AGENDA
CITY COUNCIL WORK SESSION
September 01, 2020
5:00 PM

City Council Chambers – 1100 37th Street

OPTIONAL VIRTUAL MEETING PARTICIPATION

Please click on this URL to join virtually: https://us02web.zoom.us/j/85236800409
Or join by phone: 1-669-900-9128
Webinar ID:852 3680 0409

1. **Discussion About the Water Conservation Components in the Master Plan** (30 minutes)
2. **Discussion about a Prospective Land Dedication and Fee-in-Lieu of Land Dedication Fee System for the Greeley-Evans School District** (30 minutes)

   James L. Becklenberg, City Manager

   Randy L. Ready, Assistant City Manager
3. **2021 Capital Budget** (30 minutes)

   James L. Becklenberg, City Manager

   Jacque Troudt, CPA, Finance Director
4. **COVID-19 Response Update** (15 minutes)

   James L. Becklenberg, City Manager
5. **Council Discussion**

CITY OF EVANS – MISSION STATEMENT

"To deliver sustainable, citizen-driven services for the health, safety, and welfare of the community

---

u

CITY COUNCIL WORK SESSION REPORT

DATE:	**September 1, 2020**
AGENDA ITEM:	**Work Session Item #1**
SUBJECT:	**Master Plan – Water Conservation**
NAME & TITLE:	James L. Becklenberg, City Manager Randy L. Ready, Assistant City Manager Anne Best Johnson, Community Development Director Lauren Richardson, City Planner Rick Pickard, Senior City Engineer

ISSUE DESCRIPTION:

The City of Evans has been awarded a grant from DOLA to update the Community Master Plan. Provision of utility services, including water and wastewater, are closely intertwined with land use policies and the community's vision about desired levels and types of growth. This is recognized by DOLA and communities are strongly encouraged to incorporate a chapter on watershed management, water conservation, and water planning into community Master Plans. Understanding the need to do so, the City applied for a grant from the Sonoran Institute to have a water efficiency planner help develop concepts regarding water to be considered for inclusion into the Master Plan. These concepts are based on current utility master planning work and water efficiency measures in place and under consideration.

The City received a grant of $10,000 in February from the Sonoran Institute for the purpose of identifying opportunities to integrate water efficiency strategies into the City's Master Plan. The Sonoran Institute engaged consultant Marjo Curgus with Del Corazon Consulting to perform the work. Ms. Curgis worked directly with key City Staff to ensure her work product achieved a seamless integration with other utility initiatives underway.

The purpose of the work session is for the City Council to hear an overview of Consultant Marjo Curgis' work to recommend strategies that could be incorporated in the City's Master Plan. The City Council is not asked at this time to adopt or endorse any of the specific strategies included.

Attached are two work products. The first is an overview memo defining how the subject could be woven into the Master Plan. The second contains a Policy Summary and Opportunities Review.

FINANCIAL SUMMARY:

The work performed by Del Corazon Consulting was through an award from the Sonoran Institute. There is no financial obligation of the City for this work product. The implementation of this work product will require staff time. Some implementation strategies do require financial commitments. Ms. Curgis developed a strategy respectful of the low budget requirements for the next 18 months.

REQUESTING FROM CITY COUNCIL:
Staff is requesting that Council review the findings as these will be utilized to inform decisions to be made with the Master Plan. Elements of these documents will be used in the Master Plan as water is a required component.

ATTACHMENTS:

- Del Corazon Summary Memo
- Policy Summary and Opportunities

Memo

To:	City of Evans City Council, Master Plan Committee, and Planning Commission
From:	Marjo Curgus, Principal of Del Corazón Consulting
cc:	Anne Best Johnson
Date:	8.14.2020
Re:	**Overview: Water Element for the City of Evans Master Plan update**

1. Linking Water and Land Use Planning

A vibrant future for Evans will be dependent upon the City of Evans meeting its water resource management challenges. In the fall of 2019, the City of Evans participated in the Sonoran Institute's Growing Water Smart workshop as part of a team with the City of Greeley. At the workshop, the team learned about the different strategies available to connect water resource management and land use planning. With a master plan update already planned for 2020, the City realized this was an area ripe for linking water and land use. The City applied for technical assistance through a grant from the Sonoran Institute to contract Del Corazón Consulting (DCC) to work with the City over the summer of 2020 to develop a draft element for integration of water into the master plan process during the fall.

The project conveniently overlapped with the completion of the City's *Water Efficiency Plan* (WEP), a state planning requirement for water utilities detailing how to achieve water efficiency and conservation. The City's WEP identifies a water conservation target to **lower treated water demand by 10% from 2020 to 2030, or approximately 1% per year for a total reduction of 2,964-acre feet.** The WEP projects that if the City does not reduce its water demand, the City risks coming within 283-acre feet of its' potable firm yield (the raw water available during a drought year) by 2028. Given the State of Colorado just recently announced that 100% of the state is once again in a drought, the resilience of the City's future water supply is paramount. The WEP also includes a more aggressive conservation target for the City of 17% by 2030.

In 2018, the State of Colorado updated its guidance for the development of WEPs to include strategies for how land use development can be more water efficient. In addition to conservation education and water supply management, the City's 2019 WEP includes many recommendations related to land use including indoor plumbing requirements for water efficient fixtures, water efficient outdoor irrigation, a water efficient landscape ordinance, a 10% lot size reduction for landscapes, and a requirement for restrictive covenants to allow water efficient landscapes other than turf requirements. These strategies aim to build water efficient communities from the start rather than focus on trying to change consumer behavior after construction.

2. The Policy Assessment

To develop the draft element, DCC met four times with a team represented by Anne Best Johnson, Lauren Richardson, Efren Rodriguez, Mark Obserschmidt, Rick Pickard, Scott Sandridge, and Randy Ready. The team discussed challenges, current projects, and opportunities for more sustainably managing the City's water resources. DCC reviewed of all the City of Evans existing plans and policies relevant to the connection between land use and water. This policy review is presented in *Chapter 2: Review of Existing Policies and Plans* in the DCC report to the City of Evans, *Policy Assessment and Opportunities for the 2020 Master Plan Update*.

3. The Policy Assessment Findings

Eight opportunity areas emerged from the policy assessment for inclusion in the draft master plan element for water. Each of these thematic areas is explored in depth in *Chapter 3: Opportunities for a Water Resilient Future in Evans* and builds upon the recommendations of the 2019 Water Efficiency Plan by providing greater details on how those strategies might be implemented. The eight areas included:

OPPORTUNITY AREAS FOR THE CITY OF EVANS TO ENHANCE WATER RESOURCE MANAGEMENT

1. Diversify the City's Development Pattern to Efficiently Use Infrastructure and Reduce Future Water Demand
2. Align Plumbing Code with the State Water Sense Rule
3. Promote a Water Efficient Commercial Sector
4. Require Efficient Outdoor Water Use
5. Develop Water Efficient Golf Course and Park Standards
6. Adopt a Water Fee Incentive
7. Protect Water Quality and Public Safety
8. Create Water Efficient Streetscapes and Parking Lots

4. The Draft Water Element

The approach to develop the draft master plan element was to first, build upon the City's successes to improve water resource management and, second, plan for the future by addressing key challenges. These challenges are summarized below.

CITY OF EVANS WATER RESOURCE CHALLENGES

- The price of water on the Front Range is increasing as new sources of water become scarcer. The City should continue to be proactive in pursuing fiscally responsible future water supplies.
- Demand for water as Evans will increase with population and economic growth unless conservation and efficiency measure are taken.
- Peaks in demand due to seasonal irrigation will continue to increase and put pressure on the City's treated water supply without more water efficient landscapes.
- Financial costs of regularly exceeding the threshold for treated water supply in the agreement with Greeley is unsustainable.
- The degradation of watershed and ecosystem functions endanger people, water quality, and wildlife.
- Decrease in water supply yields due to prolonged drought and changing precipitation patterns are expected.

These challenges are not unique to the City of Evans. These are issues across the State of Colorado and have motivated the State to take legislative and administrative steps to address a significant future water gap.[1] In the past few years the state has adopted:

- The State Water Plan which has a goal for 75% of communities in Colorado developing water efficient land use strategies.
- A policy requiring Water Efficiency Plans to include land use strategies for water efficiency.
- A Water Sense Rule requiring the sale of plumbing fixtures to be water efficient.
- A requirement that communities include water conservation and efficiency in their comprehensive plan.

The draft plan element organizes 1 goal, 5 objectives, and 16 strategies organized under four themes: water conservation education, zoning and development policies, watershed health, and water supply management. See page 6 for a plan summary.

5. Implementation

Considering the impacts of the pandemic on the City's resources, the staff worked to develop an implementation plan that assessed the different strategies for costs, required capacity, estimated water savings, and level of priority. The result was a set of low cost early actions the City can take in the next 18 months. While these near-term opportunities are insufficient alone to achieve the City's water conservation target, they help build the relationships and set a foundation for future action.

EARLY IMPLMENTATION OPPORTUNITIES		
High Priorities	Medium Priorities	Low Priorities
Update the water conservation ordinance to revise the time of day watering standards and a new water waste ordinance.	Increase collaboration across City departments involved in water resource management to seek funding for plan implementation.	Coordinate with the water conservation program staff to use public lands as "lead by example" demonstration projects for education on xeriscaping and native landscapes.
Develop water efficient irrigation design standards for public and private parks including incorporation of native/xeriscape landscape as a percent of park total and incorporating smart controllers and wind/rain sensors.	Adopt a Restrictive Covenant Ordinance to prevent prohibition on water efficient landscapes in subdivision covenants.	
Use recent assessments of natural areas to identify priority wetlands, recharge zones, and riparian areas to inform site planning.	Adopt a water conservation ordinance to require plumbing fixtures in new and redevelopment projects to be consistent with the State of Colorado WaterSense rule.	

[1] The State's 2019 scenarios on water supply and demand balance identified a gap between 245,00 – 754,000-acre feet for municipal water use and 10.5 – 13.6 million-acre feet for agriculture.

Manage the City's public lands to restore and enhance native plant communities, particularly the areas around the rivers and ditches.	Develop riparian corridor and wetlands standards that minimizes the disturbance and removal of riparian plant communities	
	Develop an informal or formal mechanism for strengthening regional collaboration between the City of Evans and the City of Greely on the management of water resources.	
	Develop water supply standards for areas served by ore than one water provider to clarify policy for water connections in unincorporated Weld County and the City.	

Because outdoor irrigation is 40% of the City's treated water demand during the months from April to September, the City can achieve the most significant overall water savings by pursuing actions that reduce irrigation inefficiency. The following four strategies which are also identified in the WEP offer the most significant savings.

STRATEGIES WITH GREATEST POTENTIAL WATER SAVINGS			
Strategy & Actions	Potential Water Savings	Costs	Priority Level
Implement priorities identified in the WEP to hire a water conservation staff person to manage a water conservation program development and implementation.	24.37 MGY	$$$	M
Update the landscape code to be more water efficient.	22.29 MGY	$$	H
Update the City's Water Management Plan to address needs for a financial management plan that will support funding future water supply and infrastructure projects, such as NISP, and fee incentives for efficiency.	51.14 MGY	$$$	M
Apply to the Colorado Water Conservation Board's Water Efficiency Grant Fund Program for a grant to support the development of a new Drought Management Plan.	10.26 MGY	$$	H

The City of Evans already has a landscape code with requirements for landscape design. The recommendation is to update it to make it more water efficient. There are three proven methods to reduce the demand of outdoor watering in development regulations:

1. **Decrease water waste** by improving site-specific water efficiency through irrigation system design, best practices, and technology.
2. **Reduce the amount of water needed** for irrigation by enhancing soil conditions, appropriate plant types and landscape design.
3. Use water budgets to **establish the maximum amount of water permitted** for outdoor water use.

Many communities around Colorado are incentivizing water conservation and efficiency through service and tap fees. A consultant with appropriate expertise would need to work with the City to identify the appropriate fee incentive. Cases studies on different approaches to fee incentives include methods that offer fee reductions (1) by lot size reduction in irrigated area, (2) tap size determination by gallons per minute, or (3) total water use (high, medium, low water use). The City should include non-potable and potable water use in the development of an incentive. Since a tap fee incentive affects the utilities finances. Research on a tap fee incentive should be included in the water plan master plan update.

These recommendations for outdoor water demand savings are explored in greater detail in *Chapter 3: Opportunities for a Water Resilient Future in Evans.* A case study of a peer community that has implemented many of same strategies as recommended in this draft water element and the WEP is included with this summary as Appendix A. This case study is also included in the *Policy Assessment and Opportunities for the 2020 Master Plan Update*.

Next Steps in Linking Water and the Master Plan

The draft water element will need to be integrated into the master plan update to match formatting of the rest of the plan. Additionally, there are spatial recommendations related to zoning and density that should be incorporated into the plan analysis and development. For example, the desire to incentivize land conservation through a market-based transfer of development rights programs requires identifying not only the areas for desired conservation, but the areas where development rights can be transferred. Also, the diversification of the City's lots sizes needs to be coordinated with the future land use map. Lastly, the desire to link future growth area and infrastructure extensions of potable, nonpotable, and wastewater should be assessed and mapped as part of the future land use plan.

VISION

THE CITY OF EVANS WILL MANAGE ALL ITS WATER RESOURCES SUSTAINABLY RECOGNIZING WATER IS A FINITE AND IRREPLACEABLE RESOURCE THAT IS FUNDAMENTAL TO OUR COMMUNITY'S WELLBEING.

GOAL

THE CITY OF EVANS WILL SUSTAINABLY MANAGE ITS WATER RESOURCES TO ENHANCE COMMUNITY RESILIENCE.

1.1

DEVELOP AND SUPPORT A WATER CONSERVATION PROGRAM IN THE CITY THAT INCREASES COMMUNITY AWARENESS ABOUT THE NEED TO SAVE WATER AND SUPPORTS PROJECT IMPLEMENTATION.

Strategy 1: Implement priorities identified in the 2019 Water Efficiency Plan to hire a water conservation staff person to manage water conservation program development and implementation.

Strategy 2: Create City "lead by example" demonstration project to demonstrate to the community how indoor and outdoor water can be more water efficient.

Strategy 3: Increase collaboration between different City departments involved in water resource management to seek funding for plan implementation.

1.2

CONTINUE TO STRENGTHEN PARTNERSHIP WITH NORTHERN COLORADO WATER CONSERVANCY DISTRICT TO ENHANCE THE CITY'S CAPACITY FOR WATER RESOURCE MANAGEMENT.

Strategy 4: Continue to work with NCWCD to apply their programs and resources within the City of Evans.

1.3

ADOPT DEVELOPMENT CODE REVISIONS THAT RESULT IN MORE WATER EFFICIENT DEVELOPMENT.

Strategy 5: Promote a more water efficient commercial sector.

Strategy 6: Identify areas of the City of Evans to promote clustering, redevelopment, and smaller, more compact lots that support a more water efficient land use pattern and resource protection goals.

Strategy 7: Create incentives and update the development code to achieve water efficient landscapes.

Strategy 8: Create incentives and update the development code to promote indoor water efficiency.

1.4

PROTECT WATER QUALITY AND ENHANCE WATERSHED HEALTH FOR THE SOUTH PLATTE, BIG THOMPSON, AND DITCHES.

Strategy 9: Develop water quality protection standards for waterbodies and wetlands.

Strategy 10: Implement the South Platte River Restoration Plan strategies to reconnect the floodplain to the river.

Strategy 11: Incorporate water efficient and native landscapes into City and neighborhood public lands management.

Strategy 12: Implement the Stormwater Management Plan recommendations to integrate onsite stormwater management best practices in new development.

1.5

UPDATE THE CITY OF EVANS WATER RESOURCE MANAGEMENT PLANS TO ADDRESS FUTURE WATER SUPPLY AND SUSTAINABILITY GOALS.

Strategy 13: Update the City's Water Management Plan to address the needs for a financial management plan that will support funding future water supplies and infrastructure projects, such as NISP.

Strategy 14: Develop an informal or formal mechanism for strengthening regional collaboration between the City of Evans and City of Greely on the management of water resources.

Strategy 15: Develop water supply standards for areas served by more than one water provider to clarify policy for water connections in unincorporated Weld County and the City.

Strategy 16: Apply to Colorado Water Conservation Board's Water Efficiency Grant Fund Program for a grant to support the development of a new Drought Management Plan.

Appendix A: Case Study: Town of Castle Rock, Colorado

Castle Rock, Colorado has been working to manage their water resources integrating some best practices that have made them a case study for other Front Range communities. Their efforts include:

- A water conservation fee incentive
- A water efficient land use code
- Irrigation scheduling
- Water waste ordinance
- Car wash standards
- Individual household water budgets

Water Conservation Fee Incentive

In 2015, the Town adopted a water conservation incentive for new development and annexations creating an incentive system development fee structure using a gallon per minute water metric versus a standard EQR/tap size. The fee incentives rewards developers who can reduce the gallons per minute, regardless of the EQR, through water efficiency and conservation with a fee reduction. To qualify for the fee reduction, developers must submit a Water Efficiency Plan (WEP) with their development application and meet the minimum standards for indoor and outdoor water efficiency. If approved, the Water Efficiency Plan is a document which is part of the Development Agreement. An example is provided here.

The water standard in the code is simple and references the Town's guidance manuals for the specific methodology to determine water flow rates.

Castle Rock Development Code Water System Fees
Irrespective of the SFE assignment under subsection A, connections within an area governed by a water efficiency plan shall be assigned an SFE by applying the engineering criteria adopted by Castle Rock Water to the specific water saving measures mandated by the water efficiency plan with 0.67 SFE being the lowest available assignment under this section.

Meter Size	GPM	SFE	Water	Renewable Water	Subtotal	Wastewater	Total
5/8"x3/4"	20	0.67	$ 2,455	$ 11,810	**$ 14,265**	$ 2,695	**$ 16,960**
3/4"	30	1.00	$ 3,664	$ 17,623	**$ 21,287**	$ 4,023	**$ 25,310**
1"	50	1.67	$ 6,119	$ 29,437	**$ 35,556**	$ 6,718	**$ 42,274**
1.5"	100	3.33	$ 12,201	$ 58,698	**$ 70,899**	$ 13,397	**$ 84,296**
2" C2	200	6.67	$ 24,439	$ 117,573	**$ 142,012**	$ 26,833	**$ 168,845**
2" T2	250	8.33	$ 30,521	$ 146,833	**$ 177,354**	$ 33,512	**$ 210,866**
3" C2	500	16.67	$ 61,079	$ 293,844	**$ 354,923**	$ 67,063	**$ 421,986**
3" T2	650	21.67	$ 79,399	$ 381,979	**$ 461,378**	$ 87,178	**$ 548,556**
4" C2	1,000	33.33	$122,121	$ 587,511	**$ 709,632**	$ 134,087	**$ 843,719**
4" T2	1,250	41.67	$152,679	$ 734,521	**$ 887,200**	$ 167,638	**$1,054,838**
6" C2	2,000	66.67	$244,279	$ 1,175,198	**$1,419,477**	$ 268,213	**$1,687,690**
6" T2	2,500	83.33	$305,321	$ 1,468,865	**$1,774,186**	$ 335,237	**$2,109,423**

For more information, read this excellent resource guide on designing a water conservation fee incentive program. https://westernresourceadvocates.org/wp-content/uploads/2018/07/WRA_Guide-to-Conservation-Oriented-SDCs_web.pdf

Landscape Code

In 2018, the Town updated their Landscape Code and Irrigation Standards. The requirements aim to achieve three performance standards:

1. Efficient Water Use
2. Environmental Sustainability
3. Aesthetics and Quality of Life

Applicability to Development

The regulations apply to all development with different requirements for different types. The Landscape and Irrigation Design Manual addresses standards for each development type.

1. Multi-family and single-family attached residential properties
2. Single and two-family residential properties
3. Commercial/business/industrial/urban/governmental/schools/mixed-use properties
4. Streetscape, rights-of-way (ROWs), tracts and easements
5. Public areas

Requirements for Professional Certification/Inspection

1. For developments under four units, front and rear yards must be designed and installed by the builder.
2. For development over four units, the landscape and irrigation plan must be designed by certified professionals.
3. Inspection is required prior to Certificate of Occupancy and must be approved by an independent certified auditor.

Landscape Water Allowance

The City uses water allocation for irrigation:

- No individual plant may have water demand greater than 15-inches per growing season.
- Water allocation for the irrigation of streetscapes is a maximum of 15-inches of irrigation per growing season for all landscaped areas.
- Water allocation for the irrigation of parks, sports fields, and golf courses shall vary by use of the area. Active areas may be allocated up to 19-inches.

Landscape Material Requirements

- The landscape design must include a soil analysis and amendments, utilize the approved plant list, group plants in a similar hydrozone, and meet species diversity criteria.

- Xeric landscapes must provide a minimum coverage of 75% by plant materials at 5-year maturity in front yards and side yards adjacent to streets. Rear yards must have a minimum of 40% coverage. The remainder of yard coverage can be mulches, aggregate surfaces, artificial turf, and hardscapes.
- Turf areas are limited based on the lot size. Kentucky bluegrass and any species that uses more than 19-inch of supplemental irrigation is prohibited. Native grasses are exempt from the square footage limits.

Lot Size	Percentage of Turf	Example
7,000 sq. ft. or less	30%	7,000 sq. ft. x .30=2,100 sq. ft.
7,001 - 17,000 sq. ft.	20%	17,000 x .20 = 3,400 sq. ft.
Over 17,000 sq. ft.	20%; not to exceed 5,000 sq. ft.	

Irrigation System Design Criteria

- Efficiency standards for irrigation systems.
- Permanent irrigation systems are required in landscaped areas greater than five hundred (500) square feet.
- Irrigation must use smart controllers and rain sensors.
- Dual meter installations are required for irrigated areas between two thousand five hundred (2,500) and five thousand (5,000) square feet.
- Irrigated areas greater than five thousand (5,000) square feet require a dedicated irrigation tap, except for single family lots.

Irrigated Public Area Standard

For all irrigated public areas including public lands and easements owned by the Town and/or any metropolitan district within the Town such as public street entrances, medians, parking lots and rights-of-way, public parks, and recreation areas, etc. must follow water conservation standards. The Town uses a composite landscape water use rating with a different water efficiency rating for potable and non-potable water sources.

Irrigation Schedule

Castle Rock's outdoor watering schedule is based on every third day based on address from May 1st to September 30th. Residential customers can water between 8:00 pm and 8:00 am while commercial customers can water between 10:00 pm and 6:00 am. A violation of the watering schedule is enforced through the water waste ordinance.

Water Waste

The Town has a water waste ordinance that includes:

- Continuous irrigation to any area resulting in ponding or pooling of water.
- Runoff of water not absorbed into the ground, which flows away from the area being irrigated.

- Any irrigation system that is leaking.
- Application of water intended for irrigation to any impervious surface.
- Letting water run unrestricted from a hose or faucet.
- Application of water to impervious surfaces such as street washing applications.
- Operation of any irrigation system when curtailment stages have been invoked.

Violations are given as a written notice with 24-hours to 5-days to respond. The Town has moved to incorporate education into the enforcement hiring water monitors to issue warnings and inform customers of the value of management water resources.

Residential	Non-residential
1st – Warning, no surcharge	1st – Warning, no surcharge
2nd - $25 surcharge	2nd - $100 surcharge*
3rd - $50 surcharge	3rd - $200 surcharge*
4th - $100 surcharge	4th - $400 surcharge*
5th - $200 surcharge	5th - $800 surcharge*
Subsequent - $200 surcharge*	Subsequent - $800 surcharge*
*Subject to service discontinuance	*Subject to service discontinuance

Restrictive Covenants

The Town has adopted a standard prohibiting homeowner association from requiring turf or prohibiting

3.15.080 - Restrictive Covenants
B. No person shall enforce or seek to enforce any provision contained in any restrictive covenant that has the effect of requiring that an area of any lot, or any minimum percentage of a lot, be landscaped with turf grass. However, this prohibition shall not preclude the enforcement of restrictive covenants requiring the watering and regular maintenance of turf grass. C. Any person who violates Subsection 13.15.080.B shall be punished by a fine of not more than one thousand dollars ($1,000.00). Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation is committed, continued, or permitted by any such person. D. Any new restrictive covenant that prohibits or limits the installation or use of drought-tolerant vegetative landscapes is prohibited.

Car Washes

The Town has adopted requirements for commercial car wash installations:

1. Newly constructed facilities, whether full-service, in bay, or self-serve are required to use water recycling systems or weep recovery systems and other demand management tools.

2. Existing car washing systems that are being expanded, repaired, or rehabilitated are required to conform to recycling requirements.

Water Rates and Water Budgets

The City of Castle Rock uses water budgeting for individual water customers. The indoor water budget is based on a household's water use during the winter and the outdoor water budget is calculated based on irrigated area and evapotranspiration (ET). Customers pay for the total amount of water they actually use.

Water rates are set to:

- Tier 1 (0 gallons to water allowance).
- Tier 2 (irrigation season rate): The amount of water available for seasonal purposes from April through October. This is calculated by using each customer's irrigated and plant material monthly water needs (evapotranspiration - ET).
- Tier 3 (excessive use rate): The amount of water over your total water budget allocation.
- Conservation surcharge: The water conservation measure adopted by Town Council assesses an additional charge to each 1,000 gallons used over 40,000 gallons by single-family residential customers.

Stormwater Management

The Town of Castle Rock's *Storm Drainage Design and Technical Criteria Manual* provides guidance on site level stormwater management and low impact design promoting best management practices (BMPs).

- *Volume Reduction Practices*. Reduce runoff volume and peak by minimizing impervious areas and/or the effective imperviousness of the site and to slow down runoff and promote infiltration. This is achieved through reduction of paved or impervious areas through BMPs such as the use of porous pavement, grass buffers, and grass swales.
- *Water Quality Protection*. Integration of BMPs that provide for sedimentation of particles and removal of pollutants including porous pavement detention, porous landscape detention, extended detention basins, sand filter extended detention basins, constructed wetland basins, and retention ponds. Water quality protection must be integrated into a site or development in the initial planning stages and addressed concurrently with the stormwater conveyance and detention storage facilities.
- *Drainageway Stabilization*. Drainage within or adjacent to a development must be addressed in the overall stormwater management plan regarding stabilization of many major drainageways and addressing recommendations contained within the Water Basin Master Plan.

The manual provides design standards that address the site, regional, and basin scale.

CITY OF EVANS

Policy Assessment and Opportunities for the 2020 Master Plan Update

JULY 1, 2020

PREPARED BY:
Del Corazón Consulting

CONTENTS

1 PURPOSE AND SCOPE 3
1.1 Purpose of Project 3
2 OVERVIEW OF WATER SUPPLY & DEMAND 3
2.1 Current Water Supply 3
2.2 Population and Water Demand Projections 4
2.3 Water Demand Sectors 5
3 REVIEW OF EXISTING POLICY & PLANS 5
3.1 2019 Water Efficiency Plan & Water Conservation Target 6
3.2 2016 Water Master Plan 8
3.3 The 2013 Wastewater Utility Plan Update 8
3.4 The 2016 Stormwater Master Plan 9
3.5 The 2010 Comprehensive Plan 12
3.5.1 Goals and Policies ... 12
3.6 River, Recreation, Parks and Open Space Plans 14
4 DEVELOPMENT REGULATIONS IN THE MUNICIPAL CODE 15
4.1.1 Water Supply Standards ... 15
4.1.2 Development Pattern and Zoning Dimensions ... 16
4.1.3 Outdoor Water Efficiency ... 16
4.1.4 Street Design Standards ... 19
4.1.5 Residential Development Design Standards Landscape Requirements ... 19
4.1.6 Water Source and Water Quality Protection ... 19
4.1.7 Indoor Water Use ... 20
4.2 Utility Rates and Programs 20
CASE STUDY: TOWN OF CASTLE ROCK, COLORADO 22
COMPARISON OF WATER EFFICIENCY STANDARDS 27
5 OPPORTUNITIES FOR A RESILIENT WATER FUTURE IN EVANS 28
5.1 Goal 28
5.2 Diversify Evans' Development Pattern 29
5.2.1 Mange Future Growth Areas By Phased Expansion of Instructure ... 29
5.2.2 Identify Areas for Infill and Redevelopment that Encourage Denser Development and Achieve Resource Protection Goals ... 29
5.3 Water Efficiency Trends 30
5.3.1 Make WaterSense as the Baseline for Plumbing Fixture Standards ... 30
5.3.2 Consider a Retrofit Policy or Program for Water Efficient Plumbing Fixtures ... 31
5.4 Promote Water Efficiency in the Commercial Sector 32
5.4.1 Restaurants ... 33
5.4.2 Car Washes ... 34
5.5 Require Efficient Outdoor Water Use 34
5.5.1 Develop Standards for Managing HOAs and Outdoor Water Use ... 42
5.5.2 Adopt Incentives for Water Efficient Landscape Buffers ... 43
5.6 Develop Water Efficient Golf Course and Park Standards 44

5.7 Adopt A Water Fee Incentives 45
5.7.1 Explore Tap Fee Incentives 45
5.8 Protect Water Quality & Watershed Health 46
5.9 Use LID and Xeriscape Standards for Water Efficient Streetscapes & Parking Lots 48
5.10 Conclusion 52

1 Purpose and Scope

1.1 Purpose of Project

Del Corazón Consulting was contracted by the Sonoran Institute to support the City of Evans with the integration of water in the City's master plan update. The first step in this process was the completion of a policy review to:

- Identify current policies and activities across City departments and plans.
- Identify opportunities for implementation of existing policies.
- Identify issues/gaps that may need to be addressed with water supply and demand, infrastructure, and water resource management.
- Inform development of water related recommendations for inclusion in the master plan update.

This document summarizes the review of relevant plans and policies and summarizes opportunities for how the City might strengthen the water and land use nexus.

2 Overview of Water Supply & Demand

2.1 Current Water Supply

The City of Evans Water Master Plan (WMP) and the 2020 Water Efficiency Plan (WEP) both provide a summary of the City's water supply. As of 2019, the City's average annual water demand was 2,523 acre-feet, well within its average annual available water supply of 6,361 acre-feet. The City's potable water comes from trans-mountain diversions from the Colorado River and native streamflow in the South Platte River Basin. The City also owns non-potable water rights which are used for irrigation and distributed through historical ditch systems.

TABLE 1: WATER RIGHTS

WATER RIGHT OR WATER SOURCE	AVERAGE YEAR YIELD Acre Feet	FIRM ANNUAL YIELD Acre Feet
Potable Water Sources		
Colorado Big Thompson	2,422	422
Greeley and Loveland Irrigation Co.	2,592	716
Loveland and Greeley Reservoir Co.	645	38
Seven Lakes Reservoir Co.	702	237
Treated Total	**6,361**	**3,530**
Non-Potable Water Sources		
Greenly and Loveland Irrigation Co.	181	50
Loveland and Greeley Reservoir Co.	34	8
Seven Lakes Reservoir Co.	154	12
Evans City Ditch	29.3 cfs	29.3 cfs

The City transfers the water they own to the City of Greely, who then distributes treated water to Evans through a renewable 25-year agreement with the City of Greeley for services which expires in 2023. This agreement stipulates an annual water treatment volume cap. Once the cap is exceeded, Evans must pay an additional system development charge. A priority water management goal for Evans is to minimize exceeding the annual allowance in the agreement with Greeley.

2.2 Population and Water Demand Projections

The City of Evans Water Master Plan (WMP) and the 2020 Water Efficiency Plan (WEP) both provide an analysis of the City's water supply and projected water demand. The WEP's water demand forecast, not taking into account additional water conservation measures, projects the City's treated water demands to be 3,247 AF for all customer categories, including non-revenue water, by 2028. While this projected volume is within the range of the city's current average year water supply yield, it is within 283 acre-feet of exceeding the City's firm yield in an extreme drought year. (Table 1 and Table 2).

Future water demand was calculated using a linear population projection and then multiplied by current per capita demand. The Water Master Plan used growth projections with a low (1%), medium (3%), and high (5%). It used a growth rate of 3% for its water demand projection. They based this estimate on the same data sets used by NISP, 2010 Evans Comp Plan, 2009 WEP, and NFRMPO. Notably, all the plans reviewed used different data sources and growth rates. The 2020 Water Efficiency Plan uses a growth rate of 2%.[1] The key point is that regardless of population projection growth rate, the trendline remains the same with future demand eventually outpacing water supply if no action is taken.

To prevent a future supply/demand imbalance for treated water, both the Water Master Plan and the Water Efficiency Plan expect the City can meet future demand through:

- Improving water conservation & efficiency in the community through combination of voluntary and regulatory approaches.
- Increasing the percentage of the water supply used for irrigation to a non-potable water source thus decreasing the use of treated water for irrigation.
- Requiring new development to dedicate water rights as part of the development approval process.
- Improving City management practices to reduce water loss.
- Participating in the Northern Integrated Supply Project (NISP)/Glade Reservoir Project for new sources of water.

TABLE 2: POPULATION PROJECTIONS

Plan	Plan Time Frame	Population Forecast Time Period	Growth Rate	Final Projection Population	Total Treated Water Demand Projection	Water Supply Demand Gap	Source
Current Conditions	--	2018	3.05%	21,615	2,663 AF		DOLA 2018 estimates
Water Master Plan	2015-2035	2010 - 2035	3%	33,430	1,416,320 GPY (4,346 AF)	Expectation gap met through water rights dedications, and non-potable water	NISP, Evans Comp Plan, WEP, NFRMPO
Water Efficiency Plan	2019-2028	2010 - 2030	2%*	27,415	3,247 AF	Balanced, but with 287 AF available in extreme drought	Clearwater
Sanitary System Capacity Assessment	--	2019 -2040	3.0 - 3.9%	38,168–49,592	--	--	City of Evans
2010 Comprehensive Plan[2]	2010	2010 - 2030	1.0 – 5.0%	23,184-50,413	--		

[1] Page 20 of 2019 WEP shows Figure 11 Historical and Projected Growth as 2.5%. However, the chart on the same page uses 2%.

[2] Based on the L, M, H growth rates, the 2010 Comprehensive Plan projected a population in 2020 between 20,988 to 30,949. This tracks with the low growth rate of 1%.

Wastewater Utility Plan Update	2013	2010-2030	1.0 – 5.0%	41,985			

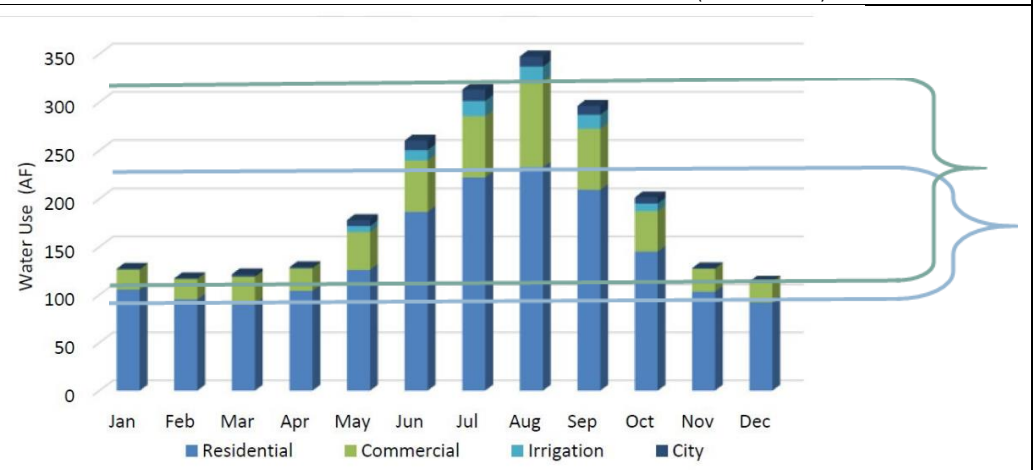
2.3 Water Demand Sectors

Residential development accounts for the majority of water use in Evans, 73%.

TABLE 3: CITY OF EVANS WATER CUSTOMERS		
SECTOR	PERCENT OF TOTAL TREATED WATER SALES 2012 -2018	AVERAGE TOTAL TREATED WATER SALES
Residential	73%	1,712 AF
Single Family	46% (2016)	
Multifamily	21% (2016)	
Non-Residential	21%	489 AF
Commercial	21%	
Government	3%	
Irrigation Only	3%	

When comparing indoor and outdoor water use, outdoor irrigation from May to October creates a noticeable increase in demand. And while commercial use is only 21% of total treated water sales, it appears that the seasonal percent increase in commercial outdoor watering is greater than that of residential water use. This is likely due to the site and landscape design standards for commercial properties including buffers, parking lots, open areas, etc. which require significant irrigation.

WEP MONTHLY TREATED WATER USE BY CUSTOMER CATEGOREY (2012-2018)



3 Review of Existing Policy & Plans

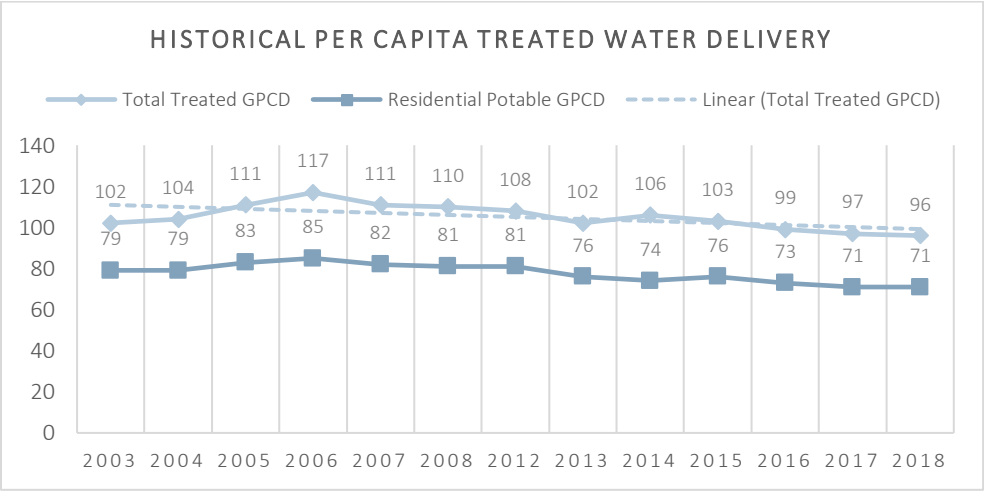
This section includes a summary of existing policies and plans relevant to planning for water resource management. The following documents were reviewed in order to identify what the City has already identified as strategies and thus inform the development of the opportunities identified in *Section 5: Opportunities For A Resilient Water Future In Evans.*

DOCUMENTS REVIEWED	
Water Efficiency Plan	2009
City of Evans' Comprehensive Plan	2010
Flood Recovery Plan	2015
Water Master Plan	2016
DRAFT Water Efficiency Plan	2020
Land Use Code (Ch. 18 Municipal Code)	--
Irrigation Specification	2000
Lawn and Grass Specification	2000
Stormwater Master Plan	2016
South Platte River Restoration Plan	2015
City of Evans Open Space and Trails Master Plan	2004
City of Evans Wastewater Utility Plan Update	2013

3.1 2019 Water Efficiency Plan & Water Conservation Target

To increase water supply resiliency so that the City can successfully meet future demand, the City has established a conservation target to lower treated water demand by 10% from 2020 to 2030, or approximately 1% per year for a total reduction of 2,964-acre feet.

A review of both the 2009 and 2019 WEPs show the City's water use has been trending downward. In the 2009 plan, gallons per capita demand (GPCD) was 109 system wide and 82 residential. In the 2019 WEP the system wide average was 102 GPCD and the residential average was 75.



Given the City's successful downward trend in water demand and upward trend in water efficiency, the 2020 Water Efficiency Plan proposes the City can be more aggressive in its water savings target aiming for a total reduction of 17% by 2030, or approximately 1.7% per year for a total reduction of 5,127-acre feet.

The WEP proposes many of the same water saving strategies as proposed in the Water Master Plan and 2009 WEP. These strategies are compared below. Considerations for regulatory water efficiency strategies and how to include these in the Master plan update are included in the Opportunities section.

Table ES-2: Water Efficiency Goals Comparison

Water Use Categories	Total Projected Water Use (2019 to 2028)	Reduction Goals for Planning Horizon		Adjusted Reduction Goals for Planning Horizon	
				Total Water Savings from Activities	Resulting Reduction
	(AF)	(%)	(AF)	(AF)	(%)
Residential	19,827	13%	2,578	3,679	19%
Commercial	5,671	5%	284	901	16%
Irrigation	831	5%	42	213	26%
Municipal	687	5%	34	99	14%
Non-Revenue Water	2,734	1%	27	236	9%
Total:	29,750		2,964	5,127	
Total Percent Reduction:			*10%*	*17%*	

TABLE 4: COMPARISION OF WATER MANAGEMENT PLAN AND WATER EFFICIENCY PLAN STRATEGY RECOMMENDATIONS				
WEP WATER SAVING STRATEGY RECOMMENDATIONS	COMPLETED	2019 WEP	2010 WMP	2009 WEP
Water Rates & Finance Approaches				
Billing Software Upgrades	●		●	●
Water Rate Change	●			●
Tap Fee Incentive		●		
Programs				
Meter Testing and Replacement			●	
Leak Detection/Repair Program		●	●	●
Residential Water Audit Kits		●		●
Residential Water Audits/Slow the Flow		●	●	●
Commercial Pre-Rinse Spray Heads Give Away		●	●	●
Commercial Toilet Rebate		●	●	●
Commercial Water Audits			●	●
Irrigation Audits – Residential/Commercial		●		
High Efficiency Appliance and Plumbing Fixture Rebate			●	●
Irrigation System Rebates		●	●	●
Education Programs				
Designated Conservation Officer		●	●	
Conservation Education in Billing Statements	●		●	
Water Conservation Website Upgrade			●	●
Children's Water Festival	●		●	
School Education Program		●	●	●
Property Manager/HOA Education and Training		●	●	●
Public Education		●	●	
Citizen Advisory Board		●		
Xeriscape Programs		●	●	●
Planning				
Water Planning (water master plan and drought master plan)		●		
Ordinances & Regulations				
New Car Wash Standards		●	●	●
10% Lot Reduction		●		
Tap Fee Incentive		●		
Restrictive Covenants Ordinance		●		
Landscape Ordinance		●		
Water Efficient Medians and Parking Lot Landscaping		●	●	●
Wind/Rain Sensors for Commercial and Open Space		●	●	●
Water Restrictions	●	●	●	
ET Irrigation Scheduling		●	●	●
Water Waste Ordinance		●	●	●
Soil Amendment Ordinance	●		●	●
Irrigation Standards for New Development		●	●	●

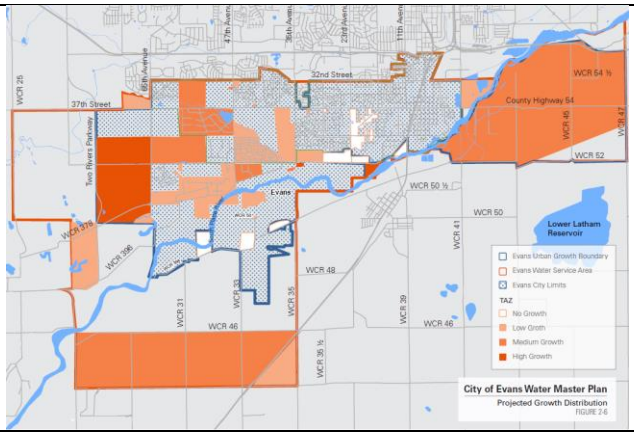
3.2 2016 Water Master Plan

The 2016 Water Master Plan provided a summary of the City's population growth, current and projected water demand, a water supply summary, water conservation options, and water resource management recommendations. These recommendations included:

TABLE 5: WMP RECOMMENDED STRATEGIES	
Issue	Recommendations
12 City parks and open space facilities totaling approximately 40 acres that have only potable water supply available and make up 25% of total irrigation.	Conduct an in-depth feasibility study to determine cost effectiveness of expanding non-potable water to City parks.
Rates are currently being applied based on number of units rather than as dwelling unit multiplier.	Apply multifamily rates as intended to raise revenue and incentives conservation.
Capacity	Staff evaluation study
	Add ½ FTE for water conservation and programs
Financial Health	Consider a fund for future water capacity from Greeley through system development fees and rate revenue in future financial plans.
	Include NISP in future financial plans.
Water Loss	Fund water loss control program for contractor to conduct leak identification and minor repairs.
Infrastructure	Fund pipe replacement for meeting peak demand and fire flows

The WMP included a growth allocation map illustrating the distribution of future growth through 2035 to inform the need for water system infrastructure planning. According to the plan, the highest growth areas include the western edge of the City and the areas in the Urban Growth Area with limited infrastructure.

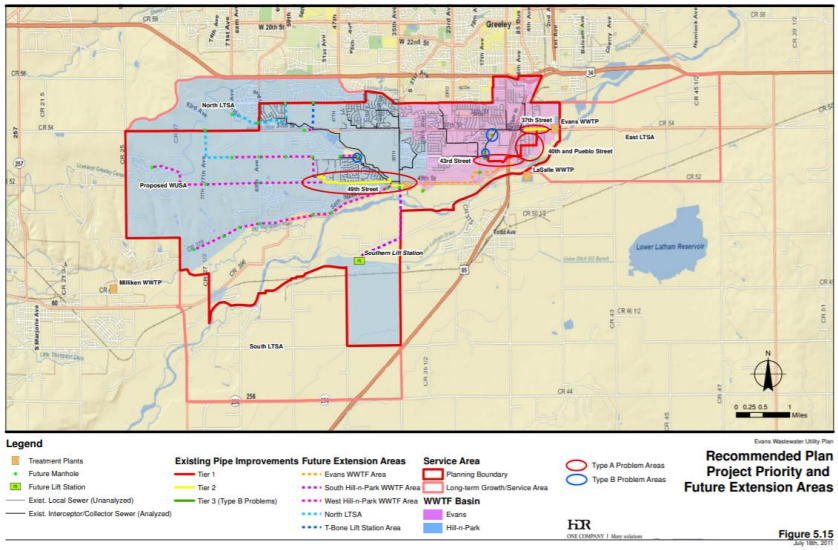
FIGURE 1: CITY OF EVANS WATER MASTER PLAN – PROJECTED GROWTH DISTRIBUTION



3.3 The 2013 Wastewater Utility Plan Update

The 2013 Wastewater Utility Plan Update provides a detailed analysis of the wastewater treatment system for the City of Evans using 2010 as the baseline and looking through to 2030. Based on the capacity assessment, the plan includes final recommendations for the City to ensure adequate wastewater treatment capacity. The recommendations are based on different scenarios for service area extension, growth projections, costs, and capacity to serve. The map representing the recommended system is included below.

FIGURE 2: CITY OF EVANS WASTEWATER PLAN FOR PRIORITY AND FUTURE SERVICE EXTENSION AREAS



In 2013, the wastewater treatment facility service capacity was:

Service Basin	Total Acres Served	Current Population	Average Daily Flow MGD
Evans	1,132	12,380	1,187,000
Hill n Park	488	9,366	484,000
Total	1620	21,746	1,671,000

The plan identified that the Evans wastewater treatment facility was at approximately 95% capacity. Following the 2013 flood which inundated the Evans WWTF, Evans pursued a Natural Disaster Grant from the Colorado Department of Health and Environment and FEMA funds as well as raised rates to construct a new facility in 2018. The total capacity of the plant is 3 million gallons per day, which is operating currently at about two thirds of total capacity. The service area includes Evans, portions of southwest Greeley, and surrounding areas of Weld County.

Both WWTF discharge to the main stem of the South Platte River, Middle South Platte River Subbasin. The plan noted that CDPHE expects changes to the discharge permits in the future as potable water withdrawals are made from the river. This change would require additional treatment for nitrates. It is assumed that since the 2013 plan update accounted for the need for additional water treatment, the new treatment plan has that capacity.

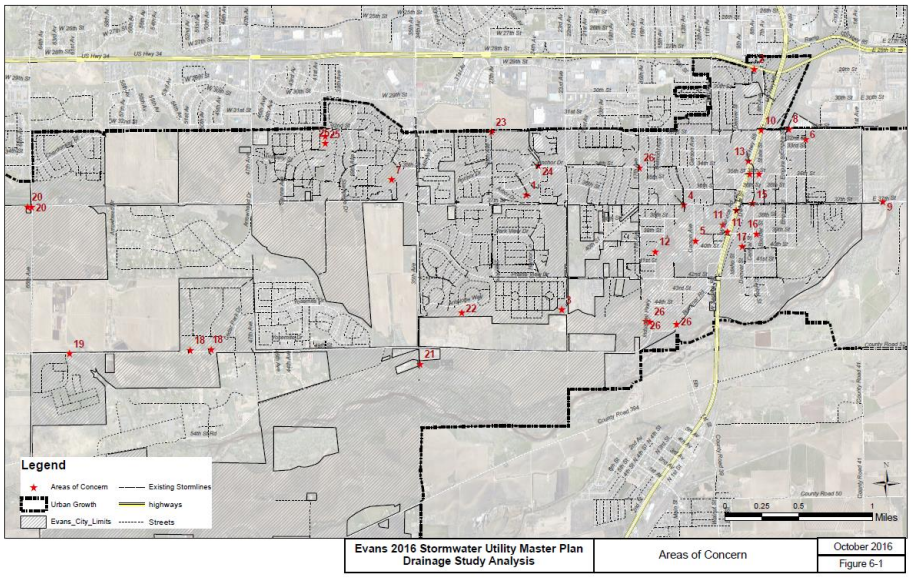
3.4 THE 2016 STORMWATER MASTER PLAN

The 2016 Stormwater Master Plan included a drainage study analysis which identifies twenty-six areas in of concern where infrastructure upgrades are necessary for stormwater infrastructure to function adequately. While the majority of these areas of concern are located in the eastern part of the city, others are distributed throughout the City.

The plan prioritized the different project area based on three different factors, which were averaged for a final ranking. These areas where also assigned to an implementation timeframe. These are summarized below.

STORMWATER MASTER PLAN PRIORITY PROJECT AREAS					
Priority Ranking	Area of Concern	Implementation Timeframe			Status
		0-3 Y	4-7 Y	7+ Y	
1	Undersized pipe at 37th and UPR – Area 9	●			
2	Undersize culverts south of ETD – Area 26				
3	Undersized inlets – Area 16	●			
4	Undersized pipe at 37th and HWY 85 – Area 15	●			
5	Undersized inlets – Area 1	●			
6	Outlets across HWY 85 to 37th St. – Area 11		●		
7	No conveyance south of 49th St. – Area 3			●	
8	Undersized pipe along 23rd Ave. – Area 26		●		
9	No maintenance given to Cave Creek – Area 22			●	
10	Undersized culverts and sedimentation – Area 19			●	
10	Safety concerns – Area 24		●		
11	Undersized culverts – Area 18			●	
12	Abandoned pond – Area 17		●		
13	Lack of infrastructure – Area 6			●	
14	Undersized pipe along 31st St. – Area 8			●	
15	Undersized pond outlet – Area 7			●	
15	Downstream channel sizing – Area 8		●		
16	Discharging to ETD – Area 4		●		
17	Undersized pipe across US HWY 85 – Area 13			●	
18	Undersized channel – Area 20			●	
19	No infrastructure to discharge point – Area 21			●	
20	Lack of pipe connection – Area 5			●	
20	Undersized pipe at 37th and 1st St. – Area 9			●	
21	Undersized pipe north of 49th St. – Area 3		●		
21	Scouring channel – Area 25			●	
21	Undersized pipe along Center Ave. – Area 14			●	
22	Lack of infrastructure – Area 12			●	
23	Undersized pipe along 15th Ave. – Area 4			●	

FIGURE 3: CITY OF EVANS STORMWATER MASTER PLAN AREAS OF CONCERN



The Stormwater Master Plan includes recommendations for the City to integrate stormwater management into city planning. With 70% (25 sq. mi.) of the urban growth area is in the County and primarily underdeveloped.

Extending new infrastructure to this area will be costly. It recommends developing site scale development standards using green infrastructure best management practices. Green infrastructure can achieve multiple benefits including:

- Reduce stormwater peak flow rate and volume and permit groundwater infiltration/recharge.
- Improve stream/river water quality by reducing non-point source pollutants and sedimentation.

The Stormwater Master Plan offers consideration for future city planning in order to minimize future issues with stormwater or developing where stormwater is already an issue. The SMP includes specific recommendations for specific growth areas that will be relevant to future land use planning.

STORMWATER MANAGEMENT PLAN ISSUE AREAS		
AREA	ISSUE	RECOMMENDATION
Urban Growth Area	The southwestern UGA is flat making it difficult to grade pipelines and channels.	Detention pond flood attenuation that will reduce the pipe sizes.
	The area northwest of the City has steeper topography. There are a number of tributaries from the northern UGA which provide more potential discharge areas.	Detention pond flood attenuation that will reduce flow velocities in the northern area and reduce erosion.
		Develop a plan for managing discharge points along the South Platte and its tributaries.
HWY 85 Corridor	Redevelopment at higher density will likely increase run off volume.	Source control measures can be implemented at the site development scale and construction. Adopt green infrastructure into development code (rain gardens, bioswales, bioretention/detention ponds.)

Additionally, the master plan describes best practices that Evans' could adopt and provides recommendations for creating stormwater system resiliency and redundancy.

STORMWATER MANAGEMENT PLAN AREAS	
Recommendation	Status
Policy	
Preserve existing drainage and water features, like wetlands, that support infiltration and filtration.	*To be developed. Comply with USACE requirements for wetlands.*
Separate new and renovated development by separating impervious areas with vegetated areas that support infiltration, reduce stormwater velocity, and filter pollutants.	*To be developed.*
Integrate best practices of site scale green infrastructure including extended detention basins, bioswales, permeable pavements, bioretention, and rain barrels.	*Need a detailed policy to create standardized designs & guidance.*
Ensure maintenance is requirement for ongoing property management.	*Implemented*
Resiliency	
Have multiple outlets to the South Platte River.	*Trying to take more storm south to River with changes to two 2016 Drainage Master Plan projects*
Install a pump station at areas of rick of back flow, including the 37th street outfall.	*In master plan*
Construct local and regional full-spectrum detention basins within new and existing developments.	*Implementing with new development*
Provide safe egress and ingress to residential properties	*Implementing with new development*

Use channels and green space to provide additional infiltration opportunities and reduce peak flow.	*Implementing with new development*
Ensure inlets are frequent and numerous in chase of clogged inlets.	*Maintenance improvement strategy*
Divert flows away from Evans Town Ditch.	*Need to assess physical viability without pumping*

3.5 The 2010 Comprehensive Plan

The 2010 Comprehensive Plan provides a summary of the City's water supply, service area, projected demand, and watershed. In this plan, the priority issues to be addressed were economic development, public safety, infrastructure, and regional leadership. The plan states the importance of planning to capture more commercial development, maintaining levels of service as the community grows, identifying areas to focus growth, diversification of the land use pattern, managing the floodplain for ecosystem services and public safety. The review of this plan included an assessment of whether the water related policies were implemented. Many of the policies related to water quality under Goal 2 where not implemented and are thus recommendations carried forward to the new master plan. Likewise, recommendations under Goal 4 related to lot sizes and infill development, both of which influence water demand. These ideas are also carried forward to the new master plan.

3.5.1 Goals and Policies

The plan is organized around four goals with policies under each goal. The four goals include:

GOAL	VISION
Goal 1. Orderly, Efficient Growth Pattern and Adequate Public Facilities, Including an Efficient Transportation System.	Evans will have a compact land use pattern, maintain a balance between development and the natural environment, provide essential services and facilities efficiently, and coordinate with neighboring jurisdictions on regional growth issues.
Goal 2. Open Space, Parks, Trails, and Recreation	Evans will conserve its natural areas and resources that provide habitat, enrich the lives of residents, and maintain environmental quality. Developed parks and landscaping should contain natural areas and non-mowed native grasses and plants and xeric plantings wherever possible.
Goal 3. Economic Development Opportunities	Evans will seek employment and commercial development opportunities that provide jobs and services to residents and that make a positive contribution to the community both financially and aesthetically.
Goal 4. Stable, Cohesive Neighborhoods and Improved Community Identity	Evans will promote the development of stable, safe, and attractive new residential neighborhoods, and will ensure that the new development and infill is compatible with existing neighborhoods.

SUMMARY OF WATER OR WATER RELATED POLICIES	IMPLEMENTATION
Goal 1. Orderly, Efficient Growth	
Policy 1.3 Promote Infill Development	
• Adopt design standards and other regulations specific to infill development	
Policy 1.4 Consider Benefits and Costs of Annexation on a Case by Case Basis	
• Develop new annexation criteria to include location relative to City's urban growth boundary, mix and balance of proposed land uses, consistency with the comp plan, fiscal impacts, ability of the City to provide facilities and services.	
• Strengthen the Adequate Public Facilities Ordinance to include all categories of infrastructure.	*Standard present*
Policy 1.7 Require Adequate Facilities and Services at the Time of Development	

• Strengthen the Adequate Public Facilities Ordinance to include all infrastructure and include criteria to determine whether adequate services are available prior to annexation.	*Standard present*
• Require public water and wastewater systems for all development in the city.	*Standard present*
Goal 2. Open Space, Parks, Trails & Recreation	
Policy 2.2 Ensure Parks, Trails, and Open Space are Adequate to Meet the Needs of Residents	
• Revise detention/retention pond standards in residential subdivisions so they are integrated into new development and the system counts towards open space dedication. Landscape should be irrigated, xeriscape with native plantings to minimize weeds.	*Standard present*
Policy 2.5 Conserve Water Bodies and Rivers	
• Coordinate efforts to conserve the rivers by cooperating with agencies, governments, landowners to manage rivers and enhance river protection and stewardship.	
• Balance recreation development and conservation of natural areas by designing recreation features to have emphasis on interpretation, scenic values, and to minimize impacts to natural communities, wildlife habitats, water quality, and other environmental values.	
• Use a variety of conservation approaches to conserve rivers and waterbodies including land acquisition, conservation easements, incentives for new development, and education.	
Policy 2.6 Organize Development to Enhance and Protect Natural Areas	
• Develop setback requirements for water bodies and wetlands by revising the code to include setbacks, design standards, and buffer requirements for rivers, streams, lakes, and wetlands.	
• Restore or enhance degraded river sections along the South Platte by working with partners on restoration and enhancement.	
• Enforce erosion control regulations.	*Erosion standards present but applies to larger subdivisions. Present for building permits.*
Policy 2.7 Discourage New Development In the 100 Year Floodplain and Prohibit in the Floodway	
• Update the municipal code to prevent residential development in the floodplain, channel or gulch or watercourse that discharges to the 100- year floodplain.	*Standard for discourage present.*
• Design utilities to minimize or eliminate flood infiltration	
• Encourage conservation easements for floodplain lands	
Policy 2.8 Conserve Water Resources (encourage conservation of water resources through the use of xeriscape principles and use of non-potable water for irrigation.	
• Implement the 2009 Water Conservation Plan to adopt water conservation measures and encourage the use of water conserving landscapes for new development.	
• Continue to provide public educational materials regarding water conservation.	
• Continue to require non-potable irrigation systems in new subdivisions.	*Standard present.*
• Consider setback requirements for the Evans Town Ditch to allow for maintenance and future trail access.	
Policy 2.10 Conserve Mature Trees and Enhance Native Species	
• Continue to evaluate mature trees prior to development during landscape plan review.	*Standard present.*
Goal 4. Stable, Cohesive Neighborhoods	
Policy 4.1 Neighborhoods Should Have a Center	
• Amend the code to create a rural residential zone district which would allow for smaller minimum lot sizes for cluster development.	
• Develop criteria for rural residential developments for permanently conserved open space.	

• Consider an incentive for cluster development providing a density bonus for rural residential development that provide 60% open space	
• Create infill standards to protect existing neighborhoods	

3.6 River, Recreation, Parks and Open Space Plans

The *2015 South Platte River Restoration Plan* was created following the September 2013 floods which had a devastating impact on the Evans. The purpose of the plan was to identify and prioritize stream restoration and rehabilitation project to reduce future impacts from flooding. The plan's objectives relevant to the master plan include:

- Reconnecting the Middle South Platte River to its floodplain and reestablishing a healthy riparian corridor.
- Protecting and promoting areas with high quality and high functioning riparian zones.
- Developing an integrated noxious vegetation management plan along the river.

The plan included regulatory recommendations for action where the comprehensive plan could support implementation are below.

SOUTH PLATTE RIVER RESTORATION PLAN STRATEGIES	
Recommendation	Status
Promote riparian setbacks up to 100' along the S. Platte River using voluntary conservation easements.	*Not implemented*
Adopt a zoning code with a 50-foot setback for riparian protection and adequate space for trails connections and public access.	*Not implemented*
Create a development fee for river restoration to assist with land acquisition, open space, and project implementation.	*Not implemented*

The 2004 Open Space and Trails Master Plan Chapter on Recommendations and Implementation Strategies offers some strategies complementary to the plan above and for water resource management.

OPEN SPACE AND TRAILS MASTER PLAN STRATEGIES	
Recommendation	Status
Land Acquisition and Funding	
The City should investigate and use the most appropriate technique for acquisition and/or protection of open space properties. Acquisition: Fee simple purchase, conservation easement, PDR, joint purchase, leaseback or lease, donations, nonprofit acquisition, and conveyance to City. Regulatory: Large lots, cluster subdivisions, phase growth, TDR. Financial: Preferential assessment, density bonuses, grants and loans.	*City Acquired Arrowhead Lake Property for use as a passive Park*
A developer land dedication requirement (or fee in lieu to acquire or develop open space properties) could be put in place along with the parkland requirement.	*The City has a parks requirement for some residential development, but not natural open lands.*
Parks and Recreation staff should meet with the Planning staff to review and evaluate the applicability of regulatory techniques and financial incentives and determine those appropriate for use.	--
Trails	
Construct a connected pathway of trails and greenways utilizing drainage ways, rivers, scenic corridors, and street right of ways.	--
Ensure trail routing avoids the most valuable habitat and in general, protects wildlife habitat and plant cover as much as possible.	--
Management Issues	

Utilize an integrated pest management approach to weed management.	
Develop management strategies to reduce or eliminate non-native invasive species and support and enhance native species.	
Engage in long term monitoring and holistic, adaptive management to protect and restore sustainable plant communities.	
Inventory and map wetland habitats.	*Some completed as well as Environmental Assessments completed for 4 East Side Storm Sewer Projects*
Preserve riparian corridors so wildlife and human populations can effectively meet current and future needs.	
Avoid placing human activities and trails in confluence areas where streams or rivers join (South Platte and Colorado Big Thompson).	
Protect riparian corridors. • Plan extensive restoration in the Ashcroft Draw area below the reservoir. • Minimize grazing. • Plan low native shrubs alongside the existing bike path in riverside park.	
Use purchase, easements, and zoning to reduce or eliminate encroachments.	

4 Development Regulations in the Municipal Code

Following the review of the City of Evans master plans, DCC conducted a review of the development code to determine:

- The presence of regulatory elements that influence water supply & demand.
- The degree to which the development regulations had been updated based on recommendations in the Evans' master plans and WEP.
- The quality of the regulatory elements to achieve water related goals.

Each of the relevant code sections are reviewed below including water supply standards, zoning district standards, indoor and outdoor water efficiency, design standards, stormwater, and water resource protection. Each of these sections was reviewed specifically for the presence of implementation of existing City of Evans plans as well as with the WEP's ordinance and regulation recommendations. For each code section, the assessment of the City's development regulations informs implementation opportunities in *Section 5: Opportunities for a Water Resilient Future.*

4.1.1 Water Supply Standards

The City's code includes many good practices related to linking water supply to development approval including requirements for:

- Connection to the City system.
- Non-potable dual water system, where available in the Urban Growth Boundary and condition of annexation.
- A water rights dedication for dual water systems.
- A water rights dedication policy for extension of service, annexation, or change in land use that will require additional water from the City. Includes option for the City to lease back water for use on agricultural and open space land after dedication.
- Development applications to estimate project total water demand and water system requirements including total number of gallons per day, irrigated agricultural land, and daily and weekly peak flows.

- An Adequate Public Facilities Ordinance applies to all development and requires applicants to demonstrate meeting water supply/wastewater/stormwater infrastructure design specifications.
- Not placing burden on water system

4.1.2 Development Pattern and Zoning Dimensions

Research has found that higher density development (7-10 units per acre) uses less water than lower density development, primarily due in the reduction in lot size and thus irrigable land area. Evans densities, lot sizes, and dimensional standards all likely play a contributing role in outdoor water demand.

The 2010 Comprehensive Plan quantified existing land use types by average density and acreage for Evans finding that 42.8% of development averaged 4-units per acre, exurban lots between 1 and 5 acres accounted for 17.7%, while only 1.5% of development fell into higher more urban densities predominately found in the more traditional development patterns of the historic downtown. Understanding more recent development pattern trends and whether lot sizes are changing will be important to identifying appropriate water resource management strategies.

2010 COMPREHENSIVE PLAN LAND USE SUMMARY			
Land Use Category	Average Density	Acres	Percent of Total
Rural Residential Neighborhood	1 unit per acre, with lot sizes ranging from less than 1 acre up to 5 acres	3,759	17.7%
Urban Residential Neighborhood	approximately 4 units per acre	9,087	42.8%
High Density Residential	7 or more units per acre	328	1.5%
Commercial	Ranging 5-30 acres	2,309	10.9%
Historical Mixed Use	--	18	<1%
Industrial Rail Access	--	1,509	7.1%
Industrial Business Park	--	456	2.1%
Industrial Clean Energy	--	1,150	5.4%
Public Facilities	--	191	<1%
Parks and Open Space	--	358	1.7%
River Natural Habitat	--	2,096	9.9%
Total Acres	--	21,261	

The City developed Residential Neighborhood Development Standards which are applicable to multifamily units with more than 20 units, all subdivisions with more than 20 single family units, or 10 duplexes on more than 5 acres. The standard includes requirements for a variety of lot sizes to prevent monotonous single-family development. While a good goal, the lot size ranges start at 6,000 square feet up to more than 13,000 square feet (> quarter acre). The average suburban lot in America is around 7,200 square feet whereas more traditional urban lots sizes are around 5,000 square feet. The standard requires development create no more than 30% of lots in any single category. The City's development pattern is also influenced by the code's dimensional standards for setback from roads, buffers from other development, and landscaping requirements.

4.1.3 Outdoor Water Efficiency

Outdoor irrigation as a percentage of total water use is 39% and one of the largest opportunities for water savings in the City through regulatory action. The City was an early adopter of outdoor water conservation ordinance restricting outdoor watering seasonally between April and October.

WATER CONSERVATION ORDINANCE	
Standard	Requirement
Year-Round Time of Day Restrictions	Irrigation limited to between 5:00 p.m. – 12:00 p.m.

Day of Week Restrictions	3 days per week depending upon address (Sunday, Wednesdays, Fridays or Tuesdays, Thursdays, Saturdays). No watering on Mondays.
Violations	A warning and increasing fine for each violation ranging from $150.00 to $999.00.

The City has a landscape policy and landscaping guide to incentivize more water efficient landscapes.

LANDSCAPE CODE	
Standard	Requirement
Plant Requirements	Plant List from Parks and Recreation Department/City Forester. It does not include groundcovers. Those are included in the Lawn and Grass Specifications which provides mixtures for native grasses for open space, detention pond grasses (native), right of way mixtures, and park turf mixtures.
	Species diversity and plant size
	Groundcover means grasses or other plants and landscaping materials used to keep soil from being blown or washed away. Such materials may include, but are not limited to turf, native grasses, low-lying shrubs or bushes, ivy, boulder/stone, wood chips, mulch, bark or other similar coverings, but not including weeds or bare dirt. (in definitions)
Turf Requirements	Turf required in stormwater detention ponds.
Soil Enhancement	Soil shall be amended according to City standards.
Tree Preservation	Existing healthy trees and shrubs shall be preserved and incorporated into the overall site and landscape design.
Irrigation System	All required landscaping shall be irrigated. Use of non-potable irrigation is encouraged. Temporary irrigation is permitted. The code includes no mention of water efficiency.
Parking Standards	1 landscape island for every 15 parking spaces at the end of each parking row, 8 feet wide by 18 feet long and shall contain groundcover and shade trees. End to end rows with more than 20 spaces shall be separated by a 5-foot-wide strip with shade trees, shrubs, and groundcover.
Buffer yards	Buffer yards shall include trees, shrubs, plus groundcover for entire area. Size vary from 10, 20, 30 feet.
Stormwater Management	Landscaping shall be designed in conjunction with the stormwater drainage plan to maximize the buffering effect of stormwater detention areas. 1. Design in natural form to blend in 2. Trickle channels appear natural using cobble, river rock, or similar materials. 3. Landscaping with bluegrass blend sod or seed mix or other City approved sod/seed mix. 4. Tree installation around perimeter 5. Installation of an irrigation system approved by the City.
Landscape Plan	Landscape and irrigation plans must be submitted. No requirement for calculation of total amount of water demand.

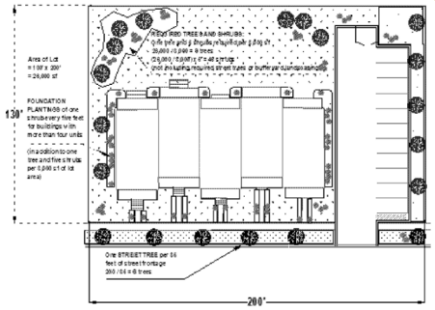
The applicability of these requirements is determined by development type.

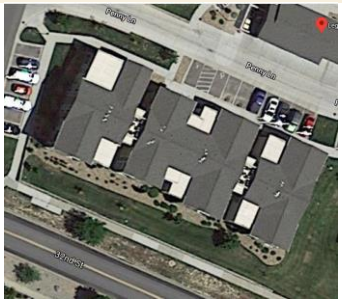
Development Type	Requirement
Single family/duplex	Required to install groundcover within two years, encouraged to plant trees in front yard, and required to install shade trees and groundcover between curb and detached sidewalk of arterial and collector street. Compliance is enforced when additional improvements are requested.
Multifamily	Requirements must meet plant requirements for trees and shrubs per square footage, landscaping along perimeter with shrubs, and for any non-impervious surface landscaping with shrubs, sod, or other groundcover.
Nonresidential	Required to landscape impervious surfaces with shrubs, sod, or groundcover as well as include an additional landscaped buffer depending upon lot size.

	• Properties of less than one acre must have a 5-foot wide landscape strip extending inward from any property line which abuts the right of way with trees, shrubs, and groundcover. • Properties of greater than one acre must have a 10-foot wide landscape strip extending inward from any property line which abuts the right of way with trees, shrubs, and groundcover. Compliance for nonconforming development occurs when applying for a building permit to increase gross floor area.

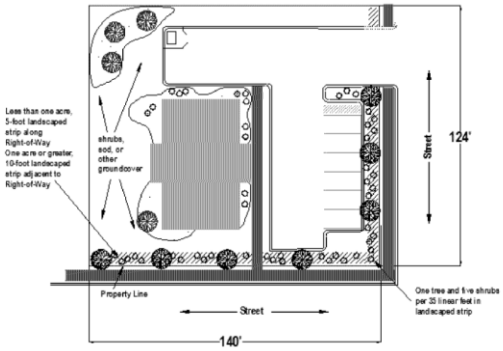
While these requirements are intended to create an aesthetically appealing urban environment, they most frequently result in large swaths of turf and underutilized space contributing to a more suburban development pattern. The images below show an illustration of the development requirements compared with Google photos from Evans. The WEP recommends both a reduction in overall landscaped area by 10% as well as more water efficient landscape ordinance. Updates to the development code landscape ordinance, buffer widths, and green infrastructure can all help create more water efficient land use patterns.

STANDARD	EXAMPLE
Multifamily Landscape Requirements Illustration	Actual Development

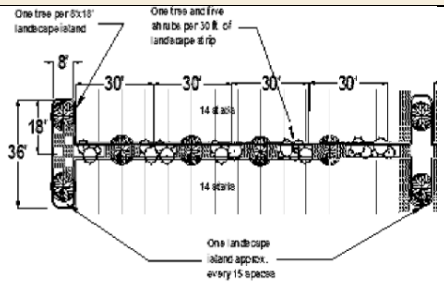


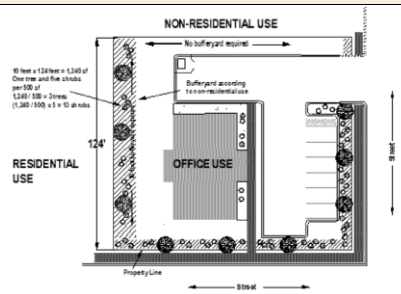


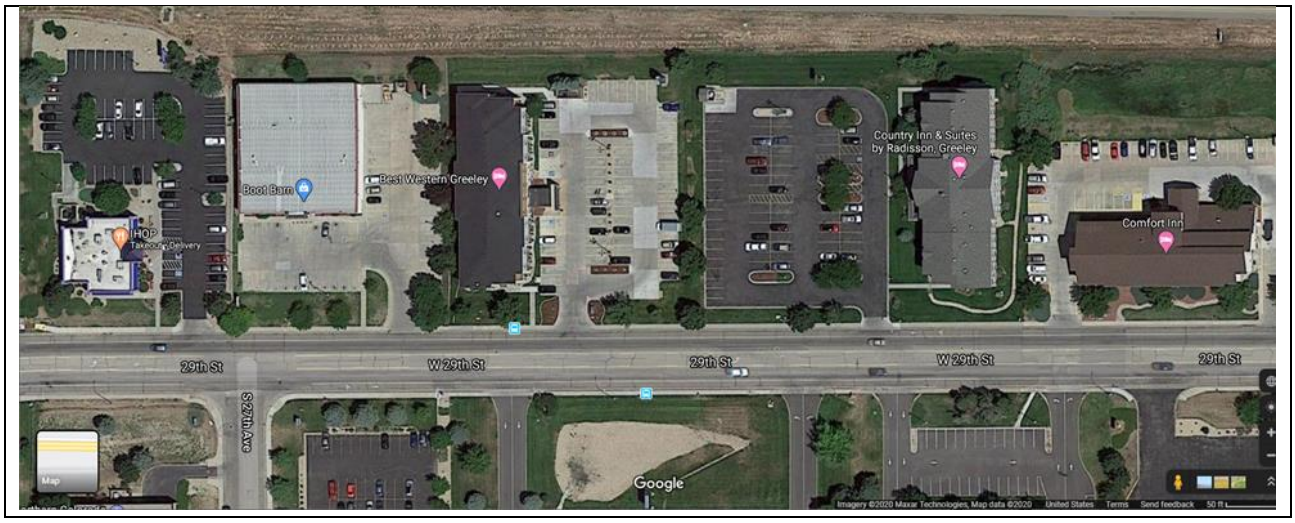
Nonresidential Landscape Requirements Illustration	Actual Development



Parking Lot Landscape Requirements Illustration	Buffer Requirements Illustration







4.1.4 Street Design Standards

The City's street design standards also contribute to outdoor water use by requiring landscaping within the streetscape.

LANDSCAPING STANDARDS FOR STREETS	
Parkways	Landscaping shall consist of ground cover with landscaped/xeriscape areas that include shrubs, bushes, hedges or other landscaping ornament as approved by the City. Minimum two-inch caliper deciduous trees shall be planted at thirty- to forty-foot spacings in the center of all parkways. Species shall be selected from the City-approved plant materials list. The placement of all trees shall meet the city's sight distance standards as provided in Chapter 15.58.
Medians	Medians shall consist of ground cover with landscaped/xeriscape areas that include two-inch caliper deciduous trees planted at thirty- to forty-foot spacings in the center of all medians. Shrub groupings may be added to the median design but shall not substitute for any trees. Species shall be selected from the City approved plant materials list. The placement of all trees shall meet the city's sight distance standards as provided in Chapter 15.58. The developer shall be responsible for installing the median and providing a perpetual maintenance mechanism for the median.

4.1.5 Residential Development Design Standards Landscape Requirements

The residential design standards include requirement for buffers, variety of lots sizes, and "identify features" within new subdivisions. Identify features include pocket parks, trails, water features, playground, community buildings, and plazas. It was unclear if the City permits a fee in lieu for park dedications that might be used for other open space or recreation acquisition.

RESOURCE	STANDARD
Residential Neighborhood Design Standards	Requires perimeter open space/outlot of at least 20 feet in width along arterial or major collector right of way with a landscape plan and maintained by the HOA.
Water Features	Includes options for water features or fountain
Pocket Parks	Must meet landscape code requirements.

4.1.6 Water Source and Water Quality Protection

While many of the City's planning documents recommend strengthening river system and water quality protection standards, to date, the City has only updated the floodplain requirements. There are currently no stream or wetland protection standards.

RESOURCE	STANDARD
Stormwater	Stormwater control plans for during and after structures have been built. Stormwater permit required for disturbance to more than 1 acre or in circumstanced City deems necessary. Includes both construction and post construction BMPs. Post construction includes water quality treatments including inlet inserts, bioretention, grass swales and buffers, extended detention basins, sand filters, permeable pavement, constructed wetland ponds and channels, and underground bmps.
Floodplain	Building permit requirements: Encroachment in the floodway is prohibited unless a no rise certification. Higher standards specific to shallow flood areas for construction. For floodplain, required analysis for all development to assess sediment transmission, channelization and flow diversion impacts. Requirement for a floodplain development permit if development removes area with fill. Elevation 18" above base flood.
	For subdivisions requires base flood elevation data to be generated if greater than 50 lots or 5 acres, whichever is lesser.
	All new and substantially improved critical facilities within special flood hazard area shall be required to be regulated to a higher standard including location outside the flood area, elevation of at least 2 feet above base flood elevation.
Erosion	Required erosion and sediment control plan for all land disturbing activity over an acre. Includes protection for waterbodies.

4.1.7 Indoor Water Use

The majority of water demand in Evans is indoor water use (61%). The City does not currently have any specific indoor water efficiency requirements in the code. The WEP recommends rebate programs, but no regulatory policies. Indoor water efficiency is currently regulated by the 2018 International Plumbing Code which is less efficient than the State of Colorado's WaterSense rule.

PLUMBING FIXTURE REQUIREMENTS		
Required Fixture	Federal Standard	CO WaterSense Standard
Toilets to not exceed	1.6 gpf	1.28 gpf
Showerheads	2.5 gpm	2.0 gpm
Faucets (bathroom and kitchen)	2.2 gpm	1.5 – 1.8 gpm

The City requires installation of separate meters for indoor and outdoor use when utilizing non-potable water.

4.2 Utility Rates and Programs

The utility recently updated its water rates and has a tiered water rate structure to incentivize water efficiency.

WATER RATES 2020		
Base Delivery Charge	City of Evans	Out of City
	$20.25 per month	$21.25 per month
Water Service Fees – Residential (SFR, MF) without non-potable availability	Potable Per 1,000 gall	
1,000 to 16,000 gallons	$5.04	
>16,001 gallons	$7.96	
>22,000 gallons	$12.77	
Water Service Fees – Residential (SFR, MF) with non-potable availability	Potable Per 1,000 gall	Non-Potable
1,000 to 16,000 gallons	$5.04	$2.61
>16,001 gallons	$12.77	
Water Service Fees – Commercial	Potable Per 1,000 gall	Non-Potable
	$6.12	$2.61

The City requires development fees for water, sewer, and stormwater.

Water system development fee	Based on tap size and water source
Sanitary sewer development fee	Based on the unit type and meter size
Stormwater development fee	Based on square footage

The City also charges a water system development fee based on tap fee/SFE.

SYSTEM DEVELOPMENT CHARGES 2020					
Tap Size (inches)	SFE	Inside City		Outside City	
			With non-potable water		With non-potable water
¾	1	$14,643.39	$8,786.03	$21,965.10	$13,179.05
1	1.67	$24,454.46	$14,672.69	$36,681.70	$22,009.02
1 ½	3.33	$48,762.49	$29,257.52	$73,143.74	$43,886.26
2	5.33	$78,049.28	$46,829.59	$117,073.91	$70,244.37
3	10.67	$156,244.99	$93,747.06	$234,367.48	$140,620.54
4	16.67	$244,105.33	$146,463.31	$366,158.00	$219,694.88
6	33.33	$488,064.22	$292,838.75	$732,096.35	$439,257.96
8	53.33	$780,932.06	$468,559.57	$1,171,398.08	$702,839.08
10	126.67	$1,854,878.37	$1,112,927.84	$2,782,317.56	$1,669,391.08
12	166.67	$2,44,641.03	$1,464,369.50	$3,660,921.04	$2,196,553.34

CASE STUDY: TOWN OF CASTLE ROCK, COLORADO

Castle Rock, Colorado has been working to manage their water resources integrating some best practices that have made them a case study for other Front Range communities. Their efforts include:

- A water conservation fee incentive
- A water efficient land use code
- Irrigation scheduling
- Water waste ordinance
- Car wash standards
- Individual household water budgets

Water Conservation Fee Incentive

In 2015, the Town adopted a water conservation incentive for new development and annexations creating an incentive system development fee structure using a gallon per minute water metric versus a standard EQR/tap size. The fee incentives rewards developers who can reduce the gallons per minute, regardless of the EQR, through water efficiency and conservation with a fee reduction. To qualify for the fee reduction, developers must submit a Water Efficiency Plan (WEP) with their development application and meet the minimum standards for indoor and outdoor water efficiency. If approved, the Water Efficiency Plan is a document which is part of the Development Agreement. An example is provided here.

The water standard in the code is simple and references the Town's guidance manuals for the specific methodology to determine water flow rates.

Castle Rock Development Code Water System Fees
Irrespective of the SFE assignment under subsection A, connections within an area governed by a water efficiency plan shall be assigned an SFE by applying the engineering criteria adopted by Castle Rock Water to the specific water saving measures mandated by the water efficiency plan with 0.67 SFE being the lowest available assignment under this section.

Meter Size	GPM	SFE	Water	Renewable Water	Subtotal	Wastewater	Total
5/8"x3/4"	20	0.67	$ 2,455	$ 11,810	**$ 14,265**	$ 2,695	**$ 16,960**
3/4"	30	1.00	$ 3,664	$ 17,623	**$ 21,287**	$ 4,023	**$ 25,310**
1"	50	1.67	$ 6,119	$ 29,437	**$ 35,556**	$ 6,718	**$ 42,274**
1.5"	100	3.33	$ 12,201	$ 58,698	**$ 70,899**	$ 13,397	**$ 84,296**
2" C2	200	6.67	$ 24,439	$ 117,573	**$ 142,012**	$ 26,833	**$ 168,845**
2" T2	250	8.33	$ 30,521	$ 146,833	**$ 177,354**	$ 33,512	**$ 210,866**
3" C2	500	16.67	$ 61,079	$ 293,844	**$ 354,923**	$ 67,063	**$ 421,986**
3" T2	650	21.67	$ 79,399	$ 381,979	**$ 461,378**	$ 87,178	**$ 548,556**
4" C2	1,000	33.33	$122,121	$ 587,511	**$ 709,632**	$ 134,087	**$ 843,719**
4" T2	1,250	41.67	$152,679	$ 734,521	**$ 887,200**	$ 167,638	**$1,054,838**
6" C2	2,000	66.67	$244,279	$ 1,175,198	**$1,419,477**	$ 268,213	**$1,687,690**
6" T2	2,500	83.33	$305,321	$ 1,468,865	**$1,774,186**	$ 335,237	**$2,109,423**

For more information, read this excellent resource guide on designing a water conservation fee incentive program. https://westernresourceadvocates.org/wp-content/uploads/2018/07/WRA_Guide-to-Conservation-Oriented-SDCs_web.pdf

Landscape Code

In 2018, the Town updated their Landscape Code and Irrigation Standards. The requirements aim to achieve three performance standards:

1. Efficient Water Use
2. Environmental Sustainability
3. Aesthetics and Quality of Life

Applicability to Development

The regulations apply to all development with different requirements for different types. The Landscape and Irrigation Design Manual addresses standards for each development type.

1. Multi-family and single-family attached residential properties
2. Single and two-family residential properties
3. Commercial/business/industrial/urban/governmental/schools/mixed-use properties
4. Streetscape, rights-of-way (ROWs), tracts and easements
5. Public areas

Requirements for Professional Certification/Inspection

1. For developments under four units, front and rear yards must be designed and installed by the builder.
2. For development over four units, the landscape and irrigation plan must be designed by certified professionals.
3. Inspection is required prior to Certificate of Occupancy and must be approved by an independent certified auditor.

Landscape Water Allowance

The City uses water allocation for irrigation:

- No individual plant may have water demand greater than 15-inches per growing season.
- Water allocation for the irrigation of streetscapes is a maximum of 15-inches of irrigation per growing season for all landscaped areas.
- Water allocation for the irrigation of parks, sports fields, and golf courses shall vary by use of the area. Active areas may be allocated up to 19-inches.

Landscape Material Requirements

- The landscape design must include a soil analysis and amendments, utilize the approved plant list, group plants in a similar hydrozone, and meet species diversity criteria.
- Xeric landscapes must provide a minimum coverage of 75% by plant materials at 5-year maturity in front yards and side yards adjacent to streets. Rear yards must have a minimum of 40% coverage. The remainder of yard coverage can be mulches, aggregate surfaces, artificial turf, and hardscapes.
- Turf areas are limited based on the lot size. Kentucky bluegrass and any species that uses more than 19-inch of supplemental irrigation is prohibited. Native grasses are exempt from the square footage limits.

Lot Size	Percentage of Turf	Example
7,000 sq. ft. or less	30%	7,000 sq. ft. x .30=2,100 sq. ft.
7,001 - 17,000 sq. ft.	20%	17,000 x .20 = 3,400 sq. ft.
Over 17,000 sq. ft.	20%; not to exceed 5,000 sq. ft.	

Irrigation System Design Criteria

- Efficiency standards for irrigation systems.
- Permanent irrigation systems are required in landscaped areas greater than five hundred (500) square feet.
- Irrigation must use smart controllers and rain sensors.
- Dual meter installations are required for irrigated areas between two thousand five hundred (2,500) and five thousand (5,000) square feet.
- Irrigated areas greater than five thousand (5,000) square feet require a dedicated irrigation tap, except for single family lots.

Irrigated Public Area Standard

For all irrigated public areas including public lands and easements owned by the Town and/or any metropolitan district within the Town such as public street entrances, medians, parking lots and rights-of-way, public parks and recreation areas, etc. must follow water conservation standards. The Town uses a composite landscape water use rating with a different water efficiency rating for potable and non-potable water sources.

Irrigation Schedule

Castle Rock's outdoor watering schedule is based on every third day based on address from May 1st to September 30th. Residential customers can water between 8:00 pm and 8:00 am while commercial customers can water between 10:00 pm and 6:00 am. A violation of the watering schedule is enforced through the water waste ordinance.

Water Waste

The Town has a water waste ordinance that includes:

- Continuous irrigation to any area resulting in ponding or pooling of water.
- Runoff of water not absorbed into the ground, which flows away from the area being irrigated.
- Any irrigation system that is leaking.
- Application of water intended for irrigation to any impervious surface.
- Letting water run unrestricted from a hose or faucet.
- Application of water to impervious surfaces such as street washing applications.
- Operation of any irrigation system when curtailment stages have been invoked.

Violations are given as a written notice with 24-hours to 5-days to respond. The Town has moved to incorporate education into the enforcement hiring water monitors to issue warnings and inform customers of the value of management water resources.

Residential	Non-residential
1st – Warning, no surcharge	1st – Warning, no surcharge
2nd - $25 surcharge	2nd - $100 surcharge*
3rd - $50 surcharge	3rd - $200 surcharge*
4th - $100 surcharge	4th - $400 surcharge*
5th - $200 surcharge	5th - $800 surcharge*
Subsequent - $200 surcharge*	Subsequent - $800 surcharge*
*Subject to service discontinuance	*Subject to service discontinuance

Restrictive Covenants

The Town has adopted a standard prohibiting homeowner association from requiring turf or prohibiting

3.15.080 - Restrictive Covenants
B. No person shall enforce or seek to enforce any provision contained in any restrictive covenant that has the effect of requiring that an area of any lot, or any minimum percentage of a lot, be landscaped with turf grass. However, this prohibition shall not preclude the enforcement of restrictive covenants requiring the watering and regular maintenance of turf grass. C. Any person who violates Subsection 13.15.080.B shall be punished by a fine of not more than one thousand dollars ($1,000.00). Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation is committed, continued, or permitted by any such person. D. Any new restrictive covenant that prohibits or limits the installation or use of drought-tolerant vegetative landscapes is prohibited.

Car Washes

The Town has adopted requirements for commercial car wash installations:

1. Newly constructed facilities, whether full-service, in bay, or self-serve are required to use water recycling systems or weep recovery systems and other demand management tools.
2. Existing car washing systems that are being expanded, repaired, or rehabilitated are required to conform to recycling requirements.

Water Rates and Water Budgets

The City of Castle Rock uses water budgeting for individual water customers. The indoor water budget is based on a household's water use during the winter and the outdoor water budget is calculated based on irrigated area and evapotranspiration (ET). Customers pay for the total amount of water they actually use.

Water rates are set to:

- Tier 1 (0 gallons to water allowance).
- Tier 2 (irrigation season rate): The amount of water available for seasonal purposes from April through October. This is calculated by using each customer's irrigated and plant material monthly water needs (evapotranspiration - ET).

- Tier 3 (excessive use rate): The amount of water over your total water budget allocation.
- Conservation surcharge: The water conservation measure adopted by Town Council assesses an additional charge to each 1,000 gallons used over 40,000 gallons by single-family residential customers.

Stormwater Management

The Town of Castle Rock's *Storm Drainage Design and Technical Criteria Manual* provides guidance on site level stormwater management and low impact design promoting best management practices (BMPs).

- *Volume Reduction Practices*. Reduce runoff volume and peak by minimizing impervious areas and/or the effective imperviousness of the site and to slow down runoff and promote infiltration. This is achieved through reduction of paved or impervious areas through BMPs such as the use of porous pavement, grass buffers, and grass swales.
- *Water Quality Protection*. Integration of BMPs that provide for sedimentation of particles and removal of pollutants including porous pavement detention, porous landscape detention, extended detention basins, sand filter extended detention basins, constructed wetland basins, and retention ponds. Water quality protection must be integrated into a site or development in the initial planning stages and addressed concurrently with the stormwater conveyance and detention storage facilities.
- *Drainageway Stabilization*. Drainage within or adjacent to a development must be addressed in the overall stormwater management plan regarding stabilization of many major drainageways and addressing recommendations contained within the Water Basin Master Plan.

The manual provides design standards that address the site, regional, and basin scale.

Comparison of Water Efficiency Standards

Comparison of Colorado Water Efficiency Statute, EPA Programs, and Federal Standards						
		Year of Implementation				
	CO Regulatory Standard	2017	2019	2021	Federal Standard	Energy Star or WaterSense Maximum Water Use
Lavatory Faucet	0.5 gpm	X			0.5 gpm	0.5 gpm or less
Public Lavatory Faucet, Metered	--				0.25 gpc	N/A
Lavatory Faucet	1.5 gpm		X		2.2 gpm	1.5 gpm
Showerhead	2.0 gpm		X		2.5 gpm	2.0 gpm
Flushing Urinal	0.5 gpf		X		1.0 gpf	0.05 gpf
Flushometer Valve Toilet, Commercial	1.28 gpf			X		1.28 gpf
Tank Toilet	1.28 gpf		X		1.6 gpf	1.28 gpf
Kitchen Faucet/Aerators, Residential	1.8 gpm	X			2.2 gpm	2.2 gpm
Spray Sprinkler Bodies	Water Sense			X	--	0.5 gpm at 30 psi
Dishwasher, Commercial	Energy Star			X	--	Depends on type[3]
Steam Cookers, Commercial	Energy Star			X	--	Depends on type[4]
Pre-rinse valves, Commercial	--	4.7-6.5 IWF				1.3 gpm
Clothes Washers, Residential	--	3.2 to 4.3 IWF				
Dishwashers, Residential	--	3.5-5.0 gpc 3.5 gpc or less				
Gallons per minute (gpm) *Gallons per flush (gpf)* *Gallons per cycle (gpc)* *International Water Factor (IWF)*						

5 Opportunities for A Resilient Water Future in Evans

5.1 Goal

The City of Evans should be commended for the good work they have done to date to more sustainably manage their water resources to date including the following water efficiency activities:

- Water Right Dedication for New Development
- Requirement for New Development to Irrigate with Non-Potable Water
- Advanced Metering Infrastructure Installation and Operations
- Water Rate Study/Water Efficient Rate Structure with Regular Updates
- Water Reuse System at the Wastewater Treatment Facility
- Tap Fees with Water Use Efficiency Incentives (Lot-based water dedication)
- Master Plans/Water Supply Plans/Integrated Water Resource Plans
- Drought Management Plan
- General Monitoring and Verification Activities and General Water Rates and Billing
- Weekly and Time of Day Outdoor Watering Restrictions
- Water Waste Ordinance
- Irrigation System Standards for New Developments
- Landscape Design Ordinances and Restrictions
- Public Education (Newsletter, Webpage, Interactive Website, Social Media, etc.)
- Children's Water Fair or Festival
- The City is currently developing a policy for car wash standards for new construction as well as funded a water conservation officer in the past, dependent on budget.

As the City looks into the future with this master plan update, its primary water goal should be to sustainably manage its water resources to be resilient from the threats and shocks of:

- Increasing costs of water as new sources of water on the Front Range become scarcer.
- Increasing demand for water as Evans' economic development and population growth create new demand.
- Peaks in demand due to seasonal irrigation increases.
- Financial costs of regularly exceeding the threshold for treated water supply in the agreement with Greeley.
- Degradation of watershed and ecosystem functions.
- Decrease in water supply yields due to prolonged drought and climate change.

To achieve its goal, the City should continue and strengthen existing water resource management practices as well as explore new strategies to conserve supplies as demand grows into the future. The ideas presented in this section were developed based on the recommendations identified in existing plans as well as best practices for linking water and land use policy. These are offered to stimulate discussion about identifying the appropriate goals and strategies for the City of Evans in the master plan update. [3]

[3] Many recommendations are borrowed from best practices resources including: NWCCOG QQ's Water Savings Resource Guide, LILP/Babbitt's Incorporating Water into Comprehensive Planning, and WRA's Integrating Water and Land Use Planning

5.2 Diversify Evans' Development Pattern

Research has identified that lot size and housing type correlate with water demand. Single family houses on large lots are the most water intensive, while smaller lots, higher density and multifamily are more efficient. Without changes to other regulatory policy, densification of the development pattern has been shown to reduce water demand principally because smaller lots have less landscaping.

5.2.1 Mange Future Growth Areas By Phased Expansion of Instructure

Evans' has a large designated urban growth area which could put pressure on City infrastructure, depending on the growth projected in all areas. Current City Master Plans include maps for water distribution, wastewater treatment, and stormwater future areas of service or areas of limited capacity. The City could be more deliberate about where new development goes that requires extension of infrastructure and where infill development can maximize current investments that reduce the need for extension of infrastructure.

The Water Master Plan projected that future water demand would be in the west and south of the service area with little to no growth in the older, developed part of the City or in agricultural areas. Similarly, the wastewater master plan and stormwater master plan also identify physical limits to growth. These infrastructure expansion areas should be explored in the development of the future land use plan and map.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.2 2016 Water Master Plan Figure 1
2.3 2013 Wastewater Utility Plan Update Figure 2
2.4 2016 Stormwater Master Plan Figure 3

5.2.2 Identify Areas for Infill and Redevelopment that Encourage Denser Development and Achieve Resource Protection Goals

In 2010, the predominant land use type was urban residential of approximately 4 dwelling units per acre accounting for 42.8% of all of Evans' housing. The City has since adopted a residential development design standard which apply to development applications with more than 20 units to create greater diversity of residential development types. This has likely had some impact on new development and diversity of lot sizes, although the smallest lot size in the design standard is 6,000 square feet. It is unclear if 6,000 square feet represents Evans' "traditional" pattern or if there is a history of smaller lots. As preparation for the new master plan, a review of the development pattern and trends in subdivision applications may inform additional changes to diversify development.

Additionally, the City should consider designating areas for residential and mixed-use redevelopment that could absorb new growth. These designated infill areas could encourage smaller lots and a diversity of housing types. These areas of intensified growth would support multiple goals. First, it could support economic development by creating neighborhood scale entrepreneurial businesses (coffee shops, small restaurants, etc.). Second, a designated "receiving zone" for higher densities could be created to support a market-based transfer of development rights program that would protect agricultural land, the river floodplain, and other priority landscapes.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.7.2 Development Pattern and Zoning Dimensions

5.3 WATER EFFICIENCY TRENDS

5.3.1 Make WaterSense as the Baseline for Plumbing Fixture Standards

The State of Colorado adopted a state policy to phase in WaterSense plumbing fixtures in 2016 and expanded it in 2019 with full implementation by 2021. For the specified fixtures and appliances, manufacturers who sell to distributors, wholesalers, retailers, developers, and homebuilders are required to sell those labeled WaterSense. It should be stressed that this does not prohibit *the installation* of other types of fixture by a homeowner who wants to order a different fixture off the internet as this falls under local government control. It should also be noted that the State of Colorado Plumbing Code and WaterSense rule are not currently aligned. The State of Colorado Plumbing Code is tied to the Federal Plumbing Standard which is less efficient than the WaterSense rule.

Currently, the City has no regulatory requirements for efficient indoor water use for either residential or commercial development. The WEP does recommend providing pre-rinse spray valves to restaurants as part of a future giveaway program as well as rebate programs for high efficiency fixtures.

Given the State's WaterSense rule has set the standard for Colorado's retail market, low hanging fruit for the City would be to align their local plumbing code policies with the WaterSense policy for residential and commercial plumbing fixtures and appliances.

Required Fixtures	Colorado Plumbing Code Standard	CO WaterSense Standard
Toilets	1.6	1.28 gpf
Showerheads	2.5	2.0 gpm
Faucets (bathroom)	2.2	1.5
Faucets (kitchen)	2.2	1.8 (temp flow of 2.2)

A quick scan of the toilets available online at the Greeley Lowe's demonstrates that nearly 80% of the single flush toilets available are water efficient, many of which are even more efficient than the WaterSense 1.28 gpf. Only about 13% of toilets available would be equal to the less efficient Colorado Plumbing or Federal Plumbing Standards of 1.6 gpf. In addition to saving homeowner money on water bills, the price of the water efficient toilets is also more affordable than those with a standard flush. Similarly, for kitchen faucets water efficient options were nearly 93% of the market, while for bathroom faucets market penetration was 99%.

WATER EFFICIENT FIXTURE MARKET PENETRATION GREELEY LOWE'S		
Toilet Flush Rate (gallons per flush)	Total Number	Percent of Total Available
Single Flush Low Flow to Ultra Low Flow		
1.28 gpf	807	57.15%
1.0 – 1.1 gpf	155	23.58%
0.08 gpf	178	
Dual Flush		
1.6/1.1 gpf	32	2.2%
1.6/0.8 - 1.0 gpf	62	4.3%
Standard Flush 1.6 gpf	**178**	12.6%
Total Types Available for Sale	**1,412**	

With a market with that is predominantly water efficient fixtures, ensuring those fixtures are installed in new development should be policy low hanging fruit. If the City were to conduct a rebate program, it could target customers in pre-1994 homes which are the least efficient and offer the greatest savings.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.7.7 Indoor Water Use

5.3.2 Consider a Retrofit Policy or Program for Water Efficient Plumbing Fixtures

Of all indoor water uses, toilets account for about 30% of household water demand. The Energy Act of 1992 raised the national efficiency standards for toilets and fixtures. Toilet efficiency dramatically increased from of 3.5 gallons per flush in the eighties to 1.6 gallons per flush in the nineties, the current Federal and State standard today. A WaterSense toilet uses almost a third of the water of toilets installed pre-1993 and is 20% more efficient than the current standard. Thus, replacing old, inefficient toilets with a WaterSense toilet can result in a reduction between 20-60%.

When it comes to considering the value of a toilet retrofit program, the age of the housing stock is the primary consideration determined by the total number of units built *prior* and *after* the 1992 Act in the community. Based on product replacement studies completed by the National Association of Home Builders (NAHB) and the International Association of Certified Home Inspectors (InterNACHI), bathroom fixtures can be expected to be replaced as follows:

- A residential tank-type toilet has an average life expectancy of 30 years
- Bathroom sink faucets have an average life expectancy of 15 years
- Showerheads have an average life expectancy of 12 years

Theoretically, this means that houses built between 1990 and 1992 which may have these older inefficient toilets will be reaching the end of their product life expectancy between 2020 and 2022. This 30-year life cycle would also assume that most of the housing stock built remodeled between 1980 to 1990 has replaced a toilet with a toilet that most likely uses 1.6 gpf. This means these homes may also benefit from an upgrade to a water sense toilet.

	Evans
Percent of Total Water Sales - Residential	73%
Average Age of Housing Stock[4]	--

Data is lacking on the age of the current housing stock. However, the 2020 Census will provide current data within a year. Using the 2020 Census, an assessment of the potential water savings for developing a plumbing retrofit program should be done gathering finer scale data including:

- Number of single family residential (SFR) and number of multifamily residential (MFR) pre-1993 and post-1993
- Average number of toilets per SFR and MFR
- Average persons per household for SFR and MFR
- Resale rate for SFR and MFR

If this assessment identified there were sufficient opportunity, Evans could pursue a toilet retrofit requirement. Communities that have instituted retrofit ordinances use different approaches requiring:

1. Plumbing upgrades at resale and transfer of property.
2. Retrofit at building permit or C.O.O. during remodel.
3. Retrofit by entire community by a date certain and often coordinated with toilet rebates for lower income.
4. Off-site retrofit of older plumbing fixtures as part of meeting water supply requirements for new development. (water demand offset).

[4] This information will be in the 2020 Census results and give an accurate picture of the age of the housing stock.

The largest scale of where this is occurring on a mandatory regulatory basis is in California where state statute requires local governments to adopt local regulations requiring retrofits of older pre-1994 fixtures in residential and commercial buildings during additions, redevelopment and/or retrofit on resale.[5] However, many local jurisdictions outside of California have also adopted this approach as part of their water conservation ordinances.

These programs are most frequently paid for by the developers or by homeowners as part of the building approval process with licensed contractors providing compliance. Local governments can also increase development review fees to include additional staff time for processing applications.

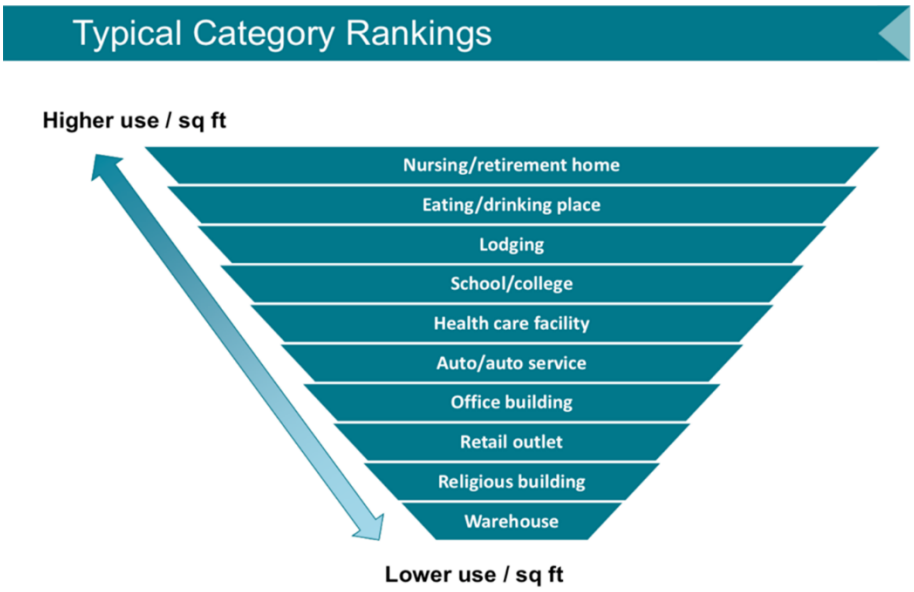
Example of Retrofit Requirements
City of Santa Fe, NM – Certificate of Compliance At Final Plumbing Inspection
25-2.6 Water Conservation Ordinance Indoor Conservation. Requires all new and remodeling construction and all replacement of existing plumbing fixtures to meet water conservation plumbing standards with deadlines for non-residential compliance. Plumbing fixtures included: toilets and urinals, non-metered and metered faucets, showerheads. A certificate of compliance is certified by a licensed contractor at final plumbing inspection.
The City of Las Vegas, NM – Certificate of Compliance At Final Plumbing Inspection
17-1-26 Water Conservation Ordinance Section VII.B. Indoor Uses All new construction, remodeling, and replacements of existing plumbing fixtures requires meeting plumbing standards to meet national standards, with hotels required to also include recirculating hot water systems. Compliance is verified by a certificate of compliances completed by a licensed mechanical contractor or plumbing permittee at final plumbing inspection.
City of Santa Cruz, CA - Retrofit on Resale
All existing residential, commercial, and industrial buildings with showers, toilets, and urinals, are required prior to transferring title or sale, to retrofit to high efficiency plumbing fixtures (showerheads to 2 gpm, toilets to 1.28 gpf, and urinals to .5 gpf. The seller is responsible for complying with the retrofit requirements and for obtaining a water conservation certificate unless the buyer and the seller agree to transfer responsibility to the buyer by completing a transfer of responsibility form.
City of DeKalb, GA - Retrofit on Reconnection
County Water Supply Article II Section 25-45 and For residential development, requires person selling a property built before 1993 to disclose to potential purchasers prior to the execution of any contract to purchase and sell such property to upgrade toilets, faucets, and showerheads to be compliant with established water efficiency flow and flush rates (WaterSense). A purchaser is not allowed to obtain water service from the county unless a certificate of compliance is provided with the application for water service. The utility may request to inspect for verification and fines are enforced if non-compliant.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.1.4 Water Efficiency Plan (Table 4) Ordinances and Regulations, Programs and Incentives 2.7.7 Indoor Water Use

5.4 Promote Water Efficiency in the Commercial Sector

Currently, there are no efficiency standards for the commercial sector in the land use code, although the City is pursuing water efficiency requirements for car washes. While commercial water use is a small percentage of total water sales, it may offer some opportunities in targeting water intensive industries.

[5] Summary of California Senate Bill 407 http://buildingincalifornia.com/wp-content/uploads/2014/02/SB407WaterConservingPlumbingFixturesHandout.pdf



CORRESPONDING POLICY & PLAN REVIEW SECTION
2.1.4 Water Efficiency Plan (Table 4)

5.4.1 Restaurants

Water demand varies depending upon the type and size of restaurant. Restaurant kitchen equipment and processes followed by restrooms account for the majority of water use. To reduce water demand in the food service industry, the following options could be included in a water conservation ordinance:

- EnergyStar appliances (dishwaters, ice machines, etc.)
- Low flow pre-rinse valves and spray nozzles (1.3 gpm) (slated for State WaterSense implementation in 2021)
- Serve water on request
- Mandatory annual water audits
- Closed system steamers
- Energy Star dishwashers and ice machine
- WaterSense toilets and faucets
- Metered faucets
- Low flow aerators on faucets
- Waterless urinals and ultra-low flow urinals

Communities that require water efficient construction practices generally target kitchen appliances and serving water on request as demonstrated below.

Example of Restaurant Requirements
City of Santa Fe, N.M. Water Conservation Ordinance
All public and private eating establishments shall provide water or other beverages only upon request. A statement of the ordinance provision is required to be communicated on the menu, table tent, or posting for restaurants and catering.
City of Millbrae, CA Water Conservation Ordinance
In addition to high efficiency toilets and faucets, requires Energy Star dishwashers and water efficient food steamers, ice machines, and pre-rinse spray valves.

City of San Francisco, CA Commercial Water Efficiency Ordinance
Requires replacement of old fixtures with new water-efficient models that meet California's plumbing standards by a date certain: • Showerheads ≤ 1.8 gpm • Kitchen faucet aerators ≤1.8 gpm • Private lavatory faucet aerators ≤1.2 gpm • Public lavatory faucets ≤ 0.5 gpm • Toilets ≤ 1.28 gpf • Urinals ≤ 0.125 gpf

5.4.2 Car Washes

While car washes do not represent a significant percent of total water use, they are water intensive. A quick yellow page's search showed seven existing car washes in Evans. Car washes types are divided into three broad categories: conveyor, in-bay automatic and self-service. The in-bay and self-service are the most common.

- *In-Bay Automatic Car Washes*: A driver pulls into the bay and parks the vehicle while a machine moves back and forth over the vehicle to clean it.
- *Self-Service Car Wash*: A customer washes the car with a device dispenses and/or a low-pressure brush.

According to the International Carwash Association in 2014, the average water consumption rate in an automated car wash is double that of a self-service wash bay, 40 gallons of water per vehicle versus about 20 gallons, respectively. The car wash industry is aware of the need to be water efficient and many voluntarily use some form of water reclamation and/or filtration technology. Frisco is the only government in the region targeting a tap fee incentive for car washes that use recycled water.

Example of Car Wash Requirements
City of Costa Mesa, CA
Installation of non-re-circulating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems.
Town of Castle Rock, CO
The Town has adopted requirements for commercial car wash installations: 1. Newly constructed facilities, whether full-service, in bay, or self-serve are required to use water recycling systems or weep recovery systems and other demand management tools. 2. Existing car washing systems that are being expanded, repaired, or rehabilitated are required to conform to recycling requirements.

5.5 Require Efficient Outdoor Water Use

The WEP includes a number of recommendations for more water efficient landscaping related to outdoor water use including:

- Restrict high water use in medians and in parking lot plantings
- Water waste ordinance
- Irrigation system standards for new development
- 10% lot reduction for irrigated area
- Requiring wind and rains sensors for commercial and open space irrigation
- Restrictive covenants ordinance
- Strengthen landscape design ordinance

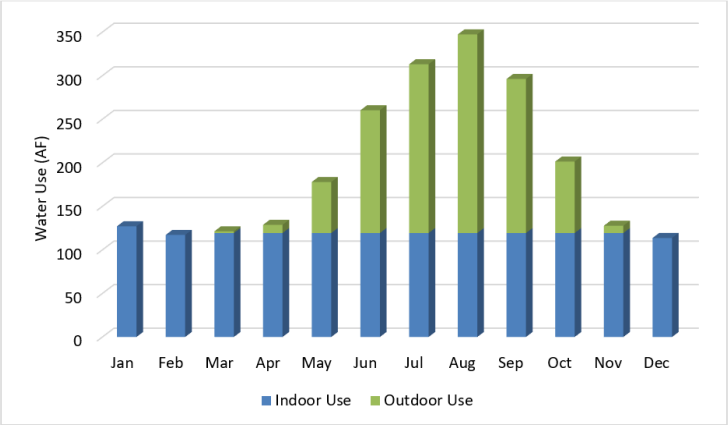
However, the plan does not provide very specific recommendations for how to revise the code to make it more water efficient. There are three proven methods to reduce the demand of outdoor watering in development regulations:

1. Decrease water waste by improving site-specific water efficiency through irrigation system design, best practices and technology.
2. Reduce the amount of water needed for irrigation by enhancing soil conditions, appropriate plant types and landscape design.
3. Use water budgets to establish the maximum amount of water permitted for outdoor water use.

Outdoor irrigation as a percentage of total water use in Evans is 39% and one of the most significant opportunities for water savings in the city. Commercial accounts, while a smaller percentage of total water use compared to residential, use a higher percentage of their water for outdoor water use. This is likely due to the landscape design standards. Opportunities for updating the City's landscape code to integrate best practices for outdoor water efficiency are explored below.

2020 WEP Summary of Indoor-Outdoor Water Demand

Figure 7: Average Indoor and Outdoor Water Use (2012-2018)



A. Review Applicability of Landscape Requirements

The City's landscape requirements are applicable to single family/duplex, multifamily, and non-residential, however, the requirements for each vary slightly. The City's code does appear to apply to both new and existing development. Many communities have updated codes to include specific criteria for when an improvement triggers compliance.

Example for Applicability QQ Water Saving Resource Guide

A. Applicability

Landscaping requirements shall apply to *<select and define as appropriate for local context>*:

1. New Development. All new nonresidential, multifamily, and residential projects consisting of 2 or more units____ *< or add threshold criteria with a site disturbance area greater than 1,000 square feet or 25 percent of the lot>.*
2. Existing Development. Projects that meet the following criteria:
    a. Projects requiring a building permit that cumulatively increase square footage by *<insert criteria such as 50 percent or more>*.

b. Projects that are a change in use from single-family/duplex to multifamily or single-family to nonresidential use.
c. Total redevelopment of a lot.

3. All Public Facilities.

B. Require Water Efficient Plant Materials

Best practices for plant material include:

- Provide specific plant lists with water-use categories
- Specify site plant composition by water-use categories
- Limit turf to a percent of total development or square footage
- Promote native plant species and natural areas
- Amend and mulch soils

Keep Soil Amendment Requirement

The City's landscape code includes a requirement that soil be amended to City standards. While a good start, as a stand-alone standard, it has little water savings benefit.

Revise the Plant List

The City of Evans landscape code requires compliance with the adopted plant list with trees and shrubs adapted to the climate. However, it does not include groundcover, grasses, or native species appropriate to the plains. The City's Lawn and Grass Specifications are included in separate document but are not referenced in the landscape code. These vegetation requirements should be integrated. The City's plant list does provide some information on drought tolerance.

Many communities expand upon this also including levels of drought tolerance as well as information to support hyrdozones with low, medium, and high-water use. For example, the City of Aurora has developed a plant list for its that indicates water frequency and amount per week.

X-rated= Plants need 1" of water per week

XX-rated= Plants need ½ "of water per week

XXX-rated= Plants need ½" of water every two week

Colorado Native Plant Society Front Range Colorado Native Plant List
CSU Extension Front Range Low Water Plant List

Develop Plant Composition and Site Coverage Standards

The City's landscape standards could more specifically address site coverage, plant combinations, and minimum amount of landscaping required to create more efficient landscapes.

While Evans may not have large swaths of remaining natural landscapes, the promotion of natural landscapes is another tactic communities are using to enhance native plant systems. For example, Breckenridge requires 50% of the site remain in natural or undisturbed condition. There may be areas, particularly along the waterways, where an additional requirement for natural vegetation would be valuable.

Landscape standards can also establish plant composition for the total use of plants based on water use. For example, requiring very low to low water-use plants shall be used for 80 percent of the total landscaping and high water-use plants limited by location (adjacent to housing).

City of Aurora Plant Material Requirements
Requirements for Drought Tolerant or Drought Resistant Landscaping and Plant Species. At least 75% of all annuals and trees, and 100% of shrubs, perennials, groundcovers, and ornamental grasses used to landscape shall be selected from the City of Aurora plant list.

Limit Turf Area and/or Total Amount of Landscaping

Best practices for turf limit the total square footage and location as well as specify the type of turf grasses. Most communities who are water conscious set allowable square footage between 1,000 and 2,000 square feet for residential and limit turf in nonresidential to certain purposes. A 2011 study for Colorado estimated the average size of a lawn in Colorado was a little over 5,000 sq. feet, far greater than today's recommendations for water efficiency.

City of Aurora Turf Area Limitations
Front Yard
Based on lot size: Small (3700 - 5999 sq ft) 40% min and 50% max Standard (6,000 – 8,999 sq ft): 30% min and 40% max Large (9,000 – 14,999 sq ft): 25% min and 40% max Estate (15000 sq ft and greater): 25% min and 40% max
Rear Yards
No landscaping required, but turf limited to not more than 45% of the area to be landscaped.
Town of Milliken
Sec. 16-2-440. - Water efficiency in landscape design. Landscape improvements shall be designed and installed with water efficiency as a primary goal. The following shall apply to the design of all landscaping subject to the standards in this Division: (a) Landscapes shall use the following xeriscape design principles to facilitate water conservation: (1) Well-planned planting schemes. (2) Use of mulch to maintain soil moisture and reduce evaporation. (3) Grouping of plant materials according to their microclimatic needs and water requirements. (4) Improvement of the soil with organic matter if needed. (5) Efficient and well-maintained irrigation systems. (6) Design of landscaping to help minimize steep grades and reduce water runoff. (7) In medians, use of native plants that require low amounts of water and maintenance. (b) Plants shall be selected appropriately based upon their adaptability to the climatic, geologic and topographical conditions of the site. Protection and preservation of native species and natural areas is encouraged. The planting of trees is encouraged wherever it is consistent with the other provisions of this Division. Please see the approved Town Plant Species List. (c)Turf grass shall be limited as follows: (1) Single-family and multifamily residential uses. The total amount of high-water turf grass shall not exceed more than fifty percent (50%) of the required landscaped area. (2) All other uses. The total amount of high-water turf grass shall not exceed more than twenty percent (20%) of the required landscaped area. (3) Exemptions. Parks and open space shall be exempt from the turf grass limitations in paragraphs (1) and (2) above. High-water turf grass is discouraged in those areas. (d) Recirculating water shall be used for decorative water features. (e) Refer to Section 13-2-60 of this Code for the Town's watering restrictions.

C. Adopt Requirements for Water Efficient Irrigation

The City's irrigation specification provides installation design specifications, but not requirements for installation of efficient irrigation systems. The move to irrigation to non-potable water should be continued, but that does not mean it is using that water more efficiently. Water efficient best practices are included below followed by recommendations for the City.

Irrigation System Best Practices
1. Water-use management plan or water budget. 2. Hydrozones that group similar water demands by irrigation zone. 3. Irrigation system design. • Smart irrigation system controllers. • Irrigation shutoff valve. • Master valves and flow sensors. • Rain sensors. • Soil moisture sensors. 4. Efficient emitters. • Overhead (spray) irrigation. o Allowable only where sufficient width exists to prevent waste. o Pop-up height consistent with mature height of plants being watered – minimum of 6 inches. o Pop-up spray heads equipped with internal check valves, internal pressure regulations, and matched precipitation rate spray and rotary nozzle. o Rotors equipped with internal check valves and pressure regulations are more efficient than spray heads. o Head-to-head coverage. • Drip systems. o Point source drip or subsurface drip irrigation for all trees, shrubs, perennials and annuals. o Internal check valves at each drip emitter and for subsurface drip systems. o Subsurface drip irrigation may be used for turf or grass areas. o Bubblers may be substituted for drip emitters. 5. Non-potable water source. 6. Separate irrigation meters.

Update the Timing of Irrigation Standards

The City was an early adopter of the day and time of week policy. This policy should be updated to narrow the time of day with less evapotranspiration loss. Across the region, most communities with this regulation are between the hours of 6:00 p.m. and 9:00 a.m.

Require Hyrdozones for Irrigated Landscapes

Hydrozones improve watering efficiency by grouping similar water needs together to prevent overwatering. Hyrdozones are linked to the plant list and required to be shown on the landscape site plan. The hydrozones complement the site composition and coverage standards.

City of Aurora Landscape Standards for Water Zones
Water Zones – Show water usage requirements for each turf and plant species listed in the Plant List. Usage requirements should be shown as follows: • Non-water conserving means any turf or plant using high amounts of water (greater than 15 inches per year) through automatic irrigation connected to a permanent tap to survive in normal weather conditions

- Water conserving means any turf or plant using low or moderate amounts of water (less than 15 inches per year) through automatic irrigation connected to a permanent tap to survive in normal weather conditions.
- Non-water (Z) using means any turf or plant species needing no water through automatic irrigation connected to a permanent tap to survive or needing only water by a temporary tap for re-establishment in normal weather conditions.

Example of Hydrozones QQ Water Saving Resource Guide

Requirement for landscape plans:

- Each hydrozone labeled by a number or letter and delineation of each hydrozone by level of water use: very low, low, moderate, and high.

Plant Selection and Grouping. Plant materials shall be selected for water efficiency, drought tolerance, use of native species and their relationship to the *<community>* regional ecology as well as geological and topographical conditions:

- Plants shall be selected from *<Appendix, Manual, or List>*.
- Plants shall be grouped together by soil suitability and by water use in distinct hyrdozones (very low, low, moderate and high) to increase irrigation efficiency.

Require Water Efficient Irrigation Systems

Adopting best practices for water efficient irrigation systems should be considered in Evans. There are excellent case studies across the Front Range of local governments who have adopted water efficient requirements for all development.

Aurora, CO

All applicants shall provide automatic irrigation system for landscaped areas. Within area of native, dryland, ad restorative grasses, applicants shall provide an automatic irrigation system for only the trees and shrubs. Developers shall install automatic rain shut-off sensors to control all irrigations systems. The Aurora Water Department has divided landscape tracts into water conserving landscapes (non-turf), and non-water conserving landscapes areas (turf), and non-irrigated areas (e.g. pavement).

Drip systems are the most water efficient irrigation system. For turf, spray emitters should be required to be WaterSense to match the State's new water efficiency rule. Smart controllers and rain sensors are effective at scheduling and preventing overwatering but should be integrated into a water efficient irrigation system rather than stand along. However, for parks and irrigated open space, smart controllers and rain sensors can help minimize waste as part of government management practices.

Irrigation System Options	Water Saving Potential
Water budgets	Medium
Smart controllers	Medium
Rain sensors on controllers	Low-Medium
Matched precipitation rate sprinklers (overhead)	Medium
Low-pressure irrigation systems (drip)	High
Anti-drain check valves	Low Medium

The following are irrigation best practices for code standards.

Example Irrigation System Standard QQ Water Savings Resource Guide

A. Irrigation System Design. Where irrigation is necessary, water-efficient irrigation systems shall be planned and designed to meet the following standards, consistent with the landscape plan and the most current version of *Landscape Irrigation Best Practices by the Irrigation Association of the American Society of Irrigation Consultants.* Irrigation systems shall be designed for site-specific hyrdozones, topography, site orientation, microclimates, prevailing winds and soil type.

1. Dual or multi-program controllers with separate valves and circuits shall be used when the landscape contains more than one type of landscape treatment or for an irrigated area over *<1,000 square feet>* or *<for all commercial, industrial, and multi-family residential developments.>*
2. Smart controllers, such as soil moisture sensing devices and rain sensors, shall be used on projects greater than *<1,000 square feet>* to minimize overwatering.
3. Irrigation systems shall use hydrozones by levels of water use.
4. Permanent irrigation systems (drip, bubblers, low-flow sprinkler heads or similar systems) shall be used on all irrigated landscapes except where hand watering with a hose equipped with a shut off valve is permitted for landscapes of *<less than 1,000 square feet>.*
5. Check valves and anti-drain valves are required for all sprinkler heads.
6. The system shall be designed to ensure that the operating pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.
7. Overhead spray irrigation is prohibited for use on trees, shrubs and groundcover. Sprinkler heads shall be a WaterSense labeled product and have matched precipitation rates within each valve zone. Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity. All sprinkler heads installed in turfgrass shall have a distribution uniformity of 0.65 or higher.
8. Low-flow sprinkler heads with matched precipitation rates shall be used when spray or rotor type heads are used for shrubs and groundcover.
9. Turf areas shall be sized and shaped for efficient irrigation and elimination of water waste. Minimum pop-up height for sprinklers in turfgrass areas shall be 6 inches. Minimum turf area width shall be 10 feet.
10. *Watering schedule shall comply with <community> water conservation ordinance <cite section>* or *<Watering shall be scheduled between 6 p.m. and 9 a.m.>*
11. Irrigation systems shall be designed to prevent water waste, overwatering and overspray, and drainage of water onto any paved or unplanted surface.

Water Budgets

Requiring a *water budget* is a method that allows a water provider to set a maximum amount of water permitted but allow developers to design however they desire within that water budget. Water budgets are used in different ways to achieve different goals.

1. Assess at development proposal/building permit the level of water intensity of a project based on an estimate in the landscaping plan.
2. Use outdoor water meters to hold a property owner accountable to exceeding the water budget agreed upon at approval.
3. Establish a water allowance for outdoor water use that cannot be exceeded and monitored with outdoor water meters.

As part of efficient irrigation, many Front Range communities are moving away from prescriptive landscape requirements to simply setting irrigation water allowances that establish a total amount of water to be used on a property with penalties for violations. This method does require additional institutional capacity for development review, monitoring, and enforcement.

City of Aspen Water Allowance *(Note: Westminster, Castle Rock, and Colorado Springs use this methodology as well with a water budget of 15-19 inches/square foot)*
Dedicated landscape water meters/submeters shall be installed for all non-residential irrigated landscapes of 5,000 square feet or more. A maximum applied water budget of 7.5 gallons/season/square foot of irrigated landscape (12 inches per season) with LID incentives available to increase the water budget up to 8.5 gallons/season/square foot. Incentives include: Non-irrigated native vegetation areas, ecological restoration areas, bioretention areas, non-irrigated permeable areas and stormwater conveyance structures. Use of rain barrels is incentivized to reduce overall water demand in the water budget calculation by 125 gallons per barrel per season.

Water Budget Calculation Irrigation Water Budget = [(ETo x Plant Factor) - Re] x Irrigated Area / Irrigation Efficiency x 0.623 ETo = Reference Evapotranspiration in inches/season (May-Sept.) Re = Effective Precipitation in inches/season Irrigated Areas = Hydrozone area in square feet Water budget calculation sheet

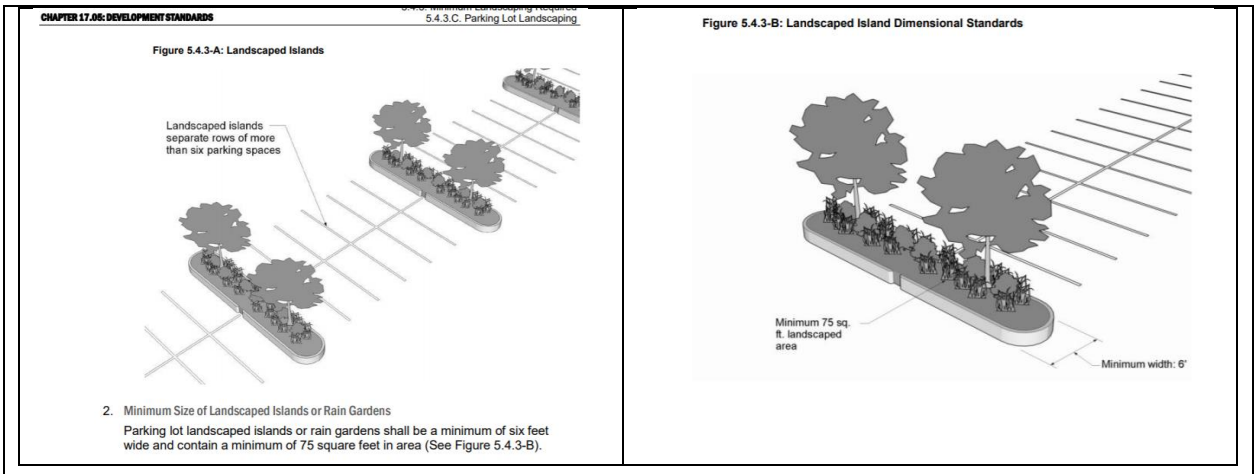
Require Rainwater Harvesting and Integrate with Street/Parking Lot Design

Landscape codes can promote Low Impact Design (LID) best practices such as rain gardens, bioswales, detention ponds and rain barrels. In arid California, Arizona and New Mexico, rainwater harvesting is a development standard requirement and they have aggressively promoted integration of bioretention and retention in landscaping codes to promote water filtration and infiltration. Evans does have some limited language in its code referencing rainwater harvesting and the stormwater master plan and river restoration plan recommends a stronger integration of best practices.

Best practices include:

- Require islands and street frontages to incorporate rain gardens with curb cuts, vegetated buffers, and bioswales to receive stormwater runoff.
- Establish requirements for the type of plants in raingardens, bioswales, and bioretention that are most appropriate for filtering runoff and provides guidance for locations for plantings in bioretention structures. (Example)
- Establish requirement for percent of total parking lot to drain to landscaped areas including trees, vegetated islands, vegetated buffers, bioswales, and rain gardens
- Create documentation requirements or criteria for how developers can demonstrate how LID infiltration and evapotranspiration meet stormwater management plan standards. (See City of Santa Rosa LID resources page)

Water Harvesting Examples
City of Aspen
Rain barrels are offered as an incentive in the use of the water allocation budget. The total gallons collected by rain barrels is subtracted from the landscape's total water estimate therefore increasing the amount of supplemental water available for additional landscaping.
Town of Carbondale LID Requirement
C. Parking Lot Landscaping 1. Landscaped Islands and/or Rain Gardens Required In all districts, landscaped islands and/or rain gardens shall be provided in parking areas along the ends of parking rows, adjacent to lot lines, and used to define the location and pattern of primary internal access drives. In addition: a. Nonresidential and Mixed-Use Districts In all nonresidential and mixed-use districts except the HCC district, landscaped islands and/or rain gardens shall be used to separate rows of more than 12 parking spaces. b. Residential Districts In all residential districts, landscaped islands and/or rain gardens shall be used to separate rows of more than six parking spaces (see Figure 5.4.3-A).



1. Planting Requirements in Landscaped Islands and Rain Gardens

Parking lot planting islands and rain gardens shall contain a minimum of one tree for every 12 parking spaces in nonresidential uses, and one tree per every six spaces in residential uses, exclusive of perimeter landscaping and street trees.

Water Harvesting Example QQ Water Savings Resource Guide – Residential Rain Barrels
A. Rainwater Harvesting 1. For all residential properties of 4 units or less, households are <*encouraged/required*> to utilize water harvested by rainwater barrels for outdoor watering of landscapes of 2 rain barrels not exceeding 110 gallons of storage per unit authorized under *C.R.S §37-96-103*. 2. The use of rain gardens to increase infiltration and filtering of stormwater is <*required/recommended*> for parking lots and residential development.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.1.4 Water Efficiency Plan (Table 4) Ordinances and Regulations 2.7.4 Street Design Standards 2.7.5 Residential Development Standards for Landscape Requirements

5.5.1 Develop Standards for Managing HOAs and Outdoor Water Use

The WEP recommends working with existing HOAs to increase water efficiency, but it also recommends making sure future HOAs do not prohibit more water efficient landscapes. Community associations in Colorado are not allowed to prevent homeowners from incorporating xeriscaping and drought-tolerant plants in their landscaping. This restriction should be reinforced in the water conservation ordinance and/or landscaping guidelines. The Colorado Homeowners Association Law website provides a good resource for developers drafting restrictive covenants. Adding a statement to the code is recommended in the City's draft WEP.

QQ Example of Requirements for HOAs in Landscape or Water Conservation Code
A. **Restrictive Covenants Landscaping Requirements.** The water demanded by landscapes in residential development, especially turfgrass, peaks in the summer months, straining the water system and environment. Homeowner covenants approved after [effective date of regulations] are prohibited from requiring that the cultivated vegetation within a subdivision be limited to turfgrass, requiring a percentage of a homeowner's property as turfgrass, or prohibiting xeric landscapes.

New Mexico's Santa Fe County water-conservation ordinance expands upon this and requires that all developments file their covenants or plats adhering to the water conservation standards and water budget required in their water conservation ordinance upon development approval. These must be signed and filed with the county clerk.

Santa Fe County Water Conservation
7.13.11.1. General Requirements. 1. All plats and non-residential development shall file signed water restrictions and covenants included in this section with the plat or site development plan. All applications subject to water restrictions and conservation requirements shall file a declaration with the county clerk memorializing the restrictions of this section. These restrictions shall run with the land, and any violations shall be enforceable by the county pursuant to Section 14.3. 2. Total water use shall not exceed that specified in the development order, plat note or the Sustainable Land Development Code (SLDC). 3. Except for water harvested using rainwater catchment systems and graywater, the annual water use for domestic purposes for new residential dwellings constructed on any lot created after the effective date of this ordinance shall not exceed 0.25 acre-foot per year or such lower amount as may be established in the development order approving the land division. **13.3 Special Enforcement of Article 13 by Santa Fe County – Severability.** 13.3.1 The covenants of this Article 13 shall run with and bind the land, shall inure to the benefit of and be enforceable by the county land use administrator, any owner or the association in any proceeding at law or in equity against any person or persons violating or attempting to violate any covenant or restriction or to restrain any such violation. Any failure by the county land use administrator, any owner or the association to enforce any covenant or restriction herein contained shall in no event be deemed a waiver of the right to do so thereafter. If the county land use administrator, an owner or the association prevails in any action against any person or persons to enforce any provision hereof, they shall be entitled to recover from such person or persons his costs and reasonable attorney's fees. **13.3.2** The invalidity or unenforceability of any covenant, restriction, term or other provision of Article 13, as determined by a court of competent jurisdiction, shall not impair or adversely affect the validity or enforceability of any other covenant, restriction, term or provision hereof, which shall be and remain valid and enforceable to the fullest extent permitted by law. The provisions of this Article 13 shall be governed by and interpreted under the laws of the State of New Mexico and are binding upon each owner, and the owner's successors and assigns.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.1.4 Water Efficiency Plan (Table 4) Ordinances and Regulations, and Programs

5.5.2 Adopt Incentives for Water Efficient Landscape Buffers

The City of Evans requirement for landscape buffers results in large swaths of turf. The City of Aurora adopted a 1-foot width reduction incentive for incorporating xeriscape principles into landscape buffers. The buffer must incorporate:

- Low water turf varieties that do not require irrigation.
- 3 inches of mulch.
- Comply with all maintenance standards.
- Water efficient irrigation.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.1.4 Water Efficiency Plan (Table 4) Ordinances and Regulations 2.7.4 Street Design Standards 2.7.5 Residential Development Standards for Landscape Requirements

5.6 Develop Water Efficient Golf Course and Park Standards

In the Mountain West, the US Golf Association estimates that the average golf course uses 2.9-acre feet of water per irrigated acre per year. Comparatively, in the arid Southwest, the average is 4.0 acres feet per irrigated acre. The most recent data found for Summit County golf courses and water demand was from a 2005 USGS study. The report generated a *per hole average value* for Colorado of 13.2-acre feet.

The golf course industry has been aware of the need for irrigation efficiency since the early 2000's with best management practices that are well researched and published. Arid communities in California and the Southwest have integrated golf course standards into their landscape or water conservation ordinances in order to promote water efficiency. While there are not currently any golf courses in Evans, adopting a standard now on water efficient golf course development could preempt an inefficient development proposal in the future.

These standards include:

- Promotion of water reuse and non-potable water sources
- Maximum water use per acre or per hole
- Maximum total turf per hole or per golf course.
- Promotion of xeriscape or native plant materials off the main fairway
- Irrigation, drainage and stormwater plans consistent with golf course ecological management best practices
- Integration of rain gardens
- Annual water audits

While Evans does not yet have a golf course, it does have a park requirement that could adopt some of the same best practices for water efficient public spaces.

Bernalillo County, NM Water Conservation Ordinance
Guidelines for parks, athletic fields and golf courses. a. Parks and golf courses shall use medium and low water use plants as much as possible. High water use turf or other restricted plants shall be allowed only in those areas with heavy usage or foot traffic, such as athletic fields, playgrounds, golf course tees, greens, and fairways. b. All parks in the unincorporated area of Bernalillo County should use less than 35 inches of water per acre of landscape area per year. Usage will be calculated on a per individual park basis and shall include all water supplies except reclaimed wastewater or other nonpotable water sources. c. Athletic fields and golf courses in the unincorporated area of Bernalillo County should use less than 45 inches of water per acre of landscape area per year. Usage will be calculated on a per individual athletic field basis and shall include all water supplies except reclaimed wastewater or other nonpotable water sources. d. All parks, golf courses, and athletic fields shall use effective water conservation measures and best management practices that are feasible and reasonable for given local conditions, such as but not limited to: 1.Evapotranspiration or soil moisture irrigation control. 2.High water-use turf removal or replacement. 3.Leak detection and repair systems or programs. 4.Irrigation system efficiency improvements.
Coachella, CA Water Conservation Ordinance
Establishes golf course criteria for all new golf courses, additions, or renovations 1. Total turf area is limited to a maximum four irrigated acres average per golf hole. 2. Practices areas/driving ranges are limited to no more than 10 acres. 3. Golf course design are to reflect natural topography and drainage. 4. Non-turf areas cannot exceed the established water budget.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.1.4 Water Efficiency Plan (Table 4) Ordinances and Regulations 2.6 River, Recreation, Parks & Open Space Plans

5.7 Adopt A Water Fee Incentives

5.7.1 Explore Tap Fee Incentives

Many communities around Colorado are incentivizing water conservation and efficiency through service and tap fees. A consultant with appropriate expertise would need to work with the City to identify the appropriate fee incentive. Cases studies on different approaches to fee incentives include fee reductions by lot size reduction in irrigated area, tap size determination by gallons per minute, or by total water use (high, medium, low water use). The City should include non-potable and potable water use in the development of an incentive. Since a tap fee incentive affects the utilities finances. Research on a tap fee incentive should be included in the water plan master plan update.

Evans could focus on high water intensity development such as multifamily, mixed use or commercial development that would most benefit financially from an incentive or make it an option available to all development. The incentive could be based on overall percent reduction in total water savings, both indoor and outdoor, or focus solely on outdoor landscaping. The developer would be required to propose how to meet the incentive by submitting a water efficiency plan or landscape plan for approval.

Examples of Outdoor Tap Fee Incentives

The City of Westminster's landscape code requires a separate irrigation meter on all non-single-family projects. Rather than charging by meter size, charges for an irrigation connection are based on a tiered fee schedule for three different types of landscapes ranging from high water use to low water use. Fees are collected when a connection is made to the system.

City of Westminster, CO		
2019 Irrigation Tap Fees (gallons/square foot/year)	Fee Per Square Foot of Irrigated Area	
	Potable	Reclaimed
High Water (> 10 GSF)	$2.47	$1.97
Medium Water (3-10 GSF)	$1.24	$0.99
Low Water (<3 GSF)	$0.62	$0.49
Zero Water (no irrigation after establishment)	0	0

The City of Fountain adopted a rate conservation ordinance in 2013 to complement the landscape ordinance. The City's landscape ordinance itself includes few best practices except for a recommendation that "native vegetation, or low water-usage vegetation on water-conserving design concepts shall be used whenever possible." Instead, conservation is incentivized through reductions in the water acquisition fee if builders voluntarily reduce the amount of landscaping for new construction. Water acquisition fees, based on lot size, are reduced by 50 percent for lots with 50 percent or less turf area, and by about 70 percent for lots with 30 percent or less turf area. Since the establishment of this incentive in 2013, voluntary participation has increased each year with 57% in 2016 and nearly 100% participation in 2019.

Fountain 2019 Tap Fees			
Lot Size in Square Feet	Standard Water Acquisition Fee	Water Acquisition Fee with Conservation Incentive: 50% or Less Irrigated Area	Water Acquisition Fee with Conservation Incentive: 30% or Less Irrigated Area
< 9,000	$4,875	$2,438	$1,024
9,001-13,000	$5,688	$2,844	$1,706
>13,001	$6,500	$3,250	$1,950

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.1.4 Water Efficiency Plan (Table 4) Ordinances and Regulations

5.8 Protect Water Quality & Watershed Health

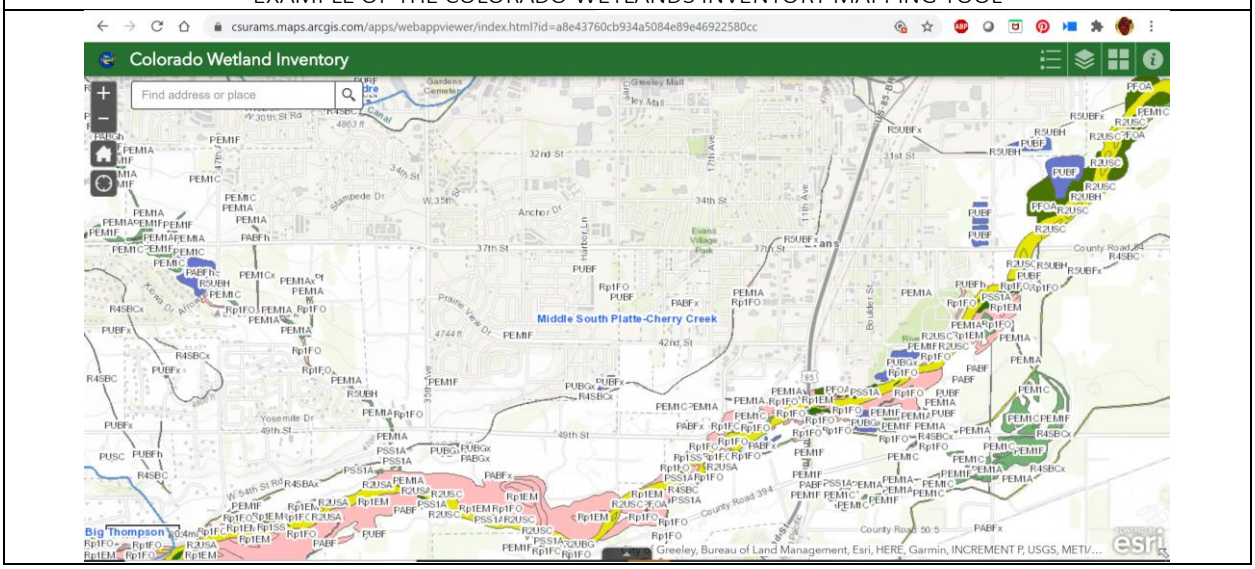
The City of Evans has extensive river, riparian and wetlands, as well as ditch areas. The river corridors are still relatively undeveloped due to the prevalence of floodplains. This has by default offered some protection of these resources, although not very strong protections. Additionally, ditch waterbodies and other wetland areas outside of the floodplain are not protected. Both the current master plan and South Platte River Restoration Plan encouraged protection of waterbodies for the purposes of protecting water quality from runoff and pollutants, supporting infiltration of rainwater recharge, enhancing native ecosystems and wildlife habitat, and creating public area for recreation.

Tools for protecting these sensitive landscapes include:

- Development standards that create appropriate buffers or setbacks, between development and natural areas.
- Development standards that minimize vegetation disturbances.
- Stormwater management standards that reduce stormwater runoff and increase water infiltration.
- Development standards that minimize the potential for contamination of streams and shallow aquifers.
- Zoning overlays, such as TDRs or clustering,, that support the use of creative site design to protect sensitive land areas from development.
- Development incentives that allow for a density bonus or variance to design standards for increased protection of sensitive areas.
- The use of park dedication in lieu of fees to fund acquisition of priority landscapes.

Across the Front Range, municipalities and counties have adopted programs and policies to protect water quality and watersheds. Most communities start with an inventory to identify sensitive areas. The Colorado Wetlands Inventory Mapping Tool integrates GIS data layers from the Colorado Natural Heritage Program and Colorado Parks and Wildlife offering an exceptional starting point for the City of Evans to apply to long range planning and site planning.

EXAMPLE OF THE COLORADO WETLANDS INVENTORY MAPPING TOOL



https://csurams.maps.arcgis.com/apps/webappviewer/index.html?id=a8e43760cb934a5084e89e46922580cc

It is standard to develop a buffer or setback standard based on the best available science informed by local experts. Buffer zones are natural or managed areas used to protect an ecosystem or critical area from adjacent land uses or sources of pollution while a setback is a prescribed distance between the resource and development. The DOLA Planning for Hazards website provides a lengthy explanation of the benefits of buffers as well as model language. Funding opportunities exist from the Colorado Watershed Assembly and the Colorado Watershed Conservation Board to assist the City and partnering organizations with strengthening protection of these natural assets.

Neighboring communities including Milliken, Greeley, and Fort Collins all have development standards for significant natural areas. Fort Collins offers a good example of how different waterbodies might require a different size buffer. Greeley requires biological surveys to accompany development proposals for projects in ecologically significant areas including:

- Areas inhabited by or frequently used by state or federally listed endangered or threatened species and species of special concern.
- Use of the area by significant wildlife including a species list, season of use and the purpose of use that the area provides for wildlife.
- Location of predominant species and characteristics of significant stands of vegetation.
- High water mark of any permanent water body or lake, or bank and one-hundred-year flood zone of any stream or river.
- Wildlife movement corridors or special habitat features.

City of Aurora Natural Areas
Sec. 142-76. - Natural areas. The following areas within the city are deemed to be natural areas. These areas shall receive limited maintenance. The maximum height limitation contained within this article shall not be applicable to these areas: (1) Sand Creek Park. (2) Springhill Park. (3) Cherry Creek Spillway/Tollgate Creek to city limits.

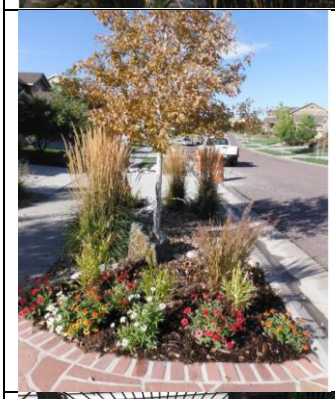
(4) Sand Creek and attendant overflow drainageways. (5) Tollgate Creek, East and West Tollgate Creeks and attendant overflow drainageways. (6) Meadowood Creek. (7) Highline Canal—Havana Street to Tower Road. (8) Quincy Reservoir and attendant overflow drainageways. (9) Unnamed creek. (10)Columbia Creek. (11) Granby Ditch. (12) Westerly Creek. (13) Sable Ditch. (14) Side Creek and attendant overflow. (15) Drainageway—Alameda Avenue to Mississippi Avenue (city center area).
City of Aurora Waterbody Setbacks
Sec. 147-44. - Water quality and wildlife habitat. (a)New structures intended for human occupancy shall not be located within 100 feet of any perennial stream or any public lake, reservoir, or element of a public water supply system, unless the City engineer determines that a smaller setback would adequately protect water quality and wildlife habitat. (b)In making the determination required in paragraph (a) of this section, the city engineer shall consider factors such as the proposed use of the land, the intensity of proposed human activity on the land, the types of existing vegetation on the land, the existence of wetlands or floodplains on the property, probable future water levels and habitat quality based on potential upstream development, the importance of the property to existing water supply sources and habitat networks, water quality and habitat quality improvements included in the design of the proposed development, and the existing and proposed uses of nearby lands. (c)Roads, trails, recreation access sites, bridges, fences, irrigation and water diversion facilities, erosion and flood control devices, underground utilities, and similarly necessary structures may be located within the required setback.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.3 2013 Wastewater Utility Plan Update 2.4 2016 Stormwater Master Plan 2.6 River, Recreation, Parks and Open Space Plans

5.9 Use LID and Xeriscape Standards for Water Efficient Streetscapes & Parking Lots

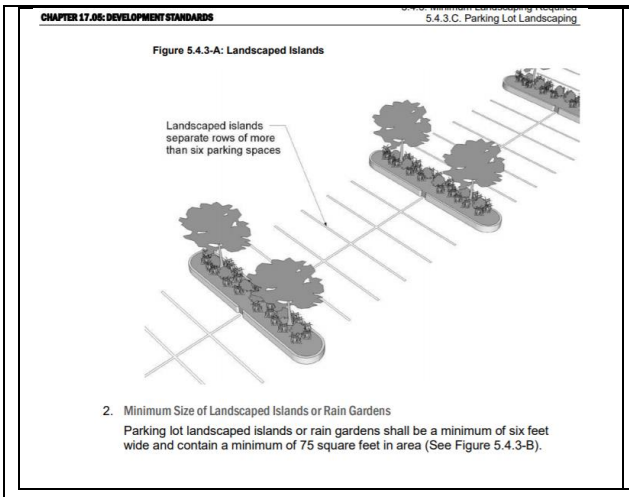
The City of Evans code requires public streetscapes commercial parking lots to be landscaped. The WEP recommends the City adopt water efficient streetscapes. Across the West, cities are converting streetscapes to be more water efficient and protecting water quality by integrating green infrastructure into street design, converting medians to xeriscape, and irrigating with non-potable water. For example, following the 2002 drought, Denver, Lakewood and Aurora began replacing turf grass in its medians with more efficient plants that use less water, using drip irrigation to reduce evapotranspiration, and irrigating at night.

Street Design Standards: Examples of Rain Gardens and Water Efficient Landscapes on the Front Range



For parking lots, an update to the landscape code could require parking area to include LID, as in this example by the Town of Carbondale.

Town of Carbondale LID Requirement
C. Parking Lot Landscaping 1. Landscaped Islands and/or Rain Gardens Required In all districts, landscaped islands and/or rain gardens shall be provided in parking areas along the ends of parking rows, adjacent to lot lines, and used to define the location and pattern of primary internal access drives. In addition: a. Nonresidential and Mixed-Use Districts In all nonresidential and mixed-use districts except the HCC district, landscaped islands and/or rain gardens shall be used to separate rows of more than 12 parking spaces. b. Residential Districts In all residential districts, landscaped islands and/or rain gardens shall be used to separate rows of more than six parking spaces (see Figure 5.4.3-A).



CHAPTER 17.05: DEVELOPMENT STANDARDS

5.4.3.C. Parking Lot Landscaping

Figure 5.4.3-A: Landscaped Islands

2. Minimum Size of Landscaped Islands or Rain Gardens

Parking lot landscaped islands or rain gardens shall be a minimum of six feet wide and contain a minimum of 75 square feet in area (See Figure 5.4.3-B).

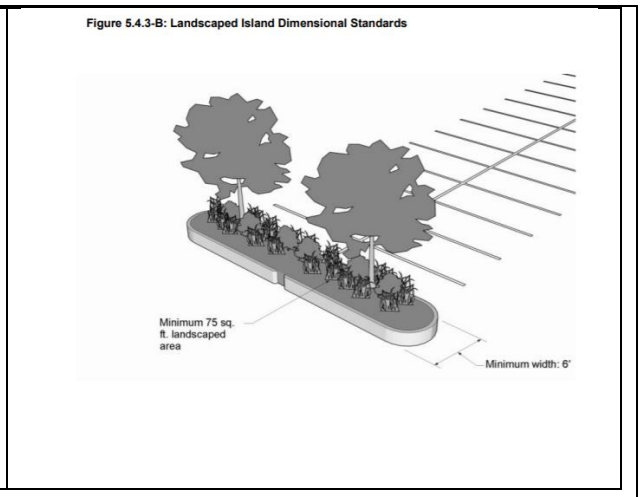


Figure 5.4.3-B: Landscaped Island Dimensional Standards

1. Planting Requirements in Landscaped Islands and Rain Gardens

Parking lot planting islands and rain gardens shall contain a minimum of one tree for every 12 parking spaces in nonresidential uses, and one tree per every six spaces in residential uses, exclusive of perimeter landscaping and street trees.

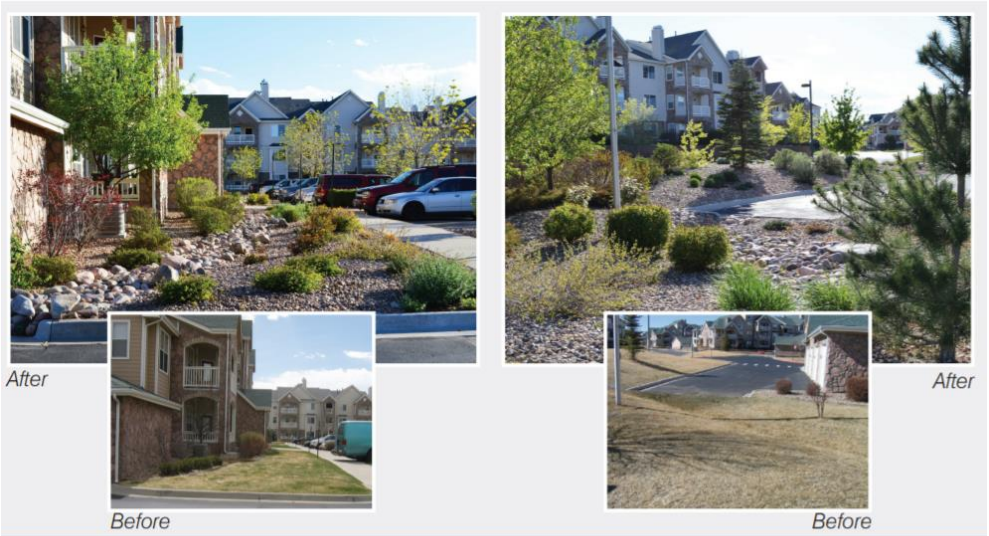
For public landscapes, the City can decide to adopt best practices, which are already strategies in existing plans, to convert older landscapes and construct new landscapes to follow best practices for water efficiency including planting with more xeric plants that use less water, using drip irrigation to reduce evapotranspiration, and irrigating at night.

CORRESPONDING POLICY & PLAN REVIEW SECTION
2.1.4 Water Efficiency Plan (Table 4) Ordinances and Regulations 2.5 2013 Wastewater Utility Plan Update 2.6 2016 Stormwater Master Plan 2.7.3 Outdoor Water Efficiency 2.7.4 Street Design Standards

5.10 Conclusion

Ultimately, water efficient landscapes will not only save money and water for the City, they will save property owners money long term. The City of Evans has an aggressive water savings vision that would be complemented and reinforced by a land use code and policies that focus on managing water resources sustainably. The opportunities explained in this report provide a guide for the City staff on implementation.

CITY OF AURORA CASE STUDY: COST SAVINGS OF THE LANDSCAPE RETROFIT PROGRAM



Renovation Size: 5.1 acres (Phase 1)

RESULTS	Pre-Renovation	Post-Renovation
Irrigation Water Use*	1,295,565 gallons/year	385,096 gallons/year
Irrigation Water Cost**	$9,069 /year	$2,696 /year SAVINGS of $6,373 /year, and $31,865 /year potential for all phases
Maintenance Cost***	Existing	20%-40% REDUCTION
Curb Appeal	Limited	ENHANCED

CITY COUNCIL WORK SESSION REPORT

DATE:	**September 1, 2020**
AGENDA ITEM:	**Work Session Item #2**
SUBJECT:	**Discussion about a Prospective Land Dedication and Fee-in-Lieu of Land Dedication Fee System for the Greeley-Evans School District**
NAME & TITLE:	James L. Becklenberg, City Manager Randy L. Ready, Assistant City Manager

ISSUE DESCRIPTION:

Representatives of the Greeley-Evans School District would like an opportunity to present the concept for a new School Impact Fee that would be formally known as a "Land Dedication and Fee-in-Lieu Fee System." This system is designed to allow the school district and the City to work with developers of new housing units to either provide land or pay a fee-in-lieu of land to accommodate the need for new school buildings brought about by growth and new development. New residential development brings new students to the city, creating new demand for school land. Currently there is no mechanism in place in the City of Evans to create a new supply of school land that would keep up with the new demand.

Policies to address the need for new development to help "pay its own way" for new school facilities have been in place in surrounding communities and in most metropolitan areas in the state for several years. On June 16 of this year the City of Greeley approved School Impact Fee Intergovernmental Agreements (IGAs) with all three school districts operating within the Greeley City Limits (including the Eaton School District, the Weld RE-4 [Windsor] School District, and the Greeley-Evans School District). Adopting a cash-in-lieu or land dedication agreement creates a mechanism for acquiring land for schools. Currently there is no way to create new supply of school sites when new demand is created in the form of new housing.

The IGA that is proposed (attached) between the City and the school district is substantively the same and is modeled on ones currently in place between Greeley and its three districts, the Town of Eaton and the Eaton School District, the Town of Windsor and School District RE-4, and in place within many jurisdictions in Colorado. Evans' current land use policies do not recover any impacts to the school districts from the addition of new housing units; as such, no new school land is acquired, even though approximately 1,900 new residential units are currently approved and in the development pipeline.

An IGA is the legal tool available to provide adequate school land, and the process is similar to the existing process adopted by the City for the dedication of land (or a fee-in-lieu) for parks. The school IGAs require a flat fee-in-lieu of land dedication on a per-unit basis and would differ by housing type (e.g., single-family vs. multi-family), since student generation rates are different for each type of land use. By law, fees collected can only be used by the school district for land

acquisition or land development (e.g. grading, access, etc.), but not for facility construction.

The methodology used to calculate the fee amount is explained in the attached Fee-in-Lieu Analysis Report. The fee is based on District 6 school site size standards and the specific student generation rates for the various types of housing within the Greeley-Evans district.

City staff has met several times over the last year with staff from the school district and the City of Greeley to provide input and to review the demographic analysis and the draft IGA. Since school impact fee systems have been in place for many years throughout the state and in our neighboring jurisdictions of Eaton, Windsor, and now Greeley, the analysis methodology and fee basis under consideration here are time-tested and working well elsewhere. In short, the districts and the municipalities that have adopted school impact fee systems find them to be an important tool for successful school facility capital planning.

Greeley staff hosted a developer, realtor, and builder roundtable on May 20 to discuss the proposed fee system. No objections were raised at that meeting. It is typical for school impact fees to be collected at the time of building permit issuance. However, because land dedication for larger developments is an option, and because land cannot be collected on a per-house basis, the proposed IGA also includes a mechanism to dedicate land at the time of plat. The fees in-lieu-of land being collected mostly at the time of building permit issuance is consistent with the way that the City collects its current impact fees for Transportation, Fire/Rescue Services, Parks and Police Protection Services. The proposed fee in Evans would be based on the actual generation of school students from various types of housing units, ranging from $549 per apartment to $2,498 per single-family home. That fee level for a single-family home would place school impact fees third in the order of the City's impact fees for single-family homes, with Parks at $4,749 and Transportation at $4,474,

City staff's experience is that school land dedication systems are understood by developers to be a common practice, and that having adequate school facilities supports strong neighborhoods. Collection of the fees at the time of building permit issuance ensures that the cost will be borne by those moving into newly-constructed housing units—not by current residents in existing housing units.

The District 6 presentation will be led by Assistant Superintendent of Support Services, Kent Henson, with participation by Superintendent Deirdre Pilch and the district's consultant, Shannon Bingham, experienced in the field of demographics and school siting. Mr. Bingham's report provides information regarding methodology and the prevalence of this practice along the Front Range and throughout the state.

FINANCIAL SUMMARY:
Adoption of a land dedication and fee-in-lieu fee system would not have a fiscal impact on the City of Evans. The fees collected would be passed-through to the school district in the same way that the Fire/Rescue fees are passed along to the fire district. Since school impact fees are being collected by Greeley and so many communities in Northern Colorado and across the state, collection of the fees in Evans would not put the City at a competitive disadvantage for housing development.

REQUESTING FROM CITY COUNCIL:
Staff is requesting that Council review the packet material and presentation from the school district. Please provide any comments or questions and provide direction to staff about bringing a proposed IGA back for City Council consideration at a future Council meeting.

ATTACHMENTS:

- Letter from School Superintendent
- Fee-in-Lieu Analysis Report
- Draft IGA
- Letter from Hartford Homes
- Letter from Western Demographics, Inc

Greeley-Evans
WELD COUNTY SCHOOL DISTRICT 6

DEIRDRE PILCH, ED.D.
SUPERINTENDENT
1025 Ninth Avenue
Greeley, Colorado 80631
970-348-6012
dpilch@greeleyschools.org

June 25, 2020

Dear Evans City Council,

On behalf of the Greeley-Evans School District 6 community, I would like to thank you for your consideration of adopting this Cash in-lieu development fee.

The City of Evans vision statement, "The City of Evans is an economically diverse, self-sufficient community providing a clean, safe, family friendly environment with growth oriented infrastructure. We accomplish our vision with strategic policies and partnerships and long range plans necessary to maintain essential City infrastructure and services" and its priorities of having a well maintained infrastructure, safe and desirable neighborhoods, family-friendly and attractive amenities and a resilient local economy are some of the main reasons why the City of Evans continues to grow. This foresight and planning have made the City of Evans an attractive site for families to move in Northern Colorado.

As the City of Evans continues to grow, these new developments not only bring people into the City of Evans but bring students into Greeley-Evans School District 6. One current development within the City of Evans is projected to bring in excess of 500 students to already over capacity school buildings. Pass-through cash-in-lieu development fees allow the school district to work with developers and the City of Evans Planning Department to create long-range plans and purchase land in areas that can support this growth and development. This partnership will ensure that the school system in Evans remains strong and meets the needs of all families.

Cash in-lieu fees exist in nearly every other city and school district in the State of Colorado. This proposal was recently passed by the Greeley City Council on June 16, 2020. The adoption of this fee system across the entire school district will allow our Greeley-Evans School District 6 to be fiscally responsible in the purchasing and development of land in areas that can support future growth within the City of Evans.

Thank you for your consideration.

Sincerely,

Deirdre Pilch

Deirdre Pilch, EdD

Land Dedication Fee-in-Lieu Analysis – Greeley-Evans School District 6
Western Demographics, Inc. - 1/12/20

Introduction – This report illustrates the acreage, costs and methodology associated with implementing a land dedication and fee-in-lieu of land dedication fee system for the Greeley-Evans School District (Weld 6). The report identifies specific cost elements analyzed and collected by Western Demographics Inc., an acknowledged expert on the topic in the State of Colorado. The report analyzes the number of students that come from housing of various types in the district and estimates an acreage per new single family home of 0.0159 acres per unit and a fee-in-lieu of this land of $2,498.02 per unit. Lower acreages and fees have been calculated for denser housing types and a slightly higher fee and acreage is associated with mobile homes which tend to produce more students.

History - The majority of Front Range school districts have had land dedication or fee-in-lieu of land dedication systems for decades. These systems have been implemented by many City and County jurisdictions as listed in the following sample table. Two of these districts, SD27J and Douglas County have voluntary capital cost recovery fees, which also collect revenue for actual school construction in addition to funds for land acquisition. Given the typical smaller size of most land developments along the Front Range, the majority of these districts are collecting Fee-In-Lieu instead of receiving school land. This revenue is consolidated so that appropriate sites may be purchased in the best locations to serve student growth needs.

Figure 1
Sample List of Front Range Districts Collecting Fee-In-Lieu

- Adams 12 (Thornton)
- Adams 12 (Westminster)
- Adams 12 (Broomfield)
- Aurora Public Schools
- Boulder Valley (Erie)
- Cherry Creek (Aurora)
- Cherry Creek (Arapahoe County)
- Cherry Creek (Centennial)
- Cherry Creek (Greenwood Village & Cherry Hills Village)
- Cherry Creek (Glendale)
- Cherry Creek
- Colorado Springs District 11
- Douglas County
- Poudre School District
- St. Vrain (Longmont)
- St. Vrain (Weld)
- Thompson Valley
- SD27J (Brighton, Thornton)
- SD27J (Aurora)
- SD27J (Commerce City)
- SD27J (Adams County)
- SD27J (Capital Facility Fee - for all municipalities)

Remaining Land Development Potential in Greeley 6 School District
Given the scale of remaining vacant land in Greeley, it makes sense for a fee ordinance to be implemented at this time. The combined effect of vacant land in Greeley, Evans and the currently unincorporated areas on the east side of the district will produce significant student impact. Cobblestone, Westgate, Triple Creek, Cardinal Acres, City Center West, Gateway Park and Northridge Estates are pending developments that will produce thousands of additional homes and potential school impacts that will not be addressed by existing schools. If a land dedication and fee-in-lieu of land dedication systems were implemented, these developments and others in the future could contribute to a funding base that would allow Greeley 6 to purchase appropriate school sites in smart locations.

Developing Areas – Greeley – 2019 – 2028: The City of Greeley expects new developments to produce over 2,000 new homes during the next eight years, predominantly on the west side of the community. The Greeley / Evans area has emerged as a prime address for young families seeking affordable housing and employment opportunities and much of this housing is targeted for families with these demographics. Figure 2 identifies the names of developing areas.

Figure 2 - Developing Areas – Greeley

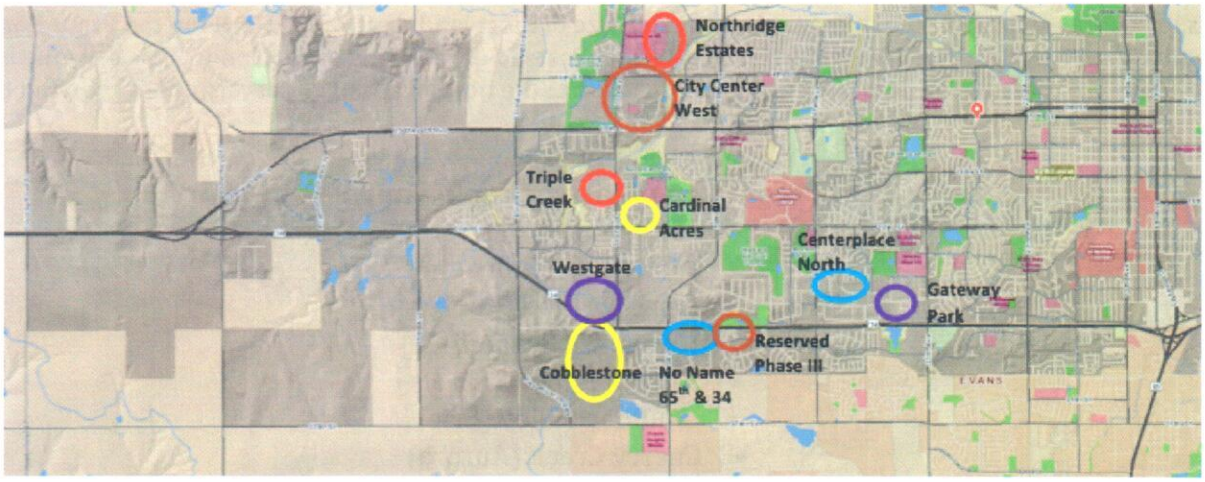


Figure 3 indicates the number of new homes expected in the areas identified on the map above as well as in the Evans area. The City of Evans expects new developments to produce over 1,500 new homes during the next five years.

Figure 3 - Development Absorption Quantities – Greeley and Evans – 2019 – 2028

			Units
Greeley	**Units**	Centerplace North	133
Cobblestone	675	Gateway Park	144
Westgate	500	Northridge Estates	232
Triple Creek	36		
Cardinal Acres	15	**Evans**	**Units**
City Center West	545	Prairie View	155
		Other Vacant Land	1,000s

Land Dedication Acreage Calculation - The methodology for calculating the amount of acreage needed for new schools given various new housing dwelling types is illustrated in the following table. Student yields per house are calculated based on samples of housing areas in which students who reside in the area are compared with the total unit count in a study area in order to produce a students per house estimate or yield. In the case of Greeley-Evans 6, approximately 0.64 students are expected from each single new family home based upon existing samples. Student yields for town homes and duplexes are calculated at 0.31 students per unit. Yields for mobile homes and apartments are estimated to be 0.62 and 0.14 respectively.

The formula for calculation addresses the number of students per new school based on district policy and the desired acreage of a new school site. The student yield is multiplied by site acreage and divided by students per school at each level – elementary, middle and high school. The results for all three levels are then added together to determine the acreage. Figure 4 illustrates the calculation given various dwelling types.

Figure 4

Greeley-Evans School District - Initial Land Dedication Fee-In_Lieu Calculations
Western Demographics, Inc. - 1/12/20 - Scenario #8

Calculation Element	Elementary School	Middle School	High School	Totals
A1 - Students per School - (SFD)	700	900	1800	
A2 - Greeley-Evans SD Student Yeild Per SFD Dwelling Unit	0.33	0.13	0.18	0.64
A3 - Site Acreage by Level	15.5	27.5	46.0	
A6 - Acreage Per Unit by Level - SFD	0.0073	0.0040	0.0046	0.0159
B2 - Greeley-Evans SD Student Yeild Per TH/Duplex Dwelling Unit	0.17	0.07	0.07	0.31
B6 - Acreage Per Unit by Level - TH/Duplex	0.0038	0.0021	0.0018	0.0077
F2 - Greeley-Evans SD Student Yeild Per Manufactured Home Dwelling Unit	0.30	0.15	0.17	0.62
F6 - Acreage Per Unit by Level - MANUF HM	0.0066	0.0046	0.0043	0.0156
G2 - Greeley-Evans SD Student Yeild Per Apartment Unit	0.07	0.03	0.04	0.14
G6 - Acreage Per Unit by Level - APT	0.0016	0.0009	0.0010	0.0035

Fee-in-Lieu of Land Dedication Calculation – Raw Land - The fee-in-lieu element of the calculation converts the acreage needed per housing unit into a cost per acre of developed land that would support a school. This calculation is based upon a raw land cost based on comparable sales of parcels between eight and sixty acres in size in the Greeley area and a cost to convert raw land into a usable site that would support an institutional building with minimal infrastructure available in the form of water, sewer, electrical, gas and an adequate, paved street. The land sales used range in age from three to six years given the limited number of sales of appropriate size. A reasonable land appreciation rate of five percent was applied in order to convert the cost of these comparable sites into current dollars. Given the eleven comparable sites available, an average cost of $69,236.52 was obtained. Figure 5 illustrates the comparables and the calculation of the average raw land cost. Figure 6 combines the cost of the raw land with approximately $88,000 of additional cost required to obtain developed land with reasonable adjacent infrastructure. Most school districts implementing fees have calculated developed land costs and used them in the formula.

Figure 5

Parcel Num	ACCTTYPE	Sales Price	Sale Date	GIS_Acres	Price per Acre	Annual Appreciation	Years of Appreciation	Appreciation Multiplier	Parcel Cost with Appreciation
80305400012	Residential	$500,000	2/25/16	8.5	$58,926	0.05	3	1.15	$575,000
80305300002	Agricultural	$700,000	1/7/16	61.3	$11,416	0.05	3	1.15	$805,000
70931334001	Commercial	$750,000	11/2/15	41.8	$17,945	0.05	4	1.2	$900,000
80306000033	Agricultural	$900,000	3/17/15	28.1	$32,075	0.05	4	1.2	$1,080,000
80306400040	Agricultural	$1,804,700	2/12/15	11.0	$164,025	0.05	4	1.2	$2,165,640
80306108001	Agricultural	$375,000	12/15/14	15.2	$24,707	0.05	5	1.25	$468,750
70929300010	Agricultural	$2,300,000	7/1/14	8.4	$274,562	0.05	5	1.25	$2,875,000
70929300011	Agricultural	$2,300,000	7/1/14	9.7	$238,141	0.05	5	1.25	$2,875,000
70929300012	Agricultural	$2,300,000	7/1/14	11.9	$193,143	0.05	5	1.25	$2,875,000
80305000040	Agricultural	$600,000	10/24/13	21.2	$28,259	0.05	6	1.3	$780,000
80305000027	Residential	$251,600	8/9/13	10.1	$24,843	0.05	6	1.3	$327,080
Totals		**$12,781,300**		**227.1**	**$56,270**				**$15,726,470**
Average Cost Per Acre with Annual Appreciation									**$69,236.52**

Fee-in-Lieu of Land Dedication Calculation – Developed Land – The estimated cost per acre to convert raw land into developed sites viable for an institutional building adds to the cost of an acre of school land. Figure 6 illustrates the $88,076 required to provide water, sewer, storm sewer, electric, gas and telephone / broadband to a site along one side of a square acre. This is the typical formula for calculating linear cost, some districts use two sides of a square acre given the significant cost to make raw land usable.

Figure 6

Greeley-Evans School District - Initial Land Dedication Fee-In_Lieu Calculations - DRAFT
Western Demographics, Inc. - 1/12/20 Scenario #8

Cost Element	Elementary School	Middle School	High School	Totals
A1 - Students per School - (SFD)	700	900	1800	
A2 - Greeley-Evans SD Student Yeild Per SFD Dwelling Unit	0.33	0.13	0.18	***0.64***
A3 - Site Acreage by Level	15.5	27.5	46.0	
A4 - Developed Land Cost	$157,312	$157,312	$157,312	
A5 - Cost Per Unit by Level - SFD	$ 1,149.50	$ 624.88	$ 723.64	***$ 2,498.02***
B2 - Greeley-Evans SD Student Yeild Per Townhome/Duplex Dwelling Unit	0.17	0.07	0.07	***0.31***
B5 - Cost Per Unit by Level - TH/Duplex	$ 592.17	$ 336.47	$ 281.41	***$ 1,210.05***
F2 - Greeley-Evans SD Student Yeild Per Manufactured Home Dwelling Unit	0.30	0.15	0.17	***0.62***
F5 - Cost Per Unit by Level - MANUF HM	$ 1,045.00	$ 721.01	$ 683.43	***$ 2,449.45***
G2 - Greeley-Evans SD Student Yeild Per Apartment Unit	0.07	0.03	0.04	***0.14***
G5 - Cost Per Unit by Level - APT	$ 243.83	$ 144.20	$ 160.81	***$ 548.84***
Raw Land Cost / Acre Based on 10 Recent Sales - With Annual Inflation				**$69,237**
Basic Infrastructure Cost / Acre - Low Impact Western Demographics Model	**Cost Per Linear Foot (lf)**	**Linear Feet Along One Side of a Square Acre**	**Subtotal / Acre**	
Electric, Gas Telephone	$46.00	208.71	$9,601	
Street Improvements	$250.00	208.71	$52,178	
Water and Sewer	$66.00	208.71	$13,775	
Storm Sewer	$60.00	208.71	$12,523	
Total Cost - Basic Infrastructure				**$88,076**
Developed Land Cost Including Basic Infrastructure				**$157,312**

Developed Land Cost – Details – Figure 7 displays the comparables and engineering cost estimates that are the background data for the infrastructure costs used to calculate developed land cost. Western Demographics collected infrastructure data from recent projects including the Eaton Recreation Center, Severance High School and Prairie Heights Middle School also w onal data from Northern Engineering regional authority o Weld County institutio l ion costs) and developed reasonable d conservative cost imates for four major fr e categories. Linear footage-based sts were converted o the $88,076 per acr ig

Western Demographics, Inc. - Developed School Land Calculation Comparables and Samples - 8/19/19 - DRAFT

	Northern Engineering	Cost Per Linear Foot	Eaton Rec Center Sample Costs	Cost This Sample	Cost Per Linear Foot Based on Acreage	Severance HS Sample Costs	Cost This Sample	Cost Per Linear Foot Based on Acreage	Prairie Heights MS - Sample Costs	Cost This Sample	Cost Per Linear Foot Based on Acreage	Average of Sample Data	Western Demographics Working Figures	Cost Per Linear Foot
Dry Utilities	Dry utility budget (electric, gas, telephone) - $5,000 per single family residential lot (Western Demographics $ this acre = $25,000 / Acre divided by 208.71)	119.78	Fiber	$50,000	$7	Fiber	$100,000	$6	Fiber	$100,000	$10		Gas	14.00
			Gas	$50,000	$7	Xcel Gas	$160,000	$10	Gas	$50,000	$5		Electric	32.00
			Electric	$25,000	$4	Xcel Electric	$40,000	$2	Electric	$40,000	$4		Telephone / Cable	8.00
			Total Dry Costs		$18	Total Dry Costs		$19	Total Dry Costs		$20	$44		46.00
Street Improvements	Cleared grading for a 36' wide (Meaning to finished roadway. Assume cut to fill 60' wide) (5) - $12 per Linear Foot (LF) of roadway	12.00	Construction of 3rd Street - approximate	$1,000,000	$142	Construction of Hidden Valley Parkway to the HS	$1,700,000	$101	City of Evans street impact fee	$120,000	$12.57		Grading 3' ROW	17.28
	Asphalt pavement subgrade preparation - $11 per LF of roadway	11.00							Traffic light	$250,000			4" Rock Base	25.92
	Rollover curb and gutter (with subgrade prep) - 2 x $24 = $48 per LF of roadway	48.00											Paving	75.28
	5' wide sidewalk (with subgrade prep) - 2 x $30 = $60 per LF of roadway	60.00												
	Asphalt pavement (3.5" HBP over 6" ABC - 31.67' width of pavement) $120 per LF of roadway	120.00												
		251.00	Total Street Costs	$1,000,000	$142	Total Street Costs	$1,700,000	$106	Total Street Costs	$370,000	$39	$134		118.48
Water and Sewer	8" diameter PVC SDR35 sanitary sewer main (with boring) - $34 per LF	39.00	Water and Sewer taps - Town of Eaton (still needs to be purchased)	$286,000		North Weld Water - water and tap	$650,000		Water and tap - previously purchased by the District				Water Line - 6" Steel	43.14
	4" diameter sanitary sewer manhole - $1,100 each					Sewer tap - Town of Severance	$390,000						Sewer Line - 8" Cement	24.88
	4" diameter sanitary sewer service - $1,000 each													
	8" diameter PVC C900 water main (with boring) - $28 per LF	26.00												
	8" diameter gate valve - $1,700 each													
	Fire hydrant assembly - $6,300 each													
	6" diameter water service - $1,700 each													
	Total Water / Sewer Cost	65.00	Total Water / Sewer Costs	$286,000	$29.26		$1,000,000	$62.45		$0	$0.00	$52.24		93.82
Storm Sewer	18" diameter reinforced concrete pipe storm drain - $60 per LF	60.00										60.00	18" Storm Sewer Line	27.00

	DRAFT	Sample Costs	Cost Per Linear Foot Based on Acreage	Average of Sample Data	Western Demographics Working Figures	Cost Per Linear Foot
Dry Utilities	$46.00	$9,603.66				
Street Improvements	$250.00	$32,177.50				
Water and Sewer	$66.00	$11,774.86				
Storm Sewer	$60.00	$12,522.60				
	$422.00	$88,075.62				

Regional Fee Comparable Observations – Windsor School District has generally led the fee development process for school land in Weld County and many of the sites constructed throughout that district's rapid growth period were provided via dedication or fee-in-lieu resources and that practice continues. Student yield rates are generally lower as one moves away from the Interstate 25 corridor and school sizes are different in the two districts, therefore fee values proposed in Greeley are a little less than those currently collected in Windsor.

Figure 8 - School Metrics - Comparative Analysis

Community	Greeley-Evans	Windsor
Elementary School Size	700	600
Middle School Size	900	900
High School Size	1800	1200
Elementary Site Acreage	15.5	10
Middle School Site Acreage	27.5	25
High School Site Acreage	46	50
Single Family Detached Yield	.64	.70

Figure 9 - Developed Land Cost Per Acre – Comparative Analysis

Community	Greeley	Windsor
Developed Land Cost Per Acre	$157,312	$156,000

Figure 10 – Student Yield – Comparative Analysis

Student Yield	Greeley-Evans	Windsor
Detached	.64	.70
Attached (TH, Duplex)	.31	.30
Multi-family	.14	.36
Mobile Home	.62	.60

Figure 11 - Comparative Fees

Housing Type	Greeley-Evans – Scenario #8	Windsor – Adopted 2019
Detached	$2,498	$2,916
Attached (TH, Duplex)	$1,210	$1,213
Multi-family	$549	$1,304
Mobile Home	$2,449	$2,457

Conclusion – A fee per single family detached unit of $2,498 seems reasonable given the various costs faced by Greeley-Evans School District 6 as it continues to provide high quality school facilities to its students and families based on a sound methodology using the metrics covered in this report. Comparable sales research for raw land, local engineering costs for infrastructure and locally-collected student yield data have all been used combined with a decades-old formula to produce the suggested fees listed in Figure 11. The fees suggested are slightly lower than those collected in an adjacent district given Greeley-Evans larger school sizes and lower student yields given its university population. The revenue collected would greatly assist the district with its efforts to purchase needed school sites as the community continues to grow.

DRAFT 6/2/2020

INTERGOVERNMENTAL AGREEMENT CONCERNING LAND DEDICATIONS OR PAYMENTS IN-LIEU FOR SCHOOL PURPOSES

THIS INTERGOVERNMENTAL AGREEMENT CONCERNING LAND DEDICATIONS OR PAYMENTS IN-LIEU FOR SCHOOL PURPOSES (the "Agreement") is entered into by and between the Weld County School District 6 ("School District"), a public school district and political subdivision of the State of Colorado, and the City of Evans, Colorado ("City"), a municipal corporation of the State of Colorado, to be effective as of the _____ day of _____, 2020 ("Effective Date").

RECITALS

A. Local governments are encouraged and authorized to cooperate or contract with other units of government, pursuant to section 29-20-105, C.R.S., for the purpose of planning or regulating the development of land, including, but not limited to, the joint exercise of planning, zoning, subdivision, building, and related regulations.

B. Section 22-54-102(3)(a), C.R.S., authorizes local governments to cooperate with school districts through intergovernmental agreements to fund, construct, maintain, or manage capital construction projects, provided that funding is provided by a source of local government revenue that is otherwise authorized by law.

C. Pursuant to section 31-23-206, C.R.S., the City has adopted through the City of Evans Comprehensive Plan dated February 16, 2010, various goals, policies, and supporting data in order to plan for the orderly growth of the City.

D. Pursuant to sections 31-23-301 and -303, C.R.S., the City is furthermore authorized to regulate and restrict the density of population of the City for the purpose of promoting health, safety, morals, and general welfare of the community; and to adopt regulations in accordance with the Comprehensive Plan to facilitate the adequate provision of schools.

E. The growth in residential land development in the City necessitates the building of additional school facilities and making improvements to existing school facilities in order to accommodate the corresponding increases in the student population. The dedication of sites and land areas for schools, or payments in lieu thereof ("in-lieu payments"), made in connection with new residential construction within the City, will help to meet such demand.

F. Colorado Revised Statute section 31-12-108.5(1) requires that prior to any proposed annexation, the City must prepare an impact report addressing the effect of the proposed annexation upon the School District, "including the estimated number of students generated and the capital construction required to educate such students." Upon completion of a statutorily required public hearing, the City must determine whether the statutory requirements for annexation are met, and whether additional terms and conditions should be imposed.

G. In accordance with the preliminary plan review of a subdivision application filed pursuant to Municipal Code Section 18.07.080 D.1.f.(4), the City requires applicants to ensure that the proposed subdivision will not cause "unreasonable burden on the ability of the school district to provide educational services."

H. The City may deny approval of the annexation or future subdivision if adequate educational opportunities cannot be afforded to the estimated new students. Alternatively, the annexation or subdivision may be approved if the developer agrees to enter into a public improvements agreement to mitigate the costs of sites that will be necessary to provide adequate educational opportunities to the estimated number of new students.

I. The School District has adopted certain planning standards and a methodology for calculating the nature and extent of the impact any proposed land-use approval by the City will have on the adequacy of school sites for the School District and the future residents thereof.

J. The City is authorized by state and local law to adopt appropriate ordinances and regulations for the purpose of promoting and preserving the public health, safety, and welfare of the citizens of the City.

K. There is an essential nexus between the need for the dedication of school sites or in-lieu payments and the legitimate local governmental interest of promoting and preserving the public health, safety, and welfare of the citizens of the City and the School District.

L. In order to provide adequate school facilities to serve new residential land developments, it is imperative that the School District be consulted regarding land dedication or in-lieu payments for school sites in order to achieve rational and cost-effective planning and to assure that the dedication or in-lieu payment requirements are roughly proportional to the impact of the proposed use on the City and School District.

M. School land dedication or in-lieu payments serve to implement the City's Comprehensive Plan, by making provisions for public improvements in a manner appropriate for a modern, efficiently functioning City; and by implementing those provisions of the Plan that are intended to ensure that new development does not negatively impact the provision of municipal services. Such dedication or in-lieu payments specifically promote the City's goals of the Comprehensive Plan to coordinate issues of location of growth and development and to ensure adequate school facilities are planned to serve the needs of new development.

N. The City, upon consideration of the effect of residential land developments and the ability of the School District to provide school facilities in the City, has determined that it is in the best interests of the citizens of the City to enter into an Intergovernmental Agreement with the School District for the purpose of providing for the dedication of land for school sites or payments in lieu thereof as provided in this Agreement.

O. The City and School District desire to define their respective rights and obligations with respect to the planning, collection, and use of such land dedications and in-lieu payments.

AGREEMENT

NOW, THEREFORE, in consideration of the objectives, policies, and findings expressed in the Recitals to this Agreement, incorporated by this reference, and the mutual promises contained in this Agreement, the City and School District agree as follows:

1. Definitions. Capitalized terms used herein and not otherwise defined have the meanings specified below:

"Developer" means the person or entity seeking land-use approval from the City and the party responsible for land dedication or in-lieu payments hereunder.

"Dwelling Unit" means a housekeeping unit designed and used for occupancy by a single individual or a family, containing cooking, living, sleeping, and sanitary facilities and having a separate entrance.

"Land Development Project" or "Project" means any proposed annexation, subdivision approval or any subsequent amendment to a previously approved development approval that will result in new or additional Dwelling Units or a population density or population greater than that contemplated by the previously approved development proposal.

"Methodology" means the formulas, based upon the School Planning Standards, for calculating land dedication requirements and in-lieu payments, as shown on Exhibit B, attached hereto and incorporated by this reference, as amended from time to time as provided herein.

"School Planning Standards" or "Standards" means the adopted School District land use standards set forth on Exhibit A, attached hereto and incorporated by this reference, as amended from time to time as provided herein, that include student yields per dwelling unit for each school age level, school facility enrollment capacities, school site acreage requirements, and the fair market value of real property that is located within the boundaries of both the City and the School District.

2. Determination of Land Dedication or In-Lieu Payment Requirements.

a. The City and School District agree that there is an essential nexus between the dedication or in-lieu payments contemplated herein and a legitimate local governmental interest, and that the proposed dedications or in-lieu payments are roughly proportional both in nature and extent to the needs generated by the proposed Land Development Project.

b. The City and School District agree that the current School Planning Standards in Exhibit A are reasonable and will be administratively reviewed by both the School District and the City no later than April 1 of every calendar year during the term of this Agreement and adjusted by mutual agreement as warranted. All dedication requirements and in-lieu payments will be based upon the School Planning Standards and the Methodology,

which are in effect at the time the Developer applies for any Land Development Project.

c. Prior to or at the time that any proposed plans are submitted to the City for any Land Development Project, the Superintendent of the School District or a designee will meet with the Developer, for the purpose of determining whether the School District desires the dedication of any land for schools within the Project, consistent with the School Planning Standards. In the event the School District requests a dedication of land that, based upon the application of the Standards and Methodology, results in a parcel that in itself would be of insufficient size for a school site, the School District agrees to discuss with the Developer:

i. the potential reservation by the Developer or acquisition by the School District of the balance of the property needed to provide an adequate site; or

ii. an in-lieu payment as provided in this Agreement in the event the dedication of sites and land areas is not deemed feasible or in the best interests of the School District.

d. Upon formal submission of any proposed Land Development Project to the City, the City will submit the Developer's proposal to the School District for its review, comments, and recommendations concerning the adequacy of school sites and facilities to provide adequate educational opportunities for students in response to the proposed Land Development Project. The School District will promptly review the proposal and submit its comments and recommendations to the City.

e. The School District will make a determination concerning the effect the Project will have on the School District's ability to provide adequate school sites and facilities based upon the School Planning Standards in effect at the time the Developer's proposal is submitted by the City to the School District for its review.

f. Upon receipt of the School District's determination that the Project will have an adverse effect, the City will, to the extent permitted by law, implement said determination as provided in Subsection 2(g) below.

g. The City agrees that as a condition of final approval of a Land Development Project, it will: (i) require proof of the dedication of land or the appropriate reservation of land for future dedication to the School District in accordance with Section 3 below, or (ii) require proof that the cash-in-lieu payment, as described in Section 4 below, has been paid to and received by the School District. The Superintendent of the School District, or the Superintendent's designee, will provide such proof in a timely manner to the Community Development Department of the City. This requirement will apply to each Land Development Project for which application is made on or after the Effective Date of this Agreement, subject only to the exemptions contained in Section 7 below.

3. Conveyance of Dedicated Land.

a. If land is to be dedicated to the School District as part of the approval of

any Land Development Project, the School District will notify the City in writing. Upon receipt of such notification, the City will thereafter accept the final plat for the Land Development Project, or any portion of it, for recording only if such plat provides for the contemporaneous dedication and conveyance of such land to the School District.

b. If land is to be reserved for future dedication to the School District as part of the approval of any Land Development Project, the School District will so notify the City in writing. Upon receipt of such notification, the City will thereafter accept the final plat for the Land Development Project, or any portion of it, for recording only if such plat shows the reservation of such land for such future dedication to the School District. Dedication of the reserved site shall occur no later than the date of final approval of the Land Development Project that includes the reserved site. The School District will promptly certify to the City in writing that the dedication has been made. In the event that the School District determines, in its sole discretion, that the dedication of a reserved site is necessary prior to the issuance of any building permit for the Project within which such site is located, the School District will so notify the person(s) shown by the records of the Weld County Assessor as being the then-current owner(s) of such site. Said notice will be sent by certified mail, return receipt requested. Within 60 days of the mailing of said notice, the reserved property that is the subject of the mailing shall be dedicated to the School District by the owner(s) thereof, as a condition of the City's final approval of the Land Development Project.

c. Prior to the issuance of the first residential building permit for the Land Development Project, the dedicated site shall have raw water dedicated, overlot grading, direct access to a publicly dedicated street improved to City standards, and utilities stubbed to the site.

d. Title to the dedicated site shall be conveyed to the School District by general warranty deed, free and clear of all liens, encumbrances, and exceptions (except those approved in writing by the School District), including, without limitation, real property taxes, which will be prorated, and paid as of, the date of conveyance. The Developer will provide a title insurance commitment and policy in an amount equal to the fair market value of the dedicated property, as a condition of the City's final approval of the Land Development Project.

e. The City and the School District agree that the substance of the preceding Subsections 3(a) through 3(d) will be required to be set forth in any preliminary, final, or annexation plats before any such plat will be approved by the City.

4. Assessment and Amount of In-Lieu Payment.

In the event that the School District determines, under Section 2 above, that the dedication of land with respect to a particular Land Development Project would not further the planning objectives of the School District, either because the parcel that could be required to be dedicated would be of insufficient size for a school site or because the location of the dedicated site would be inappropriate, then the amount of the in-lieu payment will be determined and paid to the School District, according to the School Planning Standards then in effect, prior to approval and recording of the final plat for the Land Development Project. In the event the Developer obtains approval from the City for the phasing of the Land Development Project that

results in separate filings and final plats for each phase, the Developer may defer the payment of the in-lieu payment until the recording of the final plat for each phase; provided, however, that in such case the amount of the payment will be based upon the School Planning Standards and Methodology in effect at the time of the approval of each phase.

5. Methodology for Assessing In-Lieu Payments.

a. The parties agree that the Methodology in Exhibit B has been developed in a manner so as to fairly apportion the cost of acquiring school sites made necessary by residential development, and to ensure that any in-lieu payments will be used for the purposes of school site acquisition and development and capital facilities planning within the senior high school feeder attendance area boundaries that include the Land Development Project for which the payment is being made, unless mutually agreed in writing by the Developer, School District, and City.

b. The Methodology adopted pursuant to the provisions of this Agreement will be updated annually from the date of its submission to the City, or less often, as determined by the School District. Updated versions of Exhibit B, reflecting such changes, will be furnished to the City within thirty (30) days after their adoption by the School District.

6. Collection, Deposit, and Expenditure of In-Lieu Payments.

a. All in-lieu payments shall be paid to the School District prior to or concurrent with the recording of the final plat for the Land Development Project. Such payment shall be properly identified and promptly deposited into a separate interest-bearing account authorized by sections 24-75-601 to -605, C.R.S., and established in the name of the School District. The School District will be the owner of the funds in the account.

b. The funds deposited into the account will be earmarked and expended solely for the purposes of school site acquisition and development and capital facilities planning within the senior high school feeder attendance area boundaries that include the Land Development Project for which the payment was made. The time for, nature, method, and extent of such planning or development will be within the sole discretion of the School District.

7. Exemptions.

a. The following will be exempted from land dedication or in-lieu payment requirements:

i. Alteration or expansion of a Dwelling Unit.

ii. Replacement of a Dwelling Unit.

iii. Construction of an accessory building, or structure.

iv. Long-term care facilities or group homes as defined in the City's

municipal code.

v. Commercial and industrial developments.

b. Any claim of exemption as provided in this Section 7 shall be made no later than the time of application of the Project for approval. Any claim not so made may be deemed waived by the Developer.

8. Annual Report, Accounting, and Audit.

a. The School District will establish and maintain an accounting system to ensure that all in-lieu payments are expended in accordance with Subsection 6(b) above.

b. The School District and the City will cause an audit to be performed annually of the in-lieu payments collected and expended in accordance with this Agreement. The audit will be conducted in accordance with generally accepted accounting principles for governmental entities and may be part of any general audit annually conducted by the School District. A copy of said audit will be furnished to the City. The cost of the audit will be paid from the School District's general fund.

c. At any time deemed necessary, the City may request an accounting from the Superintendent of the School District concerning the expenditure of the in-lieu payments made to the School District.

9. Term.

The term of this Agreement will commence on the Effective Date and continue for a period of ten (10) years thereafter unless the City repeals the implementing ordinance adopted by the City concurrent with this Agreement, following at least one hundred eighty (180) days prior notice to the School District. This Agreement will automatically renew for additional ten (10) year periods unless one party notifies the other of intent to non-renew at least ninety (90) days prior to expiration of the then current term.

10. Miscellaneous.

a. Faith and Credit. Neither party will extend the faith or credit of the other to any third person or entity.

b. Amendments. This Agreement may be amended only by mutual agreement of the parties, evidenced by a written instrument authorized and executed with the same formality as accorded this Agreement.

c. Notice. Any notice required by this Agreement shall be in writing. If such notice is hand delivered or personally served, it will be effective immediately upon such delivery

or service. If given by mail, it will be by certified mail, return receipt requested, and addressed to the following addresses:

City of Evans
1100 37th Street
Evans, Colorado 80620
Attention: City Manager

Weld County School District 6
1025 9th Avenue
Greeley, CO 80631
Attention: Superintendent of Schools

Notice given by mail will be effective three (3) days after it is deposited in the United States mail depository correctly addressed and with sufficient postage for delivery.

d. Governing Law. This Agreement and the rights and obligations of the parties hereto will be interpreted and construed in accordance with the laws of the State of Colorado.

e. Severability. If this Agreement, or any portion of it, is for any reason held invalid or unconstitutional by any court of competent jurisdiction, the Parties will deem that portion to be a separate, distinct, and independent provision, and such holding will not affect the validity of the remaining portions of the Agreement.

f. Indemnification. The City agrees to cooperate in the defense of any legal action that may be brought contesting the validity of this Agreement or the implementing ordinances. The School District will be responsible for defending such claim (whether filed against the City, the School District, or both) and for the payment of any final monetary judgment entered against the City in any such action. Nothing contained in this Agreement constitutes any waiver for the City or the School District of the provisions of the Colorado Governmental Immunity Act or other applicable immunity defense. This provision will survive termination of the Agreement and be enforceable until all claims are precluded by statutes of limitation.

g. Survival. Any provision or obligation of this Agreement, for the benefit of either party, that has not been fully performed or discharged at the time of termination will survive such termination and continue to bind the party until the expiration of any applicable legal or equitable period of limitation.

h. Financial Obligations. This Agreement is not a pledge of the credit of the City or the School District, or a collection or payment guarantee by the City to the School District. Nothing in this Agreement may be construed to create a multiple-fiscal year direct or indirect municipal or district debt or financial obligation.

i. No Third Party Beneficiaries. None of the terms, conditions, or covenants in this Agreement gives or allows any claim, benefit, or right of action by any third person not a party hereto. Any person other than the City or the School District receiving services or benefits under this Agreement is only an incidental beneficiary.

j. Ordinance. This Agreement has been approved by the City as part of and in conjunction with an ordinance establishing the requisite standards and requirements of the City for future annexation and subdivision of land annexed after the Effective Date hereof.

[Signature Page Is Next Page.]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which is in full force and effect the day and year first above written.

CITY OF EVANS, COLORADO

By: _____
Mayor

Date: _____

ATTEST:

By: _____
City Clerk

APPROVED AS TO LEGAL FORM:

By: _____
City Attorney

APPROVED AS TO CONTENT:

By: _____
City Manager

WELD COUNTY SCHOOL DISTRICT 6

By: _____
President, Board of Education

Date: _____

ATTEST:

By: _____
Secretary, Board of Education

APPROVED AS TO LEGAL FORM:

By: _____
School District Attorney

DRAFT 6/2/2020

Exhibit A
School District Planning Standards

I. Student Yields (per dwelling unit)

	Single Family Detached	Single Family Attached	Multifamily Development	Manufactured Home
Elementary School	0.33	0.17	0.07	0.30
Middle School	0.13	0.07	0.03	0.15
High School	0.18	0.07	0.04	0.17

II. School Facility Enrollment Capacities

Elementary School	700
Middle School	900
High School	1800

III. School Site Acreage Requirements

Elementary School	15.5
Middle School	27.5
High School	46

IV. Developed Land Value

The district uses a fixed $157,312 value per acre.

Exhibit B
School District Methodology

Based on the School District Planning Standards contained in Exhibit A and the presumption of developed land value of $157,312/acre, calculation of land dedication or in-lieu payments uses the following procedures:

1. Single Family Detached Housing

Elementary School Procedure
(15.5 acres ÷ 700 students = 0.022 acres/student)

1. 0.33 x 0.022 = 0.0073 x $157,312 = $1,149

Middle School Procedure
(27.5 acres ÷ 900 students = 0.031 acres/student)

1. 0.13 x 0.031 = 0.0040 x $157,312 = $625

High School Procedure
(46 acres ÷ 1800 students = 0.026 acres/student)

1. 0.18 x 0.026 = 0.0046 x $157,312 = $724

Summary
The total land dedication or in-lieu payment per dwelling unit is:

	Land	In-Lieu Payment
Elementary School	0.0073 acres	$1,149
Middle School	0.0040 acres	$625
High School	0.0046 acres	$724
TOTAL	0.0159 acres	$2,498

2. Single Family Attached Housing

Elementary School Procedure
(15.5 acres ÷ 700 students = 0.022 acres/student)

2. 0.17 x 0.022 = 0.0038 x $157,312 = $592

Middle School Procedure
(27.5 acres ÷ 900 students = 0.031 acres/student)

2. 0.070 x 0.031 = 0.0021 x $157,312 = $336

High School Procedure
(46 acres ÷ 1800 students = 0.026 acres/student)

2. 0.070 x 0.026 = 0.0018 x $157,312 = $281

Summary
The total land dedication or in-lieu payment per dwelling unit is:

	Land	In-Lieu Payment
Elementary School	0.0038 acres	$592
Middle School	0.0021 acres	$336
High School	0.0018 acres	$281
TOTAL	0.0077 acres	$1,210

3. Multifamily Development

Elementary School Procedure
(15.5 acres ÷ 700 students = 0.022 acres/student)

3. 0.070 x 0.022 = 0.0016 x $157,312 = $244

Middle School Procedure
(27.5 acres ÷ 900 students = 0.031 acres/student)

3. 0.030 x 0.031 = 0.0009 x $157,312 = $144

High School Procedure
(46 acres ÷ 1800 students = 0.026 acres/student)

3. 0.040 x 0.026 = 0.0010 x $157,312 = $161

Summary
The total land dedication or in-lieu payment per dwelling unit is:

	Land	In-Lieu Payment
Elementary School	0.0016 acres	$244
Middle School	0.0009 acres	$144
High School	0.0010 acres	$161
TOTAL	0.0035 acres	$549

4. Manufactured Home Dwelling

Elementary School Procedure
(15.5 acres ÷ 700 students = 0.022 acres/student)
4. 0.300 x 0.022 = 0.0066 x $157,312 = $1,045

Middle School Procedure
(27.5 acres ÷ 900 students = 0.031 acres/student)
4. 0.150 x 0.031 = 0.0046 x $157,312 = $721

High School Procedure
(46 acres ÷ 1800 students = 0.026 acres/student)
4. 0.170 x 0.026 = 0.0043 x $157,312 = $683

Summary
The total land dedication or in-lieu payment per dwelling unit is:

	Land	In-Lieu Payment
Elementary School	0.0066 acres	$1,045
Middle School	0.0046 acres	$721
High School	0.0043 acres	$683
TOTAL	0.0155 acres	$2,449

4819-3182-3551, v. 1

August 24, 2020

City of Evans Council Members
1100 37th Street
Evans, CO 80620

RE: Imposition of School Impact Fees

Dear Mayor and Council Members,

My name is Patrick McMeekin and I am the Vice President of Land Development for Hartford Homes. Hartford has been a regional builder/developer for over 30 years in the northern Colorado area. We have built homes in most communities in the area and continue to pursue projects in all parts of our region.

We have worked in many jurisdictions where School Impact fees have been or are currently being charged. In fact, it is fairly common for the School Districts we work in to charge these fees. We prefer that these fees are charged when a building permit is issued, as that is when the impact occurs.

We feel that the financial health of our school districts is of the utmost importance. We have all see the impacts of underfunded districts and the detriments that can have on our communities, teachers, and most importantly students. While we are always cautious when new fees are proposed, if there is a demonstrated need and a thoughtful analysis as to the imposition and amount of the fee, we will support the increase. In this case we believe both of those metrics have been met.

I can be reached at patrick@hartfordco.com if you have any further questions.

Sincerely,

Patrick McMeekin, Vice President of Land Development, Partner
Hartford Homes

WESTERN Demographics, Inc.
1750 30th St., #424, Boulder, CO 80301, 303-877-7557

May 14, 2020

The Honorable Mayor Brian Rudy and
The City Council of Evan Colorado
City of Evans, 1100 37th Street
Evans, Colorado 80620

Mayor Rudy and Council Members:

I am writing in support of the Greeley-Evans 6 School District request for a land dedication and fee-in-lieu of land dedication system to be applied within the City of Evans. Although it may be difficult to imagine housing growth and future needs given the current pandemic atmosphere, I believe that the City of Evan's growth potential remains robust and well-planned community facilities are as important as ever. My perspective as someone who works all over the Western U. S. reinforces how successful Evans has been in providing an affordable, service-driven environment for young families. The majority of Front Range school districts have had land dedication or fee-in-lieu of land dedication systems for decades. Site dedication and fee systems have helped districts locate schools in the best, long-term locations This tool is already in place for the surrounding towns of Eaton, Windsor, Severance and others. Having a fee system would allow Evans to remain competitive during the coming decade both in housing product marketability and in quality of community facilities.

Given the typical smaller size of most land developments along the Front Range, the majority of the school districts are collecting fee-in-lieu instead of receiving school land dedication of smaller acreages. This revenue is consolidated so that appropriate sites may be purchased in the best locations to serve student growth needs. Accordingly, most fees are a "pass-through fee" for the City and the majority of developers and builders are expecting fees and seek a uniform competitive environment. Most homebuilders have experienced fees elsewhere and only ask the dedication and fee requirements be fair, reasonable and regionally consistent. The combined effect of currently approved residential projects and vacant land in Evans and Greeley will produce significant student impacts. If a land dedication and fee-in-lieu system were implemented, the currently proposed developments and others in the future would contribute to a funding base that would allow the school district to purchase appropriate school sites in smart locations.

The Evans / Greeley area has emerged as a prime address for young families seeking affordable housing and employment opportunities. The high level of community services, high density of human service providers and educational opportunities in the community make it very attractive for the family demographic. I believe that smart school sites will reinforce this service-driven model and contribute to area's reputation as a supportive environment for families. Even in difficult economic times, schools are a positive investment for developers, realtors, and others promoting homeownership, strong neighborhoods, and quality of life.

Thank you for consideration of our request of a land dedication and fee-in-lieu system for school sites. Please let me know if you have questions.

Sincerely,

Shannon Bingham, President, Western Demographics, Inc.

CITY COUNCIL WORK SESSION REPORT

DATE:	**September 1, 2020**
AGENDA ITEM:	**Work Session Item #3**
SUBJECT:	**2021 Capital Budget**
NAME & TITLE:	James L. Becklenberg, City Manager Jacque Troudt, CPA, Finance Director

ISSUE DESCRIPTION:

The purpose of this work session item is to present to City Council the planned capital projects for 2021 and beyond and receive feedback regarding timeline and priorities. This represents a change in the budget process, whereas more time is spent reviewing planned capital expenditures at the Council level before assembly of the overall budget.

The attached long-range financial plans identify the capital projects by fund, and by year in which they are planned. Also included is a summary of road projects and an associated map.

The City Council Finance Committee met on August 25, 2020 to review the capital projects in detail by fund. The next step in the budget process is for Council to receive an overview presentation of the 2021 budget on September 15, 2020 and 1st reading to consider adoption of the 2021 budget will occur on October 5, 2020.

FINANCIAL SUMMARY:

All capital projects are included in the financial budget for the associated funds, as shown on the long range financial plans.

REQUESTING FROM CITY COUNCIL:

Feedback and direction related to the capital project priorities for the 2021 budget.

ATTACHMENTS:

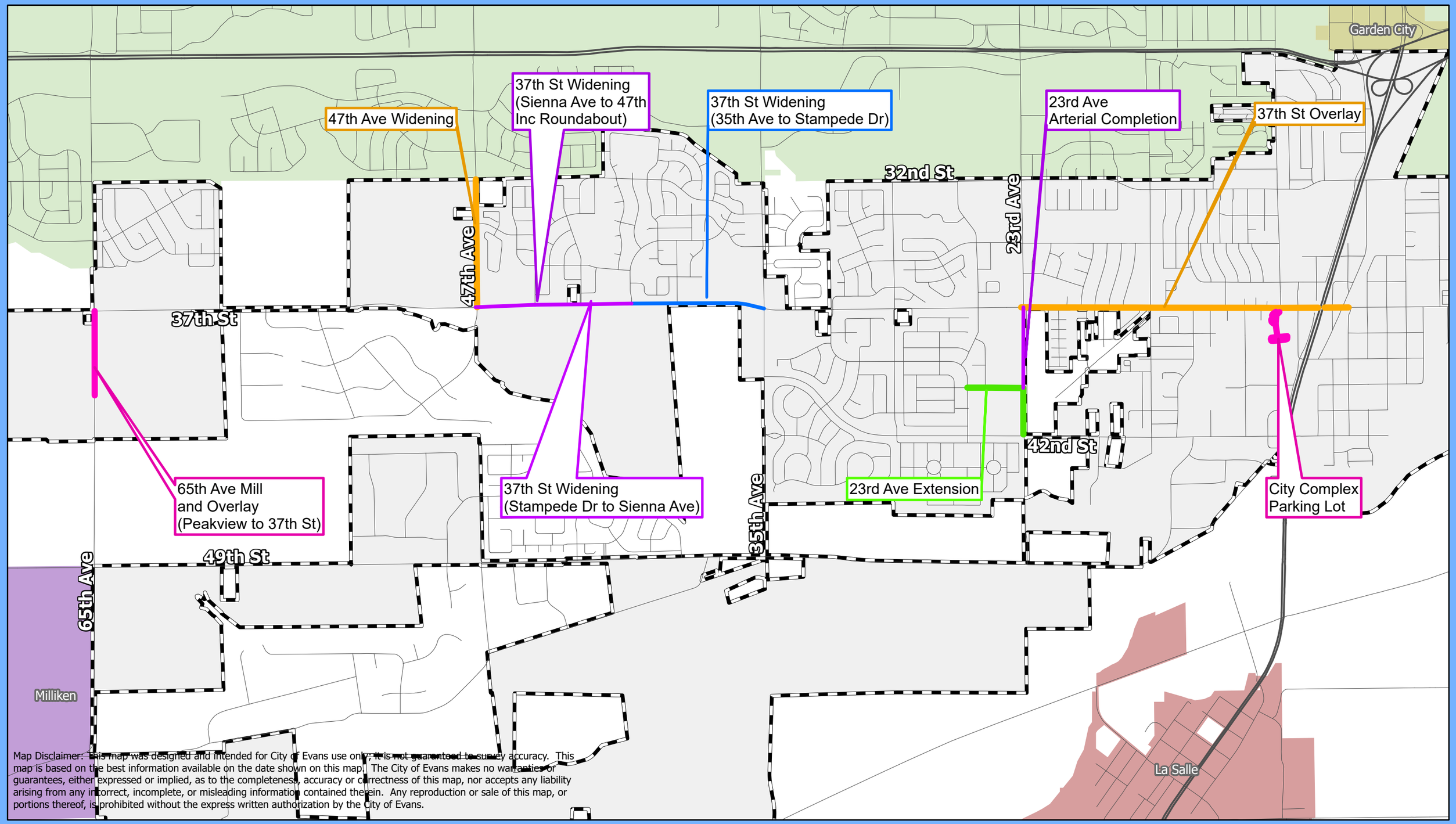
- Long Range Financial Plans
- Road Project Summary
- Road Summary Map
- Capital Presentation

COE Capital Road Projects

City of Evans, Colorado

Year of Project
- 2019 and 2020
- 2020
- 2021
- 2022
- 2023

N



Map Disclaimer: This map was designed and intended for City of Evans use only; it is not guaranteed to survey accuracy. This map is based on the best information available on the date shown on this map. The City of Evans makes no warranties or guarantees, either expressed or implied, as to the completeness, accuracy or correctness of this map, nor accepts any liability arising from any incorrect, incomplete, or misleading information contained therein. Any reproduction or sale of this map, or portions thereof, is prohibited without the express written authorization by the City of Evans.

Date: 8/27/2020

Road Project Tracking

Project		2019 Budget	2020 Budget	2021 Budget	2022 Budget	2023 Budget	2024 Budget	2025 Budget	Total Project Budget
37th Street Overlay									
	CIP Streets		2,226,000						
	Food Tax		380,000						
Project Total		-	**2,606,000**	-	-	-	-	-	**2,606,000**
37th Street Widening (35th ave-65th ave) design									
	CIP Streets	1,035,000	490,285						
Project Total		**1,035,000**	**490,285**	-	-	-	-	-	**1,525,285**
37th Street Widening (35th to Stampede)									
	CIP Streets				2,000,000				
	Street Impact				1,000,000				
	Road Tax				1,500,000				
Project Total		-	-	-	**4,500,000**	-	-	-	**4,500,000**
37th Street Widening (Stampede to Sienna)									
	CIP Streets					1,000,000			
	Street Impact					1,000,000			
	Road Tax					1,600,000			
Project Total		-	-	-	-	**3,600,000**	-	-	**3,600,000**
37th Street Widening (Sienna to 47th inc roundabout)									
	CIP Streets					400,000			
	Street Impact					1,000,000			
	Road Tax					750,000			
	Food Tax					1,500,000			
Project Total		-	-	-	-	**3,650,000**	-	-	**3,650,000**
47th Ave Widening (37th N to City Limits)									
	Food Tax		500,000						
	Street Impact		1,000,000						
	CIP Streets		2,375,000						
Project Total		-	**3,875,000**	-	-	-	-	-	**3,875,000**

Project		2019 Budget	2020 Budget	2021 Budget	2022 Budget	2023 Budget	2024 Budget	2025 Budget	Total Project Budget
23rd Ave Extension									
	Street Impact	-	300,000						
	General Fund	450,000	-						
	CIP Streets	-	197,000						
Project Total		**450,000**	**497,000**	**-**	**-**	**-**	**-**	**-**	**947,000**
23rd Ave Arterial Completion									
	Food Tax					3,000,000			
	CIP Streets					2,000,000			
Project Total		**-**	**-**	**-**	**-**	**5,000,000**	**-**	**-**	**5,000,000**
City Complex Parking Lot									
	Food Tax			550,000					
Project Total		**-**	**-**	**550,000**	**-**	**-**	**-**	**-**	**550,000**
65th Ave Mill and Overlay (Peakview to 37th St)									
	CIP Streets			100,000					
Project Total		**-**	**-**	**100,000**	**-**	**-**	**-**	**-**	**100,000**
Street Maintenance									
	CIP Streets		1,350,000	600,000	600,000	600,000	600,000	600,000	
	Road Tax		-	1,175,000	1,250,000	1,280,000	1,300,000	1,330,000	
Project Total		**-**	**1,350,000**	**1,775,000**	**1,850,000**	**1,880,000**	**1,900,000**	**1,930,000**	**10,685,000**
Total Annual Budget		**1,485,000**	**8,818,285**	**2,425,000**	**6,350,000**	**14,130,000**	**1,900,000**	**1,930,000**	**37,038,285**
									-
General Fund Total		450,000	-	-	-	-	-	-	-
CIP Streets Total		1,035,000	6,638,285	700,000	2,600,000	4,000,000	600,000	600,000	
Street Impact Total		-	1,300,000	-	1,000,000	2,000,000			
Food Tax Total		-	880,000	550,000	-	4,500,000			
Road Tax Total		-	-	1,175,000	2,750,000	3,630,000	1,300,000	1,330,000	
	Total	**1,485,000**	**8,818,285**	**2,425,000**	**6,350,000**	**14,130,000**	**1,900,000**	**1,930,000**	**37,038,285**

2021 Capital Projects

Work Session

September 1, 2020

Road Projects

(Detailed out on Road Project Tracking Summary)

CIP Streets- Ending fund balance between $64k- $1.5 Million. Varies depending on grant funding.

Street Impact- Revenue budgeted at 50% of anticipated development. Ending fund balance ranges between $541k- $1.7 Million

Food Tax- Revenue on sales tax for food, can be spent on various taxpayer identified capital, including roads. Ending fund balance ranges from $129k- $3.2 Million.

Road Tax- New 1% sales and use tax for road improvements. Ending fund balance ranges from $1.1- $3.8 Million.

Park Impact Fund

- Impact fees budgeted at 50% of anticipated development.

- Ending fund balance = $3.8- $5.5 Million

2021:

- Davinci Park design & construction $175,000

2023-2024:

- West Evans Gateway Park $500,000
- Design & construction of 23 acres near Prairie Heights Middle School $500,000

2024-2025:

- Hunters Reserve Park design & construction- $350,000
- North Point Park design & construction- $500,000

Future projects:

- West Evans Gateway Park/Recreation Facility

Conservation Trust Fund

- Annual revenue of $200k from Colorado Lottery
- 2021 & 2022 anticipated park maintenance staffing cost
- Ending fund balance = $8k- $450k

2021: 37th Street Parkway (Harbor Lane to Mountain View Dr) landscape design and construction $250,000

2022: Evans Ditch Trail Design and ROW Acquisition $200,000

2025: Denver Street Playground replacement $175,000

Future: Prairie View Park playground replacement, Ridge Park playground replacement, many others

* Annual playground surface repairs of $25,000

Water Fund

- Ending fund balance varies based on capital needs, ranges between $2.4- $4.6 Million.

2021 Priorities:

NISP Water Storage Project - $534,000

Water line replacement design- $250,000

System Expansion Fee Contingency - $328,501

Water Fund Future Projects

- **2022:**
  - NISP Water Storage Project $561,000
  - Water line replacement design $250,000
- **2023:**
  - NISP Water Storage Project $450,000
  - West Service Road 37th to 39th $200,000
- **2024:**
  - NISP Water Storage Project $1,050,750
  - 37th Street under Highway 85 $250,000
  - 39th Street under Highway 85 $250,000
  - Dos Rios & Chappelow Schools $700,000
- **2025:**
  - Pawnee & Kiowa Valve $40,000
  - Cheyenne Drive- Kiowa to Pawnee $230,000
  - Rosedale/ Pleasant Acres Drive $640,000
  - State Farm Road (Glendale Dr to State Farm Rd) $300,000
- **Future:**
  - NISP, various line replacements and expansion projects

Waste Water Fund

2021 Projects:

- Annual Sewer Line Maintenance = $100,000
- Annual Solids Handling and Dewatering = $300,000
- Lift Station and Emergency Overflow = $1,250,000
- Decommissioning of prior WW Treatment Plant = $1,000,000
- Plant Structure Maintenance - $275,000
  Replacement Planning
- Plant Equipment Maintenance - $275,000
  Replacement Planning

Ending fund balance = $5.7- $7.4 Million

Waste Water – future projects

- **<u>Annual projects:</u>**
  - Sewer Line Maintenance = $100,000
  - Solids handling and dewatering= $350,000- $500,000

- **<u>2024:</u>**
  - WW collection line replacement at 37th St (Boulder to Riverside Parkway) $100,000

- **<u>Future Projects:</u>**
  - Collection line replacements at various locations, like: 40th & Pueblo St, 42nd St, 49th St , and expansion of the treatment plant.

Stormwater Fund

Ending fund balance = $491k - $1 Million

2021-2022 Priorities:

*Construction of Heritage Inn/35th Street across Highway 85 = $7,418,252

*Highway 85 improvements at 31st Street = $1,181,748

Industrial Park Stormwater Master Plan = $60,000

*State Revolving Funds will be used

Storm Water– future projects

- **<u>2023:</u>**
  - Highway 85 improvements at St Vrain Street = $95,000
- **<u>2024:</u>**
  - Trinidad Street improvements = $260,000

- **<u>Future Projects:</u>**
  - As funding allows- improvements in various locations such as: Trinidad Street, 17th Ave from Chappelow to Industrial, 37th and Valmont to the river, 37th St and 65th Ave, 35th Ave at 49th St, Ridge at Prairie View 23rd Outfall, etc.

Questions?

City of Evans Capital Projects - Streets Long Range Financial Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Beginning Fund Balance	1,595,586	4,225,728	4,705,605	4,705,605	401,678	926,605	773,955	64,400	810,752
Revenues									
Intergovernmental	2,276,347	2,020,422	2,332,344	2,277,419	764,926	1,947,350	2,830,445	846,352	892,833
Total Revenues	2,276,347	2,020,422	2,332,344	2,277,419	764,926	1,947,350	2,830,445	846,352	892,833
CT	2,276,347	2,020,422	2,332,344	2,277,419	764,926	1,947,350	2,830,445	846,352	892,833
Transfers In	2,600,000	2,350,000	850,000	850,000	850,000	850,000	850,000	850,000	850,000
Total Available Funds	4,876,347	4,370,422	3,182,344	3,127,419	1,614,926	2,797,350	3,680,445	1,696,352	1,742,833
Expenditures									
Supplies & Services	238,650	257,959	350,000	350,000	350,000	350,000	350,000	350,000	350,000
Capital Improvement	2,007,555	3,632,586	6,931,346	7,081,346	740,000	2,600,000	4,040,000	600,000	640,000
Total Expenditures	2,246,205	3,890,545	7,281,346	7,431,346	1,090,000	2,950,000	4,390,000	950,000	990,000
Excess Revenue Over (Under) Expenditures	2,630,142	479,878	(4,099,002)	(4,303,927)	524,926	(152,650)	(709,555)	746,352	752,833
Ending Fund Balance	4,225,728	4,705,605	606,603	401,678	926,605	773,955	64,400	810,752	1,563,585
CT	4,225,728	4,705,605							

2018-2025 Capital Improvement Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Projected	2022 Projected	2023 Projected	2024 Projected	2025 Projected	Future Projects
37th St. Resurfacing - 11th Ave to 23rd Ave	-	-	1,985,000	2,038,000	-	-	-	-	-	-
37th St. Widening - 35th to 65th (4 lanes)	-	511,033	490,285	490,285	-	-	-	-	-	-
37th St. Widening - 35th to Stampede	-	-	-	-	-	2,000,000	-	-	-	
37th St. Widening - Stampede to Sienna	-	-	-	-	-	-	1,000,000	-	-	-
37th St. Widening - Sienna to 47th (inc roundabout and 47th)	-	-	-	-	-	-	400,000	-	-	-
47th Ave. Widening - 32nd to 37th	-	-	2,725,000	2,375,000	-	-	-	-	-	-
Concrete Replacement	89,993	-	-	-	-	-	-	-	-	-
Misc. Street Resurfacing (Per PMS)	602,243	775,691	850,000	1,350,000	600,000	600,000	600,000	600,000	600,000	-
35th Ave. Widening - 37th St. to Prairie View (4 lanes)	295,763	1,519,766	10,776	10,776	-	-	-	-	-	-
65th Avenue Widening (37th St to North CL)	890,885	-	-	-	-	-	-	-	-	-
US 85 Access Control @ 31st St. - Grant Funded	128,671	826,096	490,285	490,285	-	-	-	-	-	-
23rd Avenue extension (37th to 42nd)	-	-	250,000	197,000	-	-	-	-	-	-
County Road 33 Improvement- Construction	-	-	130,000	130,000	-	-	-	-	-	-
65th Avenue mill and overlay (Peakview to 37th St)	-	-	-	-	100,000	-	-	-	-	-
Pavement condition scanning	-	-	-	-	40,000	-	40,000	-	40,000	-
23rd Avenue Arterial Completion	-	-	-	-	-	-	2,000,000	-	-	-
37th Street Design & Widening (47th to 65th)	-	-	-	-	-	-	-	-	-	5,210,000
Trinidad Street Paving (31st to 35th)	-	-	-	-	-	-	-	-	-	330,000
35th Avenue Design & Widening (Prairie View to 49th)	-	-	-	-	-	-	-	-	-	2,760,000
Prairie View Drive Design & Construction	-	-	-	-	-	-	-	-	-	7,790,000
23rd Avenue extension - 2 Lane (42nd to 49th)	-	-	-	-	-	-	-	-	-	1,740,000
Two Rivers Parkway Design & Widening (37th to 49th)	-	-	-	-	-	-	-	-	-	4,050,000
35th Avenue Bridge	-	-	-	-	-	-	-	-	-	36,740,000
Capital Projects - Streets Total	**2,007,555**	**3,632,586**	**6,931,346**	**7,081,346**	**740,000**	**2,600,000**	**4,040,000**	**600,000**	**640,000**	**58,620,000**
* Capital is budgeted at 90% of projected ending fund balance after operations, excluding grant funding	5,609,954	7,504,372	6,784,154	6,734,722	1,499,944	3,036,560	3,693,960	1,269,677	1,983,227	3,693,960

City of Evans Street Impact Fund Long Range Financial Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Beginning Unrestricted Fund Balance	1,878,422	1,938,324	2,420,644	2,420,644	927,051	1,731,107	1,628,867	540,880	1,288,835
Revenues									
Assessments	422,742	854,160	697,751	584,413	774,179	863,138	879,436	737,137	-
Interest Earnings	27,508	41,607	25,423	25,423	29,876	34,622	32,577	10,818	25,777
Grant Revenue	-	248,214	-	-	-	-	-	-	-
Total Revenues	450,250	1,143,981	723,173	609,836	804,055	897,760	912,013	747,955	25,777
CT	-	-	-	-	-	-	-	-	-
Total Available Funds	450,250	1,143,981	723,173	609,836	804,055	897,760	912,013	747,955	25,777
Expenditures									
Capital	390,347	661,661	2,103,429	2,103,429	-	1,000,000	2,000,000	-	-
Total Expenditures	390,347	661,661	2,103,429	2,103,429	-	1,000,000	2,000,000	-	-
Excess Revenue Over (Under) Expenditures	59,902	482,320	(1,380,256)	(1,493,593)	804,055	(102,240)	(1,087,987)	747,955	25,777
Unreserved Ending Fund Balance	1,938,324	2,420,644	1,040,389	927,051	1,731,107	1,628,867	540,880	1,288,835	1,314,611
CT	1,938,324	2,420,644							
Reserved Cash	40,796	40,796	40,796	40,796	40,796	40,796	40,796	40,796	40,796

2018-2025 Capital Improvement Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
35th Ave. Widening - 37th St. to Prairie View (4 lanes)	72,724	634,276	-	-	-	-	-	-	-
34th St & 35th Ave- Traffic Signal	-	27,385	347,615	347,615	-	-	-	-	-
Two Rivers Intersection improvement with traffic signal	-	-	375,000	375,000	-	-	-	-	-
23rd Ave Extension to 42nd St (2 lane)	-	-	300,000	300,000	-	-	-	-	-
47th Avenue Widening	-	-	1,000,000	1,000,000	-	-	-	-	-
65th Ave Widening - Design & ROW	317,623	-	80,814	80,814	-	-	-	-	-
37th St. Widening - 35th to Stampede	-	-	-	-	-	1,000,000	-	-	-
37th St. Widening - Stampede to Sienna	-	-	-	-	-	-	1,000,000	-	-
37th St. Widening - Sienna to 47th (inc roundabout and 47th)	-	-	-	-	-	-	1,000,000	-	-
Street Impact Fund Total	**390,347**	**661,661**	**2,103,429**	**2,103,429**	**-**	**1,000,000**	**2,000,000**	**-**	**-**
*Capital is budgeted at 90% of prior year ending unrestricted fund balance, excluding grant funded projects	1,690,580	1,491,479	2,178,580	2,178,580	936,350	1,557,996	1,465,980	486,792	1,159,951

City of Evans Capital Projects- Food Tax Fund

	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Beginning Fund Balance	-	620,377	620,377	737,812	1,596,996	3,083,625	129,080	1,645,120
Revenues								
Sales Tax Revenue	946,398	1,060,900	1,319,446	1,385,419	1,454,689	1,483,783	1,513,458	1,543,728
Interest Earnings	2,968	7,000	7,000	23,766	31,940	61,673	2,582	32,902
Total Revenues	949,366	1,067,900	1,326,446	1,409,185	1,486,629	1,545,455	1,516,040	1,576,630
CT	-	-	-	-	-	-	-	-
Total Available Funds	949,366	1,067,900	1,326,446	1,409,185	1,486,629	1,545,455	1,516,040	1,576,630
Expenditures								
Capital	328,988	1,021,012	1,209,012	550,000	-	4,500,000	-	-
Total Expenditures	328,988	1,021,012	1,209,012	550,000	-	4,500,000	-	-
Excess Revenue Over (Under) Expenditures	620,377	46,888	117,434	859,185	1,486,629	(2,954,545)	1,516,040	1,576,630
Ending Fund Balance	620,377	667,266	737,812	1,596,996	3,083,625	129,080	1,645,120	3,221,750
CT	620,377							

2019-2025 Capital Improvement Plan

	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
CR 396 Bridge- design and construction	18,191	481,809	101,809	-	-	-	-	-
31st St & Hwy 85 access control- right of way acquisition	310,798	39,202	39,202	-	-	-	-	-
47th Avenue widening	-	500,000	500,000	-	-	-	-	-
37th Street Overlay	-	-	568,000	-	-	-	-	-
City Complex parking lot design and construction	-	-	-	550,000	-	-	-	-
City Complex East side landscaping	-	-	-		-	-	-	-
37th St. Widening - Sienna to 47th (inc roundabout and 47th)	-	-	-	-	-	1,500,000	-	-
23rd Avenue Arterial Completion	-	-	-	-	-	3,000,000	-	-
Capital Projects - Food Tax Fund Total	**328,988**	**1,021,012**	**1,209,012**	**550,000**	**-**	**4,500,000**	**-**	**-**

City of Evans Capital Projects- Road Tax Fund

	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Beginning Fund Balance	-	-	1,136,313	2,336,030	2,150,298	1,131,202	2,473,082
Revenues							
Sales Tax Revenue	-	1,136,313	2,351,991	2,517,547	2,567,898	2,619,256	2,671,641
Interest Earnings	-	-	22,726	46,721	43,006	22,624	49,462
Total Revenues	-	1,136,313	2,374,717	2,564,268	2,610,904	2,641,880	2,721,103
CT	-	-	-	-	-	-	-
Transfers In	-	-	-	-	-	-	-
Total Available Funds	-	1,136,313	2,374,717	2,564,268	2,610,904	2,641,880	2,721,103
Expenditures							
Capital	-	-	1,175,000	2,750,000	3,630,000	1,300,000	1,330,000
Total Expenditures	-	-	1,175,000	2,750,000	3,630,000	1,300,000	1,330,000
Excess Revenue Over (Under) Expenditures	-	1,136,313	1,199,717	(185,732)	(1,019,096)	1,341,880	1,391,103
Ending Fund Balance	-	1,136,313	2,336,030	2,150,298	1,131,202	2,473,082	3,864,184
CT							

2020-2025 Capital Improvement Plan

	2020 Budget V2	2020 Projected	2021 Projected	2022 Projected	2023 Projected	2024 Projected	2025 Projected	Future Projects
37th St. Widening - 35th to Stampede	-	-	-	1,500,000	-	-	-	-
37th St. Widening - Stampede to Sienna	-	-	-	-	1,600,000	-	-	-
37th St. Widening - Sienna to 47th (inc roundabout and 47th)	-	-	-	-	750,000	-	-	-
Street Maintenance	-	-	1,175,000	1,250,000	1,280,000	1,300,000	1,330,000	-
65th Ave Design & Widening (37th to 49th)	-	-	-	-	-	-	-	4,060,000
49th Street Design & Widening (CR 396 to 35th Ave)	-	-	-	-	-	-	-	930,000
49th Street Design & Widening (47th Ave to CR 396)	-	-	-	-	-	-	-	3,600,000
49th Street Design & Widening (47th Ave to 65th Ave)	-	-	-	-	-	-	-	6,130,000
Capital Projects - Road Tax Fund Total	**-**	**-**	**1,175,000**	**2,750,000**	**3,630,000**	**1,300,000**	**1,330,000**	**14,720,000**

City of Evans Park Impact Fund Long Range Financial Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Beginning Fund Balance	2,505,896	2,937,347	3,870,044	3,870,044	2,983,150	3,873,901	4,344,132	5,239,399	5,507,564
Revenues									
Assessments	389,733	871,153	483,797	402,592	977,489	892,753	908,385	763,377	-
Interest Earnings	41,718	61,543	59,251	59,251	88,262	77,478	86,883	104,788	110,151
Dedications	-	126,789	-	-	-	-	-	-	-
Total Revenues	431,451	1,059,486	543,048	461,843	1,065,751	970,231	995,268	868,165	110,151
CT	-	-	-	-	-	-	-	-	-
Total Available Funds	431,451	1,059,486	543,048	461,843	1,065,751	970,231	995,268	868,165	110,151
Expenditures									
Capital	-	-	1,353,737	1,348,737	175,000	500,000	100,000	600,000	650,000
Total Expenditures	-	-	1,353,737	1,348,737	175,000	500,000	100,000	600,000	650,000
Excess Revenue Over (Under) Expenditures	431,451	1,059,486	(810,689)	(886,894)	890,751	470,231	895,268	268,165	(539,849)
Unreserved Ending Fund Balance	2,937,347	3,870,044	3,059,355	2,983,150	3,873,901	4,344,132	5,239,399	5,507,564	4,967,716
CT	2,937,347	3,870,044							
Reserved Cash		126,789	126,789	126,789	126,789	126,789	126,789	126,789	126,789

2018-2025 Capital Improvement Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Projected	2022 Projected	2023 Projected	2024 Projected	2025 Projected	Future Projects
Tract O land acquisition	-	-	133,737	133,737	-	-	-	-	-	
Arrowhead Open Space Land acquisition	-	-	1,220,000	1,205,000	-	-	-	-	-	
Vineyard Park Out Lot completion	-	-	-	10,000	-	-	-	-	-	
DaVinci Park design and construction	-	-	-	-	175,000	-		-	-	
23 acres west of Prairie Heights Middle School (vision/design, & const)	-	-	-	-	-	-	100,000	400,000	-	
Hunters Reserve North Park design & construction	-	-	-	-	-	-	-	100,000	250,000	
North Point Park design & construction	-	-	-	-	-	-	-	100,000	400,000	
West Evans Gateway Park design & construction	-	-	-	-	-	500,000	-	-	-	5,000,000
Park Impact Fund Total	**-**	**-**	**1,353,737**	**1,348,737**	**175,000**	**500,000**	**100,000**	**600,000**	**650,000**	**5,000,000**
*Capital is budgeted at 90% of prior year ending fund balance	2,255,307	2,643,613	3,483,039	3,483,039	2,753,419	3,486,511	3,909,719	4,715,460	4,956,808	

City of Evans Conservation Trust Fund Long Range Financial Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Beginning Fund Balance	729,815	262,141	468,353	468,353	449,630	206,581	8,901	21,961	110,645
Revenues									
Intergovernmental	204,750	240,275	204,500	204,500	206,500	208,500	210,500	212,500	214,500
Interest Earnings/Misc Revenue	8,622	6,426	6,776	6,776	4,496	4,132	178	439	2,213
Total Revenues	213,372	246,701	211,276	211,276	210,996	212,632	210,678	212,939	216,713
CT	213,372	246,701	211,276	211,276	210,996	212,632	210,678	212,939	216,713
Total Available Funds	213,372	246,701	211,276	211,276	210,996	212,632	210,678	212,939	216,713
Expenditures									
Supplies & Services	243,591	15,511	20,000	20,000	179,045	185,312	172,618	99,255	-
Capital	437,455	24,978	210,000	210,000	275,000	225,000	25,000	25,000	200,000
Total Expenditures	681,046	40,489	230,000	230,000	454,045	410,312	197,618	124,255	200,000
Excess Revenue Over (Under) Expenditures	(467,674)	206,212	(18,724)	(18,724)	(243,049)	(197,680)	13,060	88,684	16,713
Ending Fund Balance	262,141	468,353	449,630	449,630	206,581	8,901	21,961	110,645	127,358
CT	262,141	468,353							

2018-2025 Capital Improvement Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Projected	2022 Projected	2023 Projected	2024 Projected	2025 Projected	Future Projects
Village Park Tennis Court & Prairie View Basketball Court Resurface		24,978	120,000	120,000	-	-	-	-	-	-
Redevelopment of prior pool site park	402,515	-	-	-	-	-	-	-	-	-
Playground equipment & safe surface	34,940	-	-	-	-	-	-	-	-	-
Driftwood Park playground replacement	-	-	90,000	90,000	-	-	-	-	-	-
37th Street Parkway (Harbor Ln to Mountain View Dr) landscape design & const.	-	-	-	-	250,000	-	-	-	-	-
Evans Ditch Trail Design and ROW acquisition	-	-	-	-	-	200,000	-	-	-	-
Denver Street Playground replacement	-	-	-	-	-	-	-	-	175,000	-
Prairie View Skate Park design & construction	-	-	-	-	-	-	-	-	-	250,000
29th Avenue Parkway (42nd St to 32nd St) design & const	-	-	-	-	-	-	-	-	-	200,000
Mountain View Dr (west side of 37th St to Swallow Court) design & const	-	-	-	-	-	-	-	-	-	75,000
Anchor Drive Parkway (both sides, Harbor Ln to 29th Ave) design & const	-	-	-	-	-	-	-	-	-	200,000
East side of Freedom Park (dog park), design & const	-	-	-	-	-	-	-	-	-	235,000
35th Avenue- 3440 35th St (irrigation and turf)	-	-	-	-	-	-	-	-	-	20,000
Tri-Point- 2930 11th Ave- design & const	-	-	-	-	-	-	-	-	-	180,000
Railroad Park- 3901 Denver Street- design & const	-	-	-	-	-	-	-	-	-	50,000
Community Garde- 3753 Central Street- design & const	-	-	-	-	-	-	-	-	-	95,000
Annual Playground Surface Repairs	-	-	-	-	25,000	25,000	25,000	25,000	25,000	-
Conservation Trust Fund Total	**437,455**	**24,978**	**210,000**	**210,000**	**275,000**	**225,000**	**25,000**	**25,000**	**200,000**	**1,305,000**
* Capital is budgeted at 90% of projected ending fund balance after operations	629,637	443,998	593,667	593,667	433,423	210,511	42,265	122,081	294,622	

City of Evans Water Fund Long Range Financial Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Operating Revenues									
Base Rate (base, np, penalty, misc)	2,243,632	2,877,108	2,207,825	2,282,325	2,554,722	2,603,697	2,652,267	2,700,597	2,753,972
Variable Rate	3,235,135	3,514,921	3,342,540	3,342,540	3,725,817	3,800,333	3,876,340	3,953,866	4,032,944
Interest Income	89,010	132,313	77,844	77,844	11,837	15,097	15,248	15,401	15,554
Total Operating Revenues	5,567,777	6,524,343	5,628,209	5,702,709	6,292,376	6,419,127	6,543,854	6,669,864	6,802,470
Operating Expenses									
Fixed costs	1,599,873	1,256,892	1,607,087	1,367,440	1,591,096	1,618,811	1,647,090	1,519,956	1,549,401
Variable costs (water treatment)	3,242,718	3,485,407	3,402,539	3,402,539	3,725,811	3,806,617	3,882,749	3,960,404	4,039,612
Total Operating Expenses	4,842,592	4,742,299	5,009,627	4,769,979	5,316,907	5,425,427	5,529,839	5,480,360	5,589,013
Net Revenues over (under) expenses	**725,185**	**1,782,044**	**618,583**	**932,730**	**975,468**	**993,699**	**1,014,015**	**1,189,504**	**1,213,456**
Transfer for Major Maint (w AMP)	643,759	1,620,216	680,738	680,738	963,626	984,886	1,005,176	1,180,641	1,204,570
Transfer for Water Conservation	(7,584)	-	-	-	-	(6,280)	(6,400)	(6,530)	(6,660)
Net Operations after Transfers	89,010	161,828	(62,155)	251,993	11,843	15,094	15,239	15,393	15,546
Running Cash Balance	1,084,061	1,245,889	1,183,734	1,497,881	1,509,724	1,524,817	1,540,056	1,555,449	1,570,995
Target Operating Reserve - 3 months	**1,051,604**	**780,521**	**1,082,222**	**1,022,310**	**1,088,320**	**1,111,705**	**1,132,766**	**1,076,562**	**1,097,776**
Available Funds	32,456	465,368	101,511	475,571	421,404	413,112	407,290	478,887	473,219
Water Rights Revenues									
Payment in Lieu & Water Rights Lease	24,749	83,185	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Water Rights Expenses									
Water Right Acquisition	-	-	-	-	-	-	-	-	-
Annual Net	24,749	83,185	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Running Balance	(59,428)	23,756	43,756	43,756	63,756	83,756	103,756	123,756	143,756
System Maintenance & Expansion Revenue									
Tap Fee Revenue	790,173	1,552,089	1,323,170	634,475	995,457	1,238,573	1,029,281	695,412	500,000
Water Meter Sales	42,433	57,789	77,000	58,280	56,610	78,255	70,263	44,955	45,455
Grant Revenue		-	-	-					
Interest Income/ Other Revenue	-	-	56,735	56,735	31,865	-	-	-	-
Transfer for Major Maint (w AMP)	643,759	1,620,216	680,738	680,738	963,626	984,886	1,005,176	1,180,641	1,204,570
Transfer for Water Conservation	(7,584)	-	-	-	-	(6,280)	(6,400)	(6,530)	(6,660)
Total System Expansion Revenue	1,468,780	3,230,093	2,137,642	1,430,227	2,047,558	2,295,434	2,098,320	1,914,478	1,743,365
System Maintenance & Expansion Expenses									
Capital Outlay	542,761	2,888,065	3,651,041	4,214,395	784,000	811,000	650,000	2,250,750	1,210,000
Major Maintenance & AMP	86,482	52,856	680,738	680,738	963,626	984,886	1,005,176	1,180,641	1,204,570
Water Conservation Projects	-	-	-	-	-	(6,280)	(6,400)	(6,530)	(6,660)
Misc Expenses	9,843	14,730	54,087	54,087	54,925	56,048	57,199	58,379	59,589
Total Expenses	639,086	2,955,651	4,385,866	4,949,220	1,802,551	1,845,654	1,705,975	3,483,240	2,467,499
Annual Net	829,694	274,442	(2,248,224)	(3,518,993)	245,007	449,780	392,345	(1,568,762)	(724,134)
Running Balance	5,943,723	5,434,722	3,186,498	1,915,729	2,160,736	2,610,517	3,002,861	1,434,099	709,966
Total Water Fund Revenue	6,425,132	8,217,405	7,105,113	6,472,199	7,396,308	7,755,955	7,663,398	7,430,231	7,367,925
Total Water Fund Expenses	5,481,678	7,697,950	9,395,493	9,719,199	7,119,458	7,271,081	7,235,815	8,963,600	8,056,512
CT	-	-	-	-	-	-	-	-	-
Changes in Working Capital	244,123	(783,443)	-	-	-	-	-	-	-
Total Water Fund Cash Balance	**6,968,355**	**6,704,367**	**4,413,988**	**3,457,367**	**3,734,217**	**4,219,090**	**4,646,674**	**3,113,304**	**2,424,717**
	6,968,355	6,704,367							
Fund Balance Reserve Breakout									
Operating Reserve	1,051,604	780,521	1,082,222	1,022,310	1,088,320	1,111,705	1,132,766	1,076,562	1,097,776
Greeley System Expansion	800,000	1,312,189	1,748,835	1,748,835	2,077,336	2,486,065	2,825,728	3,055,214	3,220,214
Available Fund Balance	5,116,750	4,611,657	1,582,930	686,221	568,560	621,319	688,180	(1,018,472)	(1,893,273)

Water Fund

Expense Summary

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Operating Revenues									
Base Rate (base, np, penalty, misc)	$2,243,632	$2,877,108	$2,207,825	$2,282,325	$2,554,722	$2,603,697	$2,652,267	$2,700,597	$2,753,972
	$19.00	$19.50	$21.00	$21.00	$20.50	$21.00	$21.50	$21.50	$21.50
Base Major Maintenance Calculator									
Administrative GF OH	712,961	464,695	563,984	563,984	555,267	563,596	572,050	580,631	589,340
Water Fund Payroll, Supplies & Services	730,921	636,206	887,113	647,465	879,838	899,224	919,049	939,325	960,061
AMP	27,711	5,576	-	-	-	-	-	-	-
Debt - CWPA 2013 Radio Loan	155,991	155,991	155,991	155,991	155,991	155,991	155,991	-	-
Major Maintenance Projection	616,047	1,614,640	600,738	914,885	963,626	984,886	1,005,176	1,180,641	1,204,570
Total Base Rate	**2,243,632**	**$2,877,108**	**2,207,825**	**2,282,325**	**$2,554,722**	**$2,603,697**	**$2,652,267**	**$2,700,597**	**$2,753,972**
Major Maintenance and AMP in Fixed Costs									
Asset Management Plan	-	-	-	-	-	-	-	-	-
Major Maintenance Projects:	529,565	1,561,784	550,738	550,738	913,626	934,886	955,176	1,130,641	1,154,570
Equipment	-	-	80,000	80,000	-	-	-	-	-
Line Work	58,771	47,280	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Asset Management Plan	27,711	5,576	-	-	-	-	-	-	-
Total In Fixed Costs	616,047	1,614,640	680,738	680,738	963,626	984,886	1,005,176	1,180,641	1,204,570

Capital Expenditures - System Expansion Tap Fee Revenue

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected	Future Projects
NISP Water Storage Project	320,000	1,160,000	400,000	400,000	534,000	561,000	450,000	1,050,750	-	23,137,500
System Expansion Fee Contingency	-	-	436,646	-	-	-	-	-	-	3,220,214
Whitney Way - Crossing 37th St	-		-	-	-	-	-	-	-	30,000
West Service Rd. - 31st St. to 35th St.	-		-	-	-	-	-	-	-	400,000
Brantner Rd & Ind Pkwy 43rd to 44th St	-		-	-	-	-	-	-	-	670,000
Tuscany Non-Potable Irrigation System	-	257,187	504,076	504,076	-	-	-	-	-	-
17th Avenue Replacement (37th St to North CL)	-	20,829	804,171	804,171	-	-	-	-	-	-
37th Street Improvements	77,538	1,310,280	231,382	231,382	-	-	-	-	-	-
Evans Ditch Measurement Structure Upgrades	-		200,000	200,000	-	-	-	-	-	-
Grapevine Hollow Non-Potable Backflow	-	19,820	-	-	-	-	-	-	-	-
North Point Non-Potable Backflow	-	-	35,000	35,000	-	-	-	-	-	-
Irrigation Controller Replacement	-	99,190	50,000	50,000	-	-	-	-	-	-
Evans Ditch Condition Survey & Video	63,182	20,760	161,808	161,808	-	-	-	-	-	-
Backhoe replacement	82,040	-	-	-	-	-	-	-	-	-
South Evans Utility Feasability Study	-	-	50,000	50,000	-	-	-	-	-	-
Central Weld Water Feasability Study	-	-	50,000	50,000	-	-	-	-	-	-
Water Demand Analysis	-	-	50,000	50,000	-	-	-	-	-	-
Willowbrook Non-Potable System	-	-	500,000	1,500,000	-	-	-	-	-	-
Water System Oversizing for future needs	-	-	177,958	177,958	-	-	-	-	-	-
West Service Road (37th to 39th)	-	-	-	-	-	-	200,000	-	-	-
37th Street Under Highway 85	-	-	-	-	-	-	-	250,000	-	-
39th Street Under Highway 85	-	-	-	-	-	-	-	250,000	-	-
Pawnee & Kiowa Valve	-	-	-	-	-	-	-	-	40,000	-
Cheyenne Drive from Kiowa to Pawnee	-	-	-	-	-	-	-	-	230,000	-
Water line replacements design	-	-	-	-	250,000	250,000	-	-	-	-
17th Avenue Replacement (42nd Street to 37th St)	-	-	-	-	-	-	-	-	-	1,200,000
42nd Street (35th to Eagles Nest Drive)	-	-	-	-	-	-	-	-	-	560,000
Central Street (37th St to 42nd St)	-	-	-	-	-	-	-	-	-	710,000
Glendale Drive (St Farm Rd to St Farm Rd)	-	-	-	-	-	-	-	-	-	490,000
23rd Ave - 37th to 42nd St.	-	-	-	-	-	-	-	-	-	390,000
35th St - Empire to Trinidad	-	-	-	-	-	-	-	-	-	200,000
34th St. - 23rd Ave. to 17th Ave	-	-	-	-	-	-	-	-	-	1,017,000
US 85 WSR (35th St to 31st St), 8th Ave, Southgate North	-	-	-	-	-	-	-	-	-	785,000
36th St. - 11th Ave. to Idaho	-	-	-	-	-	-	-	-	-	100,000
37th St. - 17th Ave. to Latham	-	-	-	-	-	-	-	-	-	45,000
37th St. - 23rd Ave. to 17th Ave.	-	-	-	-	-	-	-	-	-	580,000
Boulder St - 36th St. to 37th St.	-	-	-	-	-	-	-	-	-	65,000
Denver St. - 36th St. to State St.	-	-	-	-	-	-	-	-	-	120,000
Denver St. - 39th St. to 40th St.	-	-	-	-	-	-	-	-	-	65,000
Empire St. - 33rd St to 35th St.	-	-	-	-	-	-	-	-	-	117,000
Larson Ave. - 41st. St. to 42nd St.	-	-	-	-	-	-	-	-	-	90,000
Montrose St. - 34th St. to 37th St.	-	-	-	-	-	-	-	-	-	170,000
Pleasant Acres Dr. - 32nd St. to 11th Ave.	-	-	-	-	-	-	-	-	-	260,000
Southgate Dr. - Denver to 31st St.	-	-	-	-	-	-	-	-	-	230,000

State St. - 33rd St. to 35th St.	-	-	-	-	-	-	-	-	-	80,000
North-South Split Adjustment Structure	-	-	-	-	-	-	-	-	-	75,000
31st St. & Empire Measurement Facility	-	-	-	-	-	-	-	-	-	30,000
17th Ave. Sediment Removal Basin	-	-	-	-	-	-	-	-	-	10,000
37th St Sediment Removal Basin	-	-	-	-	-	-	-	-	-	10,000
Central Ave. Pipe - 40th St to 39th St.	-	-	-	-	-	-	-	-	-	20,000
Idaho St. Pipe - 42nd St. to 40th St.	-	-	-	-	-	-	-	-	-	25,000
Golden St. Pipe - 40th St. to 37th St	-	-	-	-	-	-	-	-	-	25,000
37th St. to 11th Ave. Lining	-	-	-	-	-	-	-	-	-	75,000
11th Ave. to 36th St. Lining	-	-	-	-	-	-	-	-	-	75,000
17th Ave. to 42nd St. Lining	-	-	-	-	-	-	-	-	-	75,000
Evans WWTF Lining	-	-	-	-	-	-	-	-	-	125,000
SCADA- Various locations	-	-	-	-	-	-	-	-	-	219,000
Dos Rios & Chappelow Schools	-	-	-	-	-	-	-	700,000	-	150,000
State Farm Road (Glendale Dr to State Farm Rd)	-	-	-	-	-	-	-	-	300,000	200,000
Sunset Dr- 30th St to 31st St	-	-	-	-	-	-	-	-	-	290,000
35th St Pipe- Empire to Trinidad	-	-	-	-	-	-	-	-	-	30,000
Non-Potable/ ditch maintenance	-	-	-	-	-	-	-	-	-	450,000
36th St (11th Ave to Idaho St), Denver St, Boulder St, Idaho St.	-	-	-	-	-	-	-	-	-	512,000
Empire St (35th St to 32nd St), 35th St, State St	-	-	-	-	-	-	-	-	-	691,000
Crescent Cove Apartments	-	-	-	-	-	-	-	-	-	153,000
Rosedale/Pleasant Acres Drive	-	-	-	-	-	-	-	-	640,000	430,000
Montrose St.	-	-	-	-	-	-	-	-	-	340,000
Total in CIP from Tap Fee revenue	542,761	2,888,065	3,651,041	4,214,395	784,000	811,000	650,000	2,250,750	1,210,000	38,741,714
Total Capital (includes water rights)	**1,131,097**	**4,497,130**	**4,331,779**	**4,895,133**	**1,747,626**	**1,795,886**	**1,655,176**	**3,431,391**	**2,414,570**	

City of Evans Waste Water Fund Long Range Financial Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Operating Revenues									
Sewer Sales	2,824,555	1,812,256	1,595,266	1,545,266	1,643,138	1,687,303	1,721,049	1,755,470	1,790,580
Other	43,835	142,555	41,961	52,199	25,452	28,827	29,112	28,180	27,086
Total Operating Revenues	2,868,390	1,954,811	1,637,227	1,597,465	1,668,589	1,716,130	1,750,161	1,783,651	1,817,666
CT	2,868,390	1,954,811	1,637,227	1,597,465	1,668,589	1,716,130	1,750,161	1,783,651	1,817,666
Operating Expenses									
Personnel	574,998	601,555	686,775	686,775	708,889	731,715	755,276	779,596	804,699
Operations	381,681	390,806	623,476	574,829	574,829	591,424	609,167	627,442	646,265
Debt -1998	106,465	-	-	-	-	-	-	-	-
Transfer for Overhead to General Fund	466,998	347,987	425,744	425,744	464,821	471,793	478,870	486,053	500,634
Total Operating Expenses	1,530,142	1,340,348	1,735,995	1,687,348	1,748,539	1,794,932	1,843,313	1,893,091	1,951,599
Net Revenues over (under) expenses	**1,338,248**	**614,464**	**(98,768)**	**(89,883)**	**(79,949)**	**(78,802)**	**(93,152)**	**(109,440)**	**(133,933)**
Running Cash Balance	**2,029,457**	**2,643,920**	**2,545,152**	**2,520,047**	**2,465,203**	**2,386,401**	**2,293,249**	**2,183,809**	**2,049,876**
Target Operating Reserve - 3 months	**382,536**	**335,087**	**433,999**	**421,837**	**437,135**	**448,733**	**460,828**	**473,273**	**487,900**
Available Funds	**1,646,921**	**2,308,833**	**2,111,153**	**2,098,210**	**2,028,068**	**1,937,668**	**1,832,421**	**1,710,536**	**1,561,976**
Major Maintenance Revenues									
Revenue	1,500,000	3,200,000	2,329,000	2,329,000	2,344,000	2,413,000	2,461,260	2,510,485	2,585,800
Loan Proceeds	9,649,526	-	203,907	-	-	-	-	-	-
Grant - Disaster Related	31,857	199,952	-	-	-	-	-	-	-
Total System Maintenance Revenues	11,181,383	3,399,952	2,532,907	2,329,000	2,376,130	2,413,000	2,461,260	2,510,485	2,585,800
Major Maintenance Expenses									
Asset Management	18,000	18,092	140,000	140,000	-	-	-	-	-
Capital Outlay - Major Maintenance	6,117,840	907,269	1,464,996	1,464,996	3,200,000	1,100,000	1,150,000	1,300,000	1,250,000
Debt	544,494	2,418,112	1,812,464	1,812,464	1,813,129	1,812,912	1,812,543	1,813,015	1,814,172
Total System Maintenance Expenses	6,680,334	3,343,473	3,417,460	3,417,460	5,013,129	2,912,912	2,962,543	3,113,015	3,064,172
Annual Net	4,501,049	56,478	(884,553)	(1,088,460)	(2,636,999)	(499,912)	(501,283)	(602,530)	(478,373)
Running Cash Balance	**4,041,044**	**4,097,522**	**3,212,969**	**2,945,599**	**575,970**	**76,058**	**(425,225)**	**(1,027,755)**	**(1,506,128)**
System Expansion Revenues									
Grant Revenue	-	263,446	-	-	-	-	-	-	-
Rate Revenue	-	-	604,155	604,155	604,376	604,304	604,181	604,338	604,724
System Development Fees	488,711	2,088,919	1,144,534	1,144,534	639,291	761,527	628,215	456,688	456,688
Interest	40,044	-	16,772	16,772	63,410	70,437	78,757	85,827	91,252
Loan Proceeds	3,216,509	9,794	-	-	-	-	-	-	-
Total System Expansion Revenues	3,745,264	2,362,159	1,765,460	1,765,460	1,307,078	1,436,268	1,311,153	1,146,853	1,152,664
System Expansion Expenses									
Capital Outlay	2,022,612	196,789	1,020,991	1,020,991	-	-	-	-	-

Debt	181,498	-	604,376	604,304	604,376	604,304	604,181	604,338	604,724
Total System Maintenance Expenses	2,204,110	196,789	1,625,367	1,625,295	604,376	604,304	604,181	604,338	604,724
Annual Net	1,541,154	2,165,370	140,093	140,165	702,701	831,964	706,972	542,515	547,940
Running Cash Balance	**4,035,568**	**6,200,938**	**6,341,031**	**6,755,409**	**7,043,732**	**7,875,696**	**8,582,668**	**9,125,183**	**9,673,123**
Total Waste Water Fund Revenue	17,795,037	7,716,922	5,935,594	5,691,925	5,351,797	5,565,398	5,522,574	5,440,989	5,556,129
Total Waste Water Fund Expenses	10,414,587	4,880,610	6,778,823	6,730,103	7,366,044	5,312,148	5,410,037	5,610,444	5,620,495
Changes in Working Capital	(4,740,589)	(153,163)	-	-	-	-	-	-	-
Ending Cash	7,294,156	9,977,305	9,134,077	9,255,979	7,119,829	7,373,080	7,485,617	7,316,161	7,251,796
CT	7,294,156	9,977,305							
Committed Fund Balance (Plant replacement)	300,000	700,000	1,200,000	1,200,000	1,750,000	2,400,000	3,050,000	3,700,000	4,350,000

2018-2025 Capital Improvement Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Projected	2022 Projected	2023 Projected	2024 Projected	2025 Projected	Future Projects
Combined Plant Design & Construction	8,090,448	9,794	-	-	-	-	-	-	-	-
Utility Billing Software	1,758	-	-	-	-	-	-	-	-	-
Annual Sewer Line Maintenance	6,035	245,082	334,918	334,918	100,000	100,000	100,000	100,000	100,000	1,650,000
WW Collection line replacements:		-								
40th and Pueblo St	-	-	-	-	-	-	-	-	-	1,502,001
43rd Street	-	-	-	-	-	-	-	-	-	2,080,000
37th St (17th Ave to Valmont St)	31,271	662,187	285,414	285,414	-	-	-	-	-	-
37th St (Boulder St to Riverside Pkwy)	-	-	-	-	-	-	-	100,000	-	1,679,000
49th Street	-	-	-	-	-	-	-	-	-	4,054,000
State St (MH 100 north to Stampede Truck Stop)	-	-	-	-	-	-	-	-	-	850,200
Waste Water System Oversizing for future needs	-	-	93,740	93,740	-	-	-	-	-	-
Backhoe replacement	10,939	-	-	-	-	-	-	-	-	-
Solids handling and dewatering	-	99,076	400,924	400,924	300,000	350,000	400,000	450,000	500,000	-
South Evans utility feasability - Study	-	-	50,000	50,000	-	-	-	-	-	-
Decommissioning of prior WW Plant site	-	-	303,907	303,907	1,000,000	-	-	-	-	-
Ashcroft Draw Sewerline Realignment - Survey and Design	-	87,919	120,084	120,084	-	-	-	-	-	-
Vapex Ozone odor control system	-	-	350,000	350,000	-	-	-	-	-	-
11th Ave sewerline upsize- Design	-	-	47,000	47,000	-	-	-	-	-	-
Lift Station and Emergency Overflow	-	-	-	-	1,250,000	-	-	-	-	-
Treatment plant expansion	-	-	-	-	-	-	-	-	-	35,000,000
Plant Structure Maint/replacement planning	-	-	250,000	250,000	275,000	325,000	325,000	325,000	325,000	773,834
Plant Equipment Maint/replacement planning	-	-	250,000	250,000	275,000	325,000	325,000	325,000	325,000	838,324
Waste Water Fund Total	**8,140,452**	**1,104,058**	**2,485,987**	**2,485,987**	**3,200,000**	**1,100,000**	**1,150,000**	**1,300,000**	**1,250,000**	**48,427,359**

City of Evans Storm Drainage Fund Long Range Financial Plan

	2018 Actual	2019 Actual	2020 Budget V2	2020 Projected	2021 Budget	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Beginning Cash	1,164,530	1,438,230	2,373,790	2,373,790	9,878,139	1,023,236	835,360	737,044	475,994
Operating Revenues									
Storm Drainage Fees	473,790	1,100,436	903,027	903,027	930,118	958,022	986,762	1,016,365	1,046,856
Other	18,650	30,960	3,187	3,187	23,738	23,737	23,736	23,735	23,734
Total Operating Revenues	492,440	1,131,395	906,214	906,214	953,856	981,759	1,010,498	1,040,100	1,070,590
CT	492,440	1,131,395	906,214	906,214	953,856	981,759	1,010,498	1,040,100	1,070,590
Operating Expenses									
Storm Personnel	9,799	36,457	235,554	117,777	163,244	168,958	174,871	180,992	187,327
Storm Operations	78,150	99,102	180,850	90,425	184,467	189,079	193,806	198,651	203,617
Total Operating Expenses	87,949	135,559	416,404	208,202	347,711	358,037	368,677	379,643	390,944
Transfer Out - Overhead to GF	(227,944)	(93,791)	(81,535)	(81,535)	(318,330)	(323,104)	(161,552)	(163,976)	(166,435)
Operating Income (Loss) after transfers	176,547	902,046	408,275	616,477	287,815	300,617	480,269	496,482	513,211
Other Income (Expense)									
Plant Inv Fees/Cash in Lieu of Fees	67,376	80,006	85,960	85,960	66,330	60,555	65,463	51,516	51,516
Capital Outlay	(32,430)	(500,592)	(2,642,205)	(1,249,040)	(8,660,000)	-	(95,000)	(260,000)	-
Debt Issuance Income	-	-	6,750,000	8,600,000	-	-	-	-	-
Debt Payment	-	-	(432,000)	(549,048)	(549,048)	(549,048)	(549,048)	(549,048)	(549,048)
Changes in Working Capital	62,206	454,101	-	-	-	-	-	-	-
Increase (Decrease) in Cash	273,700	935,561	4,170,029	7,504,349	(8,854,903)	(187,876)	(98,316)	(261,050)	15,679
Ending Cash	1,438,230	2,373,790	6,543,819	9,878,139	1,023,236	835,360	737,044	475,994	491,673
CT	1,438,230	2,373,790							
Target Reserve - 3 months	**21,987**	**33,890**	**104,101**	**52,051**	**86,928**	**89,509**	**92,169**	**94,911**	**97,736**

2018-2025 Capital Improvement Plan	**2018 Actual**	**2019 Actual**	**2020 Budget V2**	**2020 Projected**	**2021 Budget**	**2022 Projected**	**2023 Projected**	**2024 Projected**	**2025 Projected**	**Future Projects**
Vehicle & Equip	-	-	45,000	45,000	-	-	-	-	-	-
Utility Billing Software	52	-	-	-	-	-	-	-	-	-
37th St & Valmont Ave (37th St overlay project)	32,378	444,104	-	-	-	-	-	-	-	-
The Landings Neighborhood Inlets	-	981	174,019	-	-	-	-	-	-	174,019
Ashcroft Channel Improvements	-	55,507	139,899	139,899	-	-	-	-	-	-
37th St Storm Line 11th to Railroad (37th St overlay project	-	-	302,341	302,341	-	-	-	-	-	-
37th St Storm Line Railroad to Boulder	-	-	300,000	-	-	-	-	-	-	300,000
Heritage/ 35th St Storm Alignment Hwy 85 to River	-	-	412,800	412,800	7,418,252	-	-	-	-	-
Ridge at Prairie View 23rd Ave Outfall	-	-	686,146	-	-	-	-	-	-	686,146
Railroad Detention Pond Improvements	-	-	85,000	-	-	-	-	-	-	565,500
Hwy 85 Storm Improvements at St Vrain St	-	-	96,000	-	-	-	95,000	-	-	640,000
39th St French Drains	-	-	52,000	-	-	-	-	-	-	347,000
49th St at Neville's Crossing	-	-	-	-	-	-	-	-		358,000
Hwy 85 Storm Improvements at 31st St	-	-	184,000	184,000	1,181,748	-	-	-	-	-
Non-potable irrigation system at Tuscany subdivision	-	-	165,000	165,000	-	-	-	-	-	-
Industrial Park Stormwater Master Plan	-	-	-	-	60,000	-	-	-	-	-
49th St at 65th Ave	-	-	-	-	-	-	-	-	-	321,000
35th Ave at 49th Street	-	-	-	-	-	-	-	-	-	636,000
Harbor Lane & Anchor Dr, closure	-	-	-	-	-	-	-	-	-	127,000
37th St at 65th Ave	-	-	-	-	-	-	-	-	-	322,000
Outlet Pipe at Carson Ave Property	-	-	-	-	-	-	-	-	-	72,000
Belmont Avenue Storm Improvements at 42nd St	-	-	-	-	-	-	-	-	-	508,000
Trinidad Street Storm Improvements	-	-	-	-		-	-	260,000	-	1,780,000
37th St Pump Station at River	-	-	-	-	-	-	-	-	-	2,482,000
17th Ave Storm Improvements Chappelow to Industrial	-	-	-	-	-	-	-	-	-	3,017,000
Pioneer Park and Fox Crossing Storm Improvements	-	-	-	-	-	-	-	-	-	2,157,000
37th and Valmont to the River	-	-	-	-	-	-	-	-	-	6,087,000
Storm Drainage Total	**32,430**	**500,592**	**2,642,205**	**1,249,040**	**8,660,000**	**-**	**95,000**	**260,000**	**-**	**20,579,665**
* Capital is budgeted at 90% of projected ending fund balance after operations.	1,323,593	2,586,944	2,581,222	2,768,604	9,209,055	1,245,967	1,242,983	1,156,538	936,649	

CITY COUNCIL WORK SESSION REPORT

DATE: **September 1, 2020**

AGENDA ITEM: **Work Session Item #4**

SUBJECT: **COVID-19 Response Update**

NAME & TITLE: James L. Becklenberg, City Manager

ISSUE DESCRIPTION:

The City's response to the COVID-19 virus disaster continues, with continuous Emergency Operations Center (EOC) operations to monitor evolving conditions, coordinate with the Weld County Department of Public Health and Environment, and plan the City's operational response. The structure of the EOC, along with staffing roles, is attached to this report. Response strategies are consistent with the City's Emergency Operations Plan (EOP), which is intended to serve as a high-level guide for all emergencies.

In addition to the broader EOP, staff has developed specific responses to the pandemic conditions presented by COVID-19, which are shown in the attached "Pandemic Response Plan." At the March 17, 2020 staff described the "Operational Response Progression" and noted that at that time, the City was in Phase 3 response. At this time, the City remains in Phase 3, as most City services remain operational, due to capabilities for remote work and social distancing strategies.

At the work session, the City Manager will provide current updates on public health statistics, the business relief programs, and City facility operating impacts.

FINANCIAL SUMMARY:

None

REQUESTING FROM CITY COUNCIL:

Discussion and questions about the City's COVID-19 response

ATTACHMENTS:

- None