECOMMENDED IMPROVEMENTS

A. PRIORITY OF IMPROVEMENTS

Figure VIII-1 shows a summary of the proposed improvements with the estimated cost for the project in today's dollars, the estimated year the improvements will be installed and the estimated cost of the project accounting for inflation. This plan uses an assumed inflation rate of 3%.

Figure VIII-1: Summary of Recommended Improvements

Project	Cost Estimate	Est Year of Installation	Cost Estimate With Inflation
Source Improvements			
Treatment Plant Wells	$ 1,288,700	2024	$ 1,327,400
Trailhead Well 1	$ 2,445,300	2026	$ 2,672,000
5 Year AZ Well Field	$ 3,809,600	2024-2028	$ 4,287,700
5 Year UT Well Field	$ 5,348,300	2024-2028	$ 6,019,600
Trailhead Well 2	$ 1,713,100	2029	$ 2,045,500
Hildale Groundwater Project PH I	$ 3,793,500	2032	$ 4,949,700
10 Year AZ Well Field	$ 4,285,800	2029-2033	$ 5,592,000
10 Year UT Well Field	$ 6,337,400	2029-2033	$ 8,268,900
Hildale Groundwater Project PH II	$ 4,220,100	2036	$ 6,197,400
Hildale Groundwater Project PH III	$ 3,105,400	2040	$ 5,132,800
20 Year AZ Well Field	$ 10,952,600	2033-2042	$ 19,205,500
20 Year UT Well Field	$ 16,081,600	2033-2042	$ 28,199,200
Source Subtotal	$ 63,381,400		$ 93,897,700
Storage Improvements			
Sandhill Tank 1	$ 5,938,100	2026	$ 6,488,700
Trailhead Tank	$ 2,875,500	2030	$ 3,536,500
South Concrete Tank	$ 4,432,500	2035	$ 6,319,700
Sandhill Tank 2	$ 6,475,100	2038	$ 10,088,000
Storage Subtotal	$ 19,721,200		$ 26,432,900
Treatment Improvements			
Raw Water Transmission Line	$ 1,092,500	2024	$ 1,125,300
Small Treatment Plant (1,000 gpm)	$ 4,876,900	2025	$ 5,173,900
Additional Treatment Capacity PH1	$ 7,937,200	2029	$ 9,477,400
Additional Treatment Capacity PH2	$ 10,312,200	2035	$ 14,702,700
Treatment Subtotal	$ 18,249,400		$ 30,479,300
Distribution Improvements			
Fire Hydrant Project	$ 1,733,500	2024	$ 1,785,500
Upper Pressure Zone Improvements	$ 846,500	2026	$ 925,000
Canyon St. Line	$ 388,900	2028	$ 450,800
Northwest Hildale Transmission Line	$ 1,977,400	2028	$ 2,292,300
Hildale St. Line	$ 454,390	2030	$ 558,800
Southwest Hildale Transmission Line	$ 903,800	2040	$ 1,493,800
Transmission Line to Airport	$ 2,039,350	2042	$ 3,576,000
Distribution Subtotal	$ 8,343,840		$ 11,082,200
Grand Total	**$ 109,695,840.00**		**$ 161,892,100.00**

The detailed cost estimate for each project is located in Appendix C.

IX. POSSIBLE FINANCING PLAN

The purpose of this possible finance plan is to show what a funding plan may look like to pay for the projects recommended for 2024. The City may also choose to complete the improvements in separate smaller projects. The projects are assumed to be paid with loan and grant money. It should be noted agencies may require some amount of self-participation in order to provide funding this plan assumes a 10% self-participation match.

Figure IX-1 outlines a possible financing plan from the Utah Division of Drinking Water (DDW). This plan assumes 20% of the funding from DDW will be grant and 70% will be loan with the remaining 10% as self participation. The loan is assumed to be at a 4% interest rate and payback term of 20 years. It is possible a lower interest rate or higher portion of grants will be available. It is recommended that as the City prepares to start this project they contact DDW and other funding agencies such as the Water Infrastructure Finance Authority of Arizona, US Department of Agriculture - Rural Development, or the Utah Community Impact Board to determine what funding is available and where they can get the best funding package.

The possible financing plan shown in Figure IX-1 results in an annual payment of $224,525 This annual payment along with other O&M expenses for the water system, would require an average charge for culinary water user rates to be $51.40.

The City is looking into adjusting their culinary water impact fees. A majority of the recommended improvements in this plan are fully or partially Impact Fee eligible. Collecting impact fees would help to fund the recommended improvements.

Figure IX-1: Possible Financing plan

HILDALE CITY/TOWN OF COLORADO CITY						
POSSIBLE FINANCING PLAN 2024 projects						
Total Project Cost (Construction + Professional Services):						**$ 4,238,200**
Proposed Funding:	**% of Proj.**	**Rate**	**Term**		**Principal**	**Est. Payment**
Self Participation	10%			$	423,820.00	
DDW Grant	20%			$	762,876.00	
DDW Loan	70%	4.00%	20	$	3,051,504.00	$224,535.01
TOTAL PROJECT ANNUAL PAYMENT (2023):						**$224,535.01**
O&M EXPENSES: (First Year of New Debt Service Payment)						
Office Expenses and Travel						$ 38,867.63
Repairs and Maintenance						$ 375,825.72
Utilities						$ 189,954.97
Legal and Professional Fees						$ 68,482.00
Renewal and Replacement Fund						$0
Interest Income						$ (5,962.58)
			Subtotal Expenses:			**$667,168**
EXISTING DEBT SERVICE						
Existing Debt Service						$0
			Subtotal Existing Annual Debt Service:			**$0**
			GRAND TOTAL EXPENSES:			**$891,703**
ANNUAL INCOME						
Impact Fees Expended for 2023 Projects						$ -
Total Number Of ERU						1,446
Average Monthly Water User Rate/ERU						**$51.40**
Charges for Services, Fees, etc.						$891,703
			GRAND TOTAL INCOME:			**$891,703**

X. IMPACT FEE ANALYSIS

This plan constitutes an Impact Fee Facilities Plan (IFFP) and Impact Fee Analysis (IFA) for the Hildale/Colorado culinary water system and identifies the existing demands on the system as well as future demands which will be placed on the system due to growth. A community may charge an impact fee to provide funding for the projects required by this growth. The total cost that is eligible for the impact fee assessment is equal to the portion of a planned project in the planning window that is attributed or caused by growth. The combined costs of these projects are divided by the projected number of new ERU's that will be added to the system. Impact fees can also cover debt service that is incurred by projects that provide excess capacity to be used for growth.

While this master plan uses a planning window of 20 years, the IFFP & IFA use a planning window of 10 years encompassing the start of 2024 and the end of 2033. This shorter window I based on regulations on impact fee collection and use. Impact fees must be encumbered within six years of their receipt according to Utah State Impact Fee law and within 10 years of receipt according to Arizona State Development Fee law. This plan accounts for all incoming fees to be encumbered for eligible projects and debts in the continuous six-year window to satisfy the more stringent law.

A. EXISTING IMPACT FEES

Currently, neither community charges a culinary water Impact Fee.

B. LEVEL OF SERVICE

Impact Fee laws prohibit the use of Impact Fees to increase the level of service beyond that which is currently provided. This requires a determination of the existing level of service upon which to base future improvements. The existing level of service provided by the culinary water system, and which was used to evaluate the system in previous sections of the report, is the Utah State Code minimum sizing requirements.

C. PROPORTIONATE SHARE ANALYSIS

Impact fee laws in Utah and Arizona require that only that portion of the facility, whether existing, new, or future, that is required for growth may be included in the impact fee calculations. A proportionate share analysis must be made of all the facilities to determine a reasonable and logical ratio of cost for each improvement.

1. WATER SOURCE

The Analysis in Section III shows that the existing system has a source capacity deficit of 415gpm. Because this is an existing deficiency, the recommended improvements that fix this deficiency are not impact fee eligible. It is anticipated that the deep and shallow treatment plan wells and Trailhead Well 1 are projected to provide 375 gpm which is less than the existing deficit of 415

gpm and therefore are all considered non-impact fee eligible. Trailhead Well 2 is projected to provide 175 gpm which will bring the capacity above the 415 deficit and provide an additional 135 gpm. The additional 135 gpm above the existing capacity deficit is additional source capacity that is needed for the projected growth and therefore impact fee eligible. This results in the Trailhead Well 2 project being 77% impact fee eligible.

All of the other wells projects within the 10 year planning period provide additional source that is needed for the projected growth and are considered 100% impact fee eligible. This includes the following projects:

- 5 Year AZ Well Field
- 5 Year UT Well Field
- Hildale Groundwater Project PH 1
- 10 Year AZ Well Field
- 10 Year UT Well Field

2. WATER STORAGE

Two water storage projects are in the 10-year planning window, Sandhill Tank 1 and the Trailhead Tank. The storage that is provided by these tanks is needed for the projected growth. Because of this both tanks are considered 100% impact fee eligible.

3. WATER TREATMENT

The Raw Water Transmission Line is an improvement recommended in the water treatment section. This project helps with the operation and maintenance of the raw water line to the existing treatment plant and does not provide additional treatment capacity. Because this project does not provide any additional treatment capacity needed for the projected growth it is not considered impact fee eligible.

This plan has two recommended improvements to water treatment that will add to the treatment capacity. The Small Treatment Plant and Additional Treatment Capacity Phase 1 provide additional treatment capacity that is needed for the projected growth and are considered 100% impact fee eligible.

4. WATER DISTRIBUTION

A majority of the proposed water distribution projects in the 10-year planning period serve to improve the existing level of service for the system users or provide currently needed fire flows. These projects are not considered impact fee eligible. However, there are a few projects that

would extend the service area to allow for growth in areas that currently do not have access to the water system and therefore are unable to be developed. These projects include the following:

- Upper Pressure Zone Improvements. – This project provides increased pressures for the existing units located North of Utah Ave. This is an area that has historically had issues with low pressures and will fix an existing deficiency. However, this project also allows for the system to extend further north and allow for growth and development in new areas. Because this project fixes existing deficiencies and allows for the extension of the system it is considered 50% impact fee eligible.

- Northwest Hildale Transmission Line – This project extends the system northwest of Hildale and allows for areas to be developed that currently do not have access to the culinary water system. Because this project provides an area for growth to occur it is considered 100% impact fee eligible.

5. FUTURE PLANNING

It is recommended that the capital facilities plan be updated every five (5) years. Since this plan update falls within the 10-year planning period, it is 100% impact fee eligible.

D. ZONAL IMPACT FEES

For impact fees, Hildale and Colorado City each adopt their own impact fee ordinance for their corresponding communities. With each community being in different states, they both have different Impact Fee laws that need to be followed for that ordinance. the recommended improvements also do not effect each community equally. Because of these factors the communities desire to establish a zonal impact fee with each community being its own zone with its own impact fee.

The Impact Fee Analysis will establish the impact fee eligible cost for each of the eligible projects and that cost will be divided amongst both zones based on the percentage of benefit that project provides to each zone.

E. IMPACT FEE ANALYSIS

The total cost that is eligible for the impact fee assessment is equal to the portion of any planned water improvements project that will be constructed in the next 10 years to accommodate new growth. The combined total cost that is due to new growth is divided by the projected number of new ERUs that will be added to the system.

It is recommended that Hildale City and the Town of Colorado City begin charging impact fees per ERU. Table X shows the maximum allowable impact fee per ERU for each zone. Should a lower impact fee be adopted, the remaining construction cost deficit would need to be funded through other means. Appendix E contains the analysis performed to determine the impact fee.

Figure X-1: Maximum Zonal Impact Fee

Zone	Max Allowable IF
Hildale	$ 14,752
Colorado City	$ 14,167

It is important to note that these impact fees are for the improvements summarized in this Plan and do not provide for the City to design and build anything beyond the proposed projects. All new additions to the system will need to be considered in the impact fee calculations. Otherwise, the developer should be required to make the improvements.

F. IMPACT FEE CERTIFICATION

In general, it is beneficial to update this impact fee facilities plan and analysis at least every five years, or more frequently if drastic growth or changes affect the assumptions and data in this plan. It is assumed that this plan will be updated as recommended.

There are items relating to impact fees that Hildale City and the Town of Colorado City must consider when planning for, collecting, and expending impact fees in accordance with Utah Code 11-36a-101 and Arizona Code 9-463.05.

Staff from each community must understand that impact fees can only be expended for a system improvement that is identified in the Impact Fee Facilities Plan and that is for the specific facility type for which the fee was collected. Impact fees must be expended or encumbered for a permissible use within six years of their receipt unless Utah Code 11-36a-602(2)(b) applies. Also, impact fees must have proper accounting (track each fee in and out) in accordance with Utah Code 11-36a-601 and Arizona Code 9-463.05.

In accordance with Utah Code 11-36a-306 a certification of impact fee analysis is located in Appendix F.

APPENDIX A
Growth Rate Analysis

Population & Growth Rate								
Calandar Year	Est. Growth Rate	Hildale Population	Colorado City Population	Total Population	Hildale Connections	Colorado City Connections	Total Connections	Number of ERUs
2023		3,224	5,358	8,582	435	790	1,224	1,314
2024	10.0%	3,547	5,894	9,440	478	869	1,347	1,446
2025	10.0%	3,901	6,483	10,384	526	956	1,481	1,590
2026	10.0%	4,291	7,132	11,423	578	1,051	1,630	1,749
2027	10.0%	4,720	7,845	12,565	636	1,156	1,792	1,924
2028	10.0%	5,192	8,629	13,822	700	1,272	1,972	2,117
2029	12.0%	5,816	9,665	15,480	784	1,425	2,208	2,371
2030	12.0%	6,513	10,825	17,338	878	1,596	2,473	2,655
2031	12.0%	7,295	12,124	19,419	983	1,787	2,770	2,974
2032	12.0%	8,170	13,578	21,749	1,101	2,001	3,103	3,330
2033	12.0%	9,151	15,208	24,359	1,233	2,242	3,475	3,730
2034	10.0%	10,066	16,729	26,794	1,357	2,466	3,822	4,103
2035	10.0%	11,073	18,401	29,474	1,492	2,712	4,205	4,513
2036	10.0%	12,180	20,241	32,421	1,641	2,984	4,625	4,965
2037	10.0%	13,398	22,266	35,663	1,806	3,282	5,088	5,461
2038	10.0%	14,738	24,492	39,230	1,986	3,610	5,596	6,007
2039	8.0%	15,917	26,452	42,368	2,145	3,899	6,044	6,488
2040	8.0%	17,190	28,568	45,758	2,317	4,211	6,528	7,007
2041	8.0%	18,565	30,853	49,418	2,502	4,548	7,050	7,568
2042	8.0%	20,050	33,321	53,372	2,702	4,912	7,614	8,173
2043	8.0%	21,654	35,987	57,641	2,918	5,305	8,223	8,827

APPENDIX B
Water Use Analysis