

Stormwater

February 15, 2023

Purpose

The purpose of this paper is to provide a background in local stormwater management to the Brown Ranch Annexation Committee to frame and inform annexation negotiations pertaining to Brown Ranch.

Decision Points

There are no decisions that need to be made in connection with an eventual Annexation Agreement unless the Annexation Committee desires to modify the existing codes and regulations that delineate responsibilities amongst the City, developers, and property owners.

Section 1: Stormwater Background

In the context of municipal service, stormwater refers to surface water drainage. A stormwater system is the infrastructure used to manage, treat, and convey rain, snowmelt, pumped groundwater, etc. Stormwater can carry trash, dirt, pet waste, fertilizers, chemicals, and other pollutants and is one of the main sources of water pollution in the nation. In Steamboat Springs, the stormwater system is separate from the wastewater system. Stormwater is not collected in wastewater mains, and stormwater is not treated at the wastewater treatment plant.

The stormwater conveyance system can generally be described as the series of ditches, culverts, inlets, and best management practices (BMPs) that eventually discharge into local waterbodies, such as the Yampa River and its tributaries. A BMP is an industry term that refers to a water quality treatment element. Examples of permanent BMPs include:

- Sedimentation basins/ponds
- Grass swales
- Grass buffers
- Rain gardens
- Mechanical separators (e.g., stormceptors)
- Inlet sumps

BMPs must be designed to achieve a certain level of treatment before runoff is discharged into a waterbody. Often, a series of BMPs is necessary to successfully meet the required level of treatment. The important thing to note is that ***BMPs require space***. A development cannot successfully treat their runoff unless space is provided for the placement of BMPs.

The stormwater system provides critical community services in protecting public safety and property from flood damage and in protecting water quality in our streams and rivers. The "One Water" philosophy promoted in the 2023 Colorado Water Plan integrates capital planning and operations for stormwater, drinking water, and wastewater systems to create cost efficiencies and provide multiple benefits for communities. Brown Ranch offers an opportunity to plan these infrastructure systems more holistically and to implement green infrastructure approaches. Green infrastructure approaches are nature-based BMPs for managing and treating stormwater, such as

rain gardens, permeable pavement, and constructed wetlands, that can also enhance parks, streetscapes, and wildlife habitat. The City supports these approaches where consistent with existing standards. Recent updates to the City's adopted long-range plans, such as the Yampa River Streamflow Management Plan, Water Conservation Plan, and Climate Action Plan, include action items to promote green infrastructure methods in new development and publicly funded projects.

Section 2: Roles and Responsibilities

The City, developers, and property owners all have defined roles to play in the stormwater system.

- City responsibilities:
 - a. Implementation and oversight of the MS4 (Municipal Separate Storm Sewer System) Permit
 - b. Citywide stormwater master planning
 - c. Adoption and enforcement of municipal code standards and engineering standards to regulate stormwater system requirements, floodplains, and waterbody setbacks.
 - d. Drainage off and through public rights-of-way
 - e. Ongoing maintenance of conveyances (such as ditches, culverts, and inlets) and BMPs within public rights-of-way
- Developer responsibilities:
 - a. Construct stormwater conveyances through their property and through rights-of-way they intend to convey to the City
 - b. Construct BMPs for runoff that originates on their property
 - c. Minimize stormwater pollution during construction
- Private property owner responsibilities:
 - a. Ongoing maintenance of conveyances and BMPs located on their property

Section 3: Legal Issues

There are several legal principles at play regarding stormwater:

Discharge of runoff to waterbodies is regulated through the Federal Clean Water Act. In Colorado, the Colorado Department of Public Health and Environment (CDPHE) is tasked with implementation of these regulations. CDPHE in turn requires every municipality with a population of 10,000 or more to operate under an MS4 Permit.

- MS4 Permits must be renewed every five years.
- MS4 Permits require the Permittee (i.e., the City) to implement five control measures. The control measures are:
 - Public education and outreach (i.e., educating the public about stormwater management and water quality)
 - Illicit discharge detection and elimination (i.e., discharge of pollution to the storm system)
 - Construction sites (i.e., stormwater management during construction using BMPs to minimize pollution leaving active construction sites)
 - Post-construction stormwater management (i.e., permanent BMPs designed as part of the development)
 - Pollution prevention and good housekeeping for municipal operations (i.e., reduce water quality impacts from pollutants from municipal operations)

- ***The City's MS4 Permit with the State therefore governs how stormwater must be managed in Brown Ranch.*** The City in turn enforces stormwater program requirements through the Municipal Code, permitting, and engineering standards.

Important from a conveyance standpoint, per State law, property owners have the right to discharge runoff onto the downstream property *at the historic rate*, and an easement is not necessary to do so.

Floodplain restrictions and waterbody setbacks govern the parameters of development along streams and rivers. Typically, the 100-year flood dictates thresholds. The term "100-year flood" means there is a 1% chance the flood will occur in any given year. Statistically, over a 100-year period, there is a 63% chance of the 100-year flood happening at least once.

Section 4: Applicant's Proposal

The applicant is proposing to master plan their storm sewer system. This is a very good approach, as master planned systems tend to function better, and less land is required for BMPs. This in turn provides more options as the sites build out.

Going back to Section 2: Roles and Responsibilities, the applicant's proposal should clarify who the responsible party is going to be for the regional BMPs. Under current regulations, the property owner that the BMP is located on is responsible for ongoing maintenance.