



Thornton  Colorado

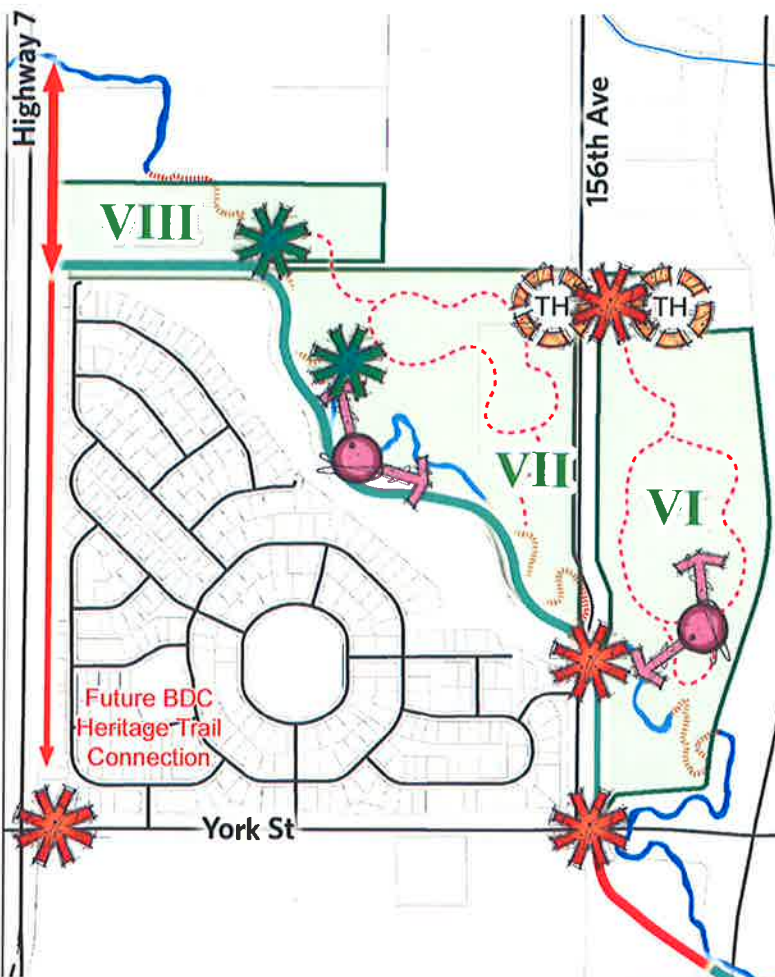
BIG DRY CREEK

Open Space & Heritage Trail



Big Dry Creek Recreation & Floodplain Restoration
Master Plan Executive Summary





Project Objective

The Big Dry Creek corridor is an important natural resource for east-west wildlife movement and regional trail connectivity in Thornton, Colorado. In 2016, Thornton received a grant from Great Outdoors Colorado to develop a Recreation and Floodplain Restoration Master Plan to assess recreation and floodplain function within publicly-owned open space parcels of the Big Dry Creek Corridor. These 8 parcels, shown and numbered in green, encompass nearly 300 acres of land. The goal of the Master Plan is to connect these areas to one another and to the larger regional and city networks of trails, parks and open spaces.

Master Plan Approach

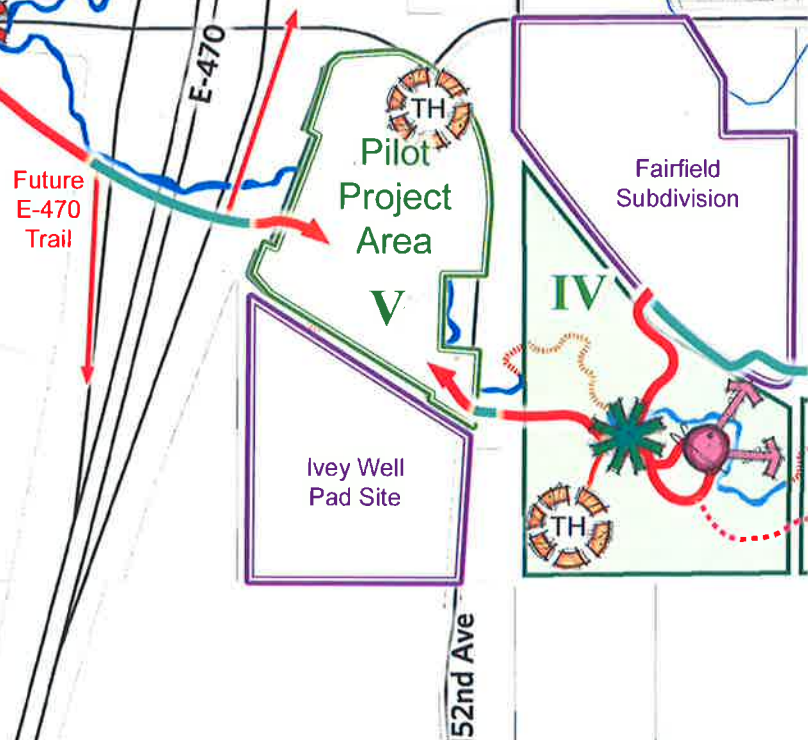
The approach for this Master Plan is to balance recreation and infrastructure improvement with floodplain restoration and long term environmental health to establish a holistic vision for Big Dry Creek through Thornton. The Master Plan vision will improve the environment along the Big Dry Creek corridor and connect open space visitors to increased recreational opportunities within this unique open space pearl.

Master Plan Recommendations

The Master Plan recommendations have been separated into three overall categories:

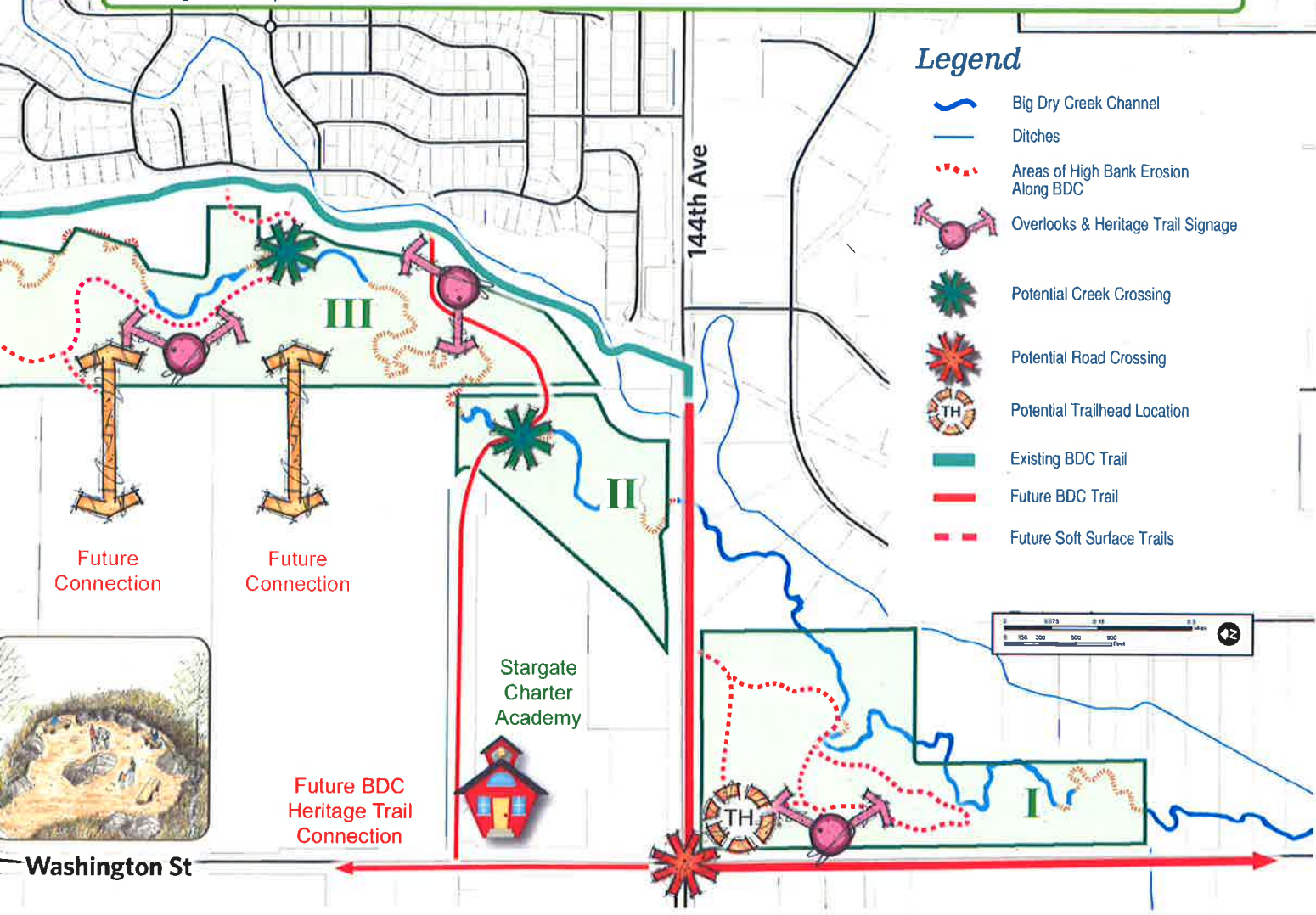
- Recreation and Infrastructure
- Floodplain Restoration
- Environmental Treatment

Through assessment and evaluation, each category can relate to and impact the other categories to achieve a well-rounded improvement project. The Master Plan recommends that each future improvement project encompasses as many categories as possible.



Master Plan Goals

- 1 Investigate and assess the Big Dry Creek corridor from **multiple angles**.
- 2 Develop a Master Plan that will achieve a **sustainable balance** in the Big Dry Creek corridor by improving floodplain resiliency, channel stability, water quality, recreational opportunities, trail connections, wildlife habitat and ecosystem health.
- 3 Create an **implementation toolbox** that can be used to design and build improvements throughout the corridor.
- 4 Identify an impactful and achievable floodplain restoration **Pilot Project** to be built on city of Thornton property following the Master Plan goals. Funds for passive recreation aspects of the Pilot Project should be pursued in an effort to create a multi-purpose project.
- 5 Develop and build public momentum for improvements in the corridor in order to make Big Dry Creek an **open space pearl**, similar to the South Platte River and Niver Creek through Thornton.
- 6 Preserve and enhance the **floodplain** along the corridor to provide natural beneficial functions to the stream system, areas of passive recreation and wildlife habitat.
- 7 Develop open space uses compatible with infrequent flood inundation, respecting FEMA and city of Thornton restrictions in the **floodway**.
- 8 Develop solutions for **stream stabilization** that reflect the existing (semi-natural) hydrology of the stream and recognize the potential for channel evolution over time.



Legend

- Big Dry Creek Channel
- Ditches
- Areas of High Bank Erosion Along BDC
- Overlooks & Heritage Trail Signage
- Potential Creek Crossing
- Potential Road Crossing
- Potential Trailhead Location
- Existing BDC Trail
- Future BDC Trail
- Future Soft Surface Trails

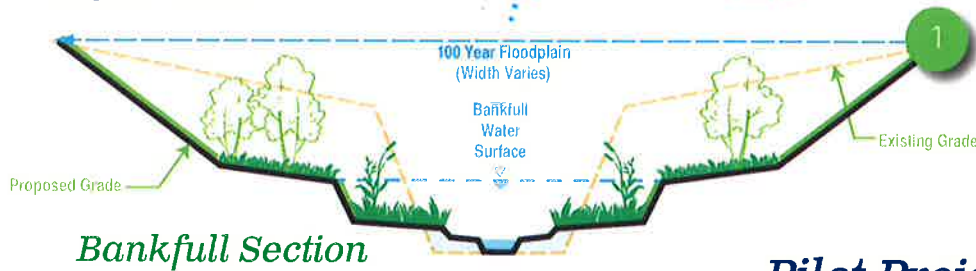
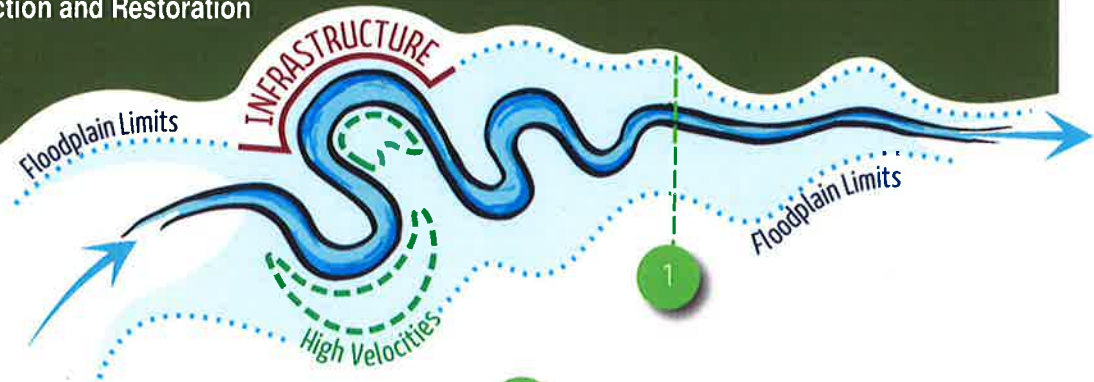


Floodplain Restoration Toolbox

A 'toolbox' approach was taken for the Master Plan to identify general strategies and techniques for the restoration and management of Big Dry Creek. The Toolbox enables the users of the Master Plan to develop a conceptual restoration approach for a variety of potential deficiencies along Big Dry Creek and adapt each technique to the individual conditions of a specific project. The Toolbox was separated into the following categories to address any issue that may be encountered on Big Dry Creek:

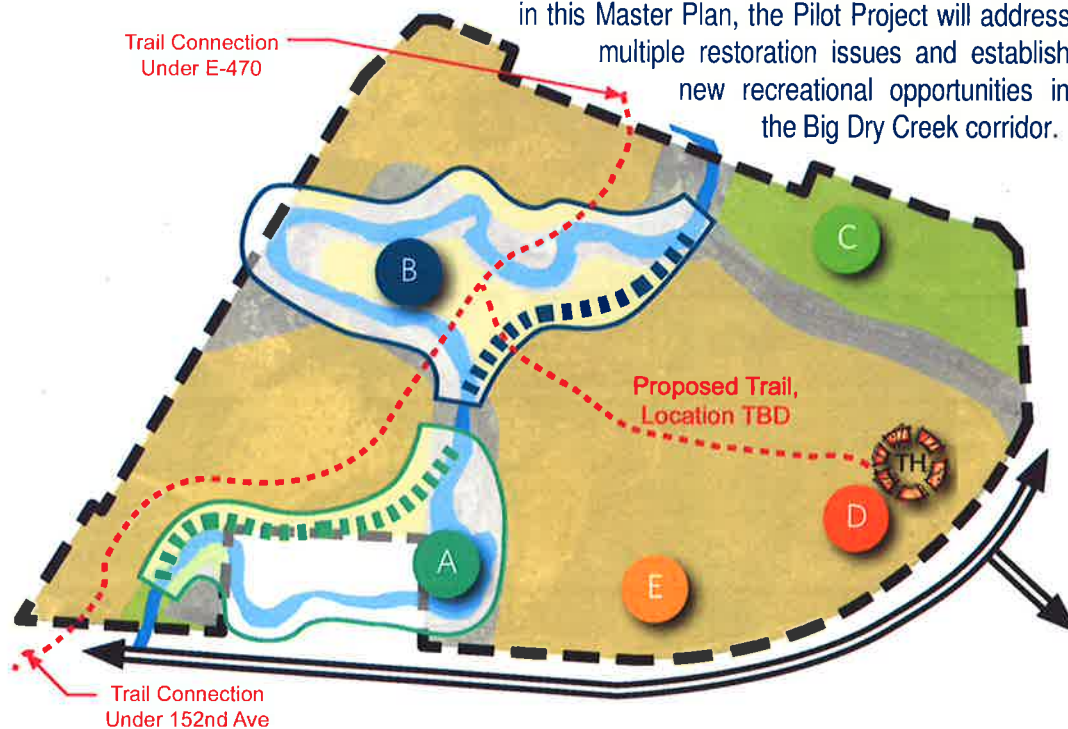
1. Floodplain Reconnection and Restoration
2. Bank Stabilization
3. Channel Complexity
4. Grade Control

The restored creek channel will vary in function, form and ecology based on the site specific issues which exist at a given location.



Pilot Project

The Big Dry Creek Pilot Project will set the example of restoration in the corridor. By using the Toolbox strategies developed in this Master Plan, the Pilot Project will address multiple restoration issues and establish new recreational opportunities in the Big Dry Creek corridor.



A

Issues

- Lateral Migration
- Erosion
- Habitat degradation

Improvement Strategies

- Off channel wetlands
- Bank stabilizations
- Grade Control
- Revegetation

B

Issues

- Lateral Migration
- Erosion

Improvement Strategies

- Channel Realignment
- Bank Stabilization
- Grade Control
- Revegetation

C

Invasive Weeds including:

- Curly Dock
- Russian Olive
- Musk Thistle
- Kochia

Weed management and revegetation

D

Potential Trailhead Location:

- Paved/unpaved parking
- 36,000 SF Max

E

Heavily populated Prairie Dog habitat with short low grasses throughout

Opportunity to increase vegetation and biodiversity

Next Steps

The next step in the Big Dry Creek Recreation & Floodplain Restoration Master Plan will be to design and construct the Pilot Project. This project will help build momentum for future projects in the corridor and help the city of Thornton apply for grants to help fund future projects.