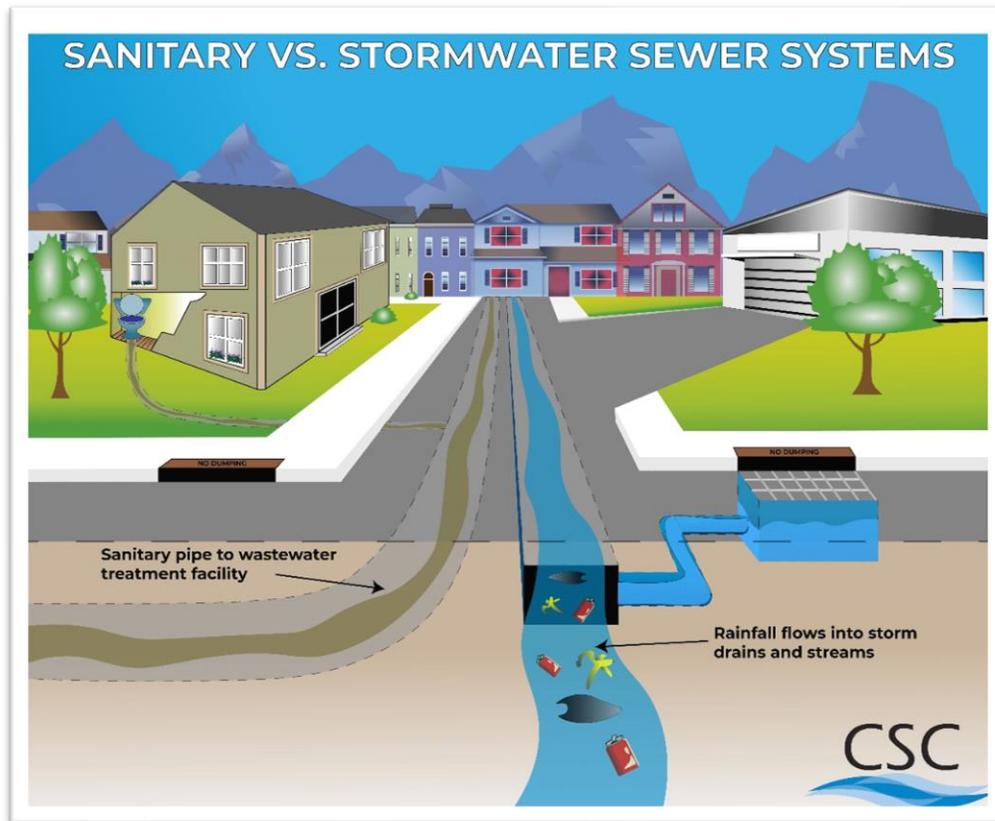


STORMWATER UTILITY 2022 ANNUAL REPORT



WESTMINSTER

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Introduction

The City of Westminster's Stormwater Utility provides a wide range of services to the community to promote sustainability, environmental protection, and regulatory compliance. These include:

- Maintenance of existing city-owned drainage facilities (creek channels, pipes, inlets, manholes),
- Funding for Capital improvements to the city-owned drainage system (creek channels, pipes, inlets, manholes),
- Street sweeping,
- Emergency response to flooding during and after significant storm events,
- Emergency spill response and remediation for hazardous spills,
- Household Hazardous Waste Pick-Up Program,
- Public education and outreach,
- Construction site inspection program,
- Post-construction (detention pond) site inspection program, and
- State MS4 permit compliance.
- Floodplain Administration for compliance with FEMA and Army Corp regulations.

The city's Stormwater Utility is funded from monthly fees charged to residents and businesses. The city's Geographic Information System (GIS) staff determine stormwater fees and maintain an inventory of both impervious surface areas and stormwater infrastructure (i.e., pipes, inlets, ponds, etc.) throughout the city. Residential single-family homes pay a \$6.00 flat fee, which forms the basis for all stormwater fees in the city. Considering the average home in Westminster has 3,100 square feet (sq. ft.) of impervious surface, other residential and commercial properties are billed \$1.94 per 1,000 sq. ft. of impervious surface ($\$6.00 / 3100 = .001935 * 1000 = \1.94). Once these fees are calculated, the city's Utility Billing Division incorporates them into monthly water bills for each customer (residential and commercial). A recent survey of municipalities has placed Westminster in the lower 30th percentile in respect to fees, with Erie being the highest at \$25.00 per month.

These fees are deposited into the city's Storm Drainage Fund. This enterprise fund was created in 2001 to provide resources for the city to maintain the city's storm drainage system and comply with the requirements set forth in the state-administered Municipal Separate Stormwater System (MS4) permit. This permit is federally mandated in accordance with the Clean Water Act of 1972. Since the fund's creation, its use has been expanded to include sustainable operations, infrastructure investment and reinvestment, and activities to protect the city's waterways.

This report highlights the value added to the community through the use of stormwater fees in 2022.

Maintenance by the City and Volunteers

As development increases throughout the city, drainage infrastructure will lose the capacity to handle the amount of water for which it was designed. Sediment, trash, debris, and chemical pollutants are washed into the drainage system, which then accumulates, eventually overwhelming the capacity of inlets, channels, culverts and pipes. This can lead to an increased flood risk, resulting in property damage.



The Stormwater Utility is dedicated to minimizing flood damage to property by ensuring the stormwater system is clear of debris and functioning properly. The Stormwater Utility works closely with other groups in the City, including the Streets Division and Parks, Recreation and Libraries Department, to accomplish this goal:

- Our Streets Division is an integral part of the stormwater program and is responsible for street sweeping. Public streets within City limits are swept quarterly.
- The City's Parks, Recreation and Libraries Department is a vital contributor in the Stormwater Utility's success by managing contracts for open drainage maintenance, inlet cleaning, detention basin maintenance, dog and goose waste control, and waste management throughout the city, totaling approximately \$275,000.

In 2022, the following routine work was completed:

2022 Maintenance			
Division	Maintenance Type	Number of Projects/Miles	Cost
Stormwater Utility	Drainage Maintenance	58	\$399,999
Streets	Street Sweeping	3,800 miles	\$201,883.61

Drainage Maintenance Project - Little Dry Creek at Wolff Run Park



Before



After

Street Sweeping



Last, but certainly not least, the City's Open Space Division and City Volunteers contribute greatly to the success of the Stormwater Utility. The preservation of City open space is extremely important not only for stormwater and floodplain management, but also for aesthetics and overall environmental health. Open space provides pervious areas, which act as natural buffers for stormwater, helping to reduce the volume of water entering our waterways along with providing water quality. Our Open Space Division also provides education and outreach to the residents of Westminster by organizing fantastic events and projects.

The City organizes two waterway cleanup events each year:

- The Great Global Cleanup in April, and
- The Honor the Land and Stream in November.

The 2022 Great Global Cleanup volunteer event drew in approximately 1,100 volunteers each working on average 3 hours for a total of 3,300 hours! The fourth annual 2022 Honor the Land and Stream waterway cleanup event drew in approximately 145 volunteers working an average of 3 hours for a total of 435 hours! If you are interested in signing up for future, please email the City at ggc@cityofwestminster.us and hls@cityofwestminster.us. **We couldn't do it without all of our awesome volunteers!**

Great Global Cleanup



Honor the Land and Streams



City Construction Projects

The City's stormwater engineers are responsible for the construction of several drainage projects every year. Before construction begins, there are multiple steps the City and contractors must take to assure the effectiveness of the project. These procedures include:

- Public Outreach - Gathering input from affected or surrounding property owners during the design process,
- Designing the improvements and preparing plans,
- Acquiring the necessary easements for the proposed work,
- Appropriating funding from the Stormwater Utility along with the Mile-High Flood District (District) (when applicable),
- Advertising and receiving bids from contractors, and
- Notifying adjacent/surrounding property owners of the construction activities.
- Construction of capital improvements.
- Planting trees and vegetation and maintaining through establishment.

The Stormwater Utility often partners with the District to improve and maintain major drainageways. They provide technical expertise and funds for many of the City's stormwater projects. District funds are derived from a property tax collected throughout the participating metro area communities and counties. The Districts' mill levy was increased in 2018, allowing for expanded support and services. Obtaining District funds for major improvement projects requires the City to match funds. However, maintenance projects and routine maintenance activities do not require matching funds from the city. The City typically receives about \$200,000 in maintenance work paid for by the District each year.

The following projects summarize some work highlights from 2022.

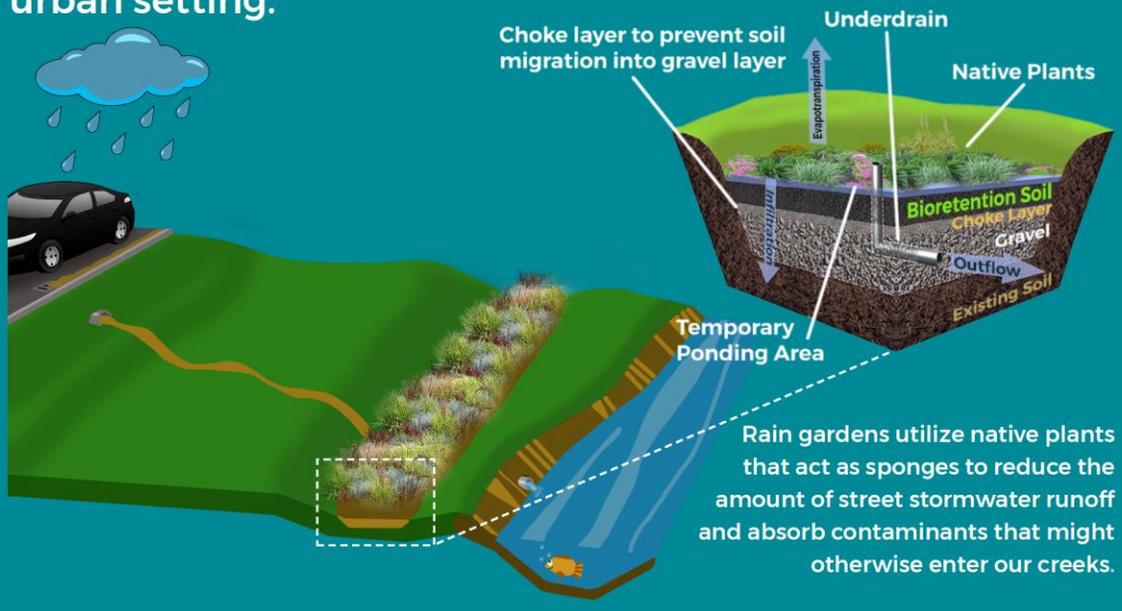
Legacy Ridge Rain Garden

In 2022 the City of Westminster's Stormwater Utility supported the installation of a rain garden at City-owned Legacy Ridge Golf Course. A rain garden's primary purpose is to treat stormwater runoff and remove pollutants (e.g. sediment and grit) before impacting an urban waterway (see diagram below). The rain garden sits near the tee-box on hole #5 and treats and stores runoff from Federal Boulevard before discharging stormwater into the Farmers High Line Canal. This portion of the golf course has historically had drainage issues. The Stormwater Utility teamed up with golf course personnel to come up with a solution and implement the solution concurrently while irrigation system upgrades were being installed.

Low Impact Development (LID) *Rain Garden*

This Low Impact Development (LID) site represents a sustainable land planning, engineering and landscaping approach used to replicate natural watershed processes.

In an effort to keep our waterways healthy, modern utility companies support green infrastructure projects using innovative technology to promote water quality in an urban setting.



Rain gardens utilize native plants that act as sponges to reduce the amount of street stormwater runoff and absorb contaminants that might otherwise enter our creeks.

122nd Avenue and Huron Street Pipe Installation:

In 2022 the City of Westminster's Stormwater Utility funded the installation of a stormwater pipe on the vacant property located at the southwest corner of 122nd Avenue and Huron Street. Prior to the pipe installation, stormwater was conveyed through roadside ditch. The ditch was heavily eroded, which can increase sediment in the stormwater system, and also hindered the City's ability to install sidewalk to increase mobility in this area.



Before: Open Ditch



During: Installation of Pipe

2022 Asset Management Program

The City of Westminster's Stormwater Infrastructure Assessment project continued throughout 2022 to evaluate and, in some cases, find stormwater infrastructure throughout the city. Assessments, such as these, are common for sanitary sewer and drinking water lines but have only recently been applied to stormwater lines in the United States. Westminster is the first community in Colorado to perform this service.

The City owns an estimated \$500,000,000 of storm pipe, inlets, outlets and manholes based on 2022 replacement costs, including \$150,000,000 of pipes, inlets and manholes located within CDOT right-of-way that was legislated to be the City's maintenance and replacement responsibility. Altogether, the City is responsible to repair and/or replace a \$500,000,000 asset consisting of approximately 217 miles of pipe and over 8,000 manholes, inlets and outlets owned and maintained by the City. This does not include privately-owned infrastructure; taking this privately-owned infrastructure into account would add approximately 50% more in cost.

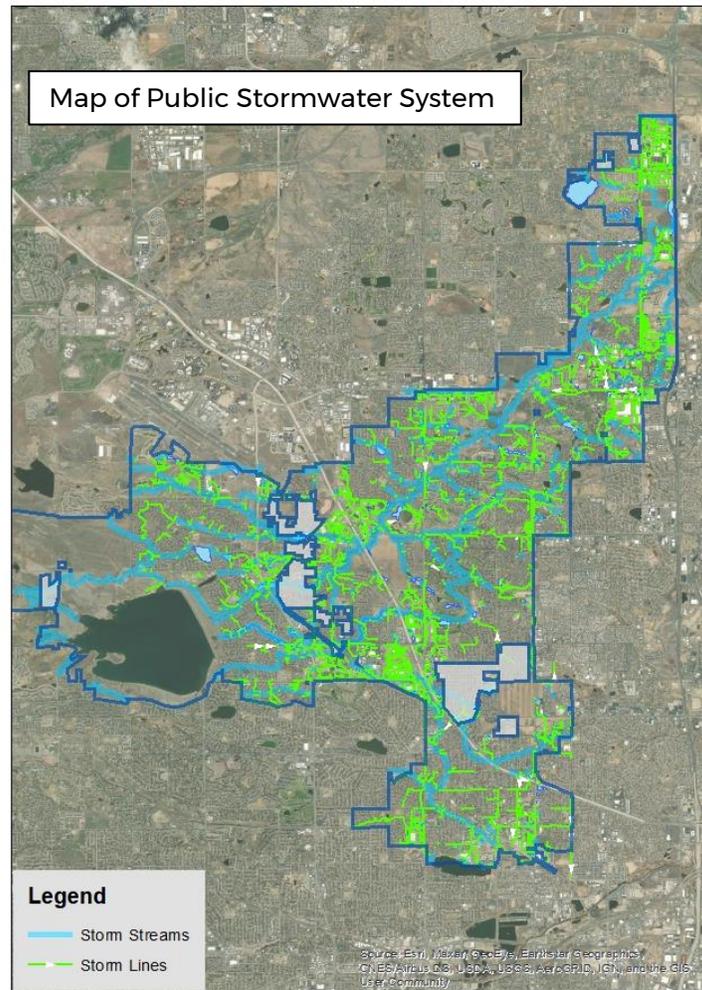


Separated Outfall Pipe



Collapsed Outfall Pipe

The value of the public system is around \$500M and has a 50-year design life. The city implemented national standards for inspection and classifying storm drainage pipes, manholes, inlets and outlets. The City's mapping data has been outdated for several years and, in older sections of Westminster, the pipe alignments were merely a best guess due to lack of records. Locating buried pipes relied heavily on institutional knowledge and, as a result, some pipe damages occurred during construction projects due to inaccurate location marking. Updating this information will reduce these damages in the future and prevent costly repairs.



Over the next few years, the public stormwater drainage system will be fully mapped, inspected and captured on close-circuit television (CCTV) media. This information will be integrated into the City’s existing geographic information system (GIS). The stormwater group will be categorizing the inspection results for criticality and risk to prioritize areas for immediate repairs, minor repairs, pipe lining, maintenance and future monitoring. The project will also recommend a level of service for the stormwater program to address future preventative maintenance of the system.

Household Hazardous Waste Program

In an effort to prevent hazardous wastes from entering the storm system the City of Westminster offers a door-to-door household hazardous waste (HHW) collection program to collect and properly dispose of or recycle HHW directly from single and multifamily residences within the city boundaries. This program is designed for Westminster residential use only with items derived from retail sales to the general public. Items must relate to reasonable activities of a homeowner and resident such as car care, lawn and garden care, pool cleaning, home maintenance, health care,

recreation, and arts and crafts. The program will not accept wastes that derive from commercial activity including home improvement contractors.

Residents have the ability to call and schedule inspections from 6:00 a.m. to 7:00 p.m. Monday through Friday or schedule a collection electronically via website. For more information on this free program, please visit:

<https://www.cityofwestminster.us/Residents/TrashRecycling/Recycling/HouseholdHazardousWaste>



Illicit Discharge Detection and Elimination (IDDE) Program

An illicit discharge is defined as any discharge that is not composed entirely of rainwater or snowmelt. According to the US EPA's 2000 National Water Quality Inventory, 39% of assessed river and stream miles, 46% of assessed lake acres, and 51% of assessed estuarine square miles do not meet water quality standards. The top causes of impairment include siltation, nutrients, bacteria, metals (primarily mercury), and oxygen-depleting substances. Polluted stormwater runoff, including runoff from urban/suburban areas and construction sites, is a leading source of this impairment.

The City maintains an IDDE program that is managed by the Stormwater Utility staff in the Engineering Division. City operations and maintenance staff and construction site inspectors also play an important role in identifying illicit discharge problems and responding to clean-up requests. However, all Public Works, Community Development, Parks, Police, and Fire Department staff across the city, along with the public, play a huge role in locating, identifying and reporting potential illicit discharges. The total discharge reports identified in the table below summarize the total amount of calls/complaints to the city. *Please note that not all reports lead to escalated enforcement, some discharges are not identified upon further investigation and often times a responsible party is not identified.*

2022 Illicit Discharge Program	
Total Illicit Discharge Reports	69
Verbal Warnings/Education	14
Escalated Enforcement	1
Remediation Costs	\$31,968.15

To report an illicit discharge, please contact the Stormwater Hotline at 303-706-3367 or email us at stormwaterhotline@cityofwestminster.us. **Please provide the nature of the discharge, pictures of the discharge (if available) and the responsible party (if applicable).**

Illicit Discharges



WHAT IS AN ILLICIT DISCHARGE?

Any discharge to the storm sewer system that is not composed entirely of stormwater, except discharges that are exempt under Westminster City Code 8-11-8.

WHAT IS THE STORM SEWER SYSTEM?

Systems including pipes, ditches, culverts, swales, curbs, gutters and waterways that convey stormwater downstream.



ARE THESE ILLICIT DISCHARGES REALLY THAT BIG OF A DEAL?

Yes!!! The substances that flow into the storm sewer system are **UNTREATED**, and can seriously damage water quality, having major impacts on aquatic life and public health!

The City can also fine you **\$999** per violation per day!! (W.M.C 8-11-10)

How Do I Report Illicit Discharges and Where Do I Learn More??

Stormwater Hotline:
303-706-3367

City website:
www.cityofwestminster.us/stormwater



Transmission Fluid Spill:



Oil Released in to Curb and Gutter:



Construction Site Inspection Program

To comply with current permit requirements the City's Stormwater Utility started a new citywide construction site inspection program in the fall of 2017. The purpose of the program was to verify that appropriate stormwater control measures were in place and properly maintain at every active construction site to prevent pollution of the City's storm sewers and waterways. Inspections are conducted by city staff and documented in digital reports with photographs. Where deficiencies and city code violations exist, construction site managers are required to respond in writing with a description and photos of their corrective actions.

Well Maintained Stormwater Control Measures:



Poorly Maintained Stormwater Control Measures:



If a pattern of violations exists, city staff will escalate enforcement actions, including stop work orders, notices of violation, and fines. The goal of enforcement is always to educate, ensure compliance and prevent pollution.

2022 Construction Site Inspection Program	
Construction Sites Inspected	29
Total Inspections	576
Notices of Violation	2
Stop Work Orders	1
Fines Issued	1

Stormwater Treatment Facility (STF) Program

STFs are permanently constructed facilities or technologies designed to improve the quality of stormwater from roads, parking lots, residential neighborhoods, commercial areas and industrial sites. In addition, STFs reduce flooding by providing temporary storage during larger storm events. STF's include, but are not limited to, extended detention basins, low impact development technologies, and underground storage systems.



Extended Detention
Basin (EDB)



Bioretention Basin (Low Impact
Development Technology)

The goal of the STF Program is to ensure that STF's are functioning and maintained properly through inspection and providing education and outreach as well as reviewing designs and inspecting all STF's for new development or redevelopment. The City is required to inspect all STF's throughout the city, including those that are municipally owned, equating to roughly 380 facilities. The team works directly with developers, Homeowners Associations (HOA's), private property managers, other City departments and commercial property owners to achieve this goal.

Example City-Owned STF at Westminster Station



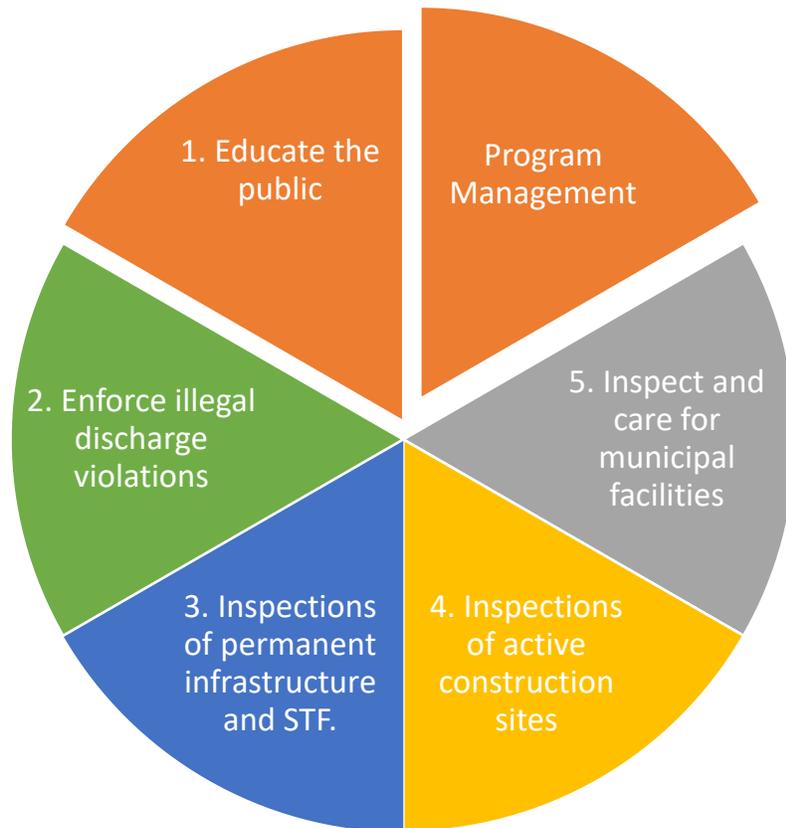
The table below outlines the inspection and follow-up efforts by city staff.

2022 STF Inspection Program	
Developments/Subdivisions	83
Total Inspections	189

State Permit Compliance

A driving factor for all of the accomplishments described in this report is compliance with the state MS4 permit. Polluted stormwater runoff from urbanized areas is commonly transported through storm sewers, and then often discharged, untreated, into local water bodies. Permit requirements are in place to require local jurisdictions, like Westminster, to conform to best practices for engineering design, pollution prevention, public education, and facility operations to reduce the level of pollution in waterways from urban runoff.

Westminster has operated under an MS4 permit since 2003 when they were first issued the permit by the Colorado Department of Public Health and Environment. The city's current permit, effective July 1, 2016, is 63 pages long and describes requirements in five broad categories:



1. **Public Education and Outreach:** Educate residents and members of the business community to help reduce water quality impacts associated with pollutants in stormwater runoff.



2. **Illicit Discharge Detection and Elimination:** Develop, implement and enforce a program to detect and eliminate spills, illegal dumping and other non-stormwater discharges into the City's storm sewer system.
3. **Post-Construction Stormwater Management:** Prevent or minimize impacts to stormwater from new development or redevelopment by ensuring that stormwater treatment facilities (e.g. SFT's, detention ponds, rain gardens) operate as designed and are maintained.
4. **Construction Site Pollutant Control:** Develop, implement and enforce a program to reduce the discharge of pollutants from construction activities.
5. **Pollution Prevention/Good Housekeeping for Municipal Operations:** Develop and implement an operation and maintenance program to prevent or reduce pollutants from municipal operations.

In November 2019, the city conducted an internal full program audit, ensuring compliance with state and federal environmental regulations. City staff are very passionate about water quality and would like to leave it to the next generation in

better condition than it is now. We strive to not only make Westminster the most sustainable city in the nation, but also one in which our residents are proud to live in.

Floodplain Management

Flooding is a natural process but is also the most common and widespread of all weather-related natural disasters. Flood losses averaged nearly \$17 billion per year between 1990 and 2018 in the United States. Floodplains help to store and absorb floodwater to reduce damage to structures from flood events. The City reviews private development projects and City capital improvement projects to ensure that the floodplain is protected.

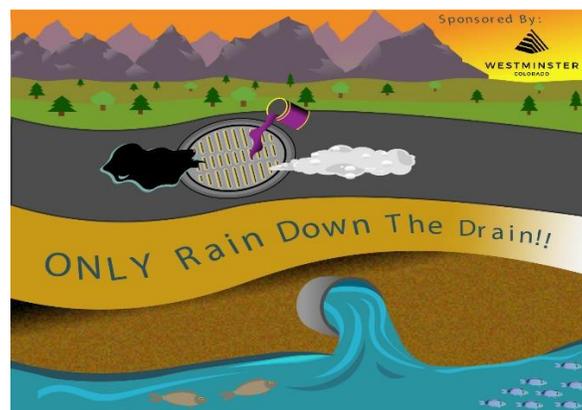
The City is also part of the Federal Emergency Management Agency's Community Rating System (CRS) which is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP). Over 1,500 communities participate nationwide. In CRS communities, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community's efforts that address the three goals of the program:

1. Reduce and avoid flood damage to insurable property
2. Strengthen and support the insurance aspects of the National Flood Insurance Program
3. Foster comprehensive floodplain management

Westminster residents can receive up to a 20% discount on flood insurance premiums.

Lastly, the City provides property protection advice and site visits. If you have flooding on your property and need assistance or require property protection advice or a site visit, please contact the City's Floodplain Manager, Heather Otterstetter at: hotterst@cityofwestminster.us or 303-658-2370.

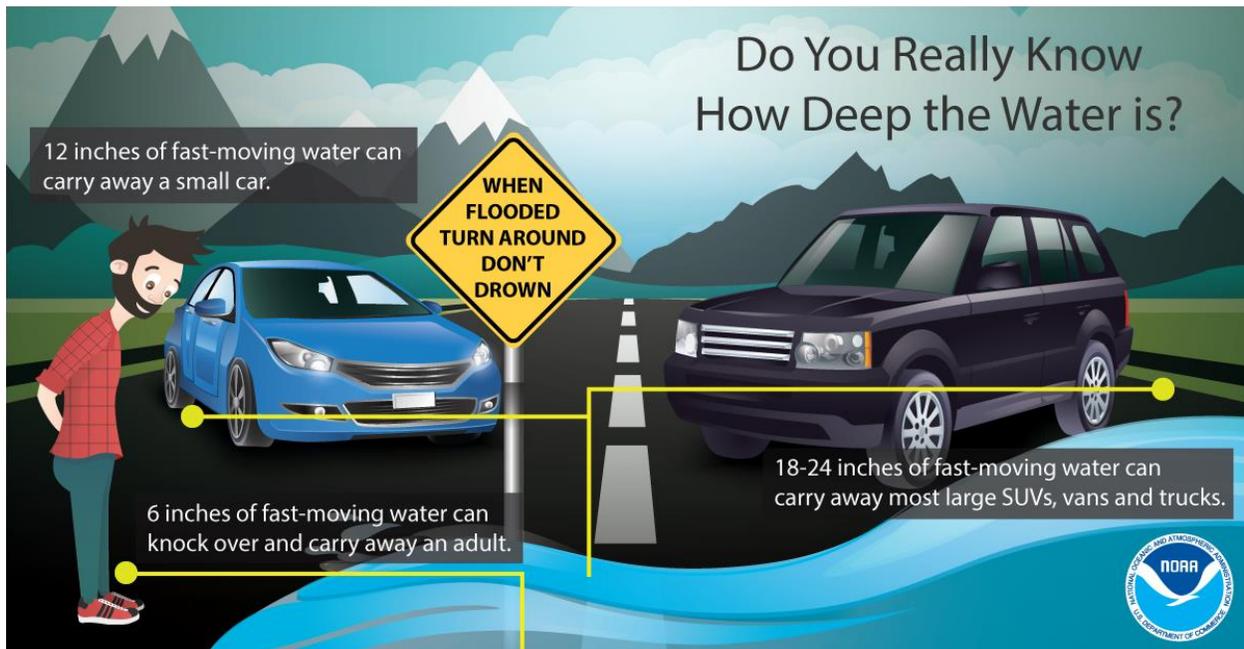
Please help protect our stormwater system and waterways by not dumping into stormwater inlets, ditches or waterways.



Flood Safety

Here are some tips to keep you and your family safe during flood events:

- Don't walk through flowing water.
- Don't drive through a flooded area.
- Stay away from power lines and electrical wires. Report downed power lines to Xcel Energy at 1-200-895-1999.
- Have your electricity turned off by Xcel Energy.
- Don't use electrical appliance that are wet.
- Look out for animals that may have been flooded out of their homes.
- Be alert for gas leaks. Don't smoke or use candles, lanterns or open flames.



Looking Ahead

Moving in to 2023, the Stormwater Utility will continue to support and conduct a wide range of stormwater-related projects. Most notably, Big Dry Creek is undergoing a major stream restoration project through a partnership with the Mile High Flood District. This multi-disciplinary effort is expected to cost approximately \$14,000,000 with construction kicking off in late 2023. Residents will notice restoration related construction activities from Westcliff Parkway to Wadsworth Boulevard, Sheridan Boulevard to 112th Avenue, and at City Park. The City's effort in restoring Big Dry Creek's streambank will aim to improve Big Dry Creek's water quality and flood management capabilities, and make it more resilient to intense storm runoff events. A majority of this project's funding will be provided by the Mile High Flood District. Simultaneously, the Mile High Flood District will continue to work with city personnel to ensure a continued maintenance of the City of Westminster's waterways and stormwater infrastructure. Throughout 2023 the stormwater team will also continue its collaboration with a contracted and on-call engineering design team to improve City owned stormwater

infrastructure. Priority projects include, but are not limited to, 94th Avenue and Wadsworth Boulevard ditch piping, Lowes Pond upgrade at 88th, and South Hylands Creek from Fire Station #2 to Carrol Butts Park stormwater pipe upgrade. The team will also continue to locate, evaluate, and map out city-wide stormwater assets, upgrade stormwater infrastructure as needed, and remain diligent in improving public understanding on the importance of stormwater management.

This officially documents another year of achievements that support compliance and sustainability! The City's Stormwater Utility Team looks forward to sharing accomplishments and value realized from stormwater fees.

THANK YOU FROM ALL OF US AT
WESTMINSTER!

