



WESTMINSTER

COLORADO

CITY COUNCIL STUDY SESSION AGENDA

JUNE 03, 2024 at 6:30 PM

Please Note: Study Sessions and Pre/Post City Council meetings are open to the public, and individuals are welcome to attend and observe. However, these briefings are not intended to be interactive with the audience, as this time is set aside for City Council to receive information, make inquiries, and provide Staff with policy direction.

- 1. CITY COUNCIL REPORTS (15 minutes)**
- 2. CITY MANAGER'S REPORT (5 minutes)**
- 3. PRESENTATIONS**
 - A. Presentation on Options to be Included in the Westminster Hills Open Space Area Future Site Operations and Capital Improvements Management Plan (2 hours)
 - B. Retreat on the Development of the 2025 Budget (2 hours)
 1. Review of the Budget Development Process
 2. Confirmation of the Strategic Plan
 3. Review of the themes from the Budget Town Hall
 4. Update on the Community Project Request Process
 5. City Council Budget Priorities
 6. Recommended Revenue Forecast
 7. Roadway Improvement Fee
 8. Stormwater Utility Fee
- 4. EXECUTIVE SESSION**

Persons needing an accommodation, such as an interpreter for another language, or who have an impairment that requires accommodation, must submit such a request to the City

Clerk. Requests must be submitted no later than noon on the Thursday prior to the scheduled Council meeting to allow adequate time to make arrangements. Please call 303-658-2161/TTY711 or State Relay or write to cityclerk@cityofwestminster.us to make a reasonable accommodation request.



WESTMINSTER
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Agenda Memorandum

Agenda Item – 3.A.

City Council Study Session
June 3, 2024

Strategic Priority 1: Access to Opportunity

Advance access to opportunity and prosperity for all in Westminster through diverse housing choices, increased mobility options, safe and walkable neighborhoods, and strong social networks

Strategic Priority 2: Community Empowerment and Engagement

Enhance the sense of community and connection in Westminster through engaging methods of communication and dialogue that improve accessibility, increase understanding, and encourage participation in civic and City life

Strategic Priority 3: Community Health and Safety

Invest in innovative and collaborative approaches to provide a continuum of services that preserve, promote, and protect the health, safety, and environment of Westminster.

Strategic Priority 4: Economic Vitality

Promote and support a resilient economy that attracts and retains a diversity of businesses, workers, and industries, expands living wage jobs, and diversifies the City's tax base.

Strategic Priority 5: Resilient Infrastructure

Maintain and invest in resilient infrastructure that creates the highest return for safety, community connectivity, enjoyment of life, and local economic success.

Strategic Priority 6: Organizational Vitality

Develop and sustain an environment where employees and the organization are equipped and supported to deliver outstanding service to everyone in Westminster.

Subject: Presentation on Options to be Included in the Westminster Hills Open Space Area Future Site Operations and Capital Improvements Management Plan (2 hours)

Prepared By: Tomás Herrera-Mishler, Parks, Recreation and Libraries Director
Joe Reale, Open Space Superintendent

Recommended City Council Action:

Provide Staff direction related to the future site configuration, policies, operations, and capital improvements associated with the Westminster Hills Open Space for inclusion in a formalized management plan.

Summary Statement:

The Westminster Hills Open Space (WHOS) off-leash dog area has seen a significant increase in use, especially in the past seven years, creating potential conflicts with the space's original purpose as outlined in the Westminster Municipal Code (W.M.C.) (Attachment 1 – Vicinity Map). Additionally, limited implementation of the 2014 Open Space Stewardship Plan (OSSP) due to resource constraints has impacted management efforts (Attachment 2 – 2014 Open Space Stewardship Plan). While the City Manager has the authority to designate off-leash areas under specific conditions, the W.M.C. authorizes the City Council to consider a change in designation if deemed in the best interest of the City.

The core challenge lies in striking a balance between honoring the original intent for the WHOS as a protected natural area first acquired to prevent the site from development, while also accommodating the needs and desires of neighbors, cyclists, nature lovers, and dog owners from across Metro Denver who utilize the space for walking, off-leash dog activities, and cycling. Various options have been prepared ranging from no change at all to a full prohibition of off-leash dogs. In between lies a solution that establishes designated zones for dog off-leash activity, on-leash dog use, and areas entirely dog-free. If any one of these approaches is coupled with increased resource allocation for maintenance, enforcement, education, volunteer management, and capital improvements, these measures will help to ensure the long-term sustainability of the WHOS as a valuable city asset.

Staff is seeking direction related to the overall site configuration as well as policy, ongoing operations, and capital improvements. Upon direction from City Council on these items, Staff will integrate them into an overall management plan for the WHOS site. Once developed, the management plan will take time to implement. Staff will return to City Council for formal action as items are ready to proceed related to any potential re-designation of open space to parkland, potential amendments to the W.M.C., and any capital improvements.

Fiscal Impact:

To be determined

Source of Funds:

To be determined

Policy Issue(s):

Does City Council wish to receive a presentation on the WHOS with options regarding future site management and capital improvements?

Alternative(s):

City Council could choose not to receive a presentation on the WHOS site configuration, future management and capital improvement options. Staff does not recommend this alternative as there is significant community interest in this topic and direction from City Council regarding the disposition of land use across the WHOS site to determine the direction of future site management and capital investments needed to accommodate the level of use and minimize disruptions to the ecology and adjacent neighborhoods.

Background Information:

The Open Space Program Policy Statement set forth in W.M.C. 13-5-1 outlines the City's commitment to preserving the natural environment and promoting quality of life for its residents by acquiring and managing open space properties (Attachment 3 – W.M.C. Title XIII Chapter 5). One such property is the WHOS, acquired over several decades beginning in 1988. Funded by the City's voter approved Parks, Open Space and Trails (POST) tax, Jefferson County Open Space, Great Outdoors Colorado (GoCo), the Trust for Public Land, and the Conservation Trust, the WHOS has grown to over 1,000 acres. There are no zoning issues regarding designated Open Space in the City of Westminster. Open space use is governed by W.M.C. 13-5-4, which requires a City Council action to determine any repurposing of designated open space land regardless of zoning. In accordance with W.M.C. (13-5-3(B)), Staff have determined that off-leash dog activity in the WHOS is not consistent with the open space purposes for which the land was acquired and recommend off-leash dog area within the WHOS be reclassified as *park* lands in accordance with City policies.

Why Does Westminster Preserve Open Space?

Westminster has a long-standing commitment to preserving open space, dating back to 1985 when voters approved a dedicated sales tax for this purpose. This pioneering move made Westminster only the second city in Colorado to implement a municipal sales tax-funded open space program. Open space offers a multitude of benefits to the community:

- **Environmental Protection:** Preserved lands safeguard sensitive ecosystems from development, allowing for continued wildlife movement and habitat preservation. These areas act as breathing room between developed areas, promoting biodiversity.
- **Enhanced Quality of Life:** Open space provides residents with convenient access to passive recreation opportunities, allowing them to connect with nature and enjoy scenic mountain views. This contributes significantly to a high quality of life in Westminster.
- **Stewardship for the Future:** Preserving open space is just the first step. Active management is crucial to ensure the public can enjoy these areas and natural resources are protected for future generations.

Having protected 3,805 acres of open space, the City has more than met its goal of preserving 15 percent of its landmass as protected open space with strategically acquired properties protecting important viewsheds, sensitive habitat, creek corridors, drainage areas, and irrigation canals. These interconnected corridors create a network of open spaces and trails throughout Westminster, providing residents with convenient access and linking to regional trail systems.

The significance of preserved open space, like the WHOS, is amplified when considered within the context of these natural corridors. The Rocky Mountain Greenway Trail extends westward through the WHOS and beyond city limits, linking to vast open spaces with more than 13,000 acres of near contiguous protected open spaces such as the Rocky Flats National Wildlife Refuge and Great Western Reservoir Open Space. Maintaining and expanding these corridors offers exceptional value for habitat preservation, scenic beauty, and public recreation opportunities both within and beyond Westminster.

Westminster's commitment to open space preservation is a cornerstone of the City's identity and well-being. By continuing to invest in and manage these vital lands, we ensure a healthy environment, a high quality of life, and a legacy for generations to come.

Why did the City of Westminster Prioritize Preserving Westminster Hills Open Space?

The initial acquisitions in 1988 associated with what constitutes the WHOS area were done to protect the mountain views, provide a buffer to potential future development to the west, and prevent the development of the site, which was originally designated as a future office-industrial park. At over 1,000 acres, this is one of the largest stretches of shortgrass prairie publicly protected on the Front Range. It does not exist in isolation. This grassland is located within a regional landscape context of approximately 13,000 acres of shortgrass prairie providing habitat, biodiversity, and connectivity. To illustrate the importance of habitat connectivity, elk herds at the Rocky Flats National Wildlife Refuge often overwinter on the western half of the WHOS.

A City Council Agenda Memorandum for the acquisition of a parcel that now is included within the WHOS dated August 13, 2007, stated that the purpose for preserving the WHOS was crucial to "...maintain the scenic vistas, wildlife habitat, shortgrass prairie and open feeling in this area. These lands are also bordered by open space lands owned by the federal government (Rocky Flats Wildlife Refuge), Jefferson, Broomfield and Boulder Counties, a huge expanse of public lands and public investment preserving the mountain backdrop. Preservation of this site will also help to buffer and protect the bald eagle nest, located across the street at Standley Lake Regional Park."

There are eight animal species of greatest conservation need that have been observed within the WHOS, including the Northern Leopard Frog, Burrowing Owl, Bald Eagle, Grasshopper Sparrow, Ferruginous Hawk, Lark Bunting, Loggerhead Shrike, and the Northern Harrier. There are two additional threatened species where the appropriate habitat exists, but they have not been observed on site. These include the Ute Ladies Tress and Prebles Jumping Mouse. Beyond that, ground-nesting grassland bird species constitute one of the fastest declining vertebrate populations in North America. Over 100 species of birds have been documented in the WHOS area.

Benchmarks and Regional Context

With the notable exception of the City of Boulder, which has a unique off-leash trails program, all open space programs on the Colorado front range require dogs to be on-leash unless otherwise prohibited. The City of Westminster permits dogs on-leash anywhere visitors are allowed. State Parks prohibit off-leash dogs outside of the two official Dog Off-Leash Areas (DOLA), both of which charge for entry. As a rule, and with few exceptions, National Parks do not allow any dogs except in hardened campgrounds. Current large off-leash areas and their acreage are as follows (Attachment 4 – Regional Dog Parks and Open Space List):

- WHOS DOLA – 470 acres off-leash within 1,050-acre open space; all the dog parks in the Denver Metro region combined would fit within the WHOS DOLA
- Cherry Creek State Park DOLA – 107 acres within 4,000-acre state park
- Chatfield State Park DOLA – 69 acres within 5,380-acre state park

Location and History

The WHOS is located on the western edge of Westminster, bordering the Countryside neighborhood, Rocky Flats National Wildlife Refuge, and Standley Lake Regional Park. In 2000, with City Council approval, approximately 27 acres in the northeast corner were designated as the City's first off-leash dog area as a pilot. The entire WHOS from Simms Street to Indiana Street opened to off-leash dog walking in 2008 and was closed for most of 2009 due to an outbreak of Bubonic Plague among the prairie dog colony. The area where off-leash dogs were allowed was adjusted to the current 470 acres in 2010, becoming the largest off-leash dog area in Metro Denver. The greatest volume of use

at the for off-leash dog visits was generally concentrated in the 70 acres in the northeast corner of the site nearest the Simms Street entrance and parking lot. In 2017, the 100th Avenue trailhead and an unpaved parking lot were built to support the Greenway Trail. The 100th Avenue parking lot was paved in 2018. With the addition of this trailhead and parking, the volume of use dramatically increased and has every year since. The Parks, Recreation, and Libraries Department (PRL) often referred to the WHOS off-leash dog area as a “Dog Park” on-line, including signage and in publications, until adoption of the OSSP when Staff began to refer to this area as the WHOS Off-Leash Dog Area.

Impact of Off-Leash Dogs on WHOS

Research has shown that the presence of dogs, particularly off-leash dogs, reduced the number of birds present by upwards of 50 percent. The presence of off-leash dogs specifically has shown to displace birds within a 250-foot buffer of trails. On-leash dogs displace birds in a radius of approximately 50 feet; in the absence of dogs and only hikers, displacement is less than 20 feet on each side of the trail. Several of these studies and a literature review were provided as background to the CAT team and can be found online [here](#). It is important to note that birds are an indicator of the impact on all wildlife. In shortgrass prairie ecosystems, this is critical because all the birds are ground-nesting, and many are state listed as species of special concern in Colorado. (Attachment 5 – WHOS Imagery Over Time)

One of the greatest challenges in managing and preserving shortgrass prairie ecosystems are non-native and invasive species. The addition of nitrogen, specifically from dog excrement and urine, directly kills native plants that flourish in Colorado’s generally poor soil and promotes the growth of non-natives that are adapted to tolerate and more effectively use the added fertilizer. Native grasslands are adapted to grow slowly in the harsh environment of Colorado’s Front Range, with root bases that extend several feet into the ground (up to 14 feet for some perennial grasses). These disturbed areas, combined with the added fertilizer to normally nutrient-poor soils, promote the rapid growth of invasive species that can quickly out-compete natural grasslands. These shallow-rooted invasive species do not support native wildlife, are much more susceptible to drought conditions, and lead to the loss of critical shortgrass prairies. Shortgrass prairies are the equivalent of an old-growth forest of Front Range plains.

Increased Use and Resulting Challenges

The popularity of the WHOS for off-leash activities has surged, particularly after 2017 with the extension of the Rocky Mountain Greenway Trail and construction of a new trailhead and parking lot on 100th Avenue, as well as the restrictions during COVID bringing more people outdoors. This increased use has led to parking issues, with visitors resorting to illegal parking on nearby streets like Simms or parking on the streets of the adjoining Countryside neighborhood. This has caused inconvenience, frustration, and safety concerns for residents in surrounding neighborhoods. The influx of additional visitors to the site has been calculated at approximately 750,000 visits each year. (This number is revised from previous estimates of one million visits based on a full year of trail counters data collection.) The growth in social trails is another clear indication of the significant growth of visitation since 2017. (Attachment 6 – Habitat Impact Zones)

Management Plans and Community Engagement

In 2010, City Council adopted the Wildlife and Natural Resource Management Plan for open space properties to provide an overview of management guidelines to protect and enhance the natural environments, keeping the open space properties in the best possible condition and preserved as they were intended. This plan, along with the 2014 OSSP, guides the management of Westminster's

open spaces. After several decades of planning and acquisition, the City's open space system required a thoughtful approach to long term management of these treasured and valuable open space assets. However, resource limitations have hampered full implementation of these plans. The 2014 plan recommends funding for open space ongoing maintenance and management of transitional landscapes such as the WHOS at a level of \$1,713 per acre. An allocation of \$805,110 would be required at this level to adequately manage the 470-acre portion of the WHOS alone. In 2024, \$827,130 was allocated to open space management throughout the entire city, excluding personnel costs. The goal of the OSSP for transitional landscapes is to move them to a sustained restored condition with a much lower annual management cost. Based on current restoration costs, available contracting services, scheduling, and the existing conditions at the WHOS, it is estimated that restoration would require approximately \$400,000/year for five years, totaling \$2,000,000, to adequately restore the WHOS, after which an annual operating budget of \$200,000 is estimated to be required to maintain the entire WHOS.

Despite budget limitations, since the 2014 adoption of the OSSP, PRL has invested significantly in the WHOS with intensive integrated pest management. Staff has eradicated all Colorado State List A noxious weed species from the WHOS and mapped invasive species remaining on site in GIS. Mile High Youth Corps has been assigned four weeks of List B invasive plant removal during 2023-2024 at a cost of \$40,000. Through 2019, there were annual volunteer dog waste pickup events scheduled on a regular basis. The COVID pandemic caused all PRL volunteer events to be cancelled. PRL has recently filled the volunteer coordinator position that became vacant during that time and have begun to ramp up volunteer efforts throughout the City's parks and open spaces.

The 2014 OSSP also identified the need to create area-specific master plans, including one for the WHOS area. In 2023, environmental consultants ERO were contracted to evaluate the current conditions of the WHOS, conduct a literature review of best practices for open space in similar condition, and develop recommended management strategies to address the natural resources and recreational concerns at the WHOS (Attachment 7 – Westminster Hills Open Space Conditions Report). The Westminster Hills Open Space Conditions Report (Conditions Report) identified ecological degradation, particularly near the parking areas, due to factors like trail expansion, erosion, and pervasive invasive plant species. Additionally, the prevalence of uncollected dog feces and urine was noted as a significant concern.

The Conditions Report also identified significant contamination issues in the Dry Creek Valley Ditch (Ditch), which is a ditch lateral from Church Ditch that crosses the WHOS flowing north into the Great Western Reservoir and Walnut Creek. The Ditch creates a separate set of unique challenges to the WHOS as it runs southeast to northwest through the northeastern corner of the WHOS site. It is important to understand that the Ditch is not a natural waterway, but an irrigation ditch owned by an irrigation ditch company within which the City of Westminster and City and County of Broomfield own shares of water. In 1993, the City obtained an easement from the Ditch owner, Dry Creek Valley Ditch Company, that allows for the one pedestrian bridge and trail to cross the Ditch and requires the City to maintain the bridge in a manner that ensures the Ditch and its embankments are not damaged. If this section of the WHOS remains accessible as part of an off-leash dog area, additional improvements to protect the Ditch, including the possibility of a second pedestrian bridge and fencing to prohibit access to the Ditch, will need to be evaluated.

The Conditions Report identified challenges with increased utilization negatively impacting the natural qualities. Per W.M.C. 13-5-3(A), activities that may be allowed on open space "...after the City Manager determines that such activities will not have a detrimental effect on the natural qualities for which the open space was originally acquired, include fishing, biking, horseback riding, boating, and the development of off-leash dog exercise areas...."

Upon receipt of the Conditions Report, PRL conducted public engagement efforts in November 2023, January 2024, and a well-attended community meeting in March 2024. An overview of the Conditions Report was provided to the community, including recommended management strategies to maintain the WHOS in the short and long term. These engagements identified significant community interest in the WHOS and also strong opposition to reducing the off-leash dog area size as recommended in the Conditions Report. Based on the concerns expressed at the March community meeting, the PRL Director created a Community Advisory Team (CAT) with representatives from various stakeholder groups in an effort to gather balanced public input. The CAT was comprised of eight community members with diverse interests, two Parks, Recreation, Libraries and Open Space Advisory Board (PRLOSAB) members, a Jefferson County Open Space representative, and Mayor Nancy McNally as the Council Liaison.

Four primary user groups were represented on the CAT:

1. Off-leash dog park users
2. Cyclists
3. Neighbors
4. Open space/environmental community

The CAT worked closely on key policy discussions related to the off-leash area and focused on developing a path forward that balances the need to protect and preserve the open space for the community to enjoy including the size, location, rules, and amenities of an off-leash dog area. The meetings were facilitated by Ashley Edinger, Senior Director of Institute and Strategic Supports, with the Rocky Mountain Partnership.

The CAT identified the need for a more sustainable approach. This approach would balance the needs of off-leash dog activities, cyclists, and walkers with the ecological health and responsible use of the WHOS.

The CAT met a total of five times from March through May, including a site visit at the WHOS. The CAT acknowledged the need for change and explored options for the off-leash dog area while identifying a need for increased funding and volunteer support. The group had candid discussions helping identify areas of common interest and opportunities to identify alternative solutions. At its last meeting on May 7, the CAT finalized a list of recommendations on how to move forward with the off-leash portion of the WHOS for consideration and feasibility analysis (Attachment 8 - Meeting Synthesis & Next Steps (Key Decisions, Action Commitments, and Next Steps)). The list of recommendations incorporated many identified by the Westy Dog Park Guardians, a grassroots organization established in January 2024 with the goal of preserving and protecting the WHOS off-leash dog area. The Westy Dog Park Guardians provided a separate WHOS Dog Park Research and Recommendations document to City Council (Attachment 9 – Westy Dog Park Guardians WHOS Dog Park Research and Recommendations). The Westy Dog Park Guardians provided an extensive and detailed set of recommendations, many of which are already employed by the City's open space program as funding allows. Staff appreciates the thoroughness of this document and concurs with many of the items recommended.

Staff recommendations considered the CAT's insights, as well as those provided by the Westy Dog Park Guardians, and the needs and desires of each primary user group and address key community concerns that include but are not limited to:

- Preservation of the natural environment;
- Access and parking availability/neighborhood conflicts;
- Safety for cyclists and pedestrians;

- Responsible pet ownership; and
- Off-leash dog area options.

Separate from the CAT engagement, as part of the PRL Vision Planning process, a statistically valid survey was conducted during the winter of 2023-2024 to assess areas in which the residents of Westminster felt their needs were being met. Sixty-three percent (63%) of respondents indicated that their need for off-leash dog areas was being met. On Priority Investment Ratings, off-leash dog walking falls just above the middle, meaning it is a medium priority, higher than pickleball and tennis courts but much lower than trails, water recreation access, natural areas and open space, libraries, etc. One recommendation of the CAT was to expand the number of dog parks elsewhere in the City; a new small off-leash dog area is included within the upcoming renovations to Squires Park on 99th Avenue as well as a temporary off-leash dog area at Downtown Westminster (with a permanent one included in future plans).

Management Recommendations

The feedback from the CAT, the Westy Dog Park Guardians, the Conditions Report, and the statistically valid survey results informed the following set of recommendations for the future management of the WHOS.

All options recommend that the approximately 600 acres to the west be designated as entirely off-limits to dogs on or off-leash. All options include retaining the Greenway Trail. However, depending on the option selected, Staff recommends that a portion of the Greenway Trail be relocated to allow for greater separation among off-leash dogs, walkers, and cyclists, taking advantage of a stretch of the newly installed concrete trail located along 100th Avenue. All options still welcome visitors to explore the entire 470-acre eastern portion of the WHOS; they would just be required to use a leash outside the off-leash areas, consistent with the regulations for the rest of the City's open space lands and the accepted norm for open space across the Front Range. All options that include an off-leash area will be buffered from adjacent neighborhoods and along Simms Street by a minimum 100-foot setback.

For the eastern 470 acres, the following four site options are presented for City Council consideration regarding the future of off-leash dog activities at the WHOS (Attachment 10 – WHOS Options Maps):

Site Option 1 - No Change to Off-Leash Dog Area: Maintain the current size (470 acres) and do not change the existing off-leash dog area. The off-leash dog area would be re-designated by City Council action from open space to parkland, allowing for the more active recreational use at the site, removing 470 acres from the City's overall open space inventory. (Not Recommended)

Site Option 2 - Large Off-Leash Dog Area: The off-leash dog area would be reduced to approximately 200 acres and include realigning the Greenway Trail along a portion of the new concrete trail on the south side of the WHOS. Dogs would be prohibited or, if allowed, required to be on-leash on the Greenway Trail. The designated off-leash dog area would be re-designated by City Council action from open space to parkland, allowing for the more active recreational use at the site, removing approximately 200 acres from the City's overall open space inventory.

Site Option 3 - Mid-Size Off-Leash Dog Area: The off-leash dog area would be within a designated, approximately 110-acre area on the eastern edge of the WHOS. The remainder of the WHOS would require dogs to be on-leash. At this size, the off-leash dog area would remain the largest off-leash site in the region. The designated off-leash dog area would be re-

designated by City Council action from open space to parkland, allowing for the more active recreational use at the site, removing approximately 110 acres from the City's overall open space inventory.

Site Option 4 - Neighborhood-Sized Off-Leash Dog Area: A 33-acre neighborhood-sized off-leash dog area would be retained in the northeast corner of the WHOS. This option prioritizes restoring the landscape and ecology of the WHOS to its original state, aligning with the original land acquisition intent and Westminster Municipal Code. The designated off-leash dog area would be re-designated by City Council action from open space to parkland, allowing for the more active recreational use at the site, removing approximately 33 acres from the City's overall open space inventory.

Additional Site Option Considerations (if Off-Leash Dog Area Option Selected)

- **Relocate Simms Street Parking:** Close the Simms Street parking lot and relocate that parking to the 100th Avenue parking by expanding that lot by 59 spaces (would require a small adjustment to the new concrete trail). Automatic gates would close at dark but still allow parked cars to leave, allowing for easier enforcement of hours of operation.
- **Waste Receptacles:** Regardless of the Site Option selected, strategically located waste receptacles at all entrances to the off-leash area, including large underground containers accessible for easy emptying by maintenance crews. Smaller receptacles would be placed at other pedestrian entrances. (CAT recommended)
- **Fencing:** Enclose the off-leash dog area and Ditch with high-tension cable fencing to prevent dogs from entering contaminated water, busy streets, or ecologically sensitive areas. This style of fencing minimizes visual disruption and is less expensive than other options and relatively easy to repair. This fence design employs recommendations from the Colorado Parks & Wildlife "Fencing with Wildlife in Mind" publication for wildlife-friendly fencing.

Policy Recommendations

As a result of this community input and conditions assessment process, City Council direction is requested on the following policy items:

- Conduct a thorough review and propose updates to W.M.C. Title XIII Chapters 1 - Parks, Open Space and Community Building Regulations and 5 - Open Space Program related to operations, including consideration of muddy day closures, process for re-designations of open space/parkland occur, etc. (CAT recommendation related to muddy day closures);
- Depending on the Site Option selected, return for formal City Council action to re-designate the WHOS open space to parkland to allow for more active recreational use; and
- Depending on the Site Option selected, provide direction related to the potential relocation of the Greenway Trail.

Operations Recommendations

These recommendations apply regardless of the chosen off-leash dog area option:

- **Increase Operating Budget and Staffing:** Fully fund the maintenance and management of

the WHOS. Add four full-time Park Ranger positions for enhanced safety and enforcement patrols seven days a week. Current staff consists of four Park Rangers dedicated to Standley Lake covering a total of 2,248 acres and two new Park Rangers added in 2022/2023 dedicated to homeless issues across the entire City. The two Park Rangers dedicated to homeless issues also patrol the remaining 4,293 acres of open space and parkland, which includes the 1,000 acres of the WHOS. New Park Rangers would provide daily, year around enforcement and education at the WHOS to include on/off-leash, pet waste, open space/park closures, and parking violations along with increased enforcement along the entirety of our trails, open space, and parkland to include graffiti, vandalism, and parking violations. The additional 4.0 FTE Park Rangers would provide a heightened presence across the entire open space and parks system.

In addition, four Open Space Stewards are recommended to be added to focus on restoration and maintenance, working collaboratively with volunteers. The OSSP recommends 1.0 FTE Open Space Steward per 600 acres of open space. The City currently has 3,805 acres of open space and 3.0 FTE Open Space Stewards. At a minimum, the open space system needs an additional 3.0 FTE Open Space Stewards. With this limited staffing, the City has been able to restore very little of our open space. An additional 4.0 FTE Open Space Stewards would make the City whole for maintaining all the City's open space and allow for initial focus on the WHOS restoration.

In addition to staffing needs, 4 pickup trucks (one pickup truck for every two employees) would be needed to support this staffing request. Other equipment needed to support the WHOS and citywide open space restoration and maintenance will be identified should new staff be considered based on this request. Any new equipment needed could be requested in future CIP or operating budget processes based on current and future prioritization of open space best practices. These specific items would be refined should new staff be considered viable per City Council direction. (CAT recommended allocation of staffing and financial resources to implement CAT recommendations)

- **Trail Network Development:** Design a user-friendly looped trail system with short, medium, and long options catering to various fitness levels and/or time availability. Close and restore social trails and existing trail network with this user-friendly looped trail system (see Trail Circulation Improvements recommendation). (CAT recommended)
- **Community Partnership:** Partner with the community to establish a "Friends Of" group to support maintenance and improvements at the WHOS through a public-private partnership. Encourage regular volunteer clean-up and landscape restoration days. Host stewardship education 'pop-ups' on-site with potential volunteers and staff. (CAT recommended)

Capital Improvement Recommendations

- **Wildlife-Friendly Fencing:** Install high-tension fencing to delineate the off-leash dog area perimeter, buffer zones near residences, and restrict Ditch access.
- **Trail Circulation Improvements:** Design a new looped trail system that allows for a variety of distances. Block and restore social trails and abandoned designated trails. Align new trails to avoid sensitive areas. Strategically place waste containers and dog waste bag dispensers throughout the trail network. Explore bridge replacement and potential additional bridge construction over the Ditch (requiring an agreement amendment with the Ditch Company). (CAT recommended)

- **Parking Improvements:**

- Close the Simms Street parking lot and relocate the 59 parking spaces to an expanded 100th Avenue parking lot/trailhead (i.e., retain the same total number of parking spaces but all located at the 100th Avenue parking lot/trailhead). Expand the 100th Avenue parking lot to compensate for the closure of the Simms Street parking lot. Include amenities such as signage, portable restrooms, and a drinking fountain. Implement automatic gates with scheduled closing times and automated exiting.
- Revegetate and restore the former Simms Street parking area and create a pedestrian entry point to the WHOS for surrounding neighborhoods. If Simms Street parking remains, consider a weekend permit zone on nearby neighborhood blocks. If a neighborhood parking permit zone is created, additional parking enforcement resources in the Community Services Department will be necessary as well as updates to the W.M.C. allowing for residential parking permits not associated with a senior high school. (Attachment 11 – Potential Parking Permit Area Map) (CAT recommended parking permit strategy.)
- Add automatic gates that close off parking at dark while still allowing parked vehicles to exit. In addition to the gate equipment necessary, this will require electricity to be pulled to the appropriate parking lot for an automatic gate to operate. (CAT recommended)
- **Signage:** Implement an effective signage strategy that includes regulations, educational content, trail information, and site identification elements. Signage should align with the PRL Signage Master Plan with messages presented positively and include interpretive information about the natural history and history of human use in the area. (CAT recommended)
- **Natural Lands Restoration:** Continue restoration efforts to return open space areas to the original shortgrass prairie ecosystem, increasing biodiversity and expanding current invasive plant management practices. Establish buffer zones near residences and along the ditch.
- **Off-Leash Area Amenities:** Create designated throw and fetch areas and an agility course within the off-leash dog area to provide additional recreational opportunities for dogs. Install strategically placed shade structures for visitor comfort.

Staff is sharing these findings with PRLOSAB on Thursday, May 30. The members of the CAT have also been invited to attend. Staff will share with City Council at the June 3 Study Session any feedback received in the PRLOSAB meeting.

The feedback from the CAT, the Westy Dog Park Guardians, the Conditions Report, and the statistically valid survey results informed the recommendations included in this document for the future management of the WHOS. Staff is seeking direction related to the overall site configuration as well as policy, operational, and capital improvements. Upon direction from City Council on these items, Staff will integrate them into an overall management plan for the WHOS site. Implementation of the management plan will take time. Staff will return with actions related to any potential re-designation of open space to parkland as amendments to the W.M.C. and when the necessary capital improvements are ready to proceed.

City Council providing direction related to the short and long-term operations and maintenance of the WHOS supports all of the City's Strategic Priorities. The goal of Access to Opportunity is supported through improvements to the WHOS site to allow for more trail options for various ability levels will improve access with increased mobility options promoting social connections and shared access to

this important City-owned site. The goal of Community Empowerment and Engagement is supported through shared use of the WHOS site by all stakeholders creating opportunities to build a stronger sense of community and connection; including a formal volunteer group will increase community members' understanding of the importance and value of the WHOS. The goal of Community Health and Safety is supported by investing in better management of the WHOS site, improvements to the safety and environment are expected with fewer dog/bike conflicts, fewer dog-to-dog conflicts, fewer invasive species and more biodiversity, and improved habitat in those areas not dedicated to off-leash dog activities. The goal of Economic Vitality is supported by making accessible the sweeping vistas of the Rocky Mountains and access to nature and the outdoors with an improved level of maintenance at the WHOS, enhancing the quality of life and the value of adjacent residential real estate while also continuing to draw visitors and new residents from across the region, regardless of the selected land management option. The goal of Resilient Infrastructure is supported by elevating the level of maintenance and operations for the WHOS that will maintain and enhance the ecological health of the landscape; a new trail system and enhanced landscape will allow for better enjoyment and continue to attract visitors to Westminster to live, shop and play. The goal of Organizational Vitality is supported through the implementation of the OSSP, establishing and maintaining a supportive environment where staff are equipped and empowered to excel; this includes strategically addressing staffing needs by adding Open Space Stewards, Park Rangers and an expanded volunteer corps.

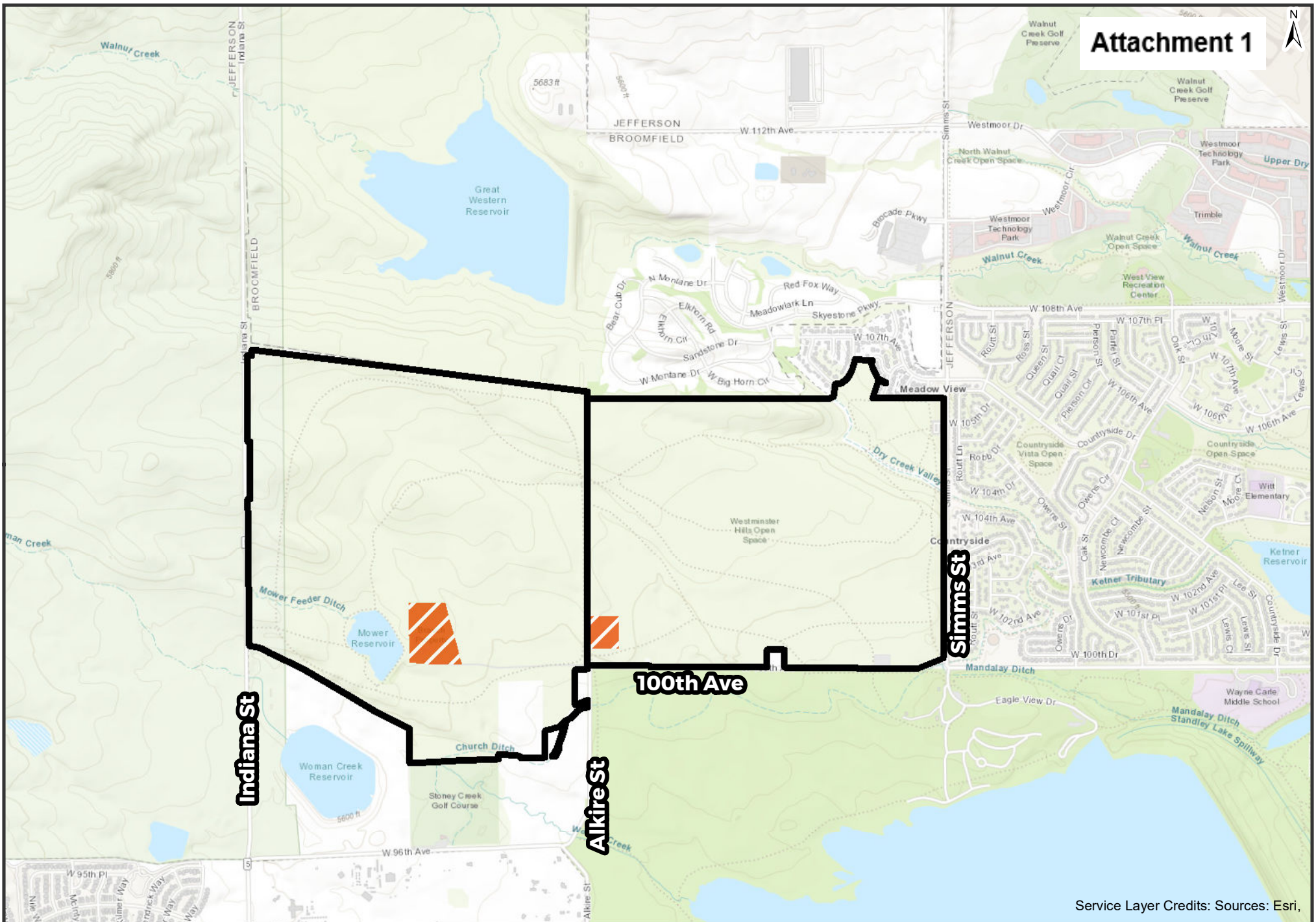
Respectfully submitted,

Mark A Freitag


Mark A. Freitag
City Manager

Attachments:

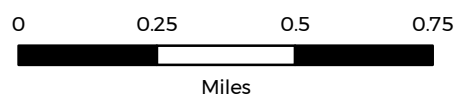
- Attachment 1 – Vicinity Map
- Attachment 2 – 2014 Open Space Stewardship Plan
- Attachment 3 – W.M.C. Title XIII, Chapter 5 Open Space Program
- Attachment 4 – Regional Dog Parks and Open Space List
- Attachment 5 – WHOS Imagery Over Time
- Attachment 6 – Habitat Impact Zones
- Attachment 7 – Westminster Hills Open Space Conditions Report
- Attachment 8 – CAT Meeting Synthesis & Next Steps (Key Decisions, Action Commitments, and Next Steps)
- Attachment 9 – Westy Dog Park Guardians WHOS Dog Park Research and Recommendations
- Attachment 10 – WHOS Off-Leash Dog Area Options Maps
- Attachment 11 – Potential Parking Permit Area Map
- Attachment 12 – WHOS Policies, Operations, and Capital Improvements Management Plan Options Presentation



Service Layer Credits: Sources: Esri,

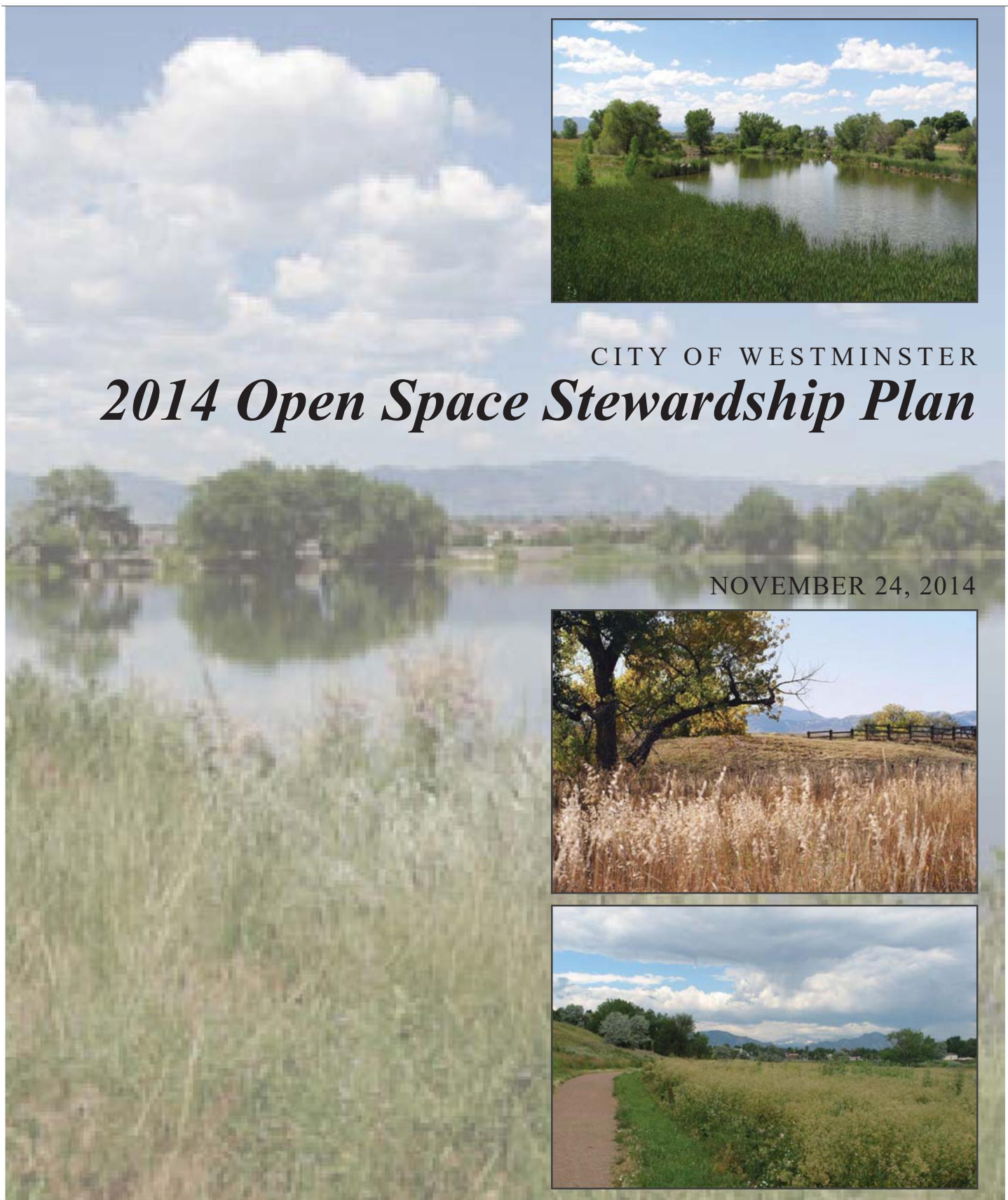
 Project Area
(1050 Acres)

 Excluded Area





WESTMINSTER



CITY OF WESTMINSTER
2014 Open Space Stewardship Plan

NOVEMBER 24, 2014





Acknowledgements

Westminster City Council

Herb Atchison, *Mayor*

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Land Stewardship

The responsibility of a community to preserve the quality and abundance of its natural resources and to manage them in a way that conserves all of the environmental, economic, social and cultural values for future generations.

City of Westminster Department of Parks, Recreation and Libraries Mission Statement

Together we create exceptional opportunities for a vibrant community with a commitment to nature, wellness, and literacy.



Overview

In 1985, voters in the City of Westminster approved a sales tax specifically earmarked to acquire and maintain open space within the city. At that time, the City of Westminster Open Space Program was only the second municipal sales tax funded open space program in the state of Colorado. Since then, the City has preserved more than 3,000 acres of open space. This is nearly 15% of the City's land mass which was the goal established when the program began.

These lands are valuable resources offering multiple benefits. For the natural environment, preserved open space protects vulnerable ecosystems from development, preserves unique features, and provides an opportunity for wildlife movement through the City with seamless natural habitat. For the public, open space provides "breathing room" between developments, fosters appreciation of the natural environment, provides increased passive recreation opportunities, preserves mountain views, and improves quality of life.

While property preservation through acquisition is the first step, active stewardship in perpetuity will ensure public amenities and natural resources are available for future generations to enjoy. This Stewardship Plan is intended to serve as a guide for current and future open space management, rehabilitation, enhancement, and sustainability for passive recreational uses in an effort to protect natural resources while ensuring high-quality visitor experiences now and in the future.

History

Water transport via creeks, canals and irrigation ditches was critical for survival and early settlement of Westminster. Livelihoods relied on the availability of water rights for farm crops and residences. The location and importance of waterways to deliver water shares played a critical role in the development of Westminster, and subsequently, the current location of open space corridors within the City's existing framework.

Although Westminster was incorporated in 1911, the City's Parks and Recreation Department didn't exist until 1972. Soon thereafter, the 1973 "Park and Open Space Master Plan- North & West Areas" provided the first formally-adopted guidance for securing property for open space use along naturally occurring drainageways. The Plan specifically stated that the City:

"...should consider securing a strip along Big Dry Creek and Walnut Creek at a minimum of 200 feet in width. This width should be expanded wherever the character of the terrain makes it logical to do so. In this way, most of the natural area along the drainages could be maintained in public use."

Coinciding with rapid development and expansion of the city, the document provided a framework for open space acquisition and preservation. Since that time, Westminster has actively protected drainage corridors from development through Public Land Dedications (PLDs), Fees-In-Lieu of dedication, and direct purchase funded by voter-approved Open Space Sales Tax Revenue. The City also restricts development from occurring within designated flood plain areas. The drainages serve as trail corridors and provide critical links to regional trail systems. Because of the foresight of prior administrations who were committed to open space acquisition, existing residential, commercial development and parks are linked to the open space framework, which has become a celebrated component of the Westminster community.

The City has created a comprehensive network of linked open spaces through acquisition of properties along key creek, drainage, and irrigation canal corridors. These corridors provide residents throughout the City convenient

access to open space and various resources within the City and to trail connections accessing the larger, more complex system of regional trails throughout the greater metropolitan area. Currently, the City maintains 118.5 miles of off-street trails. Major and minor trail systems comprise 105.63 miles and natural trails total 12.87 miles.

Corridors provide essential connectivity of open space and link stand-alone refuges to create a biotic community. For permanent or semi-permanent corridor dwelling species such as plants, insects, reptiles, amphibians, small mammals, and birds, continuity may reduce habitat fragmentation effects created by surrounding development and may allow greater dispersal or recolonization for native wildlife and plants by facilitating physical movement.

The value of the open space properties already preserved is significant when viewed in the context of naturally linked corridors. Much of the Walnut Creek, Big Dry Creek, Little Dry Creek, and Farmers' High Line Canal corridors are preserved and owned by the City. Further, these corridors extend westward outside the City limits to thousands of acres of open space, including Rocky Flats National Wildlife Refuge and Great Western Reservoir Open Space. Extending the reach of natural corridors through the City provides exceptional value within and outside of the City to habitat, scenic quality, and public recreation opportunities.

Current Acquisition Trends

Since the inception of the Open Space program in 1985, trends in open space acquisition and the disposition of those properties have changed dramatically. Large residential and commercial development is being supplemented by infill projects. The easily-obtainable undeveloped open space parcels have been acquired, and remaining pristine, undeveloped parcels- as well as available funding for outright purchase- are difficult to obtain.

The high cost and limited availability of land within the City now makes direct purchase of properties for preservation or recreational purposes expensive and challenging. Potential open space properties are also attractive to developers, making even small open space purchases less affordable given available open space acquisition funding.

For the City of Westminster, the future trend should be to target new open space acquisitions very specifically for the purpose of completing missing links in the local and regional trail systems and to supplement, or widen, current open space properties. Key properties that provide existing missing links to open spaces and those with significant natural resource or historical value should be a priority.

Current Management Trends

In 1985, voters approved a 1/4 of 1% sales tax dedicated to open space acquisition, and the focus and priority has been on acquisition and preservation of land. This priority was necessary in order to preserve as much land as possible with the available sales tax funds. Over the years, the voters extended the tax and included park and recreation acquisitions and improvements along with bonding capacity. The support of the residents in three separate sales tax votes as well as the issuance of the bonds enabled the City to leverage funds and acquire lands that were slated for development. Because of these actions, the City of Westminster has preserved 3,063 acres of prized lands that boast a wide diversity of natural resources.

Now that the City of Westminster Open Space program is well on its way to fulfilling the goal of 15% of the City's land mass as open space (currently 14.2%), the shift of priorities and focus swings to the management and stewardship of these properties; almost one-third of the City of Westminster is "greenspace": parks, open space and parks owned by homeowner associations. These natural resources must be managed in a way that will uphold and enhance the integrity of their environmental, economic, historic, and cultural values. The Open Space program has in the past focused on the preservation of the lands, and rightfully so. Now, it is time to start focusing on the stewardship of these lands in order to conserve them for future generations.



Goals of the 2014 Open Space Stewardship Plan

After several decades of planning and acquisition, the City of Westminster's open space system now requires a thoughtful approach to long term management of treasured and valuable assets. The 2014 Open Space Stewardship Plan contains tools that will allow city staff to make decisions concerning land management needs, acquisitions, trail usage, and future capital improvements. Focusing heavily on land stewardship, this plan will identify open space land management responsibilities, associated costs, needed resources, and future projected capital improvements. The goal of this plan is to provide a foundation that can be used to assemble an open space management program at a level that is complete and comprehensive.



General Management Classifications

The City of Westminster 2014 Open Space Stewardship Plan identifies classifications for managing open space and addresses resource management, maintenance, and access. Open Space lands have been analyzed and categorized into a series of five Management Classifications based on site natural features, status or condition of site, site function and, if applicable, the historic value of a site. Open Space parcels may be comprised of one or multiple classification categories.

1. Sensitive Landscape Management Areas

Total Acreage: 78 Acres*

Sensitive landscape open space parcels include sites that have high value landscape features such as threatened and endangered species, wetlands, or relatively complex rich plant communities. Such parcels have the highest value for flora and fauna when viewed at both the localized and community-wide level.

Management Strategy

- » Preserve the resource as the primary goal.
- » Recreational uses should be restricted to designated trails. Efforts should be made to close and revegetate all social trails in the area.
- » All trailheads should include education and regulation information.
- » Noxious weed management in the area should concentrate on eradication, as well as Russian olive tree removal.



Existing Cottonwood/Snowberry plant community along Farmers' High Line Canal west of US 36 and east of Trendwood Park

Examples

Colorado Butterfly Plant at locations along Walnut Creek and Cottonwood/Snowberry plant communities along the Farmers' High Line Canal from Westminster Parkway east to Sheridan Boulevard.

2. Urban Natural Landscape Management Areas

Total Acreage: 1,815 Acres*

Urban Natural landscape parcels include sites that are natural in appearance, accommodate wildlife, and allow people to access non-developed environments. These sites do not include special features or particularly unique or rare species.

Management Strategy

- » Maintain and enhance a stable, non-erosive, natural, naturalistic landscape including both native and desirable non-native plants, including eradication of noxious weeds.
- » Encourage public access with formalized trails.



Big Dry Creek Open Space

Examples

The majority of the Big Dry Creek corridor from west Wadsworth Parkway to Standley Lake Dam.

**Total Acreage of Management Area does not include open water, parking, or open space access road acreage within an open space area.*

3. Transitional Landscape Management Areas

Total Acreage: 393 Acres*

Transitional landscape management areas include sites undergoing restoration or sites scheduled for restoration and/or enhancement. This is a temporary classification until site improvements are completed, at which time the site can be reclassified as *Urban Natural* or *Sensitive* landscape.

Management Strategy

- » Achieve a stable, non-erosive condition through weed mitigation and revegetation so that these areas can eventually be reclassified as *Urban Natural* or *Sensitive* as a result of stewardship strategies.
- » Public access may be temporarily limited.

Examples

Along Big Dry Creek Corridor: from north of 120th Avenue to south of 128th Avenue former prairie dog colony sites require reseeding and extensive weed control.



Big Dry Creek Open Space

4. Functional Landscape Management Areas

Total Acreage: 332 Acres*

Functional landscape management areas include sites that serve a specific functional purpose, such as a dam, and are not associated with natural diversity, high value landscape, or public access.

Management Strategy

- » Achieve and maintain a stable non-erosive condition, natural in appearance as an unprogrammed space or as part of a singular purpose function.
- » No direct public access is provided, but appearance is an important concern.

Examples

The roadside infield between Westminster Parkway and US 36, the grassed drainage area at Quail Creek Open Space north of Amherst Park. All trails/ditch corridors where the function of the ditch takes priority. The future park site at Bradburn development.

Noxious Weed Management
Noxious weed management is required by law and should be a high priority in both the *Sensitive* and *Urban Natural* landscape management areas. The potential for successful restoration of riparian and upland communities, coupled with a comprehensive education program, is high and should be pursued.



Little Dry Creek Open Space

**Total Acreage of Management Area does not include open water, parking, or open space access road acreage within an open space area.*



5. *Historic/Agricultural Landscape Management Areas*

Total Acreage: 208 Acres*

Historic/Agricultural landscape management areas include sites identified as Historic Resources by the City of Westminster, including structures and cultivated fields or orchards, and sites with features related to the development of agricultural surface irrigation. These sites are critical to the City's community branding efforts that seek to identify Westminster as a city that has grown from and maintains connections to its agricultural roots.



Metzger Farm

Management Strategy

- » *Historic/Agricultural* landscape management areas should be restored to an *Urban Natural* landscape character or in some tracts, be retained as agriculture. Sites may be leased out for agricultural purposes, and during the lease period the following guidelines should apply:
 - **Future Potential Use:** Agricultural sites may be used for grazing, haying or winter wheat. Smaller tracts may be developed as community gardens.
 - **Ornamental and non-agricultural plantings:** The restoration of historic structures may include the development of historic landscapes. In general, only native species should be planted and the introduction of exotic species should be discouraged.
 - **Public Access:** Open space areas classified as *Sensitive* may be posted with "No Trespassing" signs to restrict access to only those with business on the site. No hunting, motorized recreational vehicles or other recreational activities will be allowed on site.
 - **Weeds:** Lessees are required to control noxious weeds on site. Lessees must observe all applicable county, state, and federal regulations
 - **Billboards:** Prohibited.
- » Develop a master plan for each site in the Open Space System that has been identified as an *Historic Resource* by the City of Westminster. At a minimum master planning efforts should:
 - Identify goals and objectives for each site and for each site's role in the City's Open Space System.
 - Identify goals and objectives for the preservation and restoration of each historic structure.
 - Identify potential uses for each historic structure, including specific end users/user groups for each structure, and if there is value to be realized by programming specific uses for historic structure(s).
 - Identify opportunities and constraints for appropriate public access.
 - Identify opportunities for education, interpretation, and for reinforcing City of Westminster branding as a suburban city that has evolved from but still celebrates its agricultural heritage.
- » Establish an inventory of remnant cottonwoods along historic ditches. Mature cottonwoods along existing and historic ditches are an historic cultural resource; in many cases, they are the last visual and physical manifestation of Westminster's agricultural heritage. Many cottonwood groves are a result of lateral ditches that are no longer in use. There may be several opportunities for successional planting as a means of maintaining an important historic attribute that is readily understood by local and regional residents.

Examples

Metzger Farm, Church's Stage Stop, Semper Farm, Lower Church Ranch, The Ranch Open Space

**Total Acreage of Management Area does not include open water, parking, or open space access road acreage within an open space area.*

Identifying Open Space Management Areas

The City of Westminster Open Space Program is shifting toward an emphasis on stewardship and away from an emphasis on land acquisition. The transition requires identifying diverse attributes of a management program through field verification and mapping, and supplementing the inventory with a user-friendly matrix that reflects inventory, acreage, site attributes and management costs. The matrix serves as an operational tool that can be easily updated as specific management areas are improved. Each Management Area will be monitored based on physical attributes, characteristics and visual access from adjacent properties. Management Areas should be named based on local geographical features, wildlife and/or role of the site in heritage of the community. Each Management Area should then be classified based on the above criteria. It is worth noting that a specific Management Area could potentially receive more than (1) classification.

General Management Guidelines: Site

The General Management Guidelines provide a framework for addressing the most common issues facing open space stewardship.

Landscape Management

Management of urban open space is subject to a number of forces including:

- » **Fragmentation:** Large scale, stable ecosystems in the semi-arid west become vulnerable when reduced in size by encroaching urban development. Prairie dogs confined to small tracts within an urban environment can damage undeveloped lands. Similarly, historic uses such as grazing horses and cattle kept in small, fenced enclosures have ecological impacts on large tracts of land, reducing the value of the open space to the community.
- » **Urban development:** People, dogs, vehicles and the weed seeds they carry are continually brought into close proximity with sites already vulnerable due to fragmentation. Urban development also affects regional and local hydrology, disrupting the underlying seasonal patterns critical to reestablishing and maintaining natural/native landscape.
- » **Drought conditions:** Fifteen years of drought conditions have weakened existing natural resources within the open space system and made dryland restoration more difficult. Uniformly restoring native plant material and/or communities is difficult in this environment, but those ideals remain the foundation of recommended management and restoration practices.

Revegetation

Establishment of native vegetative cover (excluding noxious weeds) is critical to minimizing long term maintenance of open space. Vegetation serves multiple purposes, including prevention of erosion and control of introduced weed species. Guidelines for revegetation planning include:

- » **Plant Materials**
 - Use seed mixes adapted to site-specific soil types
 - Use native species, adapted to specific soil types, to the extent possible
 - Use alternatives to native species (Ex.: Smooth Brome) where the need to stabilize a particular site is deemed to outweigh the potential for establishing native revegetation
 - Do not use bluegrass and/or other species requiring irrigation
 - Use containerized nursery stock for wetlands, trees and shrubs
 - Obtain live stakes, willow bundles and cottonwood poles from local, on-site sources, whenever possible
- » **Site Preparation**
 - Implement no-till seeding improvements, which reduces the introduction of weeds and minimizes loss of soil moisture.
 - No fertilizer or soil amendments will be added to the soil



- » **Seeding and Planting**
 - Following CDOT seeding specifications, seeding should be conducted in the following seasons: Spring Seeding is Spring Thaw- June 1st and Fall Seeding is September 1 to Ground Freeze
 - Drill seed wherever possible. Depth to be 1/3" to 1/2" wherever possible
 - Broadcast or hydro-seed on slopes steeper than 3:1 or on other areas not practical for drill seeding
 - Double seeding rates for broadcast seeding or increased by 50% if using a Brillion drill or hydro-seeding
 - Mulch all seeded areas with straw mulch. Mulch to be crimped in place
 - 80% of established coverage is considered successful. From 5'-0" height, field inspectors should observe 80% coverage of seeded area.
 - Conduct mulching as a second, separate operation if hydro-seeding
 - Install live stakes, willow bundles and cottonwood poles when dormant
 - Provide beaver protection for trees and shrubs known to be attractive to beaver
- » **Maintenance**
 - Inspect new installations at regularly scheduled intervals following planting.
 - Limit access to recently revegetated areas with temporary fencing and educational signage for the first year of establishment
 - Control weeds on site (See "Weed Management" below)
 - Maintain mulch by adding or redistributing material as required
 - Repair areas of erosion
 - Water trees or shrubs monthly from April through September until established

Noxious Weed Management

There are several reasons to manage noxious weeds. The Colorado Noxious Weed Act (2003) and the Federal Noxious Weed Act (1974) require that certain weeds be eradicated. In addition, the Federal Noxious Week Act *mandates* the eradication of certain species. Many weeds choke native plants and often impact the aesthetic integrity of open space. The goals of the Colorado Noxious Week Act aim to:

- » Prevent the introduction of new invasive plant species,
- » Eradicate species with isolated or limited populations, and
- » Contain and manage those invasive species that are well established and widespread.

Goals for Noxious Weed Management for the City of Westminster Open Space expand upon the aforementioned goals:

- » Use an integrated management approach to reduce acreage of Open Space infested with weeds.
- » Prevent the establishment of weedy species within Open Space
- » Establish a weed (and undesirable non-native tree) inventory and monitoring program
- » Create or continue mutually beneficial partnerships with other interested jurisdictions.

Effective integrated management requires the use of the following methods:

- » **Biological:** release of insects native to same regions as exotic plant. The City has also used goats to control noxious weeds at Westminster Hills Open Space. Approximately 800 goats were on site to eat noxious weeds such as Myrtle Spurge, Hoary Cress, and Knapweed. The goats naturally prefer eating weeds over native grasses and eat the entire plant, including any seeds. They have triangular-shaped mouths which grind up the seeds and make them virtually inviable by the time they pass through their body, leaving only organic fertilizer. Their hooves are split and pointed which act to aerate the soil as they graze.
- » **Chemical:** Use of herbicides and insecticides
- » **Cultural:** Cultivation of more desirable species

- » **Mechanical:** Mowing, pulling, burning etc.
- » **Mowing:** Mowing occurs several times a year along trails, fence lines and roadways. Mowing may also be employed to control noxious weeds.
- » **Educational:** Provide public with relevant information on weed management.

Local governments are directed to manage weeds in their jurisdictions. The following noxious weed lists are included in the Appendices:

- » **Colorado Department of Agriculture County Noxious Weed Program - List by County**
(Adams County, Jefferson County)
- » **Colorado Department of Agriculture Noxious Weed List**
(<http://www.colorado.gov/cs/Satellite?c=Page&cid=1174084048733&pagename=Agriculture-Main/CDAGLayout>)
- » **014 Jefferson County Noxious Weed List**
(Website- <http://www.co.jefferson.wa.us/WeedBoard>)

Undesirable non-native trees and shrubs include Russian olive, salt cedar, tamarisk and siberian elm. No new plantings of these species are permitted. Existing non-native trees should be removed and replaced with native species as appropriate. Prioritization of removals will be determined in the Noxious Weed Survey (in progress).

Streambank Erosion

Erosion measures may be required along major channels like Big Dry Creek, Little Dry Creek or Walnut Creek as well as tributary channels like Tanglewood Creek or Hyland Creek. Other erosion control measures may also be required at lake or pond outfalls or to repair rills that develop where sheet flows concentrate over the very broad hillsides above Big Dry Creek.

Erosion control measures include:

- Boulder Channel Edge
- Rip rap
- Buried rip rap
- Installation of erosion control fabric in conjunction with revegetation
- Installation of small culverts where sheet flow concentrates and erodes trails.

Trail Construction

See Trails Master Plan for trails specification.

Fencing

Fencing may be required for protection of natural resources, direct public access, recreational use and to identify open space sites. Uses and types include:

- Fencing at select areas along open space perimeters and at areas to direct access to trails will be buck and rail wooden fence.
- At trailheads, parking and at select street frontages.
- Fencing to protect natural resources will be four strand wire or welded wire installed per CDOT M standards. No barbed wire will be used for any fencing except where grazing at *Historic/Agricultural* areas may require barbed wire.
- Protection of transitional areas during seed establishment.
- Isolation of areas for restoration of *Urban Natural* landscapes in the Westminster Hills Open Space dog off-leash area and other potential/future sites as necessary.
- Protection of wetlands or marsh areas adjacent to areas leased for grazing at *Historic/Agricultural* areas.



New Structures

Rare, constructed only to meet carefully defined site needs, i.e. wildlife viewing blind, or small maintenance storage at a remote location.

General Site Clean-up

Trash receptacles located at all open space parking lots and/or site entrances; receptacles are emptied at least once a week (or on a regular basis).

Dog Feces Pick-Up

Bags are located at all open space parking lots and/or site entrances, access trails, and dog parks.

Litter Clean-Up

Regularly scheduled clean-up efforts are needed throughout the City's Open Space System, which currently include those conducted by City of Westminster Volunteer Program and during Community Pride Day.

Incident Clean-Up

Certain incidents such as weather-related or accidents that require special clean-up. Clean-up, when required, will be by Open Space Maintenance crews or qualified personnel.

General Management Guidelines: Wildlife

The Open Space System is comprised of long, continuous drainage corridors and is rich in potential wildlife habitat. Wildlife management goals in an urban environment include:

- » Protecting wildlife and wildlife habitat,
- » Educating the public about what to expect when interacting with wildlife as well as the value of open space to humans and wildlife,
- » Controlling (when necessary) wildlife populations exceeding carrying capacities of the land,
- » Minimizing encroachment on private property, and
- » Minimizing wildlife and human conflict.

Artificial Structures

Artificial structures such as perches, birdhouses, bat houses and artificial nest structures are limited to those needed to enhance or protect endangered or threatened species and some structures may be installed without a permit.

Existing Wildlife Policies

Feeding: *Coyote Management Plan 2009*

Native species reintroductions: *N/A*

Beaver: *Beaver Management Plan 2008*

Coyotes: *Coyote Management Plan 2009*

Deer: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Mountain Lions and Bears: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Norway Rats: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Prairie Dogs: *Prairie Dog Management Plan 2005*

Skunks and Raccoons: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Geese: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Other Waterfowl: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Raptors: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Native Songbirds: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Fish: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

Snakes: *Wildlife and Natural Resource Management Plan for Open Space Properties 2010*

General Management Guidelines: Regulatory

Refer to *City of Westminster Development Code Chapter 5: Sections 13-5-1 through 13-5-12.*

General - Regulatory

Concessions/Vendors: Prohibited in open space, unless approved by the PRL Director.

Noise/Disturbing the peace: Prohibited.

Littering/waste disposal: Prohibited except for the disposal of incidental items in trash receptacle provided for that purpose.

Plant Collection and Planting:

- Downed wood may not be removed or rearranged without a permit.
- Seed or plant collecting, which also includes cuttings from trees, shrubs, vines or wild flowers, is prohibited without a permit.
- Planting by anyone other than City of Westminster Open Space Maintenance staff or other designees in open space is prohibited without a permit.

Vandalism: Prohibited

Washing or bathing: Prohibited

Recreation - Regulatory

Open space is often construed by local residents as areas for types of recreation that often are considered passive and permissible on publicly owned lands. However, many types of recreation can negatively impact plant communities, wildlife populations and overall enjoyment and appreciation of nature by other users. In order to provide for visitor enjoyment and safety and to protect natural resources, the following recreational activities are not permitted:

Model Aircraft: Prohibited.

Alcohol: Prohibited.

Bicycles: Unless otherwise posted, bicycles are permitted on designated trails and within public right-of-ways only (refer to Trails Master Plan Diagram).

Boats: Non-motorized boats are permitted on Ketner Lake and McKay Lake. Canoes, kayaks, belly-boats and paddle boards are permitted. **All boat use is currently being reviewed by City of Westminster. Update when complete.**

Camping: Prohibited.

Curfew: Dusk to dawn.

Dog Walking: Dogs are allowed in open space but must be on a leash, unless otherwise posted, except within designated dog park areas. Persons walking dogs must immediately remove and properly dispose of dog feces.

Emergency/Public Safety Training:

Firearms: Prohibited.

Fires: Prohibited.

Fishing: Allowed with valid license required by Colorado Parks and Wildlife. All CPW requirements apply.

Ice Fishing: Prohibited.

Glass: Prohibited.



Group Events: Events involving more than 12 people require a permit.

Horseback riding: Unless otherwise posted, horseback riding is allowed on or within 10 feet of trails except to avoid imminent danger to other people.

Model Rockets, Motorized model vehicles: Prohibited.

Restrooms, drinking fountains: These facilities are provided at or near trailheads where appropriate and only as funds are available.

Roller skating/blading and skateboarding: Allowed only on roadways or designated trails.

Sledding, tubing, downhill skiing, and snowboarding: Prohibited except in designated areas.

Cross-country skiing: Allowed except in *Sensitive* areas.

Swimming/Wading: Prohibited.

(Swimming/wading access being reviewed by City of Westminster. Update when complete.)

Trapping: Not permitted to the public.

General Management Guidelines: Education/Interpretive

Education

The ongoing success of the City's Open Space Program depends on increasing the public's awareness of open space as an institution and promoting an understanding of natural systems and each individual's place within those systems. Goals for the educational component of the Open Space Program include:

- » Tell the story of the Westminster Open Space Program: Communicate a scientifically and historically accurate description and interpretation of the distinctive aspects of the Westminster Open Space System. For example, tell the story of how regional storm management, agriculture and surface irrigation systems have combined to influence the landscape in the Big Dry Creek corridor.
- » Create an awareness of the value of preservation of natural landscapes and resources therein, including water, wildlife, etc., in an urban setting and instill a sense of stewardship in the individual, neighborhoods and community toward open space.

Interpretive Features

Develop a thematically consistent approach to providing interpretive signage at strategic locations throughout the system. Features of the signage system should include:

- » Descriptions of natural systems in evidence along with their value and purpose;
- » Descriptions of how those systems have been influenced by their interface with urban development; and,
- » Identifying how the phenomena have contributed to shaping Westminster as a distinctive community.

Master plans for improvements and management of open space shall include an interpretive plan that defines interpretive goals for each site along with implementation strategies for meeting those goals.

General Management Guidelines: Leases

Leases

Leases on open space can be granted under limited special circumstances if they do not conflict with site management goals, and if open space lands remain accessible to the public for intended uses.

- » **Agricultural:** Agricultural/Historic sites may be leased out for agricultural activities as a means of reinforcing the site's interpretive plan or as a means of maintaining a stable condition prior to restoration.
Example: Fields at Metzger Farms could be cultivated by a lessee as a means of reinforcing the site's interpretive plan.

- » **Buildings:** Buildings located on City of Westminster Open Space property may be leased, based on goals and objectives identified during master planning of individual open space parcels.
Example: At McKay Lake residents were allowed to lease homes until the City is ready to complete site redevelopment.
- » **Grazing:** Leases may be granted at Agricultural/Historic sites as a means of reinforcing the site's interpretive plan.
Example: The Ranch leases the original open space parcel at Pecos Street and 120th Avenue for grazing.



General Management Guidelines Matrix Supporting Narrative

The Open Space Division is responsible for the stewardship of the City’s Trails and Open Space System. Responsibilities include grassland management, noxious weed control, mowing, management of lakes and fishing facilities, trail management, and maintenance of inventory associated with open space facilities and lands including fences, irrigation systems, pumps and signage.

Improved, systematic management and maintenance of open space require customized tools that reflect an accurate assessment and description of evolving conditions of individual open space tracts and trails.

As stated previously in the Stewardship Plan, as a result of the inherent fragmentation or natural areas, the ecology of the Westminster Open Space System is unstable. The major goal of the City’s Open Space Management is to create stable, healthy conditions of individual parcels and ultimately the entire system for the enjoyment of Westminster residents, visitors and, just as importantly, to reduce long term maintenance costs.

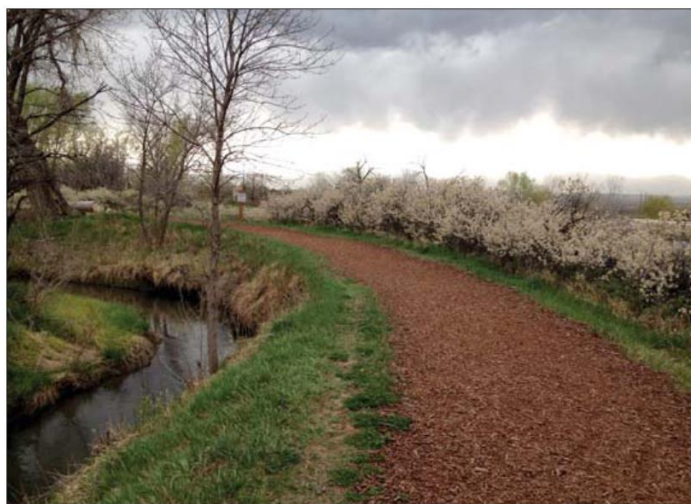
Moving Towards Adaptive Management

The Stewardship Plan recommends that the City work toward achieving a stable condition throughout the system by adopting a data driven “adaptive management” approach to maintenance. Adaptive management is defined as:

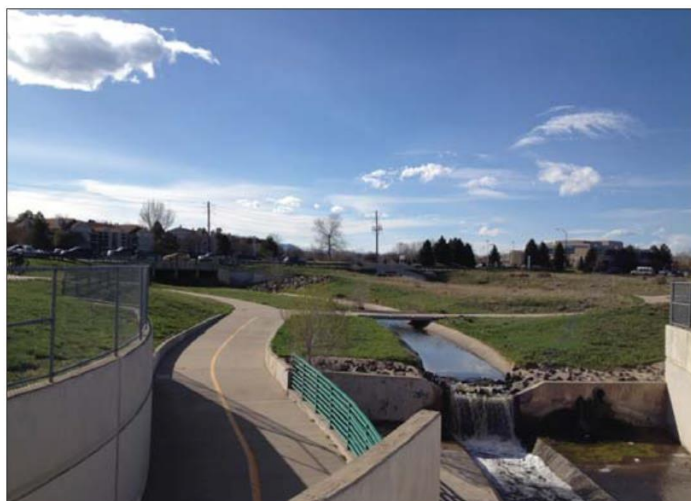
A structured process for decision-making in the face of constant uncertainty by means of monitoring, mapping and adjusting management practices according to assessment of new information. (See diagram on the following page)

Adaptive Management techniques have been utilized in traditional farming and gardening practices for millennia and have recently been adopted and promoted by the scientific community in acknowledgement of the difficulty of reestablishing an ideal, pre-development state or condition in a fragmented ecology.

General Management Guidelines Matrix and Map (large scale fold-outs) are included in the pocket at the end of this section.



Margaret’s Pond Open Space



Little Dry Creek Trail just west of Kennedy Park

The Adaptive Management Process

Visioning

- » Consider social, landscape/ecosystem, and land use issues
- » Identify short and long-term goals
- » Develop a statement of goals

Baseline Inventory

- » Inventory history, quality significance, relationships, and connections of existing resources
- » Gather specific baseline data
- » Identify relevant resource issues

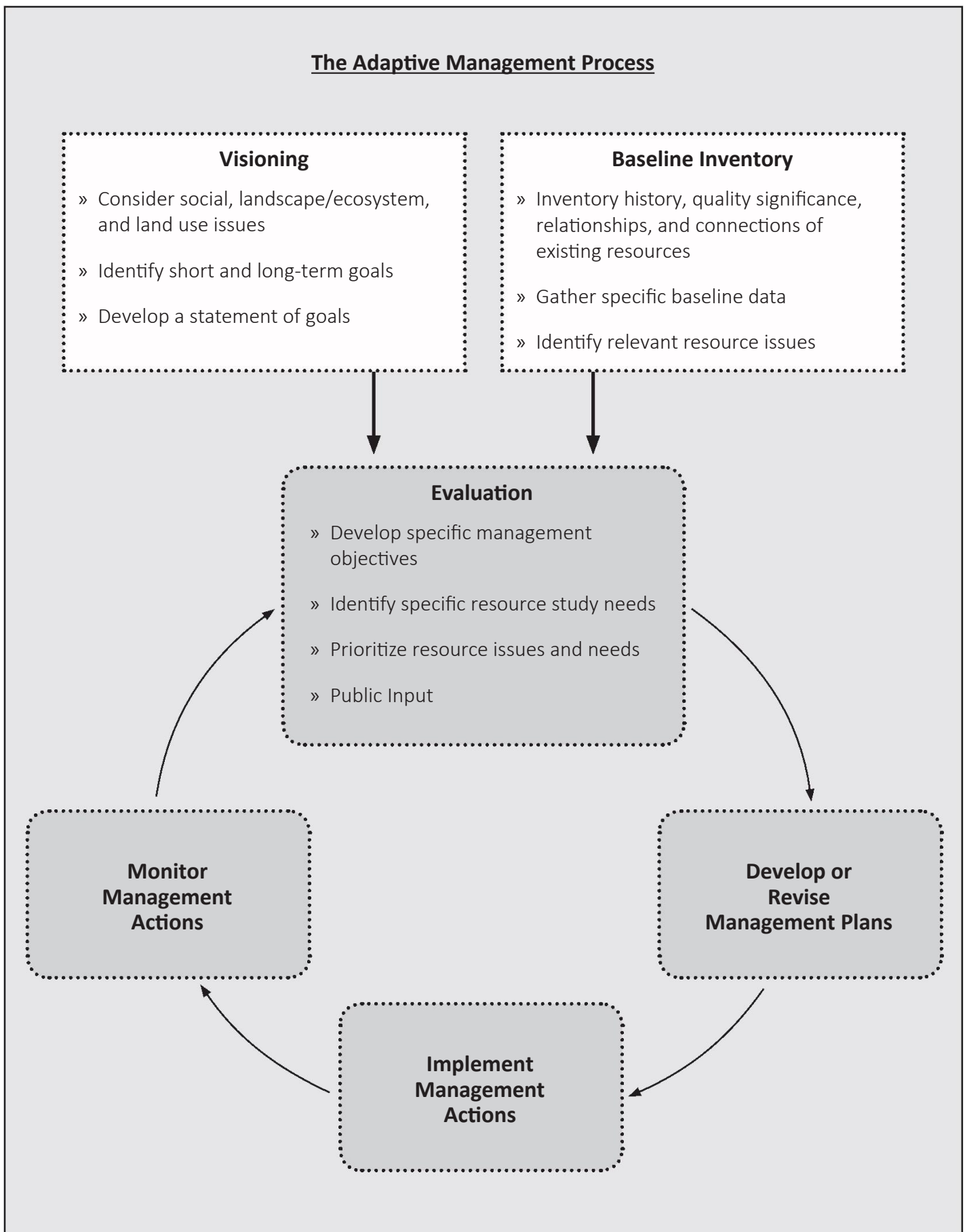
Evaluation

- » Develop specific management objectives
- » Identify specific resource study needs
- » Prioritize resource issues and needs
- » Public Input

Monitor Management Actions

Develop or Revise Management Plans

Implement Management Actions





The General Management Guidelines Matrix

The *General Management Guidelines Matrix* is a data driven, adaptive management tool intended to define and control management and maintenance costs. The *Matrix* organizes the City's Open Space System into contiguous **Management Areas** and designates a **Management Classification** for each area. The *Matrix* also includes an inventory of assets for each *Management Area*.

The *Matrix* builds a rational, defensible budget for maintaining open space lands through two sets of budget numbers. The first number describes typical land management activities for acreage in each of the Open Space Management Classifications. The second set of costs relate to the components or inventory items in each area. These numbers are broken out by Open Space Management Area and sub-area. The unit costs are described in a linked spreadsheet. When the unit costs are updated, they are reflected within the *Matrix*.

The *Open Space Management Classification* identifies a per acre cost for implementation of the *Integrated Pest Management Program* (defined below), and emphasizes weed control and revegetation, where required. The *Open Space Inventory* includes trails, fences, signs, paving, furnishings, pumps, irrigation systems, and assumes replacement or repair of a given percentage of each item at a given price, annually. All variables in either category can be updated over time to reflect changing conditions.

Current estimated annual costs for the City's Open Space Management and Maintenance are approximately \$500 per acre for a total of \$1,500,000.

Open Space Management Cost:	\$1,000,000 per year/\$333 per acre
Open Space Inventory/ Maintenance:	\$500,000 per year/ \$166 per acre
Total OS Management and Maintenance Costs:	\$500 per acre

Costs for areas designated *Transitional* are higher than other Management Classifications at an estimated \$1,700 per acre, annually.

<i>Sensitive:</i>	\$ 128.08
<i>Urban Natural:</i>	\$ 147.84
<i>Transitional:</i>	\$1,713.81
<i>Functional:</i>	\$ 152.70
<i>Historic/Agricultural:</i>	\$ 102.84

This greater, per acre cost is primarily driven by the need for extensive weed control and revegetation, which skew the overall per acre cost significantly. Once the *Transitional* areas are stabilized, they can be reclassified as *Urban Natural* or *Functional* areas and per acre costs will be reduced.

An example of a ***Transitional Management Area*** includes the large areas within Big Dry Creek Open Space from Sheridan Boulevard to 120th Avenue that were formerly colonized by prairie dogs. The prairie dogs died in an outbreak of plague and the remaining acreage is denuded and vulnerable to weeds.

Comparable Open Space Management Plans

This analysis and estimate is consistent with other, large scale studies for open space management including:

- » *Sonoma County Agricultural Preservation & Open Space District: Options for District-Owned Properties - Fee Lands Strategy, November 20, 2012 (See appendix)*
- » *Natural Lands Management Cost Analysis- 28 Case Studies, Prepared by the Center for Natural Lands Management for the Environmental Protection Agency, Grant # x83061601, October 2004 (See appendix)*

Each of these studies analyze multiple open space management areas in several different states and jurisdictions in an attempt to establish an average per acre cost for management and maintenance.

Another means of comparing the City's Open Space Management costs with other systems is to calculate acres of open space per full-time employee (FTE).

Based on information provided by the City, Westminster Open Space currently staffs two (2) full time employees (FTE) in field operations. With 3000 acres of land, this works out to a ratio of 1 FTE:1,500 acres. Comparable open space staffing ratios range from 1:100 to 1:1000 in the California studies. Local information on this topic is limited but ratios identified along the Front Range have ranged from 1:300 to 1:700.

Maintenance and Management in Westminster

The studies cited previously establish a similar range of costs per acre for open space management and acres per FTE. Each study acknowledges that variations in existing conditions of parcels and/or areas makes it difficult and challenging to establish an average per acre cost.

Per the *Sonoma County Agricultural Preservation & Open Space District: Options for District-Owned Properties - Fee Lands Strategy, November 20, 2012*, "... the number of unique conditions on each site that translate to management activities and costs precludes any simple estimating formula. The true denominator of the cost relationship is not only acreage but more importantly, public use/misuse, presence of invasive exotics, uses of the surrounding areas, edge effect and the quality and appropriateness of any restoration efforts."

Management vs. Maintenance

Management refers to overall planning and care for the land, including integrated pest and vegetation management.

Maintenance is the work involved in taking care of the inventory, the pieces and parts of the open space system.

The City of Westminster Open Space System has a high cost per acre ratio and a relatively low FTE per acre ratio. Examples of the conditions that contribute to Westminster's particular maintenance requirements include:

- » **Small, fragmented open space parcels increase the vulnerability to management and maintenance issues.** Per the studies cited above, a contiguous 3,000 acre site might be maintained in a stable condition for \$50.00 an acre per year. But small or narrower sites, typical of the Westminster Open Space System, are more vulnerable to weed infestation, and the corresponding increase of linear footage of site edge also requires maintenance and ongoing management.
- » **Wide distribution of small sites throughout the City:** The Westminster Open Space System is a corridor-based system that contains narrow corridors with significant adjacency issues (edges), as opposed to a green belt based system that contains large tracts (often full sections) of open space with fewer adjacency issues. Sites are located throughout the City and access to individual site incurs travel expenses.
- » **Maintaining site inventory in an urban setting:** Costs related to inventory comprise one-third of the projected management and maintenance costs. After the major transitional stabilization work is complete, the cost will be evenly divided between maintaining inventory and managing landscape, and ideally will remain so.

Again, per the *Sonoma County Agricultural Preservation & Open Space District: Options for District-Owned Properties - Fee Lands Strategy, November 20, 2012*, "existing preserve budgets were seldom a help in determining tasks because: 1) labor costs are grouped by the employee or the group of employees rather than broken into the tasks that are performed; 2) budgets also do not reflect amortization of equipment and other capital items already purchased and not yet ready to be repurchased; and 3) some preserves (or open space systems) simply don't have the budget to fulfill their mission over the long-term. The case studies represented (in the studies) are intended to transcend these limitations to reflect the average annual long-term cost of stewardship."



Open Space Management and Maintenance Level of Service

The *General Management Guidelines Matrix* shows an ideal annual maintenance budget of \$1.6M, up to \$673K of which is focused in areas classified as *Transitional* where weed control and revegetation efforts are critical needs.

Current Westminster Open Space Management budget, inclusive of salaries operations and materials is \$480K. The Westminster 2014 Open Space Stewardship Plan is recommending a minimum increase of \$445K with a focus on weed control, revegetation, and trails maintenance. This amount would fund three (3) additional Full Time Employees (FTEs) in field operations along with necessary equipment.

There are currently two (2) FTE field operations or one (1) FTE:1500 acres.

- » Broomfield and Aurora estimate they are at 1:600-700 acres (limited to estimates because they have personnel working in different systems: (ie: both parks and open space which provide different levels of service)
- » Adams County would not try to quantify FTE per acre because personnel work in multiple systems.
- » Thornton estimates they are at 1:350 acres but has a small, fragmented system with a high level of inventory developed on open space property.
- » Boulder and Jefferson County are not good comparisons because they have very large greenbelt holdings that do not require comparable levels of service.

This recommended increase for management and maintenance request will not cover the total budget reflected in the *General Management Guidelines Matrix* but it will:

- » Put the system on an equal footing with other, comparable systems in terms of FTE, field personnel per acre (1 FTE per 600 acres),
- » Allow measured progress on weed control in areas classified as *Transitional*, and
- » Improve the user experience along trails.

Identifying Management and Maintenance Needs

The *General Management Guidelines Matrix* identifies and projects preventive and recurring management and maintenance needs for facilities, site infrastructure and roadways. Using the *Matrix* will assist in establishing an annual budget, prioritizing management and maintenance activities and/or identifying where capital improvement projects are required.

The costs and schedule of maintenance can be calculated on a per unit basis and phased to achieve maximum efficiency and/or meet annual – and often fluctuating – budgets. Management actions can be planned and implemented on a recurring basis, or as single, one-time event. For example, recent allocations for revegetation projects are currently referred to by the City of Westminster as “*Capital Maintenance Projects*.” By implementing the *Matrix*, such projects can be more easily integrated into long-term budgeting exercises and can also be phased and/or prioritized, as budgets allow. This approach to site management will allow City staff to:

- » Share information and discuss proposed approach to maintenance needs with persons unfamiliar with existing site conditions;
- » Plan for long term, deferred maintenance;
- » Prioritize areas for attention both in terms of budget and in terms of reducing chronic problems; and,
- » Continue to adapt to changing conditions, such as unanticipated flood events or infestations.

Management Activities by Management Classification

Survey and Mapping

A comprehensive weed mapping survey of all City Open Space should be completed every five years and evaluated by Westminster Open Space Management staff. The survey should identify areas of noxious weeds that require control, as well as weedy areas that interfere with general management objectives. Because weed populations are a significant consideration for management classification, the survey should provide a feedback mechanism to update the *Matrix*. For example, infested acreage may be reclassified as *Transitional*, while stabilized areas will move from *Transitional* to *Urban Natural*. As the survey occurs on a five-year cycle, the frequency in the *Matrix* is noted as 0.2 times per year.

Integrated Pest Management (IPM)

Integrated Pest Management is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques including mechanical, chemical, biological, cultural, and education. Pest control options are selected and applied to support the ecosystem and minimize risks to human health, beneficial and non-target organisms, and the environment.

Integrated Pest Management in open space focuses on encouraging native species through weed control. Depending on the specifics of weed populations in any given year, any or all of the following techniques will be employed. The following expectations for a 'typical' year will vary depending on specific conditions.

- » **Mechanical:** Mowing or cutting targets both localized and systemic weed populations.
- » **Chemical:** Herbicides typically target local weed populations using backpack or ATV-mounted herbicide sprayers.
- » **Biological:** Goats will graze all vegetation, and insects can be used for specific weeds.
- » **Cultural:** Seeding will ensure that an appropriate seed bank is present. Portions of *Transitional* acreage will require reseeding to establish native grasses there.
- » **Education:** Educational components include signage, ranger programs and ongoing staff education.

Successional Planting

Many *Sensitive* areas include aging cottonwood stands and wooded areas. Successional plantings of young cottonwoods will provide a greater diversity of tree ages and increase the stability of this ecosystem that reflects the historic uses prevalent throughout the City of Westminster and is a visual remnant of the City's heritage.

Transitional Areas

The *Transitional* classification is intended as a temporary assignment (one to two year period, or until stabilized) for ecosystems moving toward *Sensitive* or *Urban Natural* classification. Areas in this classification have been subject to prairie dog colonies, weed infestations, deferred maintenance, or general neglect. The management activities described for these areas are intended to transform them into stable ecosystems, typically *Urban Natural*. The dog park at Westminster Hills Open Space has also been included as *Transitional* because of the high impact nature of the use requires an increased level of attention on an ongoing basis. (See *Cherry Creek State Park Dog Off-Leash Area Management Plan, October 2010*)

Prioritization

The *General Management Guidelines Matrix* supports a reasoned approach toward prioritizing funding in the event of budget shortfalls. For example, when all of weed control cannot be funded, prioritizing work upstream will limit the spread of weed seed downstream; or, as *Transitional* acreage is the most expensive to address, specific areas may be deferred to another year; or, funding might be targeted to the 'crown jewels' of the City's Open Space System or areas most visible from trails and streets.



Summary of Management Activities by Management Classification

- » *Sensitive* acreage shall be surveyed and mapped every five years. Integrated Pest Management will involve limited spot mowing as these areas have been identified as highly stable ecosystems, and funded for areas of successional planting.
- » *Urban Natural* acreage shall be surveyed and mapped every five years, with targeted mowing occurring up to 3 times a year.
- » *Transitional* acreage shall be surveyed and mapped every five years, reseeded and managed with a combination of mowing up to three times a year, broadcast herbicide, and biological controls to support seed establishment and gain control of aggressive weed populations.
- » *Functional* acreage shall be surveyed and mapped every five years and have spot mowing occurring up to three times a year.
- » *Historical/Agricultural* acreage shall be included in the survey and mapping every five years, and have spot sprays or mowing occurring up to twice a year.

Management Activities by Inventory Item

Beyond management of the land itself, all of the components installed in the City's Open Space System also require regular maintenance. The *Matrix* includes an inventory of these items that should be updated on a regular basis by City Open Space Management staff. System components and associated management activities that are currently performed, based on information provided by City Open Space personnel, are described below:

Trails

- » Concrete Trails: Sweep as needed, mow margins semi-annually, and remove snow as needed.
- » Aggregate Trails: Top-dress annually and repair as needed.
- » Natural Trails: Repair as needed.
- » Boardwalks: Inspect annually, repair as needed, and re-plank on a 10-year cycle.
- » Bridges: Inspect annually, repair as needed, and re-plank on a 20-year cycle.
- » Underpasses: Remove graffiti as soon as practical after being identified, service lighting, and clean annually.

Trailheads

- » Asphalt Parking Lots: Sweep and remove snow as needed. Annual inspections and repair include line repainting and pothole repair. Mow perimeter annually.
- » Aggregate Parking Lots: Top-dress, repair, mow perimeter and reset wheel stops annually.

Signage

Inspect, repair, and clear surrounding vegetation annually at all signs including informational kiosks, signage types 2-6 and plaques (see *Trails Wayfinding Strategy* section). Replace signs that include maps as maps are updated. Repaint City Open Space signs on an 8-year cycle.

Fences

Repair wood, plastic and wire fences as needed. Mow and trim twenty four miles of the open space side of property line fences annually.

Open Space Management anticipates adding an unspecified length of both wire and buck and rail fence on an annual basis. Actual quantities can be added to inventory of the *General Management Guidelines Matrix*. Funds for materials and installation currently come out of the Capital Construction Budget.

Site Furnishings

- » Trash vaults are located at the dog parks, and trash cans are located at trailheads. Empty, haul and dump trash.
- » Inspect benches and drinking fountains annually.
Open Space Management anticipates adding an unspecified number of benches to the City Open Space System on an annual basis, based on a prioritization plan. Funds for materials and installation currently come out of the Capital Construction Budget.

Buildings

- » Shade Shelters: Clean (using using high pressure hot water), inspect, repair, and clear surrounding vegetation annually. Repair includes painting and roof maintenance.
- » Structures: Inspect, paint, and repair including concrete, brickwork and windows annually.

Water

- » Open Water at Ponds: Treat for water quality, excess algae, sedimentation and mosquitoes.
- » Channels: Inspect and repair when damaged. Work includes placing riprap, fill material, erosion control fabric and seed.
- » Jurisdictional Dams: Inspect and maintain on a two year cycle per State mandate. Typical activities include riprap replacement, vegetation removal, and valve repair.
- » Overflow Structures, Floating Islands, Fishing Piers, Aeration Systems, and Irrigation Systems: Inspect and repair when damaged. Clean out debris and replace parts.
- » Dewatering Pumps: Inspect, test water, and service annually. The Department of Natural Resources regulates the permit for these pumps.
- » Aeration Systems: Repair parts as needed, replace pumps on a 5-year cycle.
- » Fish Stocking: Six ponds or lakes in the Westminster Open Space System have been identified for the stocking program through the Colorado Department of Parks and Wildlife. Annual stocking rotates through the six sites.

Other

- » Community Gardens: Maintenance includes fence repair, trash removal, and irrigation repair.
- » Dog parks include 20% of their acreage in the Transitional classification as that area is anticipated to require revegetation each year. Maintenance includes high pressure hot water cleaning, upkeep of entry signage, trash removal, and irrigation repair.
- » Hazard Trees: For public safety, prune or remove hazard trees from areas near and along trails and buildings, and prune away from fence lines.

A 'Wildlife Surcharge' is included in area with wildlife populations, based on maintenance costs for areas that host these populations. In areas with prairie dogs, control the population and reseed. In areas near beaver dams, wrap trees, install fences and provide manpower.



Summary: Decision Making and Prioritization Using the Matrix

The *General Management Guidelines Matrix* is a tool for exploring decision-making and prioritization within the Westminster Open Space System. The inventory and cost for maintenance and management activities are intended to be kept up-to-date. This will allow the implications of changes to be expressed for the entire system.

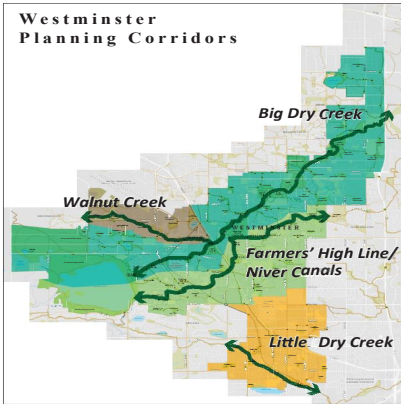
A few examples:

- » Feedback from the community suggests that additional resources be put into aggregate trails. The annual unit cost for maintaining those trails is increased on the *Unit Costs* spreadsheet to account for recharging the material more frequently. The cost implication ripples through the *General Management Guidelines Matrix*, providing an overall budget increase for this change.
- » Open Space Maintenance considers increasing visual inspections of all trails to once a week during the summer and once every three weeks during the winter. Increase the staff hours per linear foot of trail on the *Unit Costs* spreadsheet, and the implications are apparent for the entire system.
- » An outbreak of a new weed requires an increase in integrated pest management. Add one to the frequency of mechanical (mowing) treatments for each of the management classifications and the cost implication will update for the entire system.
- » A philanthropist announces a donation of five (5) new shade shelters to the City Open Space Division. Adding these to the inventory of items to maintain has budget implications.

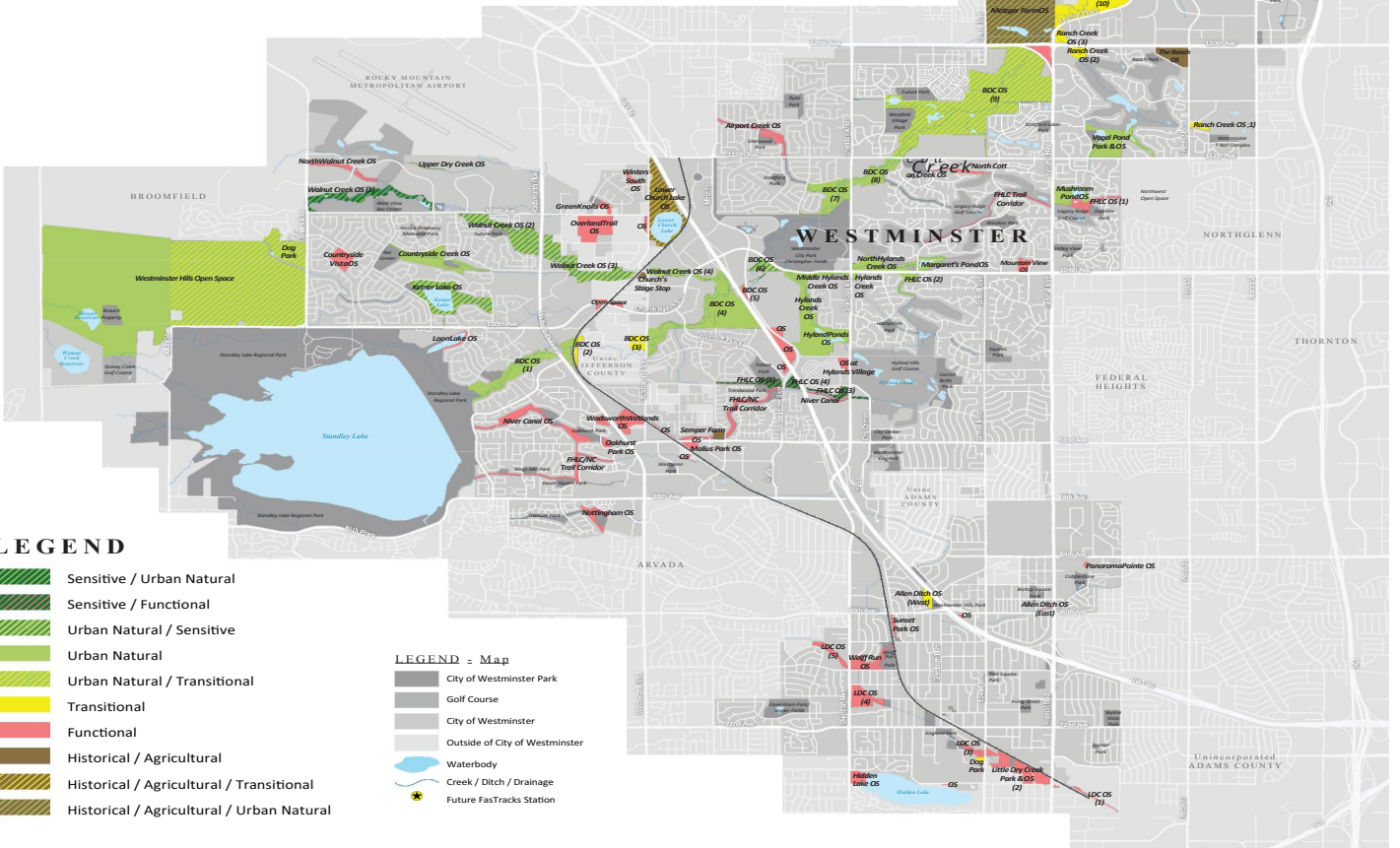
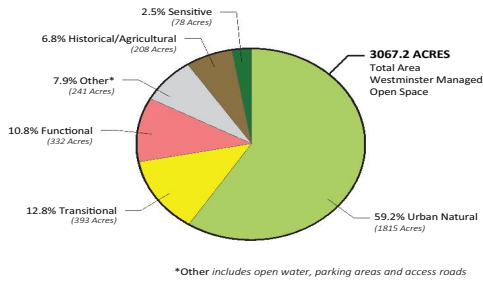
Large scale fold-out version of this map is included in the pocket at the end of this section

General Management Guidelines Map

07.28.2014



Breakdown of Westminster Open Space by Management Classification



- LEGEND**
- Sensitive / Urban Natural
 - Sensitive / Functional
 - Urban Natural / Sensitive
 - Urban Natural
 - Urban Natural / Transitional
 - Transitional
 - Functional
 - Historical / Agricultural
 - Historical / Agricultural / Transitional
 - Historical / Agricultural / Urban Natural
- LEGEND - Map**
- City of Westminster Park
 - Golf Course
 - City of Westminster
 - Outside of City of Westminster
 - Waterbody
 - Creek / Ditch / Drainage
 - Future FastTracks Station





Open Space Historical Structures Survey

NOTE: On behalf of the City of Westminster, Ron Sladek of Tatanka Historical Associates, compiled an historic overview for each lake, pond and major irrigation canal within the city boundaries. This information is available on the City of Westminster's website: <http://www.ci.westminster.co.us/ExploreWestminster/AbouttheCity/WestminsterHistory/Water.aspx>

Lower Church Ranch – Tucker Ranch – Walnut Creek Corridor

History

George Henry Church was born in Rochester, New York on December 11, 1830, and settled in Independence, Iowa in 1853 (Stone 1918; Westminster Historical Society 2014). Church first came to Colorado in 1859 to investigate potential mining claims (Westminster Historical Society 2014). After returning to Independence and marrying school teacher Sarah H. Miller, the newlyweds came to Colorado in 1861 on their honeymoon, and by 1862 they had settled in Mount Vernon Canyon in western Jefferson County. Church sold the Mount Vernon Canyon property and filed a new claim near Boulder and Left Hand Creeks near Haystack Mountain (City of Westminster 2014). After a fire at the Haystack Mountain property, the Church family again relocated in 1864 to a 160-acre claim along Big Dry Creek and established a stage stop along the Cherokee/Overland Trail (see Church's Stage Stop entry for additional information) (City of Westminster 2014). The Church Ranch would expand to approximately 27,000 acres at the height of its operation, which included the Lower Church Ranch –Tucker Ranch property currently owned by City of Westminster Open Space.



The barn and clay-tile silo at the Tucker Ranch/Lower Church Lake, located on the east side of West 108th Avenue and Wadsworth Boulevard. Photograph taken facing northeast, January 28, 2014.

Church, a decorated rancher, is credited with the first irrigation reservoir system in the state sourcing from Clear Creek near Golden, the introduction of pure-bred Hereford cattle to the region in 1869, and the introduction of wheat into high plains agriculture in Colorado (Stone 1918; Bunyak & Associates 2009). In 1863, the Churches welcomed their only son, John "Frank," and later adopted Sarah's niece, Mary Miller (Church) born in Iowa in 1870. Mary Miller Church married Thomas F. Tucker in 1892. Tucker was born in Jefferson County, Colorado in February of 1866 (City of Westminster 2014). On August 9, 1901, George Henry presented the deed for the NE ¼ of Section 11, Township 2 South, Range 69 West of the 6th Prime Meridian to Mary Miller and Tucker, although Tucker had already started construction on the main house of the property in 1900 (City of Westminster 2014). Like his father-in-law, Tucker was also a prominent rancher along the Front Range and also operated the 5,000 acre Tucker Mountain Ranch near Nederland. Structures on the Lower Church Ranch –Tucker Ranch property eventually included a caretaker's house, a frame barn with lean-to addition, a pole corral and loading chute, holding pen, hog house, water tank, sheep shed, and a blacksmith shop (City of Westminster 2014).

The silo and barn that remain today (5JF520)¹ were added to the property between 1910 and 1920 (Bunyak & Associates 2009). The Tucker Ranch struggled through the 1920s with the death of Thomas Tucker and economic hardships in the cattle industry compounded by the Depression. The ranch was operated by the Tucker children through the 1930s after Mary's death. The Colorado Department of Highways became interested in the property during the early 1950s in association with the Denver-Boulder Turnpike/U.S. 36 and in 1952 acquired 40 acres of the Tucker Ranch (City of Westminster 2014). Acquisition of the remaining parts of the original Tucker Ranch by City of Westminster Open Space began in 2003 (City of Westminster 2012). By 2006, all structures of the Tucker Ranch except for the silo and barn (5JF520) had been demolished.

Evaluation and Management Recommendations

The silo and the barn of the Tucker Ranch (5JF520) have been evaluated for their eligibility for listing on the National Register of Historic Places (NRHP) six times from 1988 to 2009. In 2006, 5JF520 was designated a Westminster Local Historic Landmark under the title "Lower Church Lake Barn and Silo" (City of Westminster 2014). In 2009, 5JF520 was officially determined to be eligible for listing on the NRHP (Colorado Office of Archaeology and Historic Preservation 2009). The most recent documentation of 5JF520 was conducted in 2008 by Bunyak Research Associates and both structures were determined to be in good condition, maintaining sufficient historic integrity to demonstrate an association with a type, period, and method of construction as stipulated under Criterion C of the NRHP. ERO concurs with the condition of the structures documented in 2008 and notes that property is maintained and often repaired by volunteers (Larsen 2014, pers. comm).

ERO recommends continuing preservation, whether through grants or continued volunteerism, for 5J520 as well as consultation with the Colorado State Historic Preservation Office (SHPO) prior to any large-scale renovations or rehabilitation of the barn or silo. Should future undertakings propose major structural renovations to the barn and silo, ERO recommends that additional historic resource documentation be conducted adhering to SHPO standards in order to mitigate the adverse impacts posed by modifying, moving, or demolishing 5JF520.

An interpretive sign or pavilion summarizing the history of the property and its association with the development of agriculture in Westminster and the early settlement of Colorado as well as two locally and state-wide significant families, the Churches and Tuckers, would further aid in the active stewardship of the property while bolstering visual interest and public education. Additionally, the eventual expansion of a trail system to include the Lower Church Ranch – Tucker Ranch would maintain and strengthen the property as a passive recreational site. Additional improvements could also include a parking lot on the east side of Old Wadsworth Boulevard at 108th Avenue.

The Tucker Ranch is a City of Westminster Historic Landmark. Any exterior modifications must be approved by the City's Historic Landmark Board.

¹ *This code given after specific historic sites is a Smithsonian trinomial. The Smithsonian trinomial is a unique identifier assigned to historic sites in many states. They are composed of one or two digits coding for the state, typically two letters coding for the county or county-equivalent within the state, and one or more sequential digits representing the order in which the site was listed in that county.*



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Church's Stage Stop Well – Twelve Mile House – Walnut Creek Corridor

History

Church's Stage Stop, also known as the Twelve Mile House (5JF521), is located north of 103rd Avenue on the west side of Wadsworth Boulevard and represents the site of the original Walnut Creek homestead complex of Sarah H. and George Henry Church. Church's Stage Stop was located on the property from which the 160 acres of the Lower Church Ranch – Tucker Ranch was deeded by George Henry Church to his daughter Mary Miller Church and her husband Thomas F. Tucker (see the Lower Church Ranch – Tucker Ranch entry). George Henry and his wife Sarah H. settled at the Walnut Creek location in 1864 after previous homestead near Haystack Mountain and Mount Vernon Canyon. Despite being nothing more than a "child's claim with its wretched dirt covered log house" according to Sarah, the Churches quickly opened their doors to travelers on the Overland Trail, also known as the Cherokee Trail, and became the first stage stop along the route from Denver to Cheyenne, Wyoming (City of Westminster 2014a: 2). George and Sarah purchased wooden outbuildings from neighboring ranches and reassembled them on their property surrounding the new two-story frame house George had constructed for his family. As the stage stop grew in popularity, this original frame house became the bunk house for travelers and George eventually built a new private residence on site. In the 1920s, many of the original structures of the stage stop were moved offsite, or damaged and destroyed by fire. One surviving element of the stage stop, the hand-dug well (5JF4665), remains on-site today. The rock-lined well may have been built by George Henry in 1864 and was restored by members of the Church family in 1978. A metal plaque on the well provides visitors with information on the stage stop; a nearby boulder with a similar plaque also serves to educate the public on the history of the site.



The well at Church's Stage Stop located at 10395 Wadsworth Boulevard. Photograph taken facing west, January 28, 2014.

The Cherokee Trail was established in 1849 by Native Americans and those seeking mineral wealth further west, becoming a major route of the gold rush of the 1850s (City of Westminster 2014b). The route began at Bent's Fort in southeast Colorado and eventually joined the Oregon Trail at Fort Bridger, Wyoming via Pueblo and Denver. In 1862 as conflicts with native populations became more frequent and travel on the Oregon Trail through central Wyoming was increasingly dangerous, the U.S. Post Office ordered the already established Overland Stage Company to relocate its operations to utilize the more southern passage of the Cherokee Trail. This route became known as the Overland Trail Denver Loop and operated from 1862 until about 1868.

As traffic on the Overland Trail declined, so did the number of visitors to Church's Stage Stop and the family shifted the focus of their homestead from hospitality to agriculture and the stage stop became the Churches' ranch headquarters. In the early 1890s, George and Sarah, along with their son Frank and his wife Katherine constructed a new operational headquarters located at the southeast corner of Church Ranch Boulevard and Wadsworth Boulevard.

Evaluation and Management Recommendations

Church's Stage Stop (5JF521) was officially determined not eligible for listing on the NRHP in 1988 as the remaining structures on site were in poor and deteriorating condition. No trace of the stage stop buildings remain today. Church's Stage Stop Well (5JF4665) was evaluated for listing on the NHRP in 2008 and was determined officially not eligible by the SHPO in 2009. The historic integrity of the well has been adversely affected by the 1978 restoration, as well as the absence of the other structures of the stage stop. The property on which the well is located has been subdivided and no longer conveys an association with the larger Church property that played a significant role in the agricultural development of Westminster. The presence of a modern residence directly south of the well further detracts from the historic feeling of the site.

As of winter 2014, the restored well was in good condition, with the brick, mortar, and plywood cover of the well intact and apparently maintained. ERO recommends continued preservation of the site; however, ERO notes that more in-depth interpretive information of the site and its regional importance would provide greater visual interest and the opportunity for public education. Archaeological testing and excavation could potentially aid in the identification of the location of the structures previously on-site. As the well is not eligible for listing on NRHP, a determination with which ERO concurs, consultation with SHPO prior to further renovations or modifications of the well are not necessary and any consultation would be considered due diligence.

Future landscaping on the site has the potential to offer historical interpretation by highlighting the remaining cottonwoods of the stage stop, as well as the relative location of the bunk house and Church residence as extrapolated from aerial and historical photographs of the site. A more exhaustive interpretive sign or pavilion would provide a more meaningful history of the property and its association with the development of agriculture in Westminster and the early settlement of Colorado as well as the locally and state-wide significant Church family than is currently present on-site.

The eventual expansion of the Walnut Creek Trail system would increase passive recreation on the site and would provide a stronger association with the Lower Church Ranch – Tucker Ranch north of the stage stop. The possible acquisition and removal of the residence directly south of Church's Stage Stop Well would further bolster the historical feeling of the site and may provide a more meaningful educational opportunity. Currently, the site remains a secondary destination along the Walnut Creek Trail system. The implementation of a more thorough historical interpretation of the site in conjunction with a garden or landscaped rest area along the trail would create a better awareness of the site, leading to a more active stewardship.

Church's Stage Stop is a City of Westminster Historic Landmark. Any exterior modifications must be approved by the City's Historic Landmark Board.

Works Cited and Additional References

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The Ranch Open Space – Marion Barn

Included for Management Purposes in the Big Dry Creek Corridor

History

A claim was filed for the land that comprises the Ranch Open Space on August 24, 1891, by Joseph H. Marion. Marion was born on May 12, 1847 in Allegheny County, Pennsylvania (Stone 1918). In 1877, Marion left Pennsylvania for the west coast and spent three years in California farming in the Sacramento Valley. By May of 1880, Marion had traveled to Colorado and began working mines in Leadville for approximately three years before again turning to agricultural pursuits near Broomfield (Stone 1918). Marion was married to Philena E. Scott in Ringgold County, Iowa in December 1883. In 1884, Joseph and Philena began homesteading on the 160-acre claim in Westminster

before officially filing for the land in 1891. Marion constructed a small reservoir to irrigate the property. The reservoir was fed by a lateral ditch sourcing from the Farmers' High Line Canal (City of Westminster 2014). Using this irrigation system, the Marion family farmed their homestead until 1940 and were well-known as local agricultural pioneers (City of Westminster 2014). In 1975, the Ranch Country Club opened on the former Marion Farm. In 1998, the Marion barn and windmill were moved approximately 200 feet to the north from the country club onto city-owned open space property. The rest of the structures of the Marion farm were eventually dismantled as the farm once owned by Marion was subdivided and sold off (Sladek 2012). The 18.9 acre Ranch Open Space represents the first open space purchase by the City of Westminster (Larsen 2014 pers. comm: City of Westminster 2014). The Ranch Open Space is unique in that the property features no trails or public access; rather, the City of Westminster issues permits for limited horse boarding in the Marion barn and the use of the 18.9 acres as pasture land (Larsen 2014 pers. comm).

Evaluation and Management Recommendations

The Marion barn at the Ranch Open Space has not been evaluated for its eligibility for listing on the NRHP. ERO recommends that a full documentation, architectural evaluation, and evaluation for NRHP eligibility be conducted prior to any proposed changes to the use or physical structure of the barn. However, until such undertakings are proposed, ERO recommends the continued use of the barn and pasture land under lease agreements.

The special use of the Ranch Open Space has ensured the successful active stewardship, preservation of both natural and historical resources, and the financial sustainability of the property and in turn has created a viable, practical utilization of an open space structure not seen in the other properties documented in winter 2014. The Marion barn has undergone major renovations, having been virtually rebuilt by the City when it was relocated, yet has maintained its original agricultural vernacular style. The current structure is in good physical condition; however, the historical integrity of the building has been impacted by the relocation and rebuilding.



The Marion barn at the Ranch Open Space located at the southwest corner of 120th Avenue and Pecos Street. Photograph taken facing southeast, January 28, 2014.

When considering the condition of the Lower Church Ranch – Tucker Ranch property in comparison with the Marion barn at the Ranch Open Space, it is worth noting the discrepancy between volunteer and lease maintained properties. The Lower Church Ranch – Tucker Ranch barn and silo act as more static features of the landscape, while the Marion barn is a functional part of the landscape, maintaining its historical utility. As the Ranch Open Space does not feature public access or trails, expanding existing trail systems to include the property would not provide any passive recreational value. If desired, an interpretative sign added to the Marion barn entrance or near the beginning of the driveway access to the property would provide public education on the site and may ease public concern over the restricted access to the open site via a brief description of the leasing program. Currently, no sidewalk exists adjacent to this open space property along Pecos Street; the installation of a sidewalk in this area would allow for a greater awareness and appreciation of the site.

Marion barn is a City of Westminster Historic Landmark. Any exterior modifications must be approved by the City's Historic Landmark Board.

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Charles and Julia Semper Farm – Allison Farm – Farmers’ High Line Canal Corridor

History

Charles S. Semper was born in England on July 31, 1830. Semper’s father was sent to the island of Trinidad in 1832 by the Church of England as a missionary where Charles was raised (International Typographical Union 1917). In April of 1859, Charles Semper arrived in Denver, the Pikes Peak gold rush having influenced his settlement in Colorado. Semper was trained as a typographer and printer and operated the presses for the first edition of the Rocky Mountain News, produced by William Byers and John Daily (Bunyak 2009). Semper’s time with the Rocky Mountain News came to an end with a labor strike in April of 1860 and the beginning of the Civil War. Semper enlisted with the

First Louisiana Heavy Artillery Regulars of the Confederate Army and did not return to Colorado until after his marriage to Julia in 1873. After Semper returned to Colorado, he and Julia filed a claim for 160 acres in Jefferson County on November 10, 1882. The Semper homestead was located at the northwest corner of what is now 92nd Avenue and Pierce Street along the route of the Cherokee-Overland Trail from Denver to Boulder, constructing their family house between 1880 and 1883 and a simple, one story barn around the turn of the century (Bunyak and Schlichting 2004). The Semper family exploited their ideal location along the stage route by establishing a post office and grocery store from their home. As the Semper Farm expanded, the Sempers began to promote an agricultural community near their farm. The settlement of Semper grew around a train depot and general store located near 92nd Avenue, not far from the Semper property today. The Sempers donated a portion of their land for a schoolhouse (Bunyak 2009). After Julia’s death in October 1916, Charles sold their homestead to the brothers George and John Allison. Charles Semper died in September 1917.

The Allison brothers bought the Semper Farm on July 19, 1916; however, John was the only of the two brothers to reside at the property. In 1961, Allison added onto the eastern portion of the original Semper residence. Linda Allison, John’s granddaughter, sold the property in 1989 with the agreement the property would be maintained as open space. In 2004, the site successfully gained local landmark status and in 2008, a State Historical Fund grant was used to renovate the exterior of the main house. Additional maintenance and research has been performed by Jeffry Stroud and Jack Kern, two Eagle Scout candidates (Turner 2010). In 2006, Denver Urban Gardens established a community garden at the northeast corner of the property and help look after the state champion apple tree located just east of the Semper – Allison residence.



The main residence at the Charles and Julia Semper Farm, also known as the Allison Farm, located north of West 92nd Avenue on the east side of Pierce Street. Photograph taken facing southeast, January 28, 2014.

Evaluation and Management Recommendations

In August 2009, the Colorado SHPO gave the Semper Farm – Allison Farm (5JF4414) an official determination of “Needs Data,” meaning additional research and documentation is necessary before the SHPO can make an official determination of “Eligible” or “Not Eligible” for inclusion of 5JF4414 on the NRHP. As it was renovated in 2008, ERO notes the good exterior condition of the farm house of site 5JF4414. The interior of the farm house has not yet undergone renovation or rehabilitation. In February 2014, the only additional work to any of the structures of 5JF4414 included the stabilization of the brick-lined well and the exterior of the garage (built in 1961) was painted and the garage door repaired. The overall structural condition of the other buildings on-site is poor and the removal of the garage has been considered. The barn is especially in need of repair.

Located in the Farmers’ High Line Canal Corridor, the Semper Farm already demonstrates a strong association with the existing Farmers’ High Line Canal Trail; however, as shown in the Semper Farm Master Plan (2011), the introduction of additional spur/branch trails throughout the Semper property would further the visual appeal and public interaction with the historical features of the site. Additionally, adding picnic and rest areas to the Semper Farm property would enhance the passive recreational value of the site and would shift the role of the farm destination rather than a mere waypoint on an already popular trail.

Active stewardship of the site is already prominent in the restoration of the exteriors of the structures, the Eagle Scout projects, and the introduction of the Denver Urban Garden community plot. This stewardship has the potential to be increased through the maintenance and possible expansion of the exiting apple orchard. Discussion of the main Semper – Allison house being renovated to house an on-site caretaker would further the rehabilitation of the site, returning at least one of the structures to its historical function. Additionally, the Semper – Allison residence could be utilized as a community center, artists’ studio, office for a non-profit organization, or garden center and still promote the historical and natural importance of the site. Interpretative signs are scheduled to be installed on the property in the summer of 2014.

The Allison Farm is a City of Westminster Historic Landmark. Any exterior modifications must be approved by the City’s Historic Landmark Board.

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Metzger Farm – Big Dry Creek Corridor

History

The land that comprises the Metzger Farm was historically associated with a parcel that in the late 1880s was split into two, side-by-side 80-acre homestead parcels under separate ownership (National Register of Historic Places Registration Form 2012). A claim for the land occupied by the Metzger Farm was first filed on January 30, 1885, by Albert B. Gay. In August 1935, the Gay family sold their homestead to James T. Burke. An attorney in Denver, Burke was born in Minneapolis in 1898 and arrived in Denver in 1921 and completed his law degree at the Westminster Law School (Tatanka Historical Associates 2007). Burke and his family owned the property until August of 1943 when it was sold to John Metzger.

Metzger, also a Denver attorney, married Bette Amen in December of 1944 after purchasing the homestead from Burke (Rocky Mountain News 2008). Metzger intended to operate the homestead as a “gentleman’s farm,” with nine outbuildings arranged in two, clean, east-west trending rows (City of Westminster 2014).

The main house of the Metzger Farm expanded upon the original Albert Gay residence, with the original structure still at the core of the Metzger Residence (Tatanka Historical Associates 2007). During the 1960s and 1970s as the Metzgers focused their attention on another ranch in Middle Park, the Metzger Farm in Westminster was cared for and managed by a local dairy farmer who had grown up near the property (Tatanka Historical Associates 2007). The City of Westminster Open Space and the City and County of Broomfield acquired the Metzger property and established a foundation for the financing, maintenance, and management of the Metzger Farm (City of Westminster 2014).

Evaluation and Management Recommendations

The Metzger Farm (5AM2830) was officially determined as eligible for listing on the NRHP in June 2012. On September 21, 2012, the National Register Nomination Form was submitted to the National Park Service and on March 20, 2013 was officially listed on the National Register of Historic Places. A master plan for the management of the Metzger Farm property was drafted in winter 2010 and a groundbreaking ceremony marking the commencement of the plan was held on April 23, 2012. The Metzger Farm Open Space was opened to the public in November 2012.

While the Metzger Farm retains historical integrity, the structures of the farm are in poor overall physical condition. Despite the obvious need for cosmetic and structural maintenance on-site, the property is very well maintained. The master plan was created to provide low impact public use with the preservation of the property’s “model farm” characteristics (City of Westminster 2014). ERO notes that the aspects of the master plan that have been carried out to date have been successful in providing the community with visual interest and opportunities for passive recreation.



The main family residence at the Metzger Farm located on 152 acres at the north-east corner of 120th Avenue and Lowell Boulevard. Photograph taken facing east/northeast, January 28, 2014.

The creation of additional trails, picnic areas, and interpretive information would add to the recreational and historical value of the property overall. The stabilization of the main house and outbuildings of the Metzger Farm would provide additional opportunities for public access, including such options as an open air museum, community center, or caretaker's residence, similar to the idea of an on-site manager, as discussed with the Semper – Allison property. Additional, more in-depth structural evaluations are recommended to determine exterior and interior conditions on a building-by-building basis and to discuss priorities for any necessary renovations and repairs of all buildings of the Metzger Farm complex. Further studies could also more specifically determine the end-use of the main house and its outbuildings. Since the Metzger Farm is officially listed on the NRHP, ERO advises that any large-scale renovation or rehabilitation of any structures on the property be proceeded by that additional historic resource documentation adhering to SHPO standards or NPS HABS/HAER Level II Documentation in order to mitigate any adverse impacts posed by modifying or removing any of the structural features of 5AM2830.

Metzger Farm is a City of Westminster Historic Landmark. Any exterior modifications must be approved by the City's Historic Landmark Board.

Works Cited and Additional References

City of Westminster

- 2014 "Metzger Farm." Westminster Landmarks. Available at: <http://www.ci.westminster.co.us/ExploreWestminster/HistoricPreservation/WestminsterLandmarks/MetzgerFarm.aspx>.
Last accessed: February 13, 2014.

National Register of Historic Places Registration Form

- 2012 *Metzger Farm*. Property entered into the National Register on March 20, 2013.

Rocky Mountain News

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Tatanka Historical Associates

- 2007 *Metzger Farm*. Prepared for the Broomfield-Westminster Open Space Foundation by Tatanka Historical Associates, Inc.



Savery Savory Water Tower – Savery Savory Mushroom Farm

History

The Savery Savory Mushroom Farm was established in the early 1920s by Charles William Savery in Adams County in the towns of Westminster and Broomfield just east of Federal Boulevard and south of West 112th Avenue near West 110th Court. Savery was born in 1878 in Parkersville, Pennsylvania and worked the lumberyard business in Philadelphia from 1900 to 1908. During that time, in June 1904, Savery married Frances Darlington of Denver and the two soon had two sons, and a daughter. As the lumberyard failed, with debts mounted and finally paid, the Savery family moved to Denver in 1909 with only \$600 to their name (Sladek 2005). In 1910, Savery opened a mining stockbrokerage office under the name Savery-Petrik in the Mining Exchange Building in Denver. The partners operated the stockbrokerage until 1917, likely parting ways as Savery's partner William Petrik became one of the most significant executives in the sugar industry as chairman of the board of the Great Western Sugar Company. With the partnership dissolved, Savery invested in a molybdenum mine in Questa, New Mexico, but by 1918 he had returned to the brokerage business and established the C.W. Savery Securities Company in the Deham Building. Savery ran this business until 1920. During his second term in stockbrokerage, Savery bought an 80-acre farm property in 1918 from Jacob and Nettie Milstein located north of Denver in Adams County.

With the purchase of the farm and an interest in mushroom farming carried with him from Pennsylvania, Savery began his mushroom and canning business in the early 1920s. Savery's cousin, Ed Jacobs, who remained in Pennsylvania supposedly had a successful mushroom farm that contributed to Savery's motivation to bring the delicacy to Colorado. After consulting with experts from the Colorado Agricultural College in Fort Collins, Savery discovered the hardships of growing mushrooms in Colorado's dry environment, his first three years of operating the farm having experienced widespread failure. However, after an eight-week visit back to Pennsylvania, Savery and his son Robert returned to Colorado ready to test different growing techniques in small mushroom buildings known as caves. The caves were kept dark, cool, and humid with strips of canvas dampened by troughs of water and an electric fan that blew over the cloth. The success of this system was the catalyst for a much larger operation that eventually grew to include 39 caves with automatic water sprayers, centrifugal pumps, and large fans. The increased production led to an increase in demand for water that could not be met by local irrigation ditches. Fortunately for Savery, his mushroom farm happened to be situated above an artesian aquifer. Water was pumped from the aquifer to the water tower (5AM1856), which was strategically located on a high point of the farm. The water from the tank was distributed via gravity through pipes to the caves and canning buildings and also eventually supplied domestic water for those taking up residence at the farm. Savery had the water tank painted to look like one of the mushroom cans produced by the farm, taking



Savery Savory Mushroom water tower is the only remaining structure of the Savery Savory Mushroom Farm. Photograph taken facing south towards Federal Boulevard, July 3, 2014.

advantage of a unique marketing opportunity. Prior to 1950, the mushroom can atop the water tower was enhanced with neon lights, solidifying the tower as a community landmark. By the 1930s, the farm complex had grown to the size of a small company town including a water tower (5AM1856), 15 residences for employees, a schoolhouse, boarding house, a baseball field, tennis court, and a general store as well as 25 additional adobe buildings for laborers, most of whom were Mexican immigrants. At the time, the average annual payroll for the company was \$32,000. Savery also eventually moved to the farm where he lived until 1956 when he was moved to a nursing home in Longmont after the death of his wife, Frances.

In 1927, Savery began to advertise his mushrooms under the Great Western Mushroom Company and by 1935 had opened branches in Los Angeles, San Francisco, and Missouri at which point the company was producing 10,000 pounds of mushrooms each day. Denver residents alone purchased 500 pounds of mushrooms daily (Sladek 2005). Savery retired in 1953 and the Savery Savory Mushroom Company ceased operations. Additional history concerning Savery, his business endeavors, and the mushroom farm is outlined in the Colorado State Register of Historic Properties Nomination Form completed by Ron Sladek with Tatanka Historical Associates and available at the History Colorado Adams County listings of properties included in national and state historic registries (<http://www.historycolorado.org/oahp/adams-county>).

The water tower (5AM1856) is the only remaining structure of the Savery Savory Mushroom Farm. By 2002, the development of the Savory Farms neighborhood had reached the foot of the water tower and the recreational park present during the July 2014 survey had been constructed. Directly south of the water tower, foundations and other structural remnants of the farm were still visible in aerial photographs through 2011. In 2011, all remaining structural features south of the water tower were obliterated with the Mushroom Pond Open Space expansion and trail improvements through the area. In 2006, the City of Westminster commissioned the historically accurate repainting of the water tower, which was found to be in excellent condition during the July 2014 survey.

Evaluation and Management Recommendations

The Savery Savory Mushroom Farm Water Tower (5AM1856) was evaluated for its eligibility for listing on the National Register of Historic Places (NRHP) in July of 2005 by Tatanka Historical Associates and was officially determined to be an eligible resource. In November 2005, 5AM1856 was submitted to the review board for listing on the Colorado State Register of Historic Places. On December 16, 2005, the Savery Savory Mushroom Farm Water Tower was officially listed on the State Register. The July 2005 documentation of 5AM1856 indicates that the paint on the water tower was faded and showed two painting episodes. The documentation by Tatanka Historical Associates also notes that the roof of the water tower was gone, that the tank was slightly deformed and no longer completely circular, exhibited bullet holes, and a rectangular piece of the bottom of the tank had been cut open. Additionally, the whole structure exhibited signs of rust. Also documented in July 2005 were the remnants of neon lighting added prior to 1950 to illuminate the tank, including neon tubing, glass fragments, and electrical wiring. Despite these impacts to the structural integrity of 5AM1856, Tatanka Historical Associates still recommended the water tower eligible for the State Register under Nomination Criteria D—indicating that the property is of geographic importance and contributes to community identity.

The July 2014 survey of 5AM1856 found the structure to be in much better condition, with structural ailments likely improved around the time of the repainting of the tank. ERO found no evidence of the electrical wiring or tubing of the neon elements noted in the 2005 documentation of the resource, nor was there any evidence of bullet holes, extensive rust, or the deformed circular structure of the tank itself.

ERO recommends continuing preservation, whether through grants or volunteerism, for 5AM1856 as well as consultation with the Colorado State Historic Preservation Office (SHPO) prior to any large-scale renovations, rehabilitation, or relocation of the water tower. Should future undertakings propose major structural renovations to the water tower, ERO recommends that additional historic resource documentation be conducted adhering to SHPO standards in order to mitigate the adverse impacts posed by modifying, moving, or demolishing 5AM1856.



Additional access or improvements to the water tower site present a challenge considering the land and park surrounding 5AM1856 are owned and maintained by the Savory Farm subdivision; however, greater public access to the site would increase visual, recreational, and educational interest.

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Prioritization of Needed Area-Specific Master Plans

The following Westminster Open Space areas listed require master planning for future development, management and/or maintenance. These projects are distinct from planning, design, and construction of “missing links” in the trail system.

Criteria for Area-Specific Open Space Master Planning

The following are criteria for Area-Specific Master Plans for the City of Westminster Open Space System.

- » Where defining program and conceptual design requires a multi-disciplinary professional expertise. (Example: Big Dry Creek Corridor where landscape architecture, civil engineering (with an emphasis on site hydrology and hydraulics) and environmental science must coordinate efforts to define a balance between increasing and changing use with the restoration of a stable, naturalistic landscape.)
- » Where defining program and conceptual design requires coordination between jurisdictions or with an outside agency. (Example: The existing Metzger Farm Master Plan was completed in cooperation with the City of Broomfield.)
- » Where programming and conceptual design must account for changing use or conditions. (Examples include: Lower Church Ranch Lake where Master Planning must account for the changed condition of the lake and anticipate the future construction of a FasTrack station on the south side of the site.)
- » As a means of ensuring a proper balance between different, possibly competing land uses. (Examples include: Planning for park and open space improvements at Ketner Lake or at the future park site abutting open space classified as *Sensitive* along the Farmers’ High Line and Niver Canals Corridor just west of Westminster Parkway.)
- » Where competing for outside funding for design, construction or maintenance must include supporting planning documents. (Ex. Planning in association with allowing a community garden at Semper Farms.)

Master planning is also the best framework for modeling the impacts that alternative solutions may have on management and maintenance costs. Proposed inventory or acreage identified in preliminary planning phases can be plugged into the *General Management Guidelines Matrix* to test the impact of proposed improvements to overall maintenance costs.

Existing Open Space Master Plans

The following is a list of existing open space area master plans and dates.

- » Semper Farm Master Plan (February 2011)
- » Metzger Farm Open Space Master Plan (Winter 2010) - Westminster/Broomfield collaboration

High Priority Area-Specific Open Space Master Plans

As funding becomes available, the following areas of the Westminster Open Space System should be considered a higher priority for master planning to be completed in the next 1-5 years. (See 11x17 Z-Fold Map in this section of Needed Area-Specific Master Plans. Numbers do not necessarily reflect priority but location on the map.)

1 - Big Dry Creek Corridor (Westminster City Park east to I-25)

The Big Dry Creek Corridor is the centerpiece of the Westminster Open Space System and is significant in establishing community identity. This area of the Big Dry Creek Corridor needs to be master planned to:

- » Develop a clear trail hierarchy,
 - Develop the Big Dry Creek Trail as part of both the City's Bikeway System and the Regional Greenway System,
 - Identify existing or potential local loop trails using existing trail connections to the Big Dry Creek Trail and secondary trails as loops serving local neighborhoods
 - Identify a clear trail hierarchy that includes closure/restoration of unwanted social trails and identifies trail materials.
- » Define complete restoration of *Transitional* landscape within the corridor, and
 - The 2014 OSSP classifies over 200 acres of the Big Dry Creek Corridor as *Transitional* landscape that should undergo restoration and/or enhancement until site improvements are completed and the areas can be reclassified *Urban Natural* landscape.
- » Identify opportunities to develop the greatest possible landscape diversity within the corridor by taking advantage of the unique drainage/hydrology/hydraulics of the creek corridor.

2 - Little Dry Creek Open Space (at Sheridan Boulevard)

As the name suggests, Little Dry Creek Open Space should echo the Big Dry Creek Open Space in serving as a key component in the overall image of the City of Westminster. Little Dry Creek is also an important recreation and transportation corridor serving as a critical link in the regional Refuge-to-Refuge Trail and commuter transit system providing a connection to the proposed Westminster Station.

Preparation of an open space master plan for this area should be coordinated closely with the planned revision to the Little Dry Creek Drainage Master Plan currently scheduled for this year (2014).

Plan sponsors, including the Urban Drainage and Flood Control District (UDFCD), Westminster, Arvada and Adams County, will be looking at the potential impacts of changed criteria for defining storm volumes and redefining the flood plain. These changes in criteria may present opportunities to:

- » Reconfigure the channel, restore a more diverse, naturalized landscape and improve/upgrade trail design, and
- » Reconfigure arterial crossings including both Sheridan Boulevard and 76th Avenue.

3 - Lower Church Ranch Lake Open Space (Wadsworth Boulevard and 108th Avenue)

This 70+ acre historic site is an irreplaceable asset linked to Westminster's historic community identity, as well as being adjacent to a potential future FasTracks station. It includes a 15-acre lake that has been going dry during the extended drought conditions, but may be restored and maintained to provide an open space asset and destination.

Proposed program elements for an open space master plan should include:

- » Trailhead, interpretive signage, and trail connections,
- » Loop trail or boardwalk around lake as well as an observation/fishing pier,
- » Improvements to the lake and habitat, and
- » Pedestrian crossings at 108th Avenue and Wadsworth Boulevard.



The master plan should also coordinate with design of future FasTracks station. Approval from the Westminster Historic Landmark Board is necessary prior to any modifications to the site within the designated historic boundary.

The master plan should incorporate the General Management Classification and maintenance strategy of the site as identified in this report (See *General Management Guidelines* section). Approximately 20 percent of Lower Church Ranch has been identified as a *Transitional* landscape in terms of its open space management classification, and should undergo restoration and/or enhancement until site improvements are completed, at which time the site can be reclassified as *Urban Natural* landscape.

4- Westminster Hills Open Space and Dog Park (Northwest of Simms Boulevard and 100th Avenue)

This expansive 1000+ acre site includes an existing dog off-leash area (approximately 70 acres) as well as areas where dogs are required to be on-leash. The dog off-leash area is very popular and is considered a regional or “destination” facility that attracts users living outside Westminster.

A master plan of the entire Westminster Hills Open Space should include:

- » An alternative trailhead accessing the “no dogs off-leash” area on the south edge of the open space at 100th Avenue and Alkire Street,
- » Trail loops and trail improvements. Trail work to be done in coordination with the Refuge-to-Refuge Trail regional trail project, and
- » Interpretive signage.

The off-leash dog areas are classified as *Transitional* landscape. The City should consider developing a management plan similar to that done by Colorado State Parks for Cherry Creek State Park (October 2010) that would provide a specific management direction for the dog-off-leash area including rotating dog off-leash areas with an ongoing revegetation program.

5 - Farmers’ High Line/Niver Canal Open Space West of US 36 and Future Park

This area is south of and adjacent to a large proposed future park site and is bisected by Westminster Boulevard. The open space area, which can be seen off of US 36, has been classified in this report as having more than five (5) acres of *Sensitive* landscape which includes a fragment of an abandoned surface irrigation system that has evolved into a Plains cottonwood/ Western snowberry community, which is landscape type unique to the western Great Plains and needs to be celebrated and preserved.

The master plan should include:

- » Trail connections,
- » Interpretive signage, and
- » Integration of proposed park improvements with the *Sensitive* landscape.

6- Vogel Pond Park and Open Space (Ranch Reserve Parkway and 112th Avenue)

This 42-acre site includes a 5-acre pond and is located along Ranch Reserve Parkway. A master plan should be in conjunction the development of the adjacent future park site and should include:

- » Trailhead serving both the park and open space,
- » Formalizing loop trails and closing/restoring unwanted social trails around the lake,
- » Completing the Mushroom Pond Trail missing link and design a pedestrian crossing at 112th Avenue to connect the trail south,
- » Improvements to fish and wildlife habitat, and
- » Potential community garden.

7 - Ketner Open Space (*Countryside Drive and Moore Street*)

This 50+ acre open space includes a 22-acre reservoir and is adjacent to Kensington Park.

A master plan should include:

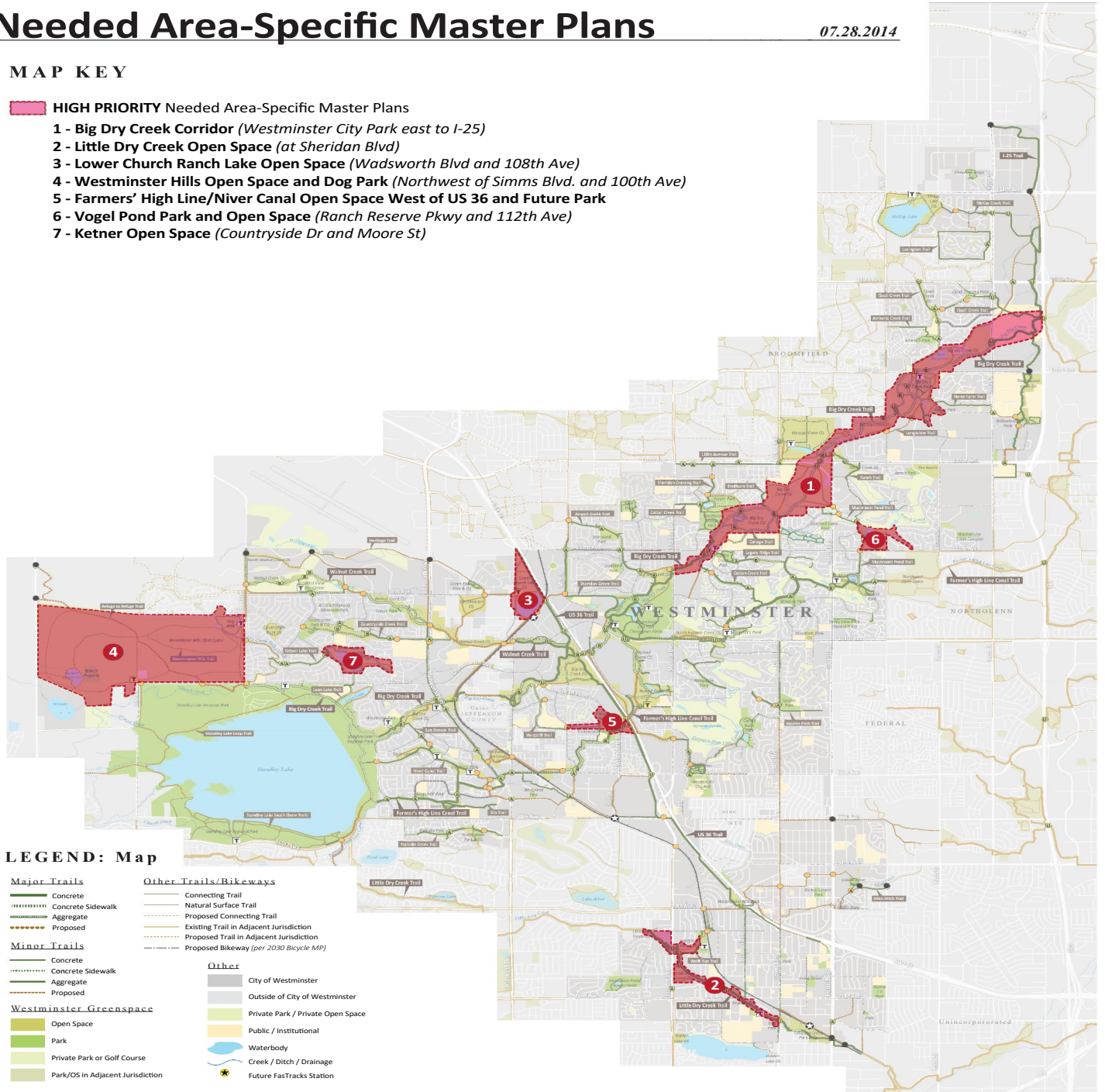
- » Developing a clear trail hierarchy that includes closure/restoration of unwanted social trails and concrete trails which connect to schools,
- » Building launch area for allowable boats, and
- » Developing fish and wildlife habitat, re-establishing healthy fish population through a lake stocking program.

Needed Area-Specific Master Plans

07.28.2014

MAP KEY

- HIGH PRIORITY** Needed Area-Specific Master Plans
- 1 - Big Dry Creek Corridor (Westminster City Park east to I-25)
 - 2 - Little Dry Creek Open Space (at Sheridan Blvd)
 - 3 - Lower Church Ranch Lake Open Space (Wadsworth Blvd and 108th Ave)
 - 4 - Westminster Hills Open Space and Dog Park (Northwest of Simms Blvd. and 100th Ave)
 - 5 - Farmers' High Line/Niver Canal Open Space West of US 36 and Future Park
 - 6 - Vogel Pond Park and Open Space (Ranch Reserve Pkwy and 112th Ave)
 - 7 - Ketner Open Space (Countryside Dr and Moore St)



LEGEND: Map

Major Trails	Other Trails/Bikeways	Other
Concrete	Connecting Trail	City of Westminster
Concrete Sidewalk	Natural Surface Trail	Outside of City of Westminster
Aggregate	Proposed Connecting Trail	Private Park / Private Open Space
Proposed	Existing Trail in Adjacent Jurisdiction	Public / Institutional
Minor Trails	Proposed Trail in Adjacent Jurisdiction	Waterbody
Concrete	Proposed Bikeway (per 2030 Bicycle MP)	Creek / Ditch / Drainage
Concrete Sidewalk		Future FasTracks Station
Aggregate		
Proposed		
Westminster Greenspace		
Open Space		
Park		
Private Park or Golf Course		
Park/OS in Adjacent Jurisdiction		





Capital Improvement Projects List

The following have been identified as high priority Capital Improvement Projects for the City of Westminster.

<u>Capital Improvement Description</u>	<u>Estimated Cost</u>
1. Big Dry Creek (BDC) Trail - Major Trail Improvements/Aggregate Replacement	\$ 1,809,940
» Upgrade Trail (10' Concrete/4' Aggregate)- Huron Street to 128th Avenue- approximately 4330 linear foot (LF)	\$ 337,740
» Bridge- South of 128th Avenue across BDC connecting to BDC Park	\$ 23,000
» Upgrade Trail (10' Concrete/4' Aggregate)- 128th Avenue to Zuni Street- approximately 4030 LF (LF may change if bridge is installed creating a more direct route)	\$ 337,740
» Upgrade Trail (10' Concrete/4' Aggregate)- west of Federal Parkway through Metzger Property- approximately 5155 LF	\$ 402,020
» Upgrade Trail (10' Concrete/4' Aggregate)- south of underpass at 120th Avenue to existing concrete trail at approximately 115th - approximately 3400 LF	\$ 265,200
» Upgrade Trail (10' Concrete/4' Aggregate)- at existing concrete west of bridge, past Westfield Village Park to existing concrete at about 112th Avenue - approximately 3700 LF	\$ 288,600
» Upgrade Trail (10' Concrete/4' Aggregate)- SW of 104th Avenue adjacent to Butterfly Pavilion to Westminster Boulevard - approximately 1360 LF	\$ 106,080
» Upgrade Trail (10' Concrete/4' Aggregate)- East of Wadsworth Boulevard, between two concrete segments within the BDC Open Space - approximately 625 LF	\$ 48,750
2. Walnut Creek Trail - Major Trail Missing Link Connection Improvements	\$ 1,519,500
» Railroad grade-separated crossing at BNSF railroad at about 103rd Avenue	\$ 780,000
» Enhanced At-Grade Crossing connecting existing Walnut Creek Trail to the east at Church's Stage Stop and future trail to the west	\$ 10,800
» Major Trail (10' Concrete) - Wadsworth Boulevard to Wadsworth Parkway- approximately 4630 LF	\$ 333,360
» Upgrade Major Trail to (10' Concrete/4' Aggregate)- Wadsworth Parkway to Simms Street - approximately 5990 LF	\$ 395,340
3. Wolff Run BNSF Railroad grade-separated crossing	\$ 780,000
» Railroad grade-separated crossing at north end of park at about 78th Avenue	\$ 780,000

4. Mushroom Pond Trail - Minor Trail Connection Improvements	\$ 216,000
» Enhanced At-Grade Crossing at 112th Avenue at Clay Drive	\$ 10,800
» Minor Trail (8' Concrete) - Ranch Reserve Parkway west to BDC Trail - approximately 2880 LF	\$ 138,240
» Minor Trail (8' Concrete)- 112th Avenue to Ranch Reserve Ridge- approximately 1395 LF	\$ 66,960

5. Allen's Ditch Trail East - Minor Trail Connection Improvements

» Upgrade Trail (8' Concrete)- Zuni Street to 81st Avenue- approximately. 1425 LF	\$ 110,724
» Upgrade Sidewalk/Trail (8' Concrete)- 81st Avenue from Clay Drive to Eliot Street - approximately. 960 LF	\$ 64,512
» Upgrade Sidewalk/Trail (8' Concrete)- 81st Avenue to 80th Avenue - approximately 960 LF	\$ 110,592
» Enhanced At-Grade Crossing at Federal	\$ 12,960
» Upgrade Sidewalk/Trail route along ROW to 8' minimum where feasible (Federal Boulevard to Lowell Boulevard)	\$ TBD
» Signage to mark trail route along existing ROW- See Wayfinding Strategy (Federal Boulevard to Lowell Boulevard)	\$ TBD

6. Countryside Creek Trail - Aggregate Replacement (Connection to Witt Elementary) **\$ 232,410**

- » Upgrade Trail (8' Concrete)- Mayfair Park to Oak Street - approximately 3810 LF

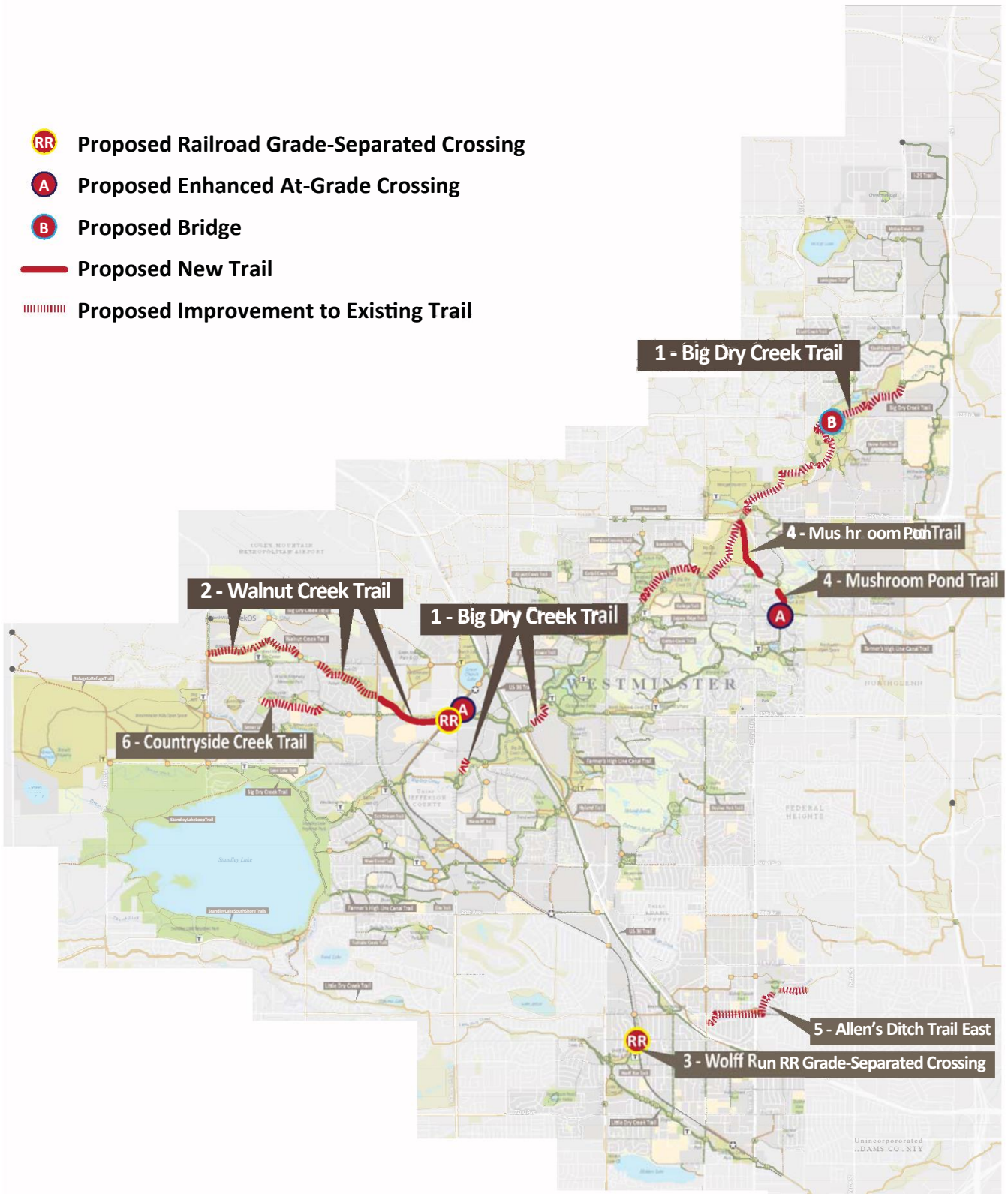
7. Westminster Trail Signage (See Wayfinding Strategy) **\$ TBD**

- » The City of Westminster is undergoing significant transition as the site of the former Westminster Mall transitions into the new Westminster Center. This project will serve as a catalyst for a citywide marketing and branding campaign. Signage developed for the city's public amenities, parks and open space, including wayfinding for the City's extensive off-street trails system, should be considered one component of this larger, citywide branding effort to ensure visual continuity and consistency. Logos, fonts, colors from the citywide branding effort should be integrated into future wayfinding signage palettes developed specifically for the City of Westminster Open Space system. All GIS navigation tools, user apps, and on-line information should also integrate similar, pre-approved graphics to create a cohesive graphic identity for city-owned property and amenities.

Cost estimates for proposed signage listed in the Wayfinding Strategy are based on costs of existing signage/materials and signs currently being installed throughout the City's open space system. Once the citywide branding efforts are finalized, these estimates will need to be adjusted. Unit costs for signage elements listed in the Wayfinding Strategy Cost Matrix should be updated to reflect changes in signage materials, sizes, and graphics per the new branding and identity program.



- RR** Proposed Railroad Grade-Separated Crossing
- A** Proposed Enhanced At-Grade Crossing
- B** Proposed Bridge
- Proposed New Trail
- |||||** Proposed Improvement to Existing Trail





Proposed Trail Improvements Prioritization Summary

The following pages include a summary of the prioritization process for proposed trail improvements (missing links, and existing trail improvements) in the City of Westminster. Priority recommendations relied on ongoing inventory for the trails system completed by the City as provided in the memo *Westminster Trail Widths and Surface Types (Jan 24, 2013)*, as well as on-the-ground, site observations by the consultants.

Prioritizing Missing Links

This *Trails Master Plan Diagram* illustrates missing links, or locations where the trail connections are missing or inadequate, in the existing trail system, as well as identifying locations for trail crossings (either grade-separated or at-grade to be determined) needed to provide safer trail connections and improve general connectivity. (See page 10 of the *Trails Master Plan Narrative: Criteria for Identifying Underpass Opportunities*)

The *Missing Links: Off-Street Trails Matrix* on the following pages provides information on proposed facility type and approximate length, and categorizes the missing link by priority- higher, medium, or lower. Most higher priority projects have been also listed on the *Capital Improvement Project List*. The criteria established for prioritizing missing links in the trail system include:

- » Completes a missing link along a Major Trail
- » Improves general connectivity (i.e. North/South connections)
- » Provides connection to major transportation destinations (i.e. FasTracks Stations)
- » Contributes to local or short loops off of the Big Dry Creek corridor
- » Improves connectivity to a school
- » Provides equitable distribution of improvements throughout the city
- » Constructibility: Opportunity for trail is tied to new development



HIGHER PRIORITY (in alphabetical order)	PROPOSED IMPROVEMENT				COMMENTS
	IMPROVEMENT TYPE	TRAIL TYPE	PROPOSED MATERIAL	APPROX. LENGTH (LF)	
<i>Allen Ditch Trail East</i>	Improve sidewalk along ROW; route signage	Minor	Concrete	3080	Federal Blvd to Lowell Blvd - needed defined connection to US 36 and further to future FasTracks station from that area. More feasible to defer the Allen Ditch Trail as a route to coincide with on-street bikeway due to the lack of land access/ ownership for trail development, improving the sidewalks and adding "route" confidence marker signage; widen sidewalk to 8' where feasible
<i>Allen Ditch Trail West</i>	New Trail	Minor	Concrete	2210	Between Harlan St and Pierce St along the 40% city ROW; good direct connection to new mall area, connects into future bikeway routes; along ROW ; widen sidewalk to 8' where <u>feasible</u>
<i>Big Dry Creek Trail Yarrow Street to BNSF RR</i>	New Trail OR improved signage	Major	Concrete	1825	Proximity to Jefferson Academy makes safety an issue at certain times of the day. Would require widening street ROW to accommodate path in Unincorporated JEFFCO; interim solution to sign route clearly with sharrows on Yarrow Street and with Sign Type #5 Confidence Markers.
<i>Farmers' High Line Canal Trail (Relocation)</i>	New Trail	Major	Concrete	1990	Legacy Ride Pkwy to Sheridan Blvd (relocate major trail route) - Low priority until Proposed Margaret's Pond Open Space Master Plan (and adjacent OS) is complete. Replace this sidewalk segment with a major trail closer to North Hylands Creek in the City Open Space.
<i>Farmers' High Line Canal Trail (Relocation)</i>	New Trail	Major	Concrete	4190	At 92nd Ave onto OS and Wadsworth Pkwy (relocate major trail route) - Low priority until Wolff Run OS to Wadsworth Wetlands (includes adjacent OS areas) is complete. Must coincide with new underpass at Wadsworth Pkwy.
<i>Green Knolls Park to Walnut Creek Park through Overland Trail OS</i>	New Trail	Minor	Concrete	495	Contributes to a North/South Connection; includes 3 segments: (1) Green Knolls Park to 108th
	<u>New Trail</u> New Trail	<u>Minor</u> Minor	<u>Concrete</u> Concrete	<u>1930</u> 1633	(2) through Overland Trail OS Property (3) alignment to connect to Walnut Creek Trail (actual alignment TBD, LF based on alignment shown in the Trails MP Map)
<i>Hyland Trail at US 36/Westminster Blvd to Big Dry Creek Trail</i>	New Trail	Minor	Concrete	4295	Already graded in through development, future/in progress underpass connects to Hyland Pond Open Space
<i>Long's View Trail</i>	New Trail	Minor	Aggregate	890	Part of a loop system, should be aggregate. Includes 4 segments: (1) near BDC Park - 890 LF
	New Trail	Minor	Aggregate	1605	(2) Segment within new development OS
	New Trail	Minor	Aggregate	690	(3) Connecting directly north to BDC Trail
	<u>New Trail</u>	<u>Minor</u>	<u>Aggregate</u>	<u>1370</u>	(4) <u>Connecting west to BDC Trail</u>
<i>Mushroom Pond Trail at Federal Park Centre Trail connection</i>	New Trail	Minor	Concrete	2879	Coincides with future underpass to connect BDC Trail to FHL Trail (critical link); includes 2 trail segments: (1) connect east of Federal continuing on the west side headed north to BDC Trail
	<u>New Trail</u> New Trail	<u>Minor</u> Minor	<u>Concrete</u> Concrete	<u>1318</u> 825	(2) E/W connection to BDC Trail Need connection to Park Centre business park to the east; includes 2 segments: (1) from the west up to BDC Park
	<u>New Trail</u>	<u>Minor</u>	<u>Concrete</u>	<u>705</u>	(2) <u>East segment through OS to Park Centre</u>
<i>Pillar of Fire Trail</i>	Improve sidewalk along ROW; route signage	Minor	Concrete	6555	Needed defined connection to US 36 and further to future FasTracks station from that area. More feasible to defer the Pillar of Fire Trail as a route due to the lack of land access/ ownership for trail development, improving the sidewalks and adding "route" confidence marker signage; widen sidewalk to 8' where feasible
<i>Standley Lake Perimeter Trail</i>	New Trail	Minor	Aggregate	12820	Creates much desired loop around the lake; includes 2 segments: (1) Loop section
	<u>New Trail</u> New Trail	<u>Minor</u> Major	<u>Aggregate</u> Concrete	<u>1875</u> 4630	(2) <u>Loop access segment from Alkire Street</u> Completes major missing link connecting Walnut Creek to Big Dry Creek (BDC); should coincide with underpass <u>improvement at RR</u>
<i>Westcliff Trail</i>	New Trail	Minor	Concrete	710	Need connection from FHC Trail to aggregate trail at edge of Betty Adams School.

Prioritizing Missing Links (continued)

MEDIUM PRIORITY (in alphabetical order)	PROPOSED IMPROVEMENT				COMMENTS
	IMPROVEMENT TYPE	TRAIL TYPE	PROPOSED MATERIAL	APPROX. LENGTH (LF)	
<i>Airport Creek Trail</i>	New Trail	Minor	Aggregate	1405	(1) Proposed segment creates direct access from BDC to Airport Creek Trail adjacent to 110th to Sheridan Blvd (north of BDC); could be concrete, but not necessary
	Bridge				If segment (1) above, then it would require a bridge over BDC to make connection
<i>Big Dry Creek Trail - Alternate Route</i>	New Trail	Minor	Concrete	2370	West of Wadsworth Pkwy; provides an alternate route away from backyard fences
<i>Bridge at Walnut Creek at 105th Ave, West of Wadsworth Parkway</i>	New Trail/Bridge	Minor	Concrete		Connects Walnut Creek Trail to Standley Lake HS, (all residents are south of the Walnut Creek Trail - does not appear to be a direct route to the school for them, so not a high priority)
<i>Bull Reservoir trails</i>	New Trail	Minor	Aggregate	4445	Creates loop from BDC trail and neighborhood loop
<i>Calkins Ditch Trail</i>	New Trail	Minor	Aggregate	3330	South of 120th Ave, west of BDC - a social trail or old maintenance patch for the ditch exists; contributes to loop system at BDC; ditch is valuable in terms of history of Westminster; high priority if pressure increases to formalize
<i>Mushroom Pond Trail at Vogel Pond</i>	New Trail	Minor	Concrete	1395	112th Ave to 114th Ct - This connection would make a nice large loop connecting BDC to Farmers' High Line; improvements should be made in conjunction with crossing improvements at 112th Ave.
<i>Hyland Trail connection to Carrol Butts Park</i>	New Trail	Minor	Concrete		Proposed alignment still unclear, crosses Par 3 golf course, alternative route along 93rd Ave and along the east side of the fairway
<i>McKay Creek Trail</i>	New Trail/Bridge	Minor	Aggregate	625	Connects McKay Creek Trail to Huntington Trails Pkwy on the south side of the elevated spillway channel; bridge needed to make connection above
<i>Panorama Trail to Westcliff Trail</i>	New Trail	Minor	Aggregate	1779	Proposed aggregate trail would create loop off of BDC
<i>Sheridan Green Trail</i>	New Trail/Bridge	Minor	Aggregate	440	North segment completes a loop around the pond just west of BDC
<i>West View Recreation Center Trail</i>	New Trail	Minor	Aggregate	2945	Creates nice loop trail from Rec Center



Prioritizing Missing Links (continued)

LOWER PRIORITY (in alphabetical order)	PROPOSED IMPROVEMENT				COMMENTS
	IMPROVEMENT TYPE	TRAIL TYPE	PROPOSED MATERIAL	APPROX. LENGTH (LF)	
<i>Bradburn/Westfield Park Trail connection</i>	New Trail	Minor	Concrete	2770	Proposed segments that complete a nice loop between the two parks; however, people are making a loop now as it is, could be formalized with future park master plan for the whole area
<i>City Park Trail connecting trails</i>	New Trail	Minor	Aggregate	2140	East side of creek from Sheridan to BDC south of 108th - creates nice loop; already has a clear foot path Promenade Terrace Bridge to 104th Ave - creates nice loop
	New Trail	Minor	Concrete	665	
<i>Community Ditch Trail</i>	New Trail	Minor	Concrete	6484	Connects Ketner Lake to Westminster Hills OS; low priority until proposed Westminster Hills OS Master Plan is completed
<i>Heritage Trail (Proposed trail south of Airport)</i>	New Trail	Minor	Concrete or Aggregate	8675	8' concrete trail - desired connection to north area to Future FasTracks at Lower Church Ranch; and on to BDC; fantastic views, could be aggregate trail
<i>Little Dry Creek Trail at 75th</i>	New Trail	Minor	Concrete or Aggregate	TBD	Loop trail through open space
<i>Loon Lake Trail</i>	New Trail	Minor	Aggregate	3110	Creates a nice trail access to Standley Lake and loop around Loon Lake; already has a clear foot path
<i>Lower Church Ranch perimeter trail</i>	New Trail	Minor	Concrete or Aggregate	TBD	Gives public access to open space; low priority until proposed Lower Church Ranch Master Plan is completed
<i>McKay Lake Trail</i>	New Trail	Minor	Concrete	1850	Adjacent to 144th and Zuni - perimeter OS trail/sidewalk
<i>North Walnut Creek Trail</i>	New Trail	Minor	Aggregate	3930	<u>Simms to Westmoor Drive</u>
<i>Walnut Creek Trail</i>	New Trail	Major	Concrete	1135	East of Westmoor Drive, North of 108th - major trail connection; low priority until connection through RR has been determined
<i>Turnpike Trail connection</i>	New Trail	Minor	Concrete	1920	East of Lowell - directly south and parallel to US36 - essentially an attached sidewalk; needs to coincide with an <u>at-grade crossing over to park at Grove St</u>
<i>Westminster Hills Open Space Trails (West), and Trailhead</i>	New Trail	Minor	Aggregate	11770	Defines a dog on-leash area within Westminster Hills OS; provides alternative parking area from dog park. Low priority until Proposed Westminster Hills Open Space Master Plan is complete. LF DOES NOT INCLUDE Refuge to Refuge Trail segment of loop
<i>Wolff Run Open Space trail</i>	New Trail	Minor	Aggregate	1660	Formalize footpath through the open space

Prioritizing Proposed Improvements to the Existing Trail System

While the *Trails Master Plan Diagram* illustrates proposed missing links and crossings, it does not illustrate needs for improvements of existing facilities. During this process, the following proposed improvements were identified as high, medium, and lower priority. Most high priority projects have been also listed on the *Capital Improvement Project List*. The criteria established for prioritizing improvements include:

- » Improves general connectivity by upgrading trail to Major or Minor trail standards.
- » Improves connectivity to a school
- » Improves connection to major transportation destinations (i.e. FasTracks Stations)
- » Improves pedestrian and bicycle safety

HIGHER PRIORITY (in alphabetical order)	PROPOSED IMPROVEMENT				COMMENTS
	IMPROVEMENT TYPE	TRAIL TYPE	PROPOSED MATERIAL	APPROX. LENGTH (LF)	
Big Dry Creek Trail (Big Dry OS)	Upgrade Material	Major	Concrete	4330	As a major, regional trail, BDC Trail existing aggregate should be replaced with a 10' concrete trail with an adjacent aggregate trail for joggers. Segments include: (1) Huron St to 128th Ave
	Upgrade Material	Major	Concrete	4030	(2) Trail adjacent to BDC Park to Federal Pkwy. Length may change based on potential future master planning of this area.
	Bridge				Proposed bridge over BDC just south of 128th Ave underpass that allows direct connection from the west side of the creek to BDC Park and parking area/trailhead on the east side of the creek
	Upgrade Material	Major	Concrete	5155	(3) West of Federal Pkwy, through Metzger Property to 120th Ave
	Upgrade Material	Major	Concrete	3400	(4) BDC OS, south of underpass at 120th Ave to existing concrete trail at approx 115th Ave
	Upgrade Material	Major	Concrete	3700	(5) BDC OS at existing concrete west of bridge, past Westfield Village Park to existing concrete at about 112th Ave
	Upgrade Material	Major	Concrete	1360	(6) SW of 104th Ave adjacent to Butterfly Pavilion to Westminster Blvd
	Upgrade Material	Major	Concrete	625	(7) East of Wadsworth Blvd, between two concrete segments within the BDC OS
Big Dry Creek Trail (Yarrow St to BNSF RR)	Sharrow				(6) Ideally this segment will eventually become a trail; however, that would require widening of 99th; in the short term, mark the existing street with a sharrow and identify as route for the Big Dry Creek Trail
Countryside Creek Trail	Upgrade Trail	Minor	Concrete	3810	(1) Segment from Mayfair Park to Countryside Rec Center - existing aggregate trail should be 8' concrete trail. Provides access to Witt Elementary and should extend to Oak Street
Farmers' High Line Canal Trail	Bridge				West of Federal Blvd - existing 6', should be widened to 10'
	Upgrade Trail	Major	Concrete	3110	Segment adjacent to canal from Westminster Blvd to Pierce St - <u>replace aggregate trail with 10' concrete trail</u>
	Upgrade Trail	Major	Concrete	590	Segment Pierce St to 92nd Lane - <u>replace aggregate trail with 10' concrete trail</u>
	Upgrade Trail	Major	Concrete	480	Segment Independence St to Standley Lake Regional Park - replace 4' concrete sidewalk adjacent to privacy fence and replace with 10' concrete trail located further south at edge of canal if <u>feasible</u> .
	Upgrade Trail	Major	Concrete	5100	Segment through Hyland Ponds Open Space - replace aggregate trail with 10' concrete trail - low priority until proposed Hyland Ponds OS master plan is completed
Walnut Creek Trail	Upgrade Trail	Major	Concrete	5520	West of Westmoor Drive to Simms St - <u>replace aggregate trail with 8' concrete trail</u>
	Upgrade Trail	Major	Concrete	4160	South of 108th to Wadsworth Pkwy - <u>replace aggregate trail with 8' concrete trail</u>
Westcliff Trail	Upgrade Trail	Minor	Concrete	1830	(1) South of 98th Ave to school - improves trail connection to <u>Betty Adams School</u>
	Upgrade Trail	Minor	Concrete	1780	(2) North of 98th Ave to BDC OS and within BDC OS - improves trail connection to <u>Betty Adams School</u>



Prioritizing Proposed Improvements to the Existing Trail System (continued)

MEDIUM PRIORITY (in alphabetical order)	PROPOSED IMPROVEMENT				COMMENTS
	IMPROVEMENT TYPE	TRAIL TYPE	PROPOSED MATERIAL	APPROX. LENGTH (LF)	
<i>Allen Ditch Trail East</i>	Upgrade Trail	Minor	Concrete	1425	(1) Zuni St to 81st Ave - existing 6' wide trail should be replaced with 8' concrete path; poor condition, hazardous, needs repair
	Upgrade Trail	Minor	Concrete	960	(2) Along 81st Ave from Clay Dr at to Eliot St - existing 4' sidewalk should be replaced with 8' concrete path; poor condition, hazardous, needs repair
	Upgrade Trail	Minor	Concrete	480	(3) 81st Ave to 80th Ave - existing 4' sidewalk should be replaced with 8' concrete path
<i>Arapahoe Ridge Trail</i>	Upgrade Trail	Minor	Concrete	3290	Arapahoe Ridge Elem School to Big Dry Creek Trail - adjacent to school and Amherst Park, replacing aggregate trail with 8' concrete trail; Consider moving trail to East side of Pecos St to avoid conflicts with the school
<i>Countryside Creek Trail</i>	Upgrade Trail	Minor	Concrete	975	(2) Segment east of Wadsworth Pkwy - existing 4' walk should be widened to 8'. Creates connection from Standley Lake High School to Walnut Creek.
<i>Quail Creek Trail</i>	Upgrade Trail	Minor	Concrete	460	Replace aggregate segment with 8' concrete trail; only segment of the trail that is currently aggregate in Quail Creek Park
<i>Stratford Lakes Trail</i>	Upgrade Trail	Minor	Concrete	775	Segment from west end of Stratford Lakes headed north to BDC Trail; is currently aggregate, replace with 8' concrete trail
<i>Trailside Creek Trail</i>	Upgrade Trail	Minor	Concrete	455	In Nottingham Park - only one segment that is not concrete, aggregate should be replaced with 8' concrete trail.
	Upgrade Trail	Minor	Concrete	770	West of Nottingham Park to Dover St - existing 5' concrete walk should be replaced with 8' concrete trail.

LOWER PRIORITY (in alphabetical order)	PROPOSED IMPROVEMENT				COMMENTS
	IMPROVEMENT TYPE	TRAIL TYPE	PROPOSED MATERIAL	APPROX. LENGTH (LF)	
<i>Airport Creek Trail</i>	Upgrade Trail	Sidewalk	Concrete	180	(2) Replace 4' sidewalk with 8' sidewalk to make trail connection less hazardous north of 112th Ave
	Upgrade Trail	Minor	Concrete	855	(3) From Kendall St to Main St, replace 6' concrete path with 8' concrete trail
	Upgrade Trail	Minor	Concrete	1655	(4) From Kensington Park to Kendall St, replace 6' concrete path with 8' concrete trail
	Upgrade Trail	Minor	Concrete	1050	(5) Airport Creek to 113th Pl, replace 4' sidewalk with ideally 8' detached walk if feasible
	Upgrade Trail	Minor	Concrete	900	(6) Airport Creek to just north of 116th Pl, replace 4' sidewalk with ideally 8' detached walk if feasible
<i>Cotton Creek Trail</i>	Upgrade Trail	Minor	Concrete	3090	Most of this trail is 6' wide concrete, backed up to backyard fences. In some locations, the trail is in poor condition from tree roots. Ideally this trail should be 8' concrete and be set further away from backyard fences
<i>Legacy Ridge Trail</i>	Upgrade Trail	Minor	Concrete	715	Segment from BDC to Vrain St - replace aggregate trail with 8' concrete trail
	Upgrade Trail	Minor	Concrete	715	Segment from Stuart St to Legacy Ridge Pkwy - replace 6' concrete sidewalk with 8' trail, and if feasible move away from backyard fences
<i>Oakhurst Park Trail</i>	Upgrade Trail	Minor	Concrete	1225	East of Wadsworth Pkwy to Trailhead - existing sidewalk functions, but as a major trail should be 8' trail and detached where feasible.



Noxious Weed Survey: Big Dry Creek Corridor Common Teasel and Russian Olive Management

Weed Biology

One of the principal goals on City of Westminster Open Space is to preserve and maintain native plant communities, protect rare species and communities, and restore native vegetation in suitable areas. Therefore, the City of Westminster sets priorities for the control or elimination of species that have the greatest negative impact potential to significant resources on the Open Space. These priorities reflect each weed's present or future harmful impacts. In general, perennial species pose a greater threat to native ecosystems than do annual or biennial species. More particularly, weed species with deep root systems or creeping rhizomes are especially difficult to control. Descriptions of the potential impacts of Russian olive and common teasel mapped on the Open Space appear below in the *Specific Weed Control Outlines*.



Russian olive along Big Dry Creek

Species Distribution

In addition to legal mandates and weed biology, the existing distribution of Russian olive and teasel in the Big Dry Creek Corridor is an important factor in prioritizing infestations of these weed species for management activities. The analogy of a wildfire has often been used to describe the spread of noxious weeds. Using this analogy, small, isolated patches of weeds are generally considered a higher priority for control activities than large, well-established infestations. Small, isolated patches are easier to eradicate because there is a smaller distribution of plants, smaller seed bank, less-developed root system, and potentially, a desirable vegetation community.

The City of Westminster also notes species that are not yet on the Open Space, but are found nearby and could be problems if they spread to the Open Space. The Integrated Pest Management Plan (IPM) in the City's 2010 *Wildlife and Natural Resource Management Plan for Open Space Properties* includes regularly monitoring the Open Space for these species in order to quickly detect and eliminate them if they ever do appear. With this reasoning in mind, for Russian olive and teasel, higher priority will be given to:

- » Infestations that are new to the open space
- » Infestations not well established in surrounding areas
- » Small infestations



Common teasel



Russian olive

- » Infestations likely to spread because of location (e.g., roadsides, trailsides, drainages, irrigation ditches or wind breaks)
- » Infestations adjacent to or likely to spread into areas containing conservation targets
- » Edges of large infestations

Lower priority will be given to:

- » Large, well-established infestations for which there is little potential for eradication on the Open Space
- » Infestations that are well established in surrounding areas and thus provide a constant seed source to the Open Space
- » Infestations confined to disturbed areas
- » Infestations that are easier to control relative to others

Mapping

Using aerial photography to identify Russian olive stands and existing GIS data from the City of Westminster for common teasel patches, **Table 1** summarizes for the Big Dry Creek Corridor the number of acres infested on the Open Space within individual reaches as well as by the five open space management classifications. The data helps establish priorities for common teasel and Russian olive management by considering existing management goals and spatial distribution along the creek corridor. It is important to note that specific patches may have a higher management priority than what may be indicated in **Table 1** by the landscape management area classification. Thus, the reach summary helps further prioritize management activities given that the creek itself acts as a vector to transport weed seed.

Setting Priorities

With both Russian olive and common teasel mapped, it is important to determine achievable goals for weed management in priority areas. For example, the 1.21 acres of Russian olive within Reach 1 (west of Wadsworth to Standley Lake) has a higher management priority than the 1.65 acres of Russian olive within Reach 4 (west of US 36 to Old Wadsworth). However, what is the goal for the 1.21-acre infestation of Russian olive? The answer – “eradication.” A small or scattered infestation should be eradicated, especially when adjacent to areas where the noxious weed species does not occur – note the spatial distribution of Russian olive below Reach 1 (west of Wadsworth to Standley Lake). In short, the Russian olive is relatively scattered until Reach 9 (north of 112th Avenue, west of Federal Boulevard).

Table 1. Common teasel and Russian olive infestations in acres based on individual reach and management area classification.

Westminster Open Space Description			Open Space Management Classification (Acres)					Open Water (Acres)*		Noxious Weeds (Acres)	
Individual Reaches Big Dry Creek Open Space Corridor	Descriptive Location	Total Acreage	Sensitive	Urban Natural	Transitional	Functional	Historical/ Agricultural	Open Water/ Wetland	Open Water Creek/ Channel	Common Teasel	Russian Olive
<i>Big Dry Creek Open Space (1)</i>	West of Wadsworth to Standley Lake; plus area between Wadsworth Pkwy and BNSF RR	53.48		50.6				1.10	1.80	3.20	1.21
<i>Big Dry Creek Open Space (2)</i>	East of BNSF RR at 99th	4.00			4.0					0.19	0.00
<i>Big Dry Creek Open Space (3)</i>	West of Old Wadsworth and 99th	8.06			8.1					0.00	0.00
<i>Big Dry Creek Open Space (4)</i>	West of US 36 to Old Wadsworth	100.97		98.5					2.50	6.41	1.65
<i>Big Dry Creek Open Space (5)</i>	Directly East of US 36 to Westminster Blvd (ROW)	1.68				1.6			0.10	0.50	0.00
<i>Big Dry Creek Open Space (6)</i>	East of Westminster Blvd. to 104th	9.84	1.6	7.6					0.63	1.09	0.05
<i>Big Dry Creek Open Space (7)</i>	West of Sheridan, North of City Park	36.29		34.2					2.10	12.09	0.12
<i>Big Dry Creek Open Space (8)</i>	East of Sheridan, South of 112th	23.67		22.6					1.10	6.83	0.18
<i>Big Dry Creek Open Space (9)</i>	North of 112th, West of Federal	287.95		183.9	93.1			8.24	5.20	33.96	9.68
<i>Big Dry Creek Open Space (US 287 Triangle)</i>	SW of 120th and Federal	12.76				12.8				0.23	0.05
<i>Metzger Farm</i>	120th Ave and Lowell Blvd	152.51	10.7				134.1	6.67	1.00	2.56	6.79
<i>Big Dry Creek Open Space (10)</i>	East of Metzger, West of Federal Pkwy	72.05			68.3			0.89	2.90	7.44	4.31
<i>Big Dry Creek Open Space (11)</i>	East of Federal Pkwy, Adjacent to Big Dry Creek Park	102.17			100.7			1.43	1.50	2.17	2.52
<i>Big Dry Creek Open Space (12)</i>	North of 128th, West of Huron	94.47		63.6				28.50	2.40	1.75	3.17
BIG DRY CREEK OPEN SPACE CORRIDOR - TOTALS		959.90	12.3	460.9	274.2	14.3	134.1	46.83	21.23	78.42	29.73

**The total acreage per GIS includes open water. Open Water acreage for ponds and the creek, as well as parking areas, were subtracted out of the Open Space Management Classification acreage to reflect actual land-based management



Specific Weed Control Outlines

The following section provides control outlines for common teasel, cutleaf teasel, and Russian olive that have been mapped within the Big Dry Creek Corridor. The control outlines are intended to provide a brief overview of the species target for management. While the City of Westminster has mapped all teasel within the Big Dry Creek Corridor as common teasel, control outlines have been provided for both common and cutleaf teasel.

Common teasel (*Dipsacus fullonum*)

Priority

High — the species can be an aggressive competitor, and control measures are relatively easy.

Description

Common teasel is a biennial forb that is capable of massive seed production and high germination that allow it to quickly invade an area.

Current Distribution on the Open Space

Common teasel is found throughout the Big Dry Creek Corridor within all Open Space management areas and creek reaches with the exception of Reach 3 (directly east of U.S. 36 to Westminster Boulevard). Approximately 78 acres or 8.2 percent of the open space area within the Big Dry Creek Corridor are infested.

Measurable Objectives and Goal

Goal: Reduce and eventually eradicate.

1. Annually cut stalks of flowering plants.
2. Focus initial control efforts within *Sensitive* Landscape Management Areas.

Control Options

The key to controlling common teasel is to eliminate seed production and exhaust the seed bank in the soil. Common teasel does not reproduce vegetatively and dies after seed production. Therefore, cutting the stalks of flowering plant is the best control in natural areas. Cut stalks should be bagged and ideally burned. It is important to ensure that the species mapped is indeed common teasel. Refer to cutleaf teasel control options should the species be present.

Treatment Schedule

Cut flowering stalks from July to August.

Cutleaf teasel (*Dipsacus laciniatus*)

Priority

High — with consideration that cut leaf teasel is more aggressive than common teasel.

Description

Although usually called a biennial, teasel is better described as a monocarpic perennial. The plant grows as a basal rosette for a minimum of one year (this rosette period frequently is longer) then sends up a tall flowering stalk and dies after flowering. The period of time in the rosette stage apparently varies depending on the amount of time needed to acquire enough resources for flowering to occur. Cutleaf teasel blooms from July through September.

Current Distribution on the Open Space

It is unknown whether cutleaf teasel occurs on the Open Space. The City of Westminster has mapped all teasel as common teasel.



Measurable Objectives and Goal

Goal: If present on the Open Space, reduce and work long term to eradicate.

1. Recruit volunteers to annually cut stalks of flowering plants.
2. Focus initial control efforts within *Sensitive* Landscape Management Areas.

Control Options

For small populations or if large groups of volunteers are available, mechanical methods work quite well. Young rosettes can be dug up using a dandelion digger. Once the rosettes get large, it is difficult to dig the roots up without doing damage to the natural area around the plant. Very small seedlings can be pulled up by hand when the soil is moist. Flowering plants can be cut before seed set. At the initiation of flowering, the flowering heads should be cut off and removed. Removed immature seed heads left in place can still develop some viable seeds. Once the flowering heads have been removed, the flowering stalk should be cut off at or slightly below ground level. Cutting off the flowering stalks just at flowering time will usually prevent resprouting from the root crown. Cutting flowering stalks prior to flowering should be avoided since the plants will resprout and flower again. A later inspection should be performed to catch any root crowns that do resprout.

Probably the most cost effective method of control is the use of foliar applied herbicides. Any of the herbicides recommended below for buffer or disturbed sites can be used, but with greater care to prevent damaging native plants. Spot treatment with backpack sprayers is probably the preferred method in high quality areas as opposed to high volume units. Triclopyr is a good choice during the growing season since it usually does not harm the monocots. Some grass species will be burned back by Triclopyr, but will usually come back. During the dormant season Glyphosate has worked in controlling teasel in some situations.

Treatment Schedule

Cut flowering stalks from June to September.

Russian olive (*Eleagnus angustifolia*)

Priority

Medium — as large, mature stands of Russian olive are nearly impossible to eradicate throughout an entire watershed once it becomes well established. Patches in an area with Ute Ladies'-tresses orchid present should be addressed first.

Description

Russian olive is a shrub or small tree that can grow up to 30 feet in height and is often thorny. It can flower and set fruit in three years. Although Russian olive establishes primarily by seed, vegetative propagation can also occur.

Current Distribution on the Open Space

Russian olive occurs in a variety of soil and moisture conditions on the Open Space but generally prefers sandy floodplains and is often associated with open, moist riparian habitats. Approximately 30 acres or 3 percent of the Big Dry Creek Corridor has canopy cover dominated by Russian olive.

Measurable Objectives and Goal

Goal: Reduce Russian olive cover on the Open Space

1. If present, remove existing trees in Ute Ladies'-tresses orchid habitat within 3 years.
2. Eradicate within *Sensitive* Landscape Management Areas within 3 years.

Control Options

Seedlings and sprouts can easily be hand-pulled when the soil is moist. Once Russian olive becomes firmly established, the most effective control method is the cut-stump herbicide treatment. This method is both labor-intensive and expensive, but can be highly effective (good kill rate if applied correctly), and is more target-specific than foliar applications of herbicide. The stump-cut method consists of the following steps: 1) cut stems of Russian olive within 5 cm of the ground surface; 2) apply herbicide within a few minutes of cutting; 3) cut and treat the entire circumference of the stem cambium; and 4) treat any resprouted foliage between 4 to 12 months after the initial treatment.

Treatment Schedule

The best time to apply herbicide to control Russian olive is when the plants are actively growing from May through September. Care should be taken to ensure that birds are not nesting in the targeted tree.

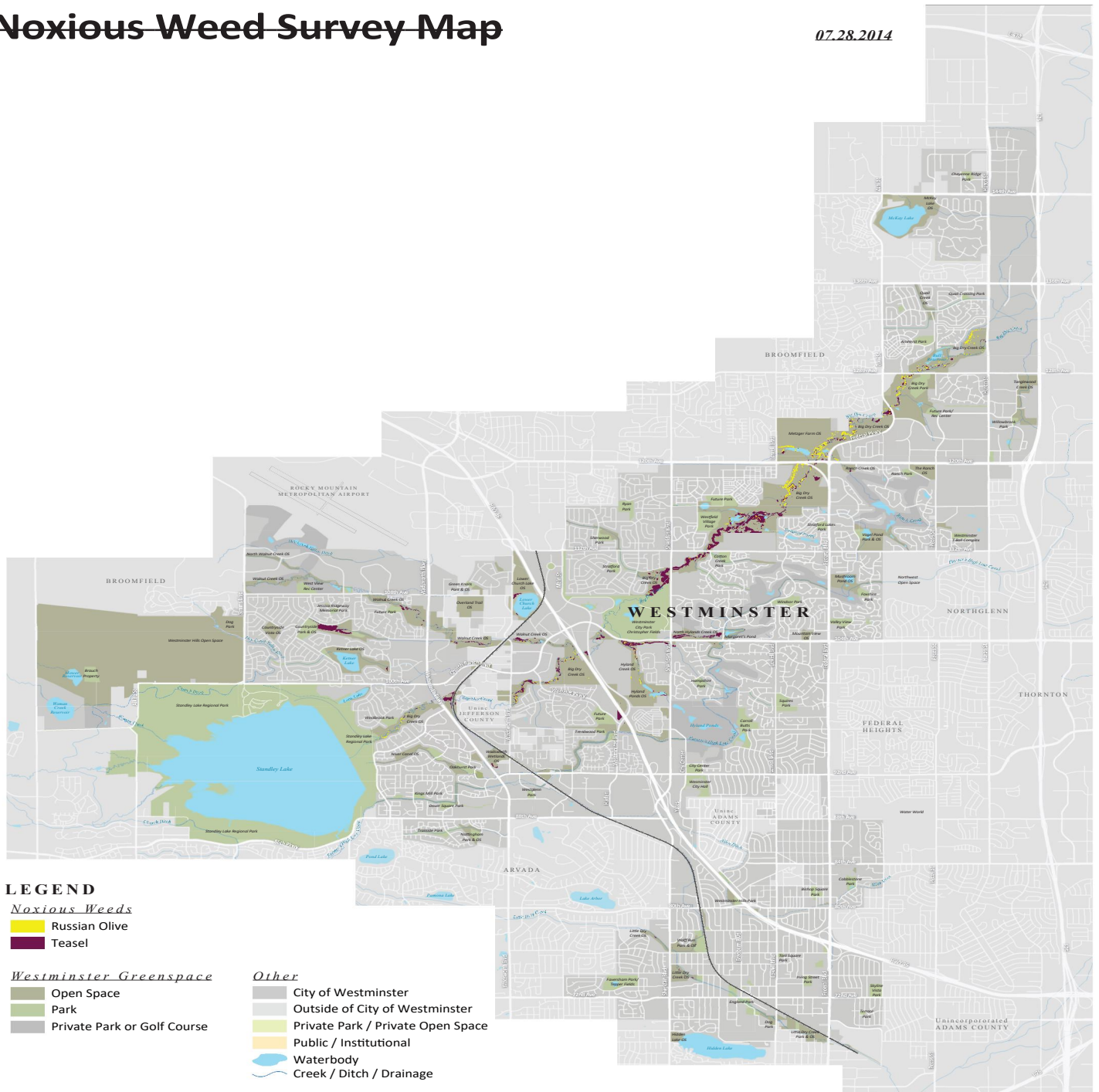
Table 2. Detailed control calendar for teasel species and Russian olive.

Weed Species	Spring (April to Mid-June)	Summer (Mid-June to August)	Fall (September to October)
Common teasel	<i>Reseed previously controlled areas</i>	<i>Cut flowering stalks from July to August</i>	<i>Reseed previously controlled areas</i>
Cutleaf teasel	<i>Cut flowering stalks beginning in June</i>	<i>Cut flowering stalks</i>	<i>Cut flowering stalks until September</i>
	<i>Consider foliar application of herbicides during growing season</i>		
Russian olive	<i>Seedlings and sprouts can be hand-pulled or weed wrenched out when soil is moist. Cut-stump herbicide treatment beginning in May.</i>	<i>Cut-stump herbicide treatment.</i>	<i>Cut-stump herbicide treatment through September</i>

Large scale fold-out version of this map is included in the pocket at the end of this section.

Noxious Weed Survey Map

07.28.2014



LEGEND

Noxious Weeds

- Russian Olive
- Teasel

Westminister Greenspace

- Open Space
- Park
- Private Park or Golf Course

Other

- City of Westminister
- Outside of City of Westminister
- Private Park / Private Open Space
- Public / Institutional
- Waterbody
- Creek / Ditch / Drainage





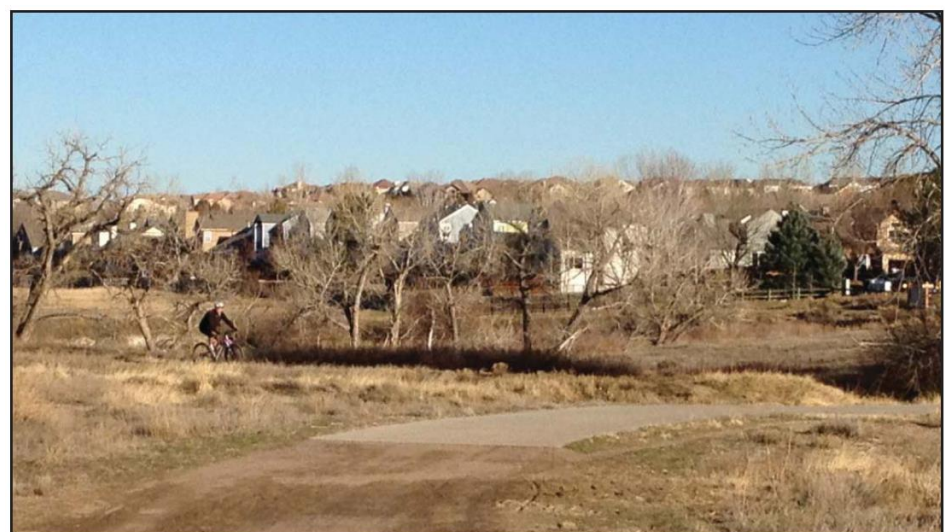
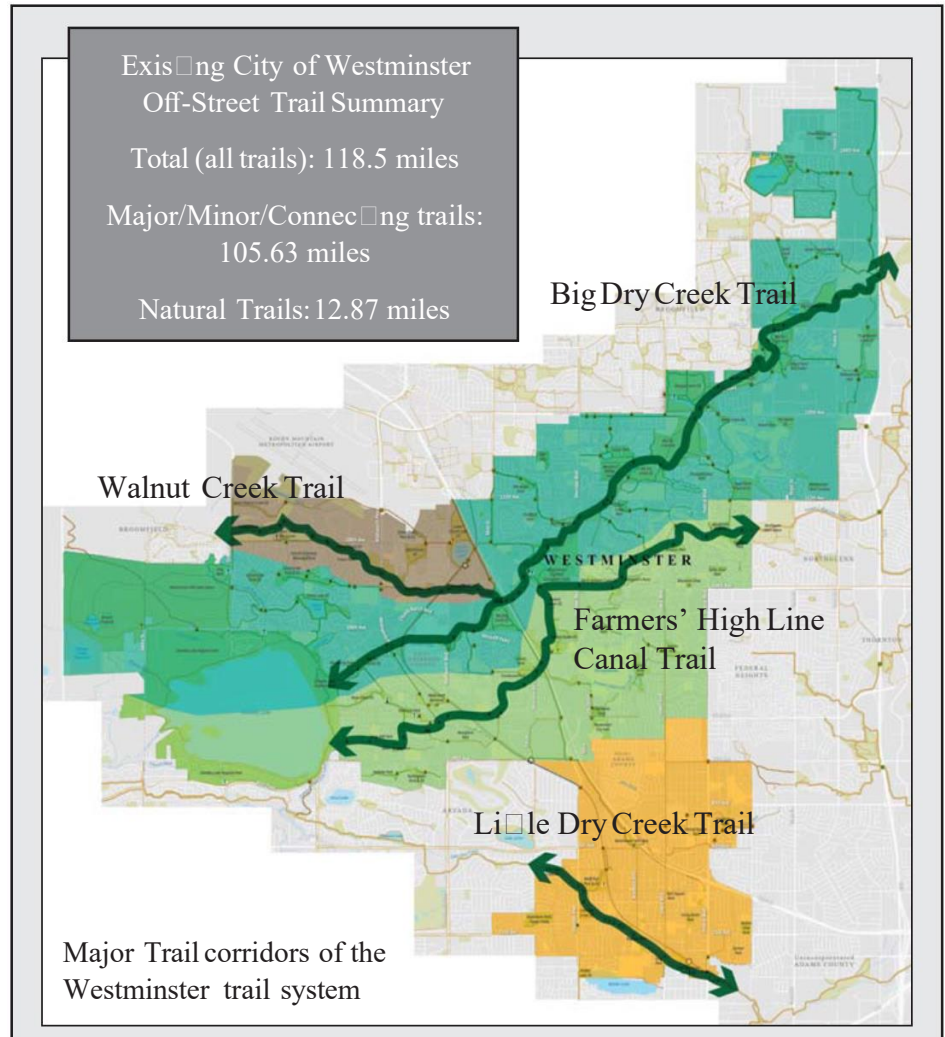
Trails Master Plan Diagram - Supporting Narrative

The conceptual approach to developing the City of Westminster's Trails System began with identifying major, linear corridors associated with drainage and irrigation conveyance (i.e. Big Dry Creek, Little Dry Creek and Farmers' High Line Canal), purchasing and preserving land along those corridors, and constructing a Major Trail (regional) system. Through the subsequent development of residential subdivisions and commercial development, Minor Trails were designed and constructed that link neighborhoods and commercial development to Major Trails; the existing combination of Major and Minor Trails serves as the framework for the Westminster Open Space and Trails System.

Goals for Trails Planning

This Trails Master Plan, as part of the Open Space Stewardship Plan, seeks to progress the following three primary goals:

- 1) Complete the Trails System as it was originally conceived by city staff
- 2) Mitigate unforeseen consequences of the "Major Trail Corridor/ Minor Trail Links" framework (as mentioned above) for trails development.
- 3) Anticipate expansion of the existing trails framework in response to expansion and changing land uses and user groups.



Trail at Stroud Lakes into Big Dry Creek Open Space

GOAL1: Complete the existing trails system as it was originally conceived by city staff.

- » Identify and construct missing links in Major Trails

Example: Walnut Creek Trail missing link at Wadsworth Boulevard/Church's Stage Stop west to Wadsworth Parkway

- » Upgrade both Major Trails and Minor Trails that are used by residents commuting to school and work to concrete trails with aggregate path at one side. Continue to use aggregate paving (crusher fines, etc.) on all other Minor Trails to contribute to the creation of a unified, hierarchical trail system that is consistent with regional standards.

Example: 1) Big Dry Creek Trail between 112th and 120th Avenues would include a 10' concrete trail with a 2' aggregate path at one side and then Caulkins Ditch Trail on the opposite side of the creek should be an 8'-10' wide aggregate trail along the old ditch maintenance road.

(2) Countryside Creek Trail through Countryside Open Space that provides connection onto Wiñ Elementary School

- » When planning new Minor Trail through a Public Land Dedication (PLD) process, consider how land acquisition for the proposed link could function to further extend and/or expand the open space corridor

Example: Proposed Long's View Trail within future development at Federal Pkwy and 122nd Ave could have the affect of broadening the corridor.

GOAL2: Mitigate the unforeseen consequences of the focus on "Major Trail/ Minor Trail links" framework for future trail expansion

City expansion and development patterns have resulted in challenges associated with the focus on trail development paralleling drainage corridors. Westminster's primary open space corridors generally run west to east, aligning with major drainage and ditch systems – offering few opportunities to make much needed north/south connections. The two most significant corridors, Big Dry Creek and the Farmers' High Line Canal, run parallel to one another through the northern part of the city leaving the southern part of the city with few opportunities to connect the Major Trails, with the exception of the future U.S. 36 Bikeway.

Objectives to mitigate these unforeseen consequences include:

- » Recognizing the off-street, open space trail system as a major component of a larger system including bike lanes, bike routes, and side paths.
- » Linking off-street, open space trails to the bikeway framework plan identified in the 2030 Westminster Bicycle Master Plan. Coordinate respective prioritization plans as much as possible.
- » Reinterpreting the Major Trail/Minor Trail connection framework to include interconnecting local loops. Use sidewalks or Minor Trails to create neighborhood loops, enabling short walks that connect users to the trails and open space system without committing them to journeying out to and back from Major Trail corridors.

Example: The series of Minor Trails from Farmers' High Line to the Big Dry Creek Trail along the southern bluff above the creek create a series of localized, neighborhood loops, i.e: Cottonwood Creek Trail at Legacy Ridge.

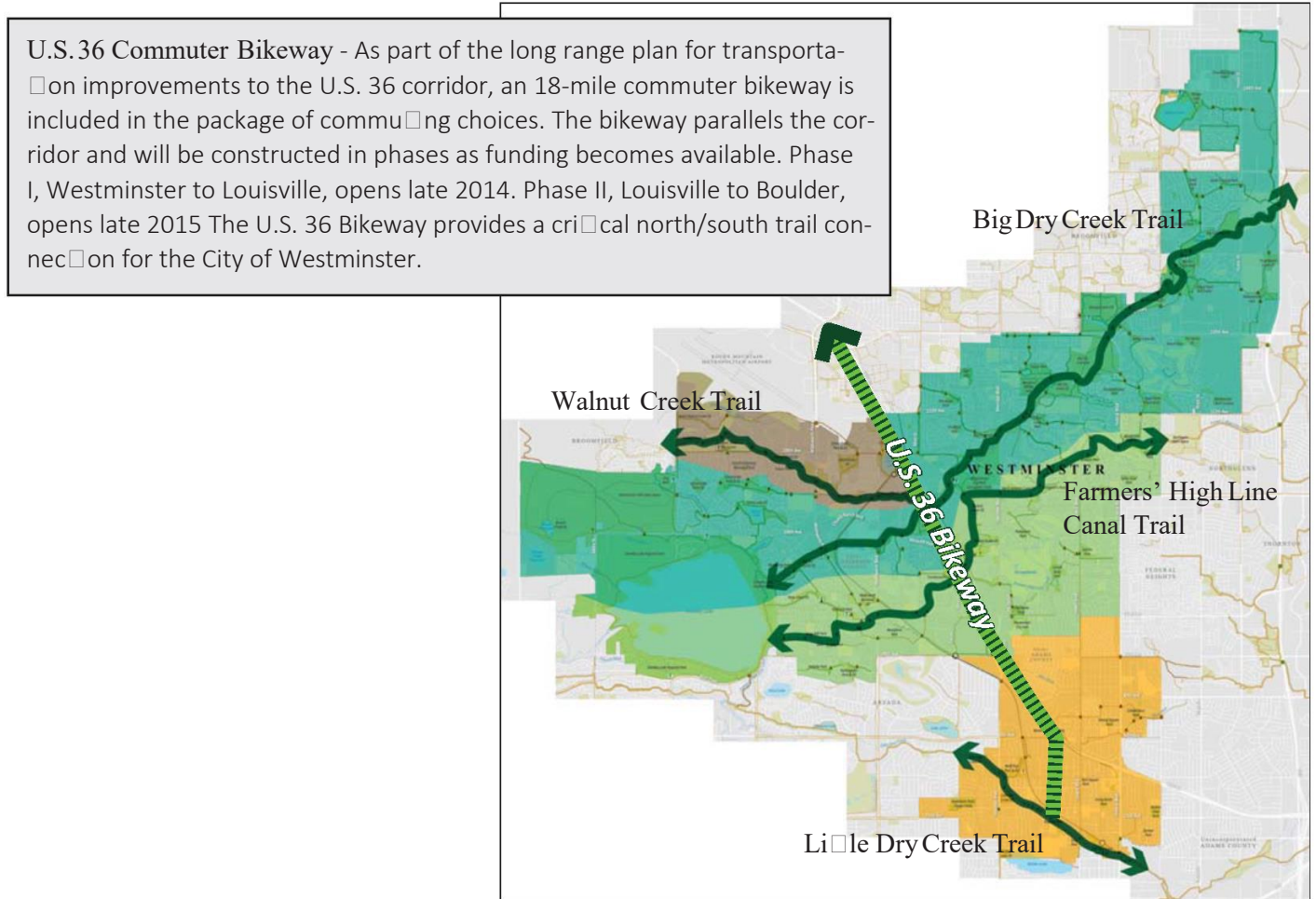


GOAL3: Anticipate and elaborate on the framework in response to growing and changing use.

The existing open space trail system is a popular public amenity for residents and non-residents. Increasing population, increased residential and commercial development, and redevelopment trends mean increased user trends along both Major and Minor Trails, and the need to connect new development and redevelopment projects to existing corridors.

Objectives to expanding on the existing framework include:

- » Continuing to expand on the trail system within open space by master planning specific areas.
 - Example:** Develop a network of trails within the Big Dry Creek Open Space from Sheridan Boulevard to I-25. The Major Trail on one side of the creek can be supplemented by a soft trail on the opposite side.
- » Improving mapping and signage. The city’s long term approach to establishing Minor Trail links to Major Trail corridors has resulted in the utilization of a variety of hybrid trail types combining trail/detached sidewalk/attached sidewalk, and bike route configurations. The resulting variety of trail types is difficult to illustrate accurately in mapping and results in unfulfilled trail user expectations on the ground.
 - Example:** Farmers’ High Line Canal trail consists of off-street trails, detached sidewalks through neighborhoods, and sidewalks along arterial streets. Illustrating the different types of trail/route conditions on a map as well as improving signage along the corridor would improve trail user experience through the corridor.
- » Identify potential connections to major corridors when public land dedications (PLDs) increase open space holdings.



Coordinate with the 2030 Bicycle Master Plan

This plan, adopted by City Council in June 2011, identifies many off-street shared paths (or trails) as part of the proposed final bikeway network to facilitate recreational and commuter bicycle needs. The plan recommends that Westminster build all new identified bikeway trail segments with concrete and retrofit all existing gravel segments with concrete for use by commuter cyclists. The plan makes recommendations for design and safety as well as recommendations for wayfinding and connection into the on-street bikeway system.

The 2030 Bicycle Master Plan and the Trails Master Plan often overlap and essentially share the same goal. In some instances the Trails Master Plan identifies a proposed trail route when it most likely will be a bikeway or bike lane with a four foot wide detached sidewalk (i.e. Bradburn Boulevard and Lowell Boulevard). If our proposed trails overlap with the proposed bikeways in an urban setting then the trail should be deferred for the bikeway and an improved sidewalk. Appropriate signage should still direct “trail” users to the next “trail” section with confidence markers as identified in the Wayfinding Strategy in this plan.

This Trails Master Plan update coordinates proposed improvement priorities (short/medium/long term) with improvement priorities identified in the bike plan ensuring connections are met.

Westminster Existing Off-Street Trail System

The existing Westminster Trail System hierarchy includes:

- » **Major Trails**, also referred to as “regional” trails, are the primary connectors of the trail system. These trails connect to major greenways and open space as well as adjacent jurisdictions.
- » **Minor Trails**, also referred to as “local” or “neighborhood” trails, provide links from neighborhoods to the Major Trails, as well as major recreational, cultural, and employment destinations.
- » **Connecting Trails**, also referred to as “access” trails, are often short trail spurs that connect the neighborhood to the Minor and Major Trail system.
- » **Natural Trails** are backcountry trails that provide a route to experience the city’s open space.

Off-Street Trail Facility Classifications and Design Standards

This section provides recommended design standards for Major and Minor Trail facility types when developing new trail connections within the City of Westminster. These design standards should be used as a tool for City staff to evaluate trail connections in development proposals and plan for new trails within the City.

These recommended design standards are consistent with **The American Association of State Highway and Transportation Officials’ (AASHTO) Official’s Guide for the Development of Bicycle Facilities, 4th Edition 2012**, a key resource for designing

bicycle facilities in the U.S., which includes off-street trails.







Off-Street Trail Facility Types

Within each trail facility type there are a variety of different trail segment types, varying in width and materials. These include:

- » **Multi-Use Path**
- » **Multi-Use Path with adjacent Aggregate Path**
- » **Aggregate Path**
- » **Natural Path**
- » **Detached Sidewalk**
- » **Attached Sidewalk**

The table on the following page summarizes the recommended specifications for each trail segment type.



Westminster Off-Street Trail Facility Segment Types			
Facility Segment Type	Typical Width	Typical Material	Typical Characteristics
Multi-Use Trail 	8'-12'	Concrete or Asphalt (See highlight box on the following page regarding pros and cons of concrete vs. asphalt)	<ul style="list-style-type: none"> » Designed for low to high speed trail use (walkers, runners, cyclists, in-line skaters) » Continuous route separated from roadway and curb » Frequent directional signage provided at trail intersections and decision making points
Multi-Use Trail with adjacent Aggregate Path 	8'-10' concrete with 4' adjacent aggregate path	Concrete or Asphalt and crusher fines or compacted organic material	<ul style="list-style-type: none"> » Designed for low to high speed trail use (walkers with strollers, cyclists, in-line skaters) on hard surface and low speed use on soft surface (walkers, runners) » Continuous route separated from roadway and curb » Frequent directional signage provided at trail intersections and decision making points
Aggregate Trail 	6'-10'	Crusher fines or compacted organic material	<ul style="list-style-type: none"> » Designed for low to moderate speed trail use (walkers, hikers, runners, off-road cyclists) » Continuous route separated from roadway and curb » Frequent directional signage provided at trail intersections and decision making points
Natural Trail 	3'-6'	Compacted organic material	<ul style="list-style-type: none"> » Designed for low speed use (walkers, hikers, trail runners) » Continuous route within an open space area with minimal conflicts with high speed trail users. » Minimal directional signage; may include educational or interpretive signage
Detached Sidewalk 	6'-10'	Concrete or Asphalt	<ul style="list-style-type: none"> » Designed for low speed users (pedestrians) » Separated by adjacent roadway and curb by a landscape buffer » Follows higher traffic volume streets
Attached Sidewalk 	4'-10'	Concrete or Asphalt	<ul style="list-style-type: none"> » Designed for low speed users (pedestrians) » Connected to adjacent roadway and curb » Follows lower traffic volume streets

Concrete vs. Asphalt: Pros and Cons			
Material	Pros	Cons	Installation
Concrete	<ul style="list-style-type: none"> » More durable » Better in low traffic or lightweight traffic » Standard for regional trails (This becomes a wayfinding issue: matching other, regional trails) 	<ul style="list-style-type: none"> » Requires thorough sub-grade preparation. (Consider a lime subgrade treatment on Big Dry Creek clay soils) » Impacts related to access for trail construction -- the proposed trail alignment is often the only means for site access » High costs for repair/replacement if improperly installed 	<ul style="list-style-type: none"> » Lime sub-grade treatment » Concrete trail- 6"
Asphalt	<ul style="list-style-type: none"> » Trail users may prefer the "softer" feel and appearance of asphalt » Appearance: The value of asphalt's "basic black" matches the value of green grass. It is much less reflective than new concrete. Additionally, asphalt allows for aggregate topcoats that can soften the appearance of a small parking lot for example. » Low cost of minor repair 	<ul style="list-style-type: none"> » Asphalt gets brittle if not "worked" by traffic. » Requires thorough subgrade preparation: Examples include: Complete removal of all plant material, Pre-emergent herbicide or use of geotextile to prevent plant growth back through asphalt » Compaction must exceed edge of trail. Shoulder construction can be required. (Very similar to crushed granite aggregate) » Best if horizontally separated from trees. 	<ul style="list-style-type: none"> » Geotextile fabric » Asphalt-6" two lifts

Major Trails

Major Trails, also known as "regional" trails, are the primary connectors of the trail system. These trails connect to major greenways and open space as well as adjacent jurisdictions.

Historically, Westminster's Major Trail Corridors were developed along existing creeks and drainageways in a, more or less, east/west direction. These include:

- » Big Dry Creek Trail
- » Walnut Creek Trail
- » Farmers' High Line Canal Trail
- » Little Dry Creek Trail

Recently Major Trail Corridors have developed to make north/south connections in the city. These include:

- » US 36 Commuter Bikeway
- » I-25 Trail (which includes Tanglewood Creek Trail)

As residents are depending more on multi-modal transportation such as biking to get to their destinations, these Major Trails become a critical piece to the proposed final bikeway network. Therefore, Major Trails must be designed to handle the high speeds of commuter cyclists as well as recreational walkers and runners. Major Trails that consist of soft aggregate paving should be upgraded to concrete and frequent directional signage should be installed to better accommodate this commuter need.



Major Trail Facility - Recommended Specifications	
Material	Concrete with adjacent aggregate trail where feasible
Width	10-12' concrete or 8'-10' concrete with adjacent 4' aggregate trail
Shoulders	2-5'
Cross Slope	1% min/2% max
Vertical Clearance	10'
Maximum Grade	8.3%
Amenities	Signage, Lighting, Trash Receptacles, Benches

Minor Trails

Minor Trails, also referred to as “local” or “neighborhood” trails, provide links from neighborhoods to the Major Trails, as well as major recreational, cultural, and employment destinations. Examples of Minor Trails facility types located within Westminster include:

- » Airport Creek Trail
- » Allen Ditch Trail
- » Countryside Creek Trail
- » Cotton Creek Trail
- » Home Farm Trail
- » Ketner Lake Trail
- » McKay Creek Trail
- » Mushroom Pond Trail
- » Niver Canal Trail
- » Quail Creek Trail
- » Squire’s Park Trail
- » Trailside Creek Trail
- » Westcliff Trail

While ideally Minor Trails would be comprised of multi-use trail segments constructed to wider standards, the reality is that in some cases due to existing development, detached and attached sidewalk segments are required to make these connections work. At a minimum, clear signage must be used to direct trail users to Major Trail connections as well as local destinations and when the trail intersects with motor vehicle traffic, there should be a signed crossing and marked crosswalk.

Minor Trail Facility - Recommended Specifications				
	MulØ-Use Trail	Aggregate Trail	Detached Sidewalk	Attached Sidewalk
Material	Concrete	Crusher fines	Concrete	Concrete
Width	8-10'	6-8'	6-10'	4-10'
Shoulders	2-5'	2-5'	2-5'	N/A
Cross Slope	1% min/2% max	1% min/2% max	1% min/2% max	1% min/2% max
Vertical Clearance	10'	10'	10'	10'
Maximum Grade	8.3%	8.3%	8.3%	8.3%
Amenities	Signage, Lighting, Trash Receptacles, Benches	Signage, Lighting, Trash Receptacles, Benches	Signage, Lighting, Trash Receptacles, Benches	Signage, Lighting, Trash Receptacles, Benches

Trail Crossings

In order to maintain continuity and safety along trails, intersections with roadways, utilities, and water features should be carefully designed and maintained. The decision on what type of design treatment is appropriate at a trail/roadway intersection requires balancing user safety and personal comfort needs with prudent traffic engineering principles and project cost and budget considerations. This section provides guidance in determining where different types of trail crossings- grade separated, at-grade- are needed.

At-Grade Crossings

Roadway intersections represent one of the primary collision points for trail users. When intersections occur at-grade, a major design consideration is the establishment of right-of-way for various users. CDOT, AASHTO (The American Association of State Highway and Transportation Officials's Guide for the Development of Bicycle Facilities, 4th Edition 2011, NACTO (The National Association of Transportation Officials Urban Bikeway Design Guide 2nd Edition 2012), and MUTCD (The Manual of Uniform Traffic Control Devices, 2009 Edition) have usage warrants and design standards regulating various types of at-grade crossings.

The City of Boulder: Pedestrian Crossing Treatment Installation Guidelines, November 2011 is another resource for at-grade crossings, including pedestrian crossing location criteria, specific crossing design treatments, technical literature research, and an evaluation of the effectiveness and safety of various treatments being tested at crossing locations in the City of Boulder.

By CDOT definition, a marked crosswalk is any crosswalk, which is delineated by white painted markings placed on the pavement. Legal crosswalks exist at all public street intersections whether marked or unmarked. However, the only way a crosswalk can exist at a mid-block location is if it is marked. All traffic devices, including crosswalk markings and signs, must conform to the federal and state regulations for dimensions, color, wording and graphics. To create highly visible roadway crossing for trail facilities, it is recommended to use ladder-style crosswalk markings in all locations along Westminster's trail system.

Various crossings may be further enhanced by using a combination of the following, based on site-specific needs, opportunities, traffic counts, and usage warrants:

- » **Enhanced mid-block crossings** - raised speed tables, colored and textured pavements within the crosswalk area, retroreflective marking materials, landscape enhancements, or other traffic calming strategies
- » **Raised medians and center pedestrian refuge islands** - to be considered on mid-block crossings on multi-lane roadways to allow pedestrians to find an acceptable gap in traffic for one approach at a time.
- » **Curb extensions** - to be considered for mid-block crossing on streets with on-street parking to enhance pedestrian visibility and shorten distance time required to cross street.
- » **Pedestrian traffic signal** - may be used in a mid-block location after careful study of traffic characteristics. This is a conventional traffic signal with Walk/Don't Walk signals for pedestrians.
- » **Pedestrian hybrid beacon** - a hybrid between a pedestrian traffic signal and a stop sign that is actuated by a pedestrian push button.
- » **Rectangular Rapid Flash Beacons (RRFBs)**- small rectangular yellow flashing lights that are deployed with pedestrian crossing warning signs.
- » **Enhanced crosswalk signing** - may be used to draw further attention to the crossing area, such as signs and bollards that say "State Law- Yield to Pedestrians" (2 or 3-lane crossings) and pedestrian activated flashing signs (multi-lane crossings.)

Existing and proposed at-grade crossings for trails are mapped on the 2014 Trails Master Plan Map. This map is to be used as a long-range planning guideline and will change based on actual trail alignments, developer negotiations, and Capital Improvement Project (CIP) feasibility.



Grade Separated Crossings

Grade separated crossings are desirable when a trail intersects with either another trail, a drainageway, a roadway, or a railroad, minimizing conflicts between motorized and non-motorized users.

Ideally, Westminster’s Major Trail System would provide uninterrupted connectivity through underpasses and overpasses that would allow safe, continuous routes of travel removed from motor vehicle conflicts, especially at arterial streets. When an underpass or overpass is not feasible, enhanced at-grade crossings can be used as an alternative, and is actually more cost-effective when connecting into the on-street bikeway network because it eliminates the need for connecting trails, ramps and curb cuts. The decision to provide underpasses for trails that follow creeks, drainages and ditches will depend on opportunities for cost-effective implementation, most likely in association with infrastructure improvements.

Existing and proposed underpasses and bridges are mapped on the 2014 Trails Master Plan Map. This map is to be used as a long-range planning guideline and will change based on actual trail alignments, developer negotiations, and funding Capital Improvement Project (CIP) feasibility.

Crossing Type Criteria		
Trail Intersection Type	Trail Facility Types	
	Major Trails	Minor Trails
Freeways & Arterial Rail Lines	<ul style="list-style-type: none"> » Provide bicycle/pedestrian underpass or overpass 	<ul style="list-style-type: none"> » Provide bicycle/pedestrian underpass or overpass if feasible and cost-effective; otherwise route to closest existing street crossing.
Arterial Streets without bike lanes	<ul style="list-style-type: none"> » Provide bicycle/pedestrian underpass or overpass; » Or provide enhanced mid-block crossing with pedestrian signal 	<ul style="list-style-type: none"> » Route to closest traffic signal; » Or provide enhanced mid-block crossing with pedestrian signal, or grade separated structure if feasible
Arterial Streets with bike lanes	<ul style="list-style-type: none"> » Enhanced at-grade crossings are preferred for linkage between on- and off-street road facilities » If grade separated structures are provided, include ramps from trail grade to street grade 	<ul style="list-style-type: none"> » Provide highly visible ladder-style crosswalks with some form of pedestrian crossing light
Local and Collector Streets without bike lanes	<ul style="list-style-type: none"> » Provide highly visible ladder-style crosswalks » May include elements of enhanced pedestrian crossings 	<ul style="list-style-type: none"> » Provide highly visible ladder-style crosswalks

Criteria for Identifying Underpass Opportunities

Integrating the Westminster Open Space Trail System into existing development patterns within city boundaries requires extending beyond existing drainage and irrigation corridors that comprise the Open Space System.

To date, the City's goal has been to extend trail connections to and from Major Trails into the context of a residential subdivision model where local roads feed into a street hierarchy of progressively busier arterials and collectors. That approach can succeed by using a combination of trails acquired through Public Land Deductions (PLDs), on-street bikeway routes and sidewalk/trail designations to complete missing links, but terminates at arterial roadways where grade-separated crossings were not part of the original subdivision pedestrian and vehicular access and transit design.

User experience on Major Trail corridors is improved by constructing grade-separated crossings at high volume/high-speed arterial streets. Such crossings are often implemented along a major drainage such as Big Dry Creek when trails are being constructed at roughly the same time arterials and collectors are undergoing reconstruction. Criteria for successful grade-separated crossings design are stringent: crossings must accommodate all persons, as required by ADA; crossings must minimize slopes on approach and be clearly visible from the street; sight lines must extend through the crossing; and the length of the crossing must be well lit.

Typical cross-sectional dimensions for an underpass serving both pedestrian and bicycle traffic are 14-16 feet. That width should be increased if the length is greater than 60 feet. (i.e., ROW at Federal Boulevard at intersections is 110 ft.)

The above criteria make the construction of underpasses at arterial streets not associated with site or regional drainage or irrigation requirements very difficult due to a range of issues including:

- » Acquisition of ROW to accommodate approaches;
- » Utility relocation;
- » Narrow, relatively steep approaches; and,
- » Long enclosed spaces with limited sight lines in and out.



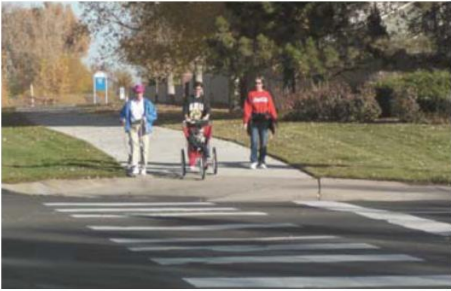

Underpasses work best when designed to feel welcoming, safe and accessible. Underpasses are significantly less expensive when integrated and constructed as a component of roadway improvements.

The best opportunities come in association with new bridge construction or existing bridge or culvert reconstruction -- i.e., Urban Drainage and Flood Control District's new criteria for determining flood volumes and defining flood plains may create future opportunities to modify crossings on Little Dry Creek and Walnut Creek-- where the possibility of improving an existing underpass or constructing a new one should always be included in design alternatives.

Where grades are favorable and there is the possibility of constructing an arterial underpass that connects directly to open space, or provides a link in a Major Trail, then that proposed underpass may be worth continued study. (i.e., crossing Federal Boulevard north of Ranch Reserve Parkway.)

Where a connecting on-street bikeway route or sidewalk trail crosses an arterial street with no City-owned land on either side, then the possibility of constructing a successful underpass becomes more remote and the City should consider at-grade solutions that include alternative transportation engineering designs related to intersection modifications.



Crossing Types			
Facility Type	Typical Width	Typical Surface	Characteristics
Bicycle/Pedestrian Bridge or Overpass 	10'-14'	Wood, composite, concrete, or metal decking	<ul style="list-style-type: none"> » Min. clear width same as approaching path, ideally including an additional 2' clearance on either side of trail » 5% max. grade on approach ramps » Railings/fences on both sides shall be a min. height of 42" for pedestrian facilities and 54" for bicycle facilities
Bicycle/Pedestrian Underpass 	10'-14'	Concrete	<ul style="list-style-type: none"> » Min. clear width same as approaching path, ideally including an additional 2' clearance on either side of trail » 10' min. vertical clearance » 5% max. grade on approach ramps » Railings/fences on both sides shall be a min. height of 42" for pedestrian facilities and 54" for bicycle facilities
Standard At-Grade Crossing 	8'-10'	Thermoplastic paint	<ul style="list-style-type: none"> » Trail crossings of all streets should use highly visible ladder-style crosswalk markings » Crosswalk and associated curb ramps should be same width as approaching trail » Acceptable for mid-block locations on local streets. Optional to include pedestrian-actuated signals based on needs
Enhanced At-Grade Crossing 	8'-10'	Thermoplastic or paint Optional to apply crosswalk markings over colored or textured pavements	<ul style="list-style-type: none"> » Recommended for mid-block locations on arterials and collectors » Consider use of median refuge islands on multi-lane roadways » Consider use of curb extensions on streets with on-street parking » Optional to include raised speed table crossing treatments and/or pedestrian-actuated signals based on needs

Trail Amenities

This section provides recommendations and guidelines for the design of trail amenities and trailheads.

Trail Amenities

The following table displays various trail facility amenities to be provided through out the Westminster trail system and the trail facility classification for which it is recommended.

Trail Amenities Recommendations			
Trail Amenity	Major	Minor	Notes
Benches	Recommended	Recommended	<ul style="list-style-type: none"> » Benches should be placed at Major Trailheads, trail lighting, and at waiting/resting areas » Locate benches in areas that provide interesting views, shade or shelter from seasonal winds, as well as those that are close to educational or cultural elements. » Locate in close proximity to the trail- typically 3' from the aggregate or paved shoulder. » Drainage should slope away from the trail. » Benches should be securely anchored to a concrete pad, and located at appropriate intervals (1/2 mile is optimum) along the trail. » Seating depth should be 18-20-inches and the length should vary between 60-90-inches.
Bollard	Recommended	Recommended	Bollards should have reflective surfaces, be removable and be placed where motor vehicles have potential access to trails.
Delineators	Recommended	Recommended	Delineators can be used in place of guard rails and in areas where the trail is adjacent to water features or slopes in excess of 1:4.
Distance Markers	Recommended		<ul style="list-style-type: none"> » Distance markers should be placed at the beginning of Major Trailheads and at locations where there is high recreational use. » The markers should be placed at ½ mile to 1 mile intervals otherwise. (See Westminster Trails Wayfinding Strategy for mile marker design concept)
Guard rails/fences	Recommended	Recommended	Guard rails should be a minimum height of 42" and used where there is more than 30" vertical drop off at edge of the shoulder.
Informational and Wayfinding Signage	Recommended	Recommended	Informational signage should be located as needed per Westminster Trails Wayfinding Strategy in this report
Lighting	Recommended	Recommended	Lighting shall conform to the City's Standards and Specifications
Regulatory Signage	Recommended	Recommended	Signage at street crossings should be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9.
Trash Receptacles	Recommended	Recommended	Trash receptacles, as well as provisions for recycling, should be provided at street crossings and near benches
Dog Waste Stations	Recommended	Recommended	Provide dog waste stations at trailheads and street crossings.



Trailheads

Trailheads are typically located at the gateways to the trail system, and thus, should be highly visible and provide appropriate amenities (wayfinding and regulatory signage or kiosk) that make a user's experience enjoyable. Trailhead design should take into account the surrounding environment and context as well as the trail facility classification, Major or Minor Trail.

Trailhead amenities should include:

- » Providing a comprehensive system of parking, transit access, information and function as a gateway to the trail system.
- » Parking should be provided in a lot configuration and may either be paved, unpaved or a combination of both.
- » When possible it will be necessary to explore shared use parking options with other facilities (i.e. schools, parks, churches).
- » When a trailhead is located along a designated RTD fixed-route, at a minimum a transit stop shall be provided with adequate access to the trail.

Trailhead Amenities Recommendations	
Trail Amenity	Notes
Benches	<ul style="list-style-type: none"> » Locate benches in areas that provide interesting views, shade or shelter from seasonal winds, as well as those that are close to educational or cultural elements. » Locate in close proximity to the trail- typically 3' from the aggregate or paved shoulder. » Drainage should slope away from the trail. » Benches should be securely anchored to a concrete pad » Seating depth should be 18-20-inches and the length should vary between 60-90-inches.
Bike Racks	Bike racks should be located near the parking facility and should be covered and lighted when possible.
Lighting	Lighting shall conform to the City standards.
Wayfinding Signage	Wayfinding signage should illustrate the entire trail network. (See Westminster Trails Wayfinding Strategy for kiosk design at trailhead)
Parking	Where provided, parking should be signed and located with close proximity to the trail. Parking should also be lighted as necessary.
Port-o-lets	Port-o-lets should be located at trailheads that are perceived to have high use. Port-o-lets should be enclosed and should be accessible for wheelchair users (ADA standards).
Regulatory Signage	Signage should be provided at Major Trailheads and street crossings in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9.
Transit Access	Transit stops should be easily accessible and visible, and provide route and schedule information and typical signage.
Trash Receptacles	Trash receptacles, as well as provisions for recycling, should be provided at trailheads and locations of benches and wayfinding signage.

Existing and proposed trailheads are mapped on the 2014 Trails Master Plan Map. This map is to be used as a long-range planning guideline and will change based on actual trail alignments, developer negotiations, and Capital Improvement Project (CIP) feasibility. Proposed trailhead locations include (see large fold-out map for locations):

- » Vogel Pond Park and Open Space (Ranch Reserve Parkway and W 112th Avenue)
- » Hyland Pond Open Space (W 98th Avenue West of Northwest Church of Christ)
- » Lower Church Lake Open Space (Wadsworth Boulevard and W 108th Avenue)
- » Westminster Hills Open Space - South (Alkire Street and 100th Avenue)

Large scale fold-out version of this map is included in the pocket at the end of this section

2014 Trails Master Plan

07.28.2014

LEGEND

Major Trails

- Concrete
- Concrete Sidewalk
- Aggregate
- Proposed

Minor Trails

- Concrete
- Concrete Sidewalk
- Aggregate
- Proposed

Other Trails/Bikeways

- Connecting Trail
- Natural Surface Trail
- Proposed Connecting Trail
- Existing Trail in Adjacent Jurisdiction
- Proposed Trail in Adjacent Jurisdiction
- Proposed Bikeway (per 2030 Bicycle MP)

Trailheads

- Existing
- Proposed

Trail Crossings

- Existing
- Proposed

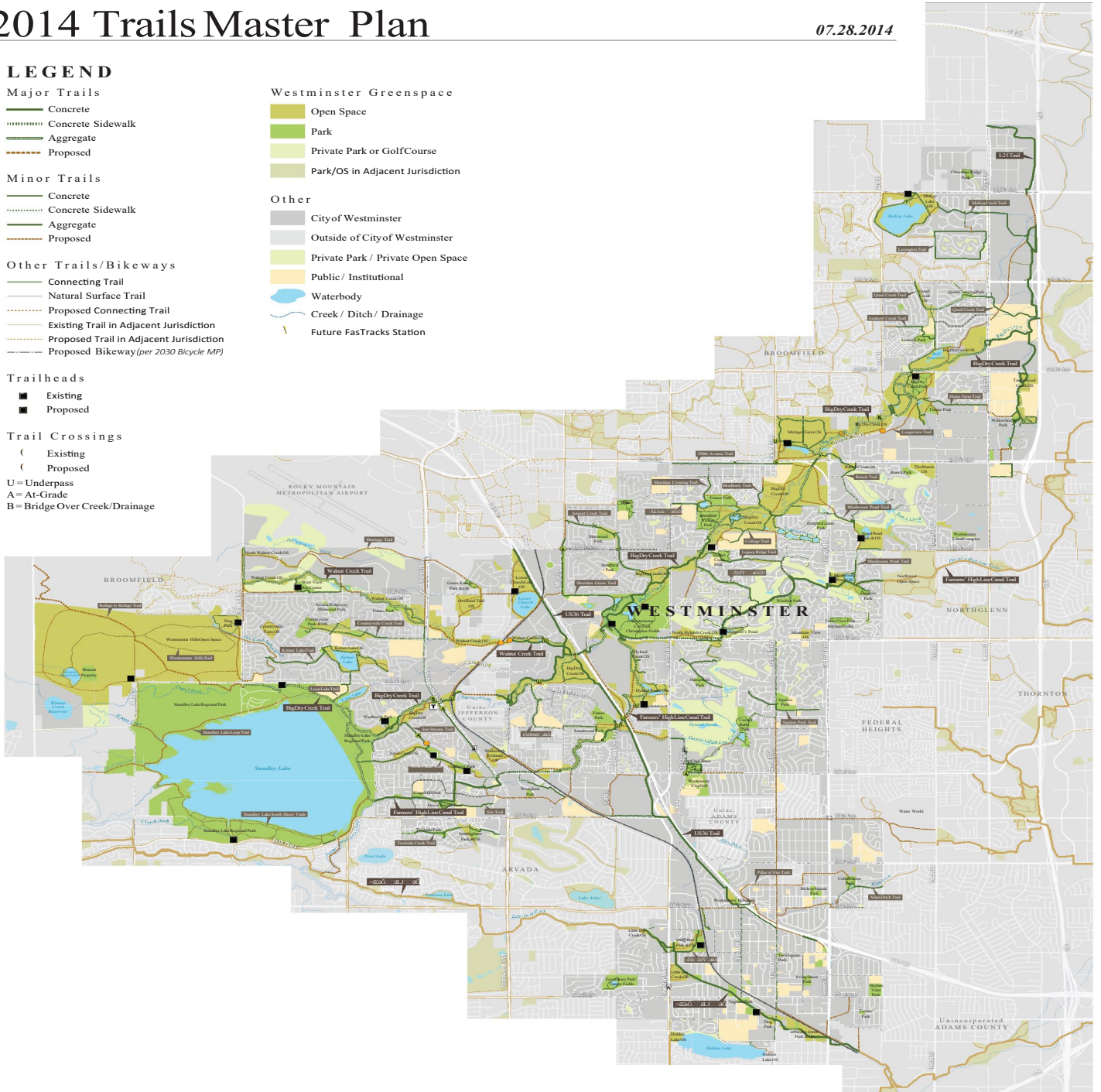
- U = Underpass
- A = At-Grade
- B = Bridge Over Creek/Drainage

Westminster Greenspace

- Open Space
- Park
- Private Park or Golf Course
- Park/OS in Adjacent Jurisdiction

Other

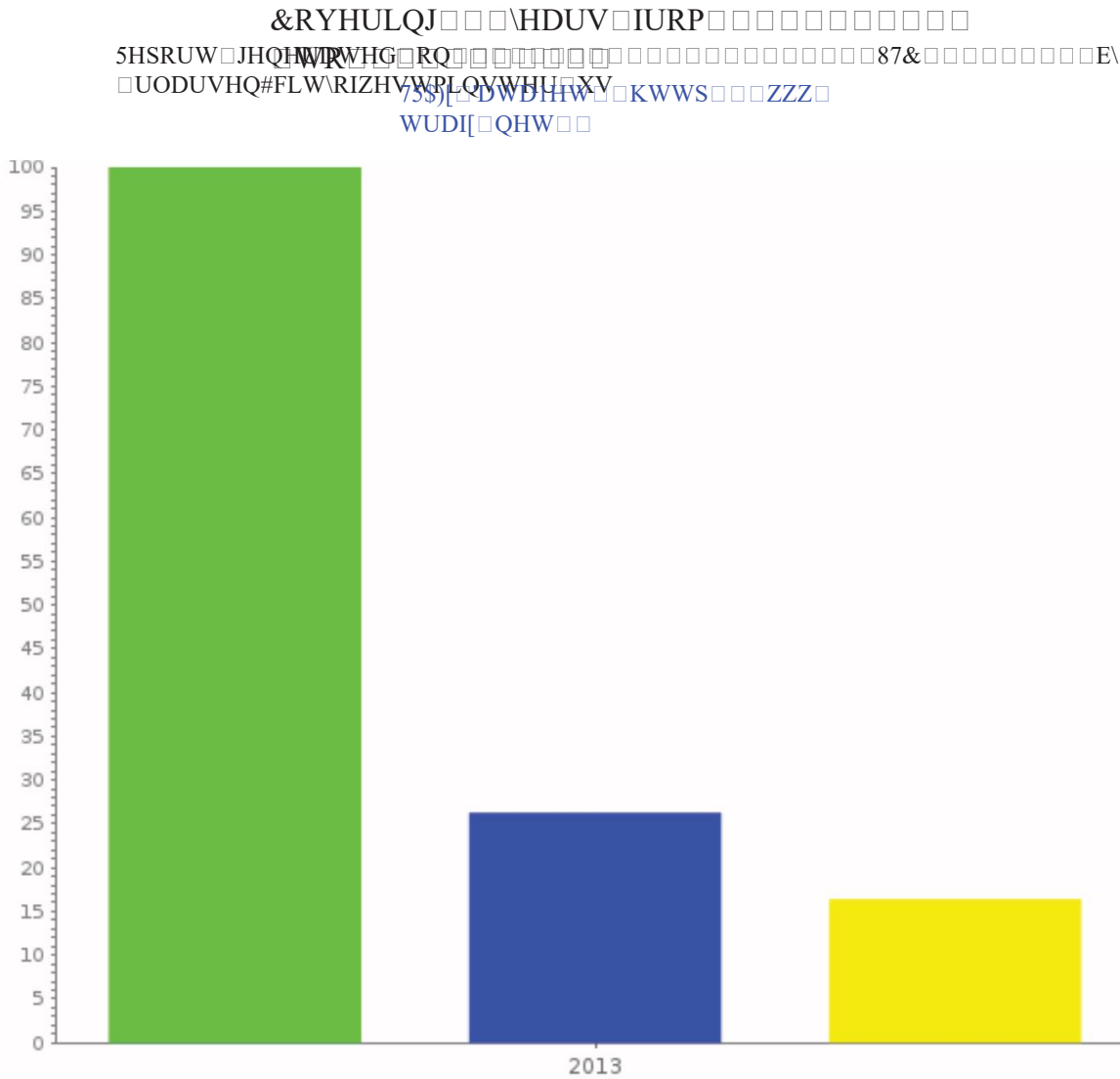
- City of Westminster
- Outside of City of Westminster
- Private Park / Private Open Space
- Public / Institutional
- Waterbody
- Creek / Ditch / Drainage
- Future FasTracks Station





Resources: 2013 Trail Use Data Report

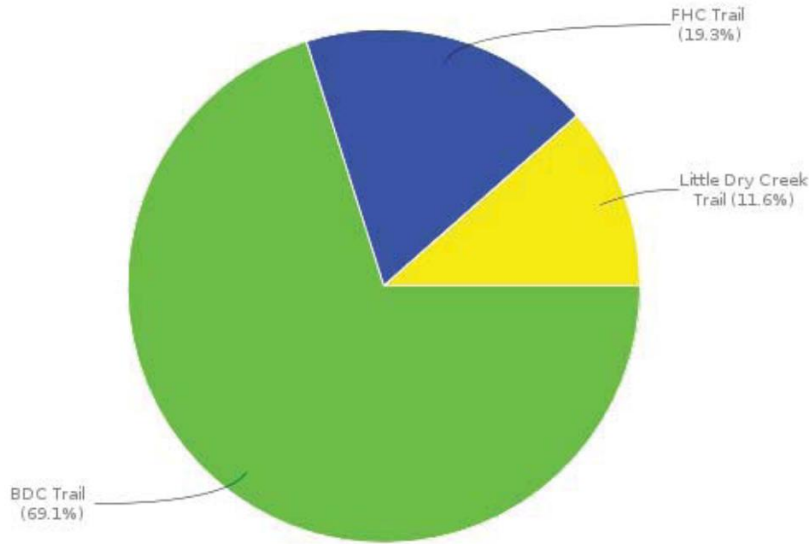
Yearly* totals report



Site Name	Average
WUDLO	100
WUDLO	26
WUDLO	16

Compare sites

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Resources: Trails Master Plan

The Westminster 2014 Trails Master Plan examines current and future needs for off-street trails within the City of Westminster. The plan builds off of existing Major Trail corridors along the Big Dry Creek, Farmers’ High Line Canal, Little Dry Creek and Walnut Creek while incorporating future connections as they tie into the 2030 Bicycle Master Plan.

Existing Westminster Trails Planning and Mapping - Resources used in the planning process

This 2014 Westminster Trails Master Plan is supported by many plans, maps and existing digital data, documents, and programs already in place that guide the City’s trails planning efforts.

- » **The 2001 Master Plan Map Diagram**
This map illustrates the City’s existing and proposed trails, including existing and proposed sidewalks, existing and proposed trailheads, and existing and proposed grade separated crossings. The map also calls out regional trail connections to adjacent municipalities.
- » **The 2013 Comprehensive Land Use Plan Update**
Chapter 7.0 – Parks, Recreation, Libraries and Open Space, Sections 7.3- and 7.4, highlights goals and policies as they pertain to trails planning, these include:

GOALS:

- PRLO-G-4 Provide easy and safe access to the City’s Open Space and Trail network.
- PRLO-G-5 Ensure the city’s open space and trails network is well-maintained and continues to preserve sensitive habitats and environments.

POLICIES:

- PRLO-P-3 Continue to identify and evaluate opportunities for property acquisitions that enhance access to the city’s trail corridors and public parks.
- PRLO-P-4 Ensure that all new residential development continues to contribute to the provision and maintenance of adequate parks, recreation facilities and open space to meet the needs of its new residents.
- PRLO-P-18 Update and utilize the Trails Master Plan to develop connections between open space areas.
- PRLO-P-19 Work with proposed development projects to provide new linkages to existing trails and create new trails where feasible.
- PRLO-P-15 Work with the Adams County Open Space Program, the City and County of Broomfield Open Space and Trails Program, Jefferson County Open Space Program and Great Outdoors Colorado Trust Fund as partners in open space programs.

The Comprehensive Land Use Plan includes a map – Figure 7-1. Parks, Libraries, Recreation & Open Space – that identifies existing and proposed trails along the main trail corridors of Big Dry Creek, the Farmers’ High Line Canal, Little Dry Creek, and Walnut Creek, providing a basis for trail connection in both open space and new development in the city.

Existing Westminster Trails Planning and Mapping - Resources used in the planning process (continued)

» **The 2010-2014 Parks and Recreation Master Plan**

While primarily a master plan for Parks and Recreation, Open Space and Trails are inventoried and included in the Open Space section of the document. While the trails map that is included in this section shows existing conditions, it also identifies proposed trail connections. The plan states that the City's "Trails Master Plan" – this 2014 plan – will be inserted as a section of this document.

A Citizens Comment section is included in the Parks & Recreation Master Plan. Two public meetings were held, comment cards were available at all recreation facilities and City Hall, and an e-comment card was available on the city's web site. Comment relating to Open Space and Trails were as follows:

OPENSOURCE

COMMENTS: about open space at 100th on the west side of Sheridan. Debris from the abandoned McStain project is dangerous and an eyesore.

- Continue to reclaim and re-vegetate open space land through prairie dog management.
- Better weed control in open spaces.

TRAILS

COMMENTS: extensive trail system. Suggest that you have done too well in paving paths. A softer walking surface would be much appreciated.

- 26 Residents of Green Knolls would like trail connections and sidewalks to enable them to safely walk or ride bikes to other trails, along Old Wadsworth and to Walnut Creek Shopping Center. (26 residents)
- Install bicycle path connecting Standley Lake to Federal Heights-allow bicycle traffic along the Farmers High Line Canal through the Hyland Hills Golf Course. This would allow bicycle traffic from the Standley lake area to connect to the Niver Creek path via 96th Avenue and eventually to the Platte River bike path, without using 92nd Avenue or 104th Avenue.
- Complete a continuous bike trail around Standley Lake. (3 residents)
- Build a safe trail connection between Westminster Hills Open Space and Standley Lake. Need a safe bike entrance to Standley Lake. There are no trails or sidewalks at the entrance at 100th and Simms. (2 Residents)
- Need more safe bike paths and trail connections in City Center area.
- Sanolets along trails and open space all year.
- No more concrete trails.
- Complete Walnut Creek Trail from Simms to Walnut Creek shopping area.
- There are no trails, parks or open space near me near 86th Ave & Federal Boulevard.
- Work with other municipalities to link trail systems both existing or planned (i.e., Broomfield, Rocky Flats).
- Build trail access to the Mower Reservoir through the forestry operations connecting to the Standley Lake trail system.
- Install access to mower reservoir from the west on Indiana Street via trailhead/parking.
- I would also like to see the "proposed" section of greenbelt that would connect Countryside neighborhood (108th/Wads) to the Dry Creek Open Space completed.

» **The 2030 Bicycle Master Plan**

This plan, adopted by City Council in June 2011, identifies many off-street shared paths (or trails) as part of the proposed final bikeway network to facilitate recreational and commuter bicycle needs. The plan recommends that Westminster build all new identified bikeway trail segments with concrete and retrofit all existing gravel segments with concrete for use by commuter cyclists. The plan makes recommendations for design and safety as well as recommendations for wayfinding and connection into the on-street bikeway system. This Trails Master



Plan update coordinates proposed improvement priorities (short/medium/long term) with improvement priorities identified in the bike plan ensuring connections are met.

» **Westminster Trails: A User's Guide**

The trail user guide map's latest publication is dated August 2009 and will be updated in 2014. This map highlights the city's trail system illustrating major and Minor Trail connections as well as materials – concrete, gravel or natural – and proposed connections on the map. This map was used on trail signage in various locations on Major Trails. The four Major Trails include:

- Big Dry Creek Trail,
- Farmers' High Line Canal Trail,
- Little Dry Creek Trail, and
- Walnut Creek Trail

» **Westminster Strategic Plan**

(TEXT STRAIGHT FROM OSSP) The City's Strategic Plan, reviewed and adopted annually by Westminster City Council, has identified the goal of 15% of the City's total land area preserved as City Open Space to preserve view corridors, provide buffers between developments, protect habitat, protect creek and irrigation canal corridors, preserve open rural landscapes, and enhance recreational opportunities for residents through a series of interconnected trails. Pursuit of property for acquisition is ultimately determined by Westminster City Council under guidance from the Open Space Advisory Board and City staff.

» **Westminster Comprehensive Land Use Plan**

(TEXT STRAIGHT FROM OSSP) The Westminster Comprehensive Land Use Plan (CLUP) governs future land development and redevelopment in the City. Two Goals and Policies within the CLUP relevant to this Plan are:

- "Preserve the unique visual character of Westminster" (Goal H2) through identification, acquisition, and/or strategic protection of view corridors and environmentally sensitive areas throughout the City (Policy H2a).
- "Enhance the City's open space system to preserve and protect natural areas, vistas and view corridors, and to complete the open space and trail system" (Goal H4). Policies H4a and H4b suggest using "acquisition of open space as a tool to channel growth into appropriate locations and to shape the overall design of the community" and suggest continuing "to develop Big Dry Creek and tributary streams as the "spine" of a comprehensive network of trails linking

» **Existing GIS Data**

The City of Westminster updates the city's parks, open space and trails information on a regular basis. Data from outside sources were used to show parks, open space and trails information in adjacent jurisdictions to illustrate connections. All of this data was used for mapping in this master plan process.

Complete list of plans reviewed for this planning effort:

- City of Westminster Zoning Code and Land Use Map
- City of Westminster Guidelines for Traditional Mixed Use Neighborhood Developments
- City of Westminster Strategic Plan (2009-2014 -2023)
- City of Westminster Trails Plan Map
- City of Westminster Existing Trail System Map
- City of Westminster 2030 Bicycle Master Plan
- City of Westminster Metzger Farm Open Space Master Plan (2010)
- City of Westminster Wildlife and Natural Resource Management Plan for Open Space Properties (2010)
- City of Westminster Storm Drainage Study (2007)
- City of Westminster Open Space & Resource Stewardship Plan (Draft -2012)
- City of Westminster Comprehensive Land Use Plan (2013)
- City of Westminster Development Code – Chapter 5 Open Space Program (2009)
- City of Westminster Grant Applications for Regional Trail Wayfinding Project (2011)
- City of Westminster Grant Applications for Semper Farm – Colorado State Historical Fund (2013)
- America's Great Outdoors (AGO): Feasibility Study for Connecting Urban Refuges to the Rocky Mountain Greenway Trail Network (2013)
- US36 Corridor Bike Links Map
- City of Thornton Parks & Open Space Master Plan (2012)
- Arvada Parks, Trails, and Open Space Master Plan (2001)
- City/County of Broomfield Open Space, Parks, Recreation and Trails Master Plan (2005)
- City/County of Broomfield Existing and Planned Trail Surfaces (2012)
- City of Northglenn Open Space Management Plan (2010)
- City of Northglenn Parks & Greenway Trail System (2008)
- Adams County Parks, Trails, and Open Space Map
- Adams County Open Space and Trails Master Plan (2012)
- Jefferson County Open Space Master Plan (2013)
- DRCOG's 2010 Guidelines for Successful Pedestrian and Bicycle Facilities in the Denver Region (2010)



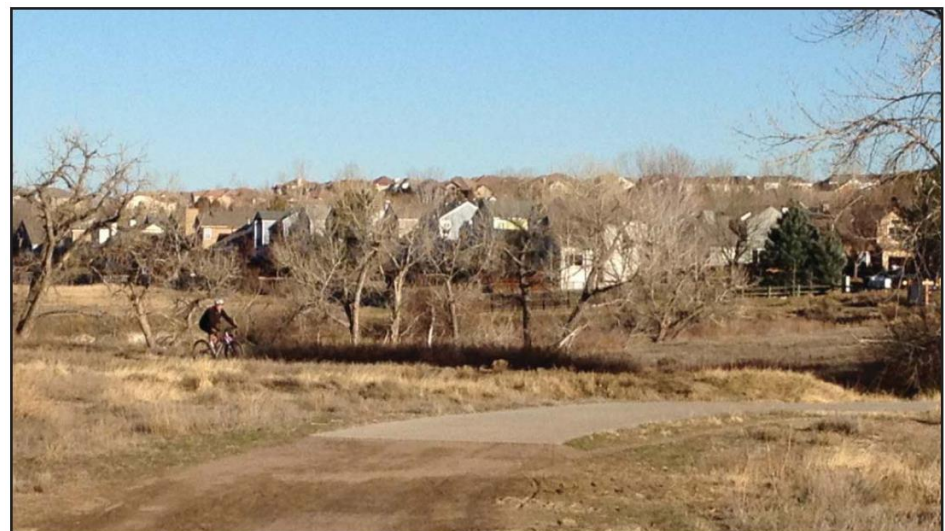
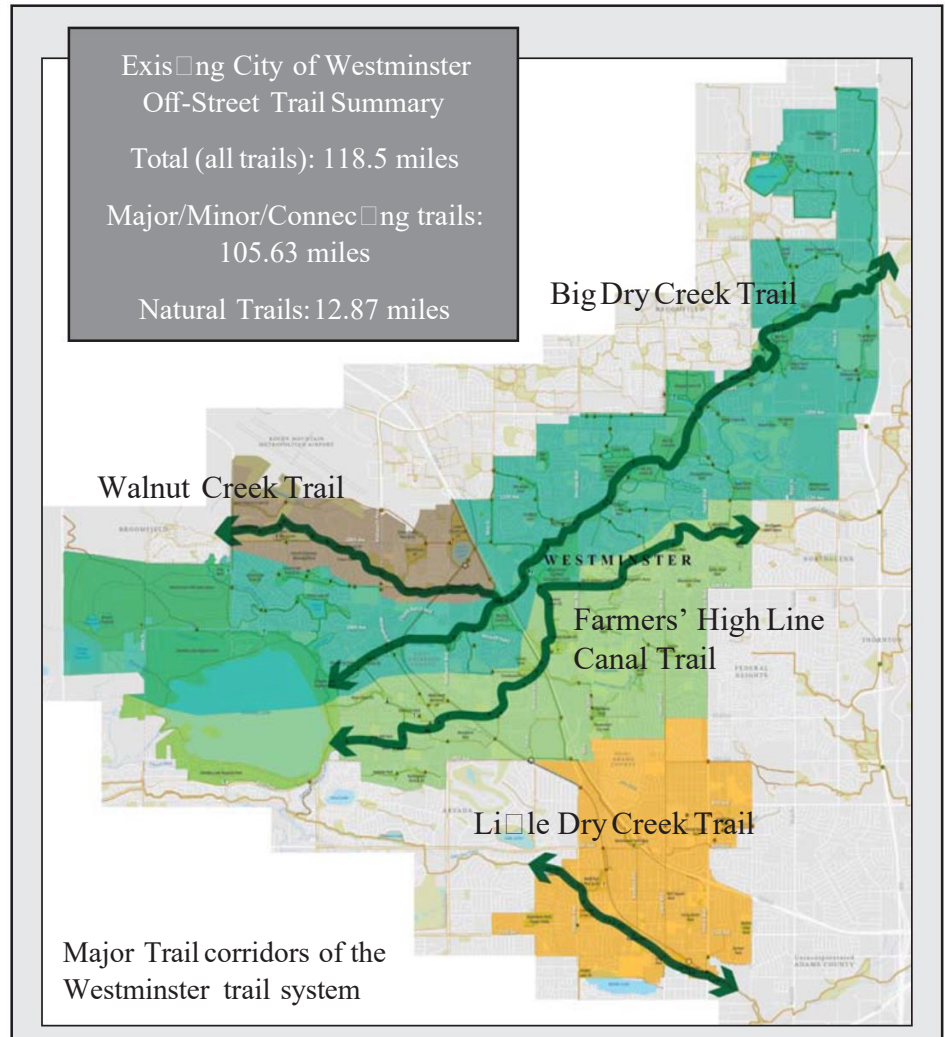
Trails Master Plan Diagram - Supporting Narrative

The conceptual approach to developing the City of Westminster's Trails System began with identifying major, linear corridors associated with drainage and irrigation conveyance (i.e. Big Dry Creek, Little Dry Creek and Farmers' High Line Canal), purchasing and preserving land along those corridors, and constructing a Major Trail (regional) system. Through the subsequent development of residential subdivisions and commercial development, Minor Trails were designed and constructed that link neighborhoods and commercial development to Major Trails; the existing combination of Major and Minor Trails serves as the framework for the Westminster Open Space and Trails System.

Goals for Trails Planning

This Trails Master Plan, as part of the Open Space Stewardship Plan, seeks to progress the following three primary goals:

- 1) Complete the Trails System as it was originally conceived by city staff
- 2) Mitigate unforeseen consequences of the "Major Trail Corridor/ Minor Trail Links" framework (as mentioned above) for trails development.
- 3) Anticipate expansion of the existing trails framework in response to expansion and changing land uses and user groups.



Trail at Stroud Lakes into Big Dry Creek Open Space

GOAL1: Complete the existing trails system as it was originally conceived by city staff.

- » Identify and construct missing links in Major Trails

Example: Walnut Creek Trail missing link at Wadsworth Boulevard/Church's Stage Stop west to Wadsworth Parkway

- » Upgrade both Major Trails and Minor Trails that are used by residents commuting to school and work to concrete trails with aggregate path at one side. Continue to use aggregate paving (crusher fines, etc.) on all other Minor Trails to contribute to the creation of a unified, hierarchical trail system that is consistent with regional standards.

Example: 1) Big Dry Creek Trail between 112th and 120th Avenues would include a 10' concrete trail with a 2' aggregate path at one side and then Caulkins Ditch Trail on the opposite side of the creek should be an 8'-10' wide aggregate trail along the old ditch maintenance road.

(2) Countryside Creek Trail through Countryside Open Space that provides connection onto Wiñ Elementary School

- » When planning new Minor Trail through a Public Land Dedication (PLD) process, consider how land acquisition for the proposed link could function to further extend and/or expand the open space corridor

Example: Proposed Long's View Trail within future development at Federal Pkwy and 122nd Ave could have the affect of broadening the corridor.

GOAL2: Mitigate the unforeseen consequences of the focus on "Major Trail/ Minor Trail links" framework for future trail expansion

City expansion and development patterns have resulted in challenges associated with the focus on trail development paralleling drainage corridors. Westminster's primary open space corridors generally run west to east, aligning with major drainage and ditch systems – offering few opportunities to make much needed north/south connections. The two most significant corridors, Big Dry Creek and the Farmers' High Line Canal, run parallel to one another through the northern part of the city leaving the southern part of the city with few opportunities to connect the Major Trails, with the exception of the future U.S. 36 Bikeway.

Objectives to mitigate these unforeseen consequences include:

- » Recognizing the off-street, open space trail system as a major component of a larger system including bike lanes, bike routes, and side paths.
- » Linking off-street, open space trails to the bikeway framework plan identified in the 2030 Westminster Bicycle Master Plan. Coordinate respective prioritization plans as much as possible.
- » Reinterpreting the Major Trail/Minor Trail connection framework to include interconnecting local loops. Use sidewalks or Minor Trails to create neighborhood loops, enabling short walks that connect users to the trails and open space system without committing them to journeying out to and back from Major Trail corridors.

Example: The series of Minor Trails from Farmers' High Line to the Big Dry Creek Trail along the southern bluff above the creek create a series of localized, neighborhood loops, i.e: Cottonwood Creek Trail at Legacy Ridge.

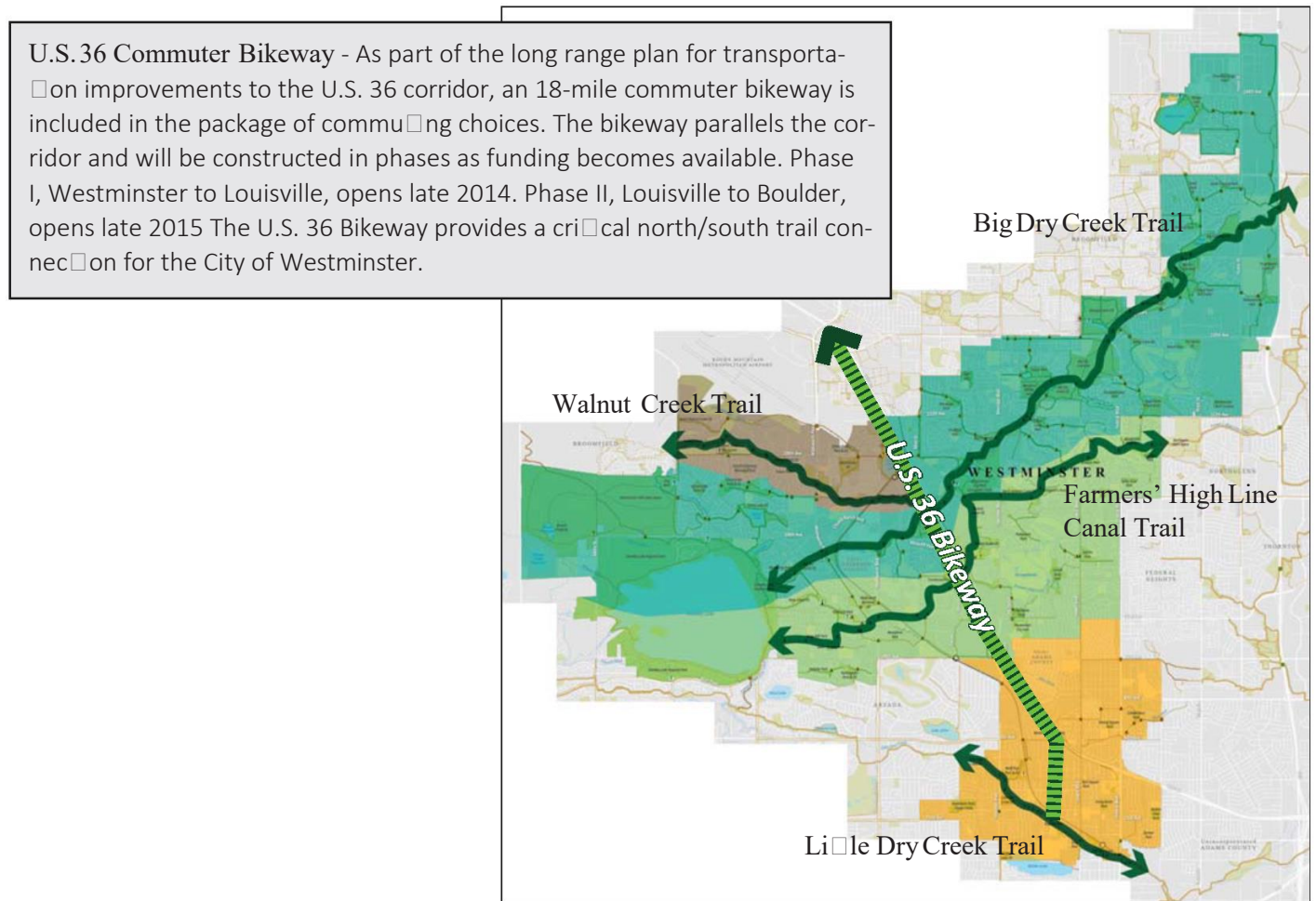


GOAL3: Anticipate and elaborate on the framework in response to growing and changing use.

The existing open space trail system is a popular public amenity for residents and non-residents. Increasing population, increased residential and commercial development, and redevelopment trends mean increased user trends along both Major and Minor Trails, and the need to connect new development and redevelopment projects to existing corridors.

Objectives to expanding on the existing framework include:

- » Continuing to expand on the trail system within open space by master planning specific areas.
 - Example:** Develop a network of trails within the Big Dry Creek Open Space from Sheridan Boulevard to I-25. The Major Trail on one side of the creek can be supplemented by a soft trail on the opposite side.
- » Improving mapping and signage. The city’s long term approach to establishing Minor Trail links to Major Trail corridors has resulted in the utilization of a variety of hybrid trail types combining trail/detached sidewalk/attached sidewalk, and bike route configurations. The resulting variety of trail types is difficult to illustrate accurately in mapping and results in unfulfilled trail user expectations on the ground.
 - Example:** Farmers’ High Line Canal trail consists of off-street trails, detached sidewalks through neighborhoods, and sidewalks along arterial streets. Illustrating the different types of trail/route conditions on a map as well as improving signage along the corridor would improve trail user experience through the corridor.
- » Identify potential connections to major corridors when public land dedications (PLDs) increase open space holdings.



Coordinate with the 2030 Bicycle Master Plan

This plan, adopted by City Council in June 2011, identifies many off-street shared paths (or trails) as part of the proposed final bikeway network to facilitate recreational and commuter bicycle needs. The plan recommends that Westminster build all new identified bikeway trail segments with concrete and retrofit all existing gravel segments with concrete for use by commuter cyclists. The plan makes recommendations for design and safety as well as recommendations for wayfinding and connection into the on-street bikeway system.

The 2030 Bicycle Master Plan and the Trails Master Plan often overlap and essentially share the same goal. In some instances the Trails Master Plan identifies a proposed trail route when it most likely will be a bikeway or bike lane with a four foot wide detached sidewalk (i.e. Bradburn Boulevard and Lowell Boulevard). If our proposed trails overlap with the proposed bikeways in an urban setting then the trail should be deferred for the bikeway and an improved sidewalk. Appropriate signage should still direct “trail” users to the next “trail” section with confidence markers as identified in the Wayfinding Strategy in this plan.

This Trails Master Plan update coordinates proposed improvement priorities (short/medium/long term) with improvement priorities identified in the bike plan ensuring connections are met.

Westminster Existing Off-Street Trail System

The existing Westminster Trail System hierarchy includes:

- » **Major Trails**, also referred to as “regional” trails, are the primary connectors of the trail system. These trails connect to major greenways and open space as well as adjacent jurisdictions.
- » **Minor Trails**, also referred to as “local” or “neighborhood” trails, provide links from neighborhoods to the Major Trails, as well as major recreational, cultural, and employment destinations.
- » **Connecting Trails**, also referred to as “access” trails, are often short trail spurs that connect the neighborhood to the Minor and Major Trail system.
- » **Natural Trails** are backcountry trails that provide a route to experience the city’s open space.

Off-Street Trail Facility Classifications and Design Standards

This section provides recommended design standards for Major and Minor Trail facility types when developing new trail connections within the City of Westminster. These design standards should be used as a tool for City staff to evaluate trail connections in development proposals and plan for new trails within the City.

These recommended design standards are consistent with **The American Association of State Highway and Transportation Officials’ (AASHTO) Official’s Guide for the Development of Bicycle Facilities, 4th Edition 2012**, a key resource for designing

bicycle facilities in the U.S., which includes off-street trails.







Off-Street Trail Facility Types

Within each trail facility type there are a variety of different trail segment types, varying in width and materials. These include:

- » Multi-Use Path
- » Multi-Use Path with adjacent Aggregate Path
- » Aggregate Path
- » Natural Path
- » Detached Sidewalk
- » Attached Sidewalk

The table on the following page summarizes the recommended specifications for each trail segment type.



Westminster Off-Street Trail Facility Segment Types			
Facility Segment Type	Typical Width	Typical Material	Typical Characteristics
Multi-Use Trail 	8'-12'	Concrete or Asphalt (See highlight box on the following page regarding pros and cons of concrete vs. asphalt)	<ul style="list-style-type: none"> » Designed for low to high speed trail use (walkers, runners, cyclists, in-line skaters) » Continuous route separated from roadway and curb » Frequent directional signage provided at trail intersections and decision making points
Multi-Use Trail with adjacent Aggregate Path 	8'-10' concrete with 4' adjacent aggregate path	Concrete or Asphalt and crusher fines or compacted organic material	<ul style="list-style-type: none"> » Designed for low to high speed trail use (walkers with strollers, cyclists, in-line skaters) on hard surface and low speed use on soft surface (walkers, runners) » Continuous route separated from roadway and curb » Frequent directional signage provided at trail intersections and decision making points
Aggregate Trail 	6'-10'	Crusher fines or compacted organic material	<ul style="list-style-type: none"> » Designed for low to moderate speed trail use (walkers, hikers, runners, off-road cyclists) » Continuous route separated from roadway and curb » Frequent directional signage provided at trail intersections and decision making points
Natural Trail 	3'-6'	Compacted organic material	<ul style="list-style-type: none"> » Designed for low speed use (walkers, hikers, trail runners) » Continuous route within an open space area with minimal conflicts with high speed trail users. » Minimal directional signage; may include educational or interpretive signage
Detached Sidewalk 	6'-10'	Concrete or Asphalt	<ul style="list-style-type: none"> » Designed for low speed users (pedestrians) » Separated by adjacent roadway and curb by a landscape buffer » Follows higher traffic volume streets
Attached Sidewalk 	4'-10'	Concrete or Asphalt	<ul style="list-style-type: none"> » Designed for low speed users (pedestrians) » Connected to adjacent roadway and curb » Follows lower traffic volume streets

Concrete vs. Asphalt: Pros and Cons			
Material	Pros	Cons	Installation
Concrete	<ul style="list-style-type: none"> » More durable » Better in low traffic or lightweight traffic » Standard for regional trails (This becomes a wayfinding issue: matching other, regional trails) 	<ul style="list-style-type: none"> » Requires thorough sub-grade preparation. (Consider a lime subgrade treatment on Big Dry Creek clay soils) » Impacts related to access for trail construction -- the proposed trail alignment is often the only means for site access » High costs for repair/replacement if improperly installed 	<ul style="list-style-type: none"> » Lime sub-grade treatment » Concrete trail- 6"
Asphalt	<ul style="list-style-type: none"> » Trail users may prefer the "softer" feel and appearance of asphalt » Appearance: The value of asphalt's "basic black" matches the value of green grass. It is much less reflective than new concrete. Additionally, asphalt allows for aggregate topcoats that can soften the appearance of a small parking lot for example. » Low cost of minor repair 	<ul style="list-style-type: none"> » Asphalt gets brittle if not "worked" by traffic. » Requires thorough subgrade preparation: Examples include: Complete removal of all plant material, Pre-emergent herbicide or use of geotextile to prevent plant growth back through asphalt » Compaction must exceed edge of trail. Shoulder construction can be required. (Very similar to crushed granite aggregate) » Best if horizontally separated from trees. 	<ul style="list-style-type: none"> » Geotextile fabric » Asphalt-6" two lifts

Major Trails

Major Trails, also known as "regional" trails, are the primary connectors of the trail system. These trails connect to major greenways and open space as well as adjacent jurisdictions.

Historically, Westminster's Major Trail Corridors were developed along existing creeks and drainageways in a, more or less, east/west direction. These include:

- » Big Dry Creek Trail
- » Walnut Creek Trail
- » Farmers' High Line Canal Trail
- » Little Dry Creek Trail

Recently Major Trail Corridors have developed to make north/south connections in the city. These include:

- » US 36 Commuter Bikeway
- » I-25 Trail (which includes Tanglewood Creek Trail)

As residents are depending more on multi-modal transportation such as biking to get to their destinations, these Major Trails become a critical piece to the proposed final bikeway network. Therefore, Major Trails must be designed to handle the high speeds of commuter cyclists as well as recreational walkers and runners. Major Trails that consist of soft aggregate paving should be upgraded to concrete and frequent directional signage should be installed to better accommodate this commuter need.



Major Trail Facility - Recommended Specifications	
Material	Concrete with adjacent aggregate trail where feasible
Width	10-12' concrete or 8'-10' concrete with adjacent 4' aggregate trail
Shoulders	2-5'
Cross Slope	1% min/2% max
Vertical Clearance	10'
Maximum Grade	8.3%
Amenities	Signage, Lighting, Trash Receptacles, Benches

Minor Trails

Minor Trails, also referred to as “local” or “neighborhood” trails, provide links from neighborhoods to the Major Trails, as well as major recreational, cultural, and employment destinations. Examples of Minor Trails facility types located within Westminster include:

- » Airport Creek Trail
- » Allen Ditch Trail
- » Countryside Creek Trail
- » Cotton Creek Trail
- » Home Farm Trail
- » Ketner Lake Trail
- » McKay Creek Trail
- » Mushroom Pond Trail
- » Niver Canal Trail
- » Quail Creek Trail
- » Squire’s Park Trail
- » Trailside Creek Trail
- » Westcliff Trail

While ideally Minor Trails would be comprised of multi-use trail segments constructed to wider standards, the reality is that in some cases due to existing development, detached and attached sidewalk segments are required to make these connections work. At a minimum, clear signage must be used to direct trail users to Major Trail connections as well as local destinations and when the trail intersects with motor vehicle traffic, there should be a signed crossing and marked crosswalk.

Minor Trail Facility - Recommended Specifications				
	Mulit-Use Trail	Aggregate Trail	Detached Sidewalk	Attached Sidewalk
Material	Concrete	Crusher fines	Concrete	Concrete
Width	8-10'	6-8'	6-10'	4-10'
Shoulders	2-5'	2-5'	2-5'	N/A
Cross Slope	1% min/2% max	1% min/2% max	1% min/2% max	1% min/2% max
Vertical Clearance	10'	10'	10'	10'
Maximum Grade	8.3%	8.3%	8.3%	8.3%
Amenities	Signage, Lighting, Trash Receptacles, Benches	Signage, Lighting, Trash Receptacles, Benches	Signage, Lighting, Trash Receptacles, Benches	Signage, Lighting, Trash Receptacles, Benches

Trail Crossings

In order to maintain continuity and safety along trails, intersections with roadways, utilities, and water features should be carefully designed and maintained. The decision on what type of design treatment is appropriate at a trail/roadway intersection requires balancing user safety and personal comfort needs with prudent traffic engineering principles and project cost and budget considerations. This section provides guidance in determining where different types of trail crossings- grade separated, at-grade- are needed.

At-Grade Crossings

Roadway intersections represent one of the primary collision points for trail users. When intersections occur at-grade, a major design consideration is the establishment of right-of-way for various users. CDOT, AASHTO (The American Association of State Highway and Transportation Officials's Guide for the Development of Bicycle Facilities, 4th Edition 2011, NACTO (The National Association of Transportation Officials Urban Bikeway Design Guide 2nd Edition 2012), and MUTCD (The Manual of Uniform Traffic Control Devices, 2009 Edition) have usage warrants and design standards regulating various types of at-grade crossings.

The City of Boulder: Pedestrian Crossing Treatment Installation Guidelines, November 2011 is another resource for at-grade crossings, including pedestrian crossing location criteria, specific crossing design treatments, technical literature research, and an evaluation of the effectiveness and safety of various treatments being tested at crossing locations in the City of Boulder.

By CDOT definition, a marked crosswalk is any crosswalk, which is delineated by white painted markings placed on the pavement. Legal crosswalks exist at all public street intersections whether marked or unmarked. However, the only way a crosswalk can exist at a mid-block location is if it is marked. All traffic devices, including crosswalk markings and signs, must conform to the federal and state regulations for dimensions, color, wording and graphics. To create highly visible roadway crossing for trail facilities, it is recommended to use ladder-style crosswalk markings in all locations along Westminster's trail system.

Various crossings may be further enhanced by using a combination of the following, based on site-specific needs, opportunities, traffic counts, and usage warrants:

- » **Enhanced mid-block crossings** - raised speed tables, colored and textured pavements within the crosswalk area, retroreflective marking materials, landscape enhancements, or other traffic calming strategies
- » **Raised medians and center pedestrian refuge islands** - to be considered on mid-block crossings on multi-lane roadways to allow pedestrians to find an acceptable gap in traffic for one approach at a time.
- » **Curb extensions** - to be considered for mid-block crossing on streets with on-street parking to enhance pedestrian visibility and shorten distance time required to cross street.
- » **Pedestrian traffic signal** - may be used in a mid-block location after careful study of traffic characteristics. This is a conventional traffic signal with Walk/Don't Walk signals for pedestrians.
- » **Pedestrian hybrid beacon** - a hybrid between a pedestrian traffic signal and a stop sign that is actuated by a pedestrian push button.
- » **Rectangular Rapid Flash Beacons (RRFBs)**- small rectangular yellow flashing lights that are deployed with pedestrian crossing warning signs.
- » **Enhanced crosswalk signing** - may be used to draw further attention to the crossing area, such as signs and bollards that say "State Law- Yield to Pedestrians" (2 or 3-lane crossings) and pedestrian activated flashing signs (multi-lane crossings.)

Existing and proposed at-grade crossings for trails are mapped on the 2014 Trails Master Plan Map. This map is to be used as a long-range planning guideline and will change based on actual trail alignments, developer negotiations, and Capital Improvement Project (CIP) feasibility.



Grade Separated Crossings

Grade separated crossings are desirable when a trail intersects with either another trail, a drainageway, a roadway, or a railroad, minimizing conflicts between motorized and non-motorized users.

Ideally, Westminster’s Major Trail System would provide uninterrupted connectivity through underpasses and overpasses that would allow safe, continuous routes of travel removed from motor vehicle conflicts, especially at arterial streets. When an underpass or overpass is not feasible, enhanced at-grade crossings can be used as an alternative, and is actually more cost-effective when connecting into the on-street bikeway network because it eliminates the need for connecting trails, ramps and curb cuts. The decision to provide underpasses for trails that follow creeks, drainages and ditches will depend on opportunities for cost-effective implementation, most likely in association with infrastructure improvements.

Existing and proposed underpasses and bridges are mapped on the 2014 Trails Master Plan Map. This map is to be used as a long-range planning guideline and will change based on actual trail alignments, developer negotiations, and funding Capital Improvement Project (CIP) feasibility.

Crossing Type Criteria		
Trail Intersection Type	Trail Facility Types	
	Major Trails	Minor Trails
Freeways & Arterial Rail Lines	<ul style="list-style-type: none"> » Provide bicycle/pedestrian underpass or overpass 	<ul style="list-style-type: none"> » Provide bicycle/pedestrian underpass or overpass if feasible and cost-effective; otherwise route to closest existing street crossing.
Arterial Streets without bike lanes	<ul style="list-style-type: none"> » Provide bicycle/pedestrian underpass or overpass; » Or provide enhanced mid-block crossing with pedestrian signal 	<ul style="list-style-type: none"> » Route to closest traffic signal; » Or provide enhanced mid-block crossing with pedestrian signal, or grade separated structure if feasible
Arterial Streets with bike lanes	<ul style="list-style-type: none"> » Enhanced at-grade crossings are preferred for linkage between on- and off-street road facilities » If grade separated structures are provided, include ramps from trail grade to street grade 	<ul style="list-style-type: none"> » Provide highly visible ladder-style crosswalks with some form of pedestrian crossing light
Local and Collector Streets without bike lanes	<ul style="list-style-type: none"> » Provide highly visible ladder-style crosswalks » May include elements of enhanced pedestrian crossings 	<ul style="list-style-type: none"> » Provide highly visible ladder-style crosswalks

Criteria for Identifying Underpass Opportunities

Integrating the Westminster Open Space Trail System into existing development patterns within city boundaries requires extending beyond existing drainage and irrigation corridors that comprise the Open Space System.

To date, the City's goal has been to extend trail connections to and from Major Trails into the context of a residential subdivision model where local roads feed into a street hierarchy of progressively busier arterials and collectors. That approach can succeed by using a combination of trails acquired through Public Land Deductions (PLDs), on-street bikeway routes and sidewalk/trail designations to complete missing links, but terminates at arterial roadways where grade-separated crossings were not part of the original subdivision pedestrian and vehicular access and transit design.

User experience on Major Trail corridors is improved by constructing grade-separated crossings at high volume/high-speed arterial streets. Such crossings are often implemented along a major drainage such as Big Dry Creek when trails are being constructed at roughly the same time arterials and collectors are undergoing reconstruction. Criteria for successful grade-separated crossings design are stringent: crossings must accommodate all persons, as required by ADA; crossings must minimize slopes on approach and be clearly visible from the street; sight lines must extend through the crossing; and the length of the crossing must be well lit.

Typical cross-sectional dimensions for an underpass serving both pedestrian and bicycle traffic are 14-16 feet. That width should be increased if the length is greater than 60 feet. (i.e., ROW at Federal Boulevard at intersections is 110 ft.)

The above criteria make the construction of underpasses at arterial streets not associated with site or regional drainage or irrigation requirements very difficult due to a range of issues including:

- » Acquisition of ROW to accommodate approaches;
- » Utility relocation;
- » Narrow, relatively steep approaches; and,
- » Long enclosed spaces with limited sight lines in and out.



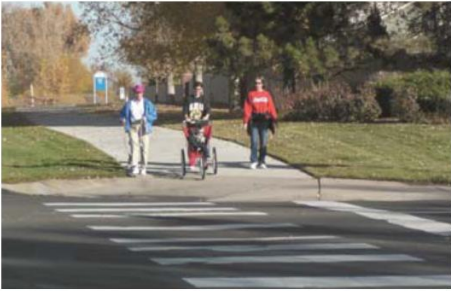

Underpasses work best when designed to feel welcoming, safe and accessible. Underpasses are significantly less expensive when integrated and constructed as a component of roadway improvements.

The best opportunities come in association with new bridge construction or existing bridge or culvert reconstruction -- i.e., Urban Drainage and Flood Control District's new criteria for determining flood volumes and defining flood plains may create future opportunities to modify crossings on Little Dry Creek and Walnut Creek-- where the possibility of improving an existing underpass or constructing a new one should always be included in design alternatives.

Where grades are favorable and there is the possibility of constructing an arterial underpass that connects directly to open space, or provides a link in a Major Trail, then that proposed underpass may be worth continued study. (i.e., crossing Federal Boulevard north of Ranch Reserve Parkway.)

Where a connecting on-street bikeway route or sidewalk trail crosses an arterial street with no City-owned land on either side, then the possibility of constructing a successful underpass becomes more remote and the City should consider at-grade solutions that include alternative transportation engineering designs related to intersection modifications.



Crossing Types			
Facility Type	Typical Width	Typical Surface	Characteristics
<p>Bicycle/Pedestrian Bridge or Overpass</p> 	10'-14'	Wood, composite, concrete, or metal decking	<ul style="list-style-type: none"> » Min. clear width same as approaching path, ideally including an additional 2' clearance on either side of trail » 5% max. grade on approach ramps » Railings/fences on both sides shall be a min. height of 42" for pedestrian facilities and 54" for bicycle facilities
<p>Bicycle/Pedestrian Underpass</p> 	10'-14'	Concrete	<ul style="list-style-type: none"> » Min. clear width same as approaching path, ideally including an additional 2' clearance on either side of trail » 10' min. vertical clearance » 5% max. grade on approach ramps » Railings/fences on both sides shall be a min. height of 42" for pedestrian facilities and 54" for bicycle facilities
<p>Standard At-Grade Crossing</p> 	8'-10'	Thermoplastic paint	<ul style="list-style-type: none"> » Trail crossings of all streets should use highly visible ladder-style crosswalk markings » Crosswalk and associated curb ramps should be same width as approaching trail » Acceptable for mid-block locations on local streets. Optional to include pedestrian-actuated signals based on needs
<p>Enhanced At-Grade Crossing</p> 	8'-10'	Thermoplastic or paint Optional to apply crosswalk markings over colored or textured pavements	<ul style="list-style-type: none"> » Recommended for mid-block locations on arterials and collectors » Consider use of median refuge islands on multi-lane roadways » Consider use of curb extensions on streets with on-street parking » Optional to include raised speed table crossing treatments and/or pedestrian-actuated signals based on needs

Trail Amenities

This section provides recommendations and guidelines for the design of trail amenities and trailheads.

Trail Amenities

The following table displays various trail facility amenities to be provided through out the Westminster trail system and the trail facility classification for which it is recommended.

Trail Amenities Recommendations			
Trail Amenity	Major	Minor	Notes
Benches	Recommended	Recommended	<ul style="list-style-type: none"> » Benches should be placed at Major Trailheads, trail lighting, and at waiting/resting areas » Locate benches in areas that provide interesting views, shade or shelter from seasonal winds, as well as those that are close to educational or cultural elements. » Locate in close proximity to the trail- typically 3' from the aggregate or paved shoulder. » Drainage should slope away from the trail. » Benches should be securely anchored to a concrete pad, and located at appropriate intervals (1/2 mile is optimum) along the trail. » Seating depth should be 18-20-inches and the length should vary between 60-90-inches.
Bollard	Recommended	Recommended	Bollards should have reflective surfaces, be removable and be placed where motor vehicles have potential access to trails.
Delineators	Recommended	Recommended	Delineators can be used in place of guard rails and in areas where the trail is adjacent to water features or slopes in excess of 1:4.
Distance Markers	Recommended		<ul style="list-style-type: none"> » Distance markers should be placed at the beginning of Major Trailheads and at locations where there is high recreational use. » The markers should be placed at ½ mile to 1 mile intervals otherwise. (See Westminster Trails Wayfinding Strategy for mile marker design concept)
Guard rails/fences	Recommended	Recommended	Guard rails should be a minimum height of 42" and used where there is more than 30" vertical drop off at edge of the shoulder.
Informational and Wayfinding Signage	Recommended	Recommended	Informational signage should be located as needed per Westminster Trails Wayfinding Strategy in this report
Lighting	Recommended	Recommended	Lighting shall conform to the City's Standards and Specifications
Regulatory Signage	Recommended	Recommended	Signage at street crossings should be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9.
Trash Receptacles	Recommended	Recommended	Trash receptacles, as well as provisions for recycling, should be provided at street crossings and near benches
Dog Waste Stations	Recommended	Recommended	Provide dog waste stations at trailheads and street crossings.



Trailheads

Trailheads are typically located at the gateways to the trail system, and thus, should be highly visible and provide appropriate amenities (wayfinding and regulatory signage or kiosk) that make a user’s experience enjoyable. Trailhead design should take into account the surrounding environment and context as well as the trail facility classification, Major or Minor Trail.

Trailhead amenities should include:

- » Providing a comprehensive system of parking, transit access, information and function as a gateway to the trail system.
- » Parking should be provided in a lot configuration and may either be paved, unpaved or a combination of both.
- » When possible it will be necessary to explore shared use parking options with other facilities (i.e. schools, parks, churches).
- » When a trailhead is located along a designated RTD fixed-route, at a minimum a transit stop shall be provided with adequate access to the trail.

Trailhead Amenities Recommendations	
Trail Amenity	Notes
Benches	<ul style="list-style-type: none"> » Locate benches in areas that provide interesting views, shade or shelter from seasonal winds, as well as those that are close to educational or cultural elements. » Locate in close proximity to the trail- typically 3’ from the aggregate or paved shoulder. » Drainage should slope away from the trail. » Benches should be securely anchored to a concrete pad » Seating depth should be 18-20-inches and the length should vary between 60-90-inches.
Bike Racks	Bike racks should be located near the parking facility and should be covered and lighted when possible.
Lighting	Lighting shall conform to the City standards.
Wayfinding Signage	Wayfinding signage should illustrate the entire trail network. (See Westminster Trails Wayfinding Strategy for kiosk design at trailhead)
Parking	Where provided, parking should be signed and located with close proximity to the trail. Parking should also be lighted as necessary.
Port-o-lets	Port-o-lets should be located at trailheads that are perceived to have high use. Port-o-lets should be enclosed and should be accessible for wheelchair users (ADA standards).
Regulatory Signage	Signage should be provided at Major Trailheads and street crossings in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9.
Transit Access	Transit stops should be easily accessible and visible, and provide route and schedule information and typical signage.
Trash Receptacles	Trash receptacles, as well as provisions for recycling, should be provided at trailheads and locations of benches and wayfinding signage.

Existing and proposed trailheads are mapped on the 2014 Trails Master Plan Map. This map is to be used as a long-range planning guideline and will change based on actual trail alignments, developer negotiations, and Capital Improvement Project (CIP) feasibility. Proposed trailhead locations include (see large fold-out map for locations):

- » Vogel Pond Park and Open Space (Ranch Reserve Parkway and W 112th Avenue)
- » Hyland Pond Open Space (W 98th Avenue West of Northwest Church of Christ)
- » Lower Church Lake Open Space (Wadsworth Boulevard and W 108th Avenue)
- » Westminster Hills Open Space - South (Alkire Street and 100th Avenue)

Large scale fold-out version of this map is included in the pocket at the end of this section

2014 Trails Master Plan

07.28.2014

LEGEND

Major Trails

- Concrete
- Concrete Sidewalk
- Aggregate
- Proposed

Minor Trails

- Concrete
- Concrete Sidewalk
- Aggregate
- Proposed

Other Trails/Bikeways

- Connecting Trail
- Natural Surface Trail
- Proposed Connecting Trail
- Existing Trail in Adjacent Jurisdiction
- Proposed Trail in Adjacent Jurisdiction
- Proposed Bikeway (per 2030 Bicycle MP)

Trailheads

- Existing
- Proposed

Trail Crossings

- (Existing
- (Proposed

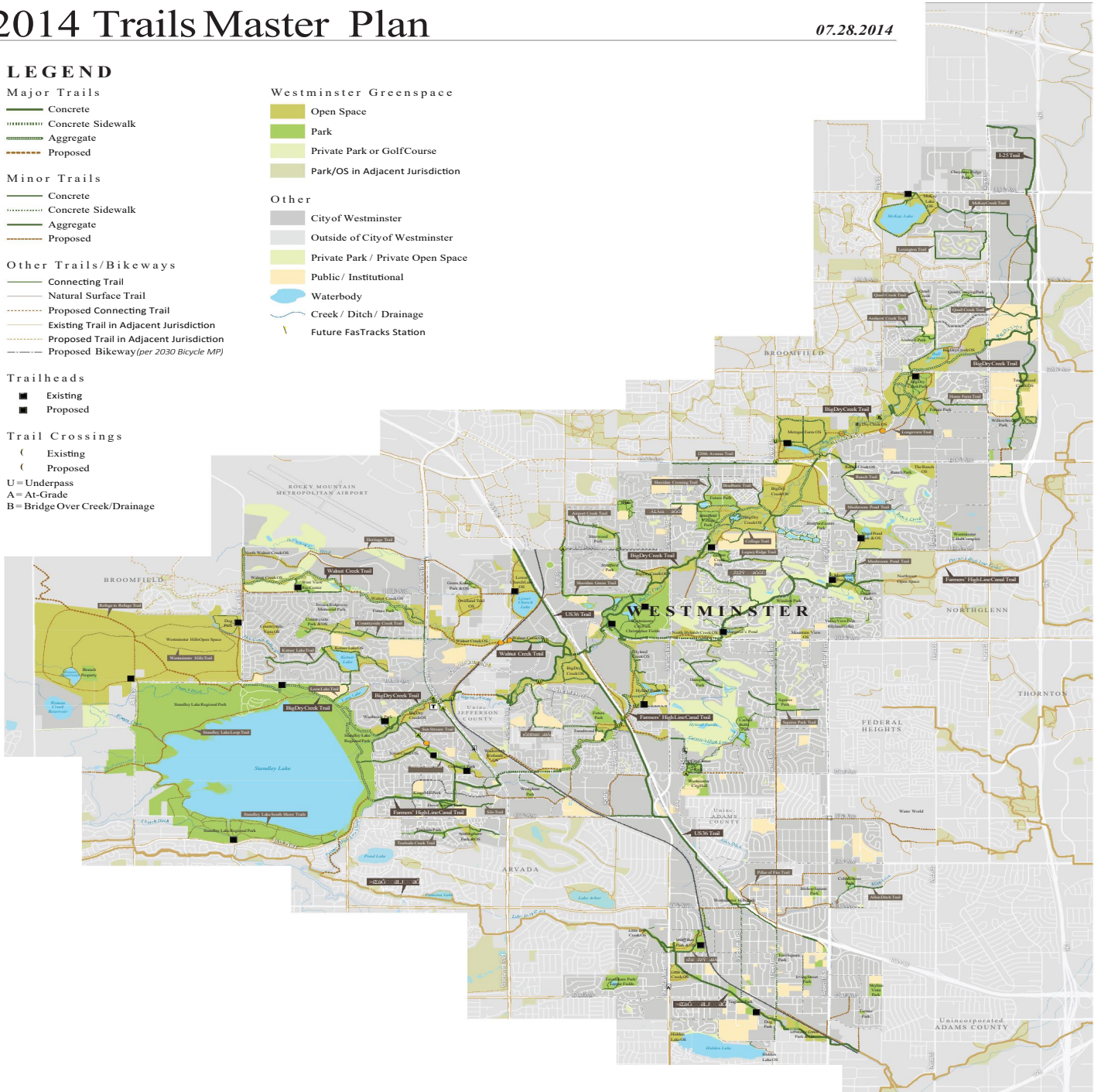
- U= Underpass
- A= At-Grade
- B= Bridge Over Creek/Drainage

Westminster Greenspace

- Open Space
- Park
- Private Park or Golf Course
- Park/OS in Adjacent Jurisdiction

Other

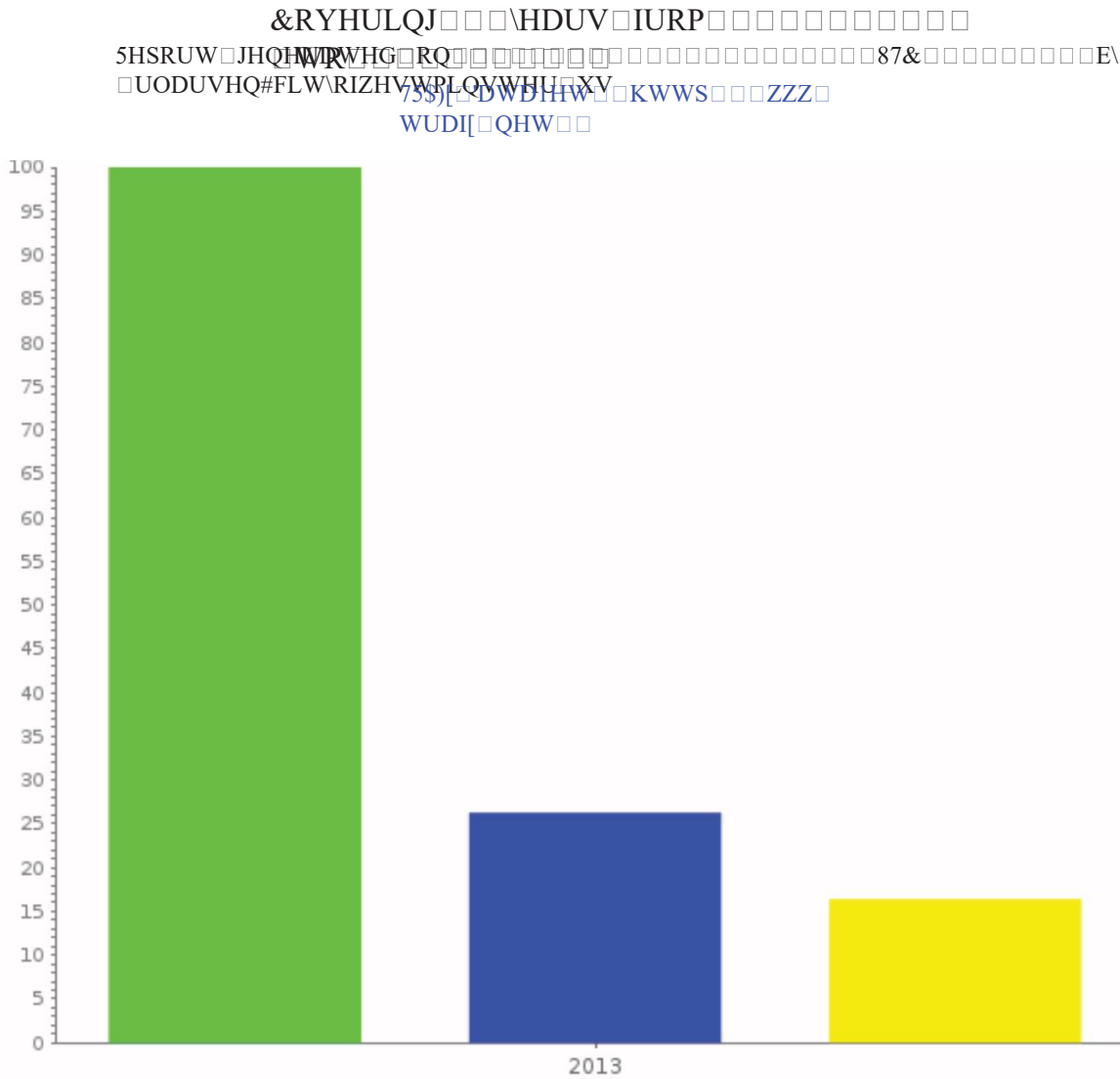
- City of Westminster
- Outside of City of Westminster
- Private Park / Private Open Space
- Public/ Institutional
- Waterbody
- Creek / Ditch / Drainage
- Future FasTracks Station





Resources: 2013 Trail Use Data Report

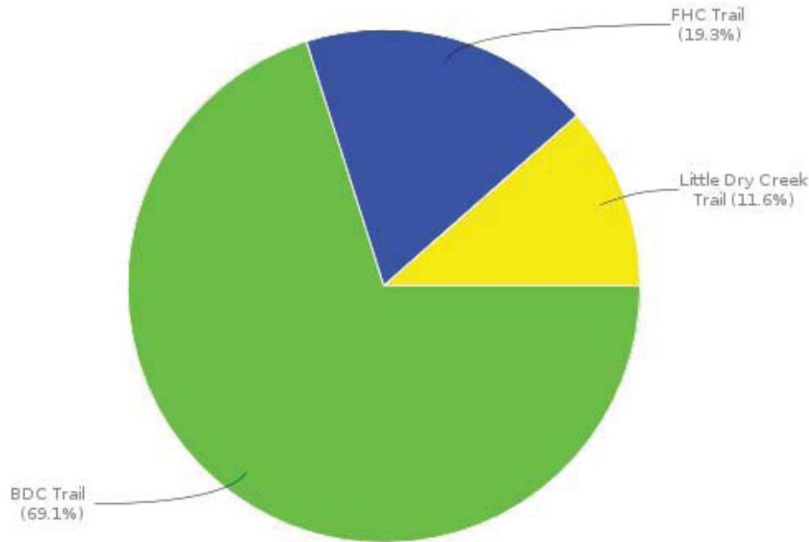
Yearly* totals report



Site Name	Average
WUDLO	100
WUDLO	26
WUDLO	16

Compare sites

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Site Name	Daily Average
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Resources: Trails Master Plan

The Westminster 2014 Trails Master Plan examines current and future needs for off-street trails within the City of Westminster. The plan builds off of existing Major Trail corridors along the Big Dry Creek, Farmers’ High Line Canal, Little Dry Creek and Walnut Creek while incorporating future connections as they tie into the 2030 Bicycle Master Plan.

Existing Westminster Trails Planning and Mapping - Resources used in the planning process

This 2014 Westminster Trails Master Plan is supported by many plans, maps and existing digital data, documents, and programs already in place that guide the City’s trails planning efforts.

» **The 2001 Master Plan Map Diagram**

This map illustrates the City’s existing and proposed trails, including existing and proposed sidewalks, existing and proposed trailheads, and existing and proposed grade separated crossings. The map also calls out regional trail connections to adjacent municipalities.

» **The 2013 Comprehensive Land Use Plan Update**

Chapter 7.0 – Parks, Recreation, Libraries and Open Space, Sections 7.3- and 7.4, highlights goals and policies as they pertain to trails planning, these include:

GOALS:

- PRLO-G-4 Provide easy and safe access to the City’s Open Space and Trail network.
- PRLO-G-5 Ensure the city’s open space and trails network is well-maintained and continues to preserve sensitive habitats and environments.

POLICIES:

- PRLO-P-3 Continue to identify and evaluate opportunities for property acquisitions that enhance access to the city’s trail corridors and public parks.
- PRLO-P-4 Ensure that all new residential development continues to contribute to the provision and maintenance of adequate parks, recreation facilities and open space to meet the needs of its new residents.
- PRLO-P-18 Update and utilize the Trails Master Plan to develop connections between open space areas.
- PRLO-P-19 Work with proposed development projects to provide new linkages to existing trails and create new trails where feasible.
- PRLO-P-15 Work with the Adams County Open Space Program, the City and County of Broomfield Open Space and Trails Program, Jefferson County Open Space Program and Great Outdoors Colorado Trust Fund as partners in open space programs.

The Comprehensive Land Use Plan includes a map – Figure 7-1. Parks, Libraries, Recreation & Open Space – that identifies existing and proposed trails along the main trail corridors of Big Dry Creek, the Farmers’ High Line Canal, Little Dry Creek, and Walnut Creek, providing a basis for trail connection in both open space and new development in the city.

Existing Westminster Trails Planning and Mapping - Resources used in the planning process (continued)

» **The 2010-2014 Parks and Recreation Master Plan**

While primarily a master plan for Parks and Recreation, Open Space and Trails are inventoried and included in the Open Space section of the document. While the trails map that is included in this section shows existing conditions, it also identifies proposed trail connections. The plan states that the City's "Trails Master Plan" – this 2014 plan – will be inserted as a section of this document.

A Citizens Comment section is included in the Parks & Recreation Master Plan. Two public meetings were held, comment cards were available at all recreation facilities and City Hall, and an e-comment card was available on the city's web site. Comment relating to Open Space and Trails were as follows:

OPENSOURCE

COMMENTS: about open space at 100th on the west side of Sheridan. Debris from the abandoned McStain project is dangerous and an eyesore.

- Continue to reclaim and re-vegetate open space land through prairie dog management.
- Better weed control in open spaces.

TRAILS

COMMENTS: extensive trail system. Suggest that you have done too well in paving paths. A softer walking surface would be much appreciated.

- 26 Residents of Green Knolls would like trail connections and sidewalks to enable them to safely walk or ride bikes to other trails, along Old Wadsworth and to Walnut Creek Shopping Center. (26 residents)
- Install bicycle path connecting Standley Lake to Federal Heights-allow bicycle traffic along the Farmers High Line Canal through the Hyland Hills Golf Course. This would allow bicycle traffic from the Standley lake area to connect to the Niver Creek path via 96th Avenue and eventually to the Platte River bike path, without using 92nd Avenue or 104th Avenue.
- Complete a continuous bike trail around Standley Lake. (3 residents)
- Build a safe trail connection between Westminster Hills Open Space and Standley Lake. Need a safe bike entrance to Standley Lake. There are no trails or sidewalks at the entrance at 100th and Simms. (2 Residents)
- Need more safe bike paths and trail connections in City Center area.
- Sanolets along trails and open space all year.
- No more concrete trails.
- Complete Walnut Creek Trail from Simms to Walnut Creek shopping area.
- There are no trails, parks or open space near me near 86th Ave & Federal Boulevard.
- Work with other municipalities to link trail systems both existing or planned (i.e., Broomfield, Rocky Flats).
- Build trail access to the Mower Reservoir through the forestry operations connecting to the Standley Lake trail system.
- Install access to mower reservoir from the west on Indiana Street via trailhead/parking.
- I would also like to see the "proposed" section of greenbelt that would connect Countryside neighborhood (108th/Wads) to the Dry Creek Open Space completed.

» **The 2030 Bicycle Master Plan**

This plan, adopted by City Council in June 2011, identifies many off-street shared paths (or trails) as part of the proposed final bikeway network to facilitate recreational and commuter bicycle needs. The plan recommends that Westminster build all new identified bikeway trail segments with concrete and retrofit all existing gravel segments with concrete for use by commuter cyclists. The plan makes recommendations for design and safety as well as recommendations for wayfinding and connection into the on-street bikeway system. This Trails Master



Plan update coordinates proposed improvement priorities (short/medium/long term) with improvement priorities identified in the bike plan ensuring connections are met.

» **Westminster Trails: A User's Guide**

The trail user guide map's latest publication is dated August 2009 and will be updated in 2014. This map highlights the city's trail system illustrating major and Minor Trail connections as well as materials – concrete, gravel or natural – and proposed connections on the map. This map was used on trail signage in various locations on Major Trails. The four Major Trails include:

- Big Dry Creek Trail
- Farmers' High Line Canal Trail
- Little Dry Creek Trail
- Walnut Creek Trail

» **Westminster Strategic Plan**

(TEXT STRAIGHT FROM OSSP) The City's Strategic Plan, reviewed and adopted annually by Westminster City Council, has identified the goal of 15% of the City's total land area preserved as City Open Space to preserve view corridors, provide buffers between developments, protect habitat, protect creek and irrigation canal corridors, preserve open rural landscapes, and enhance recreational opportunities for residents through a series of interconnected trails. Pursuit of property for acquisition is ultimately determined by Westminster City Council under guidance from the Open Space Advisory Board and City staff.

» **Westminster Comprehensive Land Use Plan**

(TEXT STRAIGHT FROM OSSP) The Westminster Comprehensive Land Use Plan (CLUP) governs future land development and redevelopment in the City. Two Goals and Policies within the CLUP relevant to this Plan are:

- "Preserve the unique visual character of Westminster" (Goal H2) through identification, acquisition, and/or strategic protection of view corridors and environmentally sensitive areas throughout the City (Policy H2a).
- "Enhance the City's open space system to preserve and protect natural areas, vistas and view corridors, and to complete the open space and trail system" (Goal H4). Policies H4a and H4b suggest using "acquisition of open space as a tool to channel growth into appropriate locations and to shape the overall design of the community" and suggest continuing "to develop Big Dry Creek and tributary streams as the "spine" of a comprehensive network of trails linking

» **Existing GIS Data**

The City of Westminster updates the City's parks, open space and trails information on a regular basis. Data from outside sources were used to show parks, open space and trails information in adjacent jurisdictions to illustrate connections. All of this data was used for mapping in this master plan process.

Complete list of plans reviewed for this planning effort:

- City of Westminster Zoning Code and Land Use Map
- City of Westminster Guidelines for Traditional Mixed Use Neighborhood Developments
- City of Westminster Strategic Plan (2009-2014 -2023)
- City of Westminster Trails Plan Map
- City of Westminster Existing Trail System Map
- City of Westminster 2030 Bicycle Master Plan
- City of Westminster Metzger Farm Open Space Master Plan (2010)
- City of Westminster Wildlife and Natural Resource Management Plan for Open Space Properties (2010)
- City of Westminster Storm Drainage Study (2007)
- City of Westminster Open Space & Resource Stewardship Plan (Draft -2012)
- City of Westminster Comprehensive Land Use Plan (2013)
- City of Westminster Development Code – Chapter 5 Open Space Program (2009)
- City of Westminster Grant Applications for Regional Trail Wayfinding Project (2011)
- City of Westminster Grant Applications for Semper Farm – Colorado State Historical Fund (2013)
- America's Great Outdoors (AGO): Feasibility Study for Connecting Urban Refuges to the Rocky Mountain Greenway Trail Network (2013)
- US36 Corridor Bike Links Map
- City of Thornton Parks & Open Space Master Plan (2012)
- Arvada Parks, Trails, and Open Space Master Plan (2001)
- City/County of Broomfield Open Space, Parks, Recreation and Trails Master Plan (2005)
- City/County of Broomfield Existing and Planned Trail Surfaces (2012)
- City of Northglenn Open Space Management Plan (2010)
- City of Northglenn Parks & Greenway Trail System (2008)
- Adams County Parks, Trails, and Open Space Map
- Adams County Open Space and Trails Master Plan (2012)
- Jefferson County Open Space Master Plan (2013)
- DRCOG's 2010 Guidelines for Successful Pedestrian and Bicycle Facilities in the Denver Region (2010)



Trails Wayfinding Strategy

This section of the 2014 Open Space Stewardship Plan defines a trails wayfinding strategy and program within the City of Westminster’s Open Space System. The Trails Wayfinding Strategy examines the existing wayfinding system, establishes goals and objectives for trails wayfinding, coordinates with the 2030 Bicycle Master Plan, proposes a conceptual signage hierarchy, maps the location for each sign type along each Major Trail corridor, and provides a plan for implementation.

Existing Conditions and Analysis

The existing Westminster Trail System is comprised of four Major Trail corridors, or regional trails - Big Dry Creek, Farmers’ High Line Canal/Niver Canal, Little Dry Creek, and Walnut Creek linked by Minor Trails through neighborhoods. Existing trails are constructed of concrete or aggregate (crusher fines) and range from 10’ wide mulch-use trails that traverse open space to 4’ sidewalks that meander through neighborhoods, as well as 10’ wide sidewalks adjacent to arterial streets.

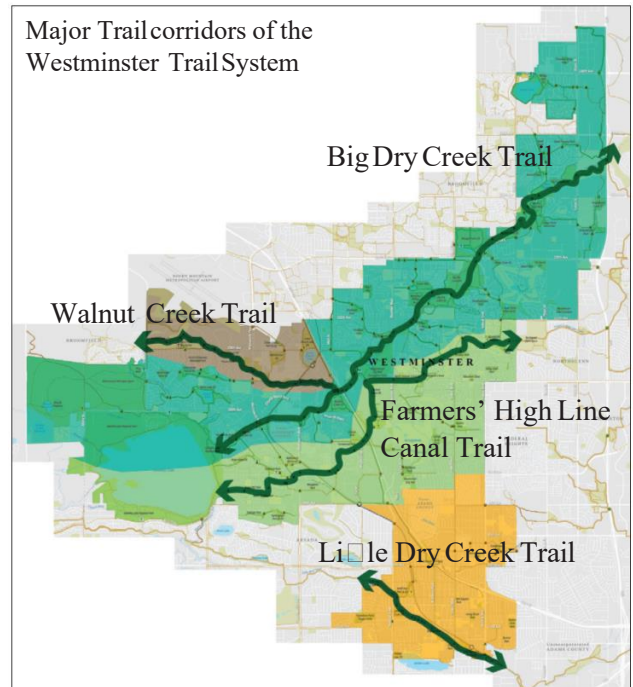
The Westminster Trail System is challenging to navigate because of three factors:

- » Signage is sparse and inadequate
- » Inconsistency of trail surface material (concrete or aggregate) and/or trail type (off-street trail, detached sidewalk, or a attached sidewalk) along a trail corridor
- » Existing wayfinding signage is inconsistent in design contributing to a lack of Open Space/Trail system identity.

Existing signage for the Big Dry Creek Trail establishes an identity for adjacent open space; however, the signs are difficult to view from a distance or at higher speeds by cyclists (per the 2030 Bicycle Master Plan) and the directional arrows are unclear (#1 left). The Mushroom Pond Trailhead style sign (#2 left) is clear and informative and is in the same color and style as the Open Space signage throughout the city. The older, blue trail signs (#3 left) are easy to spot, but lack the “open space” character.

Kiosks along the Big Dry Creek Trail are used for wayfinding purposes and provide maps that illustrate the trail system and regulatory information. Twelve kiosks were recently designed and constructed, and will be installed per the wayfinding strategy. (#4 left)

The City of Westminster is currently undergoing a citywide branding and marketing effort. The signage palette for the Open Space and Trail System should be fully integrated into this effort.



Existing Westminster Trail/Open Space signage, kiosk



Wayfinding Strategy: Goals and Objectives

The following are goals and objectives for a comprehensive Westminster Open Space/Trails wayfinding strategy:

Goals:

1. Develop a trail signage strategy that reinforces the strengths of the Open Space/Trail System.
2. Create a clear, navigable system.
3. Reinforce the Open Space System unity and community identity.
4. Provide prioritization strategy for phased implementation.

Objectives:

- » Promote Westminster's Open Space and Trail System as a friendly, well-planned, organized and safe environment that offers links to both major (regional) and minor (neighborhood or local) trails.
- » Allow for the integration of a variety of wayfinding tools, including electronic/GPS tools.
- » Improve pedestrian safety and accessibility.
- » Develop a trail signage hierarchy consistent with the Westminster Trail System's Major and Minor Trail design standards hierarchy.
- » Create a wayfinding signage palette that supports and is consistent with other, larger branding and marketing efforts throughout the City, but that also retains unique identifying symbols, colors and fonts that will be readily recognizable and associated with the City's Open Space System.
- » Coordinate with 2030 Bicycle Master Plan.
- » Coordinate with ongoing Open Space kiosk design and installation.



Coordination With Existing Plans

2030 Bicycle Master Plan

The 2030 Bicycle Master Plan includes a summary of bicycling wayfinding, types and best practices for Shared Use Paths including Shared Use Path Markers, Directional Signing, and Distance Signing. The report includes an evaluation of Westminster's existing system and identifies the following issues:

- » Comparatively sparse and incomplete wayfinding system
- » Two existing sign types - the older signs are more effective in terms of color and scale
- » Instances of on-street/off-street intersections that lack signage

The following Wayfinding and Signing Recommendations and Action Items relating to off-street trails are also included in the plan:

- » Action #3- Install bicycle appropriate regulatory, guide and warning signs wherever new bikeway facilities are implemented.
- » Action #4- Design path entrance markers to reflect and complement on-street bicycle wayfinding signs.
- » Action #5- Install trail markers at the entrance of every off-street trail. The city should survey and identify every path entrance that adjoins a roadway. A phasing plan should then identify potential funding sources to implement the path markers.
- » Action #6- Install directional signs at every key decision making point within the off-street network. The city should survey the path network to determine the key decision-making points and install directional signs that indicate the destination served by intersecting paths and their spurs. The city should coordinate with the parks department to install directional signage where a path connects to a roadway or adjoining sidewalk.
- » Action #7- Redesign existing off-street directional and distance signs to ensure legibility at typical bicycling speeds.
- » Action #8- Remove confusing signs on designated paths that forbid bicycle use

Refuge to Refuge Trail

In September 2013, the America's Great Outdoors (AGO) completed the Feasibility Study for Connecting Urban Refuges to the Rocky Mountain Greenway Trail Network. The Rocky Mountain Greenway Project, formalized in March 2012, is a federal/state/local partnership to create a continuous trail connection between Rocky Mountain National Park and the Rocky Mountain Arsenal. The Refuge to Refuge Trail Project is a key component of the larger Rocky Mountain Greenway Project and is a result of the AGO initiative – an effort by the federal government to partner with states and local communities to protect and encourage recreation and conservation activities across the country.

Wayfinding for the Refuge to Refuge Trail will be considered during the design phase of the Refuge to Refuge Trail project. Section 3.4.2 Wayfinding of the Feasibility Report (America's Great Outdoors: Feasibility Study for Connecting Urban Refuges to the Rocky Mountain Greenway Trail Network) addresses wayfinding for the Refuge to Refuge Trail as follows:

To brand the Refuge to Refuge Trail and alert users to trail connections, wayfinding should be consistent throughout the trail. A successful wayfinding program should involve a range of treatments including benches, lighting, signing, similar plantings, and so forth. If the Steering Committee develops a logo for the Rocky Mountain Greenway, it could be included on signage for this segment of trail.



US36 Bikeway

As part of the long range plan for transportation improvements to the US36 corridor, an 18-mile commuter bikeway is included in the package of commuting choices. The bikeway will be completed by late 2015.

The US36 Bikeway will have consistent and unique signage throughout the US36 corridor through Boulder, Superior, Louisville, Broomfield, and Westminster. The signage has been conceptually designed under the direction / leadership of CDOT & US36 Commuting Solutions with plenty of input from the municipalities.

Base package signage included with the trail construction package include MUTCD regulatory and warning signs (such as “yield”) and MUTCD Traveler Information Signage. Traveler Info signs include the US36 Bikeway logo, trail name, directional arrows identifying the route for US36 Bikeway at major junctions / decision points, and directional arrows toward Denver or Boulder (east or west travel).

Additional signs still in the negotiation phase between CDOT and municipalities

- include:
- » Mile Marker / emergency locator signage on brown flexible delineators (like the Forest Service uses) with reflective stickers, at a ¼-mile spacing along the entire bikeway. This is under negotiation at the moment but highly likely to be installed just prior to trail opening.
 - » Demarcation of intersecting trails by name.
 - » Demarcation of distance between major designations
 - » Possible map signs
 - » Distances to local non-US36 Bikeway designations



Potential Tools for Wayfinding

Smartphone Technology

Most trail users today rely on cell phones/smart phones to supplement printed maps. Trail signs should include a QR code (matrix patterns that can be read by smartphone cameras) that immediately directs the phone user to a web page that supplies additional information about the trail, descriptions along the trail and nearby public amenities and businesses. Designated City staff would be required to maintain the website information. Network storage capabilities would also be a factor.

QR codes are easy to generate, scan and can be easily applied to existing signage as well as be incorporated into a new signage template. Locations for QR codes would be at trailheads and Major Trail junctions.

Trail System Apps

Some communities have built apps to help smartphone users navigate their trail systems. The following are examples of successful apps that have been created to help enhance city wayfinding and community identity:

- » Boulder County Trail Guide App – Boulder, CO
It is the official GPS trails map for Boulder County Parks and Open Space. Features trail length, difficulty, parking locations, allowed uses (dogs, equestrian), a “locate me” option, trail conditions, and satellite map.

Boulder County Trail Guide App
<http://www.bouldercounty.org/pages/mobile.aspx>



- » RGreenway App - Raleigh, NC- <http://rgreenway.com/>
This app, a CityCamp2012 winner, is an interactive map of greenway trails with additional features such as weather reports, submitting issues via SeeClickFix, and the ability to track time and distance travelled.

The application is not a product of the City of Raleigh. It was created by the RGreenway team and was built using open data available through the official Raleigh Geoportal. The free application is available for mobile devices running the Android and iOS operating systems.



Discover Greenways

Information is provided for each greenway including detailed description, mileage, paved/unpaved and additional resources. Find the closest parking for each of the greenways.

Interact

Check in on the greenways using Foursquare. Easily report issues on the greenway such as graffiti and needed trail maintenance using SeeClickFix.

Enhance Your Experience

Workout mode allows you to keep track of the time and distance spent running on the greenways. The app will speak the distance and time of your workout every mile. See current weather conditions in your area.

Proposed Signage Types, Palette and Locations

Signage Types

A family of six (6) wayfinding signage types, as well as a mile marker type, is proposed in this wayfinding strategy. The Proposed Signage Types/Guidelines Matrix on the following page describes each signage type and graphically illustrates the information to be included on each sign type as well as providing typical locations for each type of sign.

Signage Palette

Signage should reflect be compatible with design standards for both bikeways and parks. The sign graphics included in the Proposed Signage Type/Guidelines Matrix on the following page is intended to be used only as an example as to what type of information should be included on each sign and suggest a typical scale. Sign design and character will be determined at a later date and will coordinate with current City branding/marketing efforts.







Typical Sign Locations

Finding a balance between adequate wayfinding signage and visually intrusive elements is an important factor in determining where to locate signage throughout the city. The Wayfinding Strategy Map (Page 9) identifies proposed locations for each of the six (6) sign types.

The 2030 Bicycle Master Plan has identified future bikeway corridors. Off-street trail signage must be in place as on-street bikeway corridors are implemented.

NOTE: Signage Schema Design will be coordinated with current Westminster branding efforts. The City is currently undergoing a new city branding/marketing effort within the Parks, Recreation and Libraries Department. New sign design character for trails and open space will be coordinating with these efforts, as well as other redevelopment and planning efforts (Westminster Center).

Signage Types/Guidelines Matrix

Sign Type	Kiosk	Trail ID/Map	Trail ID/Direction	Trail D (Major)	Confidence Marker	Trail ID (Minor)
Sign Code	1	2	3	4	5	6
Typical Example						
Description and Typical Sign Information	<ul style="list-style-type: none"> • More Structural (12 kiosks were recently designed and built) • Identifies Major Trail/Trailhead/Open Space • Identifies trail users • Provides orientation through maps of the entire Westminster trail system • Provides a place to post community information and regulatory signs • Provides QR code, or other information for using smartphone technology • Includes City logo 	<ul style="list-style-type: none"> • Identifies Major Trail • Provides orientation map that identifies adjacent trail connections and loops; nearby parks/os, landmarks and points of interest; trail surface; mileage • Provides directional information at trail junctions using arrows and/or mileage as needed • Identifies trail users • Provides QR code, or other information for using smartphone technology • Includes City logo 	<ul style="list-style-type: none"> • Identifies Major Trail • Provides directional information at trail junctions using arrows and/or mileage as needed • Identifies trail users • Provides QR code, or other information for using smartphone technology • Includes City logo 	<ul style="list-style-type: none"> • Identifies Major Trail when directional signage is not needed • Identifies trail users • Provides QR code, or other information for using smartphone technology • Includes City logo 	<ul style="list-style-type: none"> • Identifies a Major Trail along sidewalk sections of a Major Trail route (ensures trail user that they are going the right way) • Includes directional arrow • Includes City logo 	<ul style="list-style-type: none"> • Identifies a Minor Trail that connects into a Major Trail or larger neighborhood park/os • May include directional arrow • Includes City logo
Typical Location	<ul style="list-style-type: none"> • Trailhead Parking area adjacent to trail • Major park/Major Trail interface (i.e. Little Dry Creek Park & OS) 	<ul style="list-style-type: none"> • Located at Major Trail entry points from arterial streets • Bikeway/Major Trail junctions 	<ul style="list-style-type: none"> • Located at junctions along Major Trails 	<ul style="list-style-type: none"> • Located along Major Trails when entering a major open space/park/City boundary but no junction 	<ul style="list-style-type: none"> • Located along a trail where there might be confusing (i.e. when a major/minor trail section becomes a sidewalk or changes surfaces) 	<ul style="list-style-type: none"> • Along a minor trail that ensures connection onto a major trail or larger park/os
Design/Specifications	<ul style="list-style-type: none"> • Forthcoming/Coord w/ Marketing 	<ul style="list-style-type: none"> • Forthcoming/Coord w/ Marketing 	<ul style="list-style-type: none"> • Forthcoming/Coord w/ Marketing 	<ul style="list-style-type: none"> • Forthcoming/Coord w/ Marketing 	<ul style="list-style-type: none"> • Forthcoming/Coord w/ Marketing 	<ul style="list-style-type: none"> • Forthcoming/Coord w/ Marketing



Wayfinding and Signing Recommendations

- » The wayfinding program for all Major Trail corridors (Big Dry Creek, Farmers' High Line Canal, Walnut Creek, and Little Dry Creek Trails) should be consistent with a clear signage palette of minimal sign types and a wayfinding program that creates a system unity and reinforces community identity.
- » Installation of trail signage along off-street bikeway should be coordinated with the Bikeway Plan implementation schedule.
- » Provide symbols for permitted uses on all Major Trails— bicycle, pedestrian, dog on-leash, etc.
- » Develop an strategy for using smartphone technology to reinforce wayfinding. (This should be coordinated with the current City branding/marketing effort)
 - Provide a QR code (matrix patterns that can be read by smartphone cameras), or other information for use with smartphone technology.
 - Develop a website page or app that helps trail users navigate the City for use with smartphone technology.
- » Surface material for Major Trails should be consistent within the Park or Open Space to strengthen wayfinding.
- » Use proposed sign types at locations identified in the Proposed Signage Type/Guidelines Matrix.
- » Use Sign Type #5 Confidence Markers along trail "routes" on existing rights-of-way, i.e. Lowell Blvd Trail, Pillar of Fire Trail, and Bradburn Trail routes.

Implementation

As soon as the current City branding/marketing effort is completed, and a graphic identity has been established for the City's Open Space/Trails System, implementing the proposed wayfinding strategy should be a priority starting with all Major Trail corridors and trail "routes" to the future Westminster FasTracks Station.

The following pages identify estimated costs for implementing the Wayfinding Strategy for each planning corridor.

Wayfinding Strategy Map

07.28.2014

Large scale fold-out version of the maps included in the pocket at the end of this section.



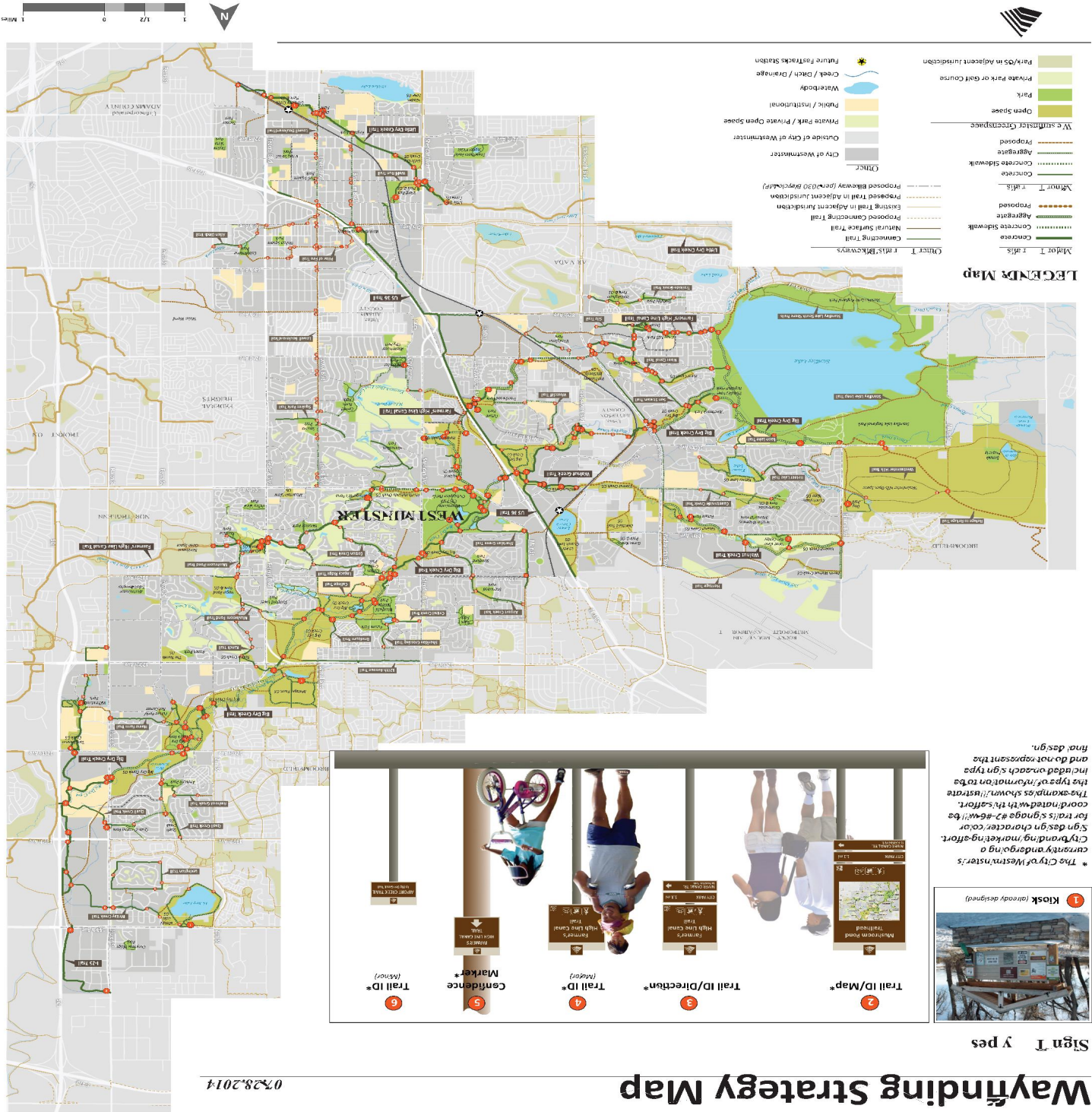
* The City of Westminster is currently undergoing a sign design charrette for trail signage. The charrette shows various sign types included on each sign type and do not represent the final design.



Sign Types

1 Kiosk (already designed)

* The City of Westminster is currently undergoing a sign design charrette for trail signage. The charrette shows various sign types included on each sign type and do not represent the final design.



WESTMINSTER



- Legend Map**
- Major Trails: Solid green line
 - Concrete Sidewalk: Dotted green line
 - Aggregate: Dashed green line
 - Proposed: Dotted orange line
 - Minor Trails: Dotted grey line
 - Concrete: Solid grey line
 - Trail Blows: Dotted grey line
 - Proposed Blows: Dotted orange line
 - Proposed in Adjacent Jurisdiction: Dotted orange line
 - Existing Trail in Adjacent Jurisdiction: Solid orange line
 - Proposed Connecting Trail: Dotted orange line
 - Natural Surface Trail: Solid orange line
 - Concrete Trail: Solid orange line
 - Connecting Trail: Dotted orange line
 - City of Westminster: Solid grey area
 - Outside of City of Westminster: Dotted grey area
 - Private Park / Private Open Space: Solid yellow area
 - Public / Institutional: Solid yellow area
 - Waterbody: Solid blue area
 - Creek / Ditch / Drainage: Solid blue area
 - Future Footcath Station: Yellow star icon
 - Park / Private Park or Golf Course: Solid green area
 - Open Space: Solid light green area
 - Park: Solid green area
 - W & Westminster GreenSpace: Solid light green area
 - Proposed: Dotted orange line
 - Aggregate: Dashed green line
 - Concrete Sidewalk: Dotted green line
 - Major Trails: Solid green line
 - Trail Blows: Dotted grey line
 - Proposed Blows: Dotted orange line
 - Proposed in Adjacent Jurisdiction: Dotted orange line
 - Existing Trail in Adjacent Jurisdiction: Solid orange line
 - Proposed Connecting Trail: Dotted orange line
 - Natural Surface Trail: Solid orange line
 - Concrete Trail: Solid orange line
 - Connecting Trail: Dotted orange line
 - City of Westminster: Solid grey area
 - Outside of City of Westminster: Dotted grey area
 - Private Park / Private Open Space: Solid yellow area
 - Public / Institutional: Solid yellow area
 - Waterbody: Solid blue area
 - Creek / Ditch / Drainage: Solid blue area
 - Future Footcath Station: Yellow star icon
 - Park / Private Park or Golf Course: Solid green area
 - Open Space: Solid light green area
 - Park: Solid green area
 - W & Westminster GreenSpace: Solid light green area

LEGEND Map

Wayfinding Strategy: Estimated Costs by Signage Types

Trail Name	Sign Type	Sign Type Description	Unit Cost	Qty	Cost per Sign Type	Total Cost per Trail
Airport Creek Trail	6	Trail ID (Minor)	\$ 295	5	\$ 1,475	\$ 1,475
Amherst Creek Trail	6	Trail ID (Minor)	\$ 295	1	\$ 295	\$ 295
Arapahoe Ridge Trail	3	Trail ID + Direction	\$ 505	1	\$ 505	\$ 505
	6	Trail ID (Minor)	\$ 295	2	\$ 590	\$ 590
Big Dry Creek Trail (IT25 to I128th)	2	Trail ID + Map	\$ 750	4	\$ 3,000	\$ 4,335
	3	Trail ID + Direction	\$ 505	2	\$ 1,010	
	4	Trail ID	\$ 325	1	\$ 325	
Big Dry Creek Trail (at Big Dry Creek Park)	1	Kiosk	\$ 1,500	1	\$ 1,500	\$ 6,685
	2	Trail ID + Map	\$ 750	3	\$ 2,250	
	3	Trail ID + Direction	\$ 505	4	\$ 2,020	
	4	Trail ID	\$ 325	1	\$ 325	
	6	Trail ID (Minor Access)	\$ 295	2	\$ 590	
Big Dry Creek Trail (Federal Pkwy to I120th)	1	Kiosk	\$ 1,500	1	\$ 1,500	\$ 3,555
	2	Trail ID + Map	\$ 750	1	\$ 750	
	3	Trail ID + Direction	\$ 505	2	\$ 1,010	
	6	Trail ID (Minor Access)	\$ 295	1	\$ 295	
Big Dry Creek Trail (I20th to I112th)	2	Trail ID + Map	\$ 750	4	\$ 3,000	\$ 7,040
	3	Trail ID + Direction	\$ 505	8	\$ 4,040	
Big Dry Creek Trail (I112th to Sheridan)	2	Trail ID + Map	\$ 750	1	\$ 750	\$ 2,085
	3	Trail ID + Direction	\$ 505	2	\$ 1,010	
	4	Trail ID	\$ 325	1	\$ 325	
	2	Trail ID + Map	\$ 750	7	\$ 5,250	\$ 8,965
Big Dry Creek Trail (Sheridan to US36)	3	Trail ID + Direction	\$ 505	5	\$ 2,525	
	4	Trail ID	\$ 325	1	\$ 325	
	5	Confidence Marker	\$ 190	3	\$ 570	
	6	Trail ID (Minor Access)	\$ 295	1	\$ 295	
Big Dry Creek Trail (US36 to Wadsworth Pkwy)	2	Trail ID + Map	\$ 750	5	\$ 3,750	\$ 6,285
	3	Trail ID + Direction	\$ 505	4	\$ 2,020	
	4	Trail ID	\$ 325	1	\$ 325	
	5	Confidence Marker	\$ 190	1	\$ 190	
Big Dry Creek Trail (Wadsworth Pkwy to Standley Lake)	2	Trail ID + Map	\$ 750	2	\$ 1,500	\$ 12,090
	3	Trail ID + Direction	\$ 505	4	\$ 2,020	
	4	Trail ID	\$ 325	2	\$ 650	
Big Dry Creek Trail Mile Markers	MM	Mile Marker	\$ 880	9	\$ 7,920	
Big Dry Creek Trail/Refuge-Refuge Trail	1	Kiosk	\$ 1,500	1	\$ 1,500	\$ 2,510
	3	Trail ID + Direction	\$ 505	2	\$ 1,010	
Cattail Creek Trail	3	Trail ID + Direction	\$ 505	1	\$ 505	\$ 1,095
	6	Trail ID (Minor)	\$ 295	2	\$ 590	
College Trail	6	Trail ID (Minor)	\$ 295	2	\$ 590	\$ 590
Countryside Creek Trail	6	Trail ID (Minor)	\$ 295	3	\$ 885	\$ 885
Home Farm Trail to Big Dry Creek Trail	3	Trail ID + Direction	\$ 505	1	\$ 505	\$ 505
	6	Trail ID + Direction	\$ 295	1	\$ 295	\$ 295
I-25 Trail (North of I128th)	2	Trail ID + Map	\$ 750	4	\$ 3,000	\$ 3,000
	3	Trail ID	\$ 505	2	\$ 1,010	\$ 1,010
	4	Trail ID	\$ 325	1	\$ 325	\$ 325
I-25 Trail at Tanglewood Creek	2	Trail ID + Map	\$ 750	1	\$ 750	\$ 750
	3	Trail ID + Direction	\$ 505	1	\$ 505	\$ 505
	4	Trail ID	\$ 325	1	\$ 325	\$ 325
	6	Trail ID (Minor)	\$ 295	2	\$ 590	\$ 590
I-25 Trail Access (at Huron St/S of I120th)	3	Trail ID + Map	\$ 505	1	\$ 505	\$ 505
	6	Trail ID (Minor)	\$ 295	5	\$ 1,475	\$ 1,475
Ketner Lake Trail	6	Trail ID (Minor)	\$ 295	3	\$ 885	\$ 885
Legacy Ridge Trail	6	Trail ID (Minor)	\$ 295	4	\$ 1,180	\$ 1,180
Lexington Loop Trail	3	Trail ID + Direction	\$ 505	2	\$ 1,010	\$ 1,010
McKay Creek Trail	6	Trail ID (Minor)	\$ 295	2	\$ 590	\$ 590
McKay Lake Loop Trail	6	Trail ID (Minor)	\$ 295	3	\$ 885	\$ 885
McKay Open Space	1	Kiosk	\$ 1,500	1	\$ 1,500	\$ 1,500
Mushroom Pond Trail	3	Trail ID (Minor)	\$ 505	1	\$ 505	\$ 505
	6	Trail ID (Minor)	\$ 295	9	\$ 2,655	\$ 2,655
Panorama Trail	6	Trail ID (Minor)	\$ 295	3	\$ 885	\$ 885
Quail Creek Trail (I36th to I225/BDC Trail)	2	Trail ID + Map	\$ 750	1	\$ 750	\$ 2,350
	3	Trail ID + Direction	\$ 505	2	\$ 1,010	
	6	Trail ID (Minor)	\$ 295	2	\$ 590	
Ranch Creek Trail	5	Confidence Marker	\$ 190	5	\$ 950	\$ 950
	6	Trail ID (Minor)	\$ 295	3	\$ 885	\$ 885
Refuge-Refuge Trail (at Starbuck Lakehead)	2	Trail ID + Map	\$ 750	1	\$ 750	\$ 2,265
	3	Trail ID + Direction	\$ 505	3	\$ 1,515	
	6	Trail ID (Minor)	\$ 295	2	\$ 590	\$ 590
Sheridan Crossing Trail	3	Trail ID + Direction	\$ 505	2	\$ 1,010	\$ 1,010
Sheridan Green Trail	6	Trail ID (Minor)	\$ 295	7	\$ 2,065	\$ 2,065
Westliff Hills OS	1	Kiosk	\$ 1,500	1	\$ 1,500	\$ 1,500
	6	Trail ID (Minor)	\$ 295	7	\$ 2,065	\$ 2,065
Estimated Totals for Signing Big Dry Creek Planning Corridor				188		\$92,045.00
Summary by Sign Type	Sign Type	Sign Type Description	Unit Cost	Qty	Cost per Sign Type	Total Cost
	1	Kiosk	\$ 1,500	5	\$ 7,500	\$ 92,045
	2	Trail ID + Map	\$ 750	34	\$ 25,500	
	3	Trail ID + Direction	\$ 505	50	\$ 25,250	
	4	Trail ID	\$ 325	9	\$ 2,925	
	5	Confidence Marker	\$ 190	9	\$ 1,710	
	6	Trail ID (Minor)	\$ 295	72	\$ 21,240	
	MM	Mile Marker	\$ 880	9	\$ 7,920	
Estimated Totals for Signing Big Dry Creek Planning Corridor				188		\$92,045.00

Wayfinding Strategy: Estimated Costs by Signage Types (continued)

Walnut Creek Planning Corridor						
Trail Name	Sign Type	Sign Type Description	Unit Cost	Qty	Cost per Sign Type	Total Cost per Trail
Walnut Creek Trail	2	Trail ID + Map	\$ 750	7	\$ 5,250	\$ 8,280
	3	Trail ID + Direction	\$ 505	6	\$ 3,030	
Estimated Total Cost for Signing Walnut Creek Planning Corridor						\$8,280.00
Farmers' High Line/Niver Canals Planning Corridor						
Trail Name	Sign Type	Sign Type Description	Unit Cost	Qty	Cost per Sign Type	Total Cost per Trail
City Centre Park Trail	2	Trail ID + Map	\$ 750	1	\$ 750	\$ 750
	6	Trail ID (Minor)	\$ 295	2	\$ 590	\$ 590
Cotton Creek Trail	6	Trail ID (Minor)	\$ 295	6	\$ 1,770	\$ 1,770
	2	Trail ID + Map	\$ 750	3	\$ 2,250	\$ 8,385
Farmers' High Line Canal Trail (Standley Lake to Wadsworth Pkwy)	3	Trail ID + Direction	\$ 505	7	\$ 3,535	
	4	Trail ID	\$ 325	8	\$ 2,600	
Farmers' High Line Canal Trail (Wadsworth Pkwy to US 36)	2	Trail ID + Map	\$ 750	5	\$ 3,750	\$ 6,855
	3	Trail ID + Direction	\$ 505	4	\$ 2,020	
	4	Trail ID	\$ 325	1	\$ 325	
	5	Confidence Marker	\$ 190	4	\$ 760	
	2	Trail ID + Map	\$ 750	6	\$ 4,500	
Farmers' High Line Canal Trail (US 36 to Sheridan N of 10th)	3	Trail ID + Direction	\$ 505	4	\$ 2,020	\$ 7,550
	4	Trail ID	\$ 325	2	\$ 650	
	5	Confidence Marker	\$ 190	2	\$ 380	
Farmers' High Line Canal Trail (E of Sheridan N of 104th to Federal)	1	Kiosk	\$ 1,500	1	\$ 1,500	\$ 7,465
	2	Trail ID + Map	\$ 750	3	\$ 2,250	
	3	Trail ID + Direction	\$ 505	5	\$ 2,525	
	4	Trail ID	\$ 325	1	\$ 325	
	5	Confidence Marker	\$ 190	3	\$ 570	
	6	Trail ID (Minor)	\$ 295	1	\$ 295	
Farmers' High Line Canal Trail (E of Federal)	1	Kiosk	\$ 1,500	1	\$ 1,500	\$ 3,405
	2	Trail ID + Map	\$ 750	1	\$ 750	
	3	Trail ID + Direction	\$ 505	1	\$ 505	
	4	Trail ID	\$ 325	2	\$ 650	
Niver Canal Trail	2	Trail ID + Map	\$ 750	2	\$ 1,500	\$ 4,170
	3	Trail ID + Direction	\$ 505	4	\$ 2,020	
	4	Trail ID	\$ 325	2	\$ 650	
Silo Trail	6	Trail ID (Minor)	\$ 295	2	\$ 590	\$ 590
Squires Park Trail	6	Trail ID (Minor)	\$ 295	1	\$ 295	\$ 295
Trailside Creek Trail	6	Trail ID (Minor)	\$ 295	5	\$ 1,475	\$ 1,475
Westglenn Park Area Trail	6	Trail ID (Minor)	\$ 295	3	\$ 885	\$ 885
Estimated Total Cost for Signing Farmer's High Line Planning Corridor				93		\$44,185.00
Summary by Sign Type for Farmers/Niver Planning Corridor						
Sign Type	Sign Type Description	Unit Cost	Qty	Cost per Sign Type	Total Cost	
1	Kiosk	\$ 1,500	2	\$ 3,000	\$ 44,185	
2	Trail ID + Map	\$ 750	21	\$ 15,750		
3	Trail ID + Direction	\$ 505	25	\$ 12,625		
4	Trail ID	\$ 325	16	\$ 5,200		
5	Confidence Marker	\$ 190	9	\$ 1,710		
6	Trail ID (Minor)	\$ 295	20	\$ 5,900		
MM	Mile Marker	\$ 880	0	\$ -		
Estimated Totals for Signing Farmers/Niver Planning Corridor				93		\$ 44,185
Little Dry Creek Planning Corridor						
Trail Name	Sign Type	Sign Type Description	Unit Cost	Qty	Cost per Sign Type	Total Cost per Trail
Allen Ditch Trail East (Route)	5	Confidence Marker	\$ 190	8	\$ 1,520	\$ 1,520
	6	Trail ID (Minor)	\$ 295	1	\$ 295	\$ 295
Bradburn Trail (Route)	3	Trail ID + Direction	\$ 505	1	\$ 505	\$ 505
	5	Confidence Marker	\$ 190	6	\$ 1,140	\$ 1,140
Little Dry Creek Trail	1	Kiosk	\$ 1,500	2	\$ 3,000	\$ 11,700
	2	Trail ID + Map	\$ 750	4	\$ 3,000	
	3	Trail ID + Direction	\$ 505	10	\$ 5,050	
	4	Trail ID	\$ 325	2	\$ 650	
Lowel Blvd Trail (Route)	3	Trail ID + Direction	\$ 505	1	\$ 505	\$ 505
	5	Confidence Marker	\$ 190	29	\$ 5,510	\$ 5,510
Pillar of Fire Trail (Route)	5	Confidence Marker	\$ 190	1	\$ 190	\$ 190
US 36 Trail	2	Trail ID + Map	\$ 750	1	\$ 750	\$ 750
Wolff Run Trail	2	Trail ID + Map	\$ 750	1	\$ 750	\$ 750
Estimated Total Cost for Signing Little Dry Creek Planning Corridor						\$ 22,865
Summary by Sign Type for Little Dry Creek Planning Corridor						
Sign Type	Sign Type Description	Unit Cost	Qty	Cost per Sign Type	Total Cost	
1	Kiosk	\$ 1,500	2	\$ 3,000	\$ 22,675	
2	Trail ID + Map	\$ 750	6	\$ 4,500		
3	Trail ID + Direction	\$ 505	12	\$ 6,060		
4	Trail ID	\$ 325	2	\$ 650		
5	Confidence Marker	\$ 190	43	\$ 8,170		
6	Trail ID (Minor)	\$ 295	1	\$ 295		
MM	Mile Marker	\$ 880	0	\$ -		
Estimated Totals for Signing Farmers/Niver Planning Corridor				66		\$ 22,675
Estimated Total Cost for Implementing Entire Wayfinding Strategy						\$167,375.00
Summary by Sign Type for All Corridors						
Sign Type	Sign Type Description	Unit Cost	Qty	Cost per Sign Type	Total Cost	
1	Kiosk	\$ 1,500	9	\$ 13,500	\$ 167,185	
2	Trail ID + Map	\$ 750	68	\$ 51,000		
3	Trail ID + Direction	\$ 505	93	\$ 46,965		
4	Trail ID	\$ 325	27	\$ 8,775		
5	Confidence Marker	\$ 190	61	\$ 11,590		
6	Trail ID (Minor)	\$ 295	93	\$ 27,435		
MM	Mile Marker	\$ 880	9	\$ 7,920		
Estimated Total Cost for Implementing Entire Wayfinding Strategy				360		\$ 167,185



Potential Funding Sources

Overview

The following pages offer a comprehensive description of funding sources that can be used to support the acquisition of land, development of trail facilities, and operation of the open space and trails program for the City of Westminster. The sources are organized and defined by local, state, and federal resources and agencies.

Local Sources

Sales Tax

The City of Westminster Open Space Program was established in 1985. Since 1985, the 1/4 of one percent, or 25 cents on a \$100 purchase, sales tax has been extended by voters three times: first in 1989, with half of sales tax revenues dedicated to parks and recreation improvements; again in 1996 when the citizens also authorized the city to issue \$26 million of bonds to fund additional open space purchases, recreation facility construction and park development; and most recently (2006), when voters approved an additional bond sale of up to \$20 million. In 2013, the City collected \$6,652,152.68 from the Open Space Sales Tax Fund. Initially, 100% of all funding was allocated for open space acquisition. In 1989, voters approved using funding to offset maintenance of open space.

Per City Council's direction, the achievement of preserving 15% of the City's land area as open space and the overall evolution of the City's open space program, the City of Westminster is shifting its focus from aggressive acquisition of properties to stewardship of those properties already preserved. To assist with these stewardship and maintenance efforts, additional funding is anticipated in the near future due to retirement of several obligations. 2016 is the final year of payment for certificates of participation (COPs) associated with the Metzger Farm property, but most of this payment in 2016 is anticipated to be covered by funds in the required debt service reserve fund associated with these COPs. Therefore, additional ongoing funds will be available for stewardship and maintenance activities in 2016. Specific proposals for use of these funds will be considered by City Council as part of the City's regular budget development process. In addition, the retirement of additional debt associated with open space acquisitions is anticipated in the 2017/2018 timeframe and will provide additional revenues to be considered for programming through the City's budget process.

Bonds

Bonds have been a very popular way for communities across the country to finance their open space programs. Bonds offer the ability for a city to leverage its sales tax program and gain access to the bulk of the total revenues (plus debt service). This enables a city to pursue a more aggressive conservation and protection program. A number of bond options are listed below. Since bonds rely on the support of the voting population, an education and awareness program is an important component of a proposed ballot measure.

- » Revenue Bonds - Revenue bonds are bonds that are solely secured by a pledge of the revenues from a certain local government activity, such as a sales tax program. The entity issuing bonds pledges to generate sufficient revenue annually to cover the program's operating costs, plus meet the annual debt service requirements (principal and interest payment). Revenue bonds are not constrained by the debt ceilings of general obligation bonds, but they are generally more expensive than general obligation bonds.
- » General Obligation Bonds - Local governments generally are able to issue general obligation bonds that are secured by the full faith and credit of the entity. In this case, the local government issuing the bonds pledges to raise its property taxes, or use any other sources of revenue, to generate sufficient revenues to make the debt service payments on the bonds. A general obligation pledge is stronger than a revenue pledge, and thus may

carry a lower interest rate than a revenue bond. Frequently, when local governments issue general obligation bonds for public enterprise improvements, the public enterprise will make the debt service payments on the general obligation bonds with revenues generated through the public enterprise's rates and charges. However, if those rate revenues are insufficient to make the debt payment, the local government is obligated to raise taxes or use other sources of revenue to make the payments. General obligation bonds distribute the costs of open space acquisition and make funds available for immediate purchases. Voter approval is required.

- » Special Assessment Bonds - Special assessment bonds are secured by a lien on property that benefits by the improvements funded with the special assessment bond proceeds. Debt service payments on these bonds are funded through annual assessments to the property owners in the assessment area.

Fees and Service Charges

The City of Westminster implements fees and service charges to offset the cost of community growth and development.

Cash-In-Lieu

A choice of paying a front-end charge for off-site open space protection is provided as an alternative to requiring developers to dedicate on-site open space that would serve their development. The City of Westminster requires that land be dedicated by developers of residential projects for open space, parks and other public uses. Residential developers are required to dedicate 12 acres per 1,000 projected future residents. Developers pay a cash-in-lieu fee if land is not donated. The fee is based on the amount per acre paid for the property or its current value, whichever is higher. These funds must be used to acquire park or open space land.

Adams County

Adams County voters demonstrated their dedication to parks and open space by approving the 1/5 of one percent (20 cents on a \$100 purchase) Open Space Sales Tax in 1999. This sales tax was authorized through 2006. In 2004, the sales tax was increased to 1/4 of one percent, or 25 cents on a \$100 purchase, and the sales tax was reauthorized by voters to remain through 2026. Proceeds from the sales tax benefit parks, recreation and open space projects throughout the county. Through 2011, over \$95 million has been generated to fund parks and open space projects in cities and unincorporated areas of Adams County.

Funds are distributed three ways:

- 68 percent is awarded through a competitive grant program.
- 30 percent is distributed back to the jurisdiction where the tax was generated. The City received \$475,080.91 from Adams County through the 30% share back program. In addition, the City received a total of \$1,468,899 through grants from Adams County in 2013 for two open space acquisitions and one underpass project.
- 2 percent is allocated to administration costs.

From 2000 to 2011, the competitive grant program disbursed over \$10.2 million in funds for parks and open space projects to the City of Westminster.

Jefferson County

Jefferson County Open Space has been identified as the nation's first sales tax-funded county open space program. It has grassroots beginnings dating back to 1972 with the proposal of a unique concept to preserve the scenic vistas and open lands within the county using the collection of 1/2 of one percent sales tax. The enabling resolution requires these funds to be used, "exclusively for the planning for, developing necessary access to, acquisition, maintenance and preservation of open space real property for the use and benefit of the public."

In 1980, this resolution was amended by the voters to add authorization for the expenditure of these funds for construction, acquisition, and maintenance of park and recreation capital improvements. When Jefferson County voters approved the Open Space Enabling Resolution, no "sunset" or end date was included, thereby ensuring perpetual land



conservation, stewardship of open space and parklands, and access for public enjoyment. Among Jefferson County's five-year goals are to preserve an additional 1,700 acres and expand the trail system by 25 miles. To date, the City of Westminster has received \$1,374,930 for parks and open space from Jefferson County through their attributable share program funded by the county's open space sales tax.

In addition, Jefferson County issued a \$100,000,000 bond, which funded many county projects, including the acquisition of Lower Church Ranch Lake and the Sisters of the New Covenant.

Charitable Donations

The City of Westminster has acquired land at a discount, with the discounted value being a charitable donation.

Other Local Options

Open Space and Trail Sponsors

A sponsorship program for park and trail amenities allows smaller donations to be received from both individuals and businesses. Cash donations could be placed into a trust fund to be accessed for certain construction or acquisition projects associated with the open space system. Some recognition of the donors may be appropriate and can be accomplished through the placement of a plaque, the naming of a trail segment, and/or special recognition at an opening ceremony. Types of gifts other than cash could include donations of services, equipment, labor, or reduced costs for supplies.

The City of Westminster encourages residents and other concerned persons or parties to donate certain lands or monies for use in the Open Space Program. City Council may by resolution accept such donated properties into the Open Space Program (Westminster Municipal Code 13-5-8).

Development Installed Trail Program

Developers are required to install at their expense any trails shown on the City of Westminster's official trail plan, which cross their property.

Volunteer Work

The Westminster Open Space Volunteer Program was created to help maintain and preserve the over 3,000 acres of open space. A variety of projects are scheduled monthly (weather permitting) and include trail building, tree wrapping, fence repair and installation, wetland plantings and Russian olive management. Projects are open to individuals, families, groups and civic organizations. Volunteers must be at least 16 years of age unless accompanied by an adult. These volunteers could also work with other elements of the City of Westminster Open Space Program to solicit and/or leverage private contributions and additional financial support for the program. In 2013, the total value of volunteer hours was \$155,257 (6885 hours X \$22.55/hour). These hours include open space volunteers, Adopt-a-Park, Open Space & Trails Volunteers, Bicycle Trail Hosts and Community Pride Day volunteers.

Trust Fund

The City of Westminster may want to consider working in partnership with other public sector agencies and private sector groups to establish an Open Space Trust Fund. This fund would be a dedicated source of funding that supports the operation and management of portions of the open space system. The City of Westminster can work with a private financial institution to set up an investment account or work with a local foundation to establish the endowment. Contributions to the fund would be solicited from parks, open space and trail advocates, businesses, civic groups, and other foundations. The goal would be to establish a capital account that would earn interest and use the interest monies to support maintenance and operations. Special events could be held whose sole purpose is to raise capital money for the trust fund. A trust fund can also be used in the acquisition of high-priority properties that may be lost if not acquired by private sector initiative.

State Sources

The Colorado Lottery for Conservation and Great Outdoors Colorado

Profits from the sale of Lottery products are mandated to be distributed according to this formula: 50 percent to the Great Outdoors Colorado (GOCO) Trust Fund, 40 percent to the Conservation Trust Fund, and 10 percent to the Colorado Division of Parks and Wildlife. GOCO funds are capped at \$35 million, adjusted for inflation (this translates to \$60.3 million for fiscal year 2014), and funds that exceed the GOCO cap go to the Colorado Department of Education, Public School Capital Construction Assistance Fund.

Great Outdoors Colorado (GOCO)

In 1992, voters placed on the ballot and approved the creation of the Great Outdoors Colorado Trust Fund. GOCO is funded by the proceeds of the Colorado Lottery, receiving 50 percent with a \$35 million cap, adjusted for inflation (proceeds above that return to the State General Fund). The GOCO Trust Fund is administered by a 17-member Board of Trustees. Based on the four funding areas mandated by the Colorado Constitution, several grant programs have been developed.

- » Local Government Parks and Recreation / Mini Grants - The Local Government Park, Outdoor Recreation and Environmental Education (LPOR) Grants – and Mini Grants for smaller projects costing \$60,000 or less – are designed for the following types of projects:
 - New park development: Creating a park where one does not exist.
 - Enhancing existing park facilities: Improving current park facilities, including installing or creating new facilities at existing parks.
 - Park land acquisition: Acquiring land for a future park.
 - Environmental education facilities: Building new facilities or enhancing existing ones.

Cities, counties, and parks and recreation districts are eligible for LPOR and Mini Grants. Eligible entities can sponsor projects on behalf of ineligible entities like school districts, unincorporated cities and towns, and community groups.
- » Open Space Grants - Open space grants help fund the acquisition and protection of unique open space and natural areas of statewide significance through fee acquisitions or conservation easements. Project areas include: buffers/inholdings, greenways/stream corridors, community separators, agricultural land, natural areas and non-game wildlife habitat, scenic viewsheds, and urban open space parcels. Non-profit land-conservation organizations, municipalities, counties, political subdivisions of the state, and the Colorado Division of Parks and Wildlife are eligible for open space grants.
- » Planning Grants- Planning grants are designed to help eligible entities develop strategic master plans for outdoor parks and recreation projects, trails or site-specific plans. Local governments are eligible to apply for planning grants.
- » Trail Grants- The Colorado State Recreational Trails Grant Program helps develop trails for non-motorized activities including hiking, biking, wildlife-watching, horseback riding, cross-country skiing, and snowshoeing. Grants for large and small trail projects and trail planning and maintenance are available through this program, which is a partnership among the Colorado Division of Parks and Wildlife, Great Outdoors Colorado, the Colorado Lottery, the federal Recreational Trails Program, and the Land and Water Conservation Fund. Trail grants are offered once a year through the Colorado State Trails Program (see Non-Motorized Trails Grant Program below).
- » Conservation Excellence Grants- Conservation Excellence Grants address changing needs within the conservation community. The redesigned program strives to foster exploration of complicated issues – i.e., oil and gas development on conserved lands, orphan easements, water, amendments – via pilot projects and/or research so that the conservation community can begin searching for potential solutions. Projects will fall into one or



more of four main categories that cover the major challenges and issues: Policy, Standards and Education, Community Engagement, and Stewardship and Long-term Sustainability. Counties, municipalities or other political subdivisions of the state, and non-profit land conservation organizations are eligible to apply.

Conservation Trust Fund

The Colorado Constitution (Article XXVII, Section 3), as amended in 1992, directs 40 percent of the net proceeds of the Colorado Lottery to the Conservation Trust Fund for distribution to municipalities and counties and other eligible entities for parks, recreation, and open space purposes.

The Department of Local Affairs distributes Conservation Trust Fund dollars from net Lottery proceeds to over 460 eligible local governments (i.e., counties, cities, towns) and Title 32 special districts that provide park and recreation services in their service plans. Conservation Trust Fund funds are distributed quarterly on a per capita basis.

Funding can be used for the acquisition, development, and maintenance of new conservation sites or for capital improvements or maintenance for recreational purposes on any public site. A public site is defined by the department as a publicly owned site, or a site in which a public entity/local government holds an interest in land or water. New conservation sites are defined in statute as being interests in land and water, acquired after establishment of a conservation trust fund, for park or recreation purposes, for all types of open space, including but not limited to flood plains, green belts, agricultural lands or scenic areas, or for any scientific, historic, scenic, recreation, aesthetic or similar purpose (CRS29-21-101).

Colorado Division of Parks and Wildlife

The Colorado Division of Parks and Wildlife has several programs to help fund projects developed or led by outside personnel or groups. Programs are available to assist landowners with habitat conditions, to help communities build trails or improve fishing opportunities, to work with ranchers to reduce conflicts with big game, and much more. Focus areas, eligibility requirements, matching fund requirements and other aspects vary for each program. Funding opportunities relevant to the City of Westminster's Open Space program are highlighted below:

- » Fishing is Fun Program- The Fishing Is Fun program provides up to \$400,000 in matching grants annually to local and county governments, park and recreation departments, water districts, angling organizations and others for projects to improve angling opportunities in Colorado. Among the types of projects supported through Fishing Is Fun are stream and river habitat improvements, access improvements, perpetual easements for public access, pond and lake habitat improvements, fish retention structures, development of new fishing ponds, and amenity improvements such as shade shelters, benches and restrooms.

Project sponsors must provide nonfederal matching funds or in-kind contributions equal to at least 25 percent of the total project cost. Match in excess of the 25 percent minimum is encouraged and will help make a project more competitive in the review and ranking process; historically, project partners have provided roughly 40 percent of project costs. Project grants have ranged from \$2,500 to \$400,000, with an average of \$85,000. Program announcements are typically made in late November, with proposals due at the Colorado Division of Parks and Wildlife area offices by early March.

The City of Westminster has funded the following projects with Fishing is Fun grants:

- » 2002: Faversham Pond \$75k
- » 2004: McKay Lake \$76k
- » 2005: Standley Lake: \$40k
- » 2007: Standley Lake \$40k

- » Outdoor Classroom Grants- Up to \$1,000 matching grants are available to support outdoor classroom projects. Outdoor classrooms come in a variety of shapes and sizes and should be designed based on the needs of the community. Whether by funding trees for shade, a garden for harvesting healthy produce, or native wildflowers to attract pollinators, this grant program is designed to help increase communities' use and enjoyment of their public outdoor spaces.

The Colorado Division of Parks and Wildlife sponsors this grant program through Colorado Project WILD workshops, which immerse educators in hands-on, interdisciplinary activities focusing on wildlife and conservation. A significant portion of workshop fees goes to support the Outdoor Classrooms Grant Program, which is administered by the Colorado Parks and Recreation Association Foundation. Educators are encouraged to work with students to design and create an outdoor classroom, where kids can spend time outside and learn first-hand about wildlife and the environment.

- » Non-Motorized Trails Grant Program- The Colorado State Recreational Trails Grant Program funds projects for large recreational trail grants, small recreational trail grants, trail planning, and trail support grants. This program is a partnership among the Colorado Division of Parks and Wildlife, Great Outdoors Colorado (GOCO), the Colorado Lottery, the federal Recreational Trails Program (RTP), and the Land and Water Conservation Fund (LWCF). The availability of funding for the Non-Motorized Trail Grants is based on the funding levels provided by the funding sources. Availability of funds for successful applicants may vary due to legislative processes, fiscal year parameters and/or written authorization of spending authority. Awarded funds are for 2 to 2 1/2 years.
- » Wetlands Partnership- The Colorado Wetlands Partnership is an endeavor to protect wetlands and wetland-dependent wildlife through the use of voluntary, incentive-based mechanisms. Furthermore, the Wetlands Initiative embraces cooperation with private landowners, municipalities, other state and federal agencies, and other non-governmental organizations in the pursuit of voluntary wetlands protection. Program services include: funding for all phases of wetland and riparian creation, restoration, and enhancement; funding for conservation easements and fee-title purchase through the Wildlife Habitat Protection Program; wildlife and aquatic resource inventories; education and outreach; and project monitoring and evaluation.

Conservation Easement Tax Credit

Colorado has an innovative tax program that allows the transfer of conservation easement income tax credits from landowners to taxpayers with Colorado income tax liabilities. The credit is based on the fair market value of the easement (§39-22-522, C.R.S.). The donation must be made to a governmental entity or a charitable organization that is exempt under section 501(c)(3) of the Internal Revenue Code and created at least two years prior to receipt of the easement (§38-30.5-104(2), C.R.S.). The donation must also qualify as a charitable contribution for federal income tax purposes [Internal Revenue Code section 170(h)]. As of 2007, donors of conservation easements can receive tax credits at the rate of 50 percent of their donation value. For example, a \$400,000 donation will yield \$200,000 in state income tax credits. The maximum credit that a landowner can earn in one year is \$375,000 (based on a \$750,000 donation). In 2013, legislation was signed into law that increases the annual tax credit cap to \$45 million.

Colorado Tourism Office – Marketing Matching Grant Program

The Colorado Tourism Office administers the Statewide Marketing Matching Grant Program (which assists organizations with promotion of the state as a whole) and the Regional Matching Grant Program (which assists organizations with the promotion of specific regions in Colorado). Within the context of marketing projects, the funds may be spent on promotion, product packaging, networking and communication and education. Not-for-profit organizations are eligible to apply. For every \$1 the organization allocates to the program, the Colorado Tourism Office will provide \$2 in matching funds.



State Historical Fund

The State Historical Fund was created by the 1990 constitutional amendment allowing limited gaming in the towns of Cripple Creek, Central City, and Black Hawk. The amendment directs that a portion of the gaming tax revenues be used for historic preservation throughout the state. Funds are distributed through a competitive process and all projects must demonstrate strong public benefit and community support. Grants vary in size, from a few hundred dollars to amounts in excess of \$200,000. The State Historical Fund assists in a wide variety of preservation projects including restoration and rehabilitation of historic buildings, architectural assessments, archaeological excavations, designation and interpretation of historic places, preservation planning studies, and education and training programs.

- » State Historical Fund – *Competitive* Grants- Competitive grants are made for any of the three projects types: acquisition and development; education; and survey and inventory. There are three essential elements to applying for a competitive State Historical Fund Grant: 1) one must be or work with an eligible grant applicant; 2) if the plan is to do physical work on a structure, building, site, or object, the resource must be historically designated. If this is a survey and planning, archaeological survey, or education project, the focus of the project must be directly related to historic preservation; 3) one must apply for projects, activities, and costs that qualify for assistance from the State Historical Fund.
- » State Historical Fund – *Non-Competitive* Grants - These grants may be submitted at any time of the year and are for smaller amounts of money than the competitive grants. They include the Historic Structure Assessment Grant, Archaeological Assessment Grant, and Emergency Grant.
- » State Historical Fund – *Emergency* Grant - Emergency grants are awarded to provide assistance to significant resources that are in imminent danger of being lost, demolished, or seriously damaged, when such threat is sudden and unexpected such as a fire, flood, hail storm, or other act of nature. A specific event (e.g., a tornado) that occurred on a specific date should be cited in the application. Building failure/damage attributed to deferred maintenance is not defined as an emergency.

It is important to contact the office immediately after the event has occurred. If a significant amount of time has transpired between the time of the event and the request for funding, it may affect eligibility. Emergency grants are typically limited in scope to the temporary stabilization of a building, structure, or site until permanent preservation actions can take place.

- » *Certified* Local Government Grants- History Colorado through the Office of Archaeology and Historic Preservation (OAHP) administers the U.S. Department of Interior's Historic Preservation Fund Program in cooperation with the U.S. Department of the Interior, National Park Service. Under this program the National Park Service has specified that at least 10 percent of Colorado's annual program funds be subgranted to Certified Local Governments. Since 2000, Colorado's 10 percent requirement has been augmented with an internal grant from the State Historical Fund.

Eligibility for participation in this federally-funded grant program requires that each applicant is a Certified Local Government. Requirements for certification may be requested from History Colorado. Any political subdivision of the state, such as a city or county, meeting the criteria set forth in the Colorado Certified Local Government Program Handbook is eligible to apply for certification.

The City of Westminster has used State Historical Funds for improvements to Semper Farm.

Colorado Department of Public Health and Environment

The Colorado Department of Local Affairs partnered with the Colorado Department of Public Health and Environment to promote the cleanup and redevelopment of brownfield sites around the state.

- » Colorado Brownfields Revolving Loan Fund- As a public-private partnership, the Colorado Brownfields Revolving Loan Fund encourages the cleanup of unused or underused contaminated properties by offering financing with reduced interest rates, flexible loan terms, and flexibility in acceptable forms of collateral. The Revolving Loan Fund can also provide cleanup grants to qualifying local governments and non-profits. All cleanups financed through the Revolving Loan Fund must have previous approval under the Voluntary Cleanup Program. The Colorado Housing and Finance Authority serves as financial manager for the Revolving Loan Fund, but does not vote on where to allot the fund. The City of Westminster has used this funding for cleanup of properties within the future Little Dry Creek Park and Open Space in south Westminster.
- » State Cleanup Program- The state of Colorado offers financial incentives for cleaning up contaminated land in the form of grants. House Bill 00-1306 provided for limited state authority to clean up sites where there is no other federal or state program that can accomplish the cleanup. It authorized \$250,000 annually for such cleanup, which is designed first to protect human health and the environment, and also to enhance the redevelopment potential of these properties.

Denver Regional Council of Governments (DRCOG) – Transportation Improvement Program (TIP)

TIP identifies all current federally funded transportation projects to be completed in the Denver region over a six-year period with federal, state or local funds. Demonstrating DRCOG's commitment to collaboration, at the DRCOG table local governments decide on a process and criteria for including projects in the TIP and awarding DRCOG-controlled federal funds, which allows the region to set and agree upon its transportation priorities. All TIP projects must meet current air quality standards. Currently, DRCOG is developing a new TIP, one that will cover the federal fiscal years 2016-2021 time period:

- Late spring 2014 – Adopt TIP Policy Document to outline policies and procedures for project selection
- Summer 2014 – Solicit call for projects from local governments, CDOT, RTD and others; sponsors complete applications
- Fall 2014 – Evaluate project submittals
- Winter/spring 2014-2015 – Select projects to fund; approve the 2016-2021 TIP

The City of Westminster has received many grants from DRCOG, including funds to improve the intersection of 120th Avenue and Federal Boulevard which will improve trail connections to the Big Dry Creek trail.

Department of Local Affairs – Energy and Mineral Impact Assistance

Energy and Mineral Impact Grants administered by the Department of Local Affairs (DOLA) assist communities affected by the growth and decline of extractive industries. The applicability of these funds to cultural heritage tourism lies mostly in their ability to fund improvements to public facilities and local government planning efforts where cultural heritage tourism-related goals can be furthered through economic development initiatives. Municipalities, counties, school districts, special districts and state agencies are eligible for the funds. Because these grants require matching funds, applications with higher matches receive more favor as they highlight community support.

Department of Local Affairs – Colorado Heritage Planning Grant

Nearly \$2 Million was awarded to projects involving over 100 local governments since the program was first introduced in 2000. The projects funded addressed many of the impacts of growth including traffic congestion, loss of agriculture, loss of open space, fiscal impacts to local governments, wildfire hazards, and a lack of affordable housing to name a few. The program is not currently funded due to state budget cuts.



Colorado Department of Transportation (CDOT) – MAP-21

On July 6, 2012, the President signed H.R. 4348, the Moving Ahead for Progress in the 21st Century Act (MAP-21). The legislation updates and replaces the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users Act of 2005 (SAFETEA-LU), specifically reauthorizing federal transportation programs, providing budget authority for federal transportation apportionments, and updating federal statutes governing the U.S. Department of Transportation (USDOT) and its various agencies and programs. A brief summary of the bill's provisions follows.

- **Duration.** MAP-21 is a 27-month authorization bill, providing spending authority through September 30, 2014.
- **Federal Spending and Colorado Apportionments.** The bill continues existing funding levels with a small inflationary adjustment. Colorado's federal highway apportionments are estimated to be \$517.0 million in fiscal year (FY) 2013 and \$522.4 in FY 2014. By comparison, Colorado's federal apportionment for FY 2012 is \$517.0 million.
- **Program Consolidation.** MAP-21 consolidates approximately 90 federal transportation programs into 30 new and existing programs, providing CDOT with more discretion and significant policy decisions to be made as a result.

Colorado Department of Transportation – National Highway Performance Program (NHPP)

MAP-21 consolidates the Interstate Maintenance Program, National Highway System formula programs, and the on-system portion of the Highway Bridge Program into a consolidated National Highway Performance Program. The new program is heavily focused on system improvement and preservation, and serves as the primary formula grant program to CDOT. Eligible NHPP projects include:

- National Highway System projects, bridges, and tunnels;
- inspection and evaluation of on-system bridges, tunnels, and related assets (e.g., retaining walls, and signage);
- training of bridge and tunnel inspectors;
- construction of and improvements to off-system federal-aid highways;
- transit projects;
- bicycle transportation and pedestrian walkways;
- safety improvements for on-system highways
- capital and operating costs for traffic and traveler information facilities and programs;
- development of a state asset management plan;
- intelligent transportation systems capital improvements;
- environmental restoration and mitigation;
- pollution abatement;
- noxious weed control; and
- construction of publicly owned bus terminals servicing the National Highway System.

Colorado Department of Transportation – Transportation Alternatives Program (TA)

Prior to MAP-21, three federal programs provided dedicated funding for bicycle and pedestrian projects: Recreational Trails (RT); Safe Routes to Schools (SRTS); and Transportation Enhancements (TE). MAP-21 folds all three programs into a single, newly created program – Transportation Alternatives. Under the new TA program, eligible activities funded by the program are a hybrid of eligible projects from the previous three programs, plus new eligibility for environmental mitigation and minor road construction projects not currently allowed under RT, SRTS, or TE. The new program may fund projects originally eligible under the RT and SRTS programs; planning, designing, or constructing boulevards and other roadways largely in rights-of-way; and new alternatives are summarized below:

- **Trail Facilities.** Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act
- **Safe Routes for Non-Drivers.** Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.
- **Use of Abandoned Railroad Corridors.** Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.
- **Scenic Areas.** Construction of turnouts, overlooks, and viewing areas.
- **Community Improvement Activities.** Community improvement activities, including:
 - inventory, control, or removal of outdoor advertising;
 - historic preservation and rehabilitation of historic transportation facilities;
 - vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control;
 - archaeological activities relating to impacts from implementation of a transportation project.
- **Environmental Mitigation Activity.** Environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:
 - address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff;
 - reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats.

Colorado Department of Transportation – Safe Routes to School

Safe Routes to School (SRTS) was established in 2005 to enable and encourage children, including those with disabilities, to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate the planning, development and implementation of projects that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

Eligible applicants include a local government; a regional transportation authority; a transit agency; a natural resource or public land agency; a school district, local education agency or school; a tribal government; and any other local or regional governmental entity with responsibility for or oversight of transportation or recreational trails that the state determines to be eligible, consistent with the goals of this grant application.

Grants are awarded through a statewide competitive process, and in proportion to the geographic distribution of the student population K-8 grades. Of the total Safe Routes to School funds, 10 to 30 percent will be dedicated to non-infrastructure (education and encouragement) projects, with remaining funds going towards infrastructure (capital) projects.

The 2014 Safe Routes to School Grants were 100 percent federally funded. This means that there was no local cash match required and applications were not scored or prioritized based on demonstration of local match commitment. The 2014 grants were funded using a different type of federal transportation dollars that did not require a local cash match. Maximum project funding for infrastructure projects was \$300,000. This is an increase from the \$250,000 maximum project funding in previous grant cycles.



Federal Sources

Most federal programs provide block grants directly to states through funding formulas. For example, if a Colorado community wants funding to support a transportation initiative, it would contact the Colorado Department of Transportation and not the U.S. Department of Transportation to obtain a grant. Despite the fact that it is rare for a local community to obtain a funding grant directly from a federal agency, it is relevant to list the current status of federal programs and the amount of funding that is available to the City of Westminster through these programs.

Surface Transportation Act

The Surface Transportation Act has been the largest single source of funding for the development of bicycle, pedestrian, trail, and greenway projects. Prior to 1990, the nation, as a whole, spent approximately \$25 million on building community-based bicycle and pedestrian projects, with the vast majority of this money spent in one state. Since the passage of Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), funding was increased dramatically for bicycle, pedestrian and greenway projects, with total spending north of \$5 billion. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) more than doubled the total amount of funding for bicycle/pedestrian/trail projects as compared to its predecessor, the Transportation Equity Act for the 21st Century (TEA-21), with approximately \$800 million available each year.

There are many current programs that deserve mention. The authorizing legislation is complicated and robust. The following provides a summary of how this federal funding can be used to support the City of Westminster Open Space Program. All of the funding within these programs would be accessed through the Colorado Department of Transportation.

Moving Ahead for Progress in the 21st Century Act (MAP-21)

Funding surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014, MAP-21 is the first long-term highway authorization enacted since 2005. MAP-21 extended current law, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), for the remainder of FY 2012, with new provisions

for FY 2013 and beyond taking effect on October 1, 2012. Funding levels were maintained at FY 2012 levels, plus minor adjustments for inflation – \$40.4 billion from the Highway Trust Fund (HTF) for FY 2013, and \$41.0 billion for FY 2014. Surface Transportation Program (STP)

MAP-21 continues the STP, providing an annual average of \$10 billion in flexible funding that may be used by states and localities for projects to preserve or improve conditions and performance on any federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, transit capital projects and public bus terminals and facilities. Activities of some programs that are no longer separately funded are incorporated, including recreational trails.

Congestion Mitigation and Air Quality (CMAQ)

MAP-21 continues this funding with average annual funding of \$3.3 billion. Historically, about five percent of these funds have been used to support bicycle, pedestrian, and trail projects. This would equal about \$165 million under MAP-21.

Highway Safety Improvement Program (HSIP)

MAP-21 continues this funding with average annual funding of \$2.4 billion, including \$220 million per year for the Rail-Highway Crossings program. Some of the eligible uses of these funds would include traffic calming, bicycle and pedestrian safety improvements, and installation of crossing signs. This is not a huge source of funding, but one that could be used to fund elements of a project.

Transportation Alternatives (TA)

MAP-21 establishes a new program to provide for a variety of alternative transportation projects that were previously eligible activities under separately funded programs. The Transportation Alternatives (TA) program will receive about

\$780 million to carry out all projects, including Recreational Trails Program (RTP) and Safe Routes to School (SRTS) programs and projects across the country, which represents about a 35 percent reduction from the current \$1.2 billion spent on these programs. States will sub-allocate 50 percent of their TA funds to Metropolitan Planning Organizations and local communities to run a grant program to distribute funds for projects. States could use the remaining half for TA projects or could spend these dollars on other transportation priorities.

- » Recreational Trails Program (RTP)- Under MAP-21, the Recreational Trails Program (RTP) is continued at the current funding levels as a set-aside from TAP. RTP will continue to operate as it did under SAFETEA-LU. However, the governor of each state may opt out of the RTP if it notifies the U.S. Department of Transportation Secretary not later than 30 days prior to apportionments being made for any fiscal year. Funding is through the Colorado State Recreational Trails Grant Program, which funds projects for trial planning and design, construction, maintenance, equipment, and special projects.
- » Safe Routes to School Program (SRTS)- The Safe Routes to School (SRTS) program is eliminated as a stand-alone program, but SRTS projects are eligible for funding under the TAP. As such, SRTS projects are now subject to all TAP requirements, including the same match requirements – 80 percent federal funding, with a 20 percent local match.
- » Scenic Byways- The National Scenic Byways program is completely eliminated under MAP-21. However, some scenic byway type projects, like turnouts, overlooks, and viewing areas will be eligible under one of the TAP categories.

Land and Water Conservation Fund

The Land and Water Conservation Fund is the largest source of federal money for park, wildlife, and open space land acquisition. The program's funding comes primarily from offshore oil and gas drilling receipts, with an authorized expenditure of \$900 million each year. However, Congress generally appropriates only a fraction of this amount. The program provides up to 50 percent of the cost of a project, with the balance of the funds paid by states or municipalities. These funds can be used for outdoor recreation projects, including acquisition, renovation, and development. Projects require a 50 percent match.

Environmental Protection Agency – Brownfields Program

The Environmental Protection Agency's (EPA) Brownfields Program provides direct funding for brownfields assessment, cleanup, revolving loans, and environmental job training. To facilitate the leveraging of public resources, EPA's Brownfields Program collaborates with other EPA programs, other federal partners, and state agencies to identify and make available resources that can be used for brownfields activities. In addition to direct brownfields funding, EPA also provides technical information on brownfields financing matters.

Community Block Development Grant Program

The U.S. Department of Housing and Urban Development (HUD) offers financial grants to communities for neighborhood revitalization, economic development, and improvements to community facilities and services, especially in low and moderate-income areas. Administered by the Department of Local Affairs, Community Development Block Grants can be spent on a wide variety of projects, including property acquisition, public or private building rehabilitation, construction of public works, public services, planning activities, assistance to nonprofit organizations and assistance to private, for-profit entities to carry out economic development. At least 70 percent of the funds must go to benefit low and moderate-income populations. The funds must go to a local government unit for disbursement. A detailed citizen participation plan is required.

Economic Development Administration

Funding is available through this federal program in the form of several different grants. Two grants that may be applicable to cultural heritage tourism are the Economic Adjustment Assistance Grant (which helps communities develop



comprehensive redevelopment efforts that could include cultural heritage tourism programs) and the Planning Program Grant (which helps planning organizations create comprehensive development strategies). Only governmental units are eligible.

Farm Service Administration

Two Farm Service Administration programs help to preserve sensitive farmland and grassland. The Conservation Reserve Enhancement Program is a land retirement program for ecologically sensitive land. The Grassland Reserve Program supports working grazing operations to maintain the land's grassland appearance and ecological function. The funds are available to private farmers and ranchers, although local governments, tribes and private groups can also solicit them. These funds are intended to be combined with other funding, but there is no set match requirement.

National Trust for Historic Preservation

This endowment funds 14 different grants. The Preservation Funds Matching Grants and Intervention Funds assist nonprofit and public agencies with planning and educational projects or preservation emergencies, respectively. The Johanna Favrot Fund for Historic Preservation provides matching grants for nonprofit and public organizations whose projects contribute to preservation and/or recapturing an authentic sense of place. The Cynthia Woods Mitchell Fund for Historic Interiors provides grants for professional expertise, communications, materials and education programs. Individuals and for-profit groups may apply. The latter two grants only apply to National Historic Landmark sites.

National Endowment for the Arts

The National Endowment for the Arts organizes its grants around artistic disciplines and fields such as folk and traditional arts; local arts agencies; state and regional entities; and museums. Within these categories, the applicable grants are listed. The grants provide funding for artistic endeavors, interpretation, marketing, and planning. Not-for-profit 501(c)(3) organizations and units of state or local government, or a recognized tribal community are eligible. An organization must have a three-year history of programming prior to the application deadline.

National Endowment for the Humanities

The National Endowment for the Humanities is a federal program that issues grants to fund high-quality humanities projects. Some grant categories that may be well suited to cultural heritage tourism are: grants for preservation and creation of access to humanities collections; interpreting America's historic places; implementation and planning; museums and historical organizations; preservation and access research; and development projects. The grants go to organizations such as museums, libraries, archives, colleges, universities, public television, radio stations, and to individual scholars. Matches are required and can consist of cash, in-kind gifts or donated services.

Preserve America

The Preserve America grants program funds "activities related to heritage tourism and innovative approaches to the use of historic properties as educational and economic assets." Its five categories are: research and documentation, interpretation and education, planning, marketing, and training. The grant does not fund "bricks and mortar" rehabilitation or restoration. This grant is available to State Historic Preservation Officers (SHPOs), Tribal Historic Preservation Officers (THPOs), designated Preserve America communities, and Certified Local Governments (CLGs) applying for designation as Preserve America Communities. Grants require a dollar-for-dollar nonfederal match in the form of cash or donated services.

Small Business Administration

Many cultural heritage tourism businesses are small businesses. The Small Business Administration does not itself loan money, but guarantees loans from banks or from specially chosen small business investment companies. These loans can be used for business expenses ranging from start-up costs to real estate purchases. Rural business investment companies target their funds toward companies located in rural areas. Eligible companies must be defined as "small" by the Small Business Administration.

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service has a long list of grant programs that benefit the conservation or restoration of habitats. These include grants for private landowners to assist in protecting endangered species, restoring the sport fish population, habitat conservation planning, and land acquisition. The amount, matching requirements, and eligibility for each grant vary. Practical information about successful projects and conserving specific habitats is available at: www.fws.gov/grants

Foundations and Philanthropic Sources

El Pomar Foundation

The El Pomar Foundation supports Colorado projects related to health, human services, education, arts and humanities, and civic and community initiatives. Generally, El Pomar does not fund seasonal activities, travel or media projects, but their funding has supported other aspects of cultural heritage tourism, including regional planning and development. Recipients must be not-for-profit 501(c)(3) organizations.

Tourism Cares

Tourism Cares supports the efforts of tourism to “preserve, conserve and promote” the things that are our cultural and historic assets through its worldwide grant program. Grants provide money for capital improvements on important sites as well as the education of local communities and the traveling public about conservation and preservation. Only 501(c)(3) not-for-profit corporations are eligible. Grant applications that leverage other sources of funding, are endorsed by the local, state, or regional tourism office and have strong support from the local community have a better chance of being funded.

CHAPTER 5. OPEN SPACE PROGRAM

13-5-1. Policy Statement.

The objective of the open space program is to promote quality of life for citizens of Westminster through the preservation and protection of the quality of the natural environment that has given Westminster much of its character. This natural environment includes many spectacular views to the foothills and mountains, which can be enjoyed from the hills and sloping sites that make up the City's predominant land form. The natural streams and man-made canals and ponds and related plant and animal communities complement the scenic vistas and remind us of the area's early history. These natural areas, water bodies, tremendous vistas and panoramas, characteristic terrains and native flora and fauna are intended to be preserved and protected for the enjoyment of this and future generations by the judicious use of those sales tax dollars designated for the open space program.

As Westminster continues to grow, open spaces should be provided and woven into the fabric of the City. These open spaces may define developed areas within the community, and in certain areas may define the boundary of the City. They are intended to obtain a balance and harmony between physical development and open space for the benefit of Westminster citizens. Preservation of open space in all parts of the City will foster appreciation of the natural environment, provide increased opportunities for passive recreation, and improve the quality of life.

(1855 3455)

13-5-2. Criteria for Acquisition.

The following six major criteria shall guide the selection of specific sites for possible acquisition and preservation. Prospective open space property shall satisfy at least one of these criteria:

- (A) *Aesthetics*: Unique or dramatic visual impact; protection of scenic view corridors; visual enhancement of primary transportation corridors; unique view from site; natural features that enhance quality of life (e.g., rock formation, body of water, trees).
- (B) *Protection and Preservation*: Protection of environmentally sensitive features (e.g., wetlands, trees, native grasses, wildlife and wildlife habitat, floodplain).
- (C) *Location*: Spatial definition of urban area; protection of sole remaining undeveloped land within large developed area of City; geographical distribution throughout City; key link or extension/addition to existing park/open space area; proximity to existing or proposed urban shaping and open space buffers; access; large number of potential beneficiaries.
- (D) *Use Potential*: Ability of the land to be used for passive recreational purposes, including trail linkages; potential secondary benefit to community (e.g., watershed protection, drainage, or regional detention areas, water wells, erosion control, public safety, floodplain preservation, solitude, noise buffer, ancillary historic preservation); continued agricultural production.
- (E) *Need for Immediate Action*: Development pressure; development status; potential to remain as open space; attitude of property owner.
- (F) *Acquisition Consideration*: Availability of land; ease of acquisition; price of land; significance of economic loss to City; potential for increase in price in the near future; potential for acquiring other sources of funds.

(1855 3455)

13-5-3. Preservation of Land and Other Open Space Uses.

- (A) Generally, lands acquired with open space funds shall be preserved and managed in a natural condition. Such lands might include scenic vistas, floodplains, trail corridors, farm lands, highly visible natural areas along arterial streets and open space buffers at the City's perimeter. Open spaces will generally be open for passive public use and enjoyment, and trails will be developed where possible to provide access. Examples of compatible passive recreation include hiking, nature study and photography.
- (B) Additional activities that may be allowed on certain open space property, or portions thereof, after the City Manager determines such activities will not have a detrimental effect on the natural qualities for which the open space was originally acquired, include fishing, biking, horseback riding, boating, and the development of off-leash dog exercise areas, restrooms, trailhead parking lots, and limited structures that enhance the passive recreational experience. "Limited structures" may include ponds or other water bodies designed to enhance wildlife habitat, benches, fishing piers, signs, and educational displays.
- (C) Development of traditional active recreational facilities, such as athletic fields, swimming pools, tennis courts and formal picnic areas, is precluded. The use of motorized vehicles by the public for any recreational purpose is prohibited, except as may be required by the Americans With Disabilities Act.
- (D) Certain open space properties may be leased for continued agricultural uses, such as farming or grazing, or for short- or long-term residential uses of structures that were located on the properties at the time of acquisition. This approach can provide a glimpse of Westminster's past, protect the land from development, and/or shift some maintenance costs to the lessee. Generally, the leased properties will continue to afford public access for passive enjoyment, to the extent such access is consistent with the lease.
- (E) Properties acquired with funds derived from the open space portion of the parks, open space and trails sales tax and properties donated to the open space program, pursuant to Section 13-5-8, W.M.C., shall not be used for transportation corridors or the installation of underground or above ground utilities, except in accordance with the policies promulgated under Section 13-5-9, W.M.C.

(1855 3455)

13-5-4. Redesignation, Sale, or Trade of Open Space Property.

- (A) In certain cases, it may be determined by the City Council that a property originally acquired for open space purposes may be better utilized for another public purpose, including, but not limited to, an active park. In such cases, the open space land acquisition account shall be reimbursed the current market value of the affected property at the time of its conversion, or the cost of that land at the time of its original acquisition, whichever is higher.
- (B) In certain cases, it may be necessary to acquire a total property in order to preserve a portion of the property as open space. In such cases, the city council may dispose of the remainder, and the open space land acquisition account shall be reimbursed the current market value of the disposed land at the time of its sale, or the cost of that land at the time of its original acquisition, whichever is higher.
- (C) In certain cases, it may be determined by the City Council that a property originally acquired for park purposes may be better utilized for open space. In such cases, the parks and recreation capital reserve fund shall be reimbursed the current market value of the affected property at the time of its conversion, or the cost of that land at the time of its original acquisition, whichever is higher.
- (D) The City Council may approve land trades of open space property for other lands. In such cases, for the purpose of reimbursing the open space land acquisition account, the relative current market values of the lands traded shall be determined by the City Council as part of the approval of the trade, but in no event

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(Supp. No. 10, Update 4)

shall a value be placed on the open space property that is lower than its cost at the time of its original acquisition.

- (E) In certain cases, it may be determined by the City Council that a property originally acquired for utility purposes may be better utilized for open space. In such cases, the current market value of the affected property at the time of its conversion will be determined, and the utility enterprise fund will receive a credit in that amount against future utility-related uses of open space, pursuant to subsection (A), above. Payment in cash or a land trade pursuant to subsection (D), above, may also occur.
- (F) Once a property is designated as open space, it shall be subject to all of the provisions of this chapter. Property that is subject to restrictions limiting its use to open space purposes may not be redesignated without approval of the restricting grantor.
- (G) For the purposes of determining the "current market value" under subsections (A), (B) and (C), above, the city manager may rely on an MAI or AIA appraisal of the property or, for parcels less than five acres in size, may rely on publicly verifiable information concerning recent sales of substantially similar properties.
- (H) Notwithstanding the foregoing, the redesignation by the City Council of parklands, open space property, or other city-owned lands that were acquired through the public land dedication requirements of Section 11-6-8, W.M.C., will not require reimbursement from one city fund to another.

(1855 3455)

13-5-5. Usage of Open Space Funds.

Generally, funds derived from the open space portion of the parks, open space and trails sales tax shall be expended only for acquisition of lands or interests in lands, for improvements to restore or enhance the land's natural or historic resources, to afford public access and safety, and to remove improvements that are incompatible or hazardous. Fencing may be installed to delineate and protect certain properties. Examples of improvements to open space properties include natural or native plantings, wetland enhancements, natural surfaced and, where appropriate, paved trails, signage for directional and educational purposes, and construction of items approved under Subsection 13-5-3(B), W.M.C., herein.

(1855 3455)

13-5-6. Reserved.

Ord. No. 3930 , § 6, adopted Apr. 23, 2018, repealed § 13-5-6, which pertained to management of open space property and derived from Ords. 1855, 3455, 3729; and Ord. No. 3838 , § 6, adopted Sept. 12, 2016.

13-5-7. Maintenance of Open Space Property.

The Department of Parks, Recreation and Libraries shall be responsible for the regular maintenance and operation of the open space properties, with funds made available in the City's general operating budget and funds derived from the open space portion of the parks, open space and trails sales tax.

(1855 1889 3455)

13-5-8. Donations to Open Space Program.

The City encourages residents of this community and other concerned persons or parties to donate certain lands or monies for use in the open space program. City Council may by resolution accept such donated properties into the open space program.

(1855 3455)

13-5-9. Utilities and Rights-of-Way.

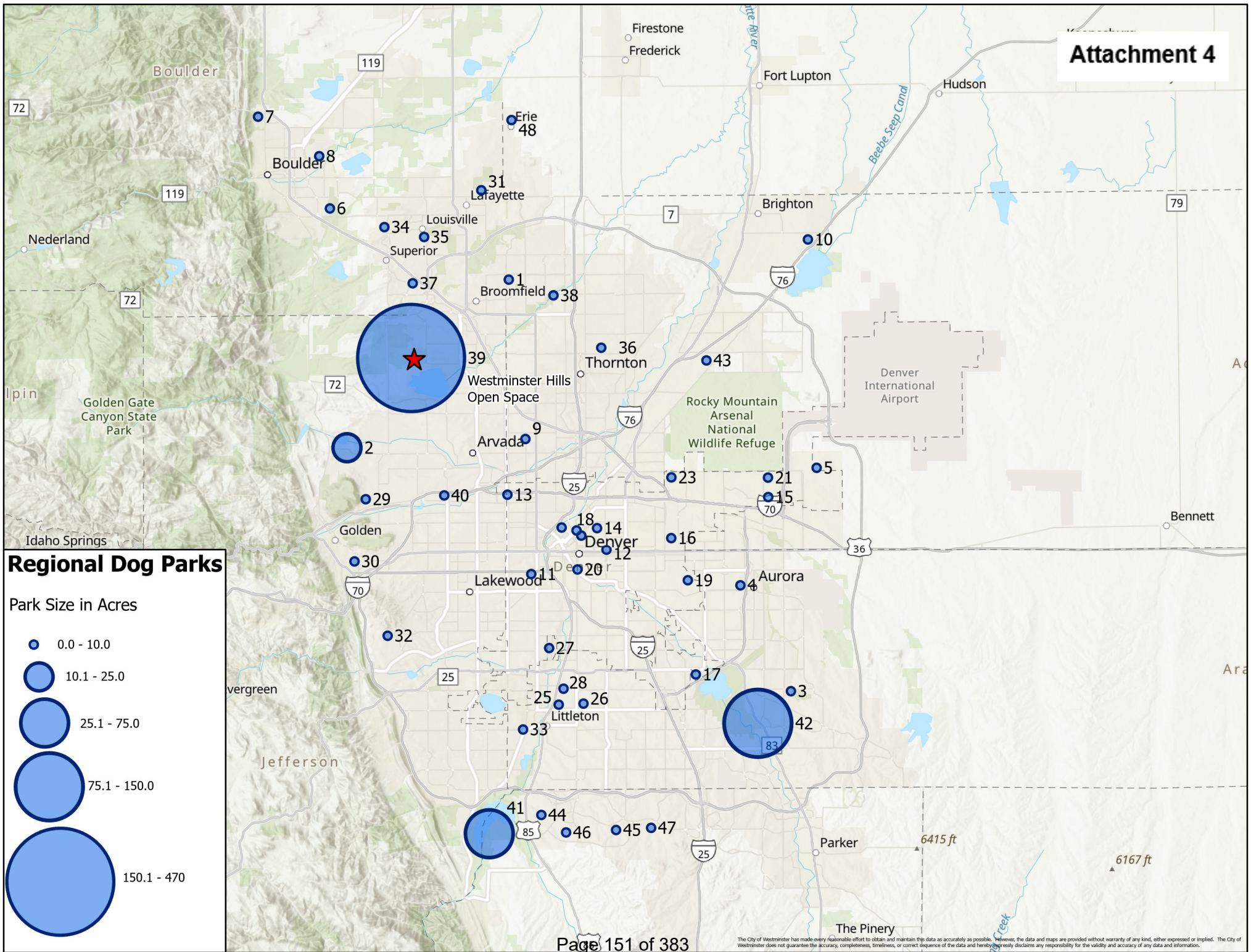
The City expresses its awareness that extension of major roadways and water and sewer service are frequently the forerunners of new urban development, and intends that every effort should be made to coordinate proposals for extension of these utilities, so as not to defeat the objectives of the open space program.

(1855 3455)

13-5-10. Statement on Deed.

Any deed conveying to the City open space property that was purchased using open space sales tax funds shall contain the notation "This land was purchased with Open Space Sales Tax Funds."


(1855)

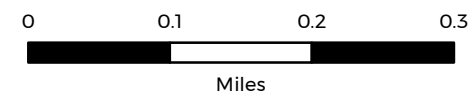


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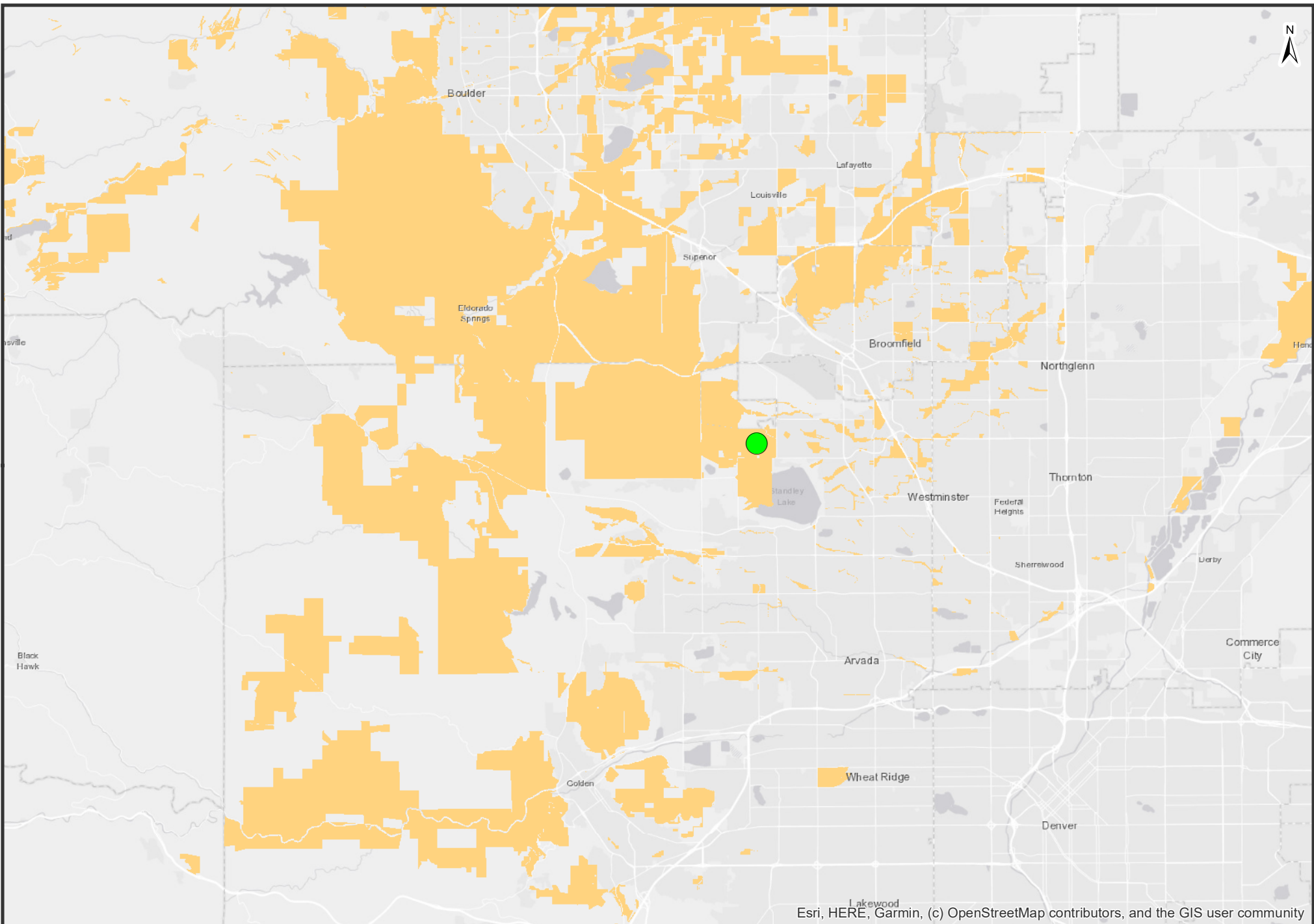
 Regional Dog Park Areas

 Westminister Hills Off Leash Area
(470 Acres)
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ID	Name	Managing Entity	Acres	Fee	Controlled Access	Fenced
1	Broomfield County Commons Dog Park	City and County of Broomfield	3.3	No	No	Yes
2	West Arvada Dog Park	City of Arvada	13	No	No	Yes
3	Grandview Dog Park	City of Aurora	5	No	No	Yes
4	Off-Leash dog area at Bicentennial Park	City of Aurora	1	No	No	Yes
5	Off-Leash dog area at Singletree Park	City of Aurora	0.34	No	No	Yes
6	East Boulder Dog Park	City of Boulder Parks	2	No	No	Yes
7	Foothills Dog Park	City of Boulder Parks	2.1	No	No	Yes
8	Valmont Dog Park	City of Boulder Parks	3.25	No	No	Yes
9	Little Dry Creek Dog Park	City of Westminster	1.44	No	No	Yes
10	Happy Tails Dog Park	City of Brighton	4.01	No	No	Yes
11	Barnum Dog Park	City of Denver Parks and Recreation	0.76	No	No	Yes
12	Carla Madison Dog Park	City of Denver Parks and Recreation	0.22	No	No	Yes
13	Berkeley Dog Park	City of Denver Parks and Recreation	1.73	No	No	Yes
14	Fuller Dog Park	City of Denver Parks and Recreation	0.73	No	No	Yes
15	Green Valley Ranch East Dog Park	City of Denver Parks and Recreation	0.28	No	No	Yes
16	Greenway Dog Park	City of Denver Parks and Recreation	2.83	No	No	Yes
17	Kennedy Dog Park	City of Denver Parks and Recreation	2.14	No	No	Yes
18	Little Box Car	City of Denver Parks and Recreation	0.07	No	No	Yes
19	Lowry Dog Park	City of Denver Parks and Recreation	2.36	No	No	Yes
20	Zeckendorf Plaza Pilot Dog Park	City of Denver Parks and Recreation	0.31	No	No	Yes
21	Parkfield Dog Park	City of Denver Parks and Recreation	0.59	No	No	Yes
22	Railyard Dog Park	City of Denver Parks and Recreation	0.58	No	No	Yes
23	Willow Bark Park	City of Denver Parks and Recreation	1.6	No	No	Yes
24	Sonny Lawson Park	City of Denver Parks and Recreation	0.15	No	No	Yes
25	Englewood Canine Corral Dog Park	City of Englewood	1.5	No	No	Yes
26	Duncan Park Off-Leash Area	City of Englewood	2	No	No	Yes
27	Northwest Greenbelt Off-Leash Area	City of Englewood	3.68	No	No	No
28	Jason Park Off-Leash Area	City of Englewood	4.94	No	No	No
29	Tony Grampas Dog Park	City of Golden	2.5	No	No	Yes
30	Homer's Run Dog Park	City of Golden	0.43	No	No	Yes
31	Great Bark Dog Park	City of Lafayette	6.1	No	No	Yes
32	Foresberg-Iron Spring Park	City of Lakewood	3.85	No	No	Yes
33	Wynetka Ponds Bark Park	City of Littleton	2.22	No	No	Yes
34	Davidson Mesa Open Space Dog Off-Leash area	City of Louisville	4.64	No	No	Yes
35	Community Park Dog Park	City of Louisville	1.28	No	No	Yes
36	Bill Goodspeed Happy Tails Dog Park	City of Northglenn	1.29	No	No	Yes
37	Autery Park Dog Park	City of Superior	1.27	No	No	Yes
38	Big Dry Creek Dog Park	City of Westminster	2	No	No	Yes
39	Westminster Hills Open Space	City of Westminster	470	No	No	Yes
40	Wheat Ridge Dog Park	City of Wheat Ridge	2	No	No	Yes
41	Chatfield Dog Park	Colorado State Parks	69	Yes*	Yes*	Yes
42	Cherry Creek State Park Dog Off-Leash Area (DOLA)	Colorado State Parks	107	Yes*	Yes*	Yes
43	First Creek Dog Park	Commerce City	1.41	No	No	Yes
44	Rover's Run at Redstone Park	Highlands Ranch Metro District	3.53	No	No	Yes
45	Digger's at Dad Clark Park	Highlands Ranch Metro District	1	No	No	Yes
46	Fido's Field at Foothills Park	Highlands Ranch Metro District	1.37	No	No	Yes
47	Hound Hill at Highland Heritage Regional Park	Highlands Ranch Metro District	1.74	No	No	Yes
48	The Boneyard at Reliance Park	Town of Erie	7.75	No	No	Yes

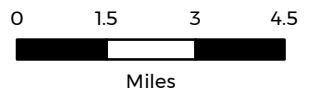
Note: Boulder Open Space and Mountain Parks Operates a Voice and Sight program with varying levels of off leash use on 8500 acres of Open Space.

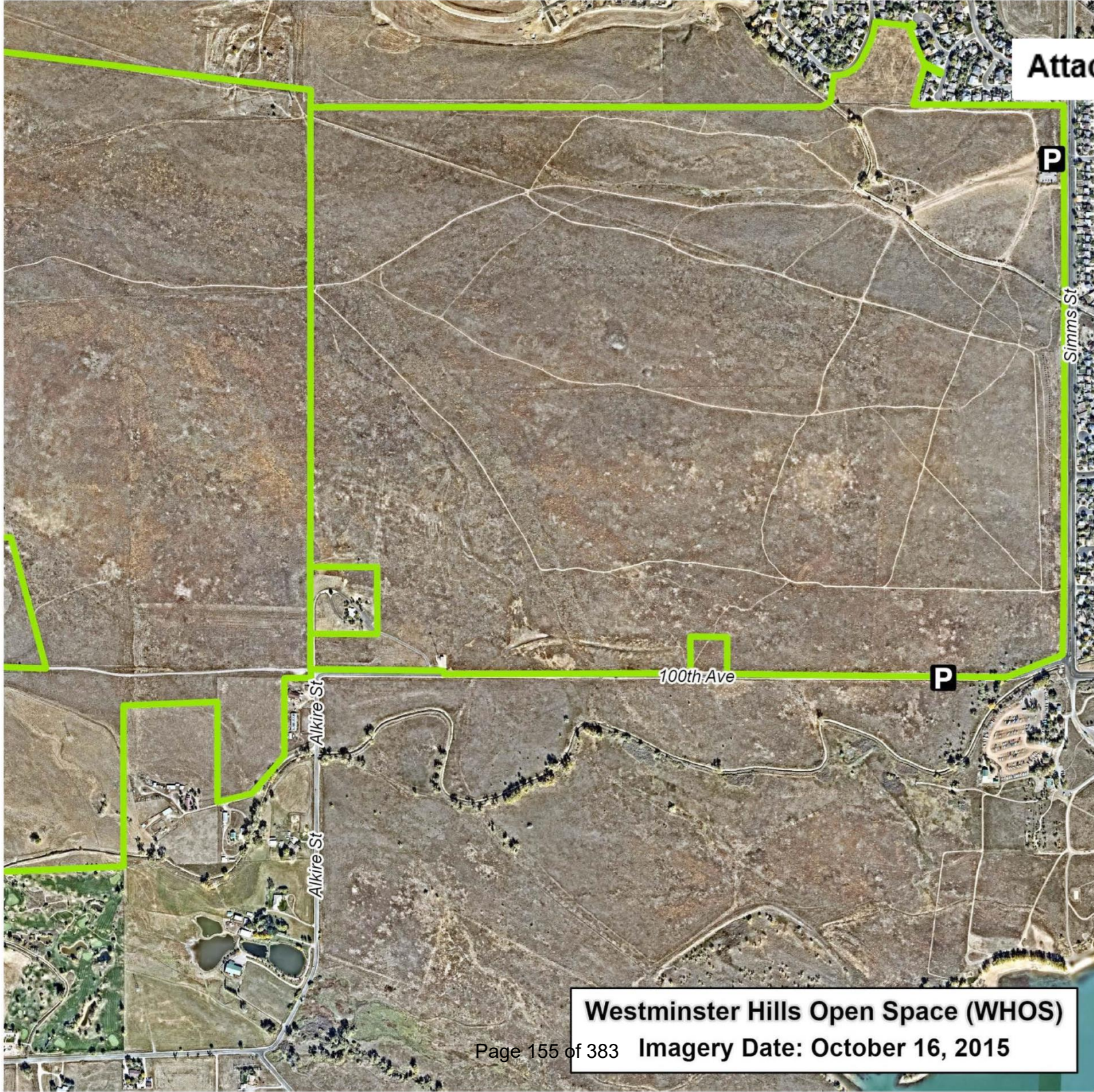


Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

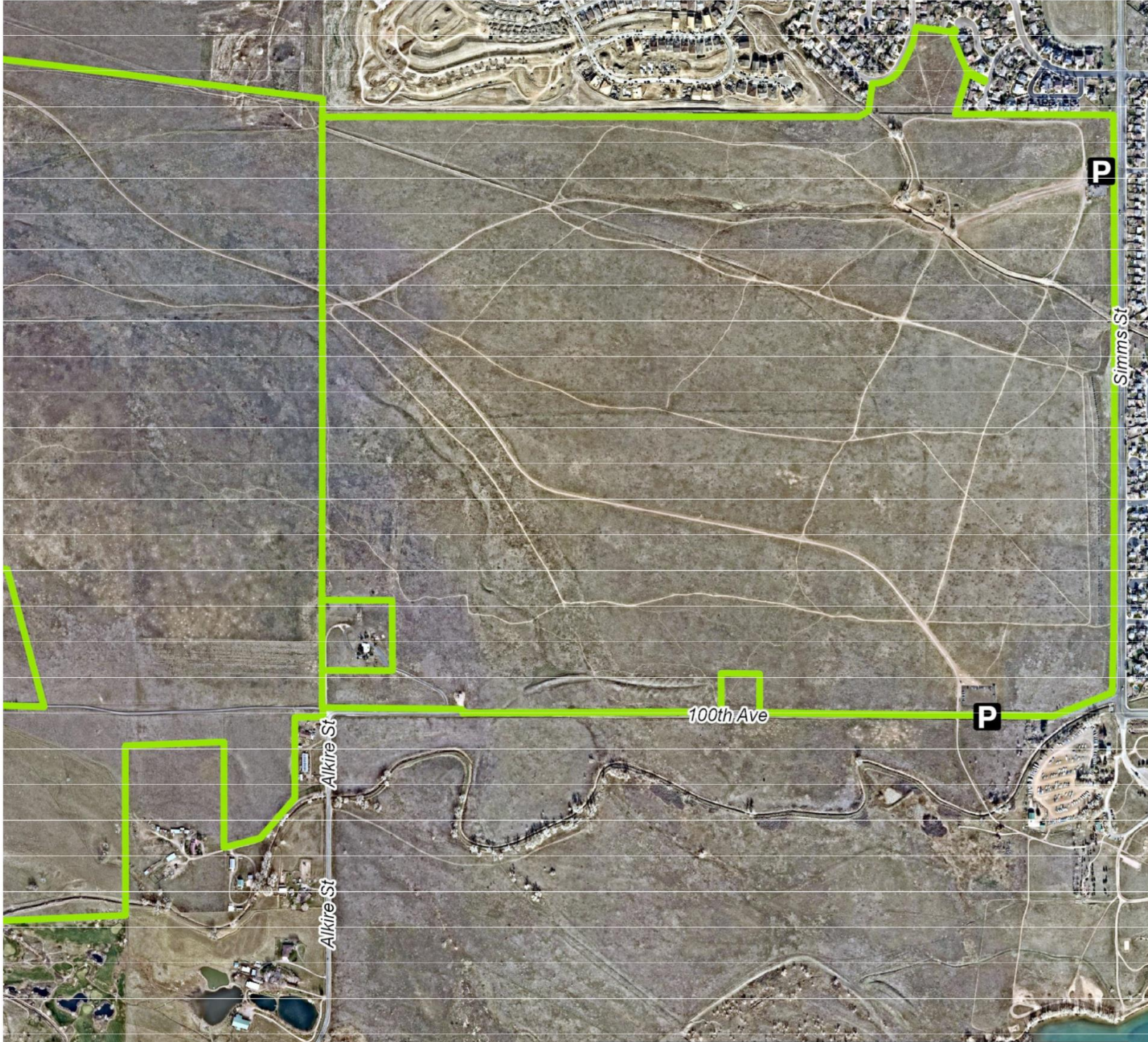
 Regional Open Space Properties

 Westminster Hills Open Space
Current Off Leash Dog Area
Page 154 of 383

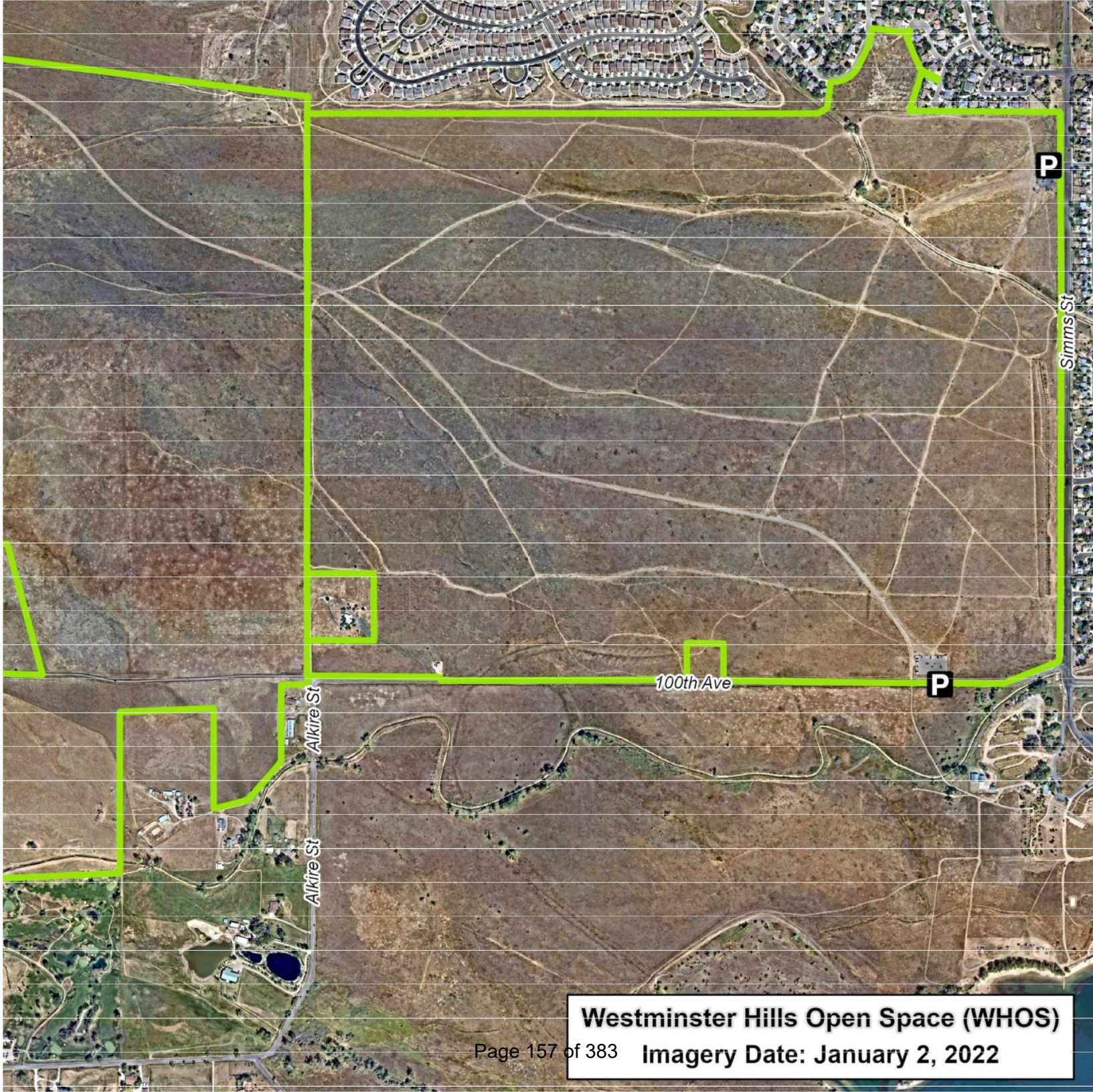




Westminster Hills Open Space (WHOS)
Page 155 of 383 Imagery Date: October 16, 2015



Westminister Hills Open Space (WHOS)
Page 156 of 383 Imagery Date: November 13, 2017



P

Simms St

P

100th Ave

Alkire St

Alkire St

Westminster Hills Open Space (WHOS)
Imagery Date: January 2, 2022



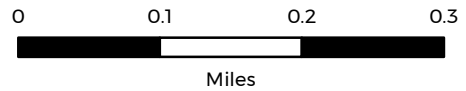
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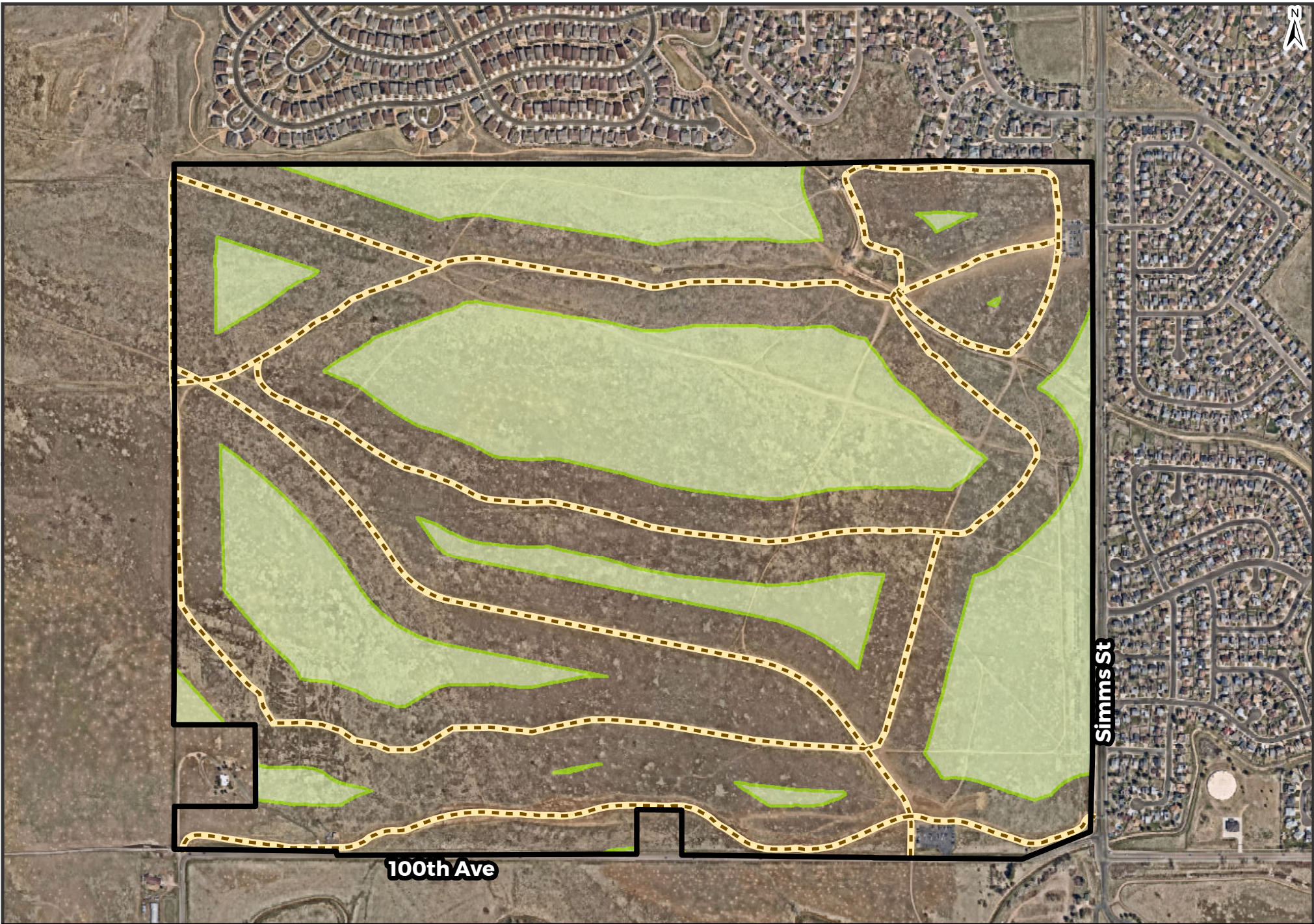
Simms St

--- All Trails

Remaining Habitat after 250ft Trail Buffer
(50 Acres)

Project Area
(470 Acres)

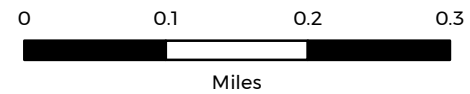




--- Designated Trails

Remaining Habitat after 250ft Trail Buffer
(157 Acres)

Project Area
(470 Acres)

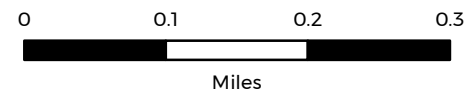


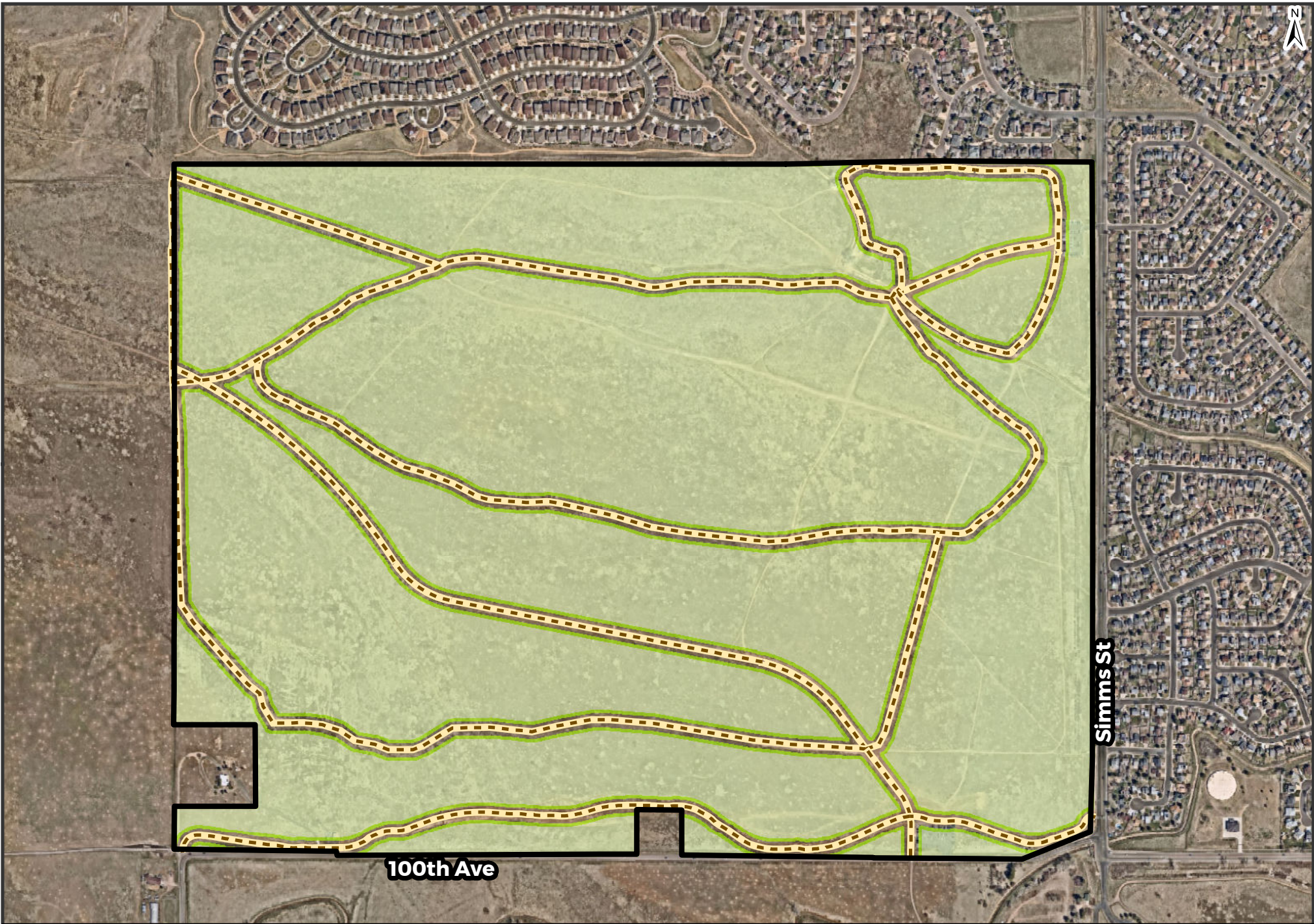


--- All Trails

Remaining Habitat after 50ft Trail Buffer
(320 Acres)

Project Area
(470 Acres)

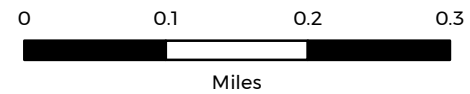




--- Designated Trails

Remaining Habitat after 50ft Trail Buffer
(393 Acres)

Project Area
(470 Acres)





Consultants in Natural Resources and the Environment

City of Westminster
Westminster Hills Open Space
Conditions Report
Jefferson County, Colorado



Prepared for—

City of Westminster
4800 W. 92nd Ave.
Westminster, CO 80031

Prepared by—

ERO Resources Corporation
1626 Cole Boulevard, Suite 100
Lakewood, Colorado 80401
(303) 830-1188
ERO Project #23-059

January 10, 2024

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Abbreviations

CDOA	Colorado Department of Agriculture
CDWA	Church Ditch Water Authority
CFU	Colony Forming Units
CPW	Colorado Parks and Wildlife
DOLA	Dogs Off-Leash Area
EPA	Environmental Protection Agency
ERO	ERO Resources Corporation
GM	Geometric Mean
JCOS	Jefferson County Open Space
MBTA	Migratory Bird Treaty Act
mL	Milliliters
MPN	Most Probable Number
NDIS	Natural Diversity Information Source
NHD	National Hydrography Dataset
OSMP	Open Space and Mountain Parks (City of Boulder)
STV	Statistical Threshold Value
ULTO	Ute-Ladies Tresses' Orchid
USDA	United States Department of Agriculture
VVMTA	Vail Valley Mountain Trails Alliance
WMC	Westminster Municipal Code

Project Summary

ERO Resources (ERO) was contracted by the City of Westminster to evaluate the current conditions of Westminster Hills Open Space. The ERO team conducted soil and water sampling, as well as surveys for vegetation conditions, noxious weeds, wildlife, and recreation impacts on the Property. In addition to field studies, ERO conducted a literature review of best practices for open spaces experiencing similar issues with natural resource degradation.

The current management strategy for Westminster Hills is unable to sustain resource demands from high visitation to the Property. This report outlines the results of the conditions assessment and provides recommendations for management strategies to address the City's natural resource and recreational concerns.

Westminster Hills Open Space Conditions Report

Jefferson County, Colorado

January 10, 2024

Introduction

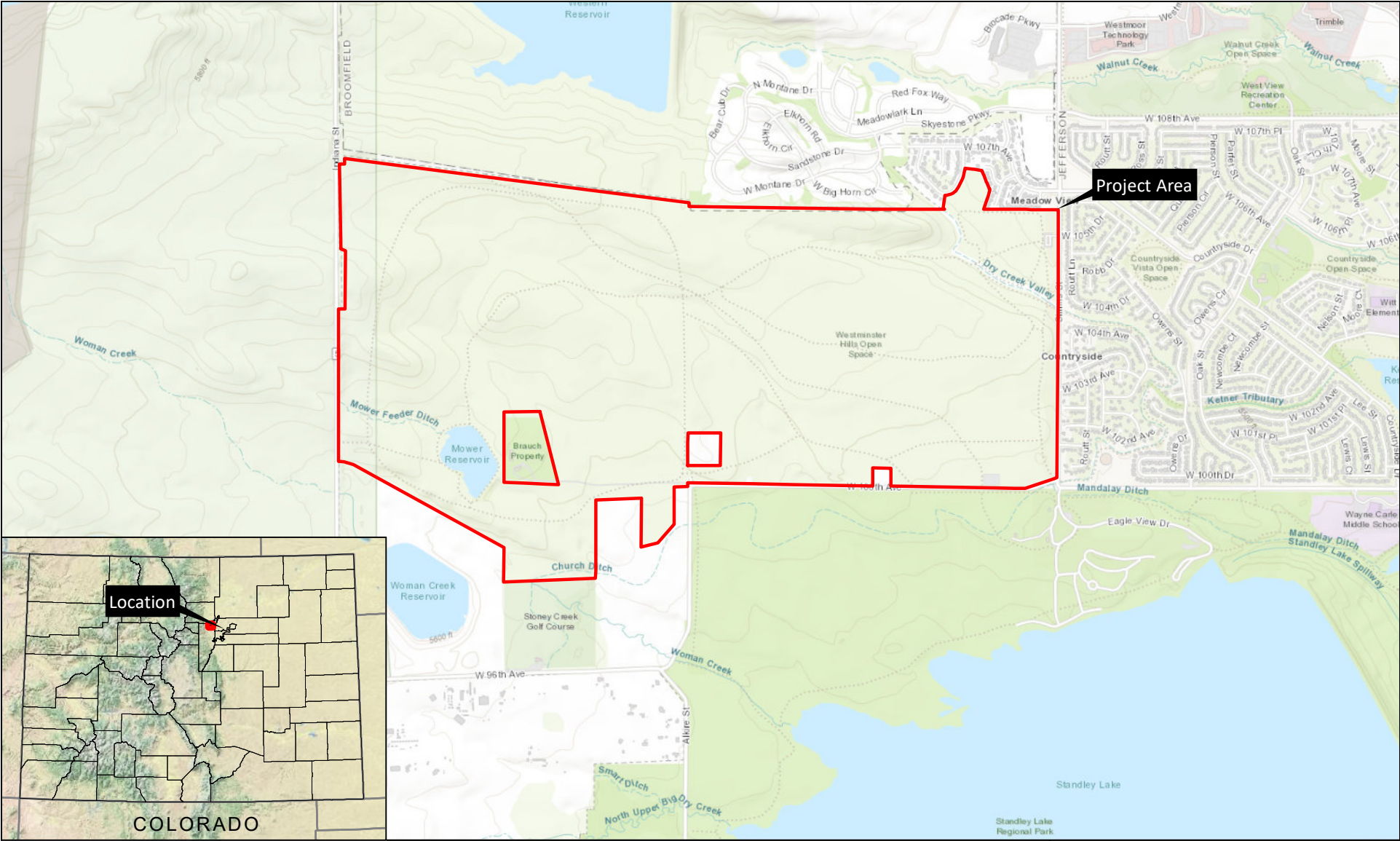
Location and Background

The Westminster Hills Open Space (Property) consists of 1,027 acres of rolling prairie, providing an important open space buffer that defines the urban interface along the City's western edge. The Property is contiguous with Standley Lake Regional Park to the south and Rocky Flats National Wildlife Refuge to the west. About 400 acres on the eastern side are managed to allow for off-leash dog use, while the western portions require dogs to be on-leash. A regional Greenway Trail crosses through the Property from the southeast to northwest, while multiple other roads, trails, and social trails provide visitor and dog access through the prairie.

The off-leash dog area is a regional attraction, providing a unique opportunity for dog owners to walk, hike, or run with their dog through an open prairie setting. This use, however, has resulted in a proliferation of social trails, vegetation trampling, native plant degradation, and concerns about contamination from dog waste (*E. coli*).

Planning Context

The 2014 City of Westminster Open Space Stewardship Plan (Westminster 2014) classifies most of the Property as an Urban Natural area, which is defined as "sites that are natural in appearance, accommodate wildlife, and allow people to access non-developed environments." The remainder of the Property (the dog off-leash area) is considered Transitional, which is defined as "a temporary assignment (one to two year period, or until stabilized) for ecosystems moving toward Sensitive or Urban Natural classifications." The Stewardship Plan calls for a master plan for the Property, which should consider trailhead access, trail improvements, interpretive signage, and a management plan that provides more specific management direction. As part of this process, a conditions report is intended to provide a current and objective baseline from which to initiate plans for the management of natural resources and public recreation on the Property.



Westminster Hills Open Space Management Plan

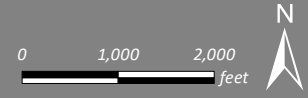
Sections 7, 8, 17, and 18, T2S, R69W; 6th PM
 UTM NAD 83: Zone 13N; 487362mE, 4414860mN
 Longitude 105.147804°W, Latitude 39.883699°N
 USGS Louisville and Golden, CO Quadrangles

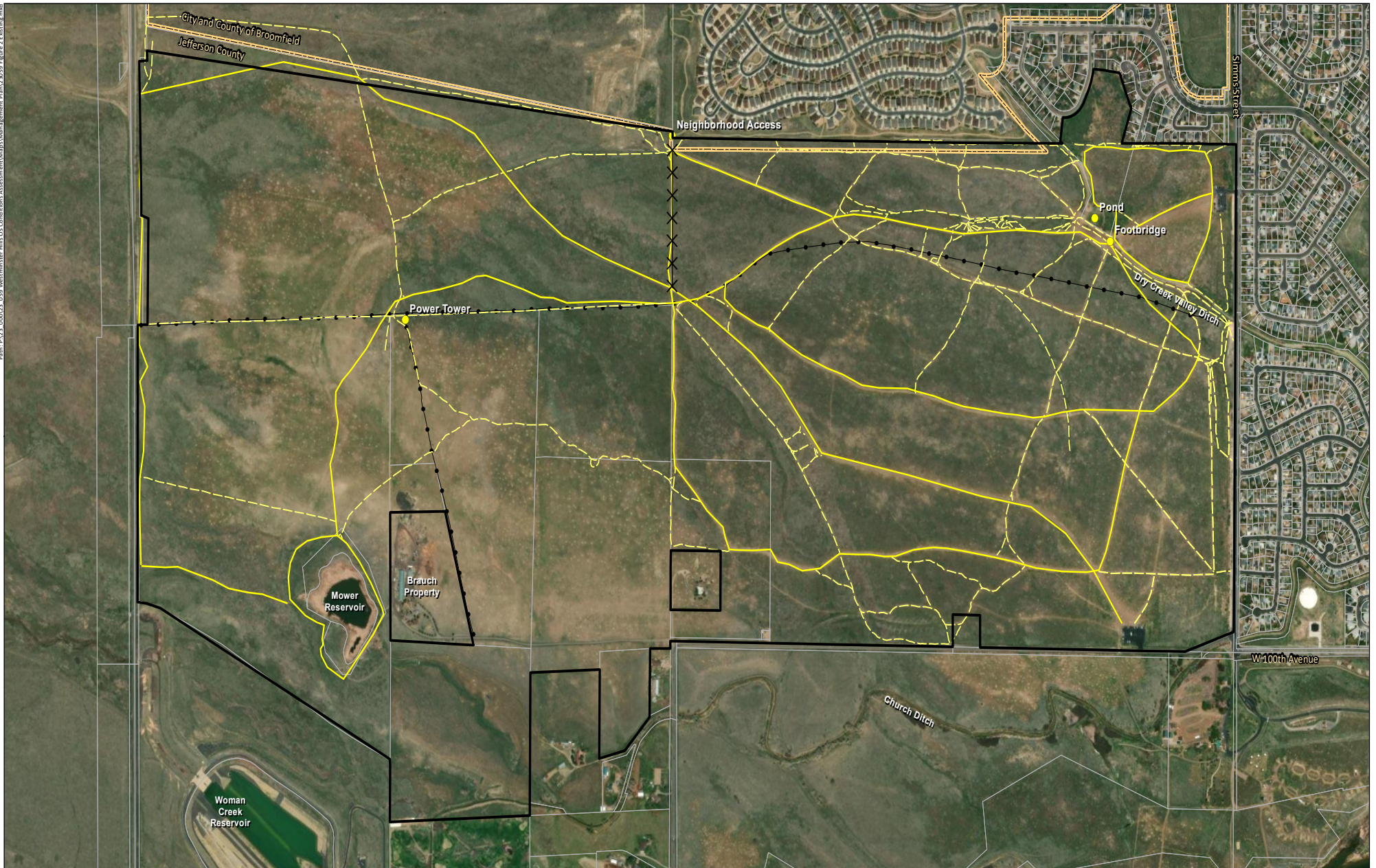
Jefferson County, Colorado

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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Figure 1 Vicinity Map

Prepared for: City of Westminster
 File: 23059 Figure 1.mxd [dlH]
 August 23, 2023

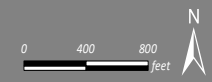




Westminster Hills Open Space Management Plan

- Project Area
- Social Trail
- Trail
- Overhead Electrical Line
- X X Fence

Figure 2
Existing Conditions



Prepared for: City of Westminster
File: 23059 Figure 2 Existing.mxd [djh]
October 10, 2023



Purpose of the Conditions Assessment

The purpose of this conditions assessment is to provide a baseline of existing natural resources from which to guide resource management and public recreation on the Property. More specifically, this conditions assessment is also intended to achieve the following objectives:

1. Document a baseline level of existing conditions and resource management issues on the Property.
2. Identify and recommend strategies to address resource management and public recreation issues in order to maintain the overall integrity of resources on the Property.

Existing conditions of Westminster Hills Open Space and Dog Park are outlined in the sections below.

Existing Conditions

Soil Sampling

ERO collected five-point composite soil samples at four predetermined sites to assess *E. coli* levels in surface soils (WH-SS-1, WH-SS-2, WH-SS-3, and WH-SS-4) on the Property (see **Figure 3**). Soil samples were collected from the top three inches of the soil using a dedicated disposable acetate liner. Organic matter was removed from each sample aliquot as collected. The samples were placed in laboratory-provided, certified clean 4-ounce glass sample jars. The jars were labeled, placed on ice, and submitted under strict chain-of-custody to Industrial Laboratory in Wheat Ridge, Colorado for analysis for *E. coli* by the appropriate Environmental Protection Agency (EPA) Method.

Soil samples were collected on May 23, 2023 and contained most probable number [of colony forming units], per gram (MPN/g) concentrations <1.8 in all four composite samples. There are no regulatory standards for *E. coli* in soils and *E. coli* concentrations were determined to be less than the laboratory method detection/reporting limit.

Surface Water Sampling

ERO is currently collecting monthly surface water samples from Mower Reservoir (WH-SW-1), in the southwest portion of the Property, and two predetermined locations along the Church Ditch (WH-SW-2 and WH-SW-3), along the northeast boundary of the Property, to assess *E. coli* levels (see **Figure 3**). Sampling only occurs when the ditch is running or when surface water is present (typically May through September). According to the Church Ditch Water Authority, the ditch begins at a headgate in Clear Creek, near Golden, Colorado, and runs 26 miles in length through Jefferson County until it ends near the intersection of 100th Avenue and Simms Street at the Wilson Flume (CDWA 2023).

Four sets of water samples were collected (May 23, 2023, June 22, 2023, July 27, 2023, and August 28, 2023). The water samples were collected using clean laboratory-provided containers, and the water collected was transferred into sterile laboratory-provided 150-milliliter, preserved, poly sample bottles. The sample bottles were labeled, placed on ice, and submitted under strict chain-of-custody to Industrial Laboratory in Wheat Ridge, Colorado for *E. coli* analysis by the appropriate EPA Method.

The highest *E. coli* concentrations were observed in the samples from Mower Reservoir (WH-SW-1) at concentrations ranging from most probable number [of colony forming units], per milliliter (MPN/100ml) concentrations of 1,119.9 to greater than 2,419.6 MPN/100ml (**Table 1**). Samples collected from Church Ditch have increased in concentration since the initial sampling event, from 32.7 MPN/100ml to greater than 2,419.6 MPN/100ml at WH-SW-2 and 35.5 MPN/100ml to greater than 2,419.6 MPN/100ml at WH-SW-3 (**Table 1**).

According to the EPA, individuals who encounter elevated levels of *E. coli* and other fecal indicator organisms increase their risk of getting sick due to potential exposure to fecal pathogens (EPA 2021). *E. coli* concentrations are typically expressed as the number of colony forming units (cfu) per 100 mL (cfu/100mL). The two sets of criteria using different methods for calculating illness rates are shown in **Table 1**. The EPA “Threshold Values” are based on studies that show a link between illness and fecal contamination in recreational waters. Both are considered protective of human health, and either can be used to assess recreational water quality (EPA 2021). It is important to note that the values >2,419.6 MPN/100mL could be any number beyond the EPA’s threshold.

All of the surface water samples collected from the Property contained *E. coli* concentrations that exceed the EPA Threshold Values (**Table 1**). However, the EPA recommends weekly sampling to evaluate the geometric mean (GM) and the statistical threshold value (STV) over a 30-day period (EPA 2021). Additional measures recommended by the EPA are listed in the **Preliminary Management Recommendations** section.

Table 1. Surface water *E. coli* concentrations.

Sample ID	Date	Results (MPN/100mL)	EPA Threshold Value ¹	EPA Threshold Value ²
WH-SW-1 (Mower Reservoir)	5/23/2023	>2,419.6	100	320
WH-SW-1 (Mower Reservoir)	6/22/2023	1,119.9	100	320
WH-SW-1 (Mower Reservoir)	7/27/2023	1,119.9	100	320
WH-SW-1 (Mower Reservoir)	8/28/2023	>2,419.6	100	320

WH-SW-2	5/23/2023	32.7	100	320
WH-SW-2	6/22/2023	261.3	100	320
WH-SW-2	7/27/2023	980.4	100	320
WH-SW-2	8/28/2023	>2,419.6	100	320
WH-SW-3	5/23/2023	35.5	100	320
WH-SW-3	6/22/2023	290.9	100	320
WH-SW-3	7/27/2023	816.4	100	320
WH-SW-3	8/28/2023	>2,419.6	100	320

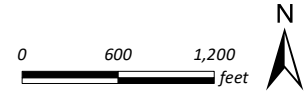
¹= EPA Estimated illness rate: 32 per 1,000 - Geometric Mean (colony forming units [cfu]/100mL); ²= EPA Estimated illness rate: 32 per 1,000 – statistical threshold value (STV- 90th percentile (cfu/100mL); **Bold** = Concentration exceeds one or both Threshold Values.



Westminster Hills Open Space Sampling Plan

- Open Space Boundary
- Trail
- Parcel Boundary
- Soil Sample Aliquot Location
- Surface Water Sample Location
- 5-Point Soil Composite Sample Location
- Overhead Electrical Line

Figure 3 Sampling Locations



Prepared for: City of Westminster
 File: 23059 Figure 3 Sampling.mxd [dlH]
 September 14, 2023



Vegetation

The Property is located in the High Plains Front Range Fans ecoregion which consists of fans, irregular plains, and scattered low hills with intermittent and perennial streams. This ecoregion is categorized as having natural vegetation of shortgrass and mixed grass prairie typically dominated by blue grama (*Bouteloua gracilis*), needle and thread grass (*Hesperostipa comata*), western wheatgrass (*Pascopyrum smithii*), buffalograss (*Bouteloua dactyloides*), Junegrass (*Koeleria macrantha*), and little bluestem (*Schizachyrium scoparium*) (Chapman et al. 2006).

The Property is dominated by several vegetation communities that included mixed grassland, nonnative grassland, and noxious weeds with some riparian woodland, emergent marsh wetland, herbaceous mesic/wet meadow, open water, bare ground, and disturbed/developed areas. During the 2023 site visits, vegetation communities on the Property included approximately 450 acres of mixed grassland, 303 acres of nonnative grassland, 220 acres of areas dominated by noxious weeds, 1.3 acres of riparian woodland, 3.9 acres of emergent marsh wetland, 2.9 acres of herbaceous mesic/wet meadow, 4 acres of open water, 3.1 acres of bare ground, and 41.2 acres of disturbed/developed areas. The different vegetation communities are described below and shown on **Figure 4**

Vegetation Communities

Mixed Grassland

The mixed grassland vegetation community generally occurs throughout the central portions of the Property in areas where a mix of native and nonnative grassland species predominates to support a large diversity of species (**Figure 4**). This community is dominated by alyssum (*Alyssum simplex*), prairie sagewort (*Artemisia frigida*), buffalo grass, smooth brome (*Bromus inermis*), field bindweed (*Convolvulus arvensis*), needle and thread grass, and western wheatgrass. See **Appendix A** for additional plant species present.

Nonnative Grassland

The nonnative grassland community generally occurs along the southwest, southeast, and northern boundary of the Property (**Figure 4**). This community is dominated by the nonnative grassland species smooth brome with less dominant components of noxious weed species and other native species including prairie sagewort, kochia (*Bassia scoparia*), cheatgrass (*Bromus tectorum*), musk thistle (*Carduus nutans*), field bindweed, redstem fillaree (*Erodium cicutarium*), dalmatian toadflax (*Linaria dalmatica*), alfalfa (*Medicago sativa*), western wheatgrass, scarlet globemallow (*Sphaeralcea coccinea*), common mullein (*Verbascum Thapsus*), and soapweed yucca (*Yucca glauca*).

Noxious Weeds

The noxious weed vegetation community generally occurs in the western portion of the Property (**Figure 4** and **Figure 5**) and coincides with active prairie dog colony (**Figure 7**). This community is almost entirely

dominated by noxious weed species dalmatian toadflax and field bindweed with some cheatgrass, musk thistle, sulfur cinquefoil (*Potentilla recta*), and redstem filaree.

Note: The weed mapping on **Figure 5** is not representative of entirely noxious weed communities.

Riparian Woodland

The riparian woodland community occurs along ditches on the Property and as a narrow fringe along the emergent marsh wetlands within Mower Reservoir in the southwest portion of the Property (**Figure 4**). This community contains an overstory of plains cottonwood (*Populus deltoides* spp. *monilifera*), Russian olive (*Elaeagnus angustifolia*), green ash (*Fraxinus pennsylvanica*), and peachleaf willow (*Salix amygdaloides*), with a shrub understory of sandbar willow (*Salix exigua*), false-indigo bush (*Amorpha fruticosa*), dogbane (*Apocynum cannabinum*), golden currant (*Ribes aureum*), and Woods' rose (*Rosa woodsii*). Herbaceous species in the riparian woodland community consist of a mixture of mesic and upland species including smooth brome, showy milkweed (*Asclepias speciosa*), common teasel (*Dipsacus fullonum*), arctic rush (*Juncus arcticus balticus*), and curly dock (*Rumex crispus*).

Emergent Marsh Wetlands

The emergent marsh wetland community occurs along Mower Reservoir in the southwest portion of the Property (**Figure 4**). Vegetation in this community is dominated by cattail species including broadleaf cattail (*Typha latifolia*) and narrowleaf cattail (*Typha angustifolia*).

Herbaceous Mesic/Wet Meadow

The herbaceous meadow community occurs primarily along an unnamed intermittent drainage in the northeastern portion of the Property west of Dry Creek Valley Ditch as well as along the unnamed intermittent drainage downgradient of Mower Reservoir in the southwest portion of the Property (**Figure 4**). The herbaceous mesic/wet meadow community is dominated by arctic rush with some jointed goatgrass (*Aegilops cylindrica*), annual ragweed (*Ambrosia artemisiifolia*), smooth brome, sedges (*Carex* spp.), field bindweed, Russian olive, foxtail barley (*Hordeum jubatum*), rushes (*Juncus* spp.), western wheatgrass, reed canarygrass (*Phalaris arundinacea*), curly dock, Canada goldenrod (*Solidago canadensis*), and common cocklebur (*Xanthium strumarium*).

Open Water

The open water areas are associated with Mower Reservoir, Church Ditch, and Dry Creek Valley Ditch on the Property.

Bare Ground

The bare ground areas include areas associated with high visitor use areas on the Property. These areas are frequently disturbed and contain a low amount of vegetative cover, if any, relative to the remainder of the Property.

Developed Areas

The developed areas include areas associated with trails and trailhead parking areas on the Property.

Photo 1. Mixed Grassland.



Photo 2. Nonnative Grassland.



Photo 3. Noxious Weeds.



Photo 4. Riparian Woodland.

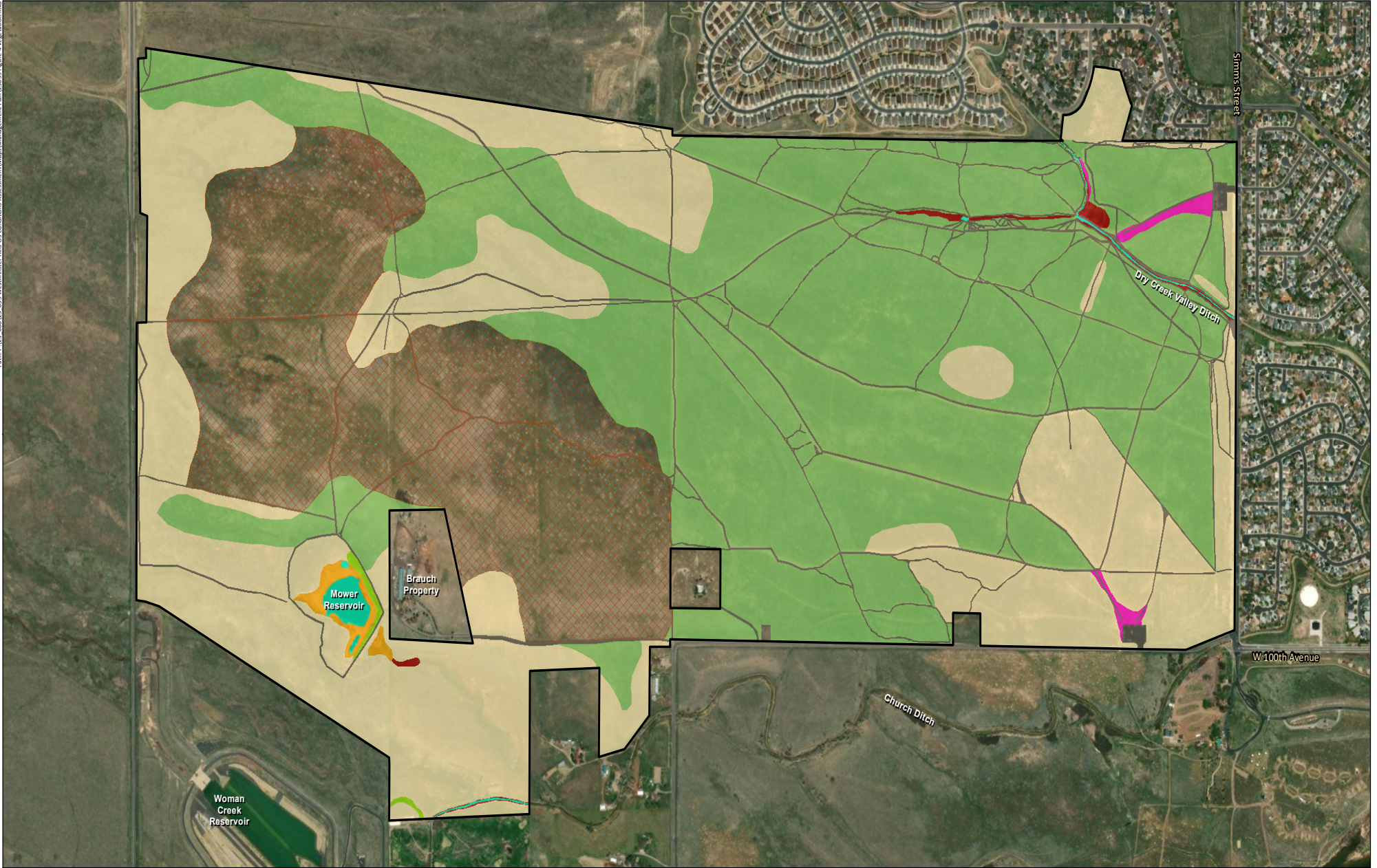


Photo 5. Emergent Marsh.



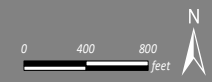
Photo 6. Herbaceous Mesic/Wet Meadow.





- Westminster Hills Open Space Management Plan
- | | | |
|---------------------|-------------------|---------------------|
| Open Space Boundary | Open Water | Nonnative Grassland |
| Emergent Marsh | Riparian Woodland | Disturbed/Developed |
| Mesic/Wet Meadow | Mixed Grassland | Bare Ground |
| Noxious Weeds | | |

Figure 4
Vegetation Communities



Prepared for: City of Westminster
File: 23059 Figure 4 Vegetation.mxd [dlh]
October 10, 2023



State Noxious Weeds

ERO surveyed the Property for noxious weeds on the Colorado Department of Agriculture (CDOA) A, B, and C lists (Colorado Department of Agriculture 2022). No List A species were found on the Property during the 2023 site visits, eleven CDOA noxious weed List B species, and seven List C species were documented during the 2023 site visits. The observed weed populations within the Property ranged from small and scattered individuals to larger dense populations that occurred throughout the Property listed below and shown on **Figure 5** and **Figure 6**. A comprehensive map of state listed noxious weeds on the Property can be found in **Appendix B**. The percent cover of discreet weed populations was assessed and categorized as shown in **Table 2**.

The most present noxious weed at Westminster Hills is Dalmatian toadflax (*Linaria dalmatica*) which is present on nearly 500 acres of the Property.

List B Weed Species

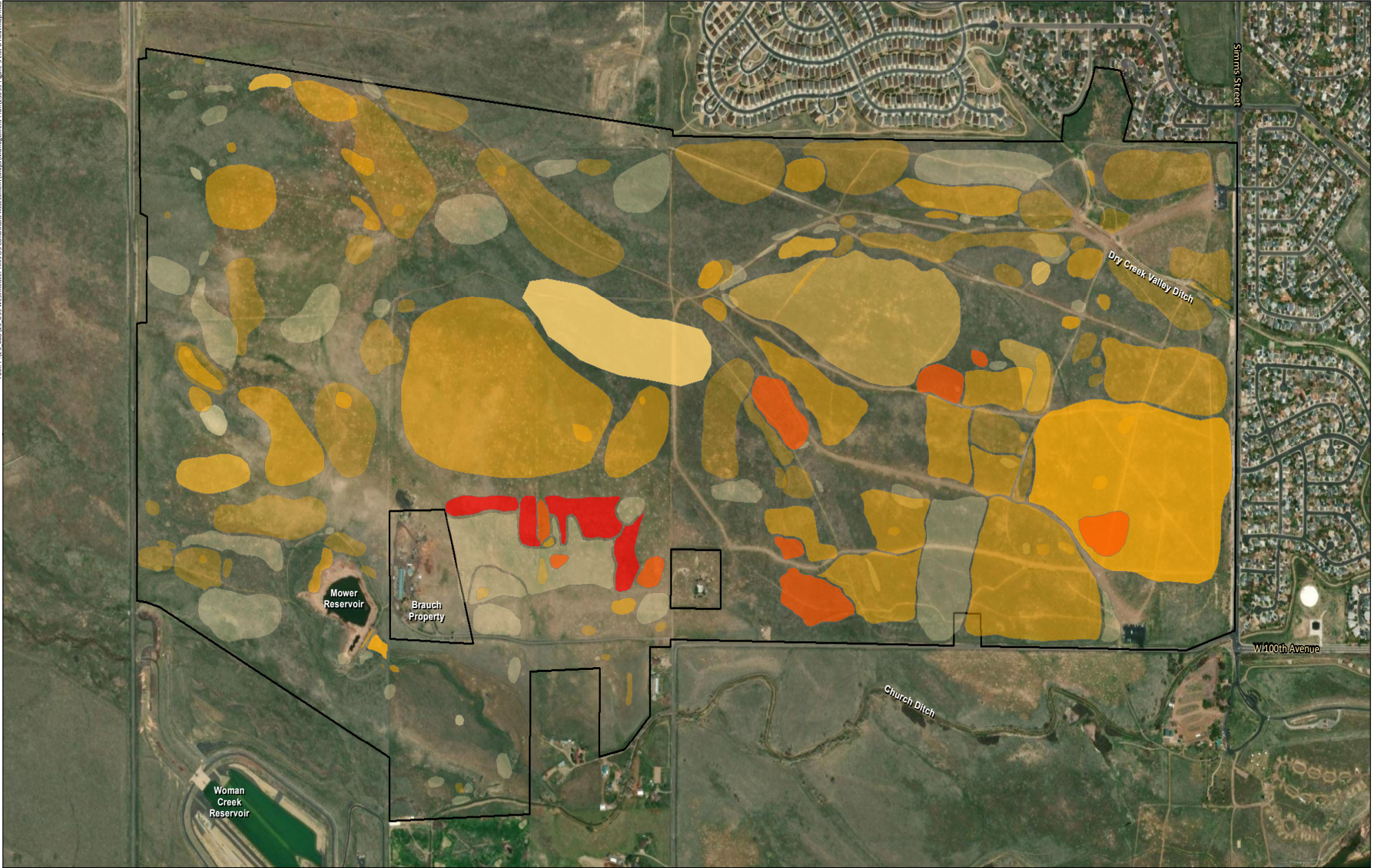
- Canada thistle (*Cirsium arvense*)
- Common teasel (*Dipsacus fullonum*)
- Cutleaf teasel (*Dipsacus laciniatus*)
- Dalmatian toadflax (*Linaria dalmatica*)
- Diffuse knapweed (*Centaurea diffusa*)
- Jointed goatgrass (*Aegilops cylindrica*)
- Musk thistle (*Carduus nutans*)
- Perennial pepperweed (*Lepidium latifolium*)
- Russian olive (*Elaeagnus angustifolia*)
- Scotch Thistle (*Onopordum acanthium*)
- Sulfur cinquefoil (*Potentilla recta*)

List C Weed Species

- Cheatgrass (*Bromus tectorum*)
- Common mullein (*Verbascum thapsus*)
- Common St. Johnswort (*Hypericum perforatum*)
- Field bindweed (*Convolvulus arvensis*)
- Quackgrass (*Elymus repens*)
- Redstem filaree (*Erodium cicutarium*)
- Siberian elm (*Ulmus pumila*)

Table 2. Noxious weed cover classes.

Cover Class	Percent Cover of Mapped Population
1	Less than or equal to 10
2	11-20
3	21-50
4	51-80
5	Greater than 80



Westminster Hills Open Space Management Plan

Open Space Boundary

List B Noxious Weeds

- CT - Canada Thistle
- DK - Diffuse Knapweed
- DT - Dalmatian Toadflax
- HC - Hoary Cres
- JG - Jointed Goatgrass
- MM - Moth Mullien
- MT - Musk Thistle
- RO - Russian Olive
- SC - Sulfur Cinquefoil
- ST - Scotch Thistle
- TE - Common Teasel

Noxious Weed Density

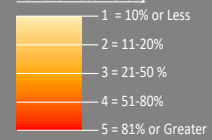


Figure 5
List B Noxious Weeds

Prepared for: City of Westminster
File: 23059 Figure 5 List B Heatmap.mxd [dH]
October 10, 2023





Westminster Hills Open Space Management Plan

Open Space Boundary

- List C Noxious Weeds
- CG - Cheatgrass
 - CM - Common Mullein
 - FB - Field Bindweed
 - QG- Quack Grass - List C
 - RSF - Redstem Filaree - List C
 - SJ - Common St. Johnswort - List C
 - SE - Siberian Elm - List C

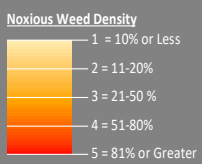
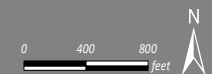


Figure 6
List C Noxious Weeds



Prepared for: City of Westminster
 File: 23059 Figure 6 List C Heatmap.mxd [dH]
 January 9, 2024



Wildlife Resources

This section includes a discussion of general quality of wildlife habitat and the species that occur or are likely to occur on the Property, as well as federally listed species, and other species of special concern.

General Wildlife

Westminster Hills Open Space provides habitat for a variety of wildlife species within the general vegetation communities found on the Property (see **Figure 4**). The grasslands (mixed grassland and nonnative grassland), riparian woodlands, and wetland (emergent marsh, wet meadow, and open water) habitats provide high-quality nesting and foraging habitats for grassland bird, arboreal bird, ducks, and raptor species as well as reptiles, small and large mammals. The black-tailed prairie dog (*Cynomys ludovicianus*) colonies found on the Property provide food and shelter for many other grassland species and can have a considerable effect on community structure and ecosystem function. Wildlife species observed during the 2023 site visit are shown in the table in **Appendix C**.

Federally-Listed Wildlife Species

ERO assessed the Property for habitat for federally threatened, endangered, and candidate species under the ESA (Endangered Species Act). Federally threatened and endangered species are protected under the ESA of 1973, as amended (16 U.S.C. 1531 et seq.). Significant adverse effects on a federally listed species or its habitat require consultation with the Service under Section 7 or 10 of the ESA. The Service's Information for Planning and Consultation (IPaC) resource list for the Property identifies several threatened and endangered species that could be potentially affected by the project (**Table 3**) (U.S. Fish and Wildlife Service 2023).

The Service indicates that eight threatened, endangered, or candidate wildlife species have potential for occurrence on the Property or to be affected by projects on the Property: gray wolf, Preble's meadow jumping mouse (Preble's), piping plover, whooping crane, pallid sturgeon, monarch butterfly, Ute-ladies tresses' orchid (ULTO), and western prairie fringed orchid (U.S. Fish and Wildlife Service 2023). However, these species were not observed during the site visits, the Property does not contain suitable habitat for most of these species, and they are not likely to occur on the Property, as described in **Table 3** below.

Table 3. Federally threatened, endangered, and candidate animal species potentially found on the Property.

Common Name	Scientific Name	Status*	Habitat	Habitat Present?
Mammals				
Gray wolf	<i>Canis lupus</i>	T	Temperate forests, mountains, tundra, taiga, grasslands, and deserts	No, outside of the current known range
Preble's meadow jumping mouse (Preble's)	<i>Zapus hudsonius preblei</i>	T	Shrub riparian/wet meadows	Minimal habitat
Birds				
Piping plover**	<i>Charadrius melodus</i>	T	Sandy lakeshore beaches and river sandbars	No habitat and no depletions anticipated
Whooping crane**	<i>Grus americana</i>	E	Mudflats around reservoirs and in agricultural areas	Low quality habitat, no depletions anticipated
Fish				
Pallid sturgeon**	<i>Scaphirhynchus albus</i>	E	Large, turbid, free-flowing rivers with a strong current and gravel or sandy substrate	No habitat and no depletions anticipated
Invertebrates				
Monarch butterfly	<i>Danaus plexippus plexippus</i>	C	Dependent on milkweeds (<i>Asclepiadoideae</i>) as host plants and forage on blooming flowers; a summer resident	Few milkweeds found; minimal to no habitat
Plants				
Ute ladies'-tresses orchid (ULTO)	<i>Spiranthes diluvialis</i>	T	Moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes below 7,800 feet in elevation	Habitat conditions not suitable for ULTO establishment
Western prairie fringed orchid**	<i>Platanthera praeclara</i>	T	Moist to wet prairies and meadows	No habitat, no depletions anticipated

*T = Federally Threatened Species, E = Federally Endangered Species, C = Candidate for Federal Listing, P = Proposed for Listing.

Source: (U.S. Fish and Wildlife Service 2023)

It is not likely for any projects on the Property to affect the gray wolf because the Property is outside of the current known range for the species and because it is ERO's understanding that activities on the Property do not require a predator management program that could result in taking of the species (U.S. Fish and Wildlife Service 2023).

The piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid are species that are affected by depletions to the Platte River system. There are no drainages on the Property with a continuous surface connection to the South Platte River. As such, there would be no potential for depletions to the South Platte River and no further action is needed regarding depletion species.

The Property is not within a designated migration corridor or breeding or overwintering area for the monarch butterfly (U.S. Fish and Wildlife Service 2019) although some monarch butterflies migrate through Colorado in the summer. A few individual milkweeds (the primary host plant) were observed on the Property during the 2023 site visits, but ERO did not observe any adult or larval monarch butterflies during the 2023 site visits. This species may occasionally travel through the Property but is not likely to adversely affected because host plants are sparse and because of the potential predation by invasive paper wasps (*Polistes dominula*) (Baker and Potter 2020). As a candidate species, monarch butterflies are not currently under federal regulation. Should the monarch butterfly's status be elevated to that of a threatened or endangered species, future consultation with the Service may be required.

Portions of Property support riparian vegetation communities, which are potential Preble's habitat. Sandbar willow, Woods' rose, and other mesic shrubs occur along the riparian woodlands in the southwestern section of the Property and may provide the forage and cover that Preble's requires; however, portions of the riparian corridor and surrounding areas have been disturbed by human activities. Mapped Preble's critical habitat occurs just west of the Property across Indiana Street along Woman Creek and the closest known Preble's capture locations are approximately 1.5 miles west of the Property along Woman Creek (U.S. Fish and Wildlife Service 2010; Rocky Flats ETS 1995). Although portions of the riparian corridor are fragmented, it may still allow movement of Preble's between the known capture sites and the Property; therefore, Preble's may occupy the Property or have potential to move into the site. It is not known if the Service considers the Property occupied Preble's habitat.

During the 2023 site visits, ERO assessed the Property for potential ULTO habitat. Although the Property is located in Jefferson County and along several National Hydrography Dataset (NHD) mapped intermittent drainages, no defined stream channels were found during the site visits. The Property does contain wetlands and mesic wet meadow areas that may provide potentially suitable habitat for ULTO. However, the wetland vegetation is dominated by densely growing species such as cattails, reed canarygrass, and sandbar willow, which are species not typically associated with ULTO habitat, and the mesic wet meadow areas located on the Property appear to lack conditions suitable for ULTO establishment including hydrologic regime and an upstream seed source.

Other Species and Habitats of Concern

Black-Tailed Prairie Dog

The black-tailed prairie dog is a Colorado species of special concern (Colorado Parks and Wildlife (CPW) 2023a). Black-tailed prairie dogs are important components of the short and mesic grasslands systems. Threats to this species include habitat loss and degradation, habitat fragmentation, disease (sylvatic plague), and lethal control activities. Typically, areas occupied by prairie dogs have greater cover and abundance of perennial grasses and annual forbs compared with unoccupied sites (Whicker and Detling 1988; Witmer et al. 2000).

Black-tailed prairie dogs are commonly considered a “keystone” species because their activities (burrowing and intense grazing) provide food and shelter for many other grassland species and have a large effect on community structure and ecosystem function (Power et al. 1996). Prairie dogs can contribute to overall landscape heterogeneity, affect nutrient cycling, and provide nest sites and shelter for wildlife (Whicker and Detling 1988). Species such as black-footed ferret, burrowing owl, prairie rattlesnake, and mountain plover are closely linked to prairie dog burrow systems for food and cover. Prairie dogs also provide an important prey resource for numerous predators including American badger, coyote, red fox, bald eagle, golden eagle, ferruginous hawk, and other raptors. Prairie dogs also can denude the surface by clipping aboveground vegetation and contributing to exposed bare ground by digging up roots (Kuford 1958; Smith 1967).

Sparsely populated, active black-tailed prairie dog burrows were observed throughout much of the western portions of the Property and just south of West 100th Avenue during the 2023 site visits (**Figure 7**). Prior to management activities occurring in or adjacent to active or inactive prairie dog towns, CPW recommends conducting burrowing owl clearance surveys in during the period from March 15 through October 31 (CPW 2021a). Management activities occurring from November 1 through March 14 would not require clearance surveys.

Western Burrowing Owl

The western burrowing owl (burrowing owl) is a small migrant owl listed by the state of Colorado as a threatened species and is federally protected under the Migratory Bird Treaty Act (MBTA). Primary threats to the burrowing owl include habitat loss and fragmentation, anthropogenic sources of mortality such as vehicular collisions, and loss of wintering grounds, largely in Mexico (McDonald, Korfanta, and Lantz 2004). In general, burrowing owls are found in grasslands with vegetation less than 4 inches high and a relatively large proportion of bare ground (Gillihan and Hutchings 2000). In Colorado, burrowing owls are usually associated with black-tailed prairie dog colonies (Andrews and Righter 1992).

The prairie dog burrows in and adjacent to the Property are potential habitat for burrowing owls and burrowing owls have been known to nest in the northeastern portion of the Property although none were observed during the 2023 site visits (**Figure 7**). Inadvertent killing of burrowing owls could occur during habitat management, construction, or projects during the breeding period, as well as up to a

month before egg laying and several months after young have fledged. CPW has a recommended buffer of ⅓ mile (660 feet) to ¼ mile (1,320 feet) surrounding active burrowing owl nests, depending on the nature of the disturbance, during the nesting season (March 15 through August 31) (Colorado Parks and Wildlife 2020). Burrowing owls could be impacted by activities if work would occur within CPW's recommended buffer of any burrows.

Raptors and Migratory Birds

A wide variety of bird species use different habitat types in the Property for shelter, breeding, wintering, and foraging at various times during the year. The grasslands, wetlands, and riparian areas in and adjacent to the Property are potential nesting habitat for migratory birds. During the 2023 site visits, ERO observed red-tailed hawk, Swainson's hawk, turkey vulture, American kestrel, red-winged black bird, great blue heron, redhead duck, cattle egret, killdeer, northern flicker, American crow, horned lark, Brewer's blackbird, common yellowthroat, house finch, barn swallow, ruddy duck, American white pelican, double-crested cormorant, black-billed magpie, vesper sparrow, great-tailed grackle, common grackle, Say's phoebe, western meadowlark, European starling, American robin, yellow-headed blackbird, and mourning dove in or soaring over the Property.

ERO surveyed the Property for nests during the 2023 site visits. ERO observed one inactive raptor nest and one active bald eagle nest site within ½ mile of the Property (**Figure 7**), however, the survey was conducted in June and July when full foliage makes nests hard to observe. No actively nesting birds were observed in or adjacent to identified nests during the 2023 site visits.

Bald Eagle and Golden Eagle

Several known bald nests occur within a ½-mile radius of the Property (the CPW-recommended buffer) including one active nest site and two historic nest sites (**Figure 7**), but no bald eagles were observed during the 2023 site visits. Additionally, the Property is in CPW-mapped bald eagle roost site, winter range, and winter forage, and is adjacent to a mapped bald eagle summer forage area (NDIS 2021). Winter range typically refers to those areas where bald eagles have been observed from November 15 through March 15 (CPW 2020).

The Property occurs within CPW-mapped breeding range for golden eagle, but no known golden eagle nest or roost sites occur in the Property or within a ½-mile radius of the Property (the CPW-recommended buffer). The closest known golden eagle nest is approximately 6 miles southwest from the Property (CPW 2023b). No golden eagles were observed during the 2023 site visits; however, golden eagles may forage on the open country in the vicinity of the Property. Individuals could be displaced by disturbance from noise and human presence during maintenance activities.

Species of Management Interest

CPW tracks a number of species that are regionally important for big game hunting and overall conservation, including sensitive or seasonal activity areas for several species. The Property contains

activity areas mapped by CPW for a variety of species (CPW 2021; Colorado Parks and Wildlife 2021b). These species are shown below in **Table 4**. Important wildlife habitats are shown on **Figure 7**, except for species activity maps covering the entirety of the Property, i.e. overall range, summer range, forage areas.

Table 4. CPW-tracked wildlife species in the vicinity of the Property.

Common Name	Scientific Name	CPW Seasonal Activity Area Present
NA	NA	High Priority Habitat – Aquatic Native Species Conservation Waters
Bald eagle	<i>Haliaeetus leucocephalus</i>	High Priority Habitat – Bald Eagle Active Nest Site
Bald eagle	<i>Haliaeetus leucocephalus</i>	High Priority Habitat – Bald Eagle Roost Site
Bald eagle	<i>Haliaeetus leucocephalus</i>	Summer Forage
Bald eagle	<i>Haliaeetus leucocephalus</i>	Winter Forage
Bald eagle	<i>Haliaeetus leucocephalus</i>	Winter Range
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	Medium Occurrence Area
Burrowing owl	<i>Athene cunicularia</i>	High Priority Habitat – Burrowing Owl Active Nest Site
Canada goose	<i>Branta canadensis</i>	Foraging Area
Canada goose	<i>Branta canadensis</i>	Winter Range
Mule deer	<i>Odocoileus hemionus</i>	Summer Range
Mule deer	<i>Odocoileus hemionus</i>	Overall Range
Olive-backed pocket mouse	<i>Perognathus fasciatus</i>	Overall Range
Preble’s meadow jumping mouse	<i>Zapus hudsonius preblei</i>	Overall Range
White-tailed deer	<i>Odocoileus virginianus</i>	Overall Range
White-tailed jackrabbit	<i>Lepus townsendii</i>	Overall Range

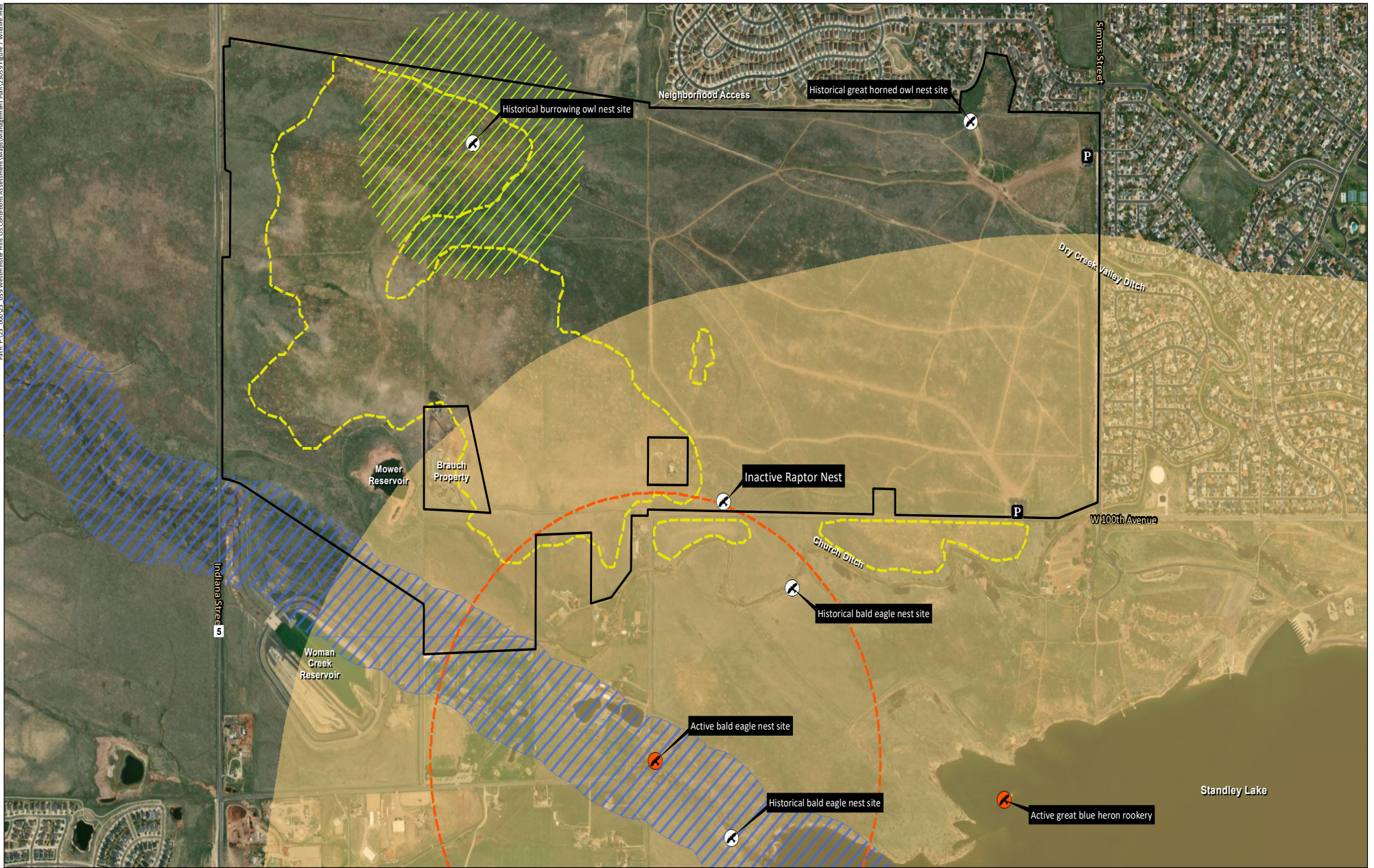
Source: (Colorado Parks and Wildlife 2021c; 2021b)

Photo 7. Black-tailed prairie dog colony



Photo 8. Bald Eagle Active Nest Site.





Westminister Hills Open Space Management Plan

- Open Space Boundary
- Active Prairie Dog Colony
- Bald Eagle Roost Site
- Aquatic Native Species Conservation Waters
- X

 Active Nest Site
- X

 Historical Nest Site
- 1/2-mile Bald Eagle Nest Buffer
- Burrowing Owl Active Nest Site



Figure 7
Wildlife Habitat

Prepared for: City of Westminister
File: 23059 Figure 7 Wildlife.mxd [dlh]
October 10, 2023



Recreation Impacts

Property Access

Designated Trails

The tread of the designated trails on the Property are generally in good condition, though these areas have experienced significant widening than original design. In areas of high congestion due to people and dogs, trail widening and bare ground is common. The off-leash area from the eastern parking lot on Simms Street has experienced the most significant widening.

When a trail is already in place, trampling and compaction may occur along the trail corridor (Jordan 2000). In high-use areas, widening of the trail tread is common, along with braiding and the development of parallel social trails. In addition to negative visual impacts of trail widening, some impacts such as the introduction of invasive plants and disturbance of wildlife can extend considerably further into natural landscapes (Tyser & Worley 1992). Substantial use reductions must occur on highly visited trails to achieve any significant reduction in trail widening and vegetation impacts (Marion and Leung 2001).

Social Trails

There are a significant number of social trails throughout the Property. These social trails range in severity of condition based on how frequently they are used by visitors and their location on the Property. Most social trails are concentrated on the east side of the Property, likely due to the off-leash dog park area. **Figure 2** illustrates the number of social trails on the Property.

According to the United States Department of Agriculture's (USDA) report on "Sustaining Wildlife with Recreation on Public Lands: A Synthesis of Research Findings, Management Practices, and Research Needs," both human and wildlife systems need to be considered to address issues which stem from human-wildlife interactions. As more visitors venture off sanctioned trails, the more likely they are to cause a disturbance to wildlife and sensitive wildlife habitats. The report emphasizes the importance of minimizing overlap with important habitats for species which are sensitive to recreation (Miller et al. 2020). This can be achieved with help from various strategies, though one example would be to implement a buffer zone for sensitive species and restrict recreational activity within a predetermined distance away from these habitats. A starting point for establishing buffer zones is identifying the distance at which species of concern respond to human activity (e.g., flight initiation distance, alert distance, etc.). A study conducted in Colorado concluded the zone of influence (i.e., where individuals were alert or flushed) for woodland and grassland bird species in the state is approximately 75 meters from trails for most species (Miller et al. 1998).

Fencing

Fencing has been utilized throughout the Property to indicate the boundary between the on and off-leash areas as well as for social trail closures. Smooth wire fencing is used along the west side of the Rocky Mountain Greenway Trail to prevent visitors from traveling off-trail and to specify where the

change in leash policy starts on the Property. Social trail closures are enacted by split rail wood fencing that vary in length and size based on the location.

Photo 9. Smooth wire fencing.



Photo 10. Large split rail fencing.



Photo 11. Medium split rail fencing with signage.



Photo 12. Church Ditch footbridge.



Dogs

Leash Compliance

The most problematic issue for the Property is the prevalence of off-leash dogs in the on-leash dog area. Off-leash dogs are approaching prairie dog colonies and sensitive burrowing owl nests on the western portion of the Property which can cause impacts to wildlife. Improving habitat conditions at Westminster Hills by limiting dog access may promote increased species presence of elk, deer, burrowing owls, and other ground nesting birds. The Rocky Mountain Greenway Trail also transects this portion of the Property making off-leash dogs a hazard to cyclists on the trail.

The Westminster Municipal Code (WMC) states dogs may be allowed off-leash if it does not impact the Open Space Purposes for which the land was acquired (Westminster 2023b). Current off-leash activity and volume do not meet this standard and should be addressed by the recommendations provided in the **Visitor and Recreation Use Management** section.

Congested Areas

Based on observations, the main area for congestion is at the dog park entrance off Simms Street. The trail heading west out of the parking lot ranges from roughly 60 to 160 feet wide due to the sheer volume of users in the vicinity at any given time.

The footbridge crossing Church Ditch (shown on **Figure 2** and in **Photo 12**) also causes congestion among user groups when the ditch is flowing. If multiple dogs and people are on the bridge at once, the dogs can become territorial making it difficult, and potentially dangerous, for other visitors and dogs to cross. The area nearby and around the footbridge is heavily trafficked by people and dogs.

Studies have shown that dogs can be avid chasers of wildlife and though they often stay within five meters of a trail, they can travel as far as 85 meters away from the trail (Lenth et al. 2008). Trails that allow off-leash dogs have a wider area of influence on mule deer and particularly can cause disruptions to small mammals and bird populations (Bekoff and Meaney 1997). Off-trail use elicits a greater flush response for grassland birds than on-trail use, possibly due to habituation to activity along designated trails (Miller et al. 2001).

Feces

Dog feces were notably present throughout the Property. High waste occurrences were noted at the eastern parking area on Simms Street and adjacent to the south parking area off West 100th Ave. While the volume of dog waste decreases on the western portion of the Property, it is still a significant issue. Anecdotally, it appears that dog owners with their dogs on-leash comply with waste removal more frequently than those with their dogs off-leash. According to the WMC, dog feces left behind by an owner is considered damage to property and shall be enforced as such (Westminster 2023a).

Signage and Wayfinding

Trail Signage

There is signage on the Property, though its consistency in messaging and tone varies. There are very few opportunities for wayfinding. Users are likely to use social trails because there are not many signs indicating where the designated trails are located on the Property.

Leash Compliance Signage

Leash compliance signage is well-noted along the smooth wire fencing across the Property. Roughly 50 percent of visitors observed blatantly walked past leash compliance signage and ignored the on-leash regulations.

Best Practices

Case Studies

Respect the Wild Campaign – Town of Eagle, Colorado

In Eagle, Colorado, community members often coexist with ungulates like elk and deer in their backyards, trails, and open spaces. This is a special part of living in Eagle, but with it comes extreme stress on the animals that are using town open spaces and properties for resting, calving, and surviving extreme winter conditions.

In an effort to combat the issues that have arisen from human-wildlife conflicts, particularly on trails and town open space properties, several local organizations teamed up to create the Respect the Wild Campaign (VVMTA 2023). This campaign has an overarching goal for the protection and preservation of wildlife with three key educational components:

1. **Respect Wildlife** – When you see wildlife, it’s essential to not approach or harass them. Human disturbances can exacerbate loss of body weight, reduce reproductive success, and decrease survivability of the fawns and calves.
2. **Respect Trail Closures** – Trails are closed to protect critical winter habitat and migratory & feeding routes. Violation of seasonal trail closures can keep wildlife from precious resources and resting spaces.
3. **Keep Your Dog Leashed** – When dogs chase wildlife, it burns precious calories and can separate infants and nursing mothers. In addition, just the presence of unleashed dogs may scare animals away from their natural grounds.

Community members who took the pledge to “respect the wild” were entered in a giveaway for one of ten \$100 gift certificates to local businesses. In addition to the pledge, partnering organizations pushed consistent and funny messaging across various social media platforms to further engage the public. See **Photo 13** below for an example. Messaging was well received because it was humorous, educational, consistent across multiple organizations, and not negative or shaming to users.

Photo 13. Respect the Wild campaign poster example.



Source: VVMTA 2023b.

The "Respect the Wild" campaign is successful because it taps into the local network of user groups and organizations who share the materials via their own social media accounts which helps to create community buy-in and promotes consistent messaging.

To review the campaign, visit <https://www.vvmta.org/respectthewild/>.

Open Space Seasonal Closures – City of Boulder Open Space and Mountain Parks

The City of Boulder Open Space and Mountain Parks' (OSMP) serves as an example of best practice for seasonal wildlife closures to inform management at Westminster Hills. OSMP introduces seasonal closures as a method for preserving sensitive habitat and wildlife in the 2005 Visitor Master Plan. The plan recognizes off-trail dogs and human impacts to ground nesting birds and provides recommended management strategies to improve these habitats during sensitive nesting periods. One recommendation is to enact a seasonal closure at the Gunbarrel/Heatherwood Passive Recreation Area (City of Boulder 2005). The Visitor Master Plan suggests requiring "seasonal closures or dog exclusions to protect seasonal nesting of grassland birds" due to recurring issues of off-trail dogs and humans around ground nesting birds. This recommendation is taken one step further in the subsequent

Grassland Ecosystem Management Plan by suggesting a redesignation of a portion of this property to a Natural Area to support seasonal closures and dog exclusions (City of Boulder 2009).

Additionally, a strategy that helps to achieve this goal is localized protection measures where wildlife closures are implemented in the vicinity of raptor nests or concentrated large mammal feeding areas. Closures are activated seasonally or temporarily to protect wildlife and people from each other or to prevent resource damage by visitors. Sensitive species which can enact a seasonal closure include but are not limited to ferruginous hawk, rough-legged hawk, northern harrier, golden eagle, American badger, and burrowing owl. Further, OSMP has designated multiple areas as “Habitat Conservation Areas” where all visitors and visitors’ activities are required to be on-trail unless approved by an off-trail permit to protect the habitat of the sensitive species (City of Boulder 2023). If sensitive species are known to occur or suspected to occur in a prairie dog colony, the area shall fall under Criteria for Designation in other Management Categories such as Multiple Objective Area, Transition Area, Removal Area, or if the presence of burrowing owls or badgers are confirmed that area shall be designated as a Grassland Preserve.

Boulder Reservoir Raptor Protections – City of Boulder OSMP

The Boulder Reservoir Master Plan (2012) utilizes innovative strategies to manage critical habitats and species. The plan prioritizes osprey conservation by preserving old utility poles and creating nesting platforms to address their limited nesting sites in the region. Buffer zones around these platforms are closed to human activity during nesting season (February 1 - September 10) and marked with clear signage. Monitoring of nests by City staff and volunteers further supports osprey conservation. The West Shore area, valued for its wetland and grassland habitat, is designated as a protected zone. Annual evaluations of wildlife closures, particularly for nesting species, underscore the commitment to habitat preservation. Volunteer engagement is integral, as volunteers annually monitor bird activity, document nests, and educate the public. Although the Site Management Plan is yet to be finalized, the Boulder Reservoir Management Plan emphasizes future development of access and wildlife area closure policies. Meanwhile, the existing strategies play a vital role in responsible habitat management and species conservation.

Off-Leash Management Strategies – Colorado Parks and Wildlife

Two of the largest off-leash designated areas in the Denver Metropolitan Area are found in Chatfield and Cherry Creek State Parks. Both sites employ a Daily Dog Off-Leash Pass where visitors wishing to let their dogs off-leash can purchase a \$3 daily pass for up to three dogs. At both parks, the owner must always have their dog within visual distance and under voice control when off-leash.

Cherry Creek State Park developed a Dog Off-Leash Area Management Plan in 2010 to outline a series of visions, goals, and practices to support the long-term success of their off-leash areas. A management plan approach was deemed necessary due to the ongoing issues with visitor experiences and conflicts, an increase in visitation and overall growth of the area, and a lack of regulatory framework and operative guidance (Cherry Creek State Park 2010). In this plan, a 2008 study was mentioned which determined

the effects of dog off-leash areas on birds and small mammals in Cherry Creek and Chatfield State Parks. The researchers identified significantly lower riparian bird densities in the dog off-leash areas and an overall lower abundance of small mammals in these areas as well (Ensign Technical Services, Inc. 2008). The specialized policies governing the dog off-leash area at Cherry Creek State Park prioritize safety, hygiene, proper upkeep, rule enforcement, and effective oversight.

Additionally, Chatfield State Park planned for rotational use of dog off-leash areas at various locations in the park. Ultimately these efforts were not successful due to staff capacity, management, and resource damage caused by insufficient vegetation recuperation between rotations.

Though signage, rules, and fees are helpful for curbing misbehavior, the main need revolves around enforcement. Without constant enforcement and monitoring of off-leash areas, it is difficult to completely combat the negative impacts to trails, vegetation, and sensitive wildlife habitats.

Off-Leash Management Strategies – Jefferson County Open Space

The Elk Meadow Park Dog Off-Leash Area (DOLA) in the Jefferson County Open Space (JCOS) system has experienced similar issues as Westminster Hills over the years. In 2017, JCOS published a report to provide background on the establishment of the Elk Meadow DOLA and to chronicle the park development and management efforts up to that point (JCOS 2017). As the first dog park owned and operated by JCOS, operation and management of the area presented a series of management challenges and public health and safety concerns. Since 2001, these issues have challenged the expertise and operational capacity of a traditional land management agency. One of the goals of the report was to illustrate how JCOS applied existing best management practices for design and operation of the DOLA to improve the sustainability of the area.

The Elk Meadow DOLA encompassed five acres of the southern portion of Elk Meadow Park, located south of Stagecoach Road in Evergreen. After years of heavy degradation due to intense visitation, the site experienced denuded areas of bare ground, water quality impacts from fecal contamination, soil compaction, noxious weed infestations, and a loss of high-quality wildlife habitat. In April of 2017, the Elk Meadow DOLA was closed for restoration and has not been reopened to off-leash use (now referred to as the Stagecoach South Site) (JCOS 2023). JCOS ultimately felt that despite their commitment and dedication of resources, they were not able to maintain the Elk Meadow DOLA in a sustainable manner (JCOS 2017). The park location, elevation, and terrain limited additional design improvements to mitigate resource impacts and provide additional visitor capacity.

Prior to the complete closure of the area, a community meeting series was held to discuss challenges and collect input on potential solutions. Staff provided detailed responses to the potential solutions generated at these meetings and discussed the feasibility, costs, benefits, and tradeoffs associated with pursuing the proposed solutions generated by the community. Many of the ideas could be applied and be of value for a new dog park, but would not remedy the site challenges and degradation at the Elk Meadow DOLA. In addition, many of the proposed solutions had either been tried previously, were not realistic, or were beyond the scope of implementation for a county agency. While the public meetings yielded a potential compromise that might have enabled a small area to potentially remain open in the

short term, in the final analysis, JCOS believed the site was unsuitable and does not retain the proper characteristics and infrastructure to support the increasing volume of visitors. As a result, after careful consideration of the land, visitors and the impacts, the decision was made to close the park for restoration, and to let the land rest.

The public was not initially supportive of the closure, but JCOS has committed to providing a suitable DOLA in the Evergreen area in the future. The Stagecoach Site is currently being restored and has seen major improvements in revegetation, wildlife habitat, and water quality.

Adjacent Public Lands Management – Rocky Flats National Wildlife Refuge

The Rocky Flats National Wildlife Refuge (Refuge) is located adjacent to Westminster Hills Open Space to the west. The Refuge has a pet policy that does not allow dogs on the property. The policy states the following reasoning:

“Many wildlife species perceive dogs (pets) as a predator and in some instances as prey to larger predatory species. Dogs (pets) can chase wildlife or be a visual threat to wildlife and birds, causing wildlife and birds to flee nesting, burrowing, feeding, and resting sites. The lingering scent of the dog (pet) can signal the presence of a predator, long after the dog (pet) is gone. The disturbance of wildlife burns much needed energy that animals need to survive and raise their young.”

-Refuge Pet Policy, Rocky Flats National Wildlife Refuge, n.d.

Though the policy is a statutory regulation which federally restricts amenities for pets, it has created a sanctuary for sensitive wildlife habitats.

Preliminary Management Recommendations

Resource management issues are specific occurrences or situations that can compromise the natural resource values on the Property. Known or potential resource management issues for the Property are listed below and addressed with management recommendations. Based on information and data gathered during the conditions assessment, ERO proposes the following management concerns and recommendations be considered in the forthcoming management plan.

Soil and Surface Water Quality Management

Environmental Concern – E. coli

Existing Condition:

Surface Soil: *E. coli* concentrations in surface soil on the Property were determined to be less than the laboratory method detection/reporting limit in the composite soil samples collected from four high traffic areas of the Property.

Surface Water: The Mower Reservoir was observed to have less human recreational use and off-leash dogs in the water, though ducks, geese, and other aquatic species activity was noted. Off-leash dogs were observed playing in and near the Church Ditch primarily in the east portion of the Property. Due to the type of activity the Property is used for, *E. coli* and other potential harmful pathogens may be present in the soil and surface water, as was shown in the surface water sampling conducted as part of this study. Additionally, the Church Ditch runs through agricultural lands and grazing areas which may affect increased levels of pathogens in the water.

Recommendations:

According to the EPA, when elevated *E. coli* concentrations are observed, it is important to respond in a timely manner by collecting additional data, posting a public notice, and/or closing the waterbody to recreational activities. The EPA provides these general actions to take when responding to elevated *E. coli* concentrations in recreational waters (EPA 2021):

- Take action immediately in the event of an exceedance to prevent human exposure to *E. coli*. Exposure can cause infection, diarrhea, and other illness in humans. Additional data may be needed to understand the cause of the exceedance.
- Issue a public notice and post advisories to notify the public that the waterbody is closed to recreational activities.
- To prevent future *E. coli* exceedances, identify the source of the bacteria. Depending on the source, different steps will be necessary to remediate the problem and reduce the likelihood of future events.

- Place permanent signage in known areas of recorded dog waste issues and around water bodies to remind owners to remove dog waste.
- Post all water bodies as being potentially unsafe for recreational use.

Vegetation Management

Noxious Weeds

Existing Condition: Noxious weed infestations were found throughout the Property (**Figure 5, Figure 6, and Appendix B**).

Recommendations:

- Develop a noxious weed management plan for the Property and implement recommended weed mitigation measures.
- Prioritize efforts on the area east of the Brauch Property where noxious weeds are the most dense.
- All herbicide treatments should follow CDOA recommendations and guidelines (CDOA 2022).

Grassland Disturbance

Existing Condition: Visitors with off-leash dogs were observed off-trail within the leash areas causing vegetation disturbance, erosion, and potentially spreading noxious weeds.

Recommendations:

- Install signage and implement off-trail closures.
- Cite visitors when recreating inappropriately within the closure areas.
- Identify areas of highest restoration potential and implement restoration plans.

Wildlife Management

Habitat Protection – Burrowing Owls

Existing Condition: Prairie dog burrows on the Property are potential nesting habitat for western burrowing owls, a state-listed threatened species, and off-leash dogs were observed running loose in the prairie dog colonies that have been identified as a historic burrowing owl nesting area.

Recommendations:

- Seasonally monitor the prairie dog colonies for nesting burrowing owls and implement appropriate closures with signage in known nesting areas during the nesting season.
- Cite visitors when dogs are off leash in the leash area.

- Designate the western grasslands as a “Protected Habitat Area” and prohibit dogs and off-trail usage for protection of ground nesting birds and consistency with U.S. Fish and Wildlife Service’s (USFWS) property regulations to the west.

Habitat Protection – Grassland Nesting Birds

Existing Condition: The mixed grassland and nonnative grassland on the Property provide nesting habitat for grassland nesting birds like the western meadowlark.

Recommendations:

- Implement seasonal closures to grasslands with signage areas during the nesting season.
- Cite visitors when recreating within the closure areas.
- Implement a vegetation enhancement plan to improve native grasslands.

Habitat Protection – Raptor and Bald Eagle Nests

Existing Condition: Large cottonwoods on the Property and adjacent to the Property provide nesting habitat and hunting perches for raptors like great-horned owl, red-tailed hawk, and bald eagle.

Recommendations:

- Seasonally monitor the potential nesting habitats for nesting raptors and implement appropriate seasonal closures with signage in known nesting areas during the sensitive nesting season.
- Cite visitors when recreating within the closure areas.

Habitat Protection – Potential Threatened and Endangered Species Habitat

Existing Condition: Riparian woodland and mesic wet meadow habitats on the Property provide potential habitat Preble’s and/or ULTO.

Recommendations:

- Both Preble’s and ULTO are species listed as threatened under the ESA and have potentially suitable habitat on the Property. Should projects involve habitat-disturbing activities in these areas, consultation with the Service would be required. If work is limited to outside of the Preble’s or ULTO habitat boundaries, ERO recommends submitting a habitat assessment to the Service requesting confirmation that the project would have no adverse impacts on any federally threatened or endangered species.

Visitor and Recreation Use Management

Trails

Existing Condition: Unplanned visitor access throughout the Property has resulted in vegetation trampling, social trail creation, and erosion.

Recommendations:

- Continue to monitor and inventory existing designated and social trails on the Property for maintenance needs.
- Review trail network to consolidate redundant trails and consider adopting or building trails to address missing links.
- Assess the viability of formally integrating specific social trails into the trail system where it makes sense.
 - For example, consider keeping appropriate access routes from neighborhoods and minimize connector social trails to provide visitors with sustainable options to enter and circulate the Property.
- Update and maintain trails following modern standards for trail grade, width, and drainage features to provide visitor access and circulation on the Property.
- Continue to actively monitor social trails and act quickly to close new undesigned trails.
- Install trail edge fencing to discourage off-trail use in sensitive areas.
- Institute on-trail requirements in sensitive habitat areas to protect wildlife.
- Implement a buffer zone for sensitive species and habitats which restricts recreational activity.

Property Access

Existing Condition: The Property is currently only formally accessible in two locations, as well as two neighborhood access points, which has caused concentrated use in these areas and denies visitation from the west and north sides of the Property.

Recommendations:

- Consider formalizing access to the Property in other areas where it is currently unavailable.
 - For example, consider a formalized access from the neighborhood on the northern boundary of the Property.

Dogs

Existing Condition: Dogs are generally congregating on the off-leash portion of the Property although many visitors are continuing to keep their dogs off-leash on the western, on-leash only portion of the Property which impacts restoration and sensitive wildlife habitats.

Recommendations:

- Improve habitat conditions at Westminster Hills by limiting dog access which may promote increased species presence of elk, deer, burrowing owls, and other ground nesting birds.
- Cite visitors with off-leash dogs beyond the permitted boundary.
- Increase signage of leash regulation change along fencing.
- Provide additional signage indicating reasons for on-leash regulations (“to reduce impacts to wildlife,” “for safety of dogs and cyclists on the regional trail,” etc.).

- Consider reducing impact from off-leash dogs by reducing the off-leash area and clearly delineating boundaries. Return the off-leash designation to its original intent of providing a local off-leash area, not a regional destination.

Signage

Existing Condition: Existing signage throughout the Property is often inconsistent and/or nonexistent in critical wayfinding, policy change, and social trail closure areas.

Recommendations:

- Provide wayfinding opportunities throughout the Property by installing maps that indicate the visitor's location within the trail system.
 - Property maps with all designated trails should be located at each parking lot and large trail junctions with "You Are Here" icons on each map.
- Coordinate wayfinding with simple and humorous messaging to inform visitors of Property rules while also providing educational information regarding vegetation, wildlife habitat, and proper trail and dog etiquette.
- Install periodic and consistent signage indicating the change in leash policy along the smooth-wire fencing boundary.
- Create and install consistent signage on social trail closures.
 - For example, instead of "Trail Closed" use language like "Restoration in Progress, Please Keep Off" as it will allow users to make more informed decisions as to why they should stay on designated trails.
- Create a sitewide educational signage program that emphasizes the unique value of these Open Space Lands.

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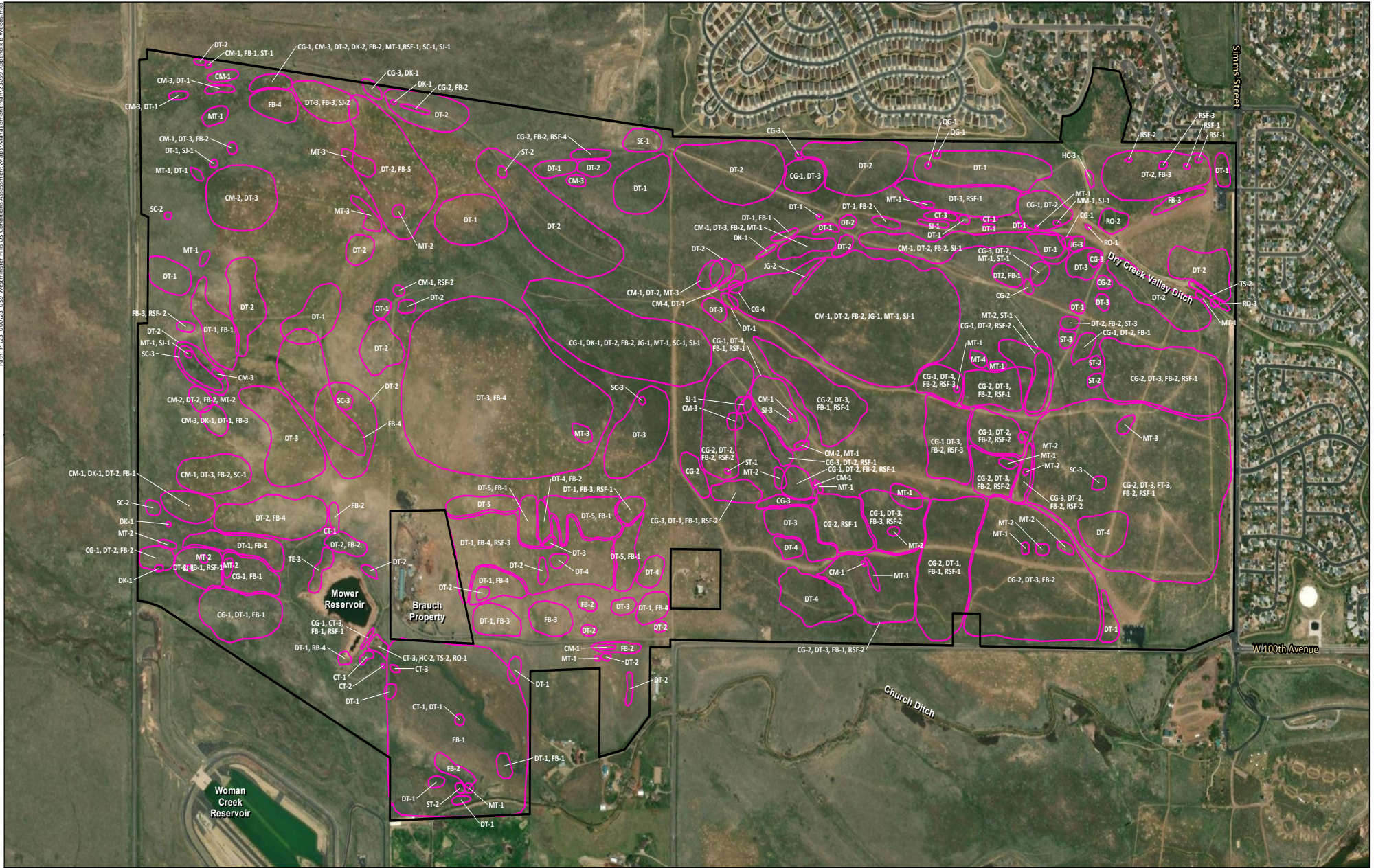
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Appendix A Prevalent Plant Species Observed on the Property

Scientific Name	Common Name
<i>Abutilon theophrasti</i>	Velvetleaf
<i>Achillea millefolium</i>	Common yarrow
<i>Aegilops cylindrica</i>	Jointed goatgrass
<i>Agropyron cristatum</i>	Crested wheatgrass
<i>Ambrosia artemisiifolia</i>	Annual ragweed
<i>Amorpha fruticosa</i>	False-indigo bush
<i>Apocynum cannabinum</i>	Dogbane
<i>Artemisia frigida</i>	Prairie sagewort
<i>Artemisia ludoviciana</i>	White sagebrush
<i>Astragalus</i> spp.	Milkvetch
<i>Bassia scoparia</i>	Kochia
<i>Bouteloua gracilis</i>	Blue grama
<i>Bouteloua dactyloides</i>	Buffalograss
<i>Bromus inermis</i>	Smooth brome
<i>Bromus japonicus</i>	Japanese brome
<i>Bromus tectorum</i>	Cheatgrass
<i>Carex</i> spp.	Sedges
<i>Carduus nutans</i>	Musk thistle
<i>Castilleja</i> spp.	Indian paintbrush
<i>Chenopodium album</i>	White goosefoot
<i>Convolvulus arvensis</i>	Field bindweed
<i>Dalea purpurea</i>	Prairie purple clover
<i>Descurainia sophia</i>	Flixweed
<i>Elaeagnus angustifolia</i>	Russian olive
<i>Ericameria nauseosa</i>	Rubber rabbitbrush

<i>Erigeron</i> spp.	Fleabane
<i>Erodium cicutarium</i>	Redstem fillaree
<i>Festuca</i> spp.	Fescue
<i>Grindelia squarrosa</i>	Curlytop gumweed
<i>Helianthus annuus</i>	Common sunflower
<i>Hesperostipa comata</i>	Needle and thread grass
<i>Heterotheca villosa</i>	Hairy false golden aster
<i>Hordeum brachyantherum</i>	Meadow barley
<i>Hordeum jubataum</i>	Foxtail barley
<i>Hypericum perforatum</i>	Common St. John's-wort
<i>Juncus</i> spp.	Rushes
<i>Koeleria macrantha</i>	Jungrass
<i>Lepidium densiflorum</i>	Common pepperweed
<i>Linaria dalmatica</i>	Dalmatian toadflax
<i>Linum lewisii</i>	Lewis flax
<i>Lithospermum occidentale</i>	Western false gromwell
<i>Medicago sativa</i>	Alfalfa
<i>Melilotus officinalis</i>	Yellow sweetclover
<i>Nassella viridula</i>	Green needlegrass
<i>Onopordum acanthium</i>	Scotch thistle
<i>Opuntia</i> spp.	Prickly pear
<i>Pascopyrum smithii</i>	Western wheatgrass
<i>Penstemon</i> spp.	Penstemon
<i>Phalaris arundinacea</i>	Reed canarygrass
<i>Populus deltoides</i> spp. <i>monilifera</i>	Plains cottonwood
<i>Potentilla recta</i>	Sulfur cinquefoil
<i>Ratibida columnifera</i>	Prairie coneflower
<i>Ribes aureum</i>	Golden current
<i>Rosa woodsii</i>	Woods' rose

<i>Rumex crispus</i>	Curly dock
<i>Salix amydaloides</i>	Peachleaf willow
<i>Salix exigua</i>	Sandbar willow
<i>Salsola tragus</i>	Prickly Russian thistle
<i>Schizachyrium scoparium</i>	Little bluestem
<i>Sphaeralcea coccinea</i>	Scarlet globemallow
<i>Taraxacum spp.</i>	Dandelion
<i>Thlaspi arvense</i>	Field pennycress
<i>Tradescantia occidentalis</i>	Prairie spiderwort
<i>Tragopogon dubius</i>	Yellow salsify
<i>Typha angustifolia</i>	Narrowleaf cattail
<i>Typha latifolia</i>	Broadleaf cattail
<i>Verbascum blattaria</i>	Moth mullein
<i>Verbascum Thapsus</i>	Common mullein
<i>Yucca glauca</i>	Soapweed



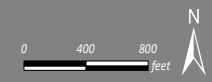
Westminster Hills Open Space Management Plan

- Open Space Boundary
- State Listed Noxious Weeds

- Noxious Weeds
- CG - Cheatgrass - List C
 - CM - Common Mullein - List C
 - CT - Canada Thistle - List B
 - DK - Diffuse Knapweed - List B
 - DT - Dalmatian Toadflax - List B
 - FB - Field Bindweed - List C
 - HC - Hoary Cress - List B
 - JG - Jointed Goatgrass - List B
 - MM - Moth Mullen - List B
 - MT - Musk Thistle - List B
 - QG - Quack Grass - List C
 - RO - Russian Olive - List B
 - RSF - Redstem Filaree - List C
 - SC - Sulfur Cinquefoil - List B
 - SJ - Common St. Johnswort - List C
 - SE - Siberian Elm - List C
 - ST - Scotch Thistle - List B
 - TE - Common Teasel - List B

- Noxious Weed Density
- 1 = 10% or Less
 - 2 = 11-20%
 - 3 = 21-50 %
 - 4 = 51-80%
 - 5 = 81% or Greater

Appendix B
State Listed Noxious Weeds



Prepared for: City of Westminster
File: 23059 Appendix B Weeds.mxd [dlh]
January 9, 2024



Appendix C. Wildlife Commonly Found in the Vegetation Communities on the Property

Scientific Name	Common Name	Grassland (Mixed and Nonnative)	Riparian Woodland	Emergent Marsh/Wet Meadow/Open Water	Observed During 2023 Site Visit
<i>Accipiter cooperii</i>	Cooper's hawk	X	X		
<i>Accipiter striatus</i>	Sharp-shinned hawk	X	X		
<i>Agelaius phoeniceus</i>	Red-winged black bird		X	X	X
<i>Ammodramus savannarum</i>	Grasshopper sparrow	X			
<i>Anas carolinensis</i>	Green-winged teal			X	
<i>Anas platyrhynchos</i>	Mallard	X		X	
<i>Archilochus alexandri</i>	Black-chinned hummingbird	X	X	X	
<i>Ardea Herodias</i>	Great blue heron		X	X	X
<i>Aquila chrysaetos</i>	Golden eagle	X	X		
<i>Athene cucularia</i>	Burrowing owl	X			
<i>Aythya americana</i>	Redhead duck			X	X
<i>Bubo virginianus</i>	Great horned owl		X		
<i>Bubulcus ibis</i>	Cattle egret			X	X
<i>Buteo jamaicensis</i>	Red-tailed hawk	X	X	X	X
<i>Buteo swainsoni</i>	Swainson's hawk	X	X		X
<i>Canis latrans</i>	Coyote	X	X	X	
<i>Carduelis tristis</i>	American goldfinch	X	X	X	
<i>Cathartes aura</i>	Turkey vulture	X	X	X	X
<i>Cervus canadensis</i>	Elk	X	X	X	
<i>Charadrius vociferus</i>	Killdeer	X			X

Westminster Hills Open Space
 Conditions Report
 Jefferson County, Colorado

Scientific Name	Common Name	Grassland (Mixed and Nonnative)	Riparian Woodland	Emergent Marsh/Wet Meadow/Open Water	Observed During 2023 Site Visit
<i>Chordeiles minor</i>	Common nighthawk	X	X		
<i>Chrysemys picta</i>	Painted turtle			X	
<i>Circus hudsonius</i>	Northern harrier	X		X	
<i>Colaptes auratus</i>	Northern flicker		X	X	X
<i>Coluber constrictor mormo</i>	Yellow-bellied racer	X			
<i>Corvus brachyrhynchos</i>	American crow	X	X	X	X
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat		X		
<i>Cyanocitta cristata</i>	Blue jay		X		
<i>Cyanocitta stelleri</i>	Steller's jay		X		
<i>Cynomys ludovicianus</i>	Black-tailed prairie dog	X			X
<i>Eptesicus fuscus</i>	Big brown bat		X		
<i>Eremophila alpestris</i>	Horned lark	X			X
<i>Erethizon dorsatum</i>	American porcupine		X		
<i>Euphagus cyanocephalus</i>	Brewer's blackbird	X	X	X	X
<i>Falco columbarius</i>	Merlin	X	X	X	
<i>Falco mexicanus</i>	Prairie falcon	X	X	X	
<i>Falco sparverius</i>	American kestrel	X	X	X	X
<i>Geothlypis trichas</i>	Common yellowthroat			X	X
<i>Haemorhous mexicanus</i>	House finch	X	X		X

Scientific Name	Common Name	Grassland (Mixed and Nonnative)	Riparian Woodland	Emergent Marsh/Wet Meadow/Open Water	Observed During 2023 Site Visit
<i>Haliaeetus leucocephalus</i>	Bald eagle	X	X	X	
<i>Hirundo rustica</i>	Barn swallow	X	X	X	X
<i>Junco hyemalis</i>	Dark-eyed junco	X	X	X	
<i>Lanius ludovicianus</i>	Loggerhead shrike	X			
<i>Lasionycteris noctivagans</i>	Silver-haired bat		X		
<i>Lasiurus borealis</i>	Eastern red bat		X		
<i>Lasiurus cinereus</i>	Hoary bat		X		
<i>Lepus californicus</i>	Black-tailed jackrabbit	X			
<i>Mareca spp.</i>	Widgeon			X	
<i>Mareca strepera</i>	Gadwall			X	
<i>Meleagris gallopavo</i>	Wild turkey	X	X	X	
<i>Mephitis mephitis</i>	Striped skunk	X	X	X	
<i>Molothrus ater</i>	Brown-headed cowbird	X	X	X	
<i>Mustela erminea</i>	Short-tailed weasel	X	X	X	
<i>Myotis lucifungus</i>	Little brown myotis		X		
<i>Myotis thysanodes</i>	Fringed myotis		X		
<i>Neogale frenata</i>	Long-tailed weasel	X	X	X	
<i>Odocoileus hemionus</i>	Mule deer	X	X	X	
<i>Ondatra zibethicus</i>	Muskrat			X	
<i>Oxyura jamaicensis</i>	Ruddy duck			X	X

Scientific Name	Common Name	Grassland (Mixed and Nonnative)	Riparian Woodland	Emergent Marsh/Wet Meadow/Open Water	Observed During 2023 Site Visit
<i>Pelecanus erythrorhynchos</i>	American white pelican			X	X
<i>Peromyscus maniculatus</i>	Deer mouse	X	X	X	
<i>Peucaea cassinii</i>	Cassin's sparrow	X			
<i>Phalacrocorax auratus</i>	Double-crested cormorant			X	X
<i>Phrynosoma hernandesi</i>	Short-horned lizard	X			
<i>Pica hudsonia</i>	Black-billed magpie	X	X		X
<i>Pipilo maculatus</i>	Spotted towhee		X	X	
<i>Pituophis catenifer</i>	Bull snake	X	X	X	
<i>Poecile atricapilla</i>	Black-capped chickadee	X	X	X	
<i>Pooecetes gramineus</i>	Vesper sparrow	X			X
<i>Procyon lotor</i>	Raccoon	X	X	X	
<i>Quiscalus mexicanus</i>	Great-tailed grackle		X	X	X
<i>Quiscalus quiscula</i>	Common grackle		X	X	X
<i>Rana pipiens</i>	Northern leopard frog		X	X	
<i>Sayornis saya</i>	Say's phoebe	X			X
<i>Sceloporus undulatus</i>	Fence lizard	X	X		
<i>Selasphorus platycercus</i>	Broad-tailed hummingbird		X		

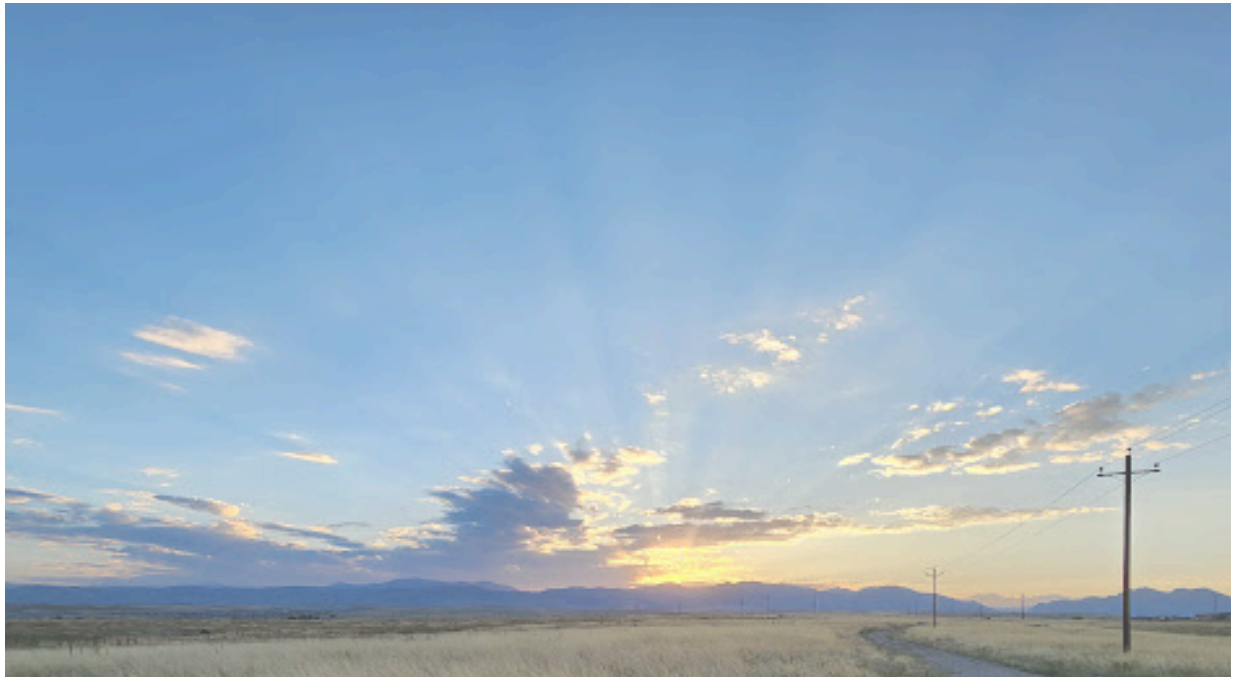
Scientific Name	Common Name	Grassland (Mixed and Nonnative)	Riparian Woodland	Emergent Marsh/Wet Meadow/Open Water	Observed During 2023 Site Visit
<i>Setophaga coronata</i>	Yellow-rumped warbler		X		
<i>Setophaga petechia</i>	Yellow warbler		X		
<i>Sialia mexicana</i>	Western bluebird	X	X	X	
<i>Sitta carolinensis</i>	White-breasted nuthatch		X	X	
<i>Sitta pygmaea</i>	Pygmy nuthatch		X		
<i>Spizella passerina</i>	Chipping sparrow	X	X	X	
<i>Sturnella neglecta</i>	Western meadowlark	X			X
<i>Sturnus vulgaris</i>	European starling	X	X	X	X
<i>Sylvilagus sp.</i>	Cottontail rabbit	X	X		X
<i>Turdus migratorius</i>	American robin	X	X	X	X
<i>Ursus americanus</i>	American black bear		X		
<i>Vermivora virginiae</i>	Virginia warbler		X	X	
<i>Vulpes vulpes</i>	Red fox	X	X	X	
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed blackbird			X	X
<i>Zenaida macroura</i>	Mourning dove	X	X	X	X



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Meeting Synthesis & Next Steps

Community Advisory Team - Westminster Hills Open Space Off-Leash Dog Area

Tuesday, May 7, 2024

This packet contains a synthesis of the meeting and next steps for the Westminster Hills Open Space Off-Leash Dog Area Community Advisory Team

Table of Contents

1. Deliverables Accomplished During the Session
2. Key Decisions, Action Commitments, and Next Steps

1. Deliverables Accomplished During the Session





- Finalize the recommendations on how to move forward with the off-leash dog portion of the Westminster Hills Open Space for staff consideration and feasibility analysis

This includes:

- Finalizing the list of recommended strategies
- Discussing recommended geographic boundary ongoing for the off-leash dog portion of open space







2. Key Decisions, Action Commitments, and Next Steps (see full slide deck [HERE](#))

Key Decision: Confirmed a list of recommendations on how to move forward with the off-leash dog portion of the Westminster Hills Open Space for staff consideration and feasibility analysis

	RECOMMENDATIONS FROM THE CAT	TOPICS THIS CONNECTS TO
	Enhance education and awareness efforts and materials, including improved signage on-site	Environment & Wildlife, Visitation, Parking / Traffic, Enforcement, Safety
	Develop a clear, intentional, and strategic trail map that reflect how people are actually using the space	Trails, Health & Wellness, Safety, Social / Community Impacts
	Relocate poop waste and garbage cans to be strategically placed along revitalized trail route, and adding more as needed	Environment & Wildlife, Trails
	Hold community clean-up days that incorporate educational components on the importance of doing this	Environment & Wildlife, Social / Community Impacts



Key Decisions, Action Commitments, and Next Steps (continued)

RECOMMENDATIONS FROM THE CAT (continued)	TOPICS THIS CONNECTS TO
 <p>Increase parking enforcement by implementing parking permit system for the open space with a complementary permitting strategy within the neighborhood to prevent parking to overflow into the neighborhood</p>	<p>Parking / Traffic, Enforcement, Neighborhood, Safety</p>
<p>Expand number of dog parks elsewhere to reduce the impact on this open space</p>	<p>Environment & Wildlife, Visitation, Health & Wellness, Social/Community Impacts</p>
 <p>Engage community members and groups to adopt a trail for cleanup</p>	<p>Environment & Wildlife, Trails, Social/Community Impacts</p>
  <p>Add markers / guards to trails and compliance to stay on trails</p>	<p>Trails, Enforcement, Safety</p>
 <p>Implement muddy day closures</p>	<p>Environment & Wildlife, Trails, Safety</p>
 <p>Implement automatic parking and access gates as well as gates for muddy day closures</p>	<p>Environment & Wildlife, Visitation, Parking / Traffic, Trails, Enforcement, Safety</p>
<p>Allocate additional staffing / FTE and financial resources to Parks, Recreation, and Open Space to support implementation of these recommendations</p>	<p>Environment & Wildlife, Visitation, Parking / Traffic, Trails, Enforcement, Neighborhood, Health & Wellness, Safety, Social/Community Impacts</p>
<p>Clean up neighborhood signage around no parking to be more specific and clearer to users of the Westminster Hills Open Space that they are not allowed to park there</p>	<p>Parking / Traffic, Enforcement, Neighborhood, Safety</p>
<p>Hold stewardship education 'pop ups' on-site with a complementary volunteer trail ambassador program</p>	<p>Trails, Enforcement, Social/Community Impacts</p>



Key Decisions, Action Commitments, and Next Steps (continued)

Additional strategies were identified by the CAT; these strategies did not have clear consensus for adding to the list of recommendations

- If areas are identified for restoration or revegetation, they would be automatically considered on-leash only
- Reduce the size of the off-leash dog portion of the open space
- Create a tag system for dog owners, which would illustrate they understand the rules and expectations of the Open Space
- Implement a 'break' from using the park and incorporate a 're-launch' to help reset expectations for users
- Reroute the Greenway Trail
- Implement an online reservation system for visiting the Open Space, in particular for high-demand times
- Add in irrigation to the off-leash dog area to promote growth of grass
- Implement a visitation cap on weekends
- Implement timed entry into the Open Space
- Implement durable surface treatments
- Issue traffic cones to neighbors to help enforce parking zones

Additional strategies identified outside of the CAT

The [Westy Dog Park Guardians' Briefing Book](#) includes specific recommendations around the following:

- Rerouting the Greenway Trail
- Using Cherry Creek as a Model
- Drought
- Non-Native Trees
- Urban Development
- Education
- Fencing
- Trash Receptacles
- Dog Fees
- Litter Clean Up
- Educational Signage
- Social Trails and Impact to Wildlife
- Trail Widening and Vegetation Trampling
- Noxious Weeds
- Ditch and E. Coli Contamination in Water
- Parking
- Signage
- Zoning Issues

[November 2023 Presentation](#) includes specific recommendations from staff around the following:

- Area Designation and Dog Management Recommendations
- Trail Management
- Educational Opportunities
- Infrastructure and Signage
- Restoration and Invasive Species Management

[Westminster Hills Open Space Conditions Report](#) includes specific recommendations around the following:

- Soial and Surface Water Quality Management
- Vegetation Management
- Wildlife Management
- Visitor and Recreation Use Management

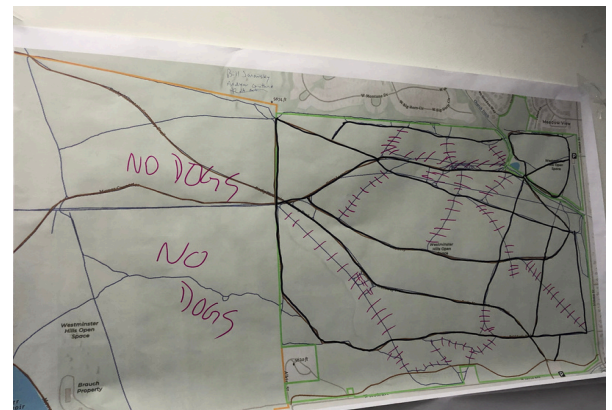
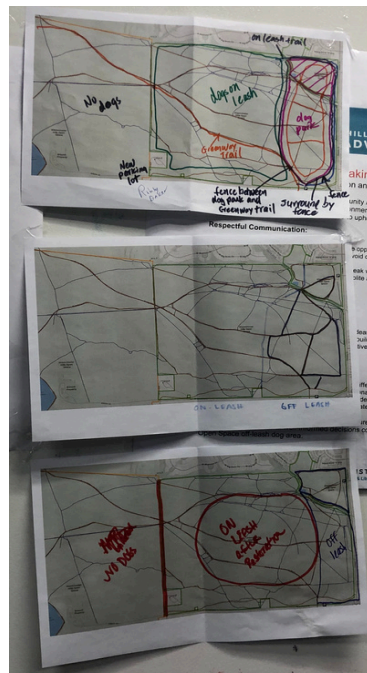
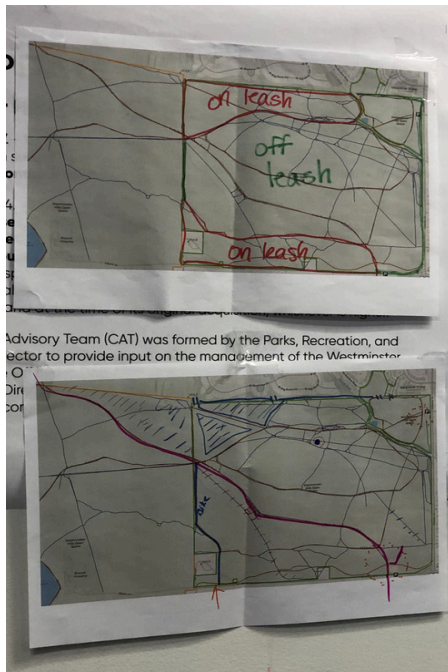


Key Decisions, Action Commitments, and Next Steps (continued)

Key Discussion: Dialogued about a recommended geographic boundary ongoing for the off-leash dog portion of open space (No consensus reached by the CAT on this)

CAT members developed individual and small group maps recommending what they believe the geography of the off-leash area should look like moving forward.

- Maps varied significantly from each other (see images below), and ranged in size of the off-leash dog area from adopting the original recommendation of 32 acres shared through the ERO report to keeping the area its full 420 acres.
- Several maps recommended a buffer area in which dogs could remain on-leash as visitors enter the open space.
- All maps agreed to preserve the left side of the Open Space as not open to dogs.



Next Steps

- Staff will put together a matrix of the recommended strategies the CAT identified with information about ease of implementation and anticipated costs and share this back with the group electronically
- Staff will present CAT recommendations and analysis to City Manager
- CAT recommendations and staff analysis will be shared with City Council in June



City of Westminster Parks, Recreation and Libraries (PRL) mission statement: *“Together we create exceptional opportunities for a vibrant community with a commitment to nature, wellness, and literacy.”*

Westy Dog Park Guardians mission statement: *“To be a responsible community partner with the City of Westminster.”*



Westy Dog Park Guardians WHOS Dog Park Research and Recommendations

The Westy Dog Park Guardians is a grassroots organization that was established in January 2024 with the goal of preserving and protecting the Westminster Hills Open Space Off-Leash Dog Park (WHOS Off-Leash Dog Park). The Guardians have worked tirelessly as a pack to gather, analyze, summarize, substantiate, and present the information about WHOS to the community and to Westminster’s elected government. These efforts have been compiled into the Guardians’ Research and Recommendations (GRR). The Guardians respectfully submit GRR to the Honorable Mayor Nancy McNally, Mayor Pro Tem Sarah Nurmela, and the Westminster City Council for their consideration and approval.

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Introduction

The purpose of this Westy Dog Park Guardians WHOS Off-Leash Dog Park Research and Recommendations (GRR) document is to request that the City Council of Westminster:

1. Acknowledge, affirm, and protect the current 420-acre WHOS Off-Leash Dog Park that has existed for dog owners and their dogs since 2000, and at its current size since 2009, confirming that the area is intended for active off-leash dog use by dog owners; andⁱ
2. Collaborate with the Westy Dog Park Guardians and community stakeholders to increase the stewardship of, and improve the conditions at, the beloved WHOS Off-Leash Dog Park, which will optimize this regional economic asset and address the concerns of Westminster Parks, Recreation & Libraries (PRL) that WHOS Off-Leash Dog Park is being “negatively impacted by overuse.”ⁱⁱ

The Westy Hills Dog Park Guardians offer a summary of research that demonstrates:

1. Substantial public support to retain the off-leash dog park at its current size;
2. Residents of the Denver Metro Area love their dogs, and recreation with their dogs is of utmost importance to them;
3. The WHOS Off-Leash Dog Park amounts to approximately 6.4% of the 6,600 acres of parks and open space enjoyed by the dog lovers of Westminster and surrounding communities, and it has been marketed, developed, managed, and used for at least two recreational activities, off-leash dog use and cycling use, for at least 24 years;
4. Questions and concerns about the data provided in the ERO Westminster Hills Open Space Conditions Reportⁱⁱⁱ;
5. The unique restorative contributions of dogs to people;
6. The importance of exercise to brain health and mental health;
7. The value of a space dedicated to diverse people and dogs recreating together naturally; and
8. A list of potential solutions to the concerns raised by PRL.

We are asking to work **together** with the City Council and PRL on the care and stewardship of the WHOS Off-Leash Dog Park because:

- 89.8% of the respondents to Community Feedback Survey 2 want to retain the 420 acres at Westminster Hills as an off-leash dog park;
- Coloradans love their dogs, dog parks are a very small portion of PRL resources, and dog owners are likely underserved by PRL resources;
- Dogs are likely not the exclusive cause of the PRL issues of concern;
- Dogs serve people in unique and important ways, and they also deserve to exercise;
- Exercise is important to people’s physical and mental health;
- This is an opportunity for the City of Westminster to provide and enjoy the recreational and economic benefits of serving dog lovers;
- We care about our neighbors and we seek to find solutions to the impacts weekend dog park use causes in the neighborhoods that surround the park;

- Upon completion of the Indiana bridge, the Greenway Trail will become an important route for regional cyclists. With Broomfield withdrawing from the project, the Trail is scheduled to be rerouted through Westminster property in the western portion of WHOS. This is a critical opportunity for a long-term solution by updating the reroute to a path along the southern border of WHOS; a plan met with preliminary positive feedback from Bike Jeffco; and

Dog owners who exercise with their dogs at WHOS Off-Leash Dog Park also love nature, the environment, and our experiences in them, and we want to collaborate on solutions and continued stewardship of the park. We are an extremely engaged population with a strong desire to improve the WHOS Off-Leash Dog Park.



Results of Community Feedback

PRL has conducted three public surveys: the Visitor Survey in summer 2023 (Survey 1), the Community Feedback Survey that was open to the public through February 15, 2024 (Survey 2), and the Management Options Survey open to the public March 6-March 24, 2024 (Survey 3).

Survey 1, which, although no numbers are provided by the PRL graph (slide 34 of Visitor Survey results on PRL website), appear to show that some **70% of respondents would be extremely dissatisfied or dissatisfied with any reduction to the off-leash dog area.**^{iv}

The **Survey 2** data is very similar to data collected from Survey 1, although no results are reported on the City of Westminster website. Our analysis of Survey 2, as categorized by the four options presented on the new Survey 3, shows that out of **883 responses**, the public supports:

- **Option 1 - No change to the size of the off-leash area – 89.8% (793)**
- Option 2 - Off-leash area larger than 33 acres but smaller than 400 acres - **2.7% (24)**
- Option 3 - Conditions assessment recommendation of reducing off leash area to 33 acres - **2.8% (25)**
- Option 4 - Eliminate off-leash at WHOS and create more off-leash dog parks throughout the city - **2.5% (22)**
- Comments recorded but n/a to any category - **2.2% (19)**^v

During the March 6, 2024 Public Meeting, PRL referred to the data from Survey 2. PRL provided information that 47% of respondents wanted no change to the size of the off-leash area and had no other percentages to report. PRL used this inaccurate and incomplete information to develop a new survey, the WHOS Area Management Options survey - Survey 3 - posted to the PRL website on March 6, 2024.

The Survey 3 data continues to show strong support for “no change to the size of the off-leash area” with 78% of respondents indicating support or strong support.^{vi}

To summarize the results of community feedback regarding the PRL plans to significantly reduce or eliminate off-leash dog use at the WHOS Off-Leash Dog Park, from surveys conducted by PRL in the last year, **the responses showed an overwhelming average of almost 80% wanting to retain full off-leash dog use at the park**, specifically:

- **Survey 1: 70%** of respondents would be extremely dissatisfied or dissatisfied with any reduction to the off-leash dog area;
- **Survey 2: 89.8% (883 respondents)** support no change to the size of the off-leash area; and
- **Survey 3: 78%** of respondents indicate support or strong support for no change to the size of the off-leash area.

Another indicator of the will of the people is the **Change.org Petition** supporting the retention of the entire 420-acre WHOS Off-Leash Dog Park, which currently has over **8,000 signatures.**^{vii}

Coloradans Love Their Dogs

In Denver, there are more dogs than children,^{viii} and 27.1% of Colorado households have a dog.^{ix} Coloradans love their dogs so much, they ranked 4th in a study examining which dog owners spoil their dogs the most.^x Coloradans value their relationships with their dogs so much that 46% report hosting a celebration for and with their dogs; 43.2% report taking their dog to dog-friendly activities; and 41.3% take their dog on vacation with them.^{xi}

A recent survey by Rover and Zillow showed that Denver tops the list for dog-friendly cities because dog owners put their dog's well-being at or near the top of their criteria for deciding where to relocate.^{xii} Being home with our dogs during the pandemic strengthened our already considerable bonds with our dogs. Among dog owners who were surveyed, 86% reported that dog-friendly amenities were a factor in determining where to move.^{xiii}

Westminster Dog Parks

In addition to WHOS Off-Leash Dog Park, there are only two other dog parks in Westminster, The Big Dry Creek Dog Park (no acreage listed, but it is within the 18-acre Big Dry Creek Park) and The Little Dry Creek Dog Park (1.75 acres).^{xiv} The difference between the WHOS Off-Leash Dog Park and the Big Dry Creek Dog Park and The Little Dry Creek Dog Park is that dog owners can exercise alongside their dogs, and their dogs can exercise at their own pace, at WHOS Off-Leash Dog Park.

The WHOS Off-Leash Dog Park is approximately 6.4% of the 6,600 acres of parks and open space enjoyed by the dog lovers of Westminster and surrounding communities. WHOS is also enjoyed by folks who walk, run, and cycle without dogs.

Although the Westminster Hills Open Space area may have been purchased with a specific use in mind, **the 420-acre East side has been devoted to off-leash dog use for 24 years**, beginning in 2000, and at its current size since 2009.^{xv} By comparison, there are over 150 miles of multi-use trails in Westminster, which are enjoyed by cyclists, runners, and walkers.^{xvi}

The results of three public surveys, the considerable support expressed at the March 6, 2024 Public Meeting, and the continuous advocacy demonstrated by the Guardians since January 2024, when most park users became aware of the PRL plans to greatly limit or eliminate off-leash use at the WHOS Off-Leash Dog Park, suggest that dog owners who wish to exercise with their off-leash dogs may be an underserved population. The City of Westminster can seize this opportunity to improve our crown jewel, the WHOS Off-Leash Dog Park.

Engaging the public has revealed a considerable desire for this population to recreate in spaces like the WHOS Off-Leash Dog Park. Westminster should consider the creation of another similar dog park, in order to serve this part of the community, and expand the economic rewards that would come with an expansion of off-leash dog parks for dog lovers who spend time and money in Westminster.

Economic Benefits of the WHOS Off-Leash Dog Park

Local businesses saw a dramatic loss of revenue when Standley Lake was closed to recreational, trailered boating. Based on the information provided by the City of Westminster and Jefferson County, the Westy Dog Park Guardians believe any reduction in size to the WHOS Off-Leash Dog Park will have similar results.

According to the PRL slide deck, the WHOS Off-Leash Dog Park attracts nearly one million visitors per year.

As stated in the Jefferson County “Colorado Federal Lands Access Program” proposal for Greenway Trail funding, they estimated 120,500 annual visitations representing “\$9,629,556 per year in direct local economic activity (US Fish and Wildlife Service, Banking on Nature, 2013. Recreation expenditures, non-consumptive activities, adjusted for FWS Region 6, assuming 66% local visitation and 34% non-local visitation).” This comes out to \$79.91 per visitor (9,629,556/120,500).^{xvii}

By extrapolating these numbers, the 1 million yearly visitors to WHOS Off-Leash Dog Park would create a nearly \$80 million direct economic benefit for the Westminster community. While the Guardians believe this number is inflated, there is evidence of large economic benefit for drawing visitors from outside the neighborhood. For comparison’s sake, using the US Fish and Wildlife Service, Banking on Nature, 2017, Rocky Mountain Arsenal National Wildlife Refuge reported 868,900 total recreation visits resulting in \$24,247,400 in total economic output.

Based on results from the Standley Lake boating closure and recreation numbers supplied by local agencies, it is apparent the western-Westminster economy will suffer should there be a significant reduction in WHOS Dog Park visitation.

Use of the WHOS Off-Leash Dog Park

Westminster Hills Open Space was acquired through twelve different open space purchases beginning in 1988 with the purchase of the 400-acre Colorado Hills Property, followed by the purchase of 125 acres in 1995 from the Brauch Family. More land was purchased over several years including the addition of Woman Creek Reservoir Property in 2017, which is 345 acres. Westminster Hills Open Space is now roughly 1,000 acres. This open space was acquired using over \$4.5 million from the Westminster Parks Open Space and Trails’ (POST) funds and more than \$4.7 million from Natural Resources Damages and Department of Energy Funds and grants from Jefferson County and Great Outdoors Colorado (GOCO).^{xviii}

For 24 years, the City of Westminster has advertised and marketed the WHOS Off-Leash Dog Park to dog owners in the Denver Metro Area, via park signage and the PRL website.^{xix}

The PRL swapped out the signs, removing the references to the WHOS Off-Leash Dog Park in 2023. Below is a history of WHOS Off-Leash Dog Park signage collected from Google Images.

PRL Signage at WHOS Off-Leash Dog Park

Signs – Simms Parking lot

- October 2007 – Sign is illegible in this photograph



- July 2012 - Sign says “Westminster Hills Dog Park”



November 2018 - Sign Says “Westminster Hills Dog Park”



- February 2022 - Sign says “Westminster Hills Dog Park”



- June 2023 – Current Sign says “Westminster Hills Open Space”



Signs – 100th Ave Parking lot

- This lot was constructed after Rocky Mountain Greenway Trail was built in 2016
- July 2015



- November 2018 - Sign says “Westminster Hills Open Space Dog Park & Greenway Trail”



- August 2019 - Sign says “Westminster Hills Open Space Dog Park & Greenway Trail”



- September 2021 - Sign says “Westminster Hills Open Space Dog Park & Greenway Trail”



- June 2023 – Current Sign says “Westminster Hills Open Space & Greenway Trail”



Management of the WHOS Off-Leash Dog Park

The PRL, on the WHOS Area Management Plan website, acknowledges that: “The land was acquired to protect the environment and offer passive recreation as designated open space. The off-leash dog area was initially a small pilot project added in 2000 that expanded to its current size of over 400 acres due to its popularity. Per the Westminster Municipal Code, lands acquired with open space funds shall be preserved and managed in a natural condition (W.M.C. 13-5-3(A)).”^{xx}

Multiple sections of the Westminster Municipal Code are relevant to the WHOS Off-Leash Dog Park:

Section 13-5-3(A) of the Westminster Municipal Code states “**Generally**, lands acquired with open space funds shall be preserved and managed in a natural condition.” It also states that: “Open spaces will generally be open for passive public use and enjoyment, and trails will be developed where possible to provide access. Examples of compatible passive recreation include hiking, nature study and photography.” (Emphasis added).^{xxi}

Section 13-5-3(B) states: “Additional activities that may be allowed on certain open space property, or portions thereof, after the City Manager determines such activities will not have a detrimental effect on the natural qualities for which the open space was originally acquired, include fishing, biking, horseback riding, boating, and the development of off-leash dog exercise areas, restrooms, trailhead parking lots, and limited structures that enhance the passive recreational experience.”^{xxii}

Section 13-5-7 states: “The Department of Parks, Recreation and Libraries shall be responsible for the regular maintenance and operation of the open space properties, with funds made available in the City's general operating budget and funds derived from the open space portion of the parks, open space and trails sales tax.”

Section 13-5-4(A) states that “In certain cases, it may be determined by the City Council that a property originally acquired for open space purposes may be better utilized for another public purpose, including, but not limited to, **an active park.**” (Emphasis added).^{xxiii}



xxiv Actual Use of the Park

The WHOS Off-Leash Dog Park has not been managed as purely open space used for only passive recreation activities since 2000. The City of Westminster has marketed and provided dog owners and their dogs with an active recreation space for 24 years. It has also developed, provided, and marketed the Rocky Mountain Greenway Bike Trail, a dirt road that can support vehicle traffic, for bike use for 8 years. For over two decades, the PRL has promoted, marketed, further developed, and managed the use of at least two recreational activities that are not listed as passive activities, off-leash dog use and cycling use, at the WHOS Off-Leash Dog Park.^{xxv}

Westminster Hills Open Space consists of 1,027 acres of prairie that includes The Rocky Mountain Greenway Trail that “crosses through the Property from the southeast to northwest, while multiple other roads, trails, and social trails provide visitor and dog access through the prairie.”^{xxvi}

“With over 150 miles of multi-use trails within Westminster, there's no shortage of outdoor opportunities. There are 50 individual trails within the system, composed of concrete, gravel, natural, and multi-surface materials. There are 5 regional trails, which are great for commuting and recreational use. The regional trails are Big Dry Creek Trail (Westminster's National Recreation Trail), Farmers' High Line Canal Trail, Little Dry Creek Trail, Rocky Mountain Greenway Trail, and the U.S. 36 Bikeway. These trails have been established along ditches and canals that were preserved as wildlife corridors, but they also provide access for trail users to observe a little bit of peace and serenity in an ever-growing metropolitan area.”^{xxvii}

The WHOS Off-Leash Dog Park portion of the Rocky Mountain Greenway Bike Trail begins at the Westminster Hills Parking lot on 100th Avenue and dissects both the 420-acre Off-Leash Dog Park, as well as the western remainder of the 1,027 acres of the Open Space. It also nearly subdivides the Historic Burrowing Owl Nest site, depicted on page 25 of the ERO Conditions Report, in the 607-acre western portion of the Open Space.^{xxviii} Bike trail development and cyclist use have an impact on the WHOS Off-Leash Dog Park, yet this impact is not addressed by the ERO Westminster Hills Open Space Conditions Report. The Rocky Mountain Greenway Bike Trail could have been routed entirely along the southern boundary of the 1,027 acres of open space. Instead, it was routed through the center of the WHOS Off-Leash Dog Park.

While preparing for the forthcoming opening of the Indiana bridge connecting the Greenway Trail to Rocky Flats National Wildlife Refuge, it became apparent the current formation of the Trail is unsustainable. We strongly recommend rerouting the Greenway Trail along the existing, newly constructed, concrete path west through the dog park and connect to existing trails around Mower Reservoir. These plans have been presented to Bike Jeffco and have received preliminary positive feedback. This reroute will be advantageous due to:

- Broomfield withdrawing from the project requiring the western section to be rerouted.
- While PRL has stated the current reroute will not disturb the burrowing owls, the noted nesting is exactly where the current reroute is scheduled to occur. The Guardians' new map leaves the nesting area completely undisturbed.
- Greatly reduces the chance for cycle/dog interaction by routing cyclists along the park perimeter.
- Allows cyclists the opportunity to enjoy a Westminster hidden gem, Mower Reservoir, on their ride.

Below is a brief review of the history of the two active uses, off-leash dog use and cycling use:

- Off-leash dog use has existed for 24 years, beginning in 2000 and at its current 420-acre size since 2009;
- Cycling use was allowed during this time, but it was greatly enhanced when the Rocky Mountain Greenway Trail that subdivides the WHOS Off-Leash Dog Park was completed in 2016. That amounts to 8 years of use.
- Off-leash dog use preceded Rocky Mountain Greenway Trail cycling use by 15 years.
- While the legal theory of nuisance does not apply because the WHOS Off-Leash Dog Park is public land, “a nuisance is an invasion of another's use and enjoyment of his real property.”^{xxxix} The initial PRL plan reducing the off-leash area to 33 acres eliminates 24 years of off-leash dog access.

PRL Overuse Argument

Of the 1,027 acres, some portion of the 420-acre WHOS Off-Leash Dog Park has existed since 2000.^{xxx} The PRL states that “the off-leash dog area is a regional attraction, providing a unique opportunity for dog owners to walk, hike, or run with their dog through an open prairie setting. This use, however, has resulted in a proliferation of social trails, vegetation trampling, native plant degradation, and concerns about contamination from dog waste (E. coli).”^{xxxi} Throughout this process, the PRL has failed to account for impacts on the land due to the construction of the Rocky Mountain Greenway Bike Trail, nor use by cyclists. They simply argue that environmental degradation is caused by off-leash dogs.

The PRL heard from long-time citizens at the March 6, 2024 Public Meeting that the WHOS Off-Leash Dog Park has been transformed from a cow pasture to the current open prairie, and some users report that the current conditions are healthier than when the land was purchased. The public also questioned blaming off-leash dogs for conditions that may be caused by, or exacerbated by, climate change.

The PRL argues that the WHOS Off-Leash Dog Park “is being loved to death,”^{xxxii} and “the current management strategy for Westminster Hills is unable to sustain resource demands from high visitation to the Property.”^{xxxiii} The PRL is arguing that the WHOS Off-Leash Dog Park is suffering from overuse. The Guardians argue that conditions at the Park are likely also impacted by climate change, bike trail development, cycling use, and that the Park is suffering from mismanagement.



WHOS Dog Park Timeline/History

- 3/2000 - 40 acres off-leash trial
- 3/2001 - 40 acres off-leash approval
- 3/2008 - 1000 acres off-leash approval
- 3/2009 - 440 acres off-leash approval
- 11/2014 - Open Space Stewardship Plan adopted requiring annual clean up days
- 4/2016 – Greenway Trail public meeting
- 6/2016 – Rocky Mountain Greenway Trail completed through Off-Leash Dog Park. Greenway Trail is a planned 80-mile bicycle route connecting Rocky Mountain Arsenal National Wildlife Refuge to Two Ponds National Wildlife Refuge to Rocky Flats National Wildlife Refuge to Rocky Mountain National Park near Estes Park.
- 6/2016 - 100th Ave dirt parking lot installed
- 1/2017 - Last scheduled Westy clean-up day (required annually by Stewardship Plan)
- 6/2017 - 100th Ave paved parking lot installed
- 5/2018 - Joe Reale becomes Open Space Superintendent^{xxxiv}
- 6/2020 - Fence built along west off-leash boundary at Alkire
- 10/2020 - Broomfield withdraws from Rocky Mountain Greenway Trail^{xxxv}
- 1/2022 - Tomás Herrera-Mishler becomes Director of Parks, Recreation, and Libraries^{xxxvi}
- 4/2022 - Some trash cans and poop bag dispensers removed
- 6/2022 - Trail barricades constructed
- 11/2022 - Mark Freitag becomes City Manager^{xxxvii}
- 6/2023 - Dog Park signs changed to Open Space only, removal of Dog Park
- 6/2023 - Westy Survey #1 conducted
- 7/2023 - Grading for paved concrete bike path begins
- 11/2023 - Paved concrete bike path and new fencing completed
- 11/2023 - Public meeting - off-leash reduction only option presented
- 11/2023 - Survey #1 results posted online (70% keep size as-is)
- 1/2024 - ERO Conditions Report completed
- 1/2024 - "Open House"- off-leash reduction only option presented
- 1/2024 - City begins using "We're early in the process, this is only one option being looked at"
- 1/2024 - Westy Dog Park Guardians founded
- 2/2024 - Survey #2 completed and comments posted online. Results never posted by City.
- 3/2024 - Public Meeting. Options given were cherry-picked out of Survey #2 responses.
- 3/2024 - Survey #3 opened and CAT formation
- 3/2024 - Survey #3 results posted (79% keep size as-is)
- 3/2024 - Guardians reported actual results of Survey #2 to City Council (90% keep size as-is)
- 3/2024 - CAT meetings begin
- 5/2024 - CAT process completed with no consensus and no report

WHOS Off-Leash Dog Park is Safe and Accessible for Diverse Park Users

The City of Westminster 2022-2023 Revised Strategic Plan provides the following Vision Statement - “Westminster is a city of beautiful, safe, well-maintained neighborhoods and destinations with a vibrant, diverse economy, rich and resilient environment and a strong sense of community and belonging.” It also contains the following Diversity, Equity and Inclusion Guiding Principle - “Achieve equitable processes for the people of Westminster by providing opportunity for all voices to be heard and drawing upon community diversity in decision making.”^{xxxviii}

Since its inception in January 2024, and the considerable community engagement undertaken by our grassroots advocacy group, the Westy Dog Park Guardians have heard from numerous users of the WHOS Off-Leash Dog Park that it is:

- a uniquely safe space for seniors, single women, and LGBTQIA+ populations walking or running with their dogs; and
- a uniquely accessible place for disabled users and folks with strollers and children to exercise with their dogs without the need for leashing them.

This diverse group of park users does not experience the sense of safety and well-being provided by the WHOS Off-Leash Dog Park in any other setting where they could walk their dogs on-leash. The Park also provides community and a strong sense of belonging between a diverse population of dog lovers.

The Importance of Exercise to Human Well-being

Exercise improves both brain health and mental well-being. All citizens, including dog owners, deserve the means to exercise. Below are highlights of key research study results.

Exercise benefits the brain in three ways: it enhances blood and oxygen flow; it elevates the levels of key neurotransmitters (dopamine, serotonin, and norepinephrine); and it stimulates the production of brain cell building blocks, especially Brain Derived Neurotropic Factor (BDNF).

The benefits of exercise to brain health, mood, and stress resilience include:

1. Protecting against the negative impacts of aging and stress;
2. Increasing brain volume in areas responsible for learning, memory, and cognitive function, via the birth of new brain cells;
3. Improving the health and functioning of brain cells, including the capacity for forming neural networks, which likely explains why exercise improves cognitive function;
4. Raising antioxidant levels, which helps protect against oxidative stress;
5. Increasing neurotropic factors, including BDNF;
6. Restoring stress arousal to a resilient level, which improves current mood and brain function, and prepares the brain for processing stressful events;

7. Reducing symptoms of anxiety, depression, and stress;
8. Regulating the fight-or-flight stress response;
9. Reducing inflammation and oxidative stress; and
10. Improving self-esteem, self-efficacy, and social support.^{xxxix}

The Unique Contributions of Dogs to People

The benefits of interactions between humans and animals have captured the interest of researchers for years. Animal-assisted interventions involve the use of animals to help people in settings such as schools, libraries, hospitals, assisted living facilities, courts, prisons, offices, and trauma scenes. The most studied species is dogs. Research shows that dogs benefit people by reducing their stress, lowering their blood pressure, reducing their heart rate, and improving their mood, happiness, loneliness, and cognitive capacity.

Below are highlights of key research study results.

Dogs make very special, unique, and important contributions to humans. Interacting with dogs:

1. Reduces stress hormones;
2. Lowers heart rate and blood pressure;
3. Increases the bonding and attachment neurotransmitter oxytocin;
4. Improves stress, happiness, loneliness, and negative emotions;
5. Enhances executive function, responsible for motivation, concentration, planning, prioritizing, emotion regulation, and the capacity to understand different points of view;
6. Improves metacognition, the ability to understand your own thinking; and
7. Increases brain activation in the prefrontal cortex, dedicated to executive functions, such as attention, working memory, and problem-solving, as well as social and emotional processing.^{xl}

Enhancing the Health of Humans and Dogs, Together

The WHOS Off-Leash Dog Park, described as the crown jewel of Westminster by people who love to exercise there with their dogs, is strategically important to the City, and of utmost significance to its dog-loving citizens. It provides the exceptional opportunity for people and dogs to exercise in natural ways, together.

Aging dogs have brains that are similar to aging people. They have a comparable metabolism, suffer from the development of beta-amyloid plaques implicated in Alzheimer's disease, and are large enough to study with neuroimaging. Researchers monitored the brain health of 43 middle-aged beagles for 3 years (36 females and all 6 years at the start of the study). They were examining the potential of 2 drugs targeting Alzheimer's disease. All the dogs, in both the treatment group and the control group, received daily exercise, playtime with dogs of the same gender, and playtime with a rotating group of toys.

Typical aging in dogs and humans causes shrinking in the hippocampus, the brain structure involved in memory and emotion and that is exceptionally sensitive to age-related decline. All the dogs in the

study, both treatment and control, experienced a 1.74% increase in hippocampus volume every year of the study. The drugs had no impact on the dog's brains.

Researchers believe that the daily social interaction from dogs playing together, physical exercise, and environmental enrichment from playing with toys, led to the increase in hippocampus volume. These activities increase blood flow, enhance the birth of new brain cells, and are likely to be protective against age-related declines. People's brain health is likely to benefit from routine social interaction, exercise, and enriching activities.^{xii}

The WHOS Off-Leash Dog Park provides the exact environment for regular exercise and interaction for dog lovers, and for our dogs, that promotes successful aging in citizens and their dogs.

Traditional dog park models do not offer the same opportunities due to their size and congestion. Westy Dog Park Guardians propose that the City of Westminster could increase its dedication to serving this population, and to reap the economic benefits that would expand as dog lovers spend time and money here, by developing a second large acreage for a second large off-leash dog park.



Environmental Concerns

Background Information

Brief History

The Westminster Hills Open Space and Off-Leash Dog Park (WHOS) consists of 1,027 acres of rolling hills and open lands purchased with funds from the Open Space Program. This program was initially created by voters in 1985 and approved $\frac{1}{4}$ of 1% of sales tax funds to be dedicated for the purchase of open space lands. Funds have also been obtained from the Department of Energy as well as grants from Jefferson County.

1. **Acquisition:** The initial acreage of the current WHOS area began with the purchase of 425.5 acres in 1988. The most recent acquisition was a 14-acre parcel in 2022.
2. **History:** the lands, which now comprise the 1,027 acreage, were used for agricultural purposes including cattle grazing leases. Cattle were regularly seen on portions of the WHOS acreage until 2010. Prairie dog colonies were also prevalent throughout the land as noted in the 2009 image below.
3. **Dog Park:** the citizens of Westminster were instrumental in obtaining access to the land for use as an off-leash dog park as early as 1999. The current 420 acre off-leash access has been in place since 2009. The dog park has become known as one of the largest dog parks in the United States.
4. **The Rocky Mountain Greenway Trail (RMGT):** was completed in 2016 and travels through the WHOS Off-Leash Dog Park. The RMGT is a partnership between local governments, the State of Colorado, the Department of the Interior, and other agencies. The intent of the RMGT is to reconnect residents of the region with the outdoors.

Management

The 2014 Open Space Stewardship Plan was designed to provide a comprehensive management plan for the City of Westminster's Open Spaces. The Plan was designed to identify management responsibilities, associated costs, needed resources, and future projected capital improvements. Although the 2014 Plan identified numerous goals and specifications, few have been implemented or visible at WHOS.

Transitional Landscape

PRL has identified WHOS as a transitional landscape, defined as areas which include sites undergoing restoration or sites scheduled for restoration and/or enhancement. This is a temporary designation until site improvements can be completed. Since 2014, there has been no reclassification of the WHOS area as no specific site improvements have been identified or completed.

Destination Facility

WHOS Off-Leash Dog Park is defined as very popular and is considered a regional or “destination facility” that attracts users living outside of Westminster. No accommodations have been implemented to address the impacts of regional use and the increased local populations.

Current State of WHOS Habitat and Wildlife

Shortgrass Prairie

According to the ERO Conditions Report, WHOS consists of 1,027 acres of rolling prairie, with the predominant ecoregion categorized as shortgrass and mixed grass prairie.^{xlii} The WHOS prairie is partially fragmented. It is contiguous with Standley Lake Regional Park to the south and Rocky Flats National Wildlife Refuge to the west, and the property is fragmented by high density housing and the Rocky Mountain Metropolitan Airport to the north and east.

Colorado Parks and Wildlife (CPW) published a "State Wildlife Action Plan" (SWAP)^{xliii} in 2015 to serve as guidance for the conservation of wildlife and habitats throughout the state of Colorado. Chapter 3 of this plan discusses the shortgrass prairie habitat and states: “Today, nearly 50% of our historic shortgrass prairie has been converted to row crop agriculture or other uses – the largest loss of any of Colorado’s habitats.” Threats for continued loss and fragmentation of the shortgrass prairie include domestic livestock grazing, energy production, continuing expansion of urban communities, and changing climate conditions. The map below depicts the presence of habitats throughout the state, with shortgrass prairie depicted in tan and occurring predominantly in the eastern portion of the state.

Colorado's 2015 State Wildlife Action Plan

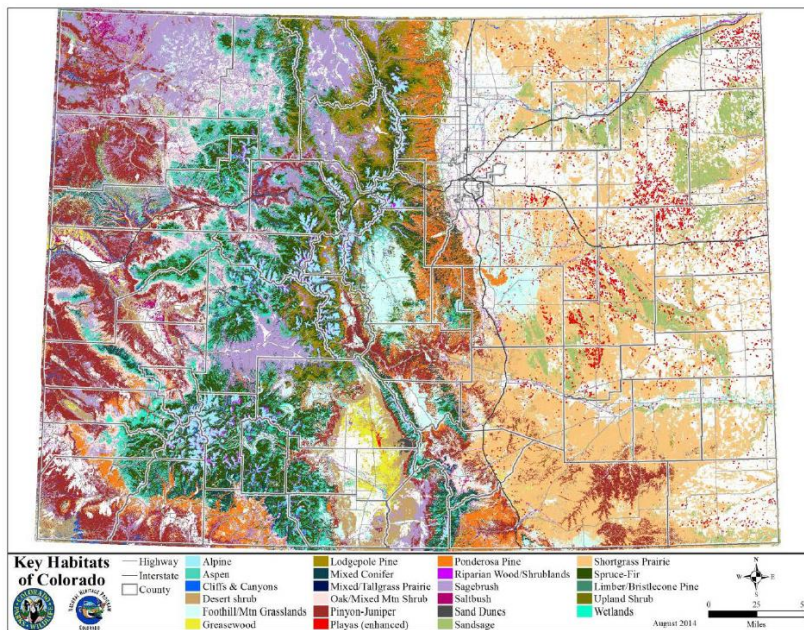


Figure 1. Distribution of key terrestrial habitats in Colorado.

Chapter 6 of the SWAP^{xlii} describes conservation actions pertinent to the shortgrass prairie: “This grassland habitat type is the most abundant in Colorado and, while degraded, is generally in better functioning ecological condition than the other grassland habitat types in eastern Colorado. The use of conservation easements is the most effective tool to address development and conversion pressures in this habitat type. Effective outreach to improve grazing management that restores vegetation condition, function, and structure will address other threats in this habitat type. Several important forbs, shrubs, and half shrubs (i.e., winterfat, native prairie clovers, leadplant) associated with this habitat type are absent or heavily reduced, negatively impacting wildlife habitat potential; this can be addressed by effectively implementing improved grazing management on public and private shortgrass prairies.”

Table 14 in the SWAP^{xlii} shows that there are 11,855,161 acres of shortgrass prairie in Colorado. **The minimum size of a patch of shortgrass prairie to be considered viable as an ecological system at the landscape scale is 50,000 acres.** There are 1,827 patches of shortgrass prairie in the state, with the largest patch consisting of 1,072,828 acres. [Emphasis added]

In comparison, the WHOS property consists of 1,027 acres and is partially fragmented by residential and commercial development. The Conservation Plan for Grassland Species in Colorado,^{xliii} issued by the Colorado Division of Wildlife (now CPW) in 2003, largely focuses on conservation efforts in the millions of acres of shortgrass prairie present in eastern Colorado, particularly the USDA National Grasslands and privately-owned grasslands. The 2003 plan does include a section addressing habitat management along the Front Range and states: **“the fragmentation of the remaining shortgrass prairie habitat in areas of increasing urban growth along the front range do not support an intact shortgrass prairie ecosystem.** For example, Jones and Bock (2002) note that in Boulder County, which manages one of the most extensive grassland open space systems in North America, shortgrass associated bird species declined significantly between the 1980’s and 1990’s amid rapid urban growth in the area. They conclude that grassland open space areas may support populations of mixed grassland birds, but sustaining species associated with the shortgrass prairie would be difficult. Many of the conservation objectives and actions outlined in this Plan are focused on management of eastern plains colonies and complexes where biologically it makes the most sense to focus efforts.”

However, the shortgrass prairie at WHOS still provides a refuge for wildlife in the urban environment as well as provides educational and wildlife viewing opportunities for the community.

The map below shows grassland habitat conditions throughout the state, with minimal significant grassland existing in the western metro Denver area.

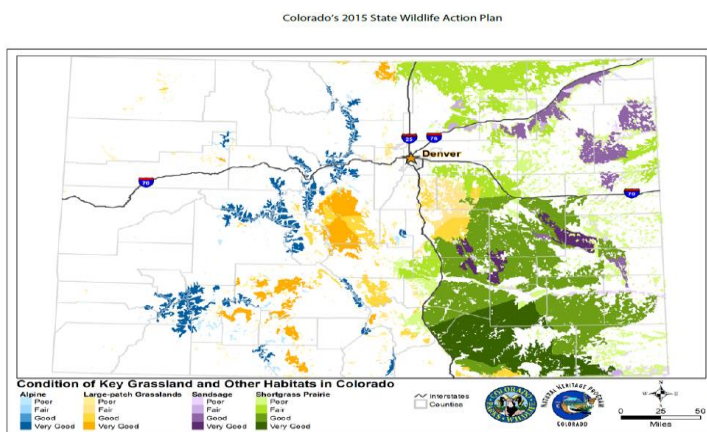


Figure 19. Terrestrial upland habitat condition – Grasslands and Other Habitats

Wildlife

The ERO Conditions Report^{xlvii} stated that no federally threatened, endangered, or candidate wildlife species were observed during the 2023 site visit, and ERO further determined that WHOS does not contain suitable habitat for most of these species.^{xlviii}

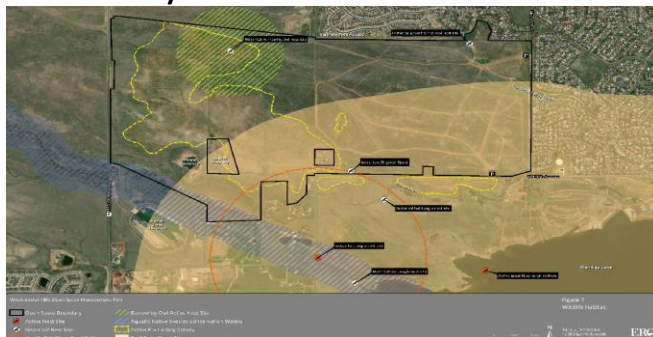
CPW identifies state-specific species of concern^{xlix} in addition to species protected under federal regulations. Species on this state-specific list identified on the WHOS property by ERO include the burrowing owl and the black-tailed prairie dog.

Burrowing Owl

The burrowing owl is considered "state-threatened" and one of Colorado's Species of Greatest Conservation Need. CPW's species profile^l for the burrowing owl describes "the burrowing owl usually lives in dry, open areas with short grasses and no trees. They nest and live in underground burrows created by prairie dogs, ground squirrels and badgers." The 2003 Conservation Plan for Grassland Species in Colorado^{li} states that the average territory size for a burrowing owl nesting site has been estimated at 1.98 acres, within a range of 0.1 acres to 4.0 acres; and further that defense of territories is largely limited to the immediate area around the nest burrow, with 95% of all movements occurring within 600 m of the nest burrow." The 2003 plan identifies primary causes of death in burrowing owl breeding areas as predation, vehicle collisions, human disturbance (especially from agricultural activities, construction and shooting), toxic chemicals (either direct mortality or loss of prey) and weather (severe hail).

Although the burrowing owl is capable of excavating its own burrows in certain types of soil, they most often use holes excavated by other animals, particularly by prairie dog colonies. Destruction of prairie dog colonies has the largest impact on burrowing owl populations in the state of Colorado. The greatest threats to the burrowing owl are loss of habitat due to residential and commercial development as well as dramatic reductions in prairie dog populations from targeted eradication efforts, poisoning, recreational shooting, and sylvatic plague. The SWAP^{lii} states that the conservation of the burrowing owl hinges on the protection of healthy prairie dog colonies and identifies several resources for conservation actions and plans. One of these plans is the 2003 Conservation Plan for Grassland Species in Colorado,^{liii} which focuses primarily on working with private land owners and the federal grasslands which contain the vast majority of suitable habitat for the burrowing owl.

As noted in the ERO report,^{liv} provided by the PRL, the burrowing owl habitat on WHOS is directly next to the Greenway Trail. Due to Broomfield withdrawing from the Greenway trail, the western section will need to be rerouted to complete the trail to the Indiana bridge project. **Failing to change the course of the Greenway Trail will be in direct conflict with the burrowing owl habitat.**



Black-Tailed Prairie Dog

The black-tailed prairie dog is considered a "state special concern" species. CPW's species profile for the black-tailed prairie dog describes the black-tailed prairie dog as the most common type of prairie dog.^{lv} The black-tailed prairie dog is widely considered a "keystone species" to indicate the health of a prairie ecosystem. At the time of publication of the 2003 Conservation Plan for Grassland Species,^{lvi} Colorado had already exceeded all acreage and distribution targets defined in the Multi-state Conservation Plan for the Black-tailed Prairie Dog in the United States (Luce 2003). This species is not currently threatened or included in the 2015 CPW SWAP.^{lvii}

The 2010 Westminster Wildlife and Natural Resource Management Plan for Open Space Properties^{lviii} identifies the black-tailed prairie dog as a potential conflict species and notes that "feeding and burrowing cause devegetation, resulting in loss of topsoil and beneficial flora, and drainage issues." This creates a conservation approach where the population of prairie dogs must be managed in order to prevent decimation of the natural shortgrass prairie vegetation which in turn causes an increase in noxious weeds. The presence of human and domestic dog activity in the eastern portion of the WHOS has limited the spread of prairie dog colonies and associated impacts, which can be seen from the ERO report^{lix} which shows noxious weeds more heavily concentrated on the western side of the WHOS.

The City of Westminster Open Space Plan F - Shortgrass Prairie Ecosystem^{lx} describes the devastating impact that unchecked populations of prairie dogs had on the WHOS. "Soon after acquisition of the property, this site was designated as a prairie dog habitat in an effort to save and relocate prairie dogs from other developments within the City. Over the years, the prairie dog population on this site steadily increased and eventually exceeded the carrying capacity of the site. Soil erosion and noxious weed infestations soon became serious issues on this site. After an outbreak of bubonic plague and a major reduction in the prairie dog population in 2009, this site is targeted for native grass revegetation and a return to a balanced ecosystem."



Westminster Hills Open Space circa 1998



Westminster Hills Open Space 2009

City of Westminster Open Space Plan F - Shortgrass Prairie Ecosystem^{lxi}

The City of Westminster Open Space Plan D - Prairie Dog Management^{lxii} classifies the WHOS as a "Prairie Dog Conservation Area (PDCA)". The classification specifies that, "the population of prairie dogs on this parcel will be frequently monitored and adaptively managed (control needs will be defined by prescribed acreage, population, vegetation, and/or soil parameters) to ensure that noxious weeds, soil erosion, and impacts to adjacent landowners/land uses are maintained at an absolute minimum."

Noxious Weeds

The Colorado Department of Agriculture identifies and categorizes noxious weeds into three categories, List A, B, and C. List A Species are designated for eradication. List B Species require that a noxious weed management plan be implemented to stop the continued spread of the species. List C Species are to be controlled as necessary while evaluated and studied through a management plan, without the goal of stopping the continued spread of the species.

ERO surveyed the WHOS in 2023 and identified eleven List B species and seven List C species present on the property.^{lxiii} The most prevalent noxious weed at WHOS is the Dalmatian toadflax which was present on nearly 500 acres of the property.

The City of Westminster Open Space Plan I – Integrated Pest Management Plan^{lxiv} states that "Noxious weed infestations have contributed to the loss of agricultural productivity and ecological functions on both public and private lands, including some of Westminster's most valuable and productive wildlife habitat. Noxious weeds pose a serious threat to the integrity of our natural resources. These non-native plants compete aggressively against native species for nutrients, water, and space. If left unchecked, these noxious weeds have a tremendous capacity to invade native plant communities and suppress or eliminate their ability to survive."

The Colorado Noxious Weed Act (§§ 35-5.5-101–119, C.R.S.) requires all public and private landowners in the State of Colorado to control noxious weeds and makes it unlawful to intentionally allow any noxious weed to grow without management. The Colorado Department of Agriculture provides a variety of resources to assist in the control of noxious weeds throughout the state.

E. coli Contamination in Ditch Water

Escherichia coli (abbreviated as E. coli) is a type of bacteria which can cause illness when ingested. There are hundreds of different strains of E. coli, the majority of which do not cause human illness. E. coli is transmitted by ingesting food or water that is contaminated with the bacteria.

ERO conducted sampling of water in the ditch and found E. coli levels that gradually increased over the summer and eventually exceeded the EPA's threshold value¹. Samples were collected in two locations, as the water enters the park and as it exits the park. E. coli levels were not significantly different between the two sampling points, indicating the contamination likely occurs prior to the water entering the WHOS. Further investigation determined that the water passes through several grazing pastures and leach fields upstream of the WHOS. The sampling data indicates that dog waste is unlikely to be a significant contributing factor in contamination.

The Church Ditch Authority owns the water prior to the Church Ditch termination near the intersection of 100th Avenue and Simms Street, where it becomes the Dry Creek Valley Ditch and enters the WHOS. The ditch is an irrigation canal and is not a state water. It is not included in federal or state regulations for which water quality standards apply.

EPA's 2012 Recreational Water Quality Criteria (RWQC) recommends actions to take for the detection of E. coli in recreational waters. However, this document applies to primary contact recreation, which is defined as "activities where immersion and ingestion are likely and there is a high degree of bodily contact with the water, such as swimming, bathing, surfing, water skiing, tubing, skin diving, water play by children, or similar water-contact activities."

The Colorado Department of Public Health and the Environment (CDPHE) requires natural swimming areas to be closed if a laboratory result shows an E. coli concentration above 235 organisms per 100 milliliters (Regulation 5 CCR 1003-5). CDPHE regulations at 5 CCR 1003-5 defines a natural swimming area as "a designated portion of a natural or impounded body of water in which the designated portion is devoted to swimming, recreative bathing, or wading and for which an individual is charged a fee for the use of such area for such purposes."

Current use of the ditch water in the WHOS is limited to dog contact. It does not meet the EPA definition of primary contact recreation, nor does it meet the CDPHE definition of a natural swimming area. There are no regulatory requirements necessitating a response to prevent access to the water. Of interest, CDPHE has registered more than 2,300 miles of waterbody segments on its impaired waters list due to E. coli levels, including segments of Boulder Creek which are heavily used by the public for tubing and wading in summer months. Unlike the Church Ditch and Dry Creek Valley Ditch, these waterbodies are state waters and regulated under the Clean Water Act, but serve as examples of E. coli impacted water bodies that remain unrestricted from public access.

The route of exposure for human ingestion of E. coli from the ditch water at WHOS is extremely low and can be further mitigated with public awareness.

Environmental Considerations

The WHOS consists of shortgrass prairie and wildlife species of concern, in addition to providing an invaluable outdoor recreational resource to the community. The 2015 SWAP^{kv} elaborates on this duality: "This threat assessment was undertaken strictly from the perspective of wildlife conservation. Some of the identified practices are also necessary and highly valued public services and land uses – for instance, water development, residential development, recreation, mining, and agriculture. These activities provide important values and are legitimate, often vital public pursuits, from which all of society benefits. Nonetheless, aspects of some of these activities are sometimes harmful to wildlife and their habitats, which are also legitimate public values and resources; therefore, these actions pose challenges from the viewpoint of wildlife conservation. These challenges need to be identified in order to determine which are most harmful, and importantly, where opportunities for investments in remedial or preventive actions would be most effective and efficient."

The shortgrass prairie habitat does not exist at a significant scale in the metro-Denver area. The suitability of the WHOS for a thriving shortgrass prairie ecosystem is limited by its size, the fragmented nature of the land, and the competing value of the land for community outdoor recreation. The Westy Dog Park Guardians understand the need to balance the two critical objectives of conserving the shortgrass prairie while preserving public access to a treasured recreational resource. The Problems and Solution section was developed to address this balance.

Environmental Problems and Solutions

1. **Reroute the Greenway Trail:** as currently constructed, the Greenway Trail routes cyclists through the middle of the WHOS Off-Leash Dog Park. As posted, and reinforced through City management comments at the public meeting held April 2016, cyclists should yield to pedestrians through the dog park. However, to route cyclists through an active dog park encourages negative encounters. What's more, the Greenway Trail already must be rerouted due to its termination in Broomfield, as Broomfield withdrew from the Greenway Trail project on October 27, 2020. As previously noted, the western section of the Greenway Trail on Westminster property is in direct conflict with the burrowing owl habitat as identified in the ERO report.

The Guardians believe this is an opportunity to create a win-win scenario for multiple park user groups. By rerouting the Greenway Trail farther south and following the existing concrete bike path west, then linking to the existing Mower Loop, Indiana Connector, and Prickly Pear Trails, the PRL will accomplish the following goals:

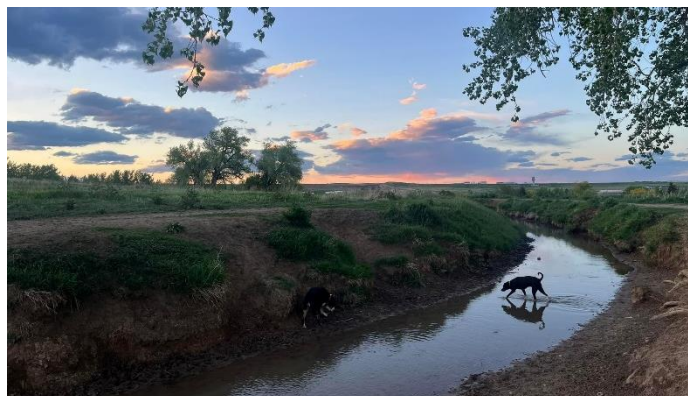
- a. Cyclist enjoyment: Not only does this take cyclists out of an active dog park, they will gain a partial loop around the Open Space Mower Reservoir water feature.
 - b. Dog walkers and families: Limit negative interactions with cyclists who do not comply with posted right-of-way.
 - c. Burrowing owls: Greatly reducing the bike traffic will decrease disturbance of their habitat and greatly reduce future traffic, giving them space to prosper. Vehicle collisions are a known cause of mortality for the burrowing owl.
 - d. Eagles: as noted in City presentations, the protected eagle habitat now extends across Alkire St. This protected location is where there are future plans to expand the concrete path. By taking the Greenway Trail directly west, the eagle protection zone is undisturbed.
 - e. Alkire St. neighbors: By routing the path directly west, the City will increase the distance between bike traffic and residential property.
 - f. City of Westminster: Not only will the City save the expense of additional enforcement of bicyclists through the dog park, the City will also save on major potential eminent domain and related legal expenses. This will also allow a more direct trail to Indiana St. that is less costly and safer for bicyclists than the 96th Street proposal.
2. **Use Cherry Creek as a Model:** recommend a management plan similar to that done by the Colorado State Parks for the Cherry Creek State Park Dog Off-Leash Area in 2010 which would provide a specific management direction.

3. **Drought:** recognize that WHOS is impacted by fifteen years of ongoing drought conditions which have weakened existing natural resources within the Open Space system, making restoration of native plants more difficult. No efforts at targeted replanting have been observed within WHOS, other than after the 2023 cement trail construction and near the Simms St. parking area.
4. **Non-Native Trees:** recommend to be removed and replaced with native species; however, no planting has been observed in WHOS since prior to 2012 near the Simms parking area.
5. **Urban Development:** recognize the effect to regional and local hydrology, disrupting the underlying seasonal patterns critical to reestablishing and maintaining natural/native landscapes. Despite recent surrounding urban growth including both Skyestone to the north property line of WHOS, and Candelas located west of Indiana, no specific measures have been implemented to address the impacts of the increasing urban encroachment.
6. **Education:** importance of educating the public with information to increase awareness of Open Space, promote understanding of natural systems, and to instill a sense of stewardship have not been implemented at WHOS. No public education for weed management has been implemented within WHOS, or via posting of informational signage. No training or volunteer opportunities for weed removal have been offered.
7. **Fencing:** despite directives that buck and rail fence shall be used along open space perimeters and at areas to direct access to trails, wire strand fencing has been placed in areas which create hazards to WHOS visitors and wildlife. Visible damage to existing buck and rail fencing can be seen at the 100th lot as it is not protected by proper placement of cement parking bumpers. Colorado Parks and Wildlife has published a "Fencing with Wildlife in Mind" guide which could help to determine the most appropriate fencing options that are considerate of the specific wildlife present at WHOS as well as suitability for dogs.
8. **Trash receptacles:** place and maintain trash receptacles at both parking lots/site entrances which are to be emptied at least once a week. Contrary to the recommendations, trash receptacles were removed from site entrances at both WHOS parking areas.
 - a. Install additional trash cans throughout the park.
 - b. Adjust collection schedules to ensure proper maintenance.
9. **Dog Feces:** bag dispensers are to be located at all Open Space parking lots and/or site entrances, access trails and dog parks. Despite this recommendation, and documented increase in visitors, in 2022 several bag dispensers were removed from each WHOS parking entrance areas.
 - a. Ensure poop bag dispensers are stocked.
 - b. Post signage indicating fines for failure to pick up dog waste.
 - c. Enforce fines for visitors who do not pick up waste.
10. **Litter Clean Up:** regularly scheduled volunteer clean-up efforts are needed throughout the City's Open Space system. The last WHOS volunteer clean-up was in January 2017.
 - a. Partner with the Westy Dog Guardians to host regularly scheduled Community Clean Up Days.
 - b. Post signage recommending ways to help keep the dog park clean.

11. **Educational Signage:** recognize the importance of educating the public with information to increase awareness of Open Space, promote understanding of natural systems, and to instill a sense of stewardship should be implemented at WHOS. Increase the sense of community by improving educational signs at the WHOS kiosks at both entrances to the park. Signs should include a trail map, information about sharing the trails, courtesy expected for different users, as well as education about native plants and wildlife present in the WHOS. Consider allowing the public to post signs, such as information for community clean up days or communication of current management consideration to eliminate the WHOS Off-Leash Dog Park.
12. **Social trails and impact to wildlife:** Some of the trails at WHOS Off-Leash Dog Park have been in existence since before the City acquired the land as Open Space. These trails existed as roads used to support cattle that were grazing on the land. Many of these roads continue to be used today by Park Rangers and serve an important management function allowing ease of access for park staff to navigate the WHOS. These roads also allow for easier emptying of trash cans. However, unofficial trails have increased with the density of human and domestic dog activity throughout the WHOS Off-Leash Dog Park. Of particular concern is the impact of increased disturbances to the burrowing owl, a Colorado Species of Concern. The following solutions are proposed to mitigate impacts to wildlife, while preserving community off-leash dog use at the park.
 - a. Establish a new official trail map.
 - i. Determine appropriate trails to close while maintaining functionality of the WHOS trail system, taking into account the ability to provide varying lengths of loops that diverse visitors can choose to walk.
 - ii. Maintain road access enabling strategically-placed trash cans to be serviced.
 - iii. Ensure appropriate buffers are maintained between trails to create larger uninterrupted spaces for wildlife. The ERO Report^{lxvi} recommends a 75-meter buffer zone (or 246 feet) from trails based on the zone of influence for most grassland bird species in Colorado.
 - iv. A physical map showing the official trails should be posted in key locations throughout the park, and the maps should also include locations of trash cans.
 - b. Protect the western 600 acres as an ecological sanctuary.
 - i. Limit trails to provide greater areas of undisturbed land.
 - ii. Close this portion of the WHOS to dogs entirely.
 - iii. Install fences as necessary and post signs clearly dividing the east and west sides of the WHOS.
 - c. Protect burrowing owl habitat. The Greenway Trail currently runs directly through the historical burrowing owl nesting grounds. Reroute the Greenway Trail by using the existing southern concrete path in the eastern portion of the WHOS, and continue the route through the southern section, and then the western edge, of the western portion of WHOS. This will avoid the burrowing owl nesting ground and avoid the need to implement seasonal closures of the bike trail during nesting season (March 15 – October 31), as specified by the CPW Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls.^{lxvii} This will also serve to keep bikes and dogs separated while diminishing the potential for negative interactions.
 - d. Implement prairie dog management guidelines established in the City of Westminster Open Space Plan D - Prairie Dog Management^{lxviii} (and update plan as needed) to control excessive devegetation and the spread of noxious weeds.

13. **Trail widening and vegetation trampling:** Significant widening of trails has occurred throughout the years and trampling of plants alongside trails has created conditions where noxious weeds can outcompete native plants. Strategies to repair the land along trails include the following.
- a. Implement mud day closures.
 - i. Utilizing typically used procedures such as cones, signs, gates, etc. , and with closure parameters agreed upon with the proposed WHOS Advisory Board, close the area during excessive mud days.
 - ii. Communicate closures to the public by posting updates on the WHOS Open Space Dog Park website.
 - iii. Manage access at the north and east neighborhood entrances by posting signs.
 - b. Use control measures to funnel foot traffic.
 - i. Install trail guards to designate width of official trails.
 - ii. Place straw or grass mats to further delineate reclamation areas alongside trails.
 - iii. Temporarily close targeted areas for revegetation as needed.
 - c. Revegetate and reclaim barren corridors alongside official trails.
 - i. Create a long-term revegetation plan. Identify sections of the park requiring regrowth. Develop a schedule for when specific sections will be targeted, likely a multi-year timeline.
 - ii. Plant native plants to clearly define the edges of trails.
 - iii. Plant native grasses following guidelines outlined in the City of Westminster Open Space Plan F - Shortgrass Prairie Ecosystem.^{lxix} plant during the optimal window between October 1 and April 30. Drill seeds into the soil at specified depths to allow existing native vegetation to continue growing along with newly planted seeds. Native grasses to be planted include the following: blue grama, buffalograss, western wheatgrass, Canby bluegrass, Arizona fescue, sandberg bluegrass, slender wheatgrass, and little bluestem.
 - iv. Plant species that are missing from a shortgrass prairie, such as important forbs, shrubs, and half shrubs identified in the CPW SWAP^{lxx} (i.e., winterfat, native prairie clovers, leadplant).
 - d. Simms entrance: The Simms Street entrance to the park is the site of the heaviest degradation at WHOS Off-Leash Dog Park and requires special attention to repair.
 - i. Repurpose log barriers previously used to close trails to funnel foot traffic and clearly establish trails.
 - ii. Add additional entrances into the park from the parking lot instead of the current single entrance. This will help disperse foot traffic and reduce the bottleneck effect.
 - iii. Target revegetation efforts to reduce barren areas and areas with dense bindweed growth.
 - e. 100th Ave. entrance: The 100th Avenue entrance currently funnels Greenway Trail and off-leash dog users into a bottleneck. Re-establish additional entrances off of parking lot for off-leash dog users to mitigate potential negative interactions between user groups.

14. **Noxious weeds:** Noxious weeds are present throughout the WHOS and compete with native plants. Eleven List B species and seven List C species are currently growing in the WHOS.
- Follow weed management recommendations published by the Colorado Department of Agriculture^{lxxi} for each species found at WHOS. Management strategies include seeding areas with competitive grasses, applying herbicides, manually pulling out rooted plants, and utilizing animals and insects to feed on targeted plant species.
 - Follow guidelines in the City of Westminster Open Space Plan I - Integrated Pest Management^{lxxii}. Establish a priority list and inventory of weeds. Select control methods. Develop preventative measures. Increase involvement of volunteer program. Educate community about types of noxious weeds.
 - Inform the public whenever herbicides are applied to the land. Post clear signs in areas where herbicides have been sprayed, including the date of application, to communicate potential hazards.
 - Implement a standardized mowing schedule to target weeds before seeds can be spread.
 - Plant native grasses that can compete with weeds.
 - Institute volunteer dig-up days. Target high density noxious weed areas or high-use areas such as the Simms St entrance.
15. **Ditch and E. coli contamination in water:** ERO conducted sampling of water in the ditch and found E. coli levels that gradually increased over the summer and eventually exceeded the EPA's threshold value.^{lxxiii} Management methods of this situation should focus on public awareness and limiting human exposure, as the sampling data indicates that dog waste is unlikely to be a significant contributing factor in contamination.
- Post signs for awareness, discouraging human contact with water. The Dry Creek Valley Ditch Authority owns the water (along with a 25' easement on either side of the ditch) and has indicated they will post these signs at no cost to the City. Signs should communicate the presence of E. coli and discourage human contact with the water.
 - Work with Ditch authorities. The Church Ditch Authority owns the water prior to the Church Ditch termination near the intersection of 100th Avenue and Simms Street, where it becomes the Dry Creek Valley Ditch. Coordination with the Dry Creek Valley Ditch is required regarding activities within the 50' easement inside the WHOS.
 - Install additional bridge(s) across the ditch. The ERO report included a recommendation to install additional bridges across the ditch. Although costly and requiring coordination with the Dry Creek Valley Ditch Authority, additional bridges would reduce the bottleneck and degradation at the current sole existing bridge and help to spread out traffic across the park.



Parking

Due to the popularity of the WHOS Off-Leash Dog Park, weekend usage has exceeded the available parking spaces in the two lots serving the Dog Park. For years, neighbors have complained to the City regarding neighborhood parking. Below are solutions to consider with the goals of alleviating stress on the Park's neighbors and ensuring a vibrant usage of the WHOS Off-Leash Dog Park.

1. Neighborhood
 - a. Residential parking permits should be issued as in use in the neighborhood surrounding Standley Lake High School. The framework is already in place with City staff and Law Enforcement.
2. To control costs for the City, parking lots and surrounding neighborhoods should only be -monitored on weekends to begin with a reevaluation after two years.

Solutions for Overcrowded Weekends

- a. Strictly enforce parking laws throughout the summer/fall to establish a pattern of enforcement.
- b. Use City media representative to get the message out to the general public.
- c. Use City media representative to publish information regarding busy days and times, encourage alternatives such as Cherry Creek, Chatfield, etc.
- d. Use City media representative to leverage multiple social media channels repeatedly throughout the summer and fall to encourage alternatives.
- e. Sponsors for parking sign – Guardians will work to find sponsors for a “Lot Full?” sign i.e.: “Get 10% off at XYZ Restaurant while you wait for lots to clear”
- f. Explore parking alternatives such as the former boat storage lot at Standley Lake
- g. Start on weekends, if it drives traffic to weekdays, reevaluate.
- h. Community feedback needed for the following, more restrictive options and greater burden to City:
 1. Paid parking, max 2 hour sessions
 2. Weekend Pass/Pricing System
 - a) Tiered pricing for Westminster residents, Jefferson county residents, etc.
 - b) Low income options
 - c) Donation option at purchase
 - d) Annual passes: possibly available only for Westy residents and/or Regional residents of Broomfield/Arvada
 - e) Timed entry reservation system

Signage

The November 2014 Open Space Stewardship Plan included the topic of signage. Kiosks at trailheads showing designated trails, trail maps, including QR codes and trail ID signs at the different trail merge points will result in well-marked trails helping people newer to the park know what to expect on their walk. Signs with distance markers may also be educational for people who are interested in knowing the distances of each trail so they can adjust their walk/run/bike based on their condition, the condition of their dog, and the temperature.

In addition to these signs, it would be valuable and beneficial to utilize kiosks at the trailheads/parking lot entrances to post signs with the park rules and associated fines, as well as community messaging such as press releases from the city and notifications that changes are coming. Additionally, the kiosks can be used to post signs to educate the public about children in off-leash dog areas and about different types of dog behavior you may see in the park. There are already signs educating about the rattlesnakes, which offer the opportunity to include more information around tips such as rattlesnake avoidance training, snake identification chart, what to do if you encounter a snake, and local emergency vets who keep antivenom in stock. The community can also use signs to designate a small lost and found area, designated at each kiosk, where people can place items they find along the trail or where they can post a message about a lost or found item.

Creative and fun signs, including drawings from local kids, can be posted around the park in various locations to educate patrons about the Open Space, such as the short grass prairie, native plants, grasses, and area wildlife. Signs and ropes can be used around revegetation areas discussing the purpose and benefits of the restoration efforts. Small signs throughout the park, and on trash cans, can encourage and educate people about the benefits of Park stewardship, such as staying on the trail and picking up an extra pile of poop.

Signage can be posted on the north and west sides of the park about closures due to nesting owls, why these closures are necessary, and the dates of the closures. These signs can be similar to the signs that Boulder County uses for raptor closures in some of the popular climbing areas. The City can connect with the Ditch Authority, which has stated it will post signs, at no charge to the City, letting people know to stay out of the ditch water. The Ditch Authority has provided these signs in other areas to educate people and advise them against contact with the water.

It would also be valuable to place a sign on the Greenway Trail, where it enters the WHOS Off-Leash Dog Park, alerting bikers that for a small section, they will be riding through an Off-Leash Dog Area.

These educational signs will help people feel more engaged and educated about the WHOS Off-Leash Dog Park and the environment around them. When people are educated, they are more invested while taking pride in being a part of its success. To continue this education and engagement around the park there can be a QR code posted on the kiosk linking to the City of Westminster's website or social media page, or even a newsletter where the City can post safety tips, mud closure days, updates on how the WHOS Off-Leash Dog Park is improving based on the efforts of the City and the patrons, and small educational pieces about things pertaining to the Open Space or seasonal changes in the Park. Finally, for community pride, consider a sign to place at our entrances stating we are one of the Top Dog Parks, and possibly even the largest Open Space Off-Leash Dog Park, in the US.

Zoning Issues

The Westy Dog Park Guardians have received numerous inquiries about zoning at the WHOS Off-Leash Dog Park. The Zoning District and the PRL Classification of the Dog Park are currently in conflict.

The Guardians recommend that the WHOS Dog Park be:

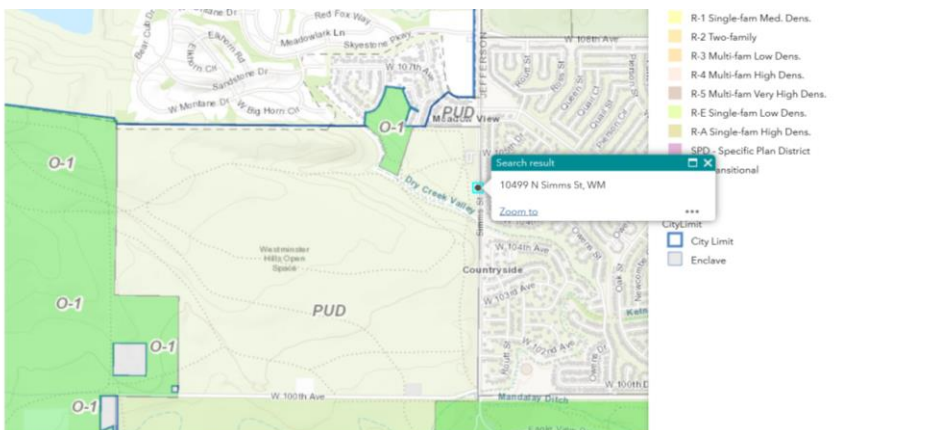
1. Rezoned to O-1 Open Space;
2. Reclassified as a Regional Park, which would conform to the classification of Westminster's two other regional recreational destinations, City Park and Standley Lake Regional Park; and
3. Renamed the Westminster Hills Open Space Off-Leash Dog Park, which officially affirms off-leash dog use.

Below please see information on Zoning District and PRL Classifications, along with screenshots, for the WHOS Dog Park, City Park, and Standley Lake Park.^{lxxiv}

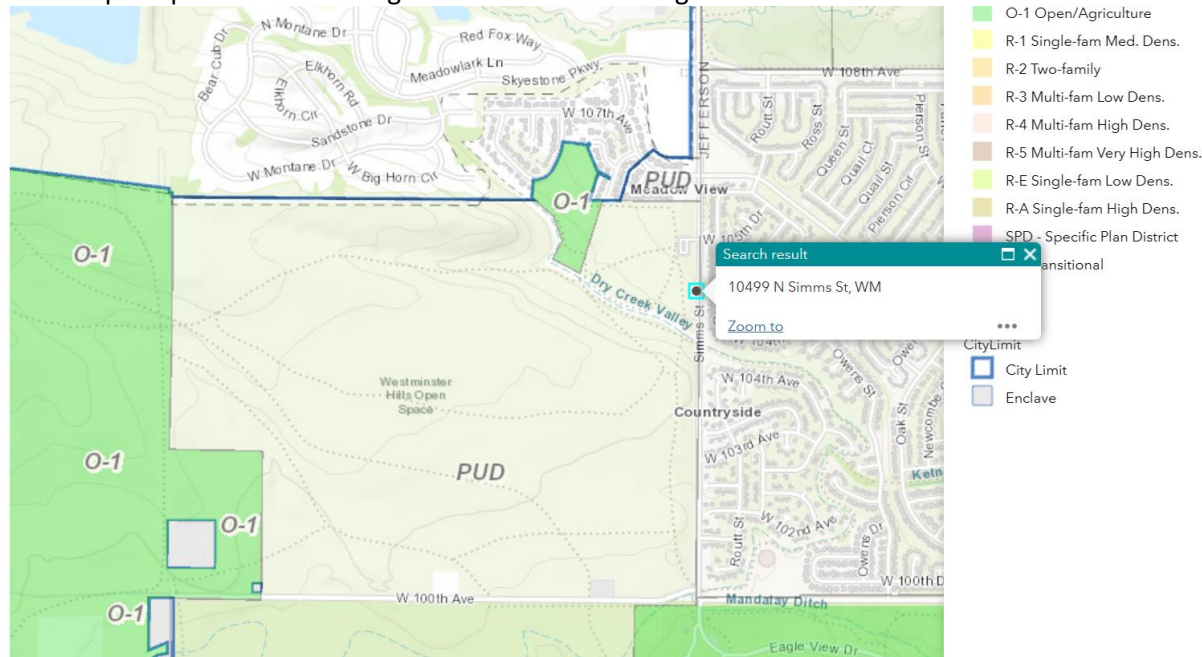
WHOS Dog Park Zoning Designation

On April 22, 2024, members of the Westy Dog Park Guardians contacted Jefferson County to inquire about potential zoning issues at the WHOS Off-Leash Dog Park. Becky Daleske, Survey and Research Analyst, confirmed via email that Jefferson County has no jurisdiction over any zoning in the City of Westminster, including the WHOS Off-Leash Dog Park. She provided the following street address for the WHOS Off-Leash Dog Park: 10499 Simms Street.

The Westminster Planning Department website provides a page devoted to Zoning in the City of Westminster.^{lxxv} The interactive map indicates that nearly the entire 420-acre WHOS Off-Leash Dog Park, located at 10499 Simms Street, is largely currently zoned as Planned Unit Development (PUD), as depicted in the following screenshots from April 22, 2024, and enlarged below. There are 2 carve-outs in the NE and SW corners of the WHOS Off-Leash Dog Park that are currently zoned O-1 Open Space/Agricultural.



WHOS Open Space Off-Leash Dog Park: Screenshot Enlarged



WHOS Dog Park PRL Classification

The PRL Classification is described in the lower right corner of each Park, on its individual website. The WHOS Off-Leash Dog Park is classified as Open Space.^{lxvii}

Westminster Hills Open Space Off-Leash Area

Open Space Amenities

- Dog drinking fountain
- Partially fenced
- Restroom facility (portable)
- See off-leash rules below
- Shade shelters
- Two parking lots: located at 10499 Simms St. and 11610 W. 100th Ave.

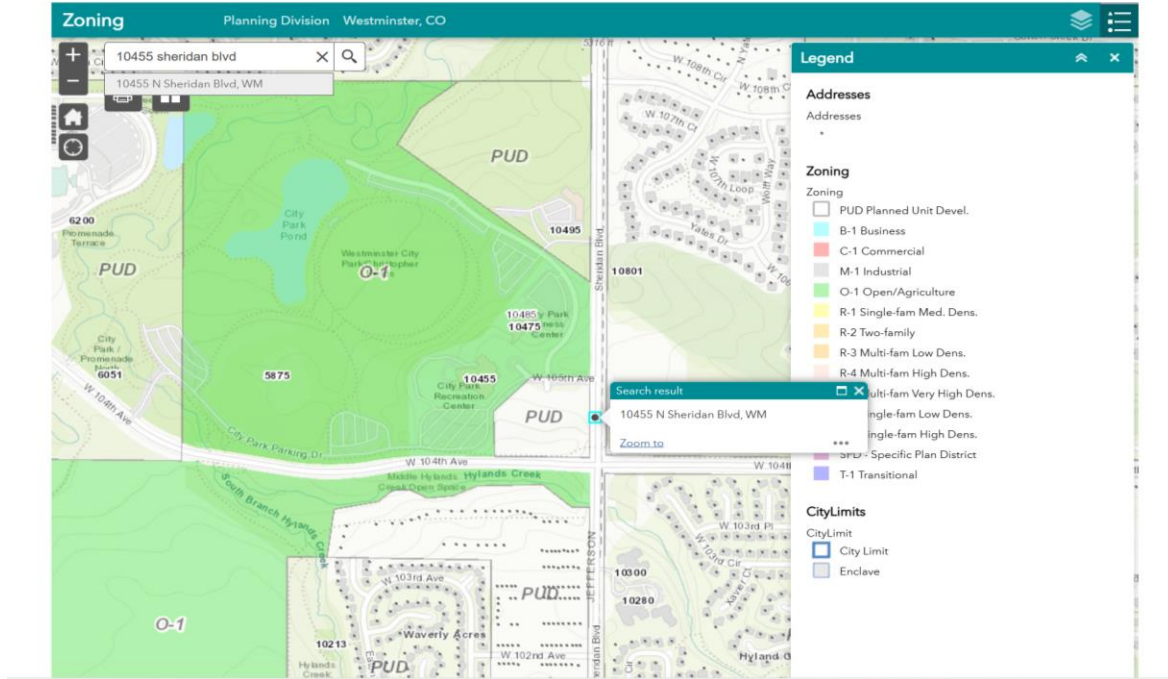
CLASSIFICATION: Open Space

City Park Zoning Designation

City Park is zoned O-1 Open Space.

Welcome To The Interactive Zoning Map

Enter Your Address, zoom to your property, and click on it to find the zoning information you are looking for!



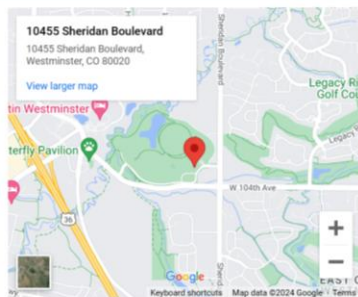
City Park PRL Classification

City Park is classified as a Regional/Citywide Park. ^{lxxvii}

Homepage > Parks & Recreation > Parks, Trails & Open Space > City Park

City Park

Disc Golf Course Closure: The City Park disc golf course is closed due to three ongoing improvement projects in the area which will extend through 2025. At this point it is unclear whether the disc course can be safely reinstated following the completion of this improvement work. During the closure, staff are actively exploring alternative disc golf sites. Stay tuned for more information!

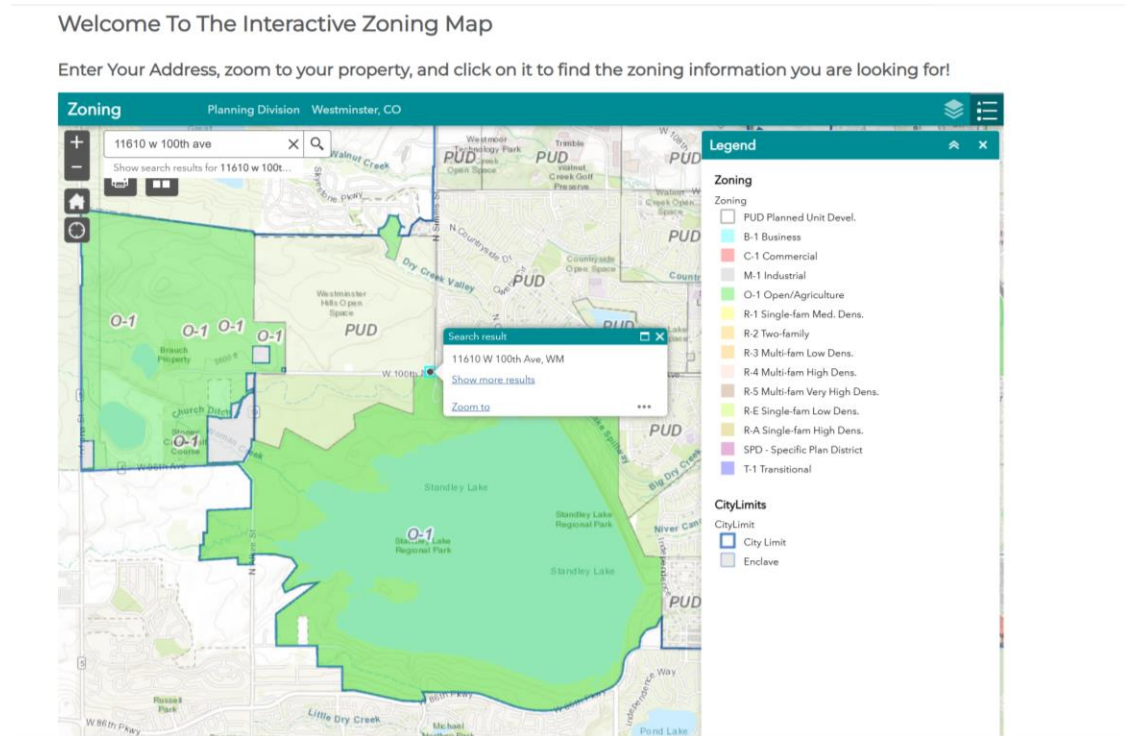


Park Amenities

- Access to Open Space (Big Dry Creek, North Hylands Creek)
- Access to regional trail (Big Dry Creek)
- Armed Forces tribute garden
- Christopher Fields - Softball fields (4)
- Drinking fountain
- Fitness center
- Parking
- Paved loop walking path with climbing stairs
- Pavilions (3 - 1 is reservable: [Reservation Information](#))
- Picnic tables (19)
- Playground equipment
- Pond (**NO FISHING ALLOWED**)
- Recreation center
- Restroom facility (portable)
- Restroom facility at Christopher Fields
- Skateboard park
- Soccer fields (4)

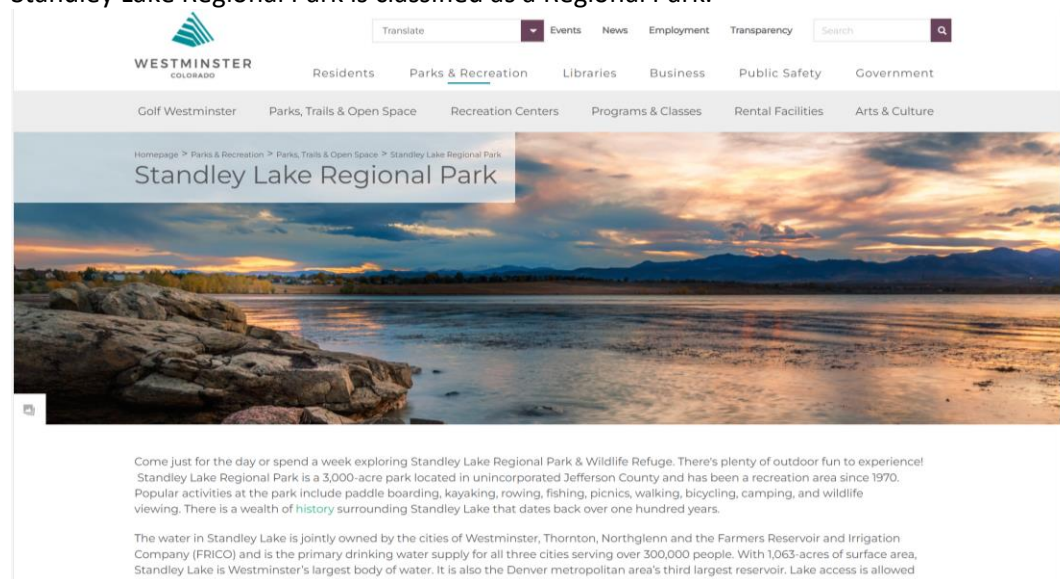
Standley Lake Regional Park Zoning Designation

Standley Lake Regional Park is zoned O-1 Open Space.



Standley Lake Regional Park PRL Classification

Standley Lake Regional Park is classified as a Regional Park.^{lxviii}



Municipal Code Sections Defining PUD & O-1 Open Space

Multiple sections of the Westminster Municipal Code are relevant to the WHOS Off-Leash Dog Park, as it is currently zoned as PUD:

Section 11-4-1 of the Westminster Municipal Code defines PUD as “A district where a maximum amount of flexibility is allowed in order to create a unified, innovative approach to mixed use design.” It also defines an O-1 OPEN DISTRICT as “An agricultural and open district for providing an area of the City devoted to the production of agricultural crops and livestock, as well as preserving and protecting agricultural and non-urbanized areas until urbanization is warranted and the appropriate change in district classification is made.”

Section 11-4-7 states “The PUD District is intended to provide the means and the guidelines through which tracts of land are developed through an overall development plan that integrates the land uses and site considerations for the land as a unit, rather than the traditional standard treatment of land uses in other so-called Euclidian districts in this Code. It is intended to reflect maximum design freedom to make the best use of topography and land features and to permit the developer an opportunity to more fully utilize the physical characteristics of the site through the reduction of lot sizes and the absence of setback and bulk restrictions; to provide for diversification and flexibility in housing types, housing prices, and overall design; to encourage innovative development of smaller parcels of land that have been passed over; to encourage mixed-use developments, including uses such as residential, office, and commercial; and to encourage higher quality development than possible under traditional standard zoning regulations.”

WHOS Off-Leash Dog Park Use

Section 11-4-7(C)(1)(a) also states that all uses that are permitted in an O-1 District are allowed in a PUD District.^{lxxix}

The PRL currently allows off-leash dogs and cycling use at the WHOS Off-Leash Dog Park. Off-leash dog use has been allowed for 24 years. Cycling use has been marketed since the PRL bisected the Off-Leash Dog Park with the Rocky Mountain Greenway Bike Trail in 2016, which is 8 years. Both of these active uses are allowed in a PUD District.

The Dog Park is a destination, and the Greenway Trail is a throughway. People spend money at destinations. They use throughways to get to destinations. The Greenway Trail is like Highway 36. Drivers use 36 to travel through Westminster to get to Denver and Boulder. The Dog Park is like Casa Bonita. Dog owners make a special effort to drive to this regional treasure to exercise with their dogs, then they buy groceries or have a meal.

Park and Open Space Typologies (Classifications)

Below are the five PRL Park and Open Space Classifications.

1. **Neighborhood Parks** provide a focal point and identity for neighborhoods while offering a mix of active and passive recreation space: between 0.5-15 acres in size;
2. **Community Parks** provide opportunities for active recreation for the greater community: typically between 15 and 50 acres in size;
3. **Citywide Parks** serve the entire city population and function as a civic center for the community with a range of active and passive uses, events and activities: range from 51 to 250 acres;
4. **Regional Parks** are citywide and regional destinations that provide regional recreational activities with a diverse landscape and range of active and passive uses, including wildlife preservation: over 50 acres; and
5. **Conservation and Open Space** conserves natural amenities, views and habitats, providing opportunities for recreation and passive use, which could include hiking, biking, horseback riding and nature study: range in character, function, and size.^{lxxx}

List of Westminster Parks by PRL Classification and Zoning Designation

Below are the parks currently listed on the City of Westminster PRL website.^{lxxxi} The acreage and current Park and Open Space Typologies (Classifications) are derived from each individual park website, and the Zoning Designations are derived from a search of each park address on the City of Westminster Interactive Zoning Map. Park and Open Space Typologies (Classifications) are further described in Chapter 7 of the 2013 Westminster Comprehensive Plan.

There are 44 parks currently zoned PUD, including the WHOS Off-Leash Dog Park. There are 17 parks currently zoned R-1, R-A, R-3, SPD, B-1, C-1, or M-1. There is 1 Neighborhood Park that is zoned both PUD and O-1 Open Space. There is 1 Community Park, 1 Regional/Citywide Park, and 1 Regional Park that are currently zoned O-1 Open Space (bolded below).

- Amherst Park, 6.4-acre Neighborhood Park, PUD^{lxxxii}
- Big Dry Creek Park, 18-acre Community Park, R-3 Multi-Family Low Density^{lxxxiii}
 - Big Dry Creek Dog Park, within the 18-acre Community Park, R-3 Multi-Family Low Density^{lxxxiv}
- Bishop Park, 6.4-acre Neighborhood Park, R-A Single Family High Density^{lxxxv}
- Carol Butts Park, 32-acre Community Park, R-1 Single Family Medium Density^{lxxxvi}
- Central Plaza Park, 1.32-acre Urban Plaza, SPD Specific Plan District^{lxxxvii}
- Cheyenne Ridge Park, 5-acre Neighborhood Park, PUD^{lxxxviii}
- **City Park, 205-acre Regional/Citywide, O-1 Open/Agriculture**^{lxxxix}
- Cobblestone Park, 8.11-acre Neighborhood Park, O-1 Open/Agriculture and PUD^{xc}
- Cotton Creek Park, 7.5-acre Neighborhood Park, PUD^{xc}
- Dover Square Park, 5.4-acre Neighborhood Park, PUD^{xcii}
- Downtown Westminster Center Park, 3-acre Community Park, SPD Specific Plan District^{xciii}
- England Park Ball Field, 9.3-acre Neighborhood Park, M-1 Industrial^{xciv}
- Faversham Park, 18-acre Community Park, PUD^{xcv}
- Fireman's Park, C-1 Commercial^{xcvi}
- Foxshire Park, 6.42-acre Neighborhood Park, PUD^{xcvii}
- Fred Valente Humanitarian Park, 1.4-acre Neighborhood Park, R-A Single Family High Density^{xcviii}

- Green Knolls Park, 4.8-acre Neighborhood Park, PUD^{xcix}
- Hampshire Park, 5.5-acre Neighborhood Park, PUD^c
- Irving St Park, 5.9-acre Neighborhood Park, B-1 Business^{ci}
- Jessica Ridgeway Memorial Park, 3.2-acre Neighborhood Park, PUD^{cii}
- Kennedy Park, 2.4-acre Neighborhood Park, R-A Single Family High Density^{ciii}
- Kensington Park, 2.4-acre Neighborhood Park, PUD^{civ}
- Kings Mill Park, 3.7-acre Neighborhood Park, PUD^{cv}
- **Little Dry Creek Dog Park, Community Dog Park, O-1 Open/Agriculture** ^{cvi}
- Mayfair Park, 10.4-acre Neighborhood Park, PUD^{cvi}
- McFall Park (formerly known as Westminster Center Park), 10-acre Special Use, PUD^{cvi}
- Meadowlark Park, 10.4-acre Neighborhood Park, PUD^{cix}
- Mike Lansing T-Ball Fields, 6.3-acre Neighborhood Park/Special Use, PUD^{cx}
- Municipal Park, 6.2-acre Neighborhood Park, PUD^{cx}
- Nottingham Park, 6.8-acre Neighborhood Park, PUD^{cxii}
- Oakhurst Park East, 2.7-acre Neighborhood Park, PUD^{cxiii}
- Oakhurst Park West, 5.86 Community Park, PUD^{cxiv}
- Oakwood Park, 2.7-acre Neighborhood Park, R-A Single Family High Density^{cxv}
- Orchard Park, 11-acre Neighborhood Park, PUD^{cxvi}
- Park 1200, 3.5-acre Neighborhood Park, PUD^{cxvii}
- Promenade Terrace, 1.7-acre Special Use, PUD^{cxviii}
- Quails Crossing Park, 3.1-acre Neighborhood Park, PUD^{cxix}
- Ranch Park, 5-acre Neighborhood Park, PUD^{cxx}
- Roemersberger Fields, 7.5-acre Special Use, PUD^{cxxi}
- Ryan Park, 13-acre Neighborhood Park, PUD^{cxvii}
- Sensory Park, 1-acre Special Use (Sensory Park is the city's first completely accessible play area, built in cooperation with Children's Hospital.), PUD^{cxviii}
- Sherwood Park, 15-acre Neighborhood Park, PUD^{cxviii}
- Somerset Park, 1.7-acre Neighborhood Park, PUD^{cxv}
- Squires Park, 16.6-acre Community Park, PUD^{cxvii}
- **Standley Lake Regional Park, 3000-acre Park located in unincorporated Jefferson County, O-1 Open/Agriculture** ^{cxvii}
- Stratford Lakes Park, 5-acre Neighborhood Park, PUD^{cxviii}
- Stratford Park, 6.4-acre Neighborhood Park, PUD^{cxix}
- Sunset Park, 7.4-acre Neighborhood Park, R-1 Single Family Medium Density^{cxix}
- TeBockhorst Park, 4.7-acre Neighborhood Park (formerly known as Trendwood), PUD^{cxix}
- Tepper Fields, 10-acre Neighborhood Park, PUD^{cxvii}
- Terrace Park, 1.2-acre Neighborhood Park, R-1 Single Family Medium Density^{cxviii}
- Torii Square Park, 1.7-acre Neighborhood Park, R-1 Single Family Medium Density^{cxviii}
- Trailside Park, 10-acre Neighborhood Park, PUD^{cxv}
- Waverly Acres Park, 11.3 acres public land dedication, 1 acre developed Neighborhood Park, PUD^{cxvii}
- Westbrook Park, 3.2-acre Neighborhood Park, PUD^{cxvii}
- Westcliff Park, PUD^{cxviii}
- Westfield Village Park, 25-acre Community Park, PUD^{cxviii}
- Westminster Hills Open Space Off Leash Area, no acreage listed, PRL Website Classification is listed as Open Space, Zoning Map PUD, with the exception of 2 carve-outs in the NE and SW corners^{cx}
- Westminster Hills Park, 2.4-acre Neighborhood Park, R-1 Single Family Medium Density^{cx}

- Westminster Station Park Nature Playground, 37.5-acre Community Park, SPD Specific Plan District^{cxlii}
- Willowbrook Park, 10.6-acre Neighborhood Park, PUD^{cxliii}
- Windsor Park, 13-acre Neighborhood Park, PUD^{cxliv}
- Wolff Run Park, 15.5-acre Neighborhood Park, PUD^{cxlv}

WHOS Off-Leash Dog Park is a Regional Asset

The PRL has acknowledged the value to the City of Westminster as a regional recreational and economic asset since at least 2014: “The dog off-leash area is very popular and is considered a regional or ‘destination’ facility that attracts users living outside Westminster.”^{cxlvi} In fact, the PRL General Management Guidelines Map indicated the WHOS Off-Leash Dog Park as an Urban Natural/Transitional area, not Urban Natural, which is the designation for the remainder of the 607 acre Westminster Hills Open Space, or Sensitive/Urban Natural.^{cxlvii}

The WHOS Off-Leash Dog Park is necessarily regional because it is bordered on the north by the Skyestone neighborhood of Broomfield.^{cxlviii} It is also very close to the Candelas neighborhood in Arvada that is located to the southwest of the Park.^{cxlix}

Although it is hard to imagine that the City of Westminster would build on any of the 44 parks that are currently zoned PUD, the 420-acre WHOS Off-Leash Dog Park, as currently zoned PUD with the exception of 2 carve-outs in the NE and SW corners, is not necessarily zoned against future development, including housing. However, the Westminster city attorney has stated that since Jeffco Open Space funds were used, in part, to purchase the land, the property cannot contain future housing.

Recommendations for Zoning and PRL Classification

In order to protect the 420-acre WHOS Off-Leash Dog Park against future development, satisfy the will of the people, and safeguard this regional economic asset, the Guardians urge the City Council to:

1. **Rezone it** to O-1 Open Space;
2. **Reclassify it** as a Regional Park, which would conform to the classification of Westminster’s two other regional recreational destinations, City Park and Standley Lake Regional Park; and
3. **Rename it** the Westminster Hills Open Space Off-Leash Dog Park, and officially affirm off-leash dog use.

Consolidated Recommendations and Budgeting for WHOS Dog Park Advisory Board Consideration

Because we acknowledge that there are some issues at the WHOS Off-Leash Dog Park and because there is no money allocated to the Dog Park in the PRL budget,^{cl} the Guardians propose the following 2024 cost-effective plan that can be implemented very quickly. We call our recommendations the Dogs On Ground Strategic (DOGS) Plan.

2024

- Minimal budget impact
 - Establish a WHOS Dog Park Advisory Board charged with strategic plan development
 - Collaborate with the Guardians to enhance community involvement and stewardship
 - Park volunteering
 - Fundraising strategies for reroute of Greenway Trail
 - To fix the Zoning and Classifications Issues
 - Rezone the Dog Park to O-1 Open Space;
 - Reclassify the WHOS Off-Leash Dog Park as a Regional Park, which would conform to the classification of Westminster's two other regional recreational destinations, City Park and Standley Lake Regional Park; and
 - Rename the WHOS Off-Leash Dog Park the Westminster Hills Open Space Off-Leash Dog Park, which officially affirms off-leash dog use.
 - Establish a well-developed Trail Map (see recommended map below)
 - Develop and implement communication strategies updating park users of changes
 - City website/social media
 - Signage at park
 - Trail ambassadors
 - To improve the Weekend Parking Problems
 - Implement Residential Parking Permits in the Countryside neighborhood, where illegal parking is an issue. This framework is already established in the neighborhood surrounding Standley Lake High School, and it is familiar to City staff and Law Enforcement.
 - Monitor parking by Law Enforcement only on the weekends, when it is an issue, to control costs for the City.
 - On the weekends, Park Rangers place a large orange traffic barrel, with a sign indicating that parking is limited to Countryside residents, at the intersection of Simms and 105th Drive, to discourage illegal parking.
 - To address the Environmental Concerns
 - Reinstate Dog Park Clean-Up Days
 - Reinstall Poop Bag Dispensers and Trash Cans
 - On Mud Days, Park Rangers place large orange traffic barrels, with Park Closed Today signs, at each Parking Lot entrance, to control costs for the City.
 - Enhance fines for failure to clean up dog waste

- Target areas for revegetation, use simple barriers or temporary closures to protect revegetation projects.
 - Use barriers to funnel foot traffic and reduce the width of trails.
 - Use the Dry Creek Valley Ditch Authority’s signage for E. Coli at ditch which is free to the City
 - Remove signs enforcing COVID-19 social distancing
 - Close western 600 acres to dogs with clear signage
 - Follow weed management recommendations published by Colorado Department of Agriculture
 - Plant native grasses that can compete with the weeds
 - Implement volunteer dig-up days
 - To reduce interactions between Dogs and Bikes
 - Within the Trail Map encourage and funnel dog owners to trails other than the Greenway Trail
 - Post trail map at multiple locations through dog park using Boulder’s 6”x6” as a model
- Moderate budget impact
 - Install trail guards to designate width of official trails
 - Place straw, grass mats, to further delineate reclamation areas
 - Advisory Board identify temporary closure of targeted areas for revegetation

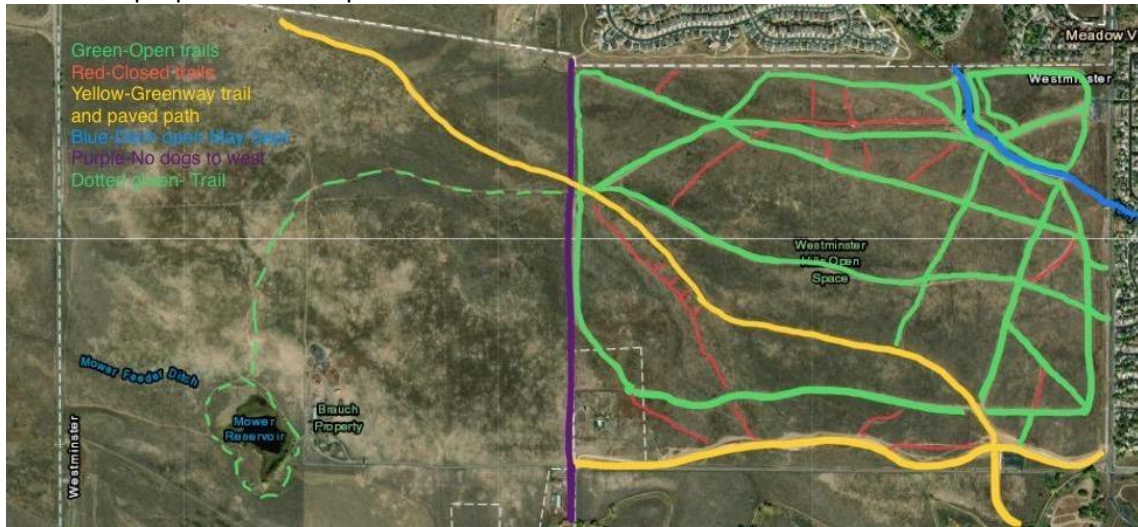
2025

- Minimal budget impact
 - Create a contest for signage designed by local children
 - Revegetation
 - Trail closure
 - Share the road/be kind to bikes (parking lot exit)
 - Educational (birds, land history, etc.)
 - Create memorial opportunities to raise funds for the park
 - Kickoff with Ryan Powell memorial bench
- Moderate budget impact
 - Implement mud day closures.
 - Utilizing typically used procedures such as cones, signs, gates, etc. , and with closure parameters agreed upon with the proposed WHOS Advisory Board, close the area during excessive mud days
 - Develop communication strategy similar to Boulder—website, text messages, social media
 - Post signage with violation fines at north and east neighborhood entrances

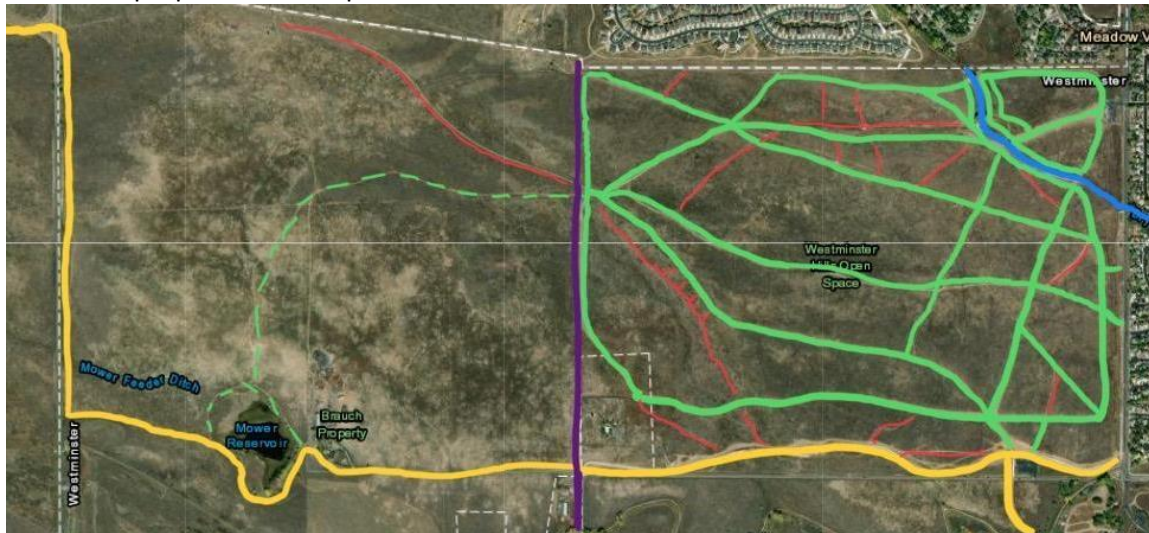
2026

- Large budget impact
 - Reroute Greenway Trail
 - Approximately 5572 feet to Indiana, much of which is already paved
 - Approximately 3679 feet to Indiana bridge
 - Consider installing additional bridges over the ditch

Guardians proposed trail map 2024-25



Guardians proposed trail map 2026



Distances in feet between trails



Distances between trails

Conclusion

Local dog owners are a diverse population of residents and neighbors that deserve an exercise and recreation space where we can safely exercise with our dogs. The vast majority of us are responsible dog owners and good citizens. As with any of the parks and recreation spaces, there are some responsible citizens who take care of the resources, and there are some less responsible citizens who fail to manage their impact.

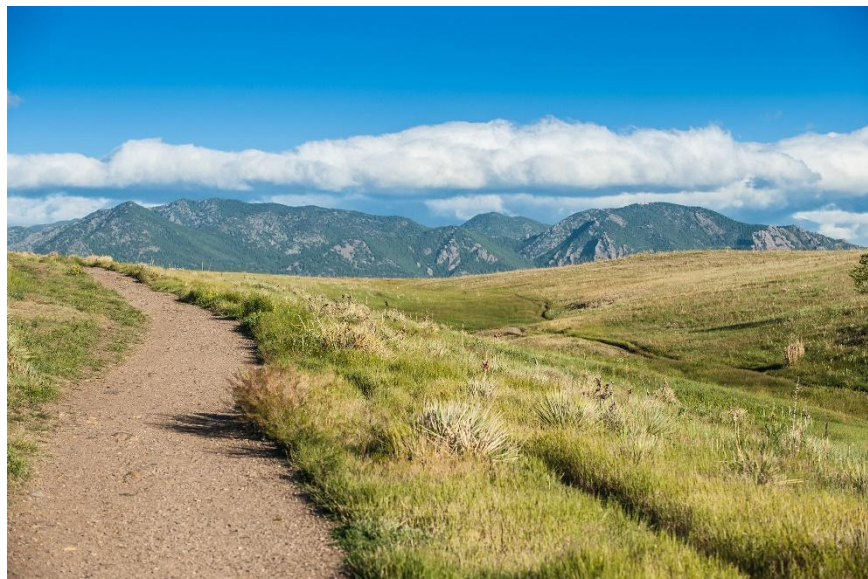
There is strong public support, demonstrated in three PRL surveys in the last year, indicating nearly 80% of survey respondents want the 420-acre WHOS Off-Leash Dog Park retained as an Off-Leash Dog Park. The WHOS Off-Leash Dog Park amounts to approximately 6.4% of the 6,600 acres of parks and open space managed by PRL. This regional asset is a unique spot for diverse dog owners to establish a sense of community belonging and to exercise safely with their dogs. Data suggests this population may be underserved.

The dog owners that love the WHOS Off-Leash Dog Park are an impassioned group of people who support developing solutions to the issues and who seek to become better stewards of this 420-acre regional recreational and economic treasure.

This is the opportunity for the City of Westminster to:

- Acknowledge, affirm, retain, and protect the 420-acre the WHOS Off-Leash Dog Park;
- Collaborate with the Westy Dog Park Guardians to promote and model dog-park citizenship, stewardship, and leadership; and
- Consider a plan to develop a second large off-leash dog park to capitalize on this Colorado-style recreation activity and economic resource.

The Westy Dog Park Guardians are seeking to increase our stewardship of the WHOS Off-Leash Dog Park through a collaboration with the City of Westminster that includes education, clean-up, and connection, and that makes a positive impact on our community, **together**.



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- ⁱⁱ Westminster Hills Open Space Area Management Plan, [Westminster Hills Open Space \(westminsterco.gov\)](#).
- ⁱⁱⁱ ERO Resources Corporation, Westminster Hills Open Space Conditions Report, Jan. 10, 2024, [DRAFT \(westminsterco.gov\)](#).
- ^{iv} Visitor Survey Results, conducted summer 2023, Slide 34, [Visitor Survey Results.pdf \(westminsterco.gov\)](#).
- ^v Westminster Hills Open Space (WHOS) Area Management Plan – Community Feedback, [WHOSCommunityFeedbackALL2-15-2025WEB-FINAL.pdf \(westminsterco.gov\)](#).
- ^{vi} [WHOSManagementOptionsSurveyResults.pdf \(westminsterco.gov\)](#)
- ^{vii} [Petition · KEEP WESTMINSTER HILLS DOG PARK COMPLETELY OFF-LEASH! - United States · Change.org](#)
- ^{viii} David Sachs, *Denver has more Dogs than Children, and Everything Else we Learned about Denver’s Dog Parks*, Denverite, Dec. 16, 2019, [Denver has more dogs than children, and everything else we learned about Denver's dog parks - Denverite, the Denver site!](#).
- ^{ix} Edwin Plotts, *Pet Ownership Statistics by State, and So Much More (Updated 2020)*, Pawlicy Advisor, [Pet Ownership Statistics by State, And So Much More \(Updated 2020\) | Pawlicy Advisor](#).
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- ^{xiii} *Id.*
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- ^{xvii} [CFL - FLAP Colorado 2016 \(jeffco.us\)](#)
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- ^{xxii} City of Westminster Municipal Code 13-5-3(A), [CHAPTER 5. - OPEN SPACE PROGRAM | Code of Ordinances | Westminster, CO | Municode Library](#).
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- ^{xxix} 7A West’s Colorado Practice Series §31:9 Alternative Theories.

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- ^{xxxiv} [\(24\) Joe Reale | LinkedIn](#)
- ^{xxxv} [10/27/2020 Broomfield City Council Withdraws from "Rocky Mountain Greenway"! \(rmpjc.org\)](#)
- ^{xxxvi} [\(24\) Tomás \(Thomas Patrick Mishler\) Herrera-Mishler | LinkedIn](#)
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- ⁱ <https://cpw.state.co.us/learn/Pages/SOC-ThreatenedEndangeredList.aspx>
- ⁱⁱ [Colorado Parks & Wildlife - Grassland Species Plan \(state.co.us\)](#)
- ⁱⁱⁱ [CO SWAP ExecutiveSummary.pdf \(state.co.us\)](#)
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- ^{lviii} Westminster Wildlife and Natural Resource Management Plan for Open Space Properties, [Microsoft Word - Sarah - test.doc \(westminsterco.gov\)](#)
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- ^{lxxvii} [City Park \(westminsterco.gov\)](#)
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- ^{lxxxv} [Big Dry Creek Dog Park \(westminsterco.gov\)](#)

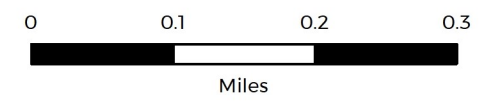
lxxxv [Bishop Square Park \(westminsterco.gov\)](http://westminsterco.gov)
lxxxvi [Carroll Butts Park \(westminsterco.gov\)](http://westminsterco.gov)
lxxxvii [Central Plaza Park \(westminsterco.gov\)](http://westminsterco.gov)
lxxxviii [Cheyenne Ridge Park \(westminsterco.gov\)](http://westminsterco.gov)
lxxxix [City Park \(westminsterco.gov\)](http://westminsterco.gov)
xc [Cobblestone Park \(westminsterco.gov\)](http://westminsterco.gov)
xci [Cotton Creek Park \(westminsterco.gov\)](http://westminsterco.gov)
xcii [Dover Square Park \(westminsterco.gov\)](http://westminsterco.gov)
xciii [Center Park \(westminsterco.gov\)](http://westminsterco.gov)
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xcviii [Fred Valente Humanitarian Park \(westminsterco.gov\)](http://westminsterco.gov)
xcix [Green Knolls Park \(westminsterco.gov\)](http://westminsterco.gov)
c [Hampshire Park \(westminsterco.gov\)](http://westminsterco.gov)
ci [Irving Street Park \(westminsterco.gov\)](http://westminsterco.gov)
cii [Jessica Ridgeway Memorial Park \(westminsterco.gov\)](http://westminsterco.gov)
ciii [Kennedy Park \(westminsterco.gov\)](http://westminsterco.gov)
civ [Kensington Park \(westminsterco.gov\)](http://westminsterco.gov)
cv [Kings Mill Park \(westminsterco.gov\)](http://westminsterco.gov)
cvi [Little Dry Creek Dog Park \(westminsterco.gov\)](http://westminsterco.gov)
cvii [Mayfair Park \(westminsterco.gov\)](http://westminsterco.gov)
cviii [McFall Park \(westminsterco.gov\)](http://westminsterco.gov)
cix [Meadowlark Park \(westminsterco.gov\)](http://westminsterco.gov)
cx [Mike Lansing T-ball Fields \(westminsterco.gov\)](http://westminsterco.gov)
cxii [Municipal Park \(westminsterco.gov\)](http://westminsterco.gov)
cxiii [Nottingham Park \(westminsterco.gov\)](http://westminsterco.gov)
cxiiii [Oakhurst Park East \(westminsterco.gov\)](http://westminsterco.gov)
cxv [Oakhurst Park West \(westminsterco.gov\)](http://westminsterco.gov)
cxvi [Oakwood Park \(westminsterco.gov\)](http://westminsterco.gov)
cxvii [Orchard Park \(westminsterco.gov\)](http://westminsterco.gov)
cxviii [Park 1200 \(westminsterco.gov\)](http://westminsterco.gov)
cxviiii [Promenade Terrace \(westminsterco.gov\)](http://westminsterco.gov)
cxix [Quail's Crossing Park \(westminsterco.gov\)](http://westminsterco.gov)
cxx [Ranch Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxi [Roemersberger Fields \(westminsterco.gov\)](http://westminsterco.gov)
cxxii [Ryan Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxiii [Sensory Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxiv [Sherwood Park \(westminsterco.gov\)](http://westminsterco.gov)
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cxxvi [Squire's Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxvii [Standley Lake Regional Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxviii [Stratford Lakes Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxix [Stratford Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxx [Sunset Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxxii [TeBockhorst Park \(westminsterco.gov\)](http://westminsterco.gov)
cxxxiii [Tepper Fields \(westminsterco.gov\)](http://westminsterco.gov)
cxxxiiii [Terrace Park \(westminsterco.gov\)](http://westminsterco.gov)

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- cxxxiv [Torii Square Park \(westminsterco.gov\)](#)
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 - cxxxvii [Westbrook Park \(westminsterco.gov\)](#)
 - cxxxviii [Westcliff Park \(westminsterco.gov\)](#)
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 - cxli [Westminster Hills Park \(westminsterco.gov\)](#)
 - cxlii [Westminster Station Park & Nature Playground \(westminsterco.gov\)](#)
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 - cxlvi [WOSSP_Cover_TOC.indd \(westminsterco.gov\)](#), at page 45.
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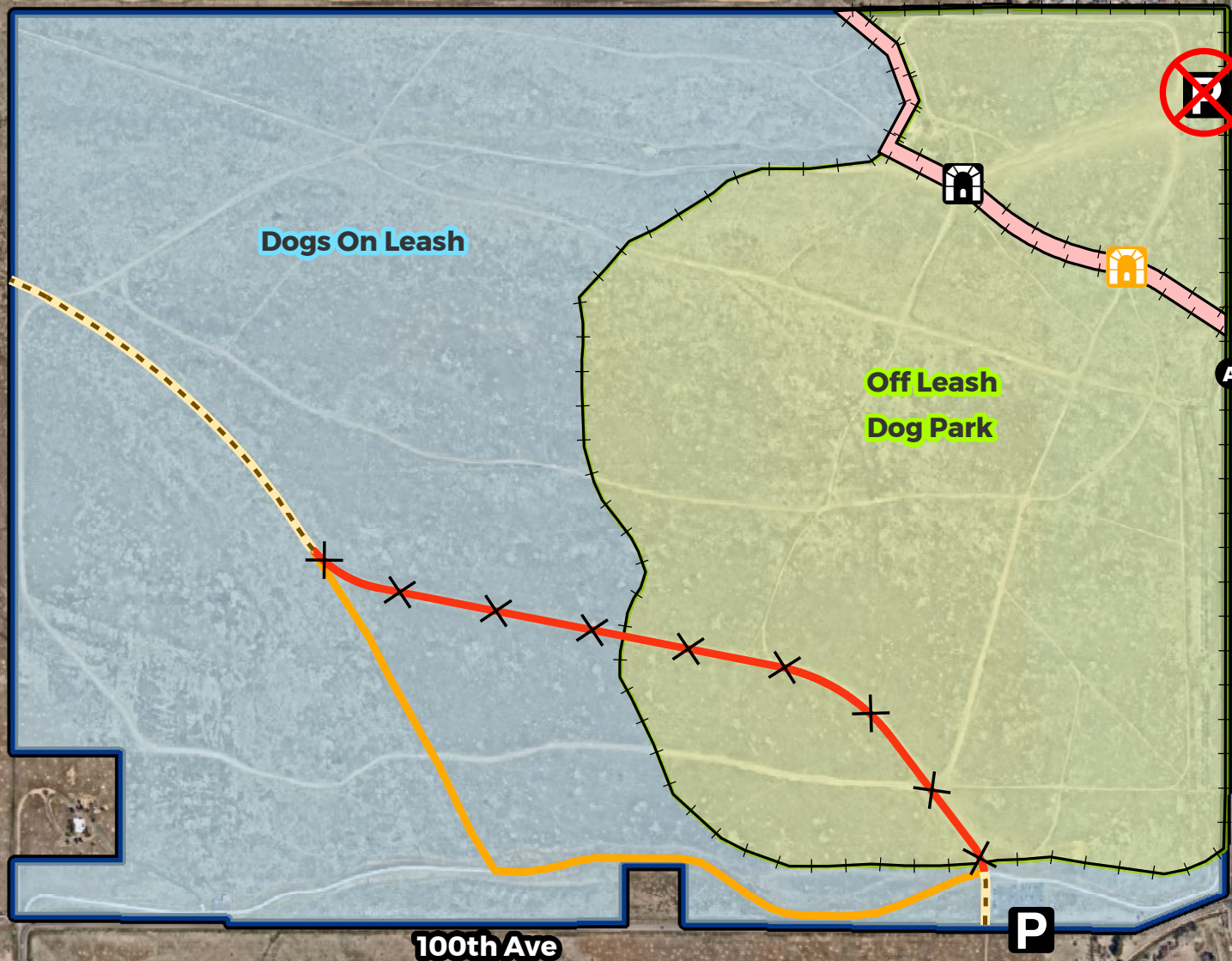
Option 1 - No Change to Off-Leash Dog Area



P Parking Lot (Add 59 Spaces)	Close Parking Lot (Remove 59 Spaces)	Existing Bridge	Off Leash Dog Park (467 Acres)
A New Pedestrian Access	New Fence	Proposed Bridge	Closed Area (3 acres)
	Existing Greenway		

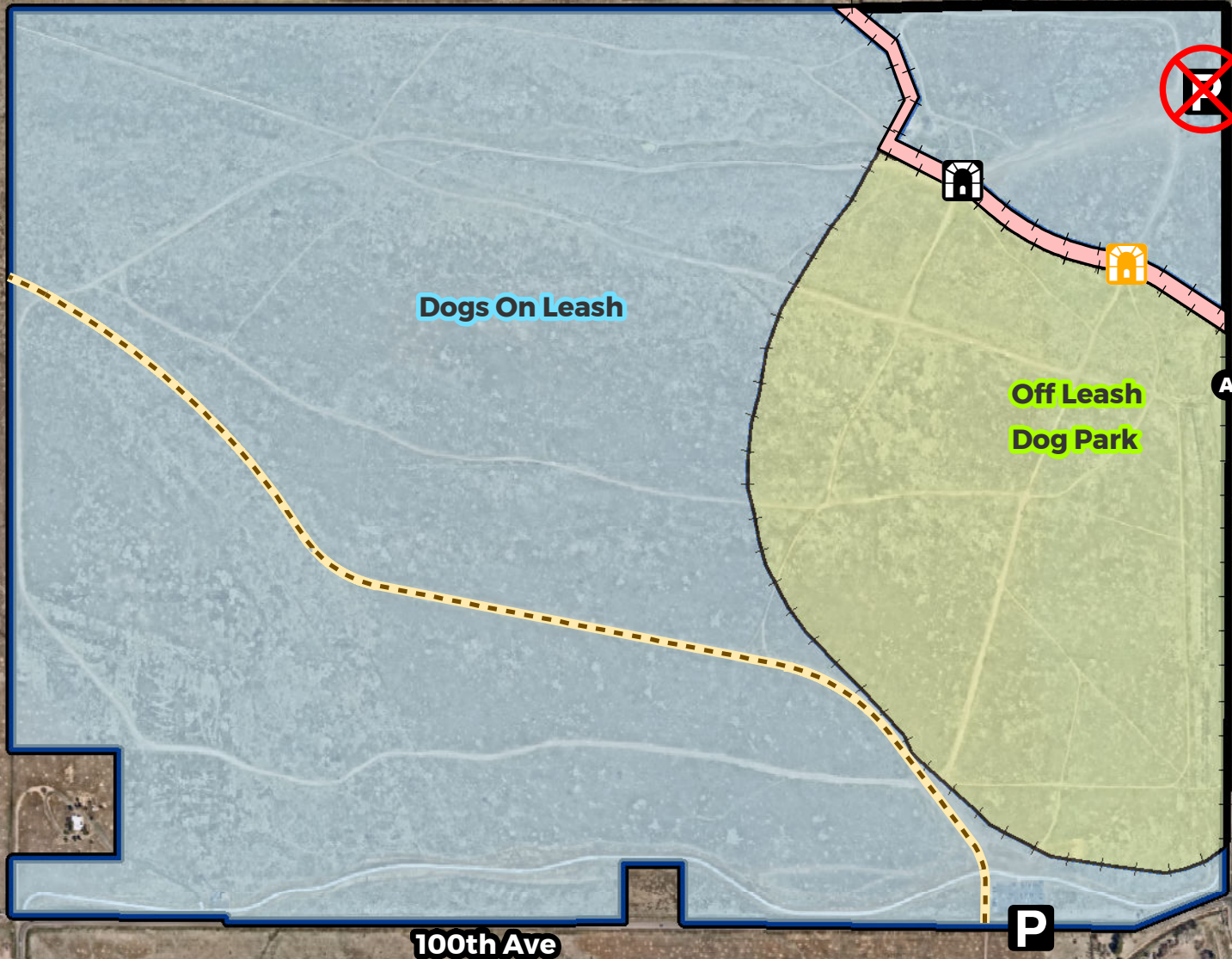


Option 2 - Large-Sized Off-Leash Dog Area



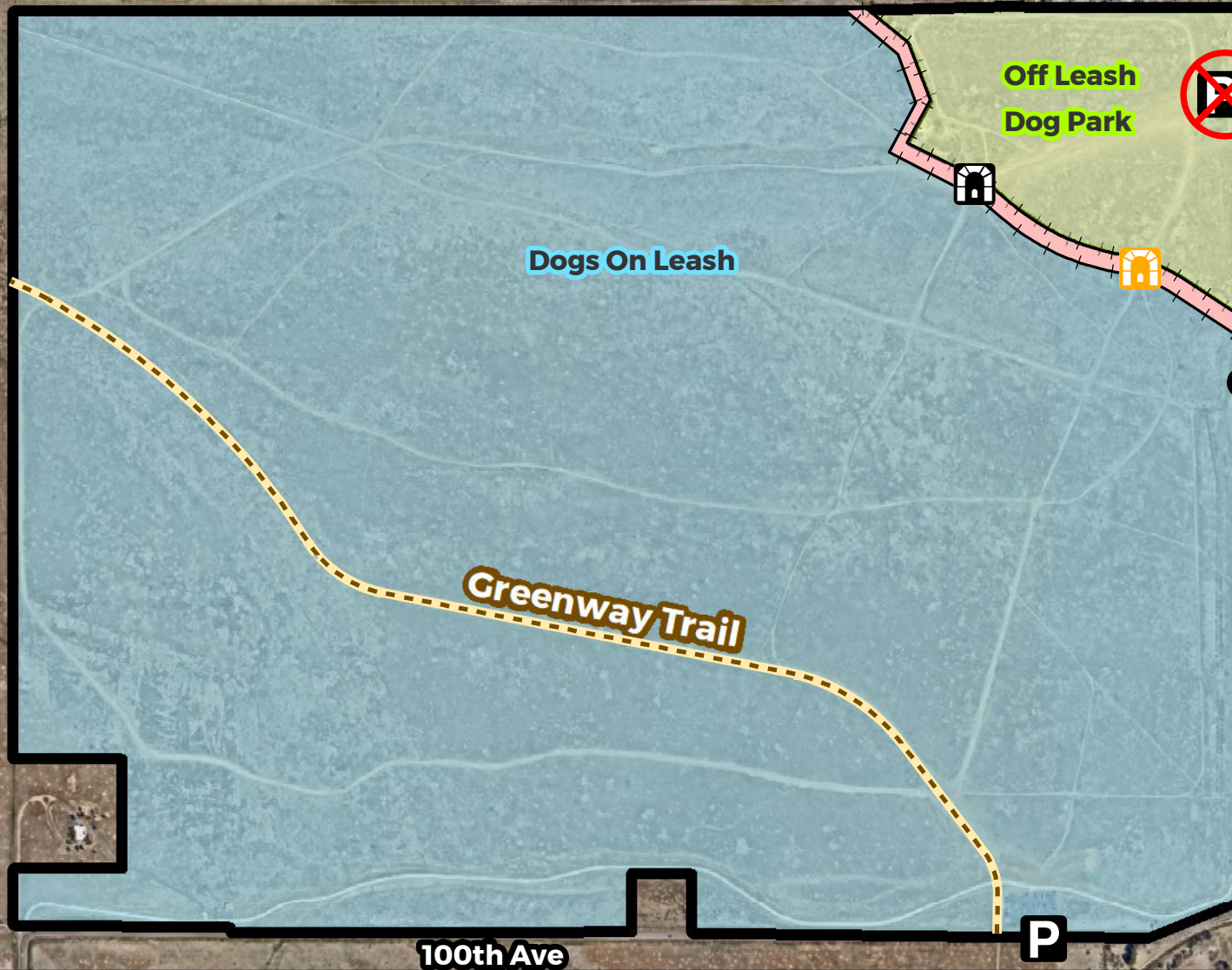
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|---|---|------------------------|-------------------|-----------------------------------|-----------------------------|
| P Parking Lot
(Add 59 Spaces) | Close Parking Lot
(Remove 59 Spaces) | New Fence | Existing Greenway | Off Leash Dog Park
(200 acres) | On Leash
(267 acres) |
| Existing Bridge | A New Pedestrian Access | New Greenway Alignment | Greenway Removal | Closed Area (3 acres) | Project Area
(470 Acres) |

Option 3 - Mid-Sized Off-Leash Dog Area

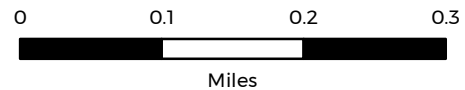


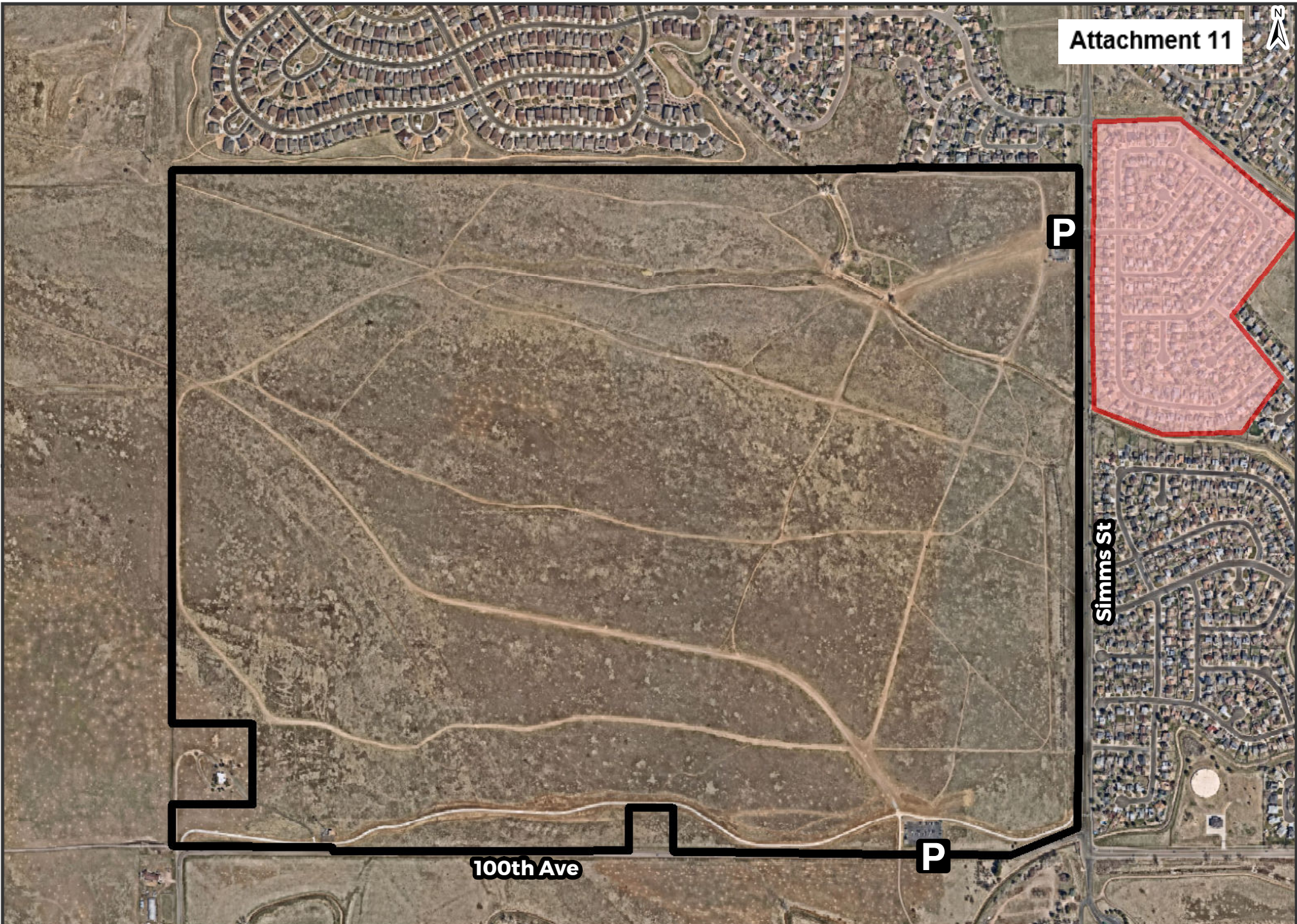
Parking Lot (Add 59 Spaces)	New Pedestrian Access	Existing Greenway	Off Leash Dog Park (110 acres)	On Leash (357 acres)
Close Parking Lot (Remove 59 Spaces)	Existing Bridge	New Fence	Closed Area (3 acres)	Project Area (470 Acres)
	Proposed Bridge			

Option 4 - Neighborhood-Sized Off-Leash Dog Area



- | | | | |
|---|--------------------------------|----------------------------------|-----------------------------|
| P Parking Lot
(Add 59 Spaces) | A New Pedestrian Access | Off Leash Dog Park
(31 acres) | On Leash
(436 acres) |
| Close Parking Lot
(Remove 59 Spaces) | Existing Bridge | Closed Area (3 acres) | Project Area
(470 Acres) |
| | Proposed Bridge | | |
| | Existing Greenway | | |





Parking Lot



Project Area
(470 Acres)



Potential Parking Permit Area

WESTMINSTER HILLS OPEN SPACE

June 3, 2024

Purpose:

Policies, Operations, and Capital
Improvements Management Plan Options

Presentation Agenda

- Overview
 - Open Space Program
 - Input Received
 - Regional Connections
- Site Options:
 - Option 1: No change to off-leash dog area
 - Option 2: Large-sized off-leash dog area
 - Option 3: Mid-sized off-leash dog area
 - Option 4: Neighborhood-sized off-leash dog area
- Policy Recommendations
- Operating Recommendations
- Capital Improvement Recommendations

Why does Westminster preserve open space?

- Environmental Protection
- Enhanced Quality of Life
- Stewardship for the Future



Westminster Hills Open Space

- Preserve Site From Development
- Protection of scenic view corridor and natural features that enhance quality of life
- Protection of environmentally sensitive features (e.g., native grasses, wildlife and wildlife habitat, etc.)
- Maintain Scenic Vistas
- Passive Recreational Purposes



WHOS History

- 1988 Acquisition of first 400 acres (additional 11 acquisitions totaling 1,050 acres through 2022)
- 2000 First off-leash dog area pilot (27 acres)
- 2008 Off-leash dog area expanded to full WHOS
- 2010 Refined off-leash area to 470 acres
- 2017 Greenway Trail installed
- 2023-2024 Southern concrete path installed
- 2023 ERO contracted to conduct Environmental Assessment of WHOS
- November 2023 - March 2024 Outreach Related to ERO Assessment
- March-May 2024 WHOS Community Advisory Team (CAT)



Input Received

- PRLOSAB preliminary ERO report (Oct 2023)
- ERO WHOS Final Conditions Report (January 2024)
- Community Meetings (Nov 2023, Jan 2024, March 2024)
- Westy Dog Park Guardians (grassroots organization established in January 2024)
- WHOS Community Advisory Team (CAT) (March-May 2024)

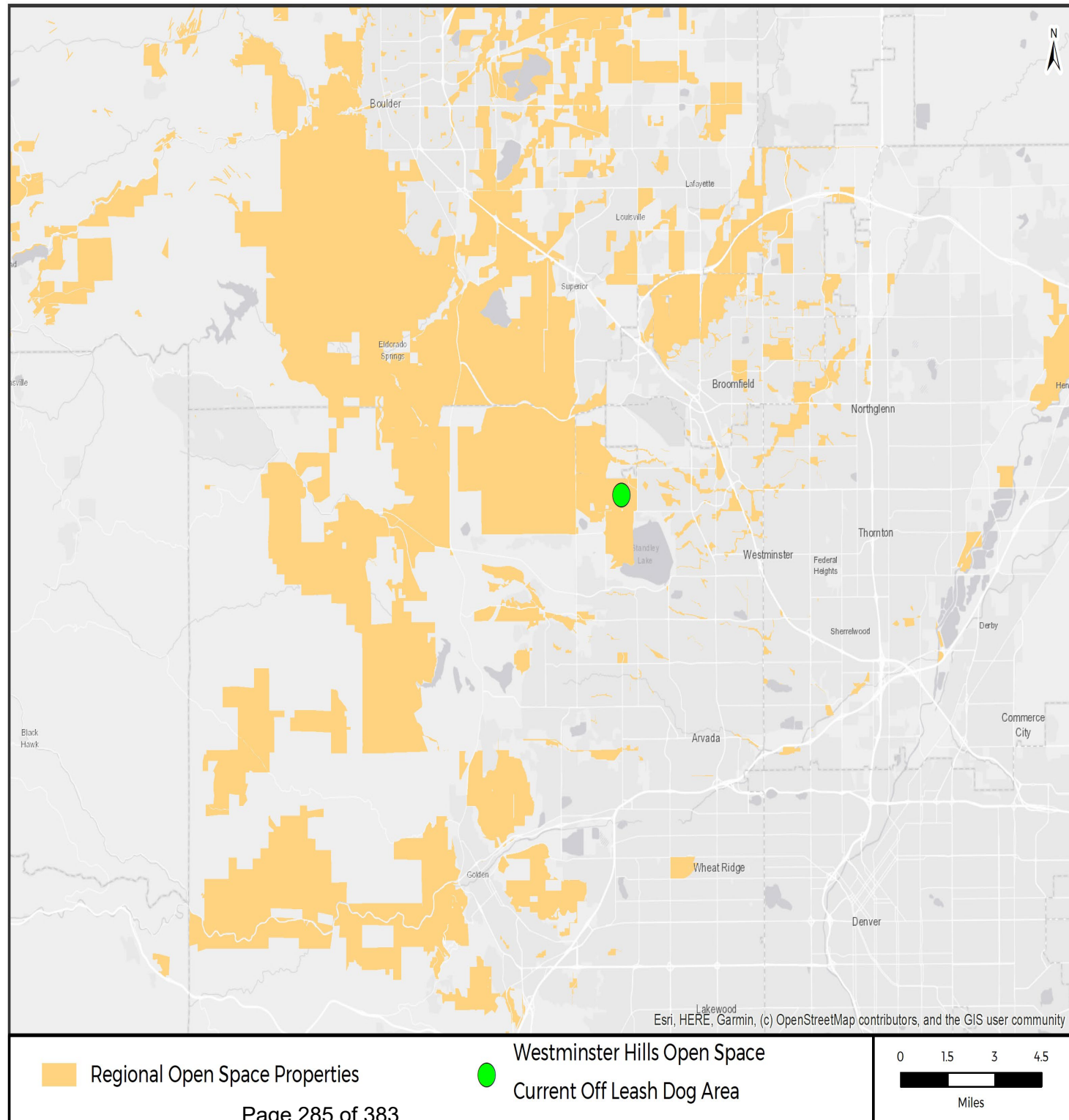
Community Advisory Team (CAT)

- Met 5 times in March-May, including site visit
- Reached agreement on 13 recommendations for feasibility analysis
- Concurred with retaining western 600 acres as dog-free area



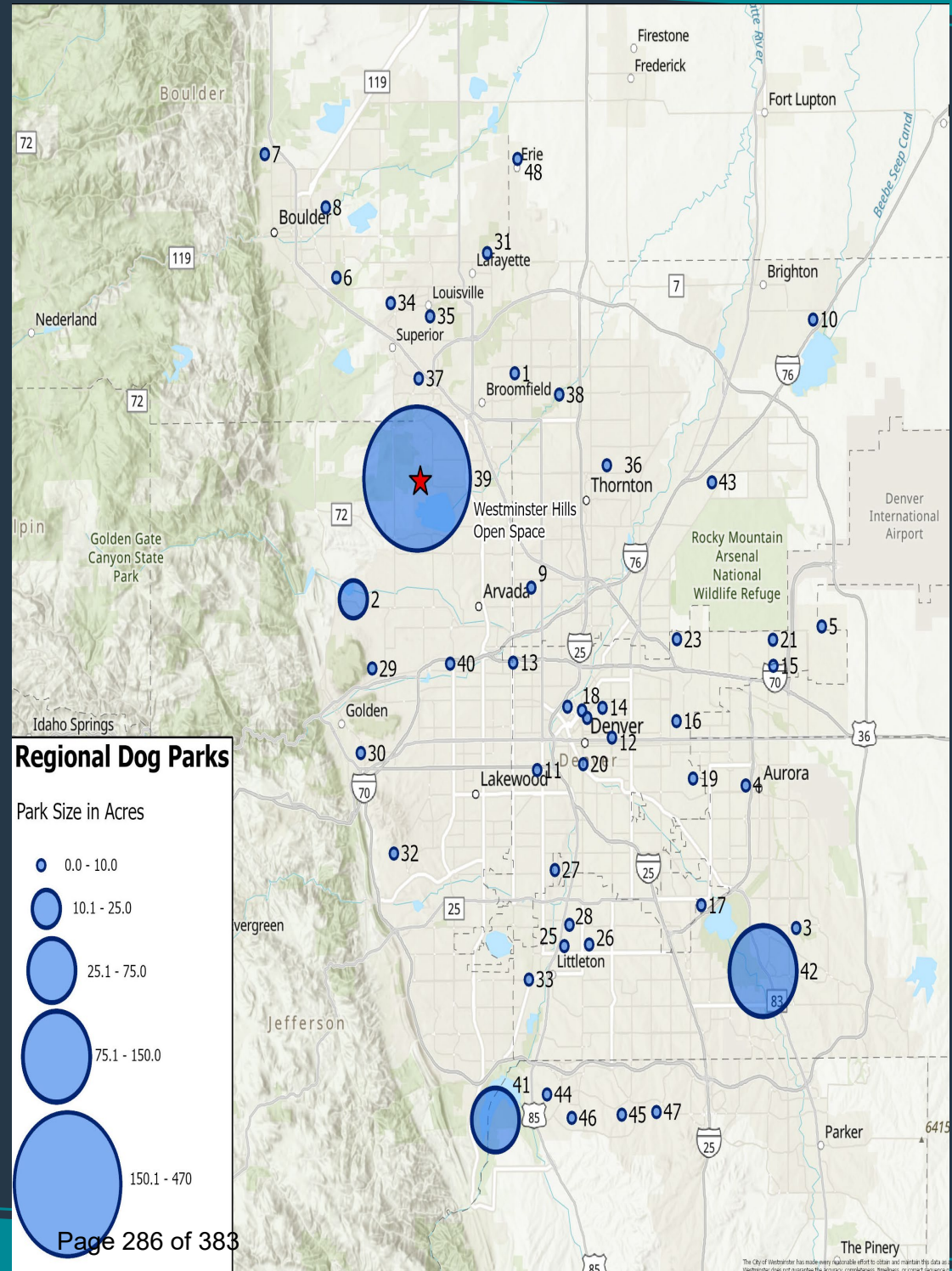
Regional Open Space Network

WHOS is part of a larger open space network, making it an important part of a larger open space ecosystem (wildlife, native grasses, etc.)



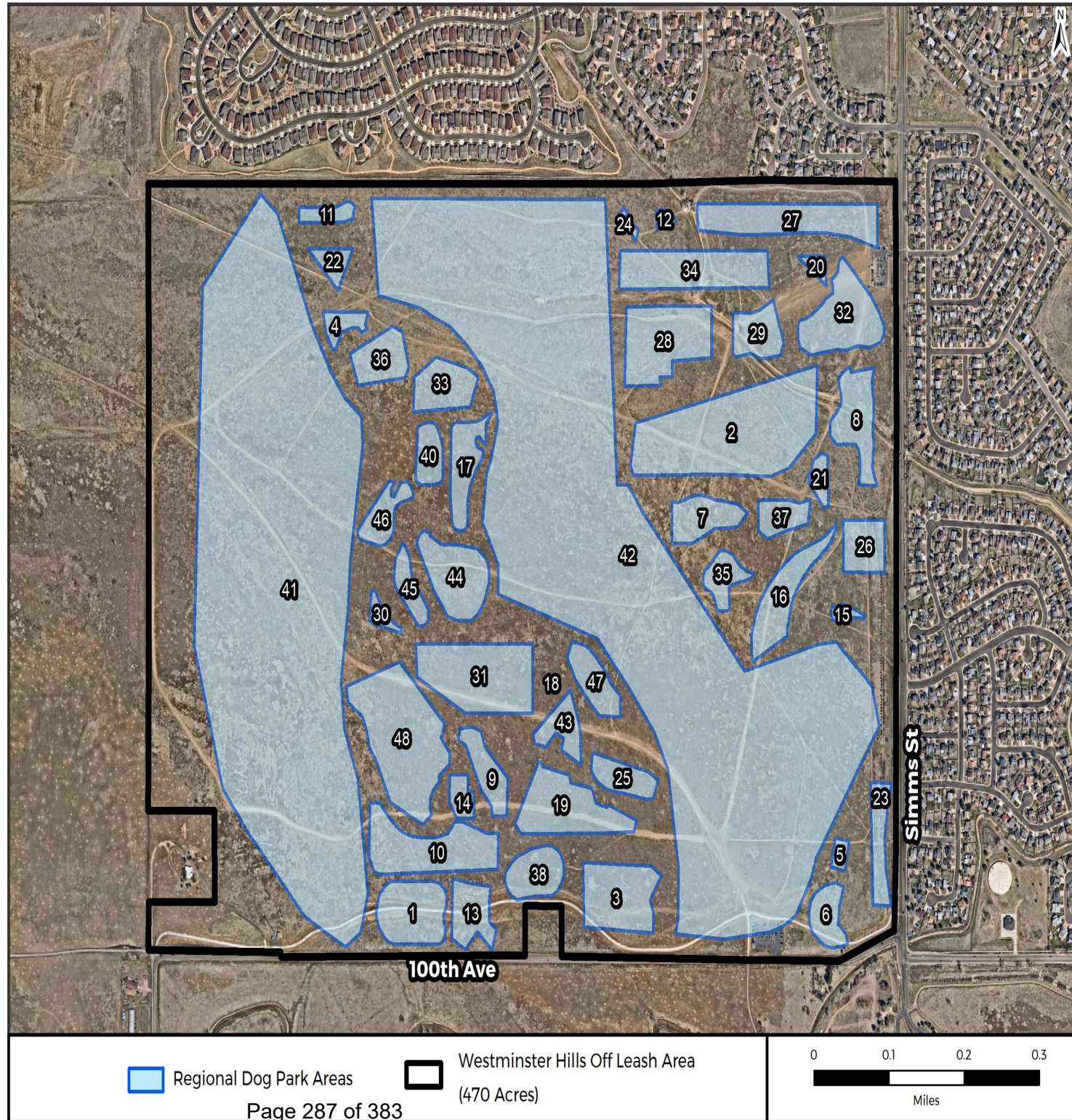
Largest Off-Leash Area in Region

- 48 off-leash dog areas in Metro Denver
- Next two largest dog off-leash areas are State owned and charge for admission



Regional Dog Parks

WHOS is larger than all other 48 previously shown dog parks combined



Increased Use and Challenges

- Parking Issues and Demand
- Estimated 750,000 visits/year
- Social Trails and Erosion



Habitat loss to disturbance

Off-leash dogs displace wildlife and render habitat within 250' of the trail unsuitable



Opportunities

- Native grasses
- Wildlife habitat
- Scenic mountain views
- High quality passive recreational opportunities for a variety of different visitors



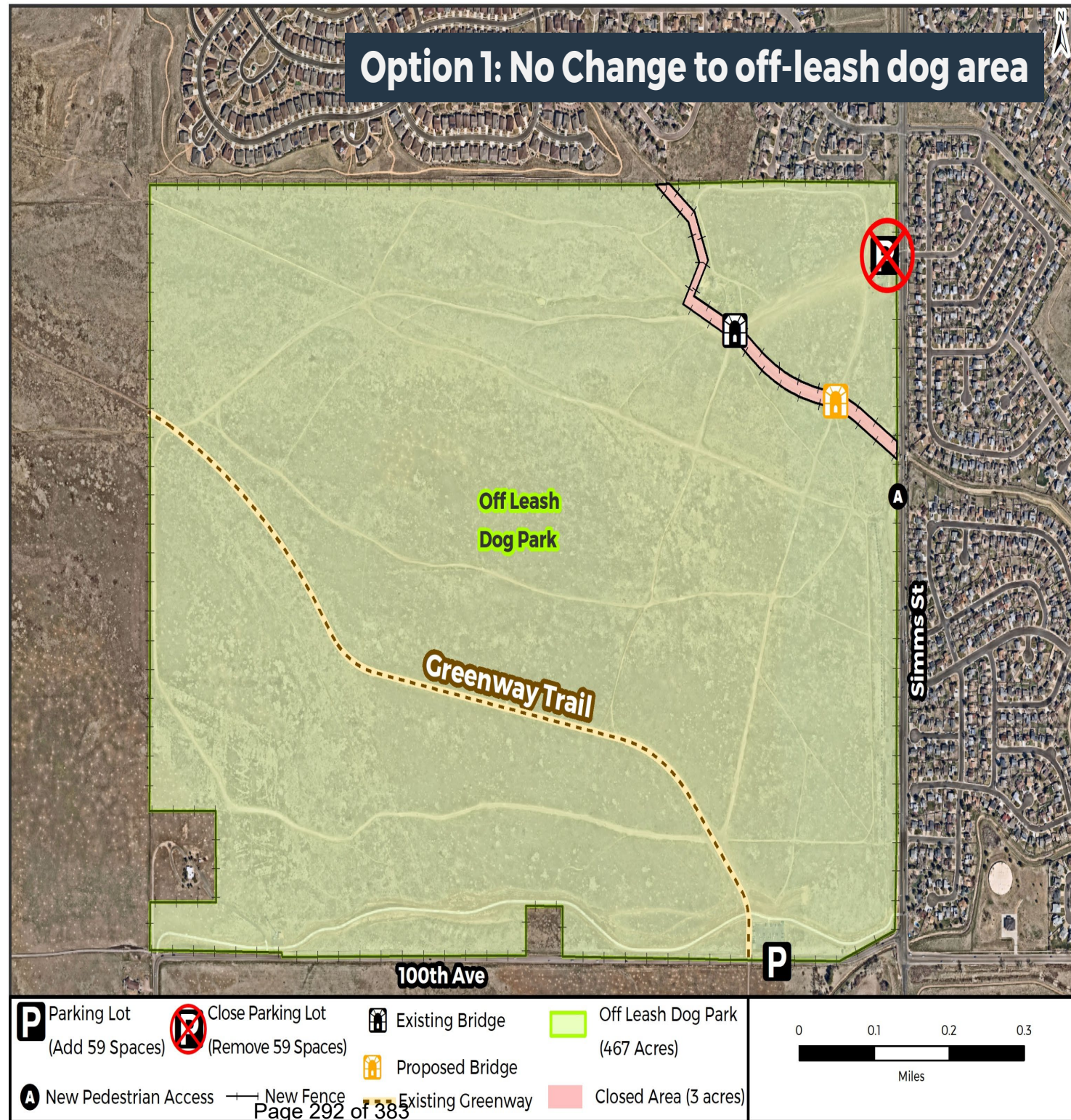
Current Maintenance & Management

- Wildlife and Natural Resource Management Plan (WNRMP) for Open Space Properties (2010)
- Open Space Stewardship Plan 2014 (replaced 2010 WNRMP)
- Integrated Pest Management (IPM) Program citywide
 - All Class A Weeds Eliminated
 - All Class B and C Weeds Inventoried and Mapped
- Mile High Youth Corps 2023-2024
- Open Space Volunteer Program Ongoing since 1990s-Paused for COVID

Site Options

- Option 1: No Change to off-leash dog area (approx. 470 acres)
- Option 2: Large-sized off-leash dog area (approx. 200 acres)
- Option 3: Mid-sized off-leash dog area (approx. 110 acres)
- Option 4: Neighborhood-sized off-leash dog area (approx. 33 acre)

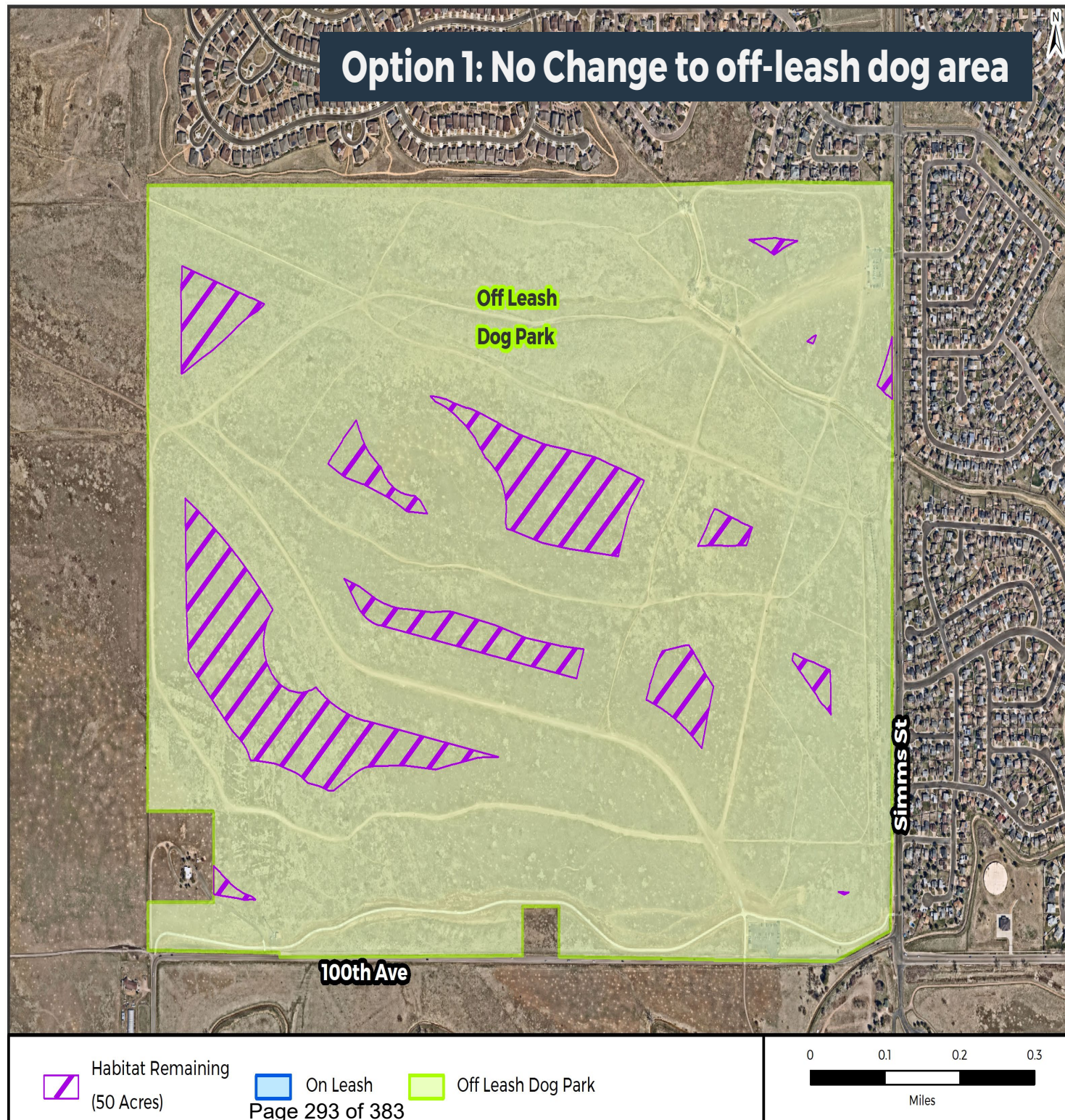
*All Options designate West 600 acres as dog free area



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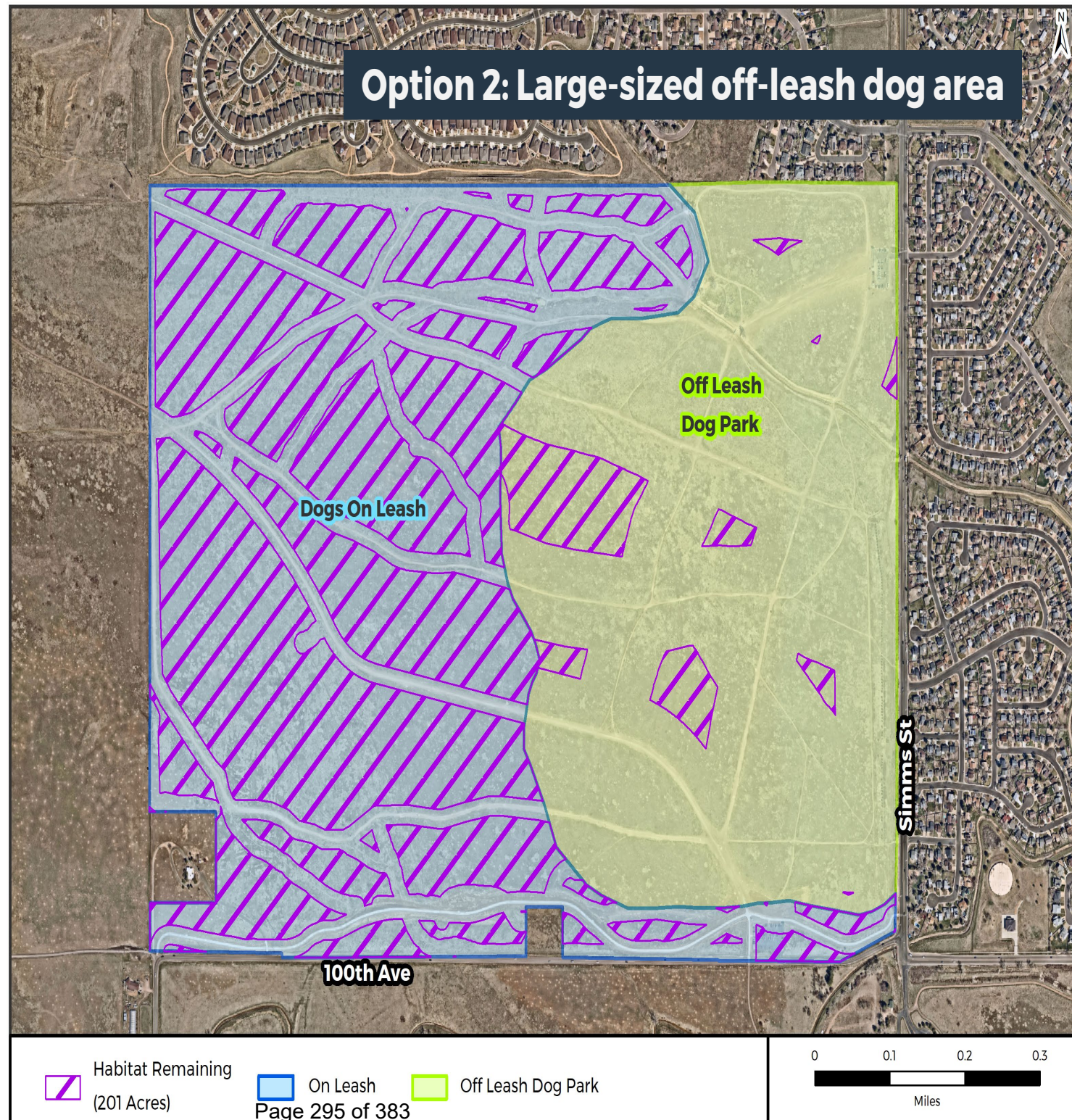
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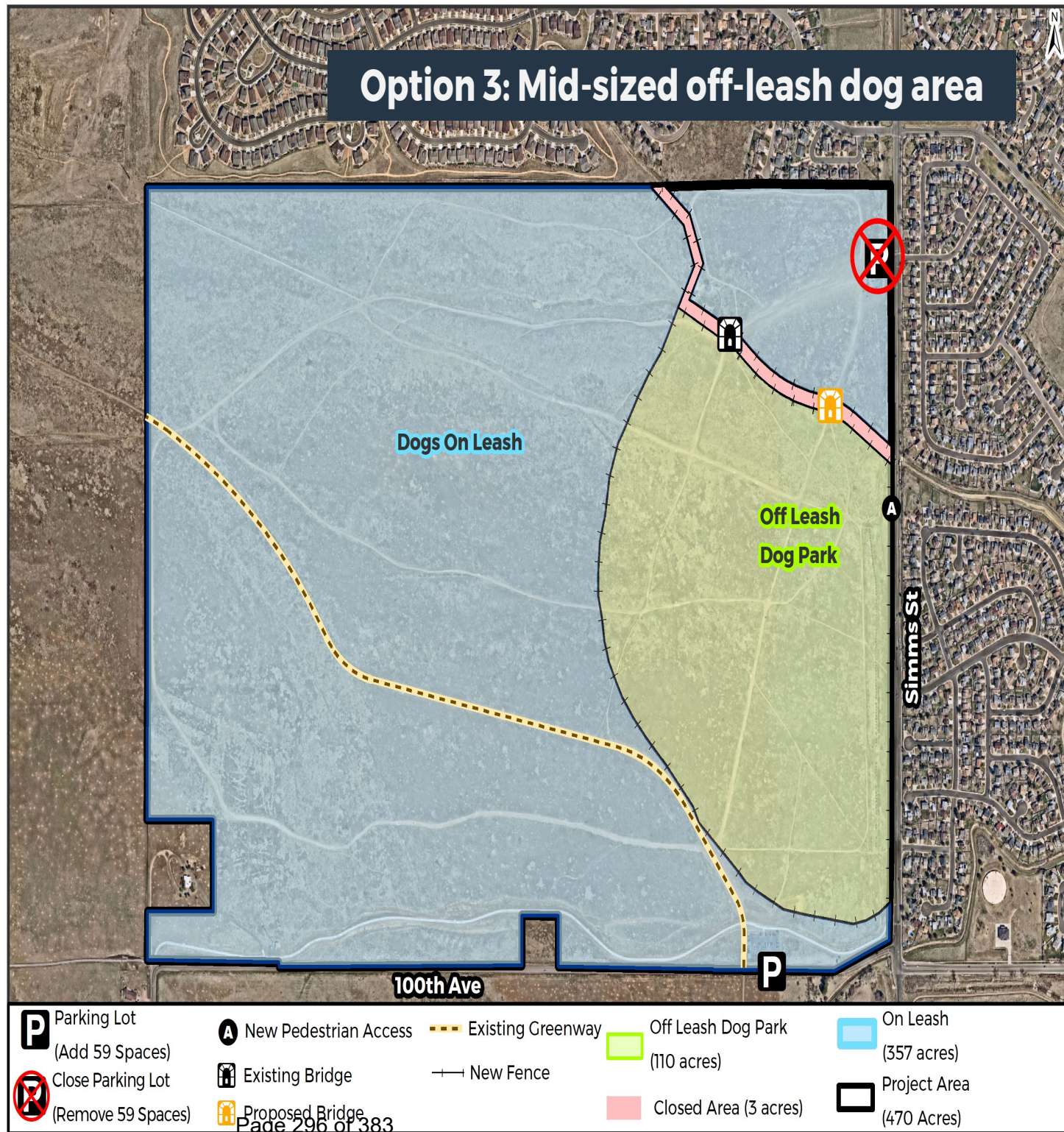


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Option 3: Mid-sized off-leash dog area

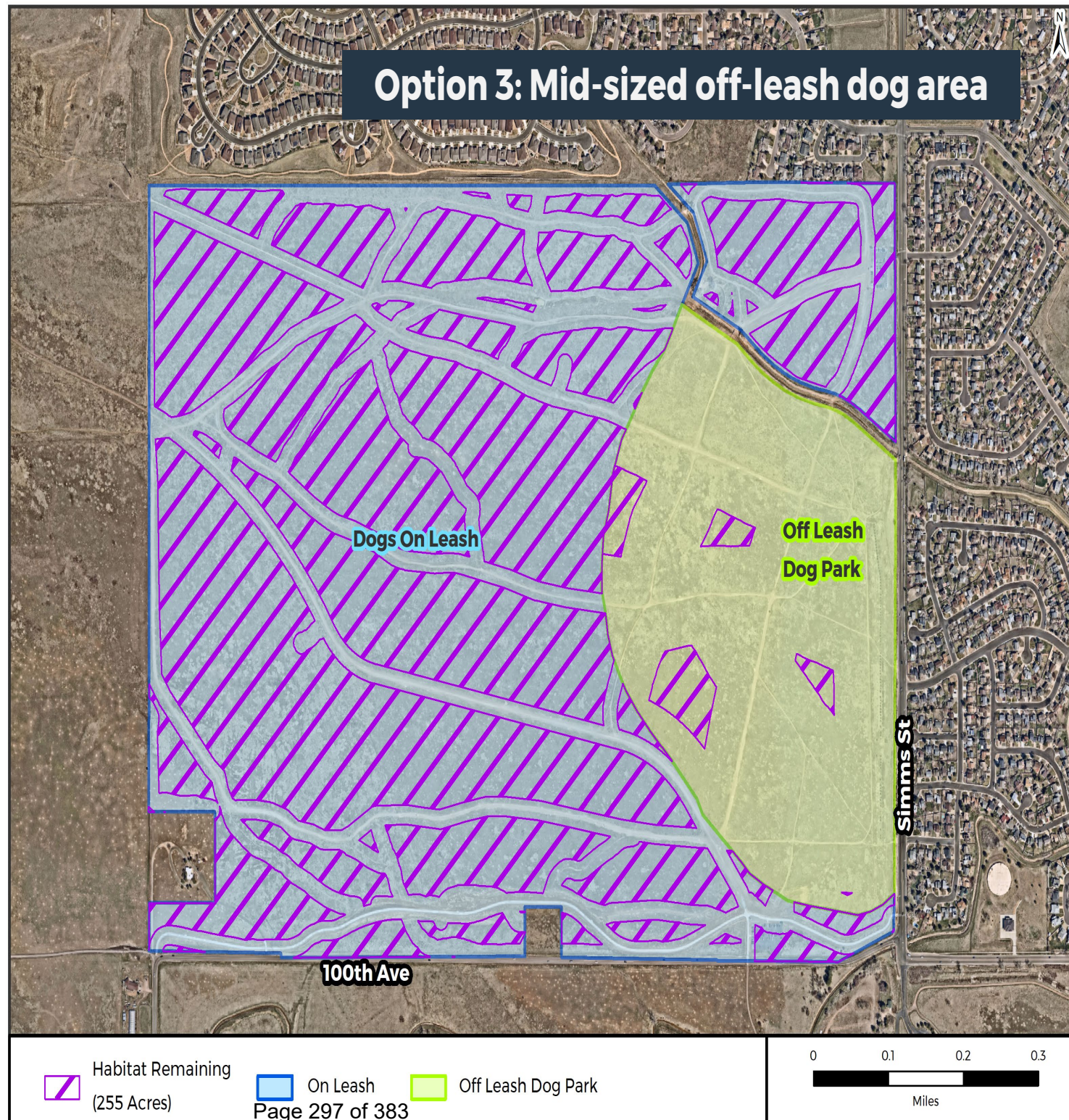



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*All Options designate west 600 acres as dog free area

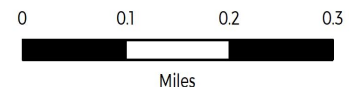
Option 3: Mid-sized off-leash dog area



 Habitat Remaining
(255 Acres)

 On Leash

 Off Leash Dog Park



Site Options

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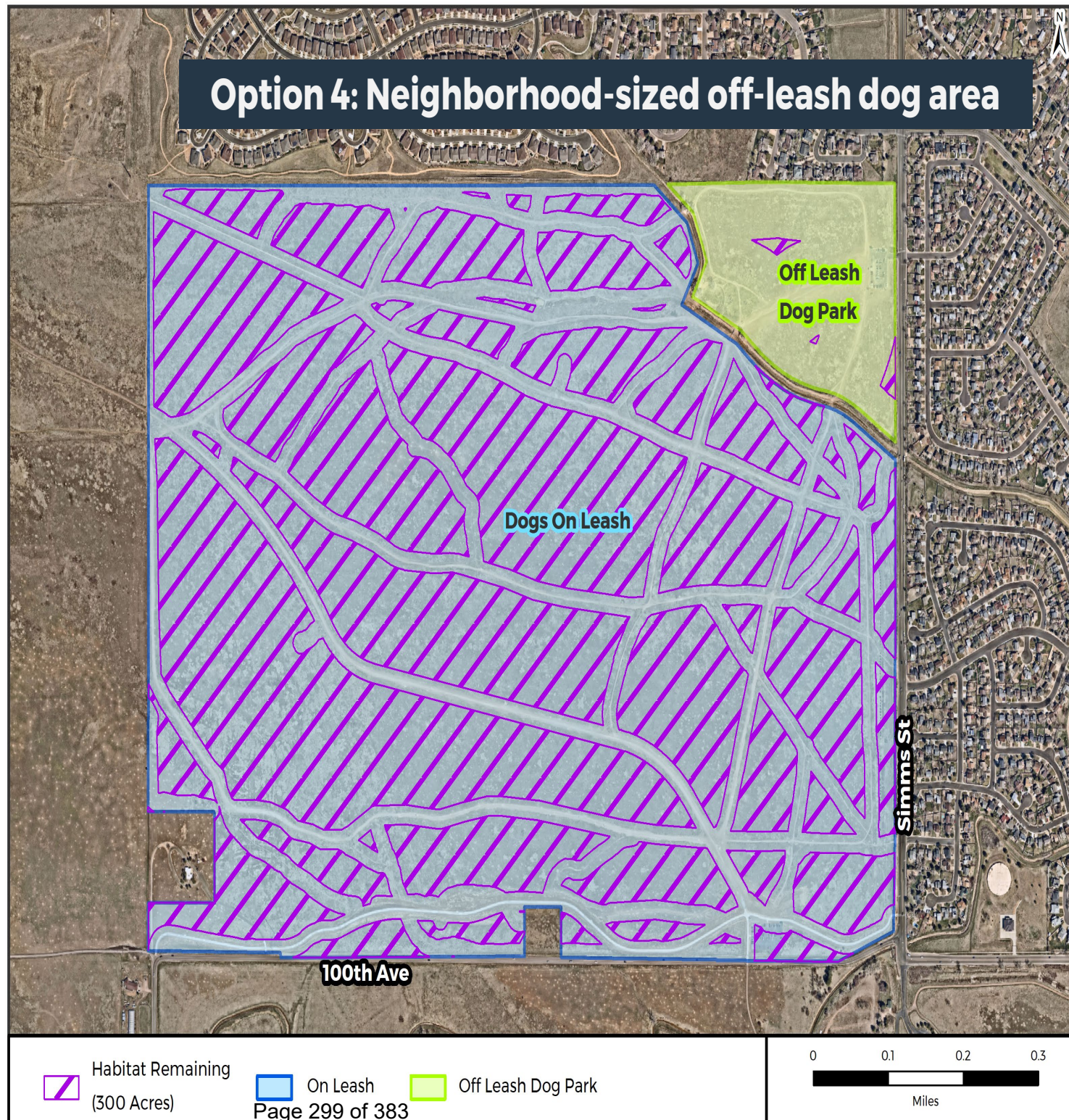
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*All Options designate west 600 acres as dog free area



Policy Recommendations

- Direct Staff to conduct a thorough review and propose updates the W.M.C. Title XIII Chapter 1 Parks, Open Space, And Community Building Regulations and Chapter 5 Open Space Program related to operations, including consideration of muddy day closures, process for re-designations of open space/parkland, etc. (all options)
- Depending on Site Option selected, direct Staff to return at a future City Council meeting with a resolution to re-designate WHOS open space as parkland to allow for more active recreational use (all options)
- Provide direction related to potential relocation of the Greenway Trail (Site Option 2)

Operational Recommendations

- Increase Operating Budget and Staffing (4.0 FTE Park Rangers and 4.0 FTE Open Space Stewards) (CAT recommended)
- Community Partnerships (create “friends of” group to support maintenance, programming, and improvements at WHOS) (CAT recommended)
- If Simms Street parking is retained, consider implementing permit parking for adjacent neighborhood (CAT recommended neighborhood permitting)

**these recommendations apply to all site options*

Capital Improvement Recommendations

- Wildlife-Friendly Fencing
- Trail Circulation Improvements
- Parking improvements
- Signage
- Natural Lands Restoration
- Off-leash Dog Area Amenities

**these recommendations apply to all site options and recommended by the CAT*

OPTION 1:
No Change
 to off-leash dog area
 (approx. 470 acres)



OPTION 2:
Large-sized
 off-leash dog area
 (approx. 200 acres)



OPTION 3:
Mid-sized
 off-leash dog area
 (approx. 110 acres)



OPTION 4:
Neighborhood-sized
 off-leash dog area
 (approx. 33 acre)



Neighborhood Parking Permit Program

- Additional Parking Enforcement Officer **\$\$\$\$***
- Vehicle and equipment **\$\$\$\$\$**
- Regulation change **\$**
- Signage **\$\$**



Parking Lots

- Remove Simms Lot and restore area **\$\$\$\$**
- Expand 100th Street lot (59 spots)-realign portion of 100th Street trail **\$\$\$\$\$**
- Install automatic gates for night time closure **\$\$\$-\$\$\$\$\$**



Trails, Access Points & Infrastructure

- Re-align section of Greenway Trail using 100th Street Trail and restoring removed Greenway segment **\$\$\$\$\$**
- Develop clear intentional trail system that meets visitor desires and protects habitat **\$\$\$\$***
- Obtain easement approval & add second crossing over DCVD **\$\$\$**
- Identify all official access points, close undesignated accesses and provide gates to implement muddy day closures **\$\$\$**
- Repair Damage to DCVD & install fences **\$\$\$**
- Waste collection strategically installed on trail system, trash collection and waste bags at every access **\$\$**
- Improved wayfinding and regulatory signage **\$\$**
- Install enhanced educational signage **\$\$**
- Remove and restore all current undesignated trails; ongoing monitoring **\$\$**



Ongoing Maintenance

- Service 13+ additional waste cans and bag dispensers (staffing need) **\$\$\$***
- Implement Muddy Day Closures (staffing need) *



Volunteer Projects

- Develop and support volunteer projects for care of WHOS **\$***



Regulatory Changes

(Does not include infrastructure)

- Redesignate off-leash areas as parks land **UNKNOWN**
- Require on-trail travel **\$***
- Close western (WCRA) lands to dogs **\$***
- Institute closure regulations (muddy trails, etc) **\$***



Staffing

- Open Space Steward - 4 New FTE including benefits **\$\$\$\$\$***
- Rangers - 4 New FTE including benefits **\$\$\$\$\$***



Vehicles/Equipment

- Pickup trucks - 4 **\$\$\$\$**

COST KEY	\$\$<50	\$\$\$\$<250k	* Ongoing costs
\$<10k	\$\$\$<100k	\$\$\$\$\$>250k	

QUESTIONS



WESTMINSTER
COLORADO

Agenda Memorandum

Agenda Item – 3.B.

City Council Study Session
June 3, 2024

Strategic Priority 1: Access to Opportunity

Advance access to opportunity and prosperity for all in Westminster through diverse housing choices, increased mobility options, safe and walkable neighborhoods, and strong social networks

Strategic Priority 2: Community Empowerment and Engagement

Enhance the sense of community and connection in Westminster through engaging methods of communication and dialogue that improve accessibility, increase understanding, and encourage participation in civic and City life

Strategic Priority 3: Community Health and Safety

Invest in innovative and collaborative approaches to provide a continuum of services that preserve, promote, and protect the health, safety, and environment of Westminster.

Strategic Priority 4: Economic Vitality

Promote and support a resilient economy that attracts and retains a diversity of businesses, workers, and industries, expands living wage jobs, and diversifies the City's tax base.

Strategic Priority 5: Resilient Infrastructure

Maintain and invest in resilient infrastructure that creates the highest return for safety, community connectivity, enjoyment of life, and local economic success.

Strategic Priority 6: Organizational Vitality

Develop and sustain an environment where employees and the organization are equipped and supported to deliver outstanding service to everyone in Westminster.

Subject: Retreat on the Development of the 2025 Budget (2 hours)

Prepared By: Erin Ferriter, Policy & Budget Administrator
Chris M. Lindsey, Assistant City Manager/Chief of Staff

Recommended City Council Action:

Provide policy feedback on the development of the 2025 budget.

Summary Statement:

Staff seeks to receive policy guidance from City Council on the development of the 2025 Budget.

Fiscal Impact:

\$0 in expenditures

Source of Funds:

Not applicable

Policy Issue(s):

Does City Council wish to provide policy guidance and feedback on the development of the 2025 Budget?

Alternative(s):

City Council could choose not to provide policy guidance on the 2025 budget development. Staff does not recommend this option due to the importance of this guidance in the development of the budget to confirm alignment with the priorities and goals.

Background Information:

Staff created the 2025 budget development process based upon feedback received during the after-action review of the 2024 budget development process utilizing a Strength, Weaknesses, Opportunities, and Threats (SWOT) analysis (Attachment A). Specifically, Staff understood the budget structure and connection of the budget to the strategic plan as strengths with opportunities to improve focused on community engagement, awareness of the comprehensive Capital Improvement Program (CIP) plan, and the budget adjustment process.

Based upon feedback received from City Council in March 2024, Staff updated the budget workflow with details and dates (Attachment B). The next step in the budget development process is the Study Session Budget Retreat. The purpose of the Study Session Budget Retreat is for City Council to receive updates and provide feedback for budget development. Staff will use the guidance from the Study Session Budget Retreat to develop the budget over the next three months.

Staff will be presenting on the following topics:

1. Review of the Budget Development Process
Staff will review the timeline and next steps in the budget process.
2. Confirmation of the Strategic Plan
Staff will confirm the mission, vision, guiding principles, and strategic priorities.
3. Review of the themes from the Budget Town Hall
Staff will review the themes heard at the Budget Town Hall.
4. Update on the Community Project Request Process
Staff will share a status update on the community request process.
5. City Council Budget Priorities
City Council to share any priorities for potential discretionary funding within the 2025 Budget.
6. Recommended Revenue Forecast
Staff will share the recommended revenue forecast based on University of Colorado Leeds School of Business modeling efforts.

7. Roadway Improvement Fee

Staff will share the current roadway improvement fee structure and discuss potential changes to the fee structure.

8. Stormwater Fee

Staff will share a review of the current stormwater fee and discuss potential changes to the fee structure.

The guidance received tonight will inform the City Manager and Staff as they develop the City Manager's Proposed Budget which will be delivered to City Council on August 26, 2024.

Conducting a retreat on the development of the 2025 Budget supports all of the City's Strategic Priorities by crafting a balanced budget that serves the City: Access to Opportunity, Community Empowerment and Engagement, Community Health and Safety, Economic Vitality, Resilient Infrastructure, and Organizational Vitality.

Respectfully submitted,

Mark A Freitag

Mark A. Freitag
City Manager

Attachments:

Attachment A – Budget SWOT Analysis

Attachment B – Budget Workflow Details and Dates

Attachment C – Westminster Tax Projections

Presentation – Budget Retreat Presentation



S

STRENGTHS

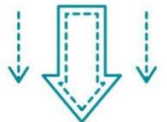
- Budget structure
- Connection to the Strategic Plan
- Budget is data drive
- Budget was Staff directed (expertise in the Staff)



W

WEAKNESS

- Time and opportunity for community input
- Time and guidance related to budget adjustments and impacts/trade-offs
- Community request process
- Understanding of the decision-making process and timing
- Awareness of the comprehensive Capital Improvement Program (CIP) plan



O

OPPORTUNITIES

- Increased community involvement and education
- When changes are made to the budget, they are consistent with the Strategic Plan
- Utilization of technology to inform the budget, including changes to the budget (if this, then that scenarios)



T

THREATS

- Economic and/or market downturns
- Turnover of staff and City Council
- Maintaining the status quo; limited innovation



2025 Detailed City Council Budget Process Workflow Calendar

March

- **Monday, March 4.** Budget 2025 Process review as part of the Policy and Budget Office Overview presentation during the Study Session.

April

- **Monday, April 1.** Staff will give two presentations on Long-term Capital Needs and Utility Financing at the Study Session.
- **Saturday, April 13.** The strategic planning retreat with Berry Dunn to be held at West View Recreation Center to establish the vision for the future to align the budget with organizational priorities.

May

- **Thursday, May 9.** Staff will support a community budget town hall with City Council about the 2025 budget.

June

- **Monday, June 3.** City Council Budget Retreat Study Session to confirm budget priorities that support the Strategic Plan priorities and Staff to recommend a revenue model for the 2025 budget.

June-August

- Staff develops a financially sustainable budget that is consistent with the Strategic plan, generally accepted accounting practices (GAAP) and Government Finance Officers Association (GFOA) budgeting standards.

August

- **Monday, August 26.** City Manager presents the City Manager's Budget to City Council. The budget memo will include the proposed budget, including staff analysis of the community requests and City Council priorities, the proposed pay plan, and proposed water and sewer rates.

August-September

- **Between Monday, August 26 and Wednesday, September 4.** City Councillors can send their questions to the City Manager.
 - Questions should be submitted to the City Manager by **noon on Wednesday, September 4.** Questions should help City Councillors decide on a budget item, help them understand how the budget was constructed, and explain what makes up the budget item.

September

- **Monday, September 9.** Answers to all City Councillors' questions will be shared by the City Manager with City Council by 4:30 pm.
- **Monday, September 16.** City Council review of the City Manager's proposed budget in a Study Session.
 - City Councillors can discuss budget questions and responses as well as propose budget amendments. Proposed budget amendments must include a sponsoring City Councillor and a second to move forward. Proposed budget amendments can consist of additions and/or deletions; budget amendment deletions need to be a minimum of \$25,000.
- **Monday, September 23.** The first public hearing on the 2025 budget will be held.
- **Monday, September 30.** The City Manager will provide City Council with Staff's analysis of the proposed budget amendments during the meeting on September 30 (*note: this is the Fifth Monday; Staff will need to coordinate with the City Clerk if this recommendation is needed*).
 - The memo will include the proposed budget amendments submitted by City Council with the total cost, and Staff's recommendation.
 - City Councillors who submitted proposed amendments will briefly state in this meeting why they believe the amendment(s) are justified, and the City Councillors will vote on each amendment. A minimum of four votes in favor of the proposed budget amendment is necessary for Staff to incorporate the amendment into the budget.

October

- **Monday, October 14.** Public hearing on the proposed budget and first reading of the budget and pay plan adoption.
- **Monday, October 28.** Second reading of the budget.

November -December

- **Monday, November 18.** After Action Review with City Council about the Budget Process. This date is tentative. Another After-Action-Review will be completed with Staff.
- Staff prepares related documents and systems for implementation of the 2025 budget.

CITY OF WESTMINSTER TAX PROJECTIONS REPORT

A consulting report for the City of Westminster completed by:

Business Research Division
Leeds School of Business
University of Colorado Boulder

May 2024



Leeds School of Business
UNIVERSITY OF COLORADO **BOULDER**

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EXECUTIVE SUMMARY

The Business Research Division (BRD) of the Leeds School of Business at the University of Colorado Boulder created an econometrically derived tax forecast for the City of Westminster to provide tax estimates for the six-year horizon ending in 2029. The 8 revenue sources the BRD projected are in three categories: sales taxes (grocery, restaurant, building material retail, and all other retail), use taxes (construction, auto, and other), and property.

Forecasts of the national indicators that are needed to drive the state and local (Westminster) forecasts are from Moody's Analytics. Under Moody's Base Scenario that was used to generate the Westminster Baseline scenario, U.S. real GDP is expected to increase by 2.6% in 2024 and 1.6% in 2025 with moderate growth throughout the rest of the forecast horizon. Job growth slows in this scenario, but the unemployment rate signals a fairly tight labor market throughout the forecast horizon.

Totaling the sales and use taxes analyzed by the BRD for the City of Westminster under the Baseline scenario, sales and use tax collections are forecasted to grow 3.6% in 2024 and 4.1% in 2025. Sales tax revenues accounted for 84% of the combined sales and use taxes in 2023. Coming off a strong year of growth in 2021 (11.6%) and 2022 (7.2%), total growth slowed in 2023 to 4.3%, modestly due to slower growth in sales tax collections. By 2029, total sales and use tax collections are projected to reach \$122.2 million, which is 20.4% higher than in 2023. Additional tax revenue growth will be derived from an increase in property tax collections.

In addition to providing the statistical upper and lower bounds to the Baseline forecast, the BRD identified two macroeconomic scenarios provided by Moody's Analytics to test Westminster's revenues under differing national economic circumstances, labeled the Westminster "optimistic" and "pessimistic" scenarios. Under the Optimistic scenario sales and use tax revenue growth rates are approximately 1 percentage point higher in 2024 than in the Baseline scenario, and cumulative revenue over the six years is higher by 3% (\$20.8 million). The Pessimistic scenario produces a 2024 forecast 3.8 percentage points below the Baseline forecast, and cumulative revenue over the six years is lower by 5.1% (\$35.1 million).

Examining the forecast error of the spring 2023 forecast, the sales tax forecast was low by 0.7%, and the combined sales and use tax forecast was low by 1.7%.

OVERVIEW

The purpose of this study is to provide an econometrically derived tax forecast to the City of Westminster about expected changes in tax collections in the short term (one to two years) and medium term (six years). The Business Research Division (BRD) created econometric models for eight specific revenue sources for the City of Westminster: grocery sales, restaurant sales, building materials sales, other sales, automobile use, construction use, other use, and property.

The City of Westminster's economy in many ways functions like the economy of the Denver Metro region, the state of Colorado, and the nation—the city is not decoupled from macroeconomic expansions and recessions. However, the factors driving the pace of growth locally can differ from the regional and national economy, calling for a deeper examination of the local economy and demographics. Some key differences include:

- Different tax bases reflecting differences in exempted expenditure categories
- Differences in the age composition of the populations and their expected growth rates
- A large and changing volume of daily in-migration or out-migration of workers
- Differences in relative incomes between Westminster and regional households
- The pace of new construction within the city
- Industry and employment growth locally versus regionally and nationally

Forecasts of the national indicators that are needed to drive the state and local (Westminster) forecasts are from Moody's Analytics, including the Moody's Baseline Scenario (chosen as the BRD Baseline), Moody's Scenario 1 (the BRD Optimistic scenario), and Moody's Scenario 3 (the Pessimistic scenario). These different forecasts provide sensitivity analysis around more optimistic and pessimistic economic scenarios. The projections from Moody's present reasonable expectations about the economy given current economic conditions, but these economic conditions can quickly change altering the future macroeconomic outlook.

The BRD Baseline Scenario

Moody's Baseline Scenario served as the baseline forecast for the Westminster model. In this scenario the Fed begins cutting interest rates during the summer of 2024 following two years of increases that drove the federal funds rate up to 5.5%. Fed remains focused on lowering inflation. The economy remains at full employment in the short run.

U.S. real GDP grows 2.6% in 2024 and 1.6% in 2025, and averages 2.2% through the forecast horizon ending in 2029. The unemployment rate averages 3.9% in 2024 and remains at levels indicative of full employment through the forecast horizon. Aside from the 1.9% growth 2024, nominal retail sales grow between 3.2% and 3.4% through the forecast horizon.

Under the BRD Baseline scenario, the City of Westminster revenue model forecasts an increase in sales tax revenue of 3.9% in 2024, followed by growth of 3.5% in 2025. Sales tax revenue growth is projected to average 3.1%. Restaurants returned to a more normal growth pattern beginning in 2023, while growth in groceries is projected to enter slow growth beginning in 2025.

Construction use, auto use, and other use taxes are projected to collectively increase in 2024 (2.5%) and 2025 (7%); growth averages 3.5% in the medium-term horizon from 2024-2029. In the near term, there continues to be some strength in auto and building use taxes. Property taxes makes strong gains every two years in conjunction with the biannual reassessment cycle.

TABLE 1: ANNUAL BASELINE SCENARIO – SALES, USE, PROPERTY TAXES

YEAR	SALES TAXES	USE TAXES	TOTAL SALES AND USE TAXES	PROPERTY TAXES	TOTAL
2022	82,199,613	15,171,915	97,371,529	7,942,161	105,313,690
2023	84,929,112	16,616,845	101,545,956	7,545,387	109,091,344
2024	88,211,230	17,036,334	105,247,564	9,149,388	114,396,952
2025	91,303,289	18,234,987	109,538,276	9,025,917	118,564,193
2026	94,021,734	18,989,781	113,011,515	10,579,770	123,591,286
2027	96,625,959	19,518,589	116,144,548	10,349,790	126,494,338
2028	99,195,200	20,004,395	119,199,595	11,848,168	131,047,763
2029	101,792,757	20,425,268	122,218,025	11,510,372	133,728,397

TABLE 2: ANNUAL BASELINE SCENARIO, PERCENT CHANGE – SALES, USE, PROPERTY TAXES

YEAR	SALES TAXES	USE TAXES	TOTAL SALES AND USE TAXES	PROPERTY TAXES	TOTAL
2022	8.7%	-0.1%	7.2%	6.9%	7.2%
2023	3.3%	9.5%	4.3%	-5.0%	3.6%
2024	3.9%	2.5%	3.6%	21.3%	4.9%
2025	3.5%	7.0%	4.1%	-1.3%	3.6%
2026	3.0%	4.1%	3.2%	17.2%	4.2%
2027	2.8%	2.8%	2.8%	-2.2%	2.3%
2028	2.7%	2.5%	2.6%	14.5%	3.6%
2029	2.6%	2.1%	2.5%	-2.9%	2.0%

TABLE 3: ANNUAL BASELINE SCENARIO, PERCENT CHANGE, UPPER BOUND

YEAR	SALES TAXES	USE TAXES	TOTAL SALES AND USE TAXES	PROPERTY TAXES	TOTAL
2022	8.7%	-0.1%	7.2%	6.9%	7.2%
2023	3.3%	9.5%	4.3%	-5.0%	3.6%
2024	8.2%	20.1%	10.1%	21.3%	10.9%
2025	6.3%	11.7%	7.3%	0.5%	6.8%
2026	4.1%	4.2%	4.1%	18.3%	5.1%
2027	4.5%	2.2%	4.1%	-0.7%	3.7%
2028	3.6%	2.9%	3.5%	15.2%	4.4%
2029	4.0%	2.0%	3.6%	-1.6%	3.2%

TABLE 4: ANNUAL BASELINE SCENARIO, PERCENT CHANGE, LOWER BOUND

YEAR	SALES TAXES	USE TAXES	TOTAL SALES AND USE TAXES	PROPERTY TAXES	TOTAL
2022	8.7%	-0.1%	7.2%	6.9%	7.2%
2023	3.3%	9.5%	4.3%	-5.0%	3.6%
2024	-0.4%	-16.0%	-3.0%	21.3%	-1.3%
2025	0.2%	0.1%	0.2%	-3.2%	-0.1%
2026	1.7%	4.0%	2.0%	15.9%	3.2%
2027	1.3%	3.0%	1.5%	-3.8%	1.1%
2028	1.1%	2.4%	1.3%	13.4%	2.3%
2029	1.0%	2.5%	1.2%	-4.2%	0.7%

Optimistic Scenario

Moody's Alternative Scenario 1 (S1: Alternative Scenario 1 – Upside – 10th Percentile) represents a more optimistic outlook compared with the Baseline forecast. Many situational conditions remain in this scenario compared to the Baseline scenario, but inflation and interest rates are comparatively elevated due to the stronger economy. The headwinds are less severe, too, as geopolitical risks ease and global trade accelerates. Real GDP grows 3.3% in 2024 and 3.1% in 2025; employment grows 1.8% in 2024 and slows to 1.3% in 2025. Nominal retail trade advances 3.8% in 2024 and 5.4% in 2025.

Under the Optimistic scenario the City of Westminster revenue model forecasts an increase sales tax revenue of 4.8% in 2024 and 5.1% in 2025. Total sales and use taxes increases by 4.7% in 2024 and 5.8% in 2025. The detailed implications of the more optimistic economic conditions for the City of Westminster are presented in the tables in the appendix of this report.

TABLE 5: ANNUAL OPTIMISTIC SCENARIO – SALES, USE, PROPERTY TAXES

YEAR	SALES TAXES	USE TAXES	TOTAL SALES AND USE TAXES
2022	82,199,613	15,171,915	97,371,529
2023	84,929,112	16,616,845	101,545,956
2024	88,982,179	17,305,527	106,287,706
2025	93,524,773	18,934,424	112,459,197
2026	96,902,071	19,690,471	116,592,542
2027	99,846,830	20,225,630	120,072,460
2028	102,954,706	20,740,494	123,695,201
2029	105,840,879	21,161,716	127,002,594

TABLE 6: ANNUAL OPTIMISTIC SCENARIO, PERCENT CHANGE – SALES, USE, PROPERTY TAXES

YEAR	SALES TAXES	USE TAXES	TOTAL SALES AND USE TAXES
2022	8.7%	-0.1%	7.2%
2023	3.3%	9.5%	4.3%
2024	4.8%	4.1%	4.7%
2025	5.1%	9.4%	5.8%
2026	3.6%	4.0%	3.7%
2027	3.0%	2.7%	3.0%
2028	3.1%	2.5%	3.0%
2029	2.8%	2.0%	2.7%

The BRD Pessimistic Scenario

Moody’s Scenario 3 (S3: Alternative Scenario 3 – Downside – 90th Percentile) represents a more pessimistic economic outlook compared to the Baseline forecast. In this scenario, the economy weakens, but the Fed keeps rates at current levels in order to combat persistently high inflation. Real GDP increases just 0.6% 2024 and falls 0.6% in 2025 before rebounding. Following moderate retail trade growth in 2023, retail sales fall in 2024 and 2025.

Under the Pessimistic scenario the City of Westminster revenue model forecasts an increase in sales tax revenue of 0.5% in 2024, followed by a decline of 1.6% in 2025 before returning to growth, reflecting the slowing impact from a recession followed by a rebound. Use taxes poses an additional drag in the short run, thus, sales and use taxes combined fall 0.2% in 2024 and 2% in 2025 in this pessimistic scenario. The detailed impact of the slower growth scenario on Westminster’s revenue collections is presented in the tables in the appendix of this report.

TABLE 7: ANNUAL PESSIMISTIC SCENARIO – SALES, USE, PROPERTY TAXES

YEAR	SALES TAXES	USE TAXES	TOTAL SALES AND USE TAXES
2022	82,199,613	15,171,915	97,371,529
2023	84,929,112	16,616,845	101,545,956
2024	85,351,327	15,994,463	101,345,790
2025	83,952,633	15,366,492	99,319,125
2026	87,353,086	16,485,693	103,838,779
2027	91,951,239	18,091,058	110,042,297
2028	96,353,915	19,279,796	115,633,712
2029	100,009,766	20,086,089	120,095,855

TABLE 8: ANNUAL PESSIMISTIC SCENARIO, PERCENT CHANGE – SALES, USE, PROPERTY TAXES

YEAR	SALES TAXES	USE TAXES	TOTAL SALES AND USE TAXES
2022	8.7%	-0.1%	7.2%
2023	3.3%	9.5%	4.3%
2024	0.5%	-3.7%	-0.2%
2025	-1.6%	-3.9%	-2.0%
2026	4.1%	7.3%	4.6%
2027	5.3%	9.7%	6.0%
2028	4.8%	6.6%	5.1%
2029	3.8%	4.2%	3.9%

METHODOLOGY

The essential inputs for the forecasting model are the historical data on key economic indicators at the national, state, and local levels. These data are sourced from U.S. government agencies, Moody’s Analytics, Colorado government agencies, and the City of Westminster offices. From these agencies, most data was

available through Q4 2023 or Q1 2024. A complete list of the variables used in the model as well as the estimated equations are available on request.

Model development begins with the construction of equations representing key indicators of the Colorado economy, including equations for employment, personal income, retail trade, residential building permits, and so forth. In these equations a Colorado economic indicator, such as personal income, is related to its national counterpart (U.S. personal income in this case) plus other factors that account for differences in the cyclical patterns of U.S. versus Colorado economies. For example, strong migration into Colorado leads to higher population growth in the state compared to the nation, specifically for the prime working-age population. These demographic factors are included as explanatory variables in the equation for Colorado personal income. Similar theoretical considerations lie behind the construction of every Colorado Economy Model equation. The equations in the Colorado Economy Model are estimated with monthly data; in some cases only lower frequency data are available and these are interpolated with a nonlinear function to create corresponding monthly data.

The Colorado Economy Model is augmented with equations representing key elements of the economy of the City of Westminster, such as Westminster employment. Due to data limitations, in some cases variables for Jefferson County (Jefferson County wages, for example) are used as proxies for corresponding Westminster variables. In addition, the model for sales and use tax revenues is completed with equations for specific components that represent major shares of sales or use taxes, particularly components such as revenues from eating and drinking places with atypical trajectories during the COVID-19 pandemic. Since sales and use tax rates have not changed over the period of observed data, these same rates are assumed to hold into the forecast period. With unchanging tax rates each revenue source is linked directly to underlying city, county or state economic indicators.

Forecasts of property tax revenues require some variations from the model just described. The property tax data are available for 20 years at an annual frequency (assessment year data currently through 2023), so that only an annual model is estimated. In addition, changes in property tax collections from year to year depend heavily on whether it is a reassessment year or not. The final complication is that assessment rates for some components are not fixed, and this breaks the link between property tax revenues and underlying economic conditions. Therefore, market property values are imputed by dividing data on assessed values by the assessment rate in each year, and equations for imputed market values are constructed with linkages to appropriate economic drivers.

The equations in this model capture dynamic relations between explanatory and dependent variables. Changes in a specific explanatory variable, such as Colorado personal income for example, are expected to cause a dynamic response of retail sales, based on the error correction mechanism (ECM). When households experience an unexpected increase or decrease in income, they tend to adjust their consumption behavior only gradually, moving slowly toward a level of expenditures that can be sustained at this new income level. Personal income and retail sales will be temporarily out of equilibrium, and retail sales is expected to adjust over several periods to correct this disequilibrium. This adjustment process is called an ECM. This ECM is represented algebraically with the *change in* retail sales expressed as a function

of the difference between retail sales and personal income in the previous period. In a flexible version of this error correction equation, lagged sales and income appear as separate explanatory variables.

The EViews program output for the building use tax equation provides an illustration of an error correction equation with the variables in log form:

Dependent Variable: DLOG(BMUT)
 Method: Least Squares
 Date: 11/25/20 Time: 15:01
 Sample (adjusted): 2005M02 2020M09
 Included observations: 188 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-18.34348	4.720538	-3.885887	0.0001
LOG(BMUT(-1))	-1.020477	0.074043	-13.78228	0.0000
LOG(BUILD_TTL_VALUE)	0.620026	0.112952	5.489296	0.0000
LOG(EMP_TTL(-1))	2.376500	0.755119	3.147185	0.0019
@SEAS(1)	-0.494610	0.204731	-2.415898	0.0167

Ignoring the constant term, C, and the seasonal dummy (@SEAS(1)), the first two terms on the right side of the equation are the lagged level of building use tax (BMUT) and the value of total construction in Colorado (BUILD_TTL_VALUE). These two terms represent a flexible form of the ECM. The dependent (left side) variable is the change in building use tax, which adjusts to the disequilibrium between these two variables. Lagged Colorado employment (EMP_TTL) is also included as a determinant of building use taxes. This equation specification is the result of a search procedure that begins with the inclusion of additional lagged terms on key variables, followed by the elimination those terms that do not have significant explanatory power, and ending with an equation that satisfies econometric diagnostic criteria. Estimation employs ordinary least squares.

Forecasting

Following the specification search and estimation of each equation, the entire set of equations is appended to the Colorado economy model, which is then solved simultaneously to produce predicted values of all dependent variables. This solution requires forecasts of all (exogenous) variables that are not explained by the model equations, in particular, the national economic indicators and the national, state, and local age-specific populations. Forecasts of the demographic variables come from Moody’s Analytics (for the national populations) and from the Colorado State Demography Office (for the state and local data). Forecasts of the national economic indicators are provided by Moody’s Analytics. Moody’s provides baseline and alternative forecast scenarios, as described in the overview, and these drive the BRD Baseline, Optimistic, and Pessimistic forecasts of the Colorado and Westminster economies.

For each national scenario the model generates a most likely forecast path for the various revenue components plus upper and lower bounds for these forecasts. These bounds incorporate statistical errors in

the estimation of the model equations. They are constructed to contain the actual future revenue paths with a 67% probability, which provides a reasonable range for likely future revenue streams.

RESULTS SUMMARY

One attribute of an econometric model is that forecasts from the model can be understood in relation to underlying economic changes. If individual revenue forecasts differ substantially from recent patterns, this should be explainable in terms of the dynamic response of revenues to expected changes in key economic drivers. For example, strong predicted growth in Colorado personal income and retail sales could account for a forecasted increase in the growth rate of Westminster sales tax revenues. In some cases forecasted fluctuations in one revenue source, such as the Building Use Tax, reflect cyclical activity in the construction sector. Overbuilding over several years will be followed by more moderate growth or even declines in this sector, creating a pattern of sharp fluctuations in this source of revenues. The discussions in this section provide this context for understanding and interpreting the model's revenue forecasts. This summary emphasizes the medium forecasts from the BRD Baseline scenario, supplemented by comments on the optimistic and pessimistic scenario forecasts.

Sales tax revenues

Some sources of sales tax revenues, such as those from restaurants, show patterns during the pandemic recession that departed substantially from other revenue sources, and their trajectories in the future are also likely to differ from those of other components as well. Forecasts are likely to be more accurate and also more informative if the components with unusual recent patterns are modeled and forecasted individually. In particular, separate equations are built into the model for sales tax revenues from restaurants, grocery stores, building materials stores, and all other.

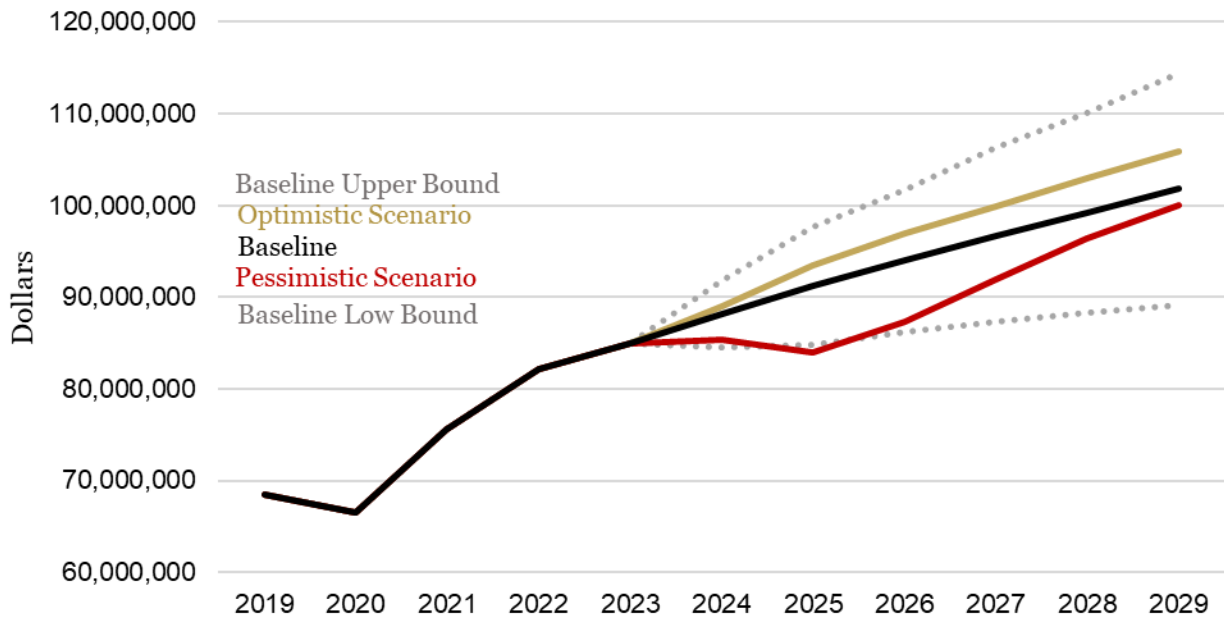
The City of Westminster staff have provided sales and use tax revenue data through March 2024. Values after that date are forecasted revenues.

Under the Baseline scenario the Westminster revenue model predicts that the City will finish 2024 with total sales tax revenues up 3.9% from 2023, totaling \$88.2 million. Looking towards 2025 the model anticipates continued growth of 3.5%. Over the forecast period (through 2029), sales taxes are projected to total a cumulative \$571.2 million, growing 19.9% from 2023 to 2029. Aside from the impact of the pandemic recession, sales tax collections exhibit normal seasonal patterns, exhibiting strong revenue growth rates for the first and third quarters.

The predicted performance of sales tax revenues under the alternative scenarios is as expected. Under the Optimistic scenario, growth rates are approximately 0.9 percentage points higher in 2024 than in the Baseline scenario. Then growth rates under the Optimistic assumptions are lower than the Baseline growth rates in the final year of the forecast horizon.

The Pessimistic scenario forecasts weaker sales tax revenues in 2025 compared to the Baseline scenario. Growth in sales tax collections pick up and exceed those of the Baseline in many of the medium-term years, but still remain approximately \$1.8 million below single-year Baseline collections in 2029 (\$26.2 million below the cumulative collections).

FIGURE 1: ANNUAL SALES TAXES



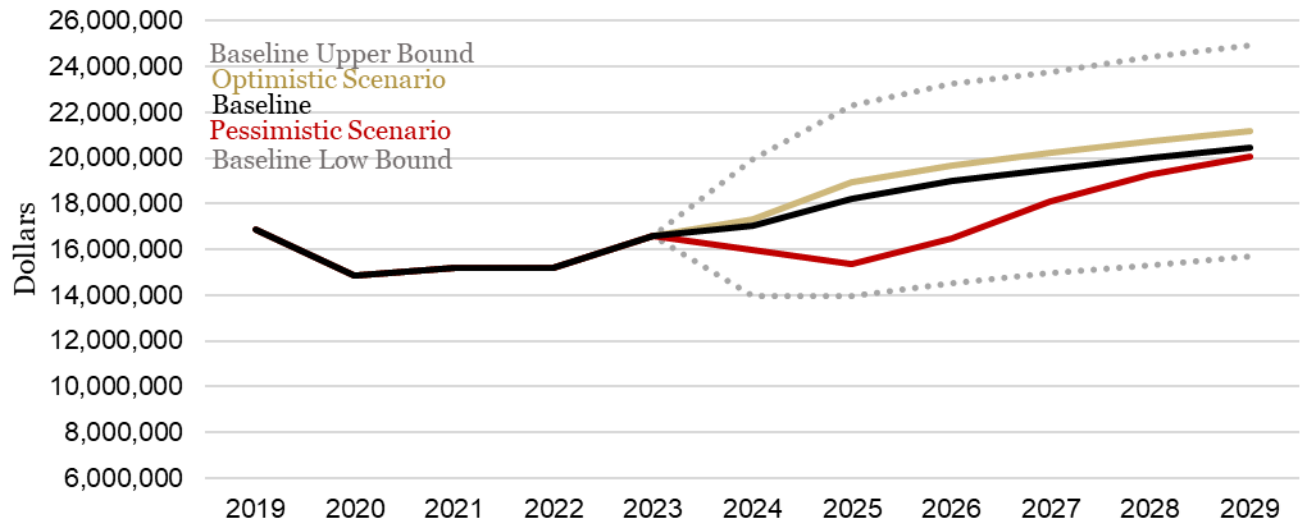
Use Tax Revenues

BRD researchers have modeled three use tax components: building use taxes, auto use taxes, and other use taxes. Building use taxes are clearly related to construction activity, measured by the value of residential permits and nonresidential building activity in the state. Auto use taxes are driven by vehicle sales, for which only national data are available. The most appropriate driver of other use taxes is Colorado taxable sales, capturing overall taxable economic activity.

Total use tax revenues are projected to increase 2.5% in 2024 to \$17 million and may decrease further in 2025 (7%). From forecast to forecast, the timing of sales tax collections gets adjusted, but the aggregate medium-term use tax forecast changed little from the prior update. Growth rates projected to grow at a moderate rate after 2024 (average 3.7%) through 2029; use taxes projected to total a cumulative \$114.2 million, growing 22.9% from 2023 to 2029.

Use taxes vary under the alternative scenarios. Under the optimistic scenario, cumulative (2024-2029) use taxes are \$3.8 million above the baseline forecast, while cumulative use taxes in the pessimistic scenario are \$8.9 million below the baseline.

FIGURE 2: ANNUAL USE TAXES



Property Tax Revenues

BRD researchers obtained annual data on Westminster property taxes and assessed values for two components: residential property and nonresidential property. Oil and gas property and other property taxes are a minority of property tax collections and are not modeled in this study.

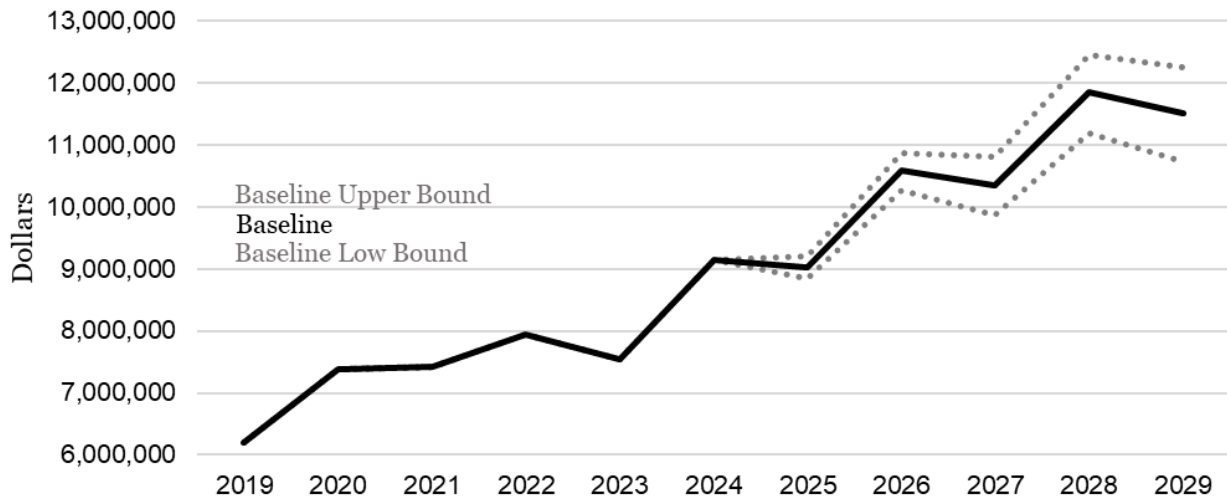
For each category of property taxes, the assessed values are divided by the assessment rate for that year and category to obtain imputed market values. Individual equations for each category express market values as a function of underlying economic drivers, in particular, indicators of national property market conditions. The year-to-year changes in property tax collections depend upon whether it is an assessment year or not. Generally, in a non-assessment year taxes on previously existing properties will not change, except for properties that are sold or modified in that year. Consequently, property tax collections do not change substantially in non-assessment years. However, during assessment years the existing stock of properties is re-evaluated, often producing a very large increase in assessed valuations as well as property tax collections. This requires construction of forecasting equations that treat assessment and non-assessment years differently. The historical data exhibit stair-step patterns, and the forecasts should mimic these patterns also.

Since 2015, nonresidential and residential property taxes have soared in the even years (2018, 2020, 2022) and are projected to increase substantially again in 2024 and other future even years. Collections in the odd years, both past and future, show little change. This pattern of growth is due to the 2-year property assessment cycle in Colorado. U.S. property market conditions that drive these forecasts are proxied by the value of residential or nonresidential property put in place.

Forecasts of nonresidential and residential property tax revenues call for approximately 17.7% increases in future even years (including 2024). For the odd years, property tax revenues decrease 2.1% on average. The rates of change are similar for residential and nonresidential properties, and therefore for total property tax collections as well. Residential and nonresidential property taxes are projected to rise from \$7.5 million

in 2023 (last historical year) to \$11.5 million in 2029, a 53% gain over this period. However, this growth may be impacted by proposed legislation to reduce property assessment rates.

FIGURE 3: ANNUAL PROPERTY TAXES

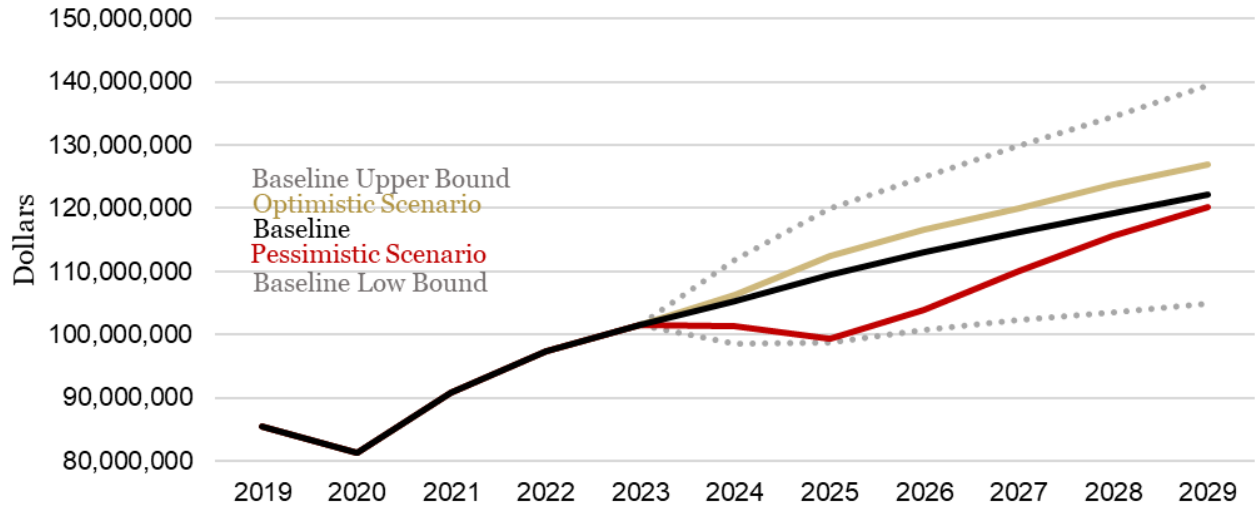


Total Tax Revenues

The last column of Table 1 displays the sums of the revenue components described above. In the BRD Baseline scenario total sales and tax revenues increase by 3.6% in 2024. Then total revenues continue to increase steadily at annual rates of growth in the 2.5%-4.1% range. These projections constitute the BRD’s most likely case.

Tables 3 and 4 present statistically based upper and lower bounds for the annual rates of change in Westminster revenues. The upper and lower bounds are given by the Medium forecast plus and minus one standard deviation. These bounds convey the inherent uncertainty in model forecasts that arises due to imperfect fits of the estimated equations and sampling errors in the coefficient estimates. These bounds do not incorporate uncertainty about the national variable projections from Moody’s; however, the alternative scenarios convey information about these sources of forecast uncertainty.

FIGURE 4: ANNUAL SALES AND USE TAXES



Quarterly Forecasts

Except for property tax revenues, the equation for each City of Westminster revenue component is estimated with monthly data, and forecasts are generated at a quarterly frequency. Consequently, the same economic forces lie behind the annual and the quarterly forecasts; the annual forecasts are simple aggregations of the monthly or quarterly data. The quarterly revenue series are expected to exhibit seasonal patterns, due to seasonal variation in underlying economic activity. Construction falls off during the winter months and retail sales are expected to be unusually strong during the holiday season. Sales tax revenues show the most prominent seasonal pattern with spikes in collections during the first quarter of each year—a one-quarter delay between holiday sales and tax collections. Auto use tax revenues tend to be strong in the summer.

APPENDIX 1: EXAMPLE EQUATIONS

Dependent Variable: DLOG(GROCERY)

Method: Least Squares

Date: 12/15/20 Time: 12:07

Sample (adjusted): 2010M02 2020M08

Included observations: 127 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.442640	0.728986	3.350736	0.0011
LOG(GROCERY(-1))	-0.967257	0.092320	-10.47717	0.0000
LOG(TAXABLESALES_CO(-1))	0.302370	0.113633	2.660937	0.0090
LOG(FOOD_BEV(-1))	0.821212	0.217036	3.783751	0.0003
DLOG(TAXABLESALES_CO(-1))	-0.640335	0.203383	-3.148415	0.0021
DLOG(FOOD_BEV_2(-1))	-2.760514	1.228201	-2.247607	0.0266
@SEAS(1)	0.522146	0.060698	8.602382	0.0000
@SEAS(2)	-0.196486	0.065552	-2.997427	0.0034
@SEAS(3)	-0.002150	0.032174	-0.066824	0.9468
@SEAS(4)	0.099798	0.048956	2.038555	0.0439
@SEAS(5)	-0.032300	0.032550	-0.992302	0.3232
@SEAS(6)	0.075553	0.036609	2.063773	0.0414
@SEAS(7)	0.051190	0.038211	1.339657	0.1831
@SEAS(8)	-0.020636	0.031050	-0.664616	0.5077
@SEAS(9)	0.028679	0.032462	0.883456	0.3789
@SEAS(10)	-0.005581	0.031706	-0.176024	0.8606
@SEAS(11)	-0.032567	0.030692	-1.061080	0.2910
R-squared	0.903887	Mean dependent var		0.000187
Adjusted R-squared	0.889907	S.D. dependent var		0.201939
S.E. of regression	0.067004	Akaike info criterion		-2.444128
Sum squared resid	0.493844	Schwarz criterion		-2.063410
Log likelihood	172.2021	Hannan-Quinn criter.		-2.289447
F-statistic	64.65575	Durbin-Watson stat		1.995941
Prob(F-statistic)	0.000000			

Dependent Variable: DLOG(EAT_DRINK)
 Method: ARMA Maximum Likelihood (BFGS)
 Date: 12/15/20 Time: 12:07
 Sample: 2010M02 2020M10
 Included observations: 129
 Convergence achieved after 8 iterations
 Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.246838	0.727667	12.70752	0.0000
LOG(EAT_DRINK(-1))	-1.200001	0.094051	-12.75903	0.0000
LOG(TRDR_TTL(-1))	0.226641	0.062256	3.640458	0.0004
DLOG(WESTMINSTER_EMP_NSA(-1))	1.598627	0.219294	7.289876	0.0000
LOG(RESTAURANTS_2(-1))	0.995922	0.118448	8.408124	0.0000
@SEAS(1)	0.034744	0.027737	1.252609	0.2130
@SEAS(2)	0.083085	0.023816	3.488607	0.0007
@SEAS(3)	-0.031118	0.022853	-1.361662	0.1761
@SEAS(4)	0.073636	0.027424	2.685083	0.0084
@SEAS(5)	0.060559	0.036035	1.680539	0.0957
@SEAS(6)	0.088231	0.034557	2.553228	0.0120
@SEAS(7)	0.087000	0.036069	2.412073	0.0175
@SEAS(8)	0.090965	0.035707	2.547549	0.0122
@SEAS(9)	0.077003	0.030493	2.525250	0.0130
@SEAS(10)	0.041236	0.027504	1.499263	0.1366
@SEAS(11)	0.057342	0.020735	2.765414	0.0067
AR(1)	0.673725	0.072472	9.296408	0.0000
SIGMASQ	0.001398	0.000150	9.333333	0.0000
R-squared	0.833522	Mean dependent var		0.003416
Adjusted R-squared	0.808025	S.D. dependent var		0.092011
S.E. of regression	0.040314	Akaike info criterion		-3.450734
Sum squared resid	0.180404	Schwarz criterion		-3.051690
Log likelihood	240.5723	Hannan-Quinn criter.		-3.288595
F-statistic	32.69143	Durbin-Watson stat		1.829514
Prob(F-statistic)	0.000000			
Inverted AR Roots	.67			

Dependent Variable: DLOG(SALES_LESS_COMPONENTS)

Method: ARMA Maximum Likelihood (BFGS)

Date: 12/15/20 Time: 12:07

Sample: 2010M02 2020M07

Included observations: 126

Convergence achieved after 3 iterations

Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.603811	3.646127	-1.811185	0.0729
LOG(SALES_LESS_COMPONENTS(-1))	-0.998983	0.084948	-11.75999	0.0000
LOG(WESTMINSTER_EMP_NSA(-1))	0.975940	0.510186	1.912907	0.0584
LOG(TAXABLESALES_CO(-1))	0.620356	0.130883	4.739779	0.0000
DLOG(TAXABLESALES_CO)	0.666082	0.238608	2.791531	0.0062
@SEAS(1)	0.519943	0.137197	3.789752	0.0002
@SEAS(2)	0.182574	0.082881	2.202829	0.0297
@SEAS(3)	0.045821	0.037555	1.220089	0.2251
@SEAS(4)	0.370323	0.102601	3.609341	0.0005
@SEAS(5)	0.176151	0.072707	2.422762	0.0171
@SEAS(6)	0.133458	0.059160	2.255899	0.0261
@SEAS(7)	0.314948	0.081681	3.855831	0.0002
@SEAS(8)	0.190594	0.081902	2.327106	0.0218
@SEAS(9)	0.110440	0.072818	1.516658	0.1323
@SEAS(10)	0.293729	0.091864	3.197422	0.0018
@SEAS(11)	0.154755	0.084640	1.828398	0.0702
AR(3)	0.140809	0.113262	1.243217	0.2165
SIGMASQ	0.004827	0.000532	9.078601	0.0000
R-squared	0.888143	Mean dependent var		0.004022
Adjusted R-squared	0.870536	S.D. dependent var		0.208565
S.E. of regression	0.075044	Akaike info criterion		-2.209440
Sum squared resid	0.608216	Schwarz criterion		-1.804256
Log likelihood	157.1947	Hannan-Quinn criter.		-2.044826
F-statistic	50.44216	Durbin-Watson stat		1.961681
Prob(F-statistic)	0.000000			
Inverted AR Roots	.52	-.26+.45i	-.26-.45i	

Dependent Variable: LOG(AUTO_USE_TAX)

Method: Least Squares

Date: 12/15/20 Time: 12:07

Sample (adjusted): 2005M02 2020M11

Included observations: 190 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.673515	1.127772	-1.483912	0.1396
LOG(AUTO_USE_TAX(-1))	0.183032	0.069240	2.643457	0.0089
LOG(VEHSALES_TTL_2(-1))	0.609887	0.093969	6.490309	0.0000
LOG(EMP_TTL(-1))	1.023155	0.229522	4.457773	0.0000
@SEAS(1)	0.071756	0.031978	2.243939	0.0261
@SEAS(2)	0.095520	0.030721	3.109260	0.0022
@SEAS(4)	0.161119	0.032228	4.999317	0.0000
@SEAS(5)	0.119727	0.029949	3.997762	0.0001
@SEAS(6)	0.146191	0.030064	4.862706	0.0000
@SEAS(7)	0.194875	0.029959	6.504686	0.0000
@SEAS(8)	0.145296	0.030014	4.840871	0.0000
@SEAS(9)	0.260770	0.029942	8.709249	0.0000
@SEAS(10)	0.170704	0.030786	5.544811	0.0000
@SEAS(11)	0.217095	0.030017	7.232302	0.0000
R-squared	0.874888	Mean dependent var		13.00157
Adjusted R-squared	0.865647	S.D. dependent var		0.264891
S.E. of regression	0.097094	Akaike info criterion		-1.755451
Sum squared resid	1.659187	Schwarz criterion		-1.516196
Log likelihood	180.7678	Hannan-Quinn criter.		-1.658532
F-statistic	94.67225	Durbin-Watson stat		1.996960
Prob(F-statistic)	0.000000			

APPENDIX 2: DETAILED RESULTS

APPENDIX TABLE 1: BASELINE ANNUAL US ECONOMIC INDICATORS – PERCENT CHANGES

YEAR	CONSUMER PRICES	RETAIL TRADE	REAL GDP	UNEMPLOYMENT RATE	EMPLOYMENT	PERSONAL INCOME	RESTAURANTS	FOOD AND BEVERAGE STORES	E-COMMERCE
2022	8.0	9.7	1.9	3.6	4.3	2.0	15.7	8.1	8.6
2023	4.1	3.4	2.5	3.6	2.3	5.2	11.6	2.6	7.4
2024	2.9	1.9	2.6	3.9	1.6	4.9	4.7	0.7	6.4
2025	2.4	3.4	1.6	4.1	0.6	4.2	3.4	1.7	5.9
2026	2.3	3.3	1.9	4.0	0.3	4.3	4.3	2.3	4.5
2027	2.2	3.2	2.2	4.0	0.3	4.4	4.5	2.4	4.8
2028	2.2	3.3	2.3	4.0	0.3	4.6	5.0	2.5	5.5
2029	2.2	3.4	2.3	4.0	0.3	4.5	5.0	2.7	5.9

APPENDIX TABLE 2: BASELINE ANNUAL COLORADO ECONOMIC INDICATORS – PERCENT CHANGES

YEAR	CONSUMER PRICES	RETAIL TRADE	PERSONAL INCOME	EMPLOYMENT	UNEMPLOYMENT RATE
2022	8.0	9.4	5.8	4.3	3.1
2023	5.2	1.4	4.7	2.5	3.2
2024	3.9	0.3	4.8	1.7	3.6
2025	3.1	4.9	5.2	1.3	3.6
2026	2.8	4.1	5.2	1.0	3.6
2027	2.8	3.8	5.5	1.0	3.6
2028	2.7	3.9	5.7	1.1	3.5
2029	2.7	4.0	5.5	1.2	3.5

APPENDIX TABLE 3: BASELINE REVENUE FORECAST, ANNUAL, TOTAL

YEAR	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022	6,553,790	13,068,797	4,583,366	57,993,661	82,199,613	2,569,341	8,767,731	3,834,843	15,171,915	97,371,529
2023	7,105,095	13,764,036	5,548,641	58,511,339	84,929,112	3,133,700	9,018,830	4,464,315	16,616,845	101,545,956
2024	7,456,508	14,306,070	5,294,667	61,153,985	88,211,230	3,302,391	9,710,450	4,023,493	17,036,334	105,247,564
2025	7,571,927	14,899,050	5,468,805	63,363,507	91,303,289	3,849,802	10,396,165	3,989,020	18,234,987	109,538,276
2026	7,679,034	15,468,617	5,788,280	65,085,803	94,021,734	3,999,878	10,913,799	4,076,104	18,989,781	113,011,515
2027	7,841,293	16,090,625	6,009,968	66,684,072	96,625,959	4,050,196	11,280,225	4,188,169	19,518,589	116,144,548
2028	8,003,822	16,743,594	6,052,975	68,394,809	99,195,200	4,119,231	11,619,336	4,265,828	20,004,395	119,199,595
2029	8,202,326	17,485,912	6,081,608	70,022,911	101,792,757	4,093,854	11,944,314	4,387,100	20,425,268	122,218,025

APPENDIX TABLE 4: BASELINE REVENUE HIGH FORECAST, ANNUAL, TOTAL

YEAR	GROCERY	RESTAURANT	BUILDING	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022	6,553,790	13,068,797	57,405,199	4,583,366	82,199,613	2,569,341	8,767,731	3,834,843	15,171,915	97,371,529
2023	7,105,095	13,764,036	59,008,632	5,548,641	84,929,112	3,133,700	9,018,830	4,464,315	16,616,845	101,545,956
2024	8,185,075	14,789,423	64,574,753	6,083,290	91,869,367	4,837,696	10,458,205	4,664,622	19,960,523	111,829,890
2025	8,653,013	15,600,198	69,191,327	6,468,532	97,699,209	5,936,020	11,442,484	4,919,013	22,297,517	119,996,726
2026	8,739,218	16,241,512	72,370,315	6,880,135	101,679,877	6,163,622	12,015,990	5,047,073	23,226,685	124,906,562
2027	8,931,796	16,951,313	75,757,178	7,125,594	106,254,138	6,106,019	12,454,480	5,183,197	23,743,695	129,997,833
2028	9,156,278	17,681,996	79,030,424	7,177,876	110,106,091	6,334,527	12,810,154	5,278,399	24,423,081	134,529,171
2029	9,366,158	18,512,568	82,442,354	7,239,025	114,469,360	6,284,034	13,180,323	5,450,133	24,914,491	139,383,851

APPENDIX TABLE 5: BASELINE REVENUE LOW FORECAST, ANNUAL, TOTAL

YEAR	GROCERY	RESTAURANT	BUILDING	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022	6,553,790	13,068,797	57,405,199	4,583,366	82,199,613	2,569,341	8,767,731	3,834,843	15,171,915	97,371,529
2023	7,105,095	13,764,036	59,008,632	5,548,641	84,929,112	3,133,700	9,018,830	4,464,315	16,616,845	101,545,956
2024	6,706,009	13,818,542	57,987,914	4,504,756	84,577,867	1,638,115	8,958,085	3,360,315	13,956,515	98,534,382
2025	6,491,691	14,192,738	57,347,284	4,455,560	84,781,601	1,583,340	9,346,585	3,040,152	13,970,077	98,751,678
2026	6,619,776	14,673,513	57,696,455	4,659,236	86,240,798	1,668,367	9,765,440	3,094,784	14,528,591	100,769,388
2027	6,750,540	15,214,624	57,788,289	4,875,117	87,359,946	1,691,054	10,114,846	3,160,408	14,966,309	102,326,255
2028	6,885,391	15,782,217	57,731,763	4,894,003	88,282,677	1,699,483	10,412,038	3,217,415	15,328,935	103,611,612
2029	7,054,612	16,445,039	57,652,957	4,919,981	89,187,118	1,696,865	10,698,475	3,316,842	15,712,182	104,899,299

APPENDIX TABLE 6: BASELINE U.S. ECONOMIC OUTLOOK, QUARTERLY, YEAR-OVER-YEAR, PERCENT CHANGE

QUARTER	VEHICLE SALES	RETAIL E-COMMERCE SALES	UNEMPLOYMENT RATE	EMPLOYMENT	RETAIL TRADE	REAL GDP	RESTAURANTS	FOOD AND BEVERAGE STORES
2022Q1	9.03	8.93	3.80	5.02	12.96	3.56	24.75	8.76
2022Q2	-2.18	6.88	3.63	4.70	9.36	1.87	15.40	8.79
2022Q3	4.48	10.95	3.53	4.11	9.83	1.71	11.01	7.74
2022Q4	2.28	7.72	3.57	3.31	6.87	0.65	13.46	7.32
2023Q1	2.24	7.52	3.50	2.83	5.26	1.72	17.51	5.18
2023Q2	3.67	7.62	3.57	2.50	1.63	2.38	9.44	2.60
2023Q3	6.11	7.13	3.70	2.05	3.20	2.93	10.11	1.97
2023Q4	6.09	7.51	3.73	1.90	3.58	3.13	9.85	0.74
2024Q1	0.62	6.51	3.80	1.82	1.55	3.10	6.01	0.71
2024Q2	0.68	5.98	3.94	1.66	2.56	3.10	6.31	1.24
2024Q3	0.72	6.05	3.99	1.47	1.67	2.35	4.14	0.57
2024Q4	2.37	6.87	4.02	1.25	1.94	1.88	2.53	0.25
2025Q1	5.41	6.74	4.07	0.88	3.35	1.74	3.34	1.11
2025Q2	6.81	6.30	4.06	0.67	3.42	1.62	3.30	1.48
2025Q3	6.96	5.47	4.07	0.52	3.39	1.56	3.41	1.89
2025Q4	6.57	5.00	4.07	0.44	3.38	1.67	3.68	2.14
2026Q1	6.06	4.70	4.03	0.38	3.37	1.78	3.99	2.19
2026Q2	5.55	4.43	4.03	0.34	3.31	1.88	4.24	2.23
2026Q3	5.03	4.40	4.02	0.32	3.31	1.96	4.44	2.32
2026Q4	4.36	4.41	4.01	0.31	3.26	2.00	4.39	2.35
2027Q1	3.52	4.48	4.00	0.30	3.14	2.05	4.33	2.36
2027Q2	3.00	4.70	3.99	0.31	3.12	2.12	4.37	2.40
2027Q3	2.72	4.93	3.98	0.31	3.15	2.21	4.50	2.41
2027Q4	2.62	5.10	3.98	0.31	3.22	2.28	4.71	2.44
2028Q1	2.47	5.29	3.97	0.32	3.27	2.32	4.85	2.49
2028Q2	2.38	5.46	3.97	0.32	3.34	2.34	5.01	2.52
2028Q3	2.23	5.61	3.97	0.33	3.37	2.34	5.03	2.53
2028Q4	2.12	5.75	3.98	0.33	3.41	2.34	5.07	2.56
2029Q1	2.09	5.88	3.98	0.34	3.43	2.32	5.07	2.60
2029Q2	2.03	5.90	3.98	0.34	3.41	2.32	5.01	2.64
2029Q3	2.05	5.91	3.99	0.34	3.41	2.31	4.99	2.69
2029Q4	2.07	5.89	3.99	0.34	3.40	2.28	4.94	2.70

**APPENDIX TABLE 7: BASELINE U.S. ECONOMIC OUTLOOK, QUARTERLY, QUARTER-OVER-QUARTER,
PERCENT CHANGE**

QUARTER	VEHICLE SALES	RETAIL E-COMMERCE SALES	UNEMPLOYMENT RATE	EMPLOYMENT	RETAIL TRADE	REAL GDP	RESTAURANTS	FOOD AND BEVERAGE STORES
2022Q1	4.46	2.66	3.80	1.06	3.06	-0.50	0.12	1.71
2022Q2	-1.16	2.10	3.63	0.81	3.36	-0.14	8.01	2.17
2022Q3	-1.08	2.30	3.53	0.87	0.14	0.66	2.24	1.40
2022Q4	0.14	0.45	3.57	0.54	0.18	0.63	2.62	1.86
2023Q1	4.42	2.47	3.50	0.58	1.50	0.56	3.69	-0.32
2023Q2	0.22	2.20	3.57	0.49	-0.20	0.51	0.59	-0.35
2023Q3	1.25	1.83	3.70	0.43	1.70	1.20	2.87	0.78
2023Q4	0.12	0.81	3.73	0.39	0.55	0.83	2.37	0.64
2024Q1	-0.96	1.52	3.80	0.50	-0.49	0.53	0.06	-0.35
2024Q2	0.29	1.69	3.94	0.32	0.79	0.51	0.88	0.18
2024Q3	1.29	1.90	3.99	0.25	0.81	0.46	0.77	0.10
2024Q4	1.76	1.59	4.02	0.17	0.82	0.37	0.79	0.32
2025Q1	1.98	1.39	4.07	0.14	0.89	0.39	0.85	0.51
2025Q2	1.62	1.27	4.06	0.11	0.86	0.39	0.85	0.54
2025Q3	1.43	1.11	4.07	0.10	0.78	0.41	0.88	0.50
2025Q4	1.39	1.14	4.07	0.09	0.81	0.48	1.05	0.56
2026Q1	1.50	1.10	4.03	0.08	0.89	0.50	1.15	0.56
2026Q2	1.13	1.02	4.03	0.07	0.80	0.48	1.09	0.58
2026Q3	0.93	1.07	4.02	0.08	0.78	0.49	1.08	0.60
2026Q4	0.74	1.15	4.01	0.08	0.76	0.52	1.00	0.59
2027Q1	0.68	1.17	4.00	0.08	0.77	0.54	1.09	0.58
2027Q2	0.62	1.23	3.99	0.08	0.78	0.55	1.13	0.62
2027Q3	0.66	1.29	3.98	0.08	0.81	0.58	1.21	0.60
2027Q4	0.64	1.32	3.98	0.08	0.82	0.59	1.20	0.62
2028Q1	0.53	1.35	3.97	0.08	0.82	0.58	1.23	0.63
2028Q2	0.53	1.40	3.97	0.08	0.84	0.58	1.28	0.64
2028Q3	0.51	1.43	3.97	0.08	0.84	0.58	1.23	0.62
2028Q4	0.54	1.46	3.98	0.09	0.86	0.58	1.24	0.65
2029Q1	0.49	1.48	3.98	0.08	0.84	0.57	1.23	0.67
2029Q2	0.48	1.41	3.98	0.09	0.83	0.57	1.22	0.68
2029Q3	0.53	1.43	3.99	0.09	0.84	0.57	1.21	0.66
2029Q4	0.56	1.44	3.99	0.09	0.84	0.56	1.19	0.67

APPENDIX TABLE 8: BASELINE COLORADO ECONOMIC OUTLOOK, QUARTERLY, YEAR-OVER-YEAR, PERCENT CHANGE

QUARTER	CONSUMER PRICES	EMPLOYMENT	RETAIL TRADE	PERSONAL INCOME
2022Q1	8.31	5.41	12.78	1.94
2022Q2	8.85	4.92	8.77	6.58
2022Q3	7.85	3.91	8.94	8.89
2022Q4	7.09	3.11	7.79	5.86
2023Q1	5.91	2.77	6.76	5.87
2023Q2	5.27	2.50	-0.15	6.16
2023Q3	5.03	2.69	1.13	2.79
2023Q4	4.69	2.18	-1.25	3.96
2024Q1	4.34	1.99	-3.40	4.13
2024Q2	4.06	1.73	0.44	4.09
2024Q3	3.78	1.51	0.68	5.01
2024Q4	3.52	1.73	3.14	6.06
2025Q1	3.34	1.54	5.62	5.37
2025Q2	3.14	1.33	4.87	5.15
2025Q3	2.99	1.16	4.71	5.02
2025Q4	2.91	1.07	4.62	5.10
2026Q1	2.85	1.01	4.42	5.16
2026Q2	2.77	0.98	4.20	5.19
2026Q3	2.73	0.97	4.05	5.23
2026Q4	2.72	0.97	3.71	5.27
2027Q1	2.74	0.99	3.69	5.36
2027Q2	2.79	1.01	3.78	5.47
2027Q3	2.82	1.04	3.96	5.58
2027Q4	2.79	1.06	3.90	5.62
2028Q1	2.74	1.08	3.91	5.65
2028Q2	2.70	1.11	3.88	5.70
2028Q3	2.67	1.14	3.83	5.64
2028Q4	2.67	1.16	3.96	5.64
2029Q1	2.68	1.17	4.02	5.56
2029Q2	2.68	1.20	4.08	5.54
2029Q3	2.68	1.20	4.04	5.51
2029Q4	2.71	1.21	4.03	5.44

APPENDIX TABLE 9: BASELINE COLORADO ECONOMIC OUTLOOK, QUARTERLY, QUARTER-OVER-QUARTER, PERCENT CHANGE

QUARTER	CONSUMER PRICES	EMPLOYMENT	RETAIL TRADE	PERSONAL INCOME
2022Q1	2.40	1.00	-10.95	1.70
2022Q2	1.80	1.00	13.20	1.20
2022Q3	1.34	0.44	3.21	3.80
2022Q4	1.37	0.62	3.61	-0.91
2023Q1	1.27	0.67	-11.80	1.71
2023Q2	1.19	0.73	5.86	1.48
2023Q3	1.11	0.63	4.54	0.50
2023Q4	1.04	0.12	1.17	0.22
2024Q1	0.94	0.49	-13.72	1.88
2024Q2	0.92	0.47	10.08	1.43
2024Q3	0.84	0.42	4.78	1.40
2024Q4	0.78	0.33	3.64	1.22
2025Q1	0.76	0.31	-11.64	1.22
2025Q2	0.72	0.27	9.30	1.21
2025Q3	0.69	0.25	4.62	1.27
2025Q4	0.71	0.25	3.55	1.30
2026Q1	0.70	0.24	-11.81	1.29
2026Q2	0.65	0.23	9.07	1.24
2026Q3	0.66	0.24	4.46	1.31
2026Q4	0.70	0.25	3.22	1.34
2027Q1	0.71	0.26	-11.83	1.36
2027Q2	0.70	0.26	9.17	1.35
2027Q3	0.69	0.27	4.64	1.41
2027Q4	0.67	0.27	3.16	1.38
2028Q1	0.66	0.28	-11.82	1.39
2028Q2	0.66	0.29	9.14	1.41
2028Q3	0.66	0.30	4.58	1.35
2028Q4	0.66	0.29	3.28	1.38
2029Q1	0.67	0.29	-11.76	1.30
2029Q2	0.66	0.32	9.20	1.39
2029Q3	0.66	0.29	4.55	1.32
2029Q4	0.69	0.30	3.27	1.32

APPENDIX TABLE 10: BASELINE REVENUE FORECAST, QUARTERLY, YEAR-OVER-YEAR, PERCENT CHANGE

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	6.45	36.65	-3.03	12.13	13.87	6.28	-15.77	16.62	-4.43	10.74
2022Q2	-14.13	14.87	-2.77	9.65	7.35	47.74	5.26	30.52	16.00	8.64
2022Q3	2.69	7.48	0.72	5.06	5.00	-72.54	0.39	48.16	-18.61	0.50
2022Q4	6.03	0.83	6.87	11.58	9.10	72.79	2.10	-2.33	13.03	9.72
2023Q1	18.50	7.36	34.47	7.32	9.54	1.37	19.91	67.55	33.36	13.05
2023Q2	5.67	5.15	28.11	-0.53	2.63	-41.01	-5.59	-22.01	-15.22	-0.20
2023Q3	5.23	4.54	19.90	2.38	4.00	277.39	-0.44	-1.72	32.82	8.44
2023Q4	3.29	4.44	5.18	-5.21	-2.49	-43.67	0.99	11.11	-8.62	-3.49
2024Q1	-1.73	4.16	-5.42	2.95	2.21	0.68	-2.99	-33.51	-15.36	-0.85
2024Q2	8.11	3.64	-14.00	5.02	3.59	135.09	9.61	26.31	27.38	6.80
2024Q3	7.21	3.20	-4.41	4.27	3.72	-41.75	14.30	-4.68	-8.80	1.36
2024Q4	7.83	4.84	7.82	5.93	6.03	66.11	9.48	6.69	17.82	7.84
2025Q1	0.71	5.36	-7.18	5.52	4.40	76.19	8.65	-7.58	11.11	5.40
2025Q2	1.79	3.93	7.91	3.13	3.46	14.72	7.65	2.00	7.89	4.17
2025Q3	2.07	3.63	5.92	2.83	3.10	4.48	6.13	2.15	4.93	3.41
2025Q4	1.74	3.77	4.56	2.93	3.07	3.67	6.12	2.53	4.85	3.37
2026Q1	1.54	3.69	6.54	3.21	3.29	3.49	5.73	3.28	4.65	3.50
2026Q2	1.43	3.85	5.25	2.67	2.94	5.76	4.71	1.83	4.35	3.18
2026Q3	1.13	3.90	6.03	2.63	2.94	2.79	4.87	1.57	3.74	3.08
2026Q4	1.55	3.85	5.74	2.33	2.73	3.54	4.70	1.79	3.87	2.93
2027Q1	1.59	3.81	5.08	2.34	2.63	2.22	4.31	3.40	3.69	2.79
2027Q2	2.12	3.91	5.04	2.56	2.93	-0.17	3.13	2.75	2.31	2.82
2027Q3	2.91	4.13	2.77	2.41	2.77	4.10	3.26	2.61	3.31	2.86
2027Q4	1.90	4.22	2.78	2.52	2.77	-0.97	2.85	2.04	1.86	2.61
2028Q1	2.57	4.04	1.31	2.39	2.61	2.08	3.29	0.50	2.33	2.57
2028Q2	1.70	4.02	0.89	2.56	2.63	3.28	3.28	2.99	3.22	2.73
2028Q3	1.69	4.03	-0.02	2.68	2.65	-1.05	2.81	2.21	1.85	2.51
2028Q4	2.27	4.15	0.86	2.63	2.74	2.80	2.69	2.10	2.60	2.71
2029Q1	2.13	4.43	0.97	2.57	2.75	0.18	2.61	3.23	2.34	2.68
2029Q2	2.71	4.59	0.42	2.45	2.71	-1.29	2.71	2.42	1.78	2.55
2029Q3	2.65	4.31	1.04	2.19	2.52	0.51	2.90	2.58	2.33	2.48
2029Q4	2.47	4.41	-0.43	2.31	2.50	-1.74	2.94	3.06	1.96	2.41

APPENDIX TABLE 11: BASELINE REVENUE FORECAST, QUARTERLY, QUARTER-OVER-QUARTER, PERCENT CHANGE

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	14.29	-6.48	-21.60	4.58	2.00	-28.35	-17.88	48.83	-5.59	0.80
2022Q2	-10.90	14.50	39.99	0.87	3.63	43.42	25.41	-18.98	12.97	5.01
2022Q3	1.97	1.66	0.02	1.82	1.69	-26.51	-0.80	12.46	-1.80	1.14
2022Q4	2.10	-7.38	-2.65	3.89	1.49	128.82	-0.06	-27.98	7.92	2.48
2023Q1	27.74	-0.42	-1.35	0.58	2.41	-57.97	-3.56	155.32	11.40	3.87
2023Q2	-20.55	12.15	33.37	-6.51	-2.90	-16.54	-1.26	-62.28	-28.19	-7.30
2023Q3	1.55	1.07	-6.40	4.79	3.05	370.15	4.61	41.70	53.85	9.90
2023Q4	0.22	-7.46	-14.60	-3.80	-4.85	-65.85	1.38	-18.57	-25.76	-8.79
2024Q1	21.54	-0.69	-11.29	9.23	7.35	-24.87	-7.36	52.78	3.18	6.71
2024Q2	-12.59	11.58	21.27	-4.62	-1.60	94.88	11.57	-28.35	8.08	-0.16
2024Q3	0.70	0.65	4.04	4.04	3.19	16.50	9.08	6.94	10.16	4.31
2024Q4	0.80	-5.99	-3.67	-2.27	-2.73	-2.62	-2.90	-8.85	-4.09	-2.96
2025Q1	13.51	-0.21	-23.63	8.80	5.71	-20.31	-8.06	32.34	-2.69	4.30
2025Q2	-11.65	10.08	40.98	-6.77	-2.48	26.89	10.54	-20.92	4.95	-1.32
2025Q3	0.98	0.35	2.12	3.73	2.83	6.10	7.54	7.09	7.13	3.54
2025Q4	0.47	-5.86	-4.91	-2.18	-2.76	-3.37	-2.91	-8.52	-4.16	-3.00
2026Q1	13.28	-0.28	-22.18	9.10	5.93	-20.45	-8.39	33.31	-2.88	4.43
2026Q2	-11.74	10.24	39.27	-7.26	-2.81	29.68	9.48	-22.03	4.65	-1.63
2026Q3	0.68	0.40	2.88	3.68	2.82	3.12	7.70	6.82	6.50	3.44
2026Q4	0.89	-5.91	-5.17	-2.46	-2.96	-2.66	-3.07	-8.32	-4.03	-3.15
2027Q1	13.33	-0.31	-22.67	9.11	5.82	-21.47	-8.73	35.42	-3.06	4.30
2027Q2	-11.28	10.34	39.22	-7.06	-2.52	26.64	8.24	-22.52	3.26	-1.60
2027Q3	1.46	0.61	0.65	3.54	2.66	7.54	7.83	6.67	7.53	3.48
2027Q4	-0.10	-5.82	-5.15	-2.35	-2.96	-7.40	-3.45	-8.83	-5.38	-3.38
2028Q1	14.06	-0.49	-23.77	8.97	5.66	-19.05	-8.34	33.37	-2.60	4.25
2028Q2	-12.03	10.33	38.64	-6.91	-2.50	28.13	8.22	-20.59	4.16	-1.44
2028Q3	1.45	0.61	-0.25	3.66	2.68	3.02	7.35	5.86	6.10	3.26
2028Q4	0.47	-5.71	-4.32	-2.40	-2.88	-3.79	-3.56	-8.93	-4.69	-3.19
2029Q1	13.91	-0.22	-23.69	8.91	5.67	-21.11	-8.41	34.85	-2.85	4.22
2029Q2	-11.54	10.50	37.88	-7.02	-2.54	26.25	8.33	-21.22	3.59	-1.56
2029Q3	1.39	0.33	0.36	3.40	2.49	4.90	7.55	6.02	6.68	3.19
2029Q4	0.30	-5.62	-5.71	-2.29	-2.89	-5.95	-3.53	-8.50	-5.03	-3.26

APPENDIX TABLE 12: BASELINE REVENUE FORECAST, QUARTERLY, TOTAL

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	1,758,357	2,978,876	887,731	14,135,597	19,760,560	435,488	1,849,152	1,135,361	3,420,001	23,180,561
2022Q2	1,566,700	3,410,756	1,242,711	14,258,277	20,478,444	624,570	2,319,046	919,898	3,863,514	24,341,958
2022Q3	1,597,565	3,467,465	1,242,934	14,517,208	20,825,171	459,000	2,300,447	1,034,507	3,793,953	24,619,124
2022Q4	1,631,168	3,211,700	1,209,991	15,082,580	21,135,438	1,050,284	2,299,087	745,076	4,094,447	25,229,885
2023Q1	2,083,662	3,198,067	1,193,711	15,169,785	21,645,225	441,476	2,217,241	1,902,295	4,561,012	26,206,237
2023Q2	1,655,533	3,586,505	1,592,047	14,182,689	21,016,774	368,435	2,189,404	717,462	3,275,302	24,292,076
2023Q3	1,681,124	3,625,030	1,490,219	14,862,030	21,658,404	1,732,212	2,290,321	1,016,668	5,039,200	26,697,605
2023Q4	1,684,775	3,354,434	1,272,664	14,296,835	20,608,708	591,577	2,321,864	827,890	3,741,330	24,350,038
2024Q1	2,047,654	3,331,136	1,128,967	15,616,600	22,124,357	444,462	2,150,976	1,264,818	3,860,256	25,984,613
2024Q2	1,789,791	3,716,994	1,369,108	14,895,248	21,771,141	866,173	2,399,779	906,257	4,172,209	25,943,350
2024Q3	1,802,344	3,741,079	1,424,463	15,496,985	22,464,870	1,009,085	2,617,792	969,106	4,595,983	27,060,854
2024Q4	1,816,719	3,516,860	1,372,129	15,145,153	21,850,861	982,670	2,541,902	883,312	4,407,885	26,258,746
2025Q1	2,062,122	3,509,600	1,047,934	16,477,997	23,097,652	783,081	2,337,068	1,168,986	4,289,135	27,386,787
2025Q2	1,821,875	3,863,197	1,477,379	15,361,675	22,524,126	993,657	2,583,468	924,406	4,501,531	27,025,657
2025Q3	1,839,668	3,876,738	1,508,768	15,935,384	23,160,559	1,054,283	2,778,252	989,979	4,822,514	27,983,073
2025Q4	1,848,262	3,649,515	1,434,723	15,588,451	22,520,952	1,018,782	2,697,376	905,649	4,621,807	27,142,759
2026Q1	2,093,783	3,639,211	1,116,518	17,007,422	23,856,934	810,394	2,470,973	1,207,325	4,488,692	28,345,625
2026Q2	1,847,908	4,011,739	1,554,946	15,772,575	23,187,167	1,050,906	2,705,239	941,352	4,697,497	27,884,664
2026Q3	1,860,410	4,027,753	1,599,729	16,353,702	23,841,594	1,083,698	2,913,454	1,005,548	5,002,700	28,844,294
2026Q4	1,876,933	3,789,914	1,517,087	15,952,105	23,136,039	1,054,881	2,824,132	921,880	4,800,893	27,936,932
2027Q1	2,127,051	3,777,992	1,173,213	17,405,161	24,483,416	828,369	2,577,467	1,248,390	4,654,226	29,137,642
2027Q2	1,887,042	4,168,748	1,633,392	16,176,264	23,865,445	1,049,068	2,789,790	967,276	4,806,134	28,671,578
2027Q3	1,914,524	4,194,000	1,644,028	16,748,418	24,500,970	1,128,117	3,008,339	1,031,808	5,168,264	29,669,233
2027Q4	1,912,677	3,949,886	1,559,335	16,354,230	23,776,128	1,044,643	2,904,630	940,694	4,889,967	28,666,095
2028Q1	2,181,657	3,930,570	1,188,619	17,821,962	25,122,808	845,625	2,662,388	1,254,594	4,762,607	29,885,415
2028Q2	1,919,163	4,336,434	1,647,871	16,590,701	24,494,168	1,083,497	2,881,242	996,215	4,960,954	29,455,122
2028Q3	1,946,912	4,362,949	1,643,744	17,197,649	25,151,254	1,116,230	3,092,977	1,054,594	5,263,801	30,415,054
2028Q4	1,956,090	4,113,641	1,572,740	16,784,498	24,426,970	1,073,879	2,982,729	960,425	5,017,033	29,444,002
2029Q1	2,228,190	4,104,580	1,200,114	18,279,660	25,812,544	847,143	2,731,840	1,295,156	4,874,139	30,686,683
2029Q2	1,971,134	4,535,591	1,654,751	16,996,355	25,157,831	1,069,528	2,959,380	1,020,350	5,049,259	30,207,090
2029Q3	1,998,516	4,550,780	1,660,766	17,574,295	25,784,357	1,121,956	3,182,751	1,081,799	5,386,506	31,170,864
2029Q4	2,004,485	4,294,961	1,565,978	17,172,601	25,038,024	1,055,227	3,070,343	989,794	5,115,364	30,153,388

APPENDIX TABLE 13: BASELINE REVENUE HIGH FORECAST, QUARTERLY, YEAR-OVER-YEAR, PERCENT CHANGE

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	6.45	36.65	-3.03	12.13	13.87	6.28	-15.77	16.62	-4.43	10.74
2022Q2	-14.13	14.87	-2.77	9.65	7.35	47.74	5.26	30.52	16.00	8.64
2022Q3	2.69	7.48	0.72	5.06	5.00	-72.54	0.39	48.16	-18.61	0.50
2022Q4	6.03	0.83	6.87	11.58	9.10	72.79	2.10	-2.33	13.03	9.72
2023Q1	18.50	7.36	34.47	7.32	9.54	1.37	19.91	67.55	33.36	13.05
2023Q2	5.67	5.15	28.11	-0.53	2.63	-41.01	-5.59	-22.01	-15.22	-0.20
2023Q3	5.23	4.54	19.90	2.38	4.00	277.39	-0.44	-1.72	32.82	8.44
2023Q4	3.29	4.44	5.18	-5.21	-2.49	-43.67	0.99	11.11	-8.62	-3.49
2024Q1	-1.73	4.16	-5.42	2.95	2.21	0.68	-2.99	-33.51	-15.36	-0.85
2024Q2	21.89	7.72	2.57	8.29	8.83	261.08	20.50	55.30	55.18	15.08
2024Q3	21.59	8.03	14.03	7.81	9.34	-8.66	25.43	17.73	12.16	9.88
2024Q4	23.19	9.67	27.45	10.61	12.53	150.30	20.43	31.50	43.41	17.27
2025Q1	14.95	9.94	9.97	10.97	11.13	177.34	19.73	13.35	35.79	14.80
2025Q2	3.11	4.73	6.45	5.11	4.96	14.81	7.75	2.05	8.35	5.58
2025Q3	2.79	3.81	5.35	5.27	4.82	2.26	6.31	2.12	4.29	4.72
2025Q4	2.02	4.01	4.71	5.21	4.70	5.22	6.22	3.42	5.38	4.83
2026Q1	1.35	4.17	6.84	4.99	4.61	3.69	5.17	4.91	4.75	4.64
2026Q2	1.45	3.99	6.53	4.35	4.20	3.72	5.14	3.09	4.32	4.22
2026Q3	0.43	4.15	5.92	4.34	4.09	4.73	4.81	1.47	4.10	4.09
2026Q4	0.72	4.15	6.31	3.26	3.39	3.14	4.96	0.40	3.55	3.42
2027Q1	1.35	4.27	5.15	4.62	4.29	-2.78	5.49	2.78	2.82	4.03
2027Q2	1.73	4.30	4.46	4.95	4.53	-0.57	2.90	2.12	1.78	4.02
2027Q3	3.22	4.38	2.95	5.03	4.62	0.85	3.86	2.02	2.66	4.25
2027Q4	2.62	4.54	2.14	5.04	4.55	-1.70	2.56	3.92	1.65	4.00
2028Q1	3.08	4.15	0.83	4.11	3.85	3.06	3.17	0.08	2.30	3.58
2028Q2	3.25	4.37	1.00	3.88	3.70	4.45	3.36	3.36	3.65	3.69
2028Q3	2.03	4.43	-0.21	3.51	3.27	1.35	2.31	3.16	2.22	3.07
2028Q4	1.65	4.28	1.38	4.03	3.68	6.16	2.65	1.17	3.29	3.61
2029Q1	2.19	4.78	1.13	4.19	3.94	1.59	2.29	4.01	2.60	3.71
2029Q2	1.81	4.88	0.64	4.44	4.02	0.13	2.59	2.38	1.88	3.63
2029Q3	2.64	4.31	1.97	4.52	4.15	-1.15	3.23	2.83	1.97	3.75
2029Q4	2.54	4.83	-0.29	4.01	3.72	-3.17	3.36	3.64	1.63	3.34

APPENDIX TABLE 14: BASELINE REVENUE HIGH FORECAST, QUARTERLY, QUARTER-OVER-QUARTER, PERCENT CHANGE

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	14.29	-6.48	-21.60	4.58	2.00	-28.35	-17.88	48.83	-5.59	0.80
2022Q2	-10.90	14.50	39.99	0.87	3.63	43.42	25.41	-18.98	12.97	5.01
2022Q3	1.97	1.66	0.02	1.82	1.69	-26.51	-0.80	12.46	-1.80	1.14
2022Q4	2.10	-7.38	-2.65	3.89	1.49	128.82	-0.06	-27.98	7.92	2.48
2023Q1	27.74	-0.42	-1.35	0.58	2.41	-57.97	-3.56	155.32	11.40	3.87
2023Q2	-20.55	12.15	33.37	-6.51	-2.90	-16.54	-1.26	-62.28	-28.19	-7.30
2023Q3	1.55	1.07	-6.40	4.79	3.05	370.15	4.61	41.70	53.85	9.90
2023Q4	0.22	-7.46	-14.60	-3.80	-4.85	-65.85	1.38	-18.57	-25.76	-8.79
2024Q1	21.54	-0.69	-11.29	9.23	7.35	-24.87	-7.36	52.78	3.18	6.71
2024Q2	-1.46	15.98	44.64	-1.65	3.38	199.32	22.65	-11.90	31.67	7.59
2024Q3	1.30	1.36	4.06	4.32	3.54	18.93	8.90	7.42	11.20	4.93
2024Q4	1.53	-6.06	-4.55	-1.30	-2.08	-6.41	-2.66	-9.04	-5.07	-2.65
2025Q1	13.41	-0.45	-23.46	9.59	6.03	-16.75	-7.90	31.70	-2.31	4.46
2025Q2	-11.61	10.48	40.02	-6.85	-2.36	23.91	10.38	-20.68	5.06	-1.05
2025Q3	0.99	0.47	2.98	4.48	3.39	5.93	7.44	7.49	7.03	4.07
2025Q4	0.77	-5.87	-5.13	-1.36	-2.19	-3.71	-2.75	-7.89	-4.08	-2.55
2026Q1	12.67	-0.30	-21.90	9.36	5.94	-17.96	-8.82	33.59	-2.89	4.27
2026Q2	-11.52	10.29	39.61	-7.41	-2.74	23.94	10.35	-22.06	4.63	-1.45
2026Q3	-0.03	0.62	2.40	4.47	3.29	6.96	7.11	5.80	6.80	3.94
2026Q4	1.06	-5.87	-4.78	-2.37	-2.84	-5.17	-2.61	-8.86	-4.58	-3.18
2027Q1	13.38	-0.19	-22.75	10.79	6.85	-22.67	-8.36	36.76	-3.58	4.88
2027Q2	-11.19	10.33	38.70	-7.11	-2.51	26.77	7.64	-22.56	3.58	-1.45
2027Q3	1.44	0.70	0.92	4.54	3.38	8.48	8.11	5.70	7.72	4.17
2027Q4	0.47	-5.72	-5.54	-2.36	-2.91	-7.57	-3.83	-7.17	-5.51	-3.40
2028Q1	13.89	-0.56	-23.75	9.81	6.14	-18.92	-7.81	31.71	-2.96	4.46
2028Q2	-11.05	10.56	38.94	-7.32	-2.66	28.47	7.83	-20.03	4.94	-1.35
2028Q3	0.25	0.76	-0.30	4.16	2.95	5.27	7.01	5.50	6.23	3.55
2028Q4	0.09	-5.86	-4.03	-1.87	-2.52	-3.18	-3.51	-8.97	-4.53	-2.90
2029Q1	14.50	-0.09	-23.94	9.98	6.41	-22.41	-8.13	35.41	-3.61	4.57
2029Q2	-11.38	10.67	38.27	-7.10	-2.59	26.63	8.14	-21.28	4.21	-1.43
2029Q3	1.06	0.21	1.02	4.25	3.08	3.92	7.69	5.97	6.33	3.66
2029Q4	0.00	-5.39	-6.15	-2.35	-2.93	-5.16	-3.39	-8.25	-4.84	-3.28

APPENDIX TABLE 15: BASELINE REVENUE HIGH FORECAST, QUARTERLY, TOTAL

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	1,758,357	2,978,876	887,731	14,135,597	19,760,560	435,488	1,849,152	1,135,361	3,420,001	23,180,561
2022Q2	1,566,700	3,410,756	1,242,711	14,258,277	20,478,444	624,570	2,319,046	919,898	3,863,514	24,341,958
2022Q3	1,597,565	3,467,465	1,242,934	14,517,208	20,825,171	459,000	2,300,447	1,034,507	3,793,953	24,619,124
2022Q4	1,631,168	3,211,700	1,209,991	15,082,580	21,135,438	1,050,284	2,299,087	745,076	4,094,447	25,229,885
2023Q1	2,083,662	3,198,067	1,193,711	15,169,785	21,645,225	441,476	2,217,241	1,902,295	4,561,012	26,206,237
2023Q2	1,655,533	3,586,505	1,592,047	14,182,689	21,016,774	368,435	2,189,404	717,462	3,275,302	24,292,076
2023Q3	1,681,124	3,625,030	1,490,219	14,862,030	21,658,404	1,732,212	2,290,321	1,016,668	5,039,200	26,697,605
2023Q4	1,684,775	3,354,434	1,272,664	14,296,835	20,608,708	591,577	2,321,864	827,890	3,741,330	24,350,038
2024Q1	2,047,654	3,331,136	1,128,967	15,616,600	22,124,357	444,462	2,150,976	1,264,818	3,860,256	25,984,613
2024Q2	2,017,854	3,863,465	1,632,982	15,358,588	22,872,888	1,330,358	2,638,130	1,114,251	5,082,739	27,955,628
2024Q3	2,044,109	3,916,010	1,699,336	16,022,663	23,682,118	1,582,180	2,872,815	1,196,907	5,651,901	29,334,019
2024Q4	2,075,457	3,678,812	1,622,005	15,813,729	23,190,003	1,480,696	2,796,284	1,088,646	5,365,627	28,555,630
2025Q1	2,353,879	3,662,344	1,241,528	17,329,957	24,587,709	1,232,667	2,575,362	1,433,707	5,241,735	29,829,444
2025Q2	2,080,615	4,046,254	1,738,380	16,142,980	24,008,229	1,527,422	2,842,613	1,137,147	5,507,183	29,515,411
2025Q3	2,101,188	4,065,139	1,790,236	16,866,673	24,823,236	1,617,977	3,054,207	1,222,289	5,894,473	30,717,709
2025Q4	2,117,331	3,826,461	1,698,388	16,637,855	24,280,035	1,557,954	2,970,301	1,125,871	5,654,126	29,934,161
2026Q1	2,385,634	3,814,974	1,326,441	18,194,479	25,721,527	1,278,141	2,708,444	1,504,094	5,490,679	31,212,206
2026Q2	2,110,812	4,207,649	1,851,878	16,845,517	25,015,855	1,584,170	2,988,673	1,172,328	5,745,171	30,761,027
2026Q3	2,110,232	4,233,792	1,896,274	17,598,265	25,838,564	1,694,450	3,201,210	1,240,293	6,135,953	31,974,517
2026Q4	2,132,541	3,985,098	1,805,542	17,180,751	25,103,931	1,606,861	3,117,663	1,130,358	5,854,882	30,958,813
2027Q1	2,417,906	3,977,686	1,394,696	19,034,453	26,824,741	1,242,573	2,857,072	1,545,912	5,645,556	32,470,297
2027Q2	2,147,265	4,388,382	1,934,485	17,680,153	26,150,285	1,575,159	3,075,292	1,197,182	5,847,634	31,997,919
2027Q3	2,178,219	4,419,060	1,952,247	18,483,654	27,033,180	1,708,784	3,324,767	1,265,390	6,298,941	33,332,121
2027Q4	2,188,406	4,166,185	1,844,166	18,047,174	26,245,931	1,579,502	3,197,349	1,174,713	5,951,565	32,197,496
2028Q1	2,492,287	4,142,692	1,406,253	19,817,503	27,858,735	1,280,601	2,947,778	1,547,203	5,775,582	33,634,316
2028Q2	2,217,006	4,580,002	1,953,895	18,366,856	27,117,760	1,645,176	3,178,648	1,237,353	6,061,177	33,178,936
2028Q3	2,222,512	4,614,809	1,948,089	19,131,819	27,917,230	1,731,933	3,401,571	1,305,439	6,438,942	34,356,172
2028Q4	2,224,473	4,344,493	1,869,639	18,773,763	27,212,367	1,676,817	3,282,157	1,188,406	6,147,380	33,359,746
2029Q1	2,546,919	4,340,685	1,422,093	20,647,910	28,957,606	1,300,966	3,015,395	1,609,224	5,925,586	34,883,192
2029Q2	2,257,102	4,803,679	1,966,395	19,181,585	28,208,760	1,647,364	3,260,882	1,266,812	6,175,057	34,383,818
2029Q3	2,281,112	4,813,809	1,986,375	19,995,892	29,077,187	1,712,009	3,511,567	1,342,401	6,565,977	35,643,164
2029Q4	2,281,026	4,554,396	1,864,162	19,526,223	28,225,807	1,623,696	3,392,479	1,231,696	6,247,871	34,473,678

APPENDIX TABLE 16: BASELINE REVENUE LOW FORECAST, QUARTERLY, YEAR-OVER-YEAR, PERCENT CHANGE

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	6.45	36.65	-3.03	12.13	13.87	6.28	-15.77	16.62	-4.43	10.74
2022Q2	-14.13	14.87	-2.77	9.65	7.35	47.74	5.26	30.52	16.00	8.64
2022Q3	2.69	7.48	0.72	5.06	5.00	-72.54	0.39	48.16	-18.61	0.50
2022Q4	6.03	0.83	6.87	11.58	9.10	72.79	2.10	-2.33	13.03	9.72
2023Q1	18.50	7.36	34.47	7.32	9.54	1.37	19.91	67.55	33.36	13.05
2023Q2	5.67	5.15	28.11	-0.53	2.63	-41.01	-5.59	-22.01	-15.22	-0.20
2023Q3	5.23	4.54	19.90	2.38	4.00	277.39	-0.44	-1.72	32.82	8.44
2023Q4	3.29	4.44	5.18	-5.21	-2.49	-43.67	0.99	11.11	-8.62	-3.49
2024Q1	-1.73	4.16	-5.42	2.95	2.21	0.68	-2.99	-33.51	-15.36	-0.85
2024Q2	-5.84	-0.50	-30.10	1.87	-1.56	2.46	-1.08	-3.46	-1.20	-1.52
2024Q3	-7.94	-1.56	-22.99	0.75	-1.94	-76.73	2.83	-27.98	-30.74	-7.38
2024Q4	-7.89	-0.12	-12.37	1.49	-0.39	-30.17	-1.53	-19.00	-9.93	-1.86
2025Q1	-13.88	0.57	-24.16	-0.27	-2.62	-27.83	-2.39	-29.67	-14.26	-4.35
2025Q2	0.35	3.17	7.77	0.61	1.42	8.14	7.36	2.23	6.35	2.09
2025Q3	1.54	3.46	7.37	0.21	1.24	6.64	5.89	2.81	5.33	1.82
2025Q4	2.62	3.54	4.71	0.11	1.11	2.76	6.21	2.84	5.11	1.67
2026Q1	2.01	3.51	5.25	1.44	1.96	3.66	5.84	3.15	4.91	2.35
2026Q2	1.70	3.28	4.39	1.12	1.73	6.49	3.64	0.26	3.28	1.95
2026Q3	2.28	3.39	4.20	0.74	1.50	7.14	4.65	1.51	4.30	1.91
2026Q4	1.90	3.39	4.65	1.02	1.69	3.80	3.93	1.94	3.53	1.95
2027Q1	1.61	3.15	5.23	0.66	1.32	1.51	4.20	2.51	3.50	1.62
2027Q2	2.76	3.73	6.28	-0.01	1.23	1.17	3.89	2.78	3.34	1.53
2027Q3	2.25	3.83	3.36	0.42	1.32	2.39	3.05	1.80	2.72	1.53
2027Q4	1.34	4.00	3.84	0.44	1.32	0.35	3.27	1.29	2.54	1.50
2028Q1	2.61	3.95	2.56	-0.08	0.90	2.54	3.29	-0.06	2.35	1.10
2028Q2	1.00	3.43	0.59	0.85	1.32	2.51	3.07	2.37	2.86	1.54
2028Q3	1.95	3.73	0.27	0.43	1.12	-1.41	3.08	3.46	2.62	1.35
2028Q4	2.36	3.83	-1.33	0.16	0.88	-1.02	2.36	1.87	1.87	1.03
2029Q1	2.34	3.88	-0.59	0.06	0.85	-0.41	2.39	4.01	2.54	1.09
2029Q2	2.29	4.57	0.15	-0.06	0.99	-1.29	2.50	2.74	2.09	1.15
2029Q3	2.25	4.01	0.97	0.29	1.16	1.72	2.95	2.18	2.65	1.39
2029Q4	2.96	4.31	1.34	0.02	1.09	-0.76	3.12	3.27	2.71	1.34

**APPENDIX TABLE 17: BASELINE REVENUE LOW FORECAST, QUARTERLY, QUARTER-OVER-QUARTER,
PERCENT CHANGE**

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	14.29	-6.48	-21.60	4.58	2.00	-28.35	-17.88	48.83	-5.59	0.80
2022Q2	-10.90	14.50	39.99	0.87	3.63	43.42	25.41	-18.98	12.97	5.01
2022Q3	1.97	1.66	0.02	1.82	1.69	-26.51	-0.80	12.46	-1.80	1.14
2022Q4	2.10	-7.38	-2.65	3.89	1.49	128.82	-0.06	-27.98	7.92	2.48
2023Q1	27.74	-0.42	-1.35	0.58	2.41	-57.97	-3.56	155.32	11.40	3.87
2023Q2	-20.55	12.15	33.37	-6.51	-2.90	-16.54	-1.26	-62.28	-28.19	-7.30
2023Q3	1.55	1.07	-6.40	4.79	3.05	370.15	4.61	41.70	53.85	9.90
2023Q4	0.22	-7.46	-14.60	-3.80	-4.85	-65.85	1.38	-18.57	-25.76	-8.79
2024Q1	21.54	-0.69	-11.29	9.23	7.35	-24.87	-7.36	52.78	3.18	6.71
2024Q2	-23.87	7.12	-1.42	-7.48	-6.49	-15.06	0.69	-45.24	-16.17	-7.93
2024Q3	-0.71	0.00	3.12	3.64	2.66	6.77	8.74	5.71	7.86	3.36
2024Q4	0.26	-6.11	-2.82	-3.10	-3.35	2.48	-2.92	-8.41	-3.45	-3.36
2025Q1	13.63	-0.01	-23.23	7.34	4.95	-22.34	-8.17	32.64	-1.78	4.00
2025Q2	-11.29	9.90	40.09	-6.67	-2.61	27.26	10.74	-20.39	3.98	-1.73
2025Q3	0.46	0.28	2.74	3.23	2.48	5.28	7.25	6.31	6.82	3.09
2025Q4	1.33	-6.04	-5.23	-3.20	-3.48	-1.24	-2.63	-8.38	-3.64	-3.50
2026Q1	12.96	-0.04	-22.84	8.77	5.84	-21.67	-8.48	33.04	-1.98	4.70
2026Q2	-11.56	9.66	38.95	-6.96	-2.83	30.75	8.44	-22.62	2.37	-2.12
2026Q3	1.04	0.40	2.55	2.84	2.25	5.92	8.30	7.63	7.87	3.06
2026Q4	0.95	-6.05	-4.81	-2.93	-3.30	-4.32	-3.30	-7.99	-4.35	-3.46
2027Q1	12.63	-0.27	-22.41	8.38	5.46	-23.39	-8.24	33.78	-2.01	4.35
2027Q2	-10.56	10.27	40.34	-7.58	-2.91	30.31	8.11	-22.42	2.21	-2.20
2027Q3	0.54	0.50	-0.27	3.28	2.35	7.19	7.43	6.60	7.23	3.06
2027Q4	0.05	-5.90	-4.37	-2.91	-3.31	-6.23	-3.09	-8.45	-4.53	-3.49
2028Q1	14.05	-0.32	-23.37	7.82	5.02	-21.71	-8.23	32.00	-2.19	3.94
2028Q2	-11.96	9.72	37.64	-6.72	-2.51	30.27	7.88	-20.54	2.72	-1.78
2028Q3	1.48	0.79	-0.59	2.85	2.15	3.09	7.44	7.74	6.98	2.86
2028Q4	0.46	-5.80	-5.90	-3.16	-3.54	-5.86	-3.77	-9.86	-5.22	-3.80
2029Q1	14.02	-0.28	-22.80	7.70	4.99	-21.23	-8.20	34.77	-1.55	4.00
2029Q2	-12.01	10.45	38.67	-6.83	-2.38	29.12	7.99	-21.51	2.27	-1.71
2029Q3	1.45	0.25	0.22	3.21	2.32	6.24	7.91	7.15	7.57	3.10
2029Q4	1.15	-5.53	-5.55	-3.43	-3.60	-8.15	-3.61	-8.89	-5.17	-3.85

APPENDIX TABLE 18: BASELINE REVENUE LOW FORECAST, QUARTERLY, TOTAL

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	1,758,357	2,978,876	887,731	14,135,597	19,760,560	435,488	1,849,152	1,135,361	3,420,001	23,180,561
2022Q2	1,566,700	3,410,756	1,242,711	14,258,277	20,478,444	624,570	2,319,046	919,898	3,863,514	24,341,958
2022Q3	1,597,565	3,467,465	1,242,934	14,517,208	20,825,171	459,000	2,300,447	1,034,507	3,793,953	24,619,124
2022Q4	1,631,168	3,211,700	1,209,991	15,082,580	21,135,438	1,050,284	2,299,087	745,076	4,094,447	25,229,885
2023Q1	2,083,662	3,198,067	1,193,711	15,169,785	21,645,225	441,476	2,217,241	1,902,295	4,561,012	26,206,237
2023Q2	1,655,533	3,586,505	1,592,047	14,182,689	21,016,774	368,435	2,189,404	717,462	3,275,302	24,292,076
2023Q3	1,681,124	3,625,030	1,490,219	14,862,030	21,658,404	1,732,212	2,290,321	1,016,668	5,039,200	26,697,605
2023Q4	1,684,775	3,354,434	1,272,664	14,296,835	20,608,708	591,577	2,321,864	827,890	3,741,330	24,350,038
2024Q1	2,047,654	3,331,136	1,128,967	15,616,600	22,124,357	444,462	2,150,976	1,264,818	3,860,256	25,984,613
2024Q2	1,558,848	3,568,399	1,112,904	14,447,889	20,688,040	377,515	2,165,785	692,641	3,235,941	23,923,981
2024Q3	1,547,720	3,568,571	1,147,599	14,974,214	21,238,104	403,065	2,355,041	732,224	3,490,331	24,728,434
2024Q4	1,551,787	3,350,437	1,115,286	14,509,857	20,527,367	413,073	2,286,283	670,631	3,369,987	23,897,354
2025Q1	1,763,355	3,350,006	856,164	15,574,232	21,543,757	320,790	2,099,595	889,535	3,309,920	24,853,677
2025Q2	1,564,346	3,681,658	1,199,390	14,535,969	20,981,363	408,253	2,325,142	708,118	3,441,513	24,422,876
2025Q3	1,571,534	3,692,117	1,232,212	15,006,080	21,501,943	429,809	2,493,670	752,805	3,676,284	25,178,227
2025Q4	1,592,456	3,468,957	1,167,794	14,525,332	20,754,538	424,487	2,428,178	689,694	3,542,359	24,296,898
2026Q1	1,798,771	3,467,430	901,075	15,799,166	21,966,442	332,518	2,222,241	917,539	3,472,298	25,438,739
2026Q2	1,590,888	3,802,243	1,252,083	14,699,147	21,344,360	434,761	2,409,805	709,988	3,554,555	24,898,915
2026Q3	1,607,397	3,817,416	1,283,949	15,116,751	21,825,512	460,491	2,609,701	764,162	3,834,354	25,659,866
2026Q4	1,622,720	3,586,425	1,222,130	14,673,208	21,104,484	440,597	2,523,692	703,095	3,667,384	24,771,868
2027Q1	1,827,723	3,576,672	948,224	15,903,460	22,256,079	337,555	2,315,623	940,604	3,593,782	25,849,861
2027Q2	1,634,786	3,944,134	1,330,704	14,697,920	21,607,543	439,862	2,503,510	729,743	3,673,115	25,280,658
2027Q3	1,643,617	3,963,784	1,327,076	15,179,815	22,114,291	471,507	2,689,427	777,889	3,938,823	26,053,115
2027Q4	1,644,414	3,730,034	1,269,113	14,738,471	21,382,033	442,130	2,606,287	712,171	3,760,588	25,142,622
2028Q1	1,875,398	3,717,974	972,497	15,890,477	22,456,346	346,127	2,391,900	940,072	3,678,098	26,134,445
2028Q2	1,651,133	4,079,517	1,338,552	14,823,021	21,892,222	450,905	2,580,264	747,012	3,778,182	25,670,404
2028Q3	1,675,602	4,111,667	1,330,721	15,244,924	22,362,914	464,838	2,772,196	804,835	4,041,870	26,404,784
2028Q4	1,683,259	3,873,059	1,252,233	14,762,644	21,571,195	437,612	2,667,678	725,495	3,830,785	25,401,980
2029Q1	1,919,293	3,862,237	966,750	15,899,372	22,647,652	344,698	2,448,992	977,744	3,771,434	26,419,086
2029Q2	1,688,880	4,266,005	1,340,620	14,814,068	22,109,572	445,071	2,644,651	767,470	3,857,192	25,966,764
2029Q3	1,713,383	4,276,640	1,343,620	15,288,914	22,622,556	472,826	2,853,873	822,381	4,149,079	26,771,636
2029Q4	1,733,056	4,040,157	1,268,992	14,765,132	21,807,338	434,269	2,750,960	749,248	3,934,477	25,741,814

APPENDIX TABLE 19: BASELINE PROPERTY TAX FORECAST, ANNUAL, PERCENT CHANGE

YEAR	NONRESIDENTIAL	RESIDENTIAL	TOTAL
2022	4.6	8.8	6.9
2023	-0.7	-8.3	-5.0
2024	18.9	23.2	21.3
2025	0.7	-3.0	-1.3
2026	15.9	18.3	17.2
2027	0.6	-4.5	-2.2
2028	14.4	14.6	14.5
2029	0.7	-5.9	-2.9

APPENDIX TABLE 20: BASELINE PROPERTY TAX FORECAST, ANNUAL

YEAR	NONRESIDENTIAL	RESIDENTIAL	TOTAL
2022	3,469,179	4,472,982	7,942,161
2023	3,444,625	4,100,762	7,545,387
2024	4,096,130	5,053,258	9,149,388
2025	4,126,146	4,899,771	9,025,917
2026	4,782,489	5,797,281	10,579,770
2027	4,813,535	5,536,255	10,349,790
2028	5,504,536	6,343,632	11,848,168
2029	5,540,448	5,969,924	11,510,372

APPENDIX TABLE 21: BASELINE PROPERTY TAX HIGH FORECAST, ANNUAL

YEAR	NONRESIDENTIAL	RESIDENTIAL	TOTAL
2022	3,469,179	4,472,982	7,942,161
2023	3,444,625	4,100,762	7,545,387
2024	4,096,130	5,053,258	9,149,388
2025	4,207,684	4,990,167	9,197,851
2026	4,892,137	5,984,824	10,876,961
2027	4,965,496	5,840,559	10,806,055
2028	5,674,561	6,772,555	12,447,115
2029	5,768,521	6,481,606	12,250,127

APPENDIX TABLE 22: BASELINE PROPERTY TAX LOW FORECAST, ANNUAL

YEAR	NONRESIDENTIAL	RESIDENTIAL	TOTAL
2022	3,469,179	4,472,982	7,942,161
2023	3,444,625	4,100,762	7,545,387
2024	4,096,130	5,053,258	9,149,388
2025	4,047,369	4,805,158	8,852,527
2026	4,674,660	5,586,845	10,261,505
2027	4,662,583	5,210,728	9,873,311
2028	5,326,811	5,865,016	11,191,827
2029	5,331,488	5,386,818	10,718,306

APPENDIX TABLE 23: OPTIMISTIC U.S. ECONOMIC OUTLOOK, ANNUAL, PERCENT CHANGE

YEAR	CONSUMER PRICES	RETAIL TRADE	REAL GDP	UNEMPLOYMENT RATE	EMPLOYMENT	PERSONAL INCOME	RESTAURANTS	FOOD AND BEVERAGE STORES	E-COMMERCE
2022	8.0	9.7	1.9	3.6	4.3	2.0	15.7	-0.3	8.6
2023	4.1	3.4	2.5	3.6	2.3	5.2	11.6	8.4	7.4
2024	3.0	3.8	3.3	3.4	1.8	5.0	8.6	4.9	8.3
2025	2.5	5.4	3.1	3.2	1.3	4.9	6.6	2.2	7.5
2026	2.3	3.6	2.3	3.4	0.7	5.3	3.3	3.1	5.1
2027	2.2	3.9	2.4	3.4	0.3	4.6	4.8	3.4	5.5
2028	2.2	3.9	2.4	3.4	0.2	4.5	4.9	3.3	5.9
2029	2.2	3.4	2.3	3.6	0.3	4.5	4.6	3.1	5.8

APPENDIX TABLE 24: OPTIMISTIC COLORADO ECONOMIC OUTLOOK, ANNUAL, PERCENT CHANGE

YEAR	CONSUMER PRICES	RETAIL TRADE	PERSONAL INCOME	EMPLOYMENT	UNEMPLOYMENT RATE
2022	8.0	9.4	5.8	4.3	3.1
2023	5.2	1.4	4.7	2.5	3.2
2024	3.9	2.2	4.9	2.0	3.3
2025	3.2	7.1	5.8	1.8	2.9
2026	2.8	4.7	6.3	1.4	2.9
2027	2.8	4.3	5.8	1.0	3.0
2028	2.7	4.5	5.6	0.9	3.0
2029	2.7	4.0	5.5	1.1	3.1

APPENDIX TABLE 25: OPTIMISTIC REVENUE FORECAST, ANNUAL, TOTAL

YEAR	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022	6,553,790	13,068,797	4,583,366	57,993,661	82,199,613	2,569,341	8,767,731	3,834,843	15,171,915	97,371,529
2023	7,105,095	13,764,036	5,548,641	58,511,339	84,929,112	3,133,700	9,018,830	4,464,315	16,616,845	101,545,956
2024	7,450,819	14,599,893	5,305,031	61,626,437	88,982,179	3,310,125	9,940,949	4,054,453	17,305,527	106,287,706
2025	7,618,239	15,632,243	5,577,376	64,696,915	93,524,773	3,941,264	10,908,496	4,084,663	18,934,424	112,459,197
2026	7,854,263	16,263,000	6,097,082	66,687,726	96,902,071	4,183,219	11,320,403	4,186,849	19,690,471	116,592,542
2027	8,123,455	16,888,359	6,350,468	68,484,548	99,846,830	4,277,961	11,636,204	4,311,466	20,225,630	120,072,460
2028	8,390,915	17,588,423	6,529,481	70,445,887	102,954,706	4,376,909	11,958,078	4,405,507	20,740,494	123,695,201
2029	8,651,654	18,309,859	6,674,479	72,204,886	105,840,879	4,365,946	12,257,344	4,538,426	21,161,716	127,002,594

APPENDIX TABLE 26: OPTIMISTIC REVENUE FORECAST, QUARTERLY, TOTAL

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	1,758,357	2,978,876	887,731	14,135,597	19,760,560	435,488	1,849,152	1,135,361	3,420,001	23,180,561
2022Q2	1,566,700	3,410,756	1,242,711	14,258,277	20,478,444	624,570	2,319,046	919,898	3,863,514	24,341,958
2022Q3	1,597,565	3,467,465	1,242,934	14,517,208	20,825,171	459,000	2,300,447	1,034,507	3,793,953	24,619,124
2022Q4	1,631,168	3,211,700	1,209,991	15,082,580	21,135,438	1,050,284	2,299,087	745,076	4,094,447	25,229,885
2023Q1	2,083,662	3,198,067	1,193,711	15,169,785	21,645,225	441,476	2,217,241	1,902,295	4,561,012	26,206,237
2023Q2	1,655,533	3,586,505	1,592,047	14,182,689	21,016,774	368,435	2,189,404	717,462	3,275,302	24,292,076
2023Q3	1,681,124	3,625,030	1,490,219	14,862,030	21,658,404	1,732,212	2,290,321	1,016,668	5,039,200	26,697,605
2023Q4	1,684,775	3,354,434	1,272,664	14,296,835	20,608,708	591,577	2,321,864	827,890	3,741,330	24,350,038
2024Q1	2,047,654	3,331,136	1,128,967	15,616,600	22,124,357	444,462	2,150,976	1,264,818	3,860,256	25,984,613
2024Q2	1,789,128	3,758,833	1,369,530	14,992,409	21,909,900	866,177	2,433,974	911,665	4,211,816	26,121,716
2024Q3	1,799,657	3,853,031	1,427,788	15,663,439	22,743,915	1,010,363	2,707,356	981,226	4,698,945	27,442,860
2024Q4	1,814,380	3,656,894	1,378,745	15,353,988	22,204,007	989,123	2,648,643	896,744	4,534,510	26,738,517
2025Q1	2,064,545	3,661,519	1,058,387	16,777,201	23,561,651	794,547	2,438,683	1,192,446	4,425,676	27,987,327
2025Q2	1,829,688	4,052,825	1,500,986	15,691,569	23,075,069	1,012,868	2,715,338	947,261	4,675,467	27,750,536
2025Q3	1,853,250	4,077,318	1,539,606	16,301,832	23,772,006	1,080,732	2,930,575	1,016,678	5,027,986	28,799,992
2025Q4	1,870,755	3,840,581	1,478,397	15,926,314	23,116,047	1,053,117	2,823,900	928,278	4,805,295	27,921,342
2026Q1	2,129,897	3,826,462	1,164,933	17,346,834	24,468,127	843,083	2,573,269	1,235,907	4,652,260	29,120,386
2026Q2	1,887,777	4,215,912	1,639,623	16,191,881	23,935,193	1,096,770	2,807,267	967,422	4,871,459	28,806,652
2026Q3	1,906,711	4,232,446	1,691,555	16,775,178	24,605,890	1,134,870	3,019,839	1,034,033	5,188,742	29,794,632
2026Q4	1,929,878	3,988,179	1,600,972	16,373,833	23,892,861	1,108,496	2,920,028	949,487	4,978,011	28,870,872
2027Q1	2,193,827	3,970,959	1,235,071	17,844,183	25,244,039	871,435	2,661,333	1,283,725	4,816,493	30,060,532
2027Q2	1,952,132	4,383,977	1,720,517	16,618,960	24,675,587	1,104,392	2,878,899	996,131	4,979,422	29,655,008
2027Q3	1,986,556	4,390,670	1,738,035	17,208,965	25,324,227	1,192,472	3,101,375	1,062,706	5,356,554	30,680,781
2027Q4	1,990,940	4,142,753	1,656,845	16,812,440	24,602,977	1,109,662	2,994,597	968,903	5,073,162	29,676,139
2028Q1	2,277,068	4,128,350	1,270,400	18,317,663	25,993,481	898,245	2,743,050	1,292,879	4,934,174	30,927,655
2028Q2	2,009,429	4,558,407	1,772,853	17,099,704	25,440,393	1,149,664	2,965,534	1,029,234	5,144,433	30,584,826
2028Q3	2,045,442	4,579,173	1,777,454	17,731,945	26,134,013	1,185,912	3,181,536	1,090,467	5,457,915	31,591,928
2028Q4	2,058,975	4,322,493	1,708,775	17,296,575	25,386,819	1,143,088	3,067,958	992,927	5,203,972	30,590,791
2029Q1	2,347,765	4,306,323	1,309,338	18,846,042	26,809,468	902,410	2,807,854	1,339,763	5,050,027	31,859,495
2029Q2	2,079,062	4,748,876	1,812,943	17,543,723	26,184,603	1,139,756	3,038,083	1,056,145	5,233,983	31,418,586
2029Q3	2,108,778	4,766,456	1,825,610	18,129,103	26,829,948	1,197,118	3,264,910	1,120,058	5,582,085	32,412,033
2029Q4	2,116,049	4,488,205	1,726,588	17,686,019	26,016,860	1,126,663	3,146,497	1,022,461	5,295,620	31,312,480

APPENDIX TABLE 27: PESSIMISTIC U.S. ECONOMIC OUTLOOK, ANNUAL, PERCENT CHANGE

YEAR	CONSUMER PRICES	RETAIL TRADE	REAL GDP	UNEMPLOYMENT RATE	EMPLOYMENT	PERSONAL INCOME	RESTAURANTS	FOOD AND BEVERAGE STORES	E-COMMERCE
2022	8.0	9.7	1.9	3.6	4.3	2.0	15.7	-0.3	8.6
2023	4.1	3.4	2.5	3.6	2.3	5.2	11.6	8.4	7.4
2024	2.7	-3.1	0.6	5.8	-1.1	3.1	-3.1	5.9	-0.3
2025	1.3	-1.8	-0.6	7.5	-1.8	0.9	-2.4	2.6	-0.3
2026	2.0	6.4	2.4	6.4	1.8	3.7	7.6	0.8	8.0
2027	2.3	6.3	3.1	5.4	1.6	5.0	8.1	1.6	8.0
2028	2.4	5.1	2.8	4.6	0.9	5.2	7.7	1.9	7.7
2029	2.3	4.4	2.5	4.1	0.8	4.8	7.9	2.2	7.2

APPENDIX TABLE 28: PESSIMISTIC COLORADO ECONOMIC OUTLOOK, ANNUAL, PERCENT CHANGE

YEAR	CONSUMER PRICES	RETAIL TRADE	PERSONAL INCOME	EMPLOYMENT	UNEMPLOYMENT RATE
2022	8.0	9.4	5.8	4.3	3.1
2023	5.2	1.4	4.7	2.5	3.2
2024	3.8	-5.8	3.2	-0.6	4.7
2025	2.4	0.3	1.4	-1.0	6.4
2026	2.3	7.2	4.4	2.6	5.8
2027	2.7	6.8	6.1	2.5	5.0
2028	2.9	5.7	6.4	1.8	4.4
2029	2.8	4.9	6.0	1.6	3.9

APPENDIX TABLE 29: PESSIMISTIC REVENUE FORECAST, ANNUAL, TOTAL

YEAR	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022	6,553,790	13,068,797	4,583,366	57,993,661	82,199,613	2,569,341	8,767,731	3,834,843	15,171,915	97,371,529
2023	7,105,095	13,764,036	5,548,641	58,511,339	84,929,112	3,133,700	9,018,830	4,464,315	16,616,845	101,545,956
2024	7,522,843	13,426,750	5,038,789	59,362,945	85,351,327	3,201,280	8,899,317	3,893,867	15,994,463	101,345,790
2025	7,719,695	13,110,401	3,697,258	59,425,279	83,952,633	3,101,811	8,528,581	3,736,100	15,366,492	99,319,125
2026	7,780,526	14,107,587	3,496,207	61,968,765	87,353,086	2,992,690	9,607,704	3,885,299	16,485,693	103,838,779
2027	7,905,001	15,110,677	4,314,628	64,620,933	91,951,239	3,289,795	10,737,699	4,063,564	18,091,058	110,042,297
2028	8,051,497	16,084,264	5,220,325	66,997,829	96,353,915	3,675,006	11,424,841	4,179,950	19,279,796	115,633,712
2029	8,225,273	17,061,515	5,668,926	69,054,051	100,009,766	3,856,604	11,904,122	4,325,362	20,086,089	120,095,855

APPENDIX TABLE 30: PESSIMISTIC REVENUE FORECAST, QUARTERLY, TOTAL

QUARTER	GROCERY	RESTAURANT	BUILDING MATERIALS	OTHER	TOTAL SALES TAXES	CONSTRUCTION USE	AUTO USE	OTHER USE	TOTAL USE TAXES	TOTAL SALES AND USE
2022Q1	1,758,357	2,978,876	887,731	14,135,597	19,760,560	435,488	1,849,152	1,135,361	3,420,001	23,180,561
2022Q2	1,566,700	3,410,756	1,242,711	14,258,277	20,478,444	624,570	2,319,046	919,898	3,863,514	24,341,958
2022Q3	1,597,565	3,467,465	1,242,934	14,517,208	20,825,171	459,000	2,300,447	1,034,507	3,793,953	24,619,124
2022Q4	1,631,168	3,211,700	1,209,991	15,082,580	21,135,438	1,050,284	2,299,087	745,076	4,094,447	25,229,885
2023Q1	2,083,662	3,198,067	1,193,711	15,169,785	21,645,225	441,476	2,217,241	1,902,295	4,561,012	26,206,237
2023Q2	1,655,533	3,586,505	1,592,047	14,182,689	21,016,774	368,435	2,189,404	717,462	3,275,302	24,292,076
2023Q3	1,681,124	3,625,030	1,490,219	14,862,030	21,658,404	1,732,212	2,290,321	1,016,668	5,039,200	26,697,605
2023Q4	1,684,775	3,354,434	1,272,664	14,296,835	20,608,708	591,577	2,321,864	827,890	3,741,330	24,350,038
2024Q1	2,047,654	3,331,136	1,128,967	15,616,600	22,124,357	444,462	2,150,976	1,264,818	3,860,256	25,984,613
2024Q2	1,800,561	3,541,630	1,365,280	14,538,272	21,245,743	864,443	2,260,492	877,172	4,002,106	25,247,850
2024Q3	1,826,795	3,411,406	1,355,530	14,863,342	21,457,073	984,413	2,310,690	920,683	4,215,786	25,672,859
2024Q4	1,847,833	3,142,578	1,189,011	14,344,731	20,524,153	907,962	2,177,159	831,194	3,916,315	24,440,468
2025Q1	2,100,716	3,081,135	825,000	15,499,852	21,506,703	681,050	1,940,745	1,094,413	3,716,207	25,222,911
2025Q2	1,857,091	3,383,744	1,058,758	14,388,421	20,688,014	823,115	2,109,434	864,405	3,796,954	24,484,969
2025Q3	1,877,335	3,408,011	973,329	14,924,255	21,182,930	829,291	2,264,811	927,840	4,021,942	25,204,872
2025Q4	1,884,552	3,237,511	840,171	14,612,752	20,574,985	768,355	2,213,591	849,442	3,831,388	24,406,373
2026Q1	2,130,673	3,264,047	639,750	15,989,913	22,024,383	598,018	2,078,358	1,138,185	3,814,561	25,838,944
2026Q2	1,873,898	3,645,538	917,820	15,018,070	21,455,325	771,396	2,347,229	895,685	4,014,311	25,469,635
2026Q3	1,881,151	3,695,020	975,212	15,637,586	22,188,970	810,884	2,602,070	963,712	4,376,666	26,565,636
2026Q4	1,894,805	3,502,982	963,426	15,323,196	21,684,408	812,392	2,580,047	887,716	4,280,155	25,964,563
2027Q1	2,145,603	3,513,463	776,132	16,759,801	23,194,999	652,130	2,399,709	1,204,999	4,256,838	27,451,837
2027Q2	1,902,082	3,913,817	1,133,718	15,668,401	22,618,018	835,832	2,641,364	939,147	4,416,343	27,034,361
2027Q3	1,929,712	3,940,876	1,202,054	16,259,444	23,332,085	921,254	2,878,225	1,001,953	4,801,432	28,133,517
2027Q4	1,927,604	3,742,521	1,202,724	15,933,288	22,806,137	880,579	2,818,400	917,465	4,616,445	27,422,582
2028Q1	2,197,600	3,748,600	961,926	17,383,129	24,291,254	730,089	2,599,752	1,224,858	4,554,699	28,845,953
2028Q2	1,931,881	4,156,914	1,396,964	16,244,777	23,730,537	953,499	2,821,290	976,547	4,751,335	28,481,872
2028Q3	1,957,638	4,195,504	1,444,038	16,872,717	24,469,897	1,005,125	3,044,863	1,034,160	5,084,148	29,554,045
2028Q4	1,964,379	3,983,246	1,417,398	16,497,205	23,862,228	986,293	2,958,936	944,385	4,889,614	28,751,841
2029Q1	2,234,747	3,995,537	1,103,487	18,010,961	25,344,733	788,442	2,723,435	1,276,808	4,788,685	30,133,417
2029Q2	1,976,097	4,417,548	1,539,627	16,769,387	24,702,659	1,004,869	2,953,528	1,006,380	4,964,776	29,667,435
2029Q3	2,004,069	4,445,363	1,555,463	17,342,920	25,347,814	1,061,446	3,168,805	1,066,663	5,296,914	30,644,729
2029Q4	2,010,359	4,203,068	1,470,350	16,930,783	24,614,560	1,001,848	3,058,354	975,512	5,035,714	29,650,274

STUDY SESSION RETREAT ON THE DEVELOPMENT OF THE 2025 BUDGET

June 3, 2024

Purpose:

To receive policy guidance from City Council on
the development of the 2025 Budget

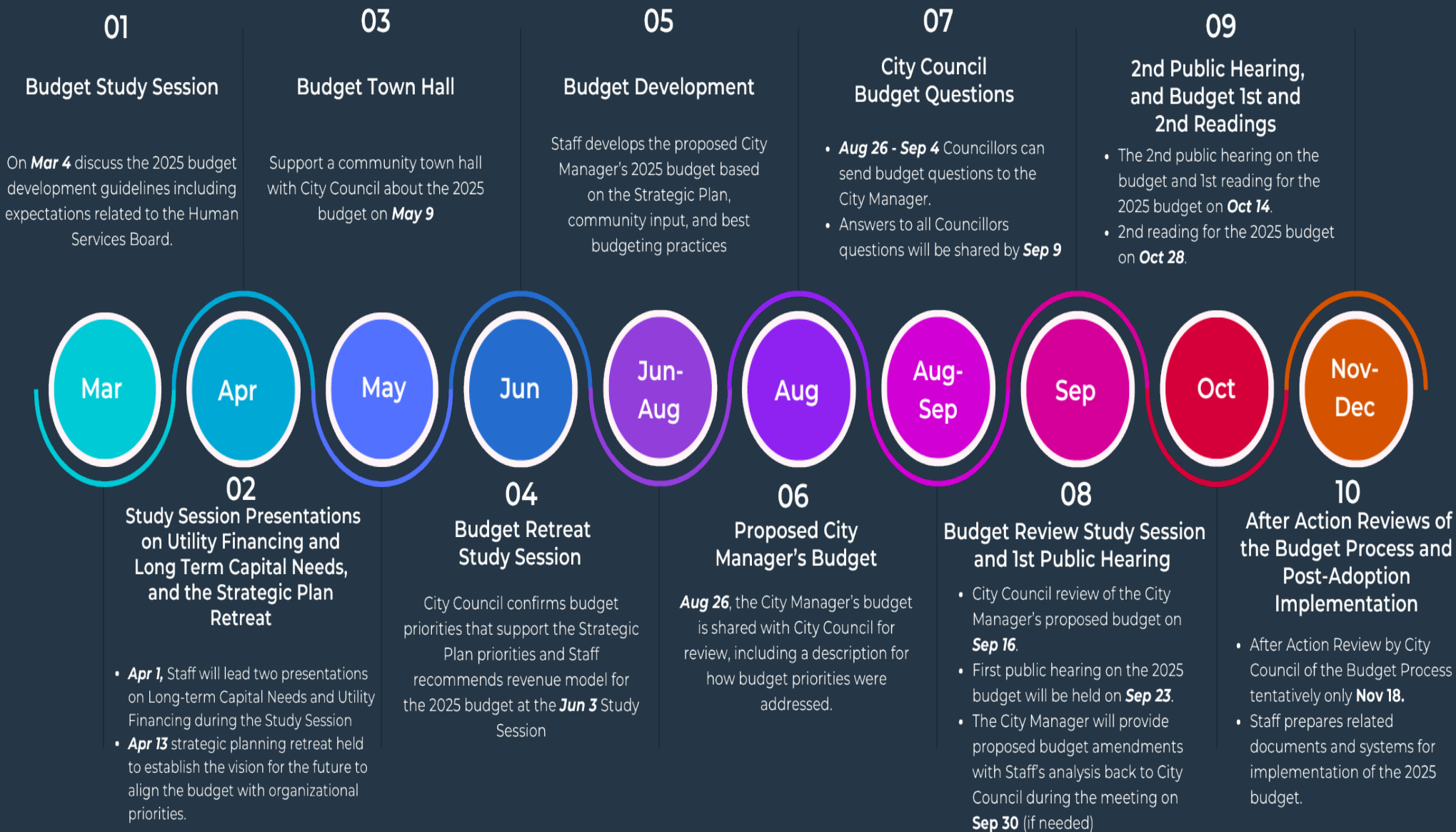
Budget Retreat Discussion Topics

1. Review of the Budget Development Process
2. Confirmation of the Strategic Plan
3. Review of the themes from the Budget Town Hall
4. Update on the Community Project Request Process
5. City Council Budget Priorities
6. Recommended Revenue Forecast
7. Roadway Improvement Fee
8. Stormwater Utility Fee

Review of the Budget Development Process

Staff will review the timeline and next steps in the budget process

2025 Budget Detailed Workflow Process



Confirmation of the Strategic Plan

Staff to confirm the vision, mission, guiding principles, and strategic priorities

Strategic Plan: Vision Statement

Westminster is a city of beautiful, safe, well-maintained neighborhoods and destinations with a vibrant, diverse economy, rich and resilient environment, and a strong sense of community and belonging.

Strategic Plan: Mission Statement

The City of Westminster provides high quality core services and fosters resilience in order to promote a safe and thriving community.

Strategic Plan: Guiding Principles

- Collaboration and Partnership
- Stewardship and Fiscal Responsibility
- Transparency and Accountability
- Diversity, Equity, and Inclusion
- Innovate and Initiate
- Prevention and Proactivity
- Sustainability and Resiliency

Strategic Plan: Strategic Priorities

- Access to Opportunity
- Community Empowerment and Engagement
- Community Health and Safety
- Economic Vitality
- Resilient Infrastructure
- Organizational Vitality

Budget Town Hall Themes

Staff will review the themes from the Budget Town Hall.



What do you value most about living in Westminster?



What do you feel the City needs to improve on?

Strategic Priority Ranking

Most Important:

Access to Opportunity and Resilient Infrastructure tied as the leading priorities for participants.

Varied Importance:

Community Health and Safety ; Economic Vitality; and Community Empowerment and Engagement

Least Important:

Organizational Vitality was consistently rated as the least important priority in comparison to the other remaining priorities

Community Project Request Process

Staff will share with City Council a status update on the community request process

Community Project Request Process

- Requests for Projects and Programs
- Form was open April 23 – May 23
- Staff will review and include as part of the 2025 proposed budget

Community Project Request Process

55 requests were received*

- Street Maintenance/Safety Projects (crosswalks, sidewalks, traffic calming measures)
- Parks and Recreation Projects (court lighting, dog parks, pickleball, tennis, disc golf)
- Open Space Management/Trail Connections
- Expanded Senior Services
- Area Enhancements
- Safe Outdoor Spaces for People Experiencing Homelessness
- Wrap Art on Electric Boxes

*Staff also received several requests prior to the process

City Council Budget Priorities

City Council to share any priorities for potential discretionary funding within the 2025 Budget

Recommended Revenue Forecast

Staff will share the recommended revenue forecast based on University of Colorado Leeds School of Business modeling efforts.

Recommended Revenue Forecast

City of Westminster Tax Projections Report

Leeds School of Business – University of Colorado Boulder

May 2024 Report

Review 2023 Sales and Use Tax

Actuals	\$	102,981,385
Optimistic	\$	103,647,723
Baseline	\$	101,862,935
Pessimistic	\$	94,760,747

1.09% Difference between Baseline and Actuals

Model Inputs

- Historical data on key economic indicators at the national, state, and local levels.
- Employment, Personal Income, Retail trade
- Food and Beverage, Residential Building Permits, and more.

Model captures dynamic relations between explanatory and dependent variables.

Forecast Scenario Drivers

Optimistic Scenario

- Elevated Interest rates are comparatively elevated due to a stronger economy.
- Employment grows 1.8% in 2024 and slows to 1.3% in 2025.
- U.S. real GDP grows 3.3% in 2024 and 3.1% in 2025.
- Geopolitical risks ease and global trade accelerates.

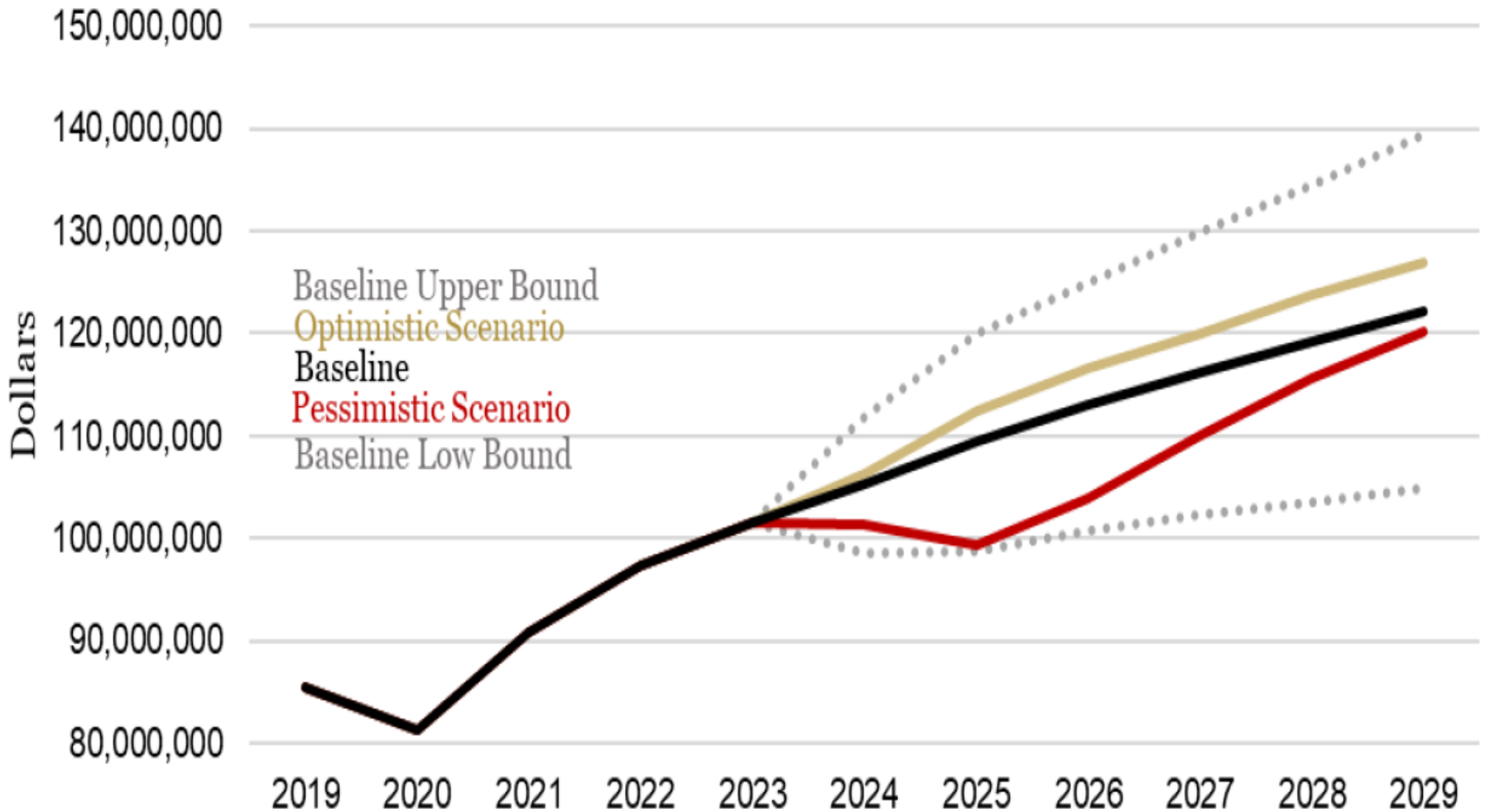
Baseline Scenario

- Lower interest rates begin in Summer 2024.
- The unemployment rate averages 3.9% in 2024 and remains at levels of full employment throughout the forecast horizon.
- U.S. real GDP grows 2.6% in 2024 and 1.6% in 2025.

Pessimistic Scenario

- Interest rates at current levels to combat inflation.
- Weaker economy and slower growth.
- U.S. real GD increases 0.6% in 2024 and 2% in 2025.

FIGURE 4: ANNUAL SALES AND USE TAXES



Annual Sales and Use Tax Projections

	2025
Optimistic	\$ 112,459,197
Baseline	\$ 109,538,276
Pessimistic	\$ 99,319,125

Staff will build the Proposed 2025 Budget on the Baseline projection.

- CU Leeds model prediction is baseline.
- Baseline is historically accurate.
- Meets Guiding Principle: Stewardship and Fiscal Responsibility.

Roadway Improvement Fees

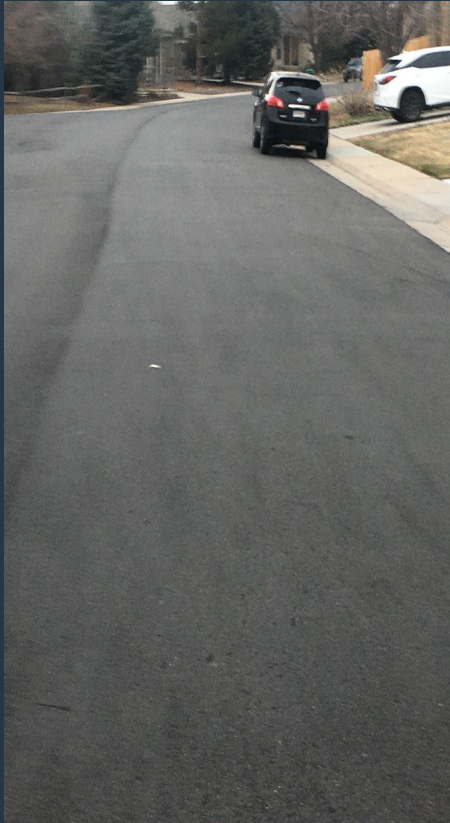
Staff will share the current roadway improvement fee structure and discuss potential changes to the fee structure.



Strategic Priority 5: Resilient Infrastructure

Maintain and invest in resilient infrastructure that creates the highest return for safety, community connectivity, enjoyment of life, and local economic success.

PAVEMENT RATING EXAMPLES



100th Drive and Oak Court

Excellent
PQI 95 ↓



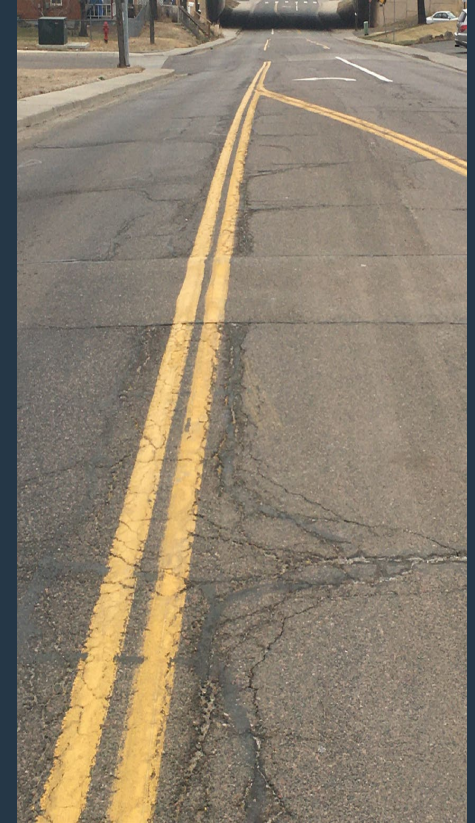
Northpark Ave, Federal Blvd to Lowell Blvd

Good
PQI 73 ↓



Stratford Lakes Drive, Federal Blvd to 112th Ave.

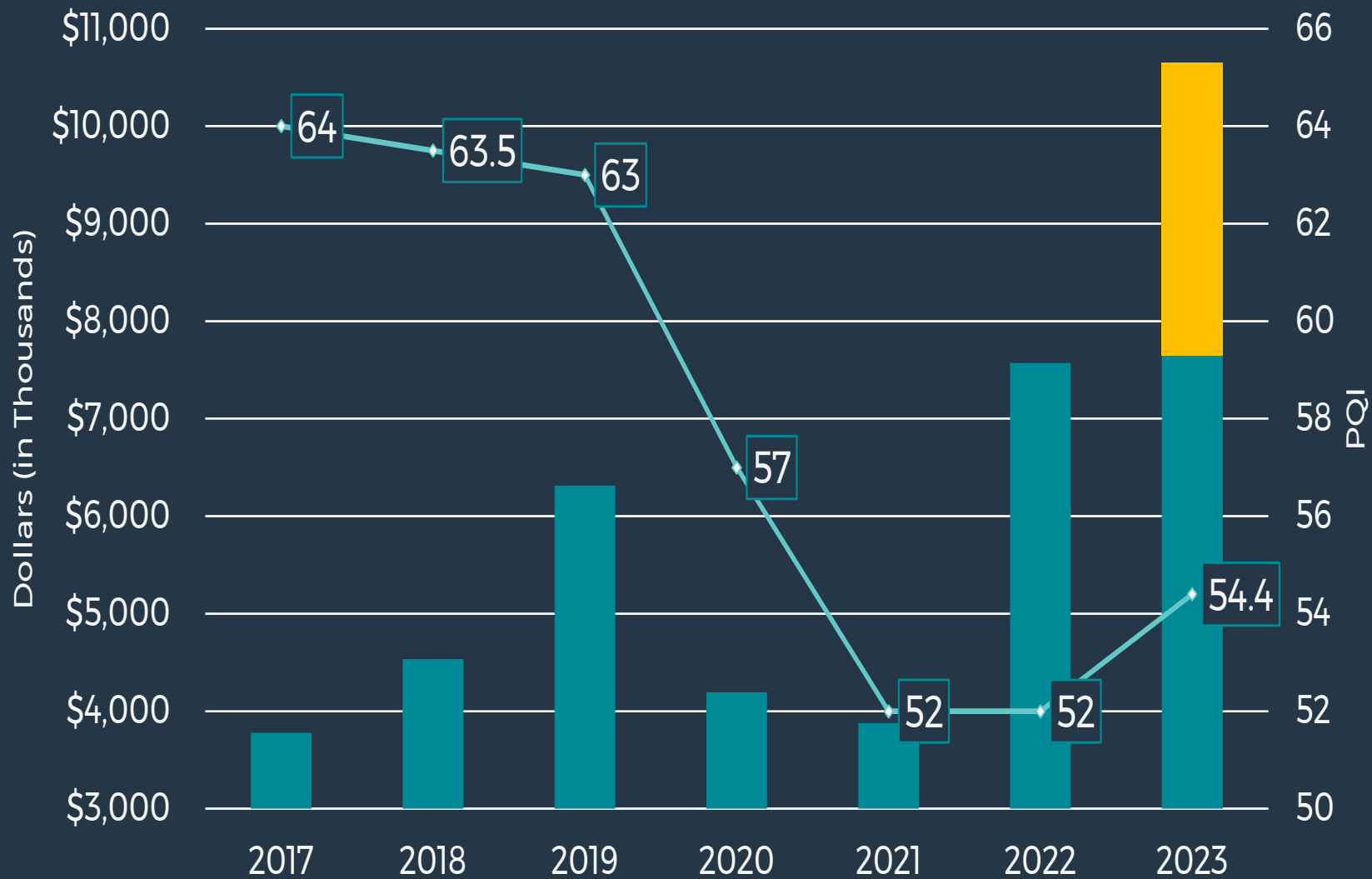
Fair
PQI 66 ↓



Lowell Blvd, 80th Avenue to 72nd Avenue

Poor
PQI 27 ↓

PAVEMENT EXPENDITURES



Roadway Improvement Fee

- Westminster's pavement quality rating is falling and is in the bottom quartile of 100 comparison local agencies (*per Colorado Asphalt Pavement Association*)
- Industry standard is to perform preventative maintenance on 10% of street network annually. Westminster is at 6.5%.

Roadway Improvement Fee

- 2024 funding level for asphalt maintenance is approximately \$9.6M.
- Pavement management models indicate that approximately \$16M annually in current dollars is needed to maintain a current rating of “Fair”.

Roadway Improvement Fee

- As part of the 2025 Budget Process, Staff will provide options for City Council consideration to increase Roadway Improvement Fee incrementally over the next several years.
- Staff will engage the Westminster business community.

Stormwater Utility Fee

Staff will share a review of the current stormwater fee and discuss potential changes to the fee structure.

Stormwater Utility Fee

Westminster's stormwater utility performs the following:

- State Stormwater Discharge Permit Compliance
- Capital Projects (drainage and creek stabilization)
- Floodplain Administration
- Asset Management
- Development Review

Stormwater Utility Fee

- Current funding provides approximately \$4.4M in revenue.
- About \$2.0M annually is committed to joint projects with Mile High Flood Control District (creek stabilization)
- Backlog of high-risk repair projects for drainage system and creek stabilization exceeds \$125M in future dollars over a 10-year period.
- There is no reserve funding for unexpected failures.

Stormwater Utility Fee

- As part of the 2025 Budget Process, Staff will provide options for City Council consideration to increase Stormwater Utility Fees incrementally over the next several years.
- Staff will engage the Westminster business community.

Next Steps

- Budget Development (Jun – Aug)
- City Manager's Budget Proposed (Aug 26)
- City Council Review and Questions (Aug – Sep)
- Budget Review Study Session + First Public Hearing (Sep)
- Second Public Hearing + 1st and 2nd Budget Readings (Oct)

CONTACT US

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