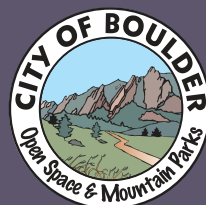




# MASTER PLAN

## DRAFT FOR PUBLIC REVIEW

May 20, 2019



OUR LANDS.  
OUR LEGACY.  
OUR FUTURE.

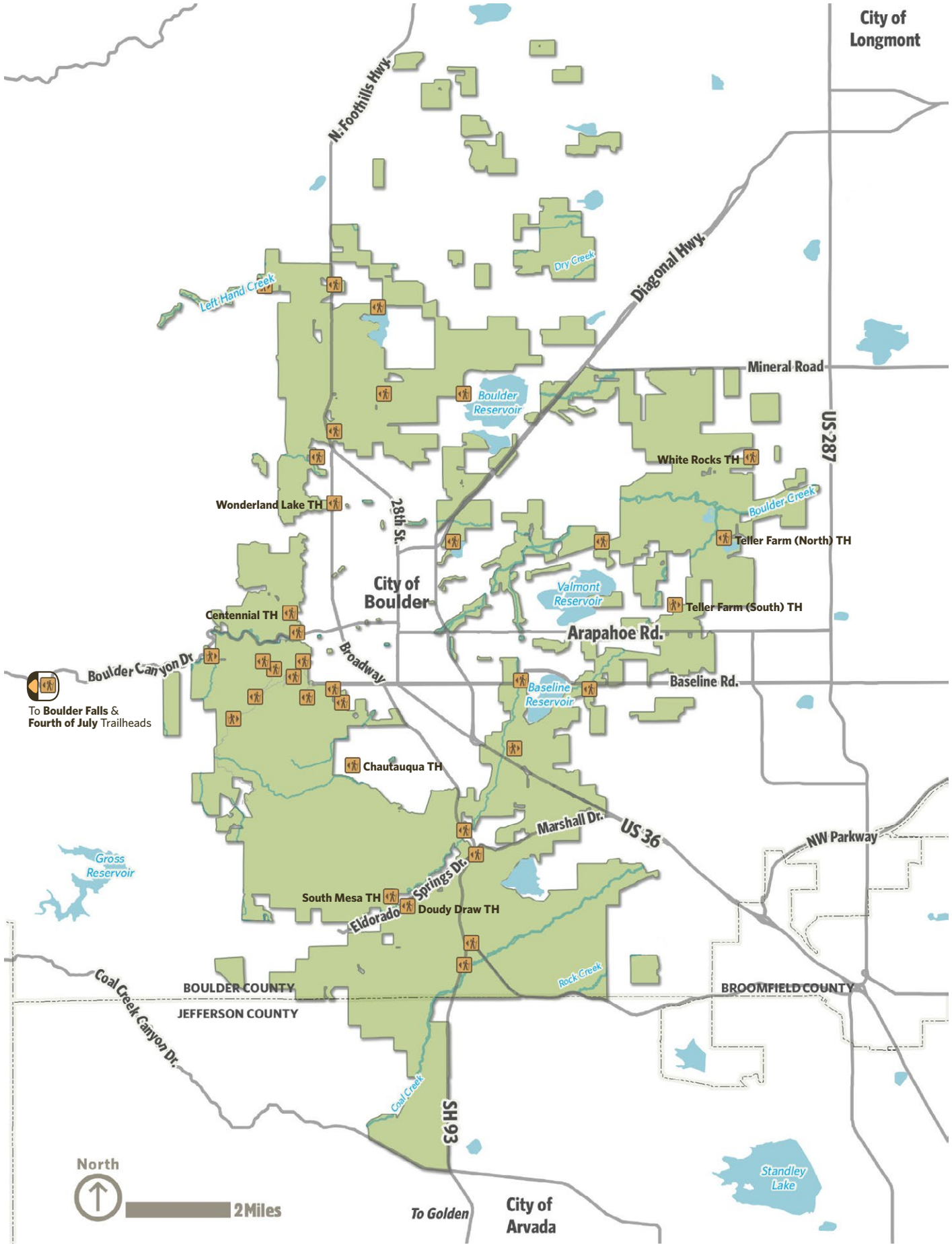
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# OPEN SPACE AND MOUNTAIN PARKS LANDS



OUR LANDS.  
OUR LEGACY.  
OUR FUTURE.



2 Miles

# OSMP Draft Master Plan: Strategies At A Glance



## Ecosystem Health and Resilience

1. Conserve and restore Boulder's natural heritage\*
2. Reduce undesignated trails\*
3. Extend on-trail requirements\*
4. Reduce human disturbance\*
5. Manage entire ecosystems using a holistic approach to planning\*
6. Control invasive species\*
7. Prepare for a changing ecosystem
8. Develop a learning laboratory approach to conservation
9. Reduce and offset greenhouse gas emissions



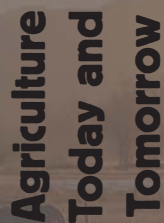
## Responsible Recreation, Stewardship and Enjoyment

1. Support a range of recreational opportunities
2. Encourage multimodal access to trailheads
3. Provide welcoming and inspiring visitor amenities
4. Update guidelines and standards for quality trail design and construction\*
5. Reduce the trail maintenance backlog\*
6. Improve trail connections
7. Manage increasing visitation\*
8. Review and improve fee-based recreation programs\*
9. Develop a learning laboratory approach to recreation



## Community Connection, Education and Inclusion

1. Inspire environmental literacy and new involvement in OSMP
2. Cultivate leaders in stewardship
3. Foster wellness through immersion in the outdoors
4. Heighten community understanding of land management efforts
5. \*Enhance signs and communications
6. \*Welcome diverse backgrounds and abilities
7. \*Connect youth to nature
8. \*Consult and collaborate with federally recognized Native American nations and help support indigenous peoples
9. Preserve and interpret Boulder's cultural heritage



## Agriculture Today and Tomorrow

1. Maintain infrastructure for agriculture and water\*
2. Integrate native ecosystems and agriculture
3. Support the success of ranchers and farmers
4. Diversify agricultural operations
5. Enhance enjoyment and protection of working landscapes
6. Reduce or eliminate pesticide use
7. Reduce agricultural impacts from prairie dogs\*
8. Plan for the future of water
9. Enhance soil health and resilience\*



## Financial Sustainability

1. Stabilize funding
2. Budget for future uncertainty
3. Understand total cost of system management
4. Take care of what we have
5. Target acquisitions
6. Partner to protect lands beyond target area
7. Participate in other acquisition opportunities
8. Evaluate existing real estate assets on OSMP lands
9. Invest in workforce development and operational needs
10. Update planning framework

\*This strategy is a high priority for the next decade.

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## City of Boulder Open Space & Mountain Parks

2520 55<sup>th</sup> St. | Boulder, CO 80301; 303-441-3440

<http://www.osmp.org>

To all those who love and protect Boulder's open space system, thank you. Our community's passion and commitment for open spaces and wild places have helped permanently protect some of our region's most critical wildlife habitat, productive agricultural lands and awe-inspiring views. And, as we prepare to finalize and begin implementing our master plan, our journey together to care for these protected places continues.

Boulder's Open Space and Mountain Parks has worked with you, the community, to create an initial draft of a systemwide master plan; a plan that once finalized will guide all aspects of land management on our system from peak to plains, to protect and enjoy the natural areas around the City. Since our first land purchase in 1898, there has been a continual period of successful acquisition, preservation and provision for enjoyment of open space. This legacy has left us in great shape, and we have so much to look forward to as we chart our future together.

The main goal of this effort is to ensure the master plan is everyone's plan. This community led effort reflects input from thousands of people who value our 46,000 acres of open space lands.

The plan you have before you is in draft form. What this means is that we still hope to hear from you on how the plan can be improved. As you read through the findings in this draft, please tell us how we did. Have we reflected your vision, hopes and concerns for our shared future? Did we capture and support your values? Do the outcomes and strategies address the concerns you may have about the future of our open space? Your thoughts will shape the final plan and inform discussions with decision-makers this summer. We are scheduled to have a final master plan completed by this fall, a plan for the whole community. Together, we move forward.

Sincerely,

A handwritten signature in black ink that reads "Daniel E. Burke". The signature is written in a cursive, flowing style.

Dan Burke  
Interim Director

Open Space and Mountain Parks

## NOTE TO READERS ON **DRAFT** PLAN

The City of Boulder's Open Space and Mountain Parks (OSMP) Department is pleased to present a **draft copy** of our first ever master plan for your review. As a first draft, this May 20 version is laid out in text format. As the plan content evolves through the steps described below, final maps and graphics will be incorporated. A graphically-complete plan is expected in late 2019, following final approval of plan content by Boulder City Council.

### How to Review the **Draft** Master Plan

Between May 20 and June 12, 2019, the main opportunities for public comment on the draft plan include:

- An [online comment form](#) [*Please note that comments received through Monday, June 3, will be summarized to inform discussion with the Open Space Board of Trustees (OSBT) and City Council Tuesday, June 11. Comments received June 4 through June 12 will be considered before releasing a second draft of the plan for consideration by OSBT and the Planning Board*];
- Community drop-in hours to meet with project staff at the OSMP Hub (2520 55th St):
  - Thursday, May 30, from 4 - 7 p.m.; and
  - Saturday, June 1, from 10 a.m. - 1 p.m.;
- Emails to [OSMPmasterplan@bouldercolorado.gov](mailto:OSMPmasterplan@bouldercolorado.gov);
- Emails to the [Open Space Board of Trustees](#) and [City Council](#); and
- Public comment at a regular OSBT meeting Wednesday, June 12, 2019.

As noted above, City Council and OSBT will meet in a joint study session June 11 to discuss the draft plan. Due to city protocol, public comment will not be taken that evening. However, members of the public may speak the following night June 12 at a regular OSBT meeting, after which this engagement window will close so that staff can analyze and incorporate feedback into the next draft of the Master Plan.

Following this fifth engagement window, members of the public will also have final opportunities to share comments on the revised draft plan at the following meetings with OSBT, Planning Board or City Council members:

- Regular OSBT meeting on July 10;

*Open Space and Mountain Parks **DRAFT** Master Plan  
FOR PUBLIC REVIEW | May 20, 2019*

- Special OSBT meeting on July 31 with a public hearing on the revised draft plan;
- Planning Board meeting on Aug. 1 with a public hearing on the revised draft plan; and
- City Council on Sept. 3 with a public hearing on the revised draft plan.

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# Executive Summary

*“The environment, after all, is where we all meet, where we all have a mutual interest. It is one thing that all of us share.” -Lady Bird Johnson*

Boulder’s Open Space and Mountain Parks (OSMP) system has a central role to play in preserving biodiversity - for the benefit of nature and people alike. Just as a diversity of human cultures, backgrounds and perspectives enhances our community, natural and agricultural lands need a diversity of plants, animals and crops to thrive. In turn, this biological and agricultural variety provides us clean air, clean water, local foods, a vibrant economy and scenic beauty to inspire us, our children and their children.

We are all connected - nature, people, farms, ranches - through an intricate network of inputs and outputs, through the air we breathe and the water we drink, through our long history and relationship with Open Space and Mountain Parks.

These meaningful connections with the land and with each other make us who we are. They unite community members and staff with deep appreciation for the environment and a commitment to protect it. And they inspire us to work together to ensure our landscapes are enjoyed long into the future.

A product of meaningful and inclusive consultation with community members, the Open Space Board of Trustees, City Council and OSMP staff, this Draft Master Plan helps focus our energy, funding and expertise on a clear vision for the future. It describes our five **focus areas** - or central management themes - and the related open space **values** we all share. It articulates our aspirations and our collective hopes as desired **outcomes** for the future of OSMP with general management **strategies** to achieve them.

The 2019 Draft OSMP Master Plan also proposes a set of **high priority strategies**, or efforts we will emphasize first. In summary, these strategies would guide staff to focus on:

- Keeping healthy habitats healthy and bringing degraded ones into better condition;
- Taking care of and improving the condition of our existing assets, including trails, visitor amenities, agricultural structures and water infrastructure;
- Addressing visitation growth;
- Enhancing soil health and carbon storage in irrigable agricultural lands to improve productivity and slow the effects of climate change; and
- Fostering environmental literacy, wellness and stewardship among youth and underserved communities.

The following sections summarize the five focus areas that organize the draft plan, which are described further in Section 3 of the document. This summary also introduces the priorities that we will get to work on first in the next few years, which are described further in Section 4.

## Helping Nature Thrive: Our Central Purpose

At the center of it all is the natural landscape itself. It is where we began over a century ago. It is a focus for our future.

Boulder's natural landscapes play a central role in preserving biodiversity. They support more than 740 kinds of native plants, 300 bird species, 130 species of butterflies, 60 kinds of mammals, 20 reptile and amphibian species and 15 types of fish.

While generations of Boulder residents have long worked to preserve and protect these important natural areas, our two major ecosystems - grasslands and forests - still need our help. Ecological monitoring tells us these ecosystems are, on average, only in fair condition. Thus, it is critical we are good stewards, protecting and preserving the natural areas that are healthy and addressing threats that weaken their health. Invasive, non-native plant species are making it hard for native plants to survive, affecting the animals that depend on them and the waterways we all depend on. Drier, hotter conditions in the future, coupled with more frequent and intense fires and floods will further challenge nature preservation.

Restoration is a key stewardship tool used to return degraded areas to more natural conditions, build in resilience, and recover from disasters or degradation. But can restoration remain effective given the pace of environmental change? As temperatures and climate change affect our ecosystems, how can we prevent species loss? Can we restore habitats to have even more ability to be resilient to change and recover from disturbance? What makes natural landscapes resilient in the first place?

The following guidance in the master plan will help us address and prioritize the most vexing challenges and important opportunities over the next decade, as we work together to enhance **Ecosystem Health and Resilience**.

<b>FOCUS AREA</b>	<b>Ecosystem Health and Resilience (EHR)</b>
<b>VALUE STATEMENT</b>	<i>Using the best available science, we protect healthy ecosystems and mend those we have impaired.</i>
<b>OUTCOMES</b>  EHR Outcomes, continued	<b>EHR.A) HIGH DIVERSITY OF NATIVE PLANTS AND ANIMALS:</b> OSMP lands represent a high diversity of native plants and animals, expansive natural areas and some of the most critical wildlife habitat along the Front Range.
	<b>EHR.B) RESTORED, RESILIENT HABITAT:</b> Degraded habitat with high potential to support native or extirpated (i.e., locally extinct) native species is restored and made more resilient to stressors like invasive species or direct and indirect human impacts.
	<b>EHR.C) CLIMATE ACTION COMMITMENT:</b> Native ecosystems withstand and slow the effects of climate change.
	<b>EHR.D) INFORMED, SHARED STEWARDSHIP:</b> OSMP and the community work side by side to develop a greater understanding of the land and to safeguard our natural heritage.
<b>STRATEGIES</b>  * HIGH PRIORITY STRATEGIES (Identified with input from community members, staff and the Open Space Board of Trustees)	* <b>EHR.1) CONSERVE AND RESTORE BOULDER’S NATURAL HERITAGE:</b> Sustain, expand, enhance, connect and restore habitat blocks with high ecological value and potential through conservation practices.
	* <b>EHR.2) REDUCE UNDESIGNATED TRAILS:</b> Close, designate or reroute undesignated trails, especially in sensitive habitat areas.
	* <b>EHR.3) EXTEND ON-TRAIL REQUIREMENTS:</b> Reduce off-trail travel in targeting locations, especially in sensitive habitat areas.
	* <b>EHR.4) REDUCE HUMAN DISTURBANCE:</b> Understand and address impacts from noise pollution, light pollution, and adjacent development on wildlife and sensitive habitat areas.
	* <b>EHR.5) MANAGE ENTIRE ECOSYSTEMS USING A HOLISTIC APPROACH TO PLANNING:</b> Use management and planning approaches that consider all elements and processes of natural systems rather than focusing on one species or attribute at a time.
	* <b>EHR.6) CONTROL INVASIVE SPECIES:</b> Prioritize management and control of species that have severe and/or widespread impacts, particularly those that are non-native and most likely to be controlled.

EHR Strategies, continued	EHR.7) <b>PREPARE FOR A CHANGING ECOSYSTEM:</b> Maintain or increase the capacity of natural ecosystems to buffer impacts from extreme events like fires and floods.
	EHR.8) <b>DEVELOP A LEARNING LABORATORY APPROACH TO CONSERVATION:</b> Conduct, support, apply and widely distribute the findings of long-term, scientific research to inspire community stewardship.
	EHR.9) <b>REDUCE AND OFFSET GREENHOUSE GAS EMISSIONS:</b> Support the citywide climate commitment by reducing and offsetting greenhouse gas emissions related to departmental operations and visitor travel.

## Inspiring Responsible Recreation

Boulder residents, when you voted over a century ago to purchase the 75-acre Chautauqua Park near the base of the Flatirons, you made history. In 1967, you did it again: Boulder became the first city in the United States to tax itself for the purchase and care of natural lands. Nature has long motivated innovation and quality of life in Boulder.

Residents' long-term investment in natural landscapes pays dividends today in the form of physical, mental and even spiritual wellness. National Geographic recently recognized Boulder as the "happiest city in the United States" for the benefits natural landscapes affords residents. Friends head out on their favorite trail to see what wildflowers are in bloom and to spend time together. Parents enjoy weekend hikes and picnics with their children. Busy professionals walk their dogs after a stressful workday. World-class athletes train on OSMP trails. If enjoyed responsibly - future generations will reap these same rewards.

As the Front Range population grows, so too has interest in outdoor recreation grown across Colorado. In 2017, OSMP attracted roughly 6.25 million visits, up 34 percent from 4.7 million in 2005 (Visitation Estimate, 2018).

OSMP has also seen a growing interest and participation in volunteering as a form of recreation in which community members enjoy taking care of their open space lands. In 2018, 2,156 volunteers provided 18,810 hours of their time to help their public lands - contributing service valued at more than \$503,730.

Nonetheless, rising visitation stresses a system designed to accommodate far fewer residents and visitors. While maintenance needs throughout the system expand, increased trail use may have unintended impacts on certain wildlife and plants,

facilitate the movement of weeds and pests, and cause erosion. So how do we ensure visitors can continue to enjoy high quality, inspiring experiences on open space while we address visitation and its related impacts?

The following guidance for **Responsible Recreation, Stewardship and Enjoyment** will help us address and prioritize the most important needs over the next decade.

<b>FOCUS AREA</b>	<b>Responsible Recreation, Stewardship and Enjoyment (RRSE)</b>
<b>VALUE STATEMENT</b>	<i>We are united by our connection to and enjoyment of nature and our obligation to protect it.</i>
<b>OUTCOMES</b>	RRSE.A) <b>DIVERSE RANGE OF RECREATIONAL OPPORTUNITIES:</b> A fun and diverse range of recreational opportunities reflects visitors’ interests and abilities that contribute to our physical and mental well-being.
	RRSE.B) <b>ENJOYABLE, RESPONSIBLE RECREATION:</b> Amid changing visitor use levels and patterns, ecosystem health is sustained, and visitor experiences remain positive.
	RRSE.C) <b>WELCOMING, ACCESSIBLE TRAILHEADS:</b> Welcoming trailheads and supporting recreational amenities provide access to and highlight Boulder’s scenic, natural and cultural landscape.
	RRSE.D) <b>GREAT EXPERIENCES FOR ALL:</b> Visitors respect and care for each other so all can enjoy themselves.
	RRSE.E) <b>HIGH-QUALITY TRAIL NETWORK:</b> Visitors can enjoy OSMP lands and reach a range of recreational destinations through a well-maintained, connected network of local and regional trails that is welcoming and accessible to all.
<b>STRATEGIES</b>	RRSE.1) <b>SUPPORT A RANGE OF RECREATIONAL OPPORTUNITIES:</b> Continue to encourage a diverse range of passive recreation opportunities that honor and respect the unique character and history of the Boulder community and its surrounding open space lands, providing fun and memorable experiences.
	RRSE.2) <b>ENCOURAGE MULTIMODAL ACCESS TO TRAILHEADS:</b> Explore and partner on a range of coordinated transportation and design solutions to reduce parking congestion and promote active living, ecosystem health and public transportation.

<p>* <b>HIGH PRIORITY STRATEGIES</b>          (Identified with input from community members, staff and the Open Space Board of Trustees)</p>	<p><b>RRSE.3) PROVIDE WELCOMING AND INSPIRING VISITOR AMENITIES:</b> Continue to provide and improve welcoming, sustainable and accessible trailheads and other amenities, such as the Ranger Cottage, Flagstaff Nature Center, Panorama Point and other viewpoints, picnic areas and wayfinding, to enhance visitor experiences and inspire understanding of the surrounding landscape for a range of visitor demographics.</p>
	<p>* <b>RRSE.4) UPDATE GUIDELINES AND STANDARDS FOR QUALITY TRAIL DESIGN AND CONSTRUCTION:</b> Design and construct quality trails that facilitate a range of experiences through a variety of landscape types, using design guidelines and construction standards that elevate the quality and sustainability of trails and encourage the use of native materials that blend with natural surroundings.</p>
	<p>* <b>RRSE.5) REDUCE THE TRAIL MAINTENANCE BACKLOG:</b> Use technology to anticipate and address long-term maintenance needs and changing conditions through a prioritized, life-cycle approach to improving the condition of OSMP’s diverse portfolio of historic and modern trails and amenities.</p>
	<p><b>RRSE.6) IMPROVE TRAIL CONNECTIONS:</b> Connect and improve the trail network where lands offer high recreational potential, leveraging citywide and regional partnerships.</p>
	<p>* <b>RRSE.7) MANAGE INCREASING VISITATION:</b> Develop an adaptive visitor use management toolkit that explores the expanded use and coordination of management tools that address visitation growth and support positive visitor experiences.</p>
	<p>* <b>RRSE.8) REVIEW AND IMPROVE FEE-BASED RECREATION PROGRAMS:</b> Support enjoyable and compatible recreation experiences by periodically evaluating and refining fee-based recreation programs, commercial use permits and related regulations to make programs easier to understand for visitors and easier to manage for staff.</p>
	<p><b>RRSE.9) DEVELOP A LEARNING LABORATORY APPROACH TO RECREATION:</b> Combine community engagement results with scientific research and comprehensive data analysis to understand trends, develop and assess practical initiatives, and design management approaches that seek to improve community well-being, enjoyment, understanding and stewardship.</p>

## Harmonizing Agriculture and Nature

In a unique partnership, one-third of OSMP lands - or about 15,000 acres - are leased to about 25 ranchers and farmers. As such, lessees do the stewardship work of 15 full-time staff members, saving OSMP more than \$1 million in labor and material costs annually. These ranchers and farmers also preserve Boulder’s agricultural legacy, creating stunning views of working landscapes against the mountain backdrop. Focused on producing food, feed and fiber, OSMP’s agricultural program also conducts research and restoration projects to maintain healthy soils and habitat, encourage integrated, non-chemical pest management, promote water conservation and increase resilience to environmental change.

Many farmers and ranchers are aging, and they hold the institutional knowledge of how to manage OSMP’s agricultural lands. And as the climate changes, more carbon dioxide may lead to more crop yields, but higher temperatures, lower water availability and increased winter survival of pests will likely offset those gains. The timing and availability of forage for cattle also will likely become less certain, making ranching operations more difficult. And with a portfolio of \$60-\$70 million in water rights plus extensive infrastructure like ditches and farm buildings, OSMP’s maintenance and management requirements for agriculture is extensive.

Farmers and ranchers on OSMP lands play a critical role in addressing these challenges, but how will we encourage and support the next generation of farmers and ranchers? How will we continue to sustain viable agricultural operations and infrastructure on open space? How should we better integrate agricultural activities with the ecological health and resilience of the larger landscape?

The management approach described below for **Agriculture Today and Tomorrow** was developed using the recent Agricultural Resources Management Plan, as well as additional staff, board and community input throughout the master plan process to date.

<b>FOCUS AREA</b>	<b>Agriculture Today and Tomorrow (ATT)</b>
<b>VALUE STATEMENT</b>	<i>Our legacy and future are based on working landscapes that are in harmony with nature.</i>
<b>OUTCOMES</b>	ATT.A) <b>VIALE AGRICULTURAL LIVELIHOODS:</b> The city’s ranchers and farmers are valued and supported in their contributions to the stewardship of Boulder’s agricultural heritage.

ATT outcomes, continued	ATT.B) <b>SUSTAINABLE, PRODUCTIVE AGRICULTURE:</b> OSMP’s agricultural lands and infrastructure remain productive and sustainable long into the future.
	ATT.C) <b>DIVERSE AGRICULTURAL PRODUCTS FOR LOCAL MARKETS:</b> A diversity of food and agricultural products is grown on suitable open space properties to better meet the changing demands of the local agricultural economy and the needs of ranchers, farmers and city residents.
	ATT.D) <b>HIGH-VALUE HABITAT ON RANCHES AND FARMS:</b> City agricultural lands provide high-value habitat for rare and native species, integrating both agricultural and ecosystem objectives.
	ATT.E) <b>SOIL HEALTH AND RESILIENCE:</b> Appropriate agricultural practices protect high-quality soils from erosion, improve productivity, maintain soil health and increase resilience in a changing climate.
	ATT.F) <b>RESILIENT AND EFFICIENT WATER SUPPLY:</b> OSMP emerges as a leader in the acquisition and preservation of water assets and the application of innovative irrigation practices that anticipate environmental change.
	ATT.G) <b>APPRECIATION FOR WORKING LANDSCAPES:</b> Community members experience and better understand working landscapes, contributing to the preservation of Boulder’s agricultural lands and heritage.
	STRATEGIES
ATT.2) <b>INTEGRATE NATIVE ECOSYSTEMS AND AGRICULTURE:</b> While maintaining the viability of agricultural operations, evaluate and increase the potential for improving the quality of habitat on agricultural lands through staff programs and partnerships with ranchers and farmers.	
ATT.3) <b>SUPPORT THE SUCCESS OF RANCHERS AND FARMERS:</b> Where appropriate, evaluate and pilot cost-sharing, partnerships and other mechanisms to encourage both responsible land stewardship and economic viability for a diverse range of current and future farmers and ranchers on OSMP lands.	



<p>ATT strategies, continued</p>       <p>* <b>HIGH PRIORITY STRATEGIES</b>          (Identified with input from community members, staff and the Open Space Board of Trustees)</p>	<p><b>ATT.4) DIVERSIFY AGRICULTURAL OPERATIONS:</b> Partner with open space ranchers and farmers to analyze and where appropriate expand the variety of agricultural operations on OSMP lands, focusing on the infrastructure and technical assistance needed to support local food systems, including diversified vegetable farming, pastured livestock, micro dairies and taking products to market.</p>
	<p><b>ATT.5) ENHANCE ENJOYMENT AND PROTECTION OF WORKING LANDSCAPES:</b> Partner with community members, farmers and ranchers to maintain and enhance the condition and experience of working landscapes, viewsheds and historic structures.</p>
	<p><b>ATT.6) REDUCE OR ELIMINATE PESTICIDE USE:</b> Reduce or eliminate the use of pesticides wherever possible. When reduction or elimination of pesticides is not possible, use the least toxic and least persistent pesticide that is effective.</p>
	<p>* <b>ATT.7) REDUCE IMPACTS TO FARMS FROM PRAIRIE DOGS:</b> Increase the viability of agricultural operations to the extent possible by reducing impacts from prairie dogs on agricultural lands, especially in prioritized irrigated fields, while maintaining ecologically sustainable prairie dog populations across the landscape.</p>
	<p><b>ATT.8) PLAN FOR THE FUTURE OF WATER:</b> Develop and implement a water management approach that balances sustainable agricultural operations, ecosystem stewardship, protection of OSMP water rights, efficiency of water use and resilience in a more variable climate.</p>
	<p>* <b>ATT.9) ENHANCE SOIL HEALTH AND RESILIENCE:</b> Manage agricultural activities in tilled lands and native grasslands to prevent soil erosion, maintain and/or improve soil health, and protect ecosystem function.</p>

## Building an Inclusive Community of Stewards

Named “the best place to raise an outdoor kid” by Backpacker Magazine, Boulder boasts an extensive network of trails, amenities and programs for youth, families and people of all ages to connect with and explore nature. Our efforts help forge connections that inspire a life-long love of the land, inspiring current and future generations to understand, value and protect open space lands.

Like many communities along the Front Range, Boulder’s demographic profile is shifting, which will affect who visits open space in the future. For example, since 2000, the number of people of Hispanic origin has increased more than 8 percent in Boulder,

while across the nation, the Hispanic population increased by 43 percent (City of Boulder, 2017). Moreover, national trends point to young people spending less and less time outdoors and work needs to be done to understand how this national trend may be affecting Boulder.

Even in light of visitation growth, how do we inspire children to fall in love with nature so they will then protect it in years to come? How do we engage and welcome underserved communities and honor our legacy of designing experiences for all to enjoy? And how will we work as a community to take care of OSMP lands for future generations? We hope some of these answers lie in the guidance below for **Community Connection, Education and Inclusion**.

<b>FOCUS AREA</b>	<b>Community Connection, Education and Inclusion (CCEI)</b>
<b>VALUE STATEMENT</b>	<i>Together, we build an inclusive community of stewards and seek to find our place in open space.</i>
<b>OUTCOMES</b>	CCEI.A) <b>INSPIRING ENVIRONMENTAL EDUCATION:</b> Visitors participate in education programs and other forums that deepen their sense of place and appreciation for Boulder’s natural, cultural and scenic heritage and broaden their understanding of OSMP land and its management.
	CCEI.B) <b>FULFILLING COMMUNITY INVOLVEMENT:</b> Community volunteerism, partnerships and neighborhood involvement serve an increasingly vital role in OSMP’s fulfillment of the City Charter Purposes for open space.
	CCEI.C) <b>LIFETIME CONNECTIONS WITH NATURE:</b> Long-term connections with OSMP lands are strengthened and deepened over the course of our lives and across generations.
	CCEI.D) <b>PHYSICAL AND MENTAL WELL-BEING:</b> Increase awareness of the benefits of nature and the ways visiting OSMP lands can reduce stress and increase physical and mental well-being.
	CCEI.E) <b>ENGAGED YOUTH INSPIRED BY NATURE:</b> OSMP is an emerging leader in promoting an increase in the time that youth spend outdoors and caring for their open space system.
	CCEI.F) <b>PROMOTING EQUITY &amp; INCLUSION:</b> We are all part of an inclusive community, where all people feel welcome, safe and able to enjoy the benefits of open space.

CCEI outcomes, continued	CCEI.G) <b>CONNECTIONS TO BOULDER’S PAST:</b> Cultural landscapes and historic resources on OSMP lands are preserved so that people can enjoy and understand the places and stories of Boulder’s past.
<b>STRATEGIES</b>  <b>* HIGH PRIORITY STRATEGIES</b> (Identified with input from community members, staff and the Open Space Board of Trustees)	CCEI.1) <b>INSPIRE ENVIRONMENTAL LITERACY AND NEW INVOLVEMENT IN OSMP:</b> Foster interest, competence and confidence in enjoying and sustaining the OSMP system through a continuum of educational and service-learning experiences for people of all ages.
	CCEI.2) <b>CULTIVATE LEADERS IN STEWARDSHIP:</b> Advance skill-building and training for volunteers and stewards through expanded mentorship and leadership opportunities that increase OSMP’s capacity to address needs and support career development in open space management.
	CCEI.3) <b>FOSTER WELLNESS THROUGH IMMERSION IN THE OUTDOORS:</b> Working with schools and organizations, raise awareness of how open space improves physical and mental well-being.
	CCEI.4) <b>HEIGHTEN COMMUNITY UNDERSTANDING OF LAND MANAGEMENT EFFORTS:</b> Heighten community and neighborhood understanding and involvement in OSMP management and planning efforts through targeted education, outreach and in person engagements in support of on-the-ground action.
	* CCEI.5) <b>ENHANCE SIGNS AND COMMUNICATIONS:</b> Foster discovery, enjoyment and stewardship through a coordinated effort to enhance signs, communications and media that incorporate effective design, messaging and languages for a range of audiences.
	* CCEI.6) <b>WELCOME DIVERSE BACKGROUNDS AND ABILITIES:</b> Improve understanding, services and amenities for underserved communities through outreach, listening sessions, culturally-relevant programming, language translations, visual signs and materials, staffing and other creative means of empowering and engaging underserved members of our community.
	* CCEI.7) <b>CONNECT YOUTH TO NATURE:</b> Foster youth interest, competence and confidence in enjoying and preserving nature for youth through a continuum of educational and service-learning experiences.

CCEI strategies, continued	* CCEI.8) <b>CONSULT AND COLLABORATE WITH FEDERALLY RECOGNIZED NATIVE AMERICAN NATIONS AND HELP SUPPORT INDIGENOUS PEOPLES:</b> Work in partnership with American Indian Tribes and other city departments through formal government-to-government consultations to support Tribal Nations and Indigenous Peoples' connections to their ancestral homelands.
	CCEI.9) <b>PRESERVE AND INTERPRET BOULDER'S CULTURAL HERITAGE:</b> Complete an inventory and resource management approach for OSMP-managed cultural landscapes and historic resources to improve community connections with Boulder's past.

## Funding Our Future

Starting in 2020, funding for OSMP may decrease by as much as \$10 million a year. Portions of city sales tax dedicated to open space have either expired or will be repurposed to other city departments. Staff have been preparing for this reduction, but our capacity to provide the same level of service to our community members will be challenged. Meanwhile, more frequent and intense weather events may increase future costs, and our maintenance backlog remains a significant burden despite great strides. There are also fewer opportunities to purchase large swaths of open space and the price of land - when it does become available - is climbing. While these conditions present challenges for maintaining fiscal health, the following outcomes and strategies set up a creative, efficient approach to **Financial Sustainability**.

<b>FOCUS AREA</b>	<b>Financial Sustainability (FS)</b>
<b>VALUE STATEMENT</b>	<i>Shifting financial conditions require planning for the future.</i>
<b>OUTCOMES</b>	FS.A) <b>LASTING VALUE FOR THE COMMUNITY:</b> OSMP effectively and efficiently manages city taxpayer dollars to build both trust and lasting open space value.
	FS.B) <b>RESILIENCE TO CHANGE:</b> Financial management strengthens adaptability and resilience to local, national and global market forces and environmental change.
	FS.C) <b>PROTECTED INVESTMENTS:</b> The community's long-term investment in open space is protected or enhanced by prioritizing maintenance of OSMP properties and assets.

FS outcomes, continued	FS.D) <b>TARGETED ACQUISITIONS:</b> Strategic acquisition of land, mineral and water interests continue to play an important role in preserving, enhancing and managing Boulder’s legacy of preservation, agriculture and passive recreation.
	FS.E) <b>EFFECTIVE COMMUNICATION:</b> Financial information is proactively and clearly communicated to promote accountability, increase community understanding of OSMP financial management, and ensure alignment of spending with community priorities.
STRATEGIES	FS.1) <b>STABILIZE FUNDING:</b> Steadily generate funds through sales and use tax collections while strategically leveraging other revenue streams and local dollars to support OSMP’s capacity to deliver open space services.
	FS.2) <b>BUDGET FOR FUTURE UNCERTAINTY:</b> Create, optimize, and manage budgets that anticipate major change drivers such as extreme weather events and fluctuations in revenue and spending.
	FS.3) <b>UNDERSTAND TOTAL COST OF SYSTEM MANAGEMENT:</b> Adopt or create models to understand the total value and cost of managing the OSMP system and its many diverse assets, including impact and investment tracking for upfront and ongoing costs regarding land management, agriculture, trails and other infrastructure.
	FS.4) <b>TAKE CARE OF WHAT WE HAVE:</b> Focus capital investments on retaining the health of ecosystems on OSMP properties, as well as maintenance of existing trails, amenities and agricultural infrastructure.
	FS.5) <b>TARGET ACQUISITIONS:</b> Prioritize opportunities to acquire land, mineral and water interests in the Area III - Rural Preservation Area of the Boulder Valley Comprehensive Plan to advance its goals, OSMP Master Plan focus areas and city charter purposes for open space.
	FS.6) <b>PARTNER TO PROTECT LANDS BEYOND TARGET AREA:</b> Consider acquisition of land, mineral and water interests outside the Boulder Valley Comprehensive Plan boundary where partnership opportunities help leverage costs and advance master plan focus areas and charter purposes for OSMP.
	FS.7) <b>PARTICIPATE IN OTHER ACQUISITION OPPORTUNITIES:</b> Consider acquisition of land, water and mineral interests within Area I and II of the Boulder Valley Comprehensive Plan only when coupled with planning, development or annexation projects or where citywide priorities or partnership opportunities emerge.

FS strategies, continued	FS.8) <b>EVALUATE EXISTING REAL ESTATE ASSETS ON OSMP LANDS:</b> To improve the protection of, and align with, Open Space purposes in the City Charter, assess real estate assets and explore alternative preservation and stewardship options to better enable staff to steward and manage for those purposes.
	FS.9) <b>INVEST IN WORKFORCE DEVELOPMENT AND OPERATIONAL NEEDS:</b> To provide effective management of the OSMP system over time, maintain a team-oriented workforce that benefits from experience and ongoing training and is equipped with adequate resources to meet the expectations of the community.
	FS.10) <b>UPDATE PLANNING FRAMEWORK:</b> Refine OSMP planning methods and products to better inform and prioritize the efficient use of limited funding.

## Prioritizing Our Work

All 46 strategies across the five focus areas described above are important, and they are all designed to guide our work over the next decade. However, finite capacities require a realistic view of what is achievable, so staff and community members have a shared understanding about what to expect and when.

To that end, staff set out to understand how residents would prioritize their tax dollars through a series of community surveys and in person engagements. Over and again, community members told us efforts aimed at ecosystem health and resilience are most important, and that opportunities to enjoy and protect nature are vital. We heard strong guidance to protect the substantial investment our community has made in open space and to prioritize conservation and maintenance of our existing system.

We listened. With this input as a guide, staff identified 17 high priority strategies (indicated with an asterisk in the tables above). This means we would emphasize funding for these strategies as compared to others, especially in the next few years. However, we would still make progress on other strategies as capacity allows.

If and when additional funding becomes available, we would then scale up funding and effort for our high priority strategies while also devoting more toward other strategies. For example, additional funding would provide more capacity to pursue restoration and conservation projects, make additional progress toward reducing the trail maintenance backlog, and incorporate more forward-thinking approaches to climate change, soil health, youth engagement, inclusion and volunteers.

## **Inspiring Action**

As Boulder residents, we are twice lucky - first for living side by side with such a beautiful landscape; secondly for having had the foresight to protect it.

Over the decades, scientists, land managers and volunteers have demonstrated the kind of patient, careful work it takes to protect healthy lands from deteriorating. Forests have been thinned to help nature thrive and reduce fire risk to nearby homes. Deteriorated areas have also come back to life, like once-plowed grasslands where prairie grasses and songbirds now thrive. Agricultural soils have been studied to learn how they can slow the effects of climate change.

Our work together is not done. The master plan process has helped us talk about our future with creativity, empathy and optimism. We have learned from each other about what we all value and how to honor those values by designing an inclusive future.

We can bring this kind of success to many other places on our system if we continue to put our minds, energies and resources toward it. If we do, more critical wetlands and miles of stream frontage will be restored and more of our forests and grasslands will reach good condition. We can also restore more undesignated trails and improve official ones, so we all enjoy the benefits of nature. Even if funding for OSMP declines in the coming years, we can still make a positive difference by strategically leveraging and prioritizing the time and money we have available.

We hope you join us in making our legacy our future.

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# SECTION 1: OUR LANDS

*“The environment, after all, is where we all meet, where we all have a mutual interest. It is one thing that all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become.”*

-Lady Bird Johnson

## Our Conservation Legacy

For the City of Boulder’s Open Space and Mountain Parks (OSMP) system, everything begins with land conservation. Without it, Boulder would not be Boulder. The city protects large tracts of important habitat for native plants and animals and connects people with these vast natural spaces. This legacy of stewardship and enjoyment has been a long time in the making - over 120 years! Our community’s dedication to protecting nature has culminated in a robust open space system nearly three times the size of the city itself, serving both the local community and the region.

Beginning with a purchase near Chautauqua in 1898 and Frederick Law Olmsted Jr.’s call to preserve Boulder’s scenic mountain landscape in 1910, more than 46,000 acres of public land have been protected (System Overview, 2018). As we look to the future of our conservation legacy, the vision of an interconnected open space system enveloping Boulder is nearing completion.

Today, open space wraps the City with grassland prairies, working agricultural lands, iconic flatirons and forested foothills. Intersected by three major creeks, these features are uniquely preserved at the junction of the Great Plains and Rocky Mountains. This remarkable open space system has led to national recognition as the “happiest city in the United States” because of its safe and convenient access to open space (National Geographic, 2017).

Even more, the land, air and water provide an abundance of cultural, agricultural and ecosystem benefits to wildlife and people, many of which are documented in OSMP’s [2018 System Overview report](#), a foundational document describing the current state of our lands. Crucial points from this report include:

- For over 120 years, open space has provided physical and mental benefits to the Boulder community through passive recreation. Today, OSMP maintains a 155-mile trail system and 113 trailheads that connect visitors to diverse open space lands.
- In 2017, OSMP public lands received an estimated 6.25 million visits (representing total number of visits as opposed to the total number of visitors), a 34-percent increase from the estimated 4.7 million visits in 2005.

- Two continental-scale ecoregions, the Central Great Plains and the Southern Rocky Mountains, merge within Boulder’s open space system. The convergence of forested foothills and prairie grasslands – two of OSMP’s major ecosystems – have helped to create some of the most diverse wildlife and plant habitats in the West.
- OSMP lands support a host of native species, including more than 740 species of plants, 300 bird species, 130 species of butterflies, 60 kinds of mammals, 20 reptile and amphibian species and 15 types of fish. These lands also host the highest-quality cliff-nesting raptor habitats in the western United States.
- OSMP monitors more than 80 ecological indicators to assess the health of OSMP forest and grassland ecosystems. These indicators suggest that the overall state of OSMP forests and grasslands are fair; the two factors that prevent the condition of OSMP natural areas from being even better are the presence of non-native plant species and disturbances to streams and creeks.
- There are 11 active restoration projects on over 500 acres of OSMP’s grasslands, wetlands and riparian ecosystems. As of 2019, OSMP has also treated more than 1,900 acres of forested land to improve the health of open space forests and to reduce the fire danger for Boulder neighborhoods.
- OSMP works to foster enjoyment, protection of the land and improved quality of life for the Boulder community through environmental education, outreach, volunteering, service learning, recreation activities, skill building and law enforcement. According to feedback from OSMP educational programming, 100 percent of respondents said they would attend another of these programs with OSMP.
- OSMP is supported by our generous community. In 2018, 2,156 volunteers provided 18,810 hours of their time to help their public lands – contributing service valued at more than \$503,730 to open space.
- One-third of OSMP land (15,000 acres) is leased by partner ranchers and farmers who contribute over \$1 million in services annually, increasing local food production while also supporting the health of native grasslands and wetlands.

- OSMP land also frames urban development and protects natural scenery from the impacts of growth.
- By preventing development in certain parts of the floodplains in Boulder Valley, OSMP lands reduce flood risk to human infrastructure while avoiding costly damages in the instance of flooding.
- OSMP has acquired more than 1,000 acres of wetland habitat, 70 percent of perennial streams and 87 percent of ephemeral streams in the Boulder Valley.

## Charter Purposes

Management of Boulder's open space system is guided by the City of Boulder's 1986 voter approved Charter, which calls for open space purposes to inform decision-making. The charter serves as a mandate for how we manage the OSMP system. The City Charter states that open space shall be acquired, maintained, preserved, retained, and used only for the following purposes:

- a) natural areas with features or species of special value;
- b) water, landscapes and ecosystems;
- c) passive recreation;
- d) agriculture;
- e) limiting sprawl;
- f) urban shaping;
- g) floodplain protection; and
- h) aesthetics and quality of life.

## Why a Master Plan?

In managing this unique and complex system, challenges are bound to arise. The master plan process - and engaging and listening to the community - has been critical in crystalizing where the system will need to be resilient in the coming years to withstand mounting pressures and foreseeable trends. Major pressure points include increasing visitation, retaining ecosystem health, increasing maintenance costs and a 30 percent reduction in city sales tax revenue dedicated to funding OSMP. Decreasing funding along with increasing visitation and a maturing land system to manage highlight the importance of developing a strategic focus for OSMP. As such, the Master

Plan will help ensure conservation, maintenance and responsible stewardship of our existing natural areas and assets, while balancing the need for restoration, weed management and providing new opportunities for enjoyment of our open space.

The City Charter's purposes for open space informed and shaped the creation of the Master Plan's five focus areas, which knit the charter purposes together into themes that organize policy direction for OSMP over the next decade and beyond. For example, the **Ecosystem Health and Resilience** focus area ties to certain charter purposes, such as *Water, Landscapes and Ecosystems*, and *Natural Areas and Features or Species of Special Value*. This focus area also corresponds to strong public support for protecting our open space system through conservation and preservation. Another example is the charter purpose *Passive Recreation*. Coupled with strong community support for recreational access and shared stewardship of OSMP lands, this charter purpose led to the focus area **Responsible Recreation, Stewardship and Enjoyment** focus area.

In February 2018, the release of the System Overview report launched an inclusive, collaborative 19-month public engagement effort around values, aspirations, strategies and priorities for Boulder's lands. These efforts produced the five focus areas described below, as well as supporting outcomes, actionable strategies and priorities that direct our work over the next 10 years. With the support of a united community, policy makers, stakeholders and staff, the strategic guidance in this document also brings our attention to the more distant future as we shepherd over a century of land conservation into the next 100 years.

## Values and Focus Areas

The five focus areas below can be understood through their corresponding value statements, which emerged from community voices, OSBT and City Council. As the voice of the people, these values speak to us all. They reflect the deep appreciation we all have for the land, and the profound sense of place it engenders.

The following focus areas were unanimously adopted by City Council and Open Space Board of Trustees (OSBT) in July 2018.

### **Ecosystem Health and Resilience**

*Using the best available science, we protect healthy ecosystems and mend those we have impaired.*

### **Responsible Recreation, Stewardship and Enjoyment**

*We are united by our connection to and enjoyment of nature and our obligation to protect it.*

## **Agriculture Today and Tomorrow**

*Our legacy and future are based on working landscapes in harmony with nature.*

## **Community Connections, Education and Inclusion**

*Together, we build an inclusive community of stewards and seek to find our place in open space.*

## **Financial Sustainability**

*Shifting financial conditions require planning for the future.*

While finding the right balance of investment and attention is always challenging, the focus areas provide a framework of mutual support, each one strengthening the others. We must always seek out relationships among the focus areas to find the most efficient and valuable use of limited resources.

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## SECTION 2: OUR COMMUNITY

*“The outdoors is for all and it is more empowering when we create opportunities and support one another’s voices, welcoming each other into our respective stories.”*

-José Gonzales, Founder of Latino Outdoors

### How We Work Together

Time and again, Boulder residents have come together to support their natural lands through tax measures, volunteerism, planning processes and so much more. This kind of meaningful, inclusive engagement is essential for future protection and enjoyment of our lands. Boulder’s Open Space and Mountain Parks (OSMP) Department is committed to welcoming and involving all members our community, including youth, Spanish-speakers, people experiencing disabilities and other underserved populations.

As a pilot project for the City of Boulder’s *Engagement Strategic Framework*, the process to develop this Draft OSMP Master Plan was designed to help community members collaborate in an informed and predictable way.

To develop and evaluate the approach to engagement, city staff has worked with an OSMP Master Plan Process Committee. Made up of two members of City Council (Aaron Brockett and Mary Young), as well as two members of the Open Space Board of Trustees (Curt Brown and Tom Isaacson), the committee has guided staff on creating and implementing an inclusive, transparent process for both community and staff engagement.

### A Foundation of Information

The master plan process launched in February 2018 following the release of the *System Overview* report. This report and the strategic plans, reports and scientific papers that have guided OSMP over the years act as a foundation for understanding our system and its legacy. This foundation of information grounds the master plan work in decades of OSMP research.

### Spotlight on Inclusion

Guided by the Process Committee, the OSMP master plan process sought to invite all people, regardless of their differences, to work together and create a rich, diverse environment of involvement, respect, community and connection. This approach to

inclusive engagement - cultivating broader community support and greater credibility - is a corner stone of the master plan approach. Inclusive engagement makes for a better master plan because the challenges facing our lands are complex. Strong strategies for the future require input from as many perspectives as possible.

To create an inclusive process, OSMP staff collaborated with partners on engagement efforts called micro-engagements. These in person outreach efforts reach people where they are - trailheads, libraries, housing communities or conferences - rather than expecting them to come to us. This shift has allowed the department to think more critically about reaching a broader cross-section of our community, building deeper understandings of all who contribute to the stewardship and enjoyment of OSMP land.

Throughout the engagement process, OSMP staff enhanced existing partnerships and created new relationships with audiences of diverse backgrounds. Staff reached out to Spanish-speakers, people experiencing disability and youth to gather feedback. These efforts included engagements with more than 1,250 youth, 40 people experiencing disabilities and 140 people from the Latino community. With guidance from the Process Committee, we have:

- Engaged members of the public where they typically go, in addition to inviting them to traditional community workshops;
- Fostered relationships with underrepresented groups;
- Partnered with Growing Up Boulder (GUB) and the Youth Opportunities Advisory Board (YOAB) to engage with youth; and
- Made translation services and assistive devices available at workshops.

We developed and worked with our partners to host inclusive events that anticipated and overcame barriers to participation.

## How We Listened

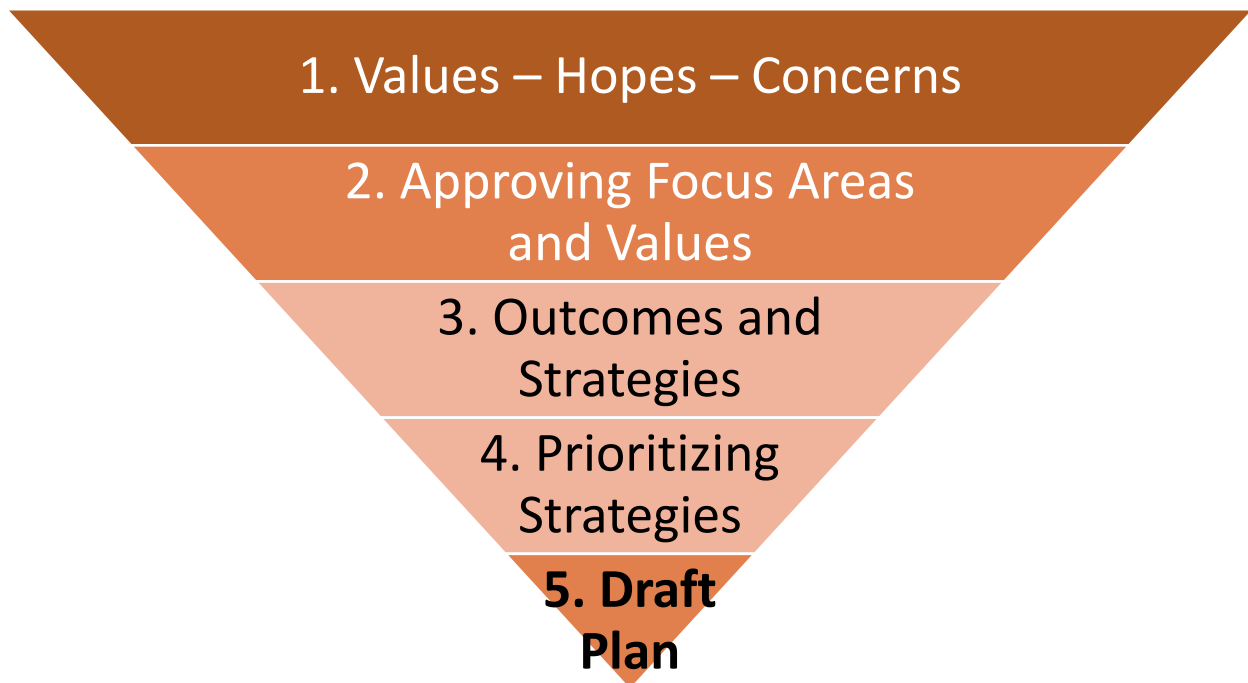
To be clear and consistent about when and how the public could participate in the planning process, OSMP staff designed a series of five distinct engagement windows (Figure 2.1).

In January 2018, the **First Engagement Window** kicked off with an open house followed by a celebratory event that sought to engage all ages and aspects of the community around their values and the future of OSMP. This engagement window included creative feedback opportunities, including a community art project. Local musicians Jeff and Paige performed at this event, entertaining children and parents alike ([What We've Heard, 2019](#)). Micro-engagements also kicked-off in the First



Engagement Window. These engagements focused on engaging underrepresented groups through partnerships and channels they are already involved in. We concentrated on listening to community values, hopes and concerns for the future of open space. Draft focus areas and values emerged from this community input, answering the question “What is it time to focus on now?”

Confirmation of these high-level focus areas occurred in the **Second Engagement Window** through an online questionnaire. City Council then approved these five focus areas in July 2018.



*Figure 2.1 Engaging the community through five distinct engagement windows.*

OSMP staff conducted a series of nine meetings in an iterative process that sought input from staff, stakeholders and the community during the **Third Engagement Window** to share focus area research and trends and to brainstorm preliminary outcomes and strategies for four of the five focus areas. The fifth focus area covers financial sustainability and was covered in the subsequent engagement window.

After a culmination of over a year’s worth of consensus-building, the **Fourth Engagement Window** focused on funding and prioritization across the first four focus areas. During this window, the community provided valuable input and guidance on which strategies the department should prioritize over the next decade. For the first time, all outcomes and strategies for the first four focus areas were shared together to support prioritization, along with draft outcomes and strategies to advance

financial sustainability. Through a public workshop and micro-engagements, community members helped prioritize how their tax dollars for OSMP will be spent over the next decade. A statistically valid survey was mailed to 6,000 households in the Boulder area, and a companion version of the survey was also available online for the general public.

With the goal of gaining City Council approval of the final OSMP master plan in September 2019, the **Fifth Engagement Window** will gather community feedback on the draft master plan before council adoption.

## Who We Heard From

Thousands of individuals were intentionally and thoughtfully heard throughout every engagement window of this process to help build clear, collective agreements about the future of OSMP. To date:

- More than 10,000 comments have been received as part of the master plan process;
- OSMP staff hosted seven community events with more than 900 total attendees;
- More than 5,100 responses to questionnaires were submitted by the public;
- More than 1,900 individuals responded to the open participation survey in spring 2019;
- More than 1,300 individuals completed the mailed statistically valid survey;
- More than 120 comments were sent in via email and social media; and
- Over 1,400 people participated in micro-engagements. These participants are not typically heard from during engagement processes and include representation from the Latino community, the Black community, people experiencing disabilities and youth.

## What We Heard

Longstanding community values of enjoying and protecting nature rang loudly through these thousands of public comments. Love for the land, often passed down through generations, has created a strong and lasting heritage of environmental stewardship, outdoor recreation and working landscapes. This legacy has united community

members, staff, OSBT and Council around a shared set of open space values that are inherent in both the City Charter and the draft OSMP Master Plan.

Boulder's open space city charter purposes are well established and diverse, and their relevance has stood the test of time. They were again confirmed through the emergence of five focus areas for the master plan that reflect the individual and collective strength of those original City Charter purposes.

## **Coming Together to Care for Our Lands**

Once completed, the OSMP master plan will be a guiding compass for department work, setting the course for identifying improvements, overcoming differences, respecting all voices, and achieving a shared vision for integrated, responsible land management over the next decade and beyond.

Like the cycle of discovering nature, protecting it, and eventually sharing a love of nature with others, every management action we take is part of a continuous cycle of inputs and outputs. None of us is alone in the shared responsibility of protecting critical habitat, enjoying being connected to nature, or of sharing what we know about nature to inspire its careful stewardship. Rather, we are all stronger together, united around a central purpose of caring for nature, both for its inherent values and for the benefit of current and future generations.

## **Advancing Community-wide Goals**

The master plan advances and aligns with established community-wide goals and plans including the city vision and values, Sustainability and Resilience Framework and the Boulder Valley Comprehensive Plan.

### ***City Vision and Values***

OSMP staff and volunteers deliver services within a broad and integrated municipal governance model. To foster integrated operations, the city manager provides all city departments and staff guidance in the form of following a shared vision and set of values.

**Citywide Vision:** Service excellence for an inspired future.

**Citywide Values:**

- Customer Service;
- Respect;

- Integrity;
- Collaboration; and
- Innovation.

For a more in-depth description of the city's vision and values, please refer to the [city culture webpage](#).

## ***Sustainability and Resilience Framework***

The City of Boulder is continuously working to fulfill its vision. The Sustainability and Resilience Framework provides a common language for all city departments, the local community and the Boulder City Council about what makes a great community. The framework aligns city government with a wide range of community priorities, to evaluate whether expectations are being met and to adjust, if necessary. To realize the city's vision of "service excellence for an inspired future," the Sustainability and Resilience Framework establishes seven broad outcome categories. The annual budget, as well as strategic plans and master plans, develop strategies to achieve those outcomes.

Elements of the Sustainability and Resilience Framework are:

- Safe Community;
- Healthy and Socially Thriving Community;
- Livable Community;
- Accessible and Connected Community;
- Environmentally Sustainable Community;
- Economically Vital Community; and
- Responsibly Governed Community.

We integrate the Sustainability and Resilience Framework into our planning efforts as you will see in future chapters of the Master Plan and other future plans. Read the full [City of Boulder Sustainability and Resilience Framework](#).

## ***Boulder Valley Comprehensive Plan***

The Boulder Valley Comprehensive Plan (BVCP) is developed and jointly adopted by the City of Boulder and Boulder County to guide land use decisions in the Boulder Valley. Intended to integrate a range of community service areas, the BVCP provides high-level policies and goals to protect the natural environment of the Boulder Valley while fostering a livable, vibrant and sustainable community. Adopted in 1977, the City of Boulder and Boulder County update the plan periodically, most recently doing

so in 2017. The BVCP supports the community's vision for balancing development and preservation of the Boulder Valley. The BVCP reflects the city's sustainability framework. This arrangement allows the city to evaluate whether expectations are being met and to identify where the city needs to make adjustments. Master plans, strategic plans and the city's annual capital and operation budget outline the strategies designed to achieve the BVCP's goals.

Integral to the BVCP are the core values and guidance to achieve sustainability, intergovernmental cooperation, organized urban development and protection of open space. Within the BVCP, locations that support natural ecosystems or native plants and animals that possess important ecological, biological or geological values are defined as Boulder Valley Natural Ecosystems. The Boulder Valley ecosystem map designates most city open space as "natural ecosystems."

## SECTION 3: OUR PATH FORWARD

Section 3 is the heart of the master plan. It describes broadly shared aspirations about the future of Boulder’s Open Space and Mountain Parks (OSMP) and the department’s means of achieving them together with our community. Developed and prioritized with help from the community and Open Space Board of Trustees (OSBT), the master plan outcomes and strategies will direct how we spend our time and public tax dollars in keeping with community values and priorities.

The following definitions will help readers understand and connect to the text that follows.

Master Plan Component	Definition
Open Space Purposes in the City Charter	Approved by city voters in 1986, these serve as the fundamental guidance for managing open space lands.
Master Plan Focus Areas	These management themes describe what staff and the community should focus on for the next 10 years, with an eye to the next 50 years. They were derived from public and staff input, and unanimously adopted by City Council in July 2018.
Value Statements	Developed through broad community and staff engagement, these reflect what we find important about OSMP. Corresponding to each focus area, they help us understand each management theme, and motivate us to consider the open space values we all have in common.
Outcomes	These aspirational goals for OSMP describe the overall desired outcomes for each focus area. These were drafted with staff and public input and refined with guidance from the Open Space Board of Trustees.
Strategies	These describe management approaches for achieving desired outcomes. These were drafted with staff and public input and refined with guidance from the Open Space Board of Trustees.
High Priority Strategies	With input from the public and OSBT, 17 of 46 strategies have been prioritized as being most important to emphasize, especially in the first years following City Council adoption of the final Master Plan. Further explanation of priorities is provided in Section 4 of the draft master plan.

## 3.1 Ecosystem Health and Resilience

*Using the best available science, we protect healthy ecosystems and mend those we have impaired.*

### Introduction

#### *Boulder's Wild Idea*

Boulder's system of open space and mountain parks is a powerful and enduring reflection of Boulder's values. The Boulder community has spent decades protecting natural lands—from the 1898 purchase of the 75-acre Chautauqua Park, to the 1967 tax to purchase and care for lands, to the 1986 adoption of open space guidance in the City Charter. Through the Open Space and Mountain Parks (OSMP) master plan process, community members reaffirmed that preservation and protection of the natural environment is a core community value.

Broad engagement led to the Ecosystem Health and Resilience (EHR) focus area - and the value statement: *Using the best available science, we protect healthy ecosystems and mend those we have impaired.* In early 2018, one resident said "it is a very unique ecosystem with some of the greatest diversity on our continent. I can go 1,000 miles east or west and not find that diversity of plant and animal life." According to a 2019 representative community survey, 79 percent of residents feel ecosystem health and resilience is one of the most important themes for guiding OSMP management in the future.

#### *The Future of Nature*

In Boulder, the Great Plains and Southern Rocky Mountains merge in dramatic fashion, creating iconic rock formations, unmatched scenic beauty and very high biodiversity. These striking landscapes support, at last estimate, 741 native plant species, 303 native bird species, 138 native butterfly species, 61 native mammal species, 21 native reptile and amphibian species and 18 native fish species. These lands also host some of the highest-quality cliff-nesting raptor habitats in the western United States.

But these natural lands lie side-by-side with a robust and growing urban environment, and they need thoughtful stewardship to retain or improve the health of this delicate system. The pressures of human activities and environmental change have degraded some of our most precious waterways and wildlife habitats. For example, undesignated trails and invasive weeds have proliferated across the landscape, fragmenting wildlife habitat and impairing the function of wetland and riparian areas. A more arid future,

caused by climate change, coupled with more frequent and intense fires and floods, will further challenge nature preservation.

Collaboration is vital to achieving effective conservation. At the heart of our future successes will be partnerships with the U.S. Fish and Wildlife Service, Colorado Parks and Wildlife, the Colorado State Natural Areas program, neighboring land management agencies, community organizations and nonprofits. By setting our collective sights on a healthy future for nature, we ourselves will thrive.

## Outcomes: Ecosystem Health and Resilience

The following outcomes describe community aspirations for ecosystem health and resilience over the next decade and beyond.

- **EHR.A) HIGH DIVERSITY OF NATIVE PLANTS AND ANIMALS:** OSMP lands represent a high diversity of native plants and animals, expansive natural areas and some of the most critical wildlife habitat along the Front Range.
- **EHR.B) RESTORED, RESILIENT HABITAT:** Degraded habitat, with high potential to support native or extirpated (i.e., locally extinct) native species, is restored and made more resilient to stressors like invasive species, direct human impacts and air, noise and light pollution.
- **EHR.C) CLIMATE ACTION COMMITMENT:** Native ecosystems withstand and slow the effects of climate change.
- **EHR.D) INFORMED, SHARED STEWARDSHIP:** OSMP and the community work side by side to develop a greater understanding of the land and to safeguard our natural heritage.

## Strategies: Ecosystem Health and Resilience

**\* EHR.1) CONSERVE AND RESTORE BOULDER'S NATURAL HERITAGE:** Sustain, expand, enhance, connect and restore habitat blocks with high ecological value and potential through conservation practices.

\*This strategy is a high priority for the next decade.

As staff, we strive to maintain and enhance a network of healthy, resilient habitats for native plants and animals. Large, connected and unfragmented habitat areas - rather



than smaller, fragmented ones - support a wider range of plant and animal species and better contribute to the overall quality and function of natural systems (Dale et al. 2000). They are also more resilient to shocks, such as wildfires and floods, and stresses like aridification.

This strategy would guide implementation projects to enhance creeks, wetlands and wildlife corridors as well as targeted fire management practices in both our forests and grasslands. For example, phased projects along lower Boulder Creek would restore formerly mined gravel pits to improve grassland health and support native fish and amphibians. Staff would recontour the land and redistribute waste piles left over from mining operations. We would also seed and install native plants, while managing weeds especially as native plants are establishing. Figure 3.1.1 illustrates before and after conditions for a typical creek restoration project.



Figure 3.1.1 Rendering of pre- (left) and post-restoration (right) conditions along a stretch of creek. (Modified with permission from [https://lwoq.org/wp-content/uploads/2018/07/AdaptiveManageManual\\_FINAL\\_Web\\_Spreads.pdf](https://lwoq.org/wp-content/uploads/2018/07/AdaptiveManageManual_FINAL_Web_Spreads.pdf))

### **Community Voices**

Residents consider restoring degraded ecosystems and wildlife habitat as the most important priority for allocating OSMP tax dollars.

**\*EHR.2) REDUCE UNDESIGNATED TRAILS:** Close, designate or reroute undesignated trails, especially in sensitive habitat areas.

\*This strategy is a high priority for the next decade.

For EHR strategies 2, 3 and 4, sensitive habitat areas can be understood as those places where plant and wildlife communities are diverse, unique or made up of rare and/or native species in decline, as described in the open space purposes of the City Charter.

Since the 1970s, OSMP and others have studied human impacts on plants and animals, as evidenced by dozens of independent studies. Based on this and other outside

research, findings show that unmanaged recreation can negatively impact soils, water quality, plants and wildlife (System Overview, 2018).

Among those impacts are undesignated trails - pathways that visitors create by going off trails officially managed by OSMP staff. Often, these unofficial trails emerge when visitors look for short cuts or try to access destinations not served by official OSMP trails.

Our lands lie side by side with a world class city and OSMP visitation is increasing. As more of these undesignated trails continue to emerge, they fragment natural habitat for native plants and animals, sometimes flushing wildlife from their home or damaging rare plants. Public land managers across the country experience the same challenges and struggle to keep up with the resulting maintenance or restoration costs.

As of 2018, more than 160 miles of undesignated trails were present on OSMP lands, down from almost 180 mapped in 2012. This change reflects the restoration, designation or revegetation of undesignated trails. However, our trail system is dynamic and new informal trails tend to emerge based on new visitor use patterns. Therefore, this change also takes into account the addition of new undesignated trails.

Closing and restoring undesignated trails on OSMP lands is one way to increase ecosystem health and resilience. However, this will require strong support from the community, especially where informal trails provide walks from an individual's backyard and may have been established 30 years ago. Although the statistical survey for the master plan suggests strong support for closing undesignated trails, we understand this choice becomes more difficult when it might be an informal trail someone uses daily.

This strategy guides staff to work closely with the community in accelerating the closure and restoration of undesignated trails, focusing first on the most sensitive habitat areas. Success will require engagement with neighborhoods and the larger community. For example, staff can provide environmental education **programming**, and community members can volunteer to help care for their land. By working together, we can restore undesignated trails and consider ways to mitigate established uses that have unintended consequences for sensitive habitat areas.

In some areas of the system, past trail study area plans provided guidance by identifying **projects** where a certain subset of undesignated trails should be closed. Where these outstanding commitments are still relevant, staff will work to close undesignated trails through a collaborative planning and public engagement process. In addition, staff will work with the community through a future planning process to identify where else undesignated trails should be closed, rerouted or designated.

### Community Voices

In the 2019 Master Plan Survey, one of the questions specifically related to trail management actions that OSMP could take to protect natural resources. In total, 89 percent of respondents supported OSMP closing unmanaged trails to better protect natural resources (49 percent strongly supported, and 40 percent supported).

### \* EHR.3) EXTEND ON-TRAIL REQUIREMENTS: Reduce off-trail travel in targeted locations, especially in sensitive habitat areas.

\*This strategy is a high priority for the next decade.

Another way to improve ecosystem health and resilience is to promote on-trail travel. While OSMP encourages on-trail hiking, biking and horseback riding to protect plants and wildlife, visitors can move off trail in designated areas across the system to explore other ways of experiencing the landscape. In Habitat Conservation Areas, travel is restricted to on-trail, and we provide permits to allow off-trail travel for appropriate uses. See below in Table 3.1.1 for OSMP Off Trail Permits issued between May 1, 2007, to May 1, 2019. The data illustrate that out of an estimated 6.25 million annual visits to OSMP, only a fraction of those visits come from those traveling off trail. Even considering non-compliance rates, these data suggest that the vast majority of visitors stay within a trail corridor.

OSMP Permits Issued for Off-Trail Use in Habitat Conservation Areas (2007 - 2019)				
Activity	# of Permits issued over the last 12 years	Average # of permits per year from 2007 to 2012	# of People (groups of people are often covered by a single permit)	Average number of people per year from 2007 to 2012
Hiking	2,330	194	11,358	947
Nature Observation	292	24	1,196	100
Photography	168	14	776	65
Other	141	12	646	53
Running	137	11	395	33
Bouldering	40	3	134	11
Horseback Riding	45	4	371	31
Climbing	30	3	616	51
<b>TOTAL</b>	<b>3,183</b>	<b>265</b>	<b>15,492</b>	<b>1,291</b>

Table 3.1.1 OSMP Off Trail Permit Details between May 1, 2007, and May 1, 2019

This strategy guides staff to work closely with the community through **future planning** efforts to consider where on-trail travel or the establishment of on-trail corridors will best protect natural and agricultural resources. Future plans would also seek to support enjoyable passive recreation experiences.

### *Community Voices*

In the 2019 Master Plan Survey, one of the questions specifically related to trail management actions that OSMP could take to protect natural resources. Over 85 percent of respondents would support OSMP extending the requirements for users to stay on managed trails to better protect natural resource (47 percent strongly supported and 42 percent supported).

## **\*EHR.4) REDUCE HUMAN DISTURBANCE: Understand and address impacts from noise pollution, light pollution, and adjacent development on wildlife and sensitive habitat areas.**

\*This strategy is a high priority for the next decade.

A direct human disturbance to ecosystem health, and wildlife in particular, is light and noise pollution (<http://www.darksky.org/light-pollution/wildlife/>). This strategy would spur management action to protect natural sounds and night skies. To understand this problem, staff need to study how light pollution and noise affect plants and wildlife on OSMP lands, determine desired conditions, and explore actions to mitigate problems. This strategy also addresses disturbance caused by humans on adjacent properties, such as land conversion and energy development.

This strategy enables OSMP to establish a program to study and protect night skies and the natural acoustical environment. Staff will also collaborate with partners whose policies, decisions and actions can affect our wildlife, and to ensure we can respond to new challenges. It requires we work even more closely with adjacent landowners, understanding that a healthy natural environment underpins our well-being, quality of life and economy.

### *Community Voices*

During the **Ecosystem Health and Resilience** community workshop in October 2018, members of the Boulder community consistently stressed the importance of addressing recreational impacts to vital ecosystems and called for a better understanding of natural sounds and night skies in relation to development and transportation or aviation corridors (Third Engagement Window Summary Report, 2019).

**\* EHR.5) MANAGE ENTIRE ECOSYSTEMS USING A HOLISTIC APPROACH TO PLANNING:** Use management and planning approaches that consider all elements and processes of natural systems rather than focusing on one species or attribute at a time.

\*This strategy is a high priority for the next decade.

Managing entire ecosystems and key ecological processes, such as fire, flood and drought, is the most efficient and beneficial way to foster biodiversity and support resilient systems. OSMP's Forest Ecosystems Management Plan and the Grassland Ecosystems Management Plan are both outstanding examples of using a systems-approach to manage ecosystems. For example, the Grassland Ecosystems Management Plan provides practical strategies to conserve the ecological value of the grasslands in the Grassland Planning Area.

Implementing this strategy will involve updating sections of the *Forest Ecosystems Management Plan* and *the Grassland Ecosystems Management Plan* that need the most attention. The strategy will result in updated policy, programs and projects to improve ecosystem health to keep land management current, effective and proactive.

#### *Community Voices*

Land management has been a key topic throughout the master planning process, even with younger visitors of city lands. A survey conducted by the Youth Opportunities Advisory Board and Growing Up Boulder found that nearly one-third of youth surveyed emphasized the importance of restoring land holistically (YOAB Survey, 2018).

**\* EHR.6) CONTROL INVASIVE SPECIES:** Prioritize management and control of species that have severe and/or widespread impacts, particularly those that are non-native and most likely to be controlled.

\*This strategy is a high priority for the next decade.

Twenty of the most invasive plant species statewide are present on OSMP lands. The use of prescriptive grazing to manage invasive species is a primary alternative to herbicides or other more labor-intensive management techniques. For example, the presence of perennial, non-native tall oatgrass (*Arrhenatherum elatius*) has dramatically increased over the past 20 years, invading foothills and prairie ecosystems on OSMP properties (Tall Oatgrass Ecological Study 2018). Tall oatgrass forms dense

stands that shade and out-compete native plants for light, moisture and nutrients. OSMP is undertaking a multiyear integrated approach to managing this invasive grass. In particular, we are evaluating the effects of prescriptive grazing, fire and herbicides on controlling its spread.

Depending on future funding and staffing levels, the strategy accelerates our research and management of weeds, including tall oatgrass and others. It expands the **current program**, requiring support from volunteers and partners to restore key areas in the system. Staff will focus implementation on areas where grazing is not practicable and where invasive species are most problematic and most likely to be controlled. This strategy also relates to **ATT.6: Reduce or eliminate pesticide use**.

An invasive species is one that is typically non-native or alien to the ecosystem and causes economic or environmental harm and potentially harm to human health. The definition of invasive species is sometimes extended to include native species, when native species increase in abundance beyond desirable or historic levels, typically responding to a human-caused environmental change. For example, climate change and fire suppression contributed to the expansion and infilling of ponderosa pine (a native tree) and consequent outbreaks of mountain pine beetles (a native insect).



Figure 3.1.2 Tall oatgrass is widespread and abundant in ungrazed areas (left-side of fence) and much less common and dense in areas where we used cattle to graze down the tall oatgrass (right-side of fence).

### Community Voices

In the 2019 Master Plan Survey, less than half (44 percent) would support the targeted use of synthetic chemical sprays (herbicides) when other management approaches for managing invasive weeds have failed, while just over half (56 percent) would oppose the targeted use of herbicides.

## **EHR.7) PREPARE FOR A CHANGING ECOSYSTEM:** Maintain or increase the capacity of natural ecosystems to buffer impacts from extreme events like fires and floods.

Climate change is a significant challenge to OSMP land and operations. Impacts of climate change include more frequent and extreme natural disasters; like the 2013 flood, which resulted in \$300 million of private property damage and \$27 million of municipal property damage. Other potential impacts include more frequent and intense wildfires, upslope shifts in plants, earlier arrival of migratory birds, advanced blooming time of plants, loss of plant populations in hot microsites and increased spread of invasive species and pests (System Overview, 2018).

To mitigate the impacts of a changing climate, we need to increase the capacity of ecosystems to buffer the impacts of extreme events like fires and floods. Some of this involves integrating climate change mitigation into future resource and area plans. Other aspects of implementation involve on-the-ground action. For example, as of 2017, OSMP staff had improved forest ecosystems and reduced the risk of catastrophic wildfire by thinning trees in 1,500+ acres of overly dense forests (System Overview, 2018).

This strategy involves integrating climate change considerations into future planning efforts. It also requires **establishing a program** to guide climate change research and consider actions to increase the capacity of ecosystems to buffer the impacts of extreme events. In addition, OSMP staff in coordination with other departments will implement the Boulder's Climate Commitment related to urban ecosystems which will include discussions of acquisitions of water rights.

### *Community Voices*

During the March 2019 community meeting, participants provided open-ended comments, with many addressing the importance of mitigating impacts of climate change. This sentiment echoed findings from youth-focused micro-engagements in the fall of 2018 where youth respondents thought OSMP should be adapting the land with resiliency and climate change in mind while focusing on restoration.

## **EHR.8) DEVELOP A LEARNING LABORATORY APPROACH TO CONSERVATION:** Conduct, support and distribute the findings of scientific research to inspire community stewardship.

OSMP uses science to further understand ecosystems and document their attributes, conditions and significance. Resulting data also helps detect changes in resource conditions and evaluate consequences of management actions. Each year we undertake

dozens of monitoring projects, sponsor research grants and issue 30-50 research permits. There is also considerable community interest in citizen science programs and finding out more about the state of OSMP natural resources. To develop strategies and best management practices for conducting and applying research and monitoring, staff must describe successes to date, study and learn from our peers and secure resources.

This strategy - and the master plan as a whole - helps OSMP staff focus our research agenda and capture existing commitments to monitor resources conditions. Moreover, it guides future **systemwide and area planning** efforts by informing the development of a consistent inventory and assessment process to determine relative ecological value and trends over time. With this strategy, staff aim to inspire citizen science, community understanding, practical initiatives, pilots and catalyst projects to improve the city's ability to recognize and respond to environmental trends.

### Community Voices

To understand how best to share data and research findings, the 2019 OSMP Master Plan Survey asked residents how likely they would be to use certain tools to learn more about OSMP. As Figure 3.1.3 demonstrates, the three most preferred methods were on-site signs, website content and graphical hard copy materials.

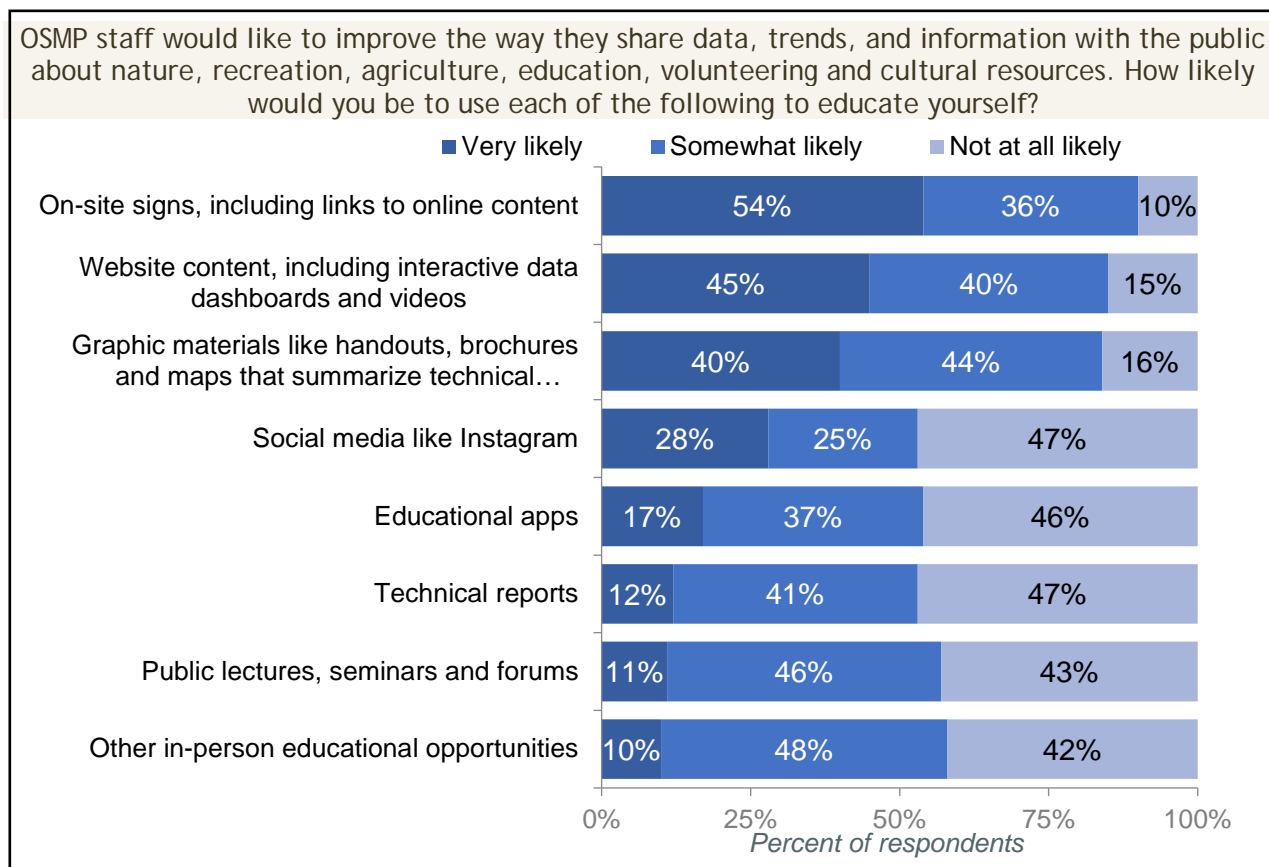


Figure 3.1.3: Question #21 Likely Use of OSMP Educational Methods



## **EHR.9) REDUCE AND OFFSET GREENHOUSE GAS EMISSIONS:** Support the citywide climate commitment by reducing and offsetting greenhouse gas emissions related to departmental operations and visitor travel.

Climate change is attributed to increased levels of atmospheric carbon dioxide (CO<sub>2</sub>) and other greenhouse gases produced from the use of fossil fuels; and we want to play a part in reducing these inputs. However, reducing emissions will come with a price tag. For example, transitioning OSMP's fleet to clean energy vehicles will be expensive. OSMP may be able to partially offset costs like these if we can earn credit for the large quantity of carbon that is stored on OSMP lands. Moreover, future management choices could even accelerate carbon storage.

As climate change affects a broad spectrum of OSMP's operations and lands, this strategy has synergies with the other focus areas. More specifically, this strategy would involve the creation of a program studying and experimenting with carbon sequestration in agricultural fields which directly relates to the **Agriculture: Today and Tomorrow**. It also relates to visitor travel and **Responsible Recreation, Stewardship and Enjoyment**. Finally, this strategy will likely integrate with operational strategies proposed under **Financial Sustainability**.

### *Community Voices*

Community engagement frequently surfaced concerns regarding climate change related impacts on our OSMP lands. In particular, during the **Ecosystem Health and Resilience** community workshop we heard interest in maintaining diverse ecosystems to modulate temperatures, slow water runoff and store carbon (Third Engagement Window Summary Report, 2019).

## **Advancing Community-wide Goals**

As mentioned in Chapter 2, the master plan advances community-wide objectives described in the city's Sustainability and Resilience Framework. For example, outcomes and strategies within the Ecosystem Health and Resilience focus area strongly support and align with the following objectives within this framework:

- Environmentally Sustainable Community;
- Safe Community; and
- Livable Community.

The master plan also integrates and advances community-wide policies in the Boulder Valley Comprehensive Plan (BVCP) to OSMP lands and management practices. Outcomes and strategies within Ecosystem Health and Resilience strongly support and align with BVCP policies, including:

- 3.01 Incorporating Ecological Systems into Planning
- 3.02 Adaptive Management Approach
- 3.03 Native Ecosystems
- 3.04 Ecosystem Connections and Buffers
- 3.07 Invasive Species Management
- 3.08 Public Access to Public Lands
- 3.09 Integrated Pest Management
- 3.10 Climate Change Mitigation & Adaptation & Resilience
- 3.20 Wildfire Protection & Management
- 3.21 Preservation of Floodplains
- 3.22 Floodplain Management
- 4.01 Climate Action: Reduce Greenhouse Gas Emissions
- 8.16 Trail Functions and Locations

Guidance in this focus area will also support community conversations in the future as the BVCP periodically gets updated.

## 3.2 Responsible Recreation, Stewardship and Enjoyment

*We are united by our connection to and enjoyment of nature and our obligation to protect it.*

### Introduction

#### *Our Historic Role in the Region*

In 1910, a report by Frederick Law Olmsted Jr. – the nation’s pre-eminent landscape architect at the time – highlighted the value of Boulder’s natural areas, particularly the Flatirons, for their contribution to the quality of life for the citizens of Boulder:

*In the great tract of unspoiled foot-hill scenery lying above and beyond the Chautauqua grounds, Boulder has a priceless possession. . . as paths and well planned roads are gradually extended through the tract it will become possible for anyone to traverse in the course of two hours’ leisurely walking or driving, as beautiful, wild, and refreshing scenery as any that thousands upon thousands of busy, hard-working Americans spend largely of their money and time to enjoy by traveling thousands of miles from home.*

Over a century later, Boulder’s open space system is three times the size of the city of Boulder itself, with over 150 miles of trails providing access to much of the same beautiful scenery.

Our community’s long-term investment in open space has paid dividends for each generation of community members with stunning landscapes, trails and other facilities for all to enjoy long into the future. From hiking, biking and climbing, to birdwatching, photography and quiet contemplation, OSMP lands offer great experiences for all. The OSMP lands present both accessible and challenging terrain for all abilities, and as nature presenter David Attenborough has said, “No one will protect what they don’t care about; and no one will care about what they have never experienced.”

#### *The Future of Recreation*

As the Front Range population grows, so too has the interest in outdoor recreation, reflected by the booming outdoor industry in Colorado (System Overview, 2018). In 2017, OSMP attracted roughly 6.25 million visits, up 34 percent from 4.7 million in 2005. Along with the rise in visitation, OSMP has also seen a growing interest and participation in volunteer opportunities as forms of recreation.

Nonetheless, rising visitation stresses a system designed to accommodate far fewer residents and visitors. While maintenance needs grow, increased trail use can also flush certain wildlife from the area, facilitate the movement of weeds and pests, cause erosion and damage vegetation (System Overview, 2018).

How do we address increasing visitation and related impacts to visitors' experiences, plants and animals? Even in light of this growth, how do we allow children to fall in love with nature so they will then protect it in years to come? How do we engage and welcome underserved communities and honor our legacy of designing experiences for all to enjoy? And how will we work as a community to protect and preserve OSMP lands for future generations?

As we think to the future of OSMP, the outcomes listed below describe aspirations for responsible recreation over the next decade and beyond.

## Outcomes: Responsible Recreation, Stewardship and Enjoyment

The following outcomes describe staff and community aspirations for Recreation, Stewardship and Education (RRSE) over the next decade and beyond.

- **RRSE.A) DIVERSE RANGE OF PASSIVE RECREATIONAL OPPORTUNITIES:** A fun and diverse range of recreational opportunities reflects visitors' interests and abilities that contribute to our physical and mental well-being.
- **RRSE.B) ENJOYABLE, RESPONSIBLE RECREATION:** Amid changing visitor use levels and patterns, ecosystem health is sustained and visitor experiences remain positive.
- **RRSE.C) WELCOMING, ACCESSIBLE TRAILHEADS:** Welcoming trailheads and supporting recreational amenities provide access to and highlight Boulder's scenic, natural and cultural landscape.
- **RRSE.D) GREAT EXPERIENCES FOR ALL:** Visitors respect and care for each other so all can enjoy themselves.
- **RRSE.E) HIGH-QUALITY TRAIL NETWORK:** Visitors can enjoy OSMP lands and reach a range of recreational destinations through a well-maintained, connected network of local and regional trails that is welcoming and accessible to all.

## Strategies: Responsible Recreation, Stewardship and Enjoyment

### RRSE.1) SUPPORT A RANGE OF RECREATIONAL

**OPPORTUNITIES:** Continue to encourage a diverse range of passive recreation opportunities that honor and respect the unique character and history of the Boulder community and its surrounding open space lands, providing fun and memorable experiences.

OSMP lands support a diverse range of recreation activities across a diversity of recreation settings, referred to as the Recreation Opportunity Spectrum, a concept rooted in the idea that land stewards can facilitate a continuum of outdoor experiences based on the character of the landscape and understanding the type of experiences best fits within a particular setting, temporarily and spatially (Visitor Use Management Framework, 2016). By applying this model to OSMP's specific landscape context, we aim to better understand visitors' experiences on OSMP lands.

This strategy will continue **programming** that contribute to the diverse range of passive recreation activities. It also guides future planning and design efforts, in which options for providing the follow would be considered: educational loop trails, family-friendly infrastructure, picnic facilities, stacked loops for mountain biking, climbing areas, connected trail routes for runners, trails through agricultural lands, trailheads with adequate parking, well-designed trails for horseback riding and sites well-suited for bird watching.

Implementing this strategy would also require updating visitor use management guidance to evaluate and consider emerging activities such as e-bikes, hammocking and slack lining to determine their appropriateness on OSMP lands. This planning update would also consider how we improve accessibility and what **programs and projects** would improve access for underserved populations, including people experiencing disabilities, the Latino community and youth.

#### *Community Voices*

According to a 2019 survey of Boulder Valley residents, the popularity of recreation activities on OSMP lands falls into three tiers. The first - hiking - is frequently enjoyed by 85 percent of adult residents 18 or older. The second tier of activities - frequently enjoyed by about 25 percent of adult residents - includes dog walking, running, biking and observing nature/wildlife. The third tier of activities is frequently enjoyed by less than 10 percent of residents and includes contemplation/meditation (9 percent), climbing/bouldering (8 percent) and photography/painting (6 percent) among others.

Respondents to the 2019 OSMP Master Plan Survey also demonstrated interest from community members to see a mix of opportunities regarding dogs and bikes. For example, residents would like to see a mix of areas where biking opportunities are improved (59 percent) and areas where bikes are not allowed on certain days (41 percent). OSMP will continue to provide opportunities for a mix of activities, balancing various community interests.

## **RRSE.2) ENCOURAGE MULTIMODAL ACCESS TO TRAILHEADS:** Explore and partner on a range of coordinated transportation and design solutions to reduce parking congestion and promote active living, ecosystem health and public transportation.

Especially at certain times of the day, week or year, parking at many popular OSMP trailheads can be full, causing spillover parking in surrounding neighborhoods. Often, residents feel trails are crowded near these same trailheads, such as Chautauqua and Sanitas (2019 OSMP Master Plan Survey). Meanwhile, transportation issues are also a barrier for those who find it hard to reach OSMP by bus, bike or foot (2019 OSMP Master Plan Survey). Inclusive, equitable multimodal access to OSMP lands will improve OSMP's ability to address these sometimes-competing needs.

To that end, this strategy would enhance **program** coordination between City and County departments to address parking congestion at trailheads and related neighborhood impacts, especially at certain congestion hot spots. Approaches may include exploring the feasibility of coupling shuttle service to trailheads with parking management tools such as time limits and parking fees, as was completed through the *Chautauqua Access Management Plan*. Other means of encouraging walking and biking to trailheads would also be explored. Building on successes at Chautauqua, this strategy would inform future **planning** and design **projects** to explore short- and long-term solutions to parking congestion at high-use trailheads.

This strategy also supports strategies under **Ecosystem Health and Resilience** regarding reducing emissions related to visitor travel, as well as citywide goals to decrease greenhouse gas emissions and increase biking, walking and use of public transportation. In addition, this strategy would support and be completed in parallel with strategy **RRSE.7 (Manage Increasing Visitation)** to ensure multimodal access options consider implications for visitation numbers.

### *Community Voices*

Residents' concerns about parking congestion emerged in findings from the 2019 Master Plan Survey (Figure 3.2.1), with variations by location.

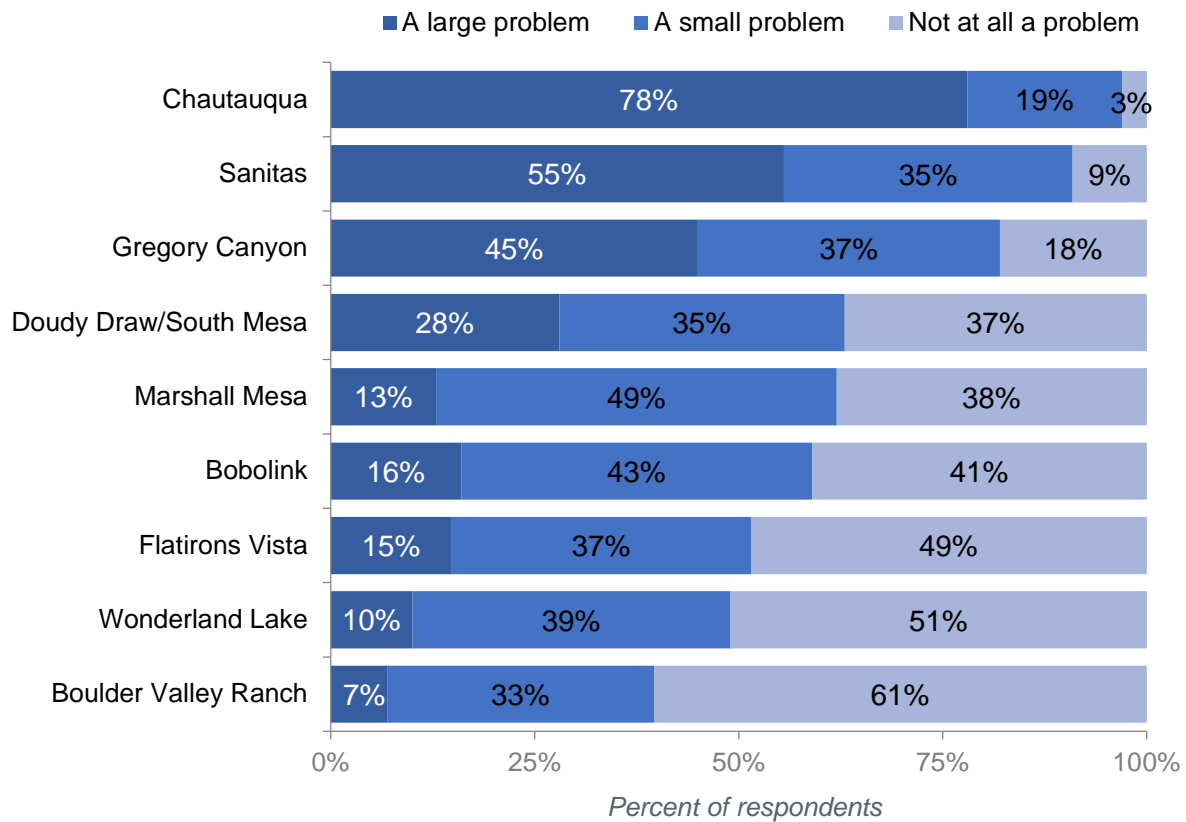


Figure 3.2.1: Residents' Perceptions of Parking Congestion  
 (Source: 2019 OSMP Master Plan Survey)

The survey also uncovered support for potential transportation solutions for addressing parking congestion. On the whole, residents support less restrictive approaches over more restrictive ones. For example, most residents (nearly 9 in 10) would support or strongly support the least restrictive approach - low- or no-cost shuttles to trailheads. Roughly 6 in 10 would support or strongly support closing parking lots when full and only letting cars in when someone leaves (more restrictive). Even fewer (roughly 3 in 10) would support or strongly support charging for parking at more trailheads (most restrictive). See Figure 3.2.2 under RRSE.7 for more information.

### **RRSE.3) PROVIDE WELCOMING AND INSPIRING VISITOR**

**AMENITIES:** Continue to provide and improve welcoming, sustainable and accessible trailheads and other amenities, such as the Ranger Cottage, Flagstaff Nature Center, Panorama Point and other viewpoints, picnic areas and wayfinding information, to enhance visitor experiences and inspire understanding of the surrounding landscape for a range of visitor demographics.

In our historic mountain parks just west of town, the National Park Service planned and designed amenities such as Sunrise amphitheater and Panorama Point in 1937, when Boulder's population stood at about 11,000 people (System Overview, 2018). Today, our population is 10 times that, and residents enjoy OSMP lands frequently. In fact, more than 7 in 10 city residents visit 2 or 3 times a month or more (2019 OSMP Master Plan Survey). This increased use puts pressure on aging visitor facilities, some of which need improvements.

The 2005 Visitor Master Plan (VMP) set in motion Open Space and Mountain Parks' framework for making decisions that fosters the continuation of a high-quality visitor experience and confirms Boulder's commitment to protecting and preserving its lands for future generations. It also presented opportunities to create a full range of visitor experiences, including extending a sense of welcome; enhancing visitor access; connecting to the land; and accessing various destinations. Today, OSMP continues to advance this model of providing equal opportunities for all residents and visitors to connect with nature "for anyone to traverse," as Frederick Law Olmsted Jr. described in his 1910 report. As a result, resident surveys conducted by OSMP continue to reflect the public's overall satisfaction with their open space experiences.

This strategy directs improvements to our maintenance **program** for recreation assets by updating facility inventories, better tracking the condition of visitor infrastructure, and anticipating repairs or enhancements. In support of **FS.4 (Take care of what we have)**, considerations for long-term maintenance needs will also be addressed in future **planning** and design **projects** to extend the usable life of visitor amenities and better understand lifecycle costs.

This strategy guides staff to work closely with the community on **plans** to improve design, sustainability and maintenance of visitor facilities. It can also enhance how we deliver services to all residents, for example, through interpretive amenities in various locations throughout the system. The goal is to inspire both awe and understanding of our important natural, scenic and cultural landscapes by enhancing educational opportunities as visitor amenities get improved over time.



### **Community Voices**

Early in the Master Plan process, the public was asked about their hopes for the future of OSMP. One community member described their hope as, “Quality, well managed, well maintained facilities help preserve the natural environment and enhance recreation.” Another responded, “Because the scenery, the natural resources, and the connection with nature are key elements that Boulder has thoughtfully preserved through Open Space, visitor facilities are essential for Boulder's growing population to be able to enjoy these areas.”

This desire for quality amenities was also reflected in the 2016 Resident Survey, where respondents rated the quality and importance of certain OSMP facilities. For example, six in ten respondents felt that restrooms are important. Master plan engagements with youth and the Latino community also resulted in strong interest and support for quality visitor amenities, including benches, picnic tables and child-friendly restrooms to support family visits to OSMP (Third Engagement Window Summary Report, 2018).

**\*RRSE.4) UPDATE GUIDELINES AND STANDARDS FOR QUALITY TRAIL DESIGN AND CONSTRUCTION:** Design and construct quality trails that facilitate a range of experiences through a variety of landscape types, using design guidelines and construction standards that elevate the quality and sustainability of trails and encourage the use of native materials that blend with natural surroundings.

\*This strategy is a high priority for the next decade.

Trails are the foundation on which memorable experiences of open space are created for our residents and visitors. These findings suggest that our legacy of trail building continues to be well-received. However, more frequent and intense flooding, high levels of use, erosion and the proliferation of informal or undesignated trails present challenges for maintaining or improving the trail system.

This strategy guides staff to focus OSMP's design and construction **program** on updating guidelines, standards and specifications and developing best practices for planning, designing, constructing and maintaining trails. For example, using federal trail standards as a basis for conversation, staff have adapted trail management objectives (TMOs) as one of those inputs to document and communicate a classification system for OSMP's designated trails.

Implementing this strategy through future **planning** would also build on existing guidance for OSMP trails, providing additional direction on how trails should look and feel in different landscape settings, what range of experiences they should facilitate and what type of destinations should they connect to like scenic viewpoints. Guidance would also be updated regarding sustainability practices and resilience to more frequent and intense weather events.

### **Community Voices**

In the 2016 Resident Survey, nearly all respondents reported they had used OSMP trails in the previous year, and about 90 percent rated trail quality as very good or excellent. In the 2019 Master Plan Survey, 63 percent of respondents supported widening, hardening or redesigning trails to support high visitation levels. Design guidelines and standards will consider these findings and provide general guidance on how and under what conditions to consider these and other trail design techniques that seek to protect adjacent habitat and take visitors where they want to go.

**\*RRSE.5) REDUCE THE TRAIL MAINTENANCE BACKLOG:** Use strategic approach to anticipate and address long-term maintenance needs and changing conditions through a prioritized, life-cycle approach to improving the condition of OSMP's diverse portfolio of legacy and modern trails and features.

\*This strategy is a high priority for the next decade.

To keep pace with industry standards and best practices, OSMP is moving toward managing the trail system with an integrated asset management system. Utilizing an asset approach for trails and their features will enable better tracking of maintenance and repair needs, improving operations and allowing more efficient allocation of resources. The asset management system will include cyclic updates to existing inventories, condition surveys and identifying life cycle costs over time. This strategy relates to **RRSE.4**.

In managing the trail system there are three categories that define the level of work needed to maintain trails; routine, preventative and major maintenance. All trails require routine maintenance to prevent long-term disrepair and the higher costs often associated with major repairs. Trails also go through a lifecycle requiring varying levels of resources to maintain, repair or replace.

Additionally, deferred maintenance is a common reality when managing a complex and aging trail system such as the one on OSMP lands. While just over one-third of the

current system is in good condition needing only routine maintenance, approximately 95 miles of existing trails on the OSMP system need preventative and major maintenance according to the last condition survey from 2015-2017. These 95 miles of trails are spread across the system with elements of each trails section varying in condition from poor to fair. Trail conditions are used to determine the most appropriate tool for management with the overall goal of improving the overall condition of the trail system. Options for preventative and major maintenance to improve the condition of trails include rebuilding and repairing trails in-place as well as rerouting sections or longer segments of trails. Improvements and repairs range in size, cost and complexity. Some examples are in-place drainage upgrades, resurfacing or tread stabilization to extend the trails lifecycle but prescriptions may also include possible reroutes to correct design flaws that create longstanding issues such as unsustainable grades, ongoing erosion, trail widening and identified impacts to surrounding wildlife habitat. Additional consideration for maintenance and asset lifecycle must be taken into account to ensure construction or adoption of new trails meet standards to reduce long term maintenance costs.

Community desire for trails that do not meet standards for sustainability, such as Mount Sanitas, come with a much higher maintenance cost. Past trail study area (TSA) plans for the north, west and southern parts of the system provide community and staff recommendations on rerouting or competing repair in-place for a large part of the system.

This strategy guides staff to continue **program** improvements that balance consistent routine maintenance while addressing preventative and major maintenance needs as funding allows will be critical to upgrade the health of trails to meet the designated management objectives and improve conditions. This will ultimately reduce costs of long-term maintenance. The emerging asset management systems and tools will ensure the trail system is maintained and managed effectively by tracking progress and lessons-learned that can help drive priorities and innovation.

### *Community Voices*

In the 2019 Master Plan Survey, 76 percent of residents thought OSMP should focus more on improving maintenance and design of existing trails compared to those who thought we should focus more on building new trails (24 percent). This finding confirms input received throughout the planning process regarding the importance of trail maintenance.

## **RRSE.6) IMPROVE TRAIL CONNECTIONS:** Connect and improve the trail network where lands offer high recreational potential, leveraging citywide and regional partnerships.

Beyond repair and rehabilitation work needed for existing trails on OSMP land, past trail study area plans have recommended construction of some new OSMP trails. Future planning for the eastern part of the system may also result in recommendations for additional trail mileage. OSMP also plays a key role in the region's open space and trail network.

Department funding levels over the next decade will determine the degree to what can be achieved in the next decade - both in terms of construction and recognizing maintenance costs for new trails. Therefore, funding and management partnerships with other land managers or organizations has the potential to expand possibilities - as will regular and robust engagement of community groups to help construct and maintain any new trails that come online.

This strategy guides staff to pursue design and construction **projects** for new trails, while emphasizing maintenance needs for existing trails. For example, most of the work identified in the North Trail Study Area Plan for the Boulder Valley Ranch area focuses on repairing or rerouting existing trails, which will improve visitor experience and decrease maintenance issues and costs over time. A few new trails have also been suggested such as the Wrangle and Shale trails, and recommendations also included formalizing the undesignated trail along the Eagle and Sage loop. Work plan priorities will first focus on repairing or replacing existing trails but then look to expand capacity through partnerships and community volunteers to strategically implement new trail construction.

### *Community Voices*

Input into the Master Plan process at the **Responsible Recreation, Stewardship and Enjoyment** emphasized improving trail connections, especially local and regional connections for mountain biking and commuting (Third Engagement Window Summary Report, 2019). In addition, 59 percent of residents would like to see trails improved for biking (2019 OSMP Master Plan Survey).

**\*RRSE.7) MANAGE INCREASING VISITATION:** Develop an adaptive visitor use management toolkit that explores the expanded use and coordination of management tools that address visitation growth and support positive visitor experiences.

\*This strategy is a high priority for the next decade.

The average annual increase in OSMP visitation is similar to neighboring public lands in Jefferson County and other Front Range areas (System Overview, 2018). The steady rise in use results in added wear and tear to an already aging system of trails and amenities and can affect a visitor’s ability to have the experiences they seek on open space. These challenges necessitate thoughtful and holistic management approaches that consider ecosystem health, visitors experiences, and equity in how all ages, abilities and demographics can access OSMP lands.

We are also committed to facilitating high-quality experiences for visitors over time, despite changes in levels and patterns of use. However, the recent Master Plan Survey suggests that increasing use already affects residents’ experiences. It revealed - among other things - that perceptions of crowding and parking congestion vary according to place (see Figure 3.2.2). While Chautauqua and Sanitas present the greatest concerns for residents, about half or more residents feel crowding on trails is also a problem at lesser known areas such as Bobolink, Dowdy Draw and South Mesa. These findings suggest the need to monitor conditions over time, especially where congestion issues are emerging. Early detection can support early action.

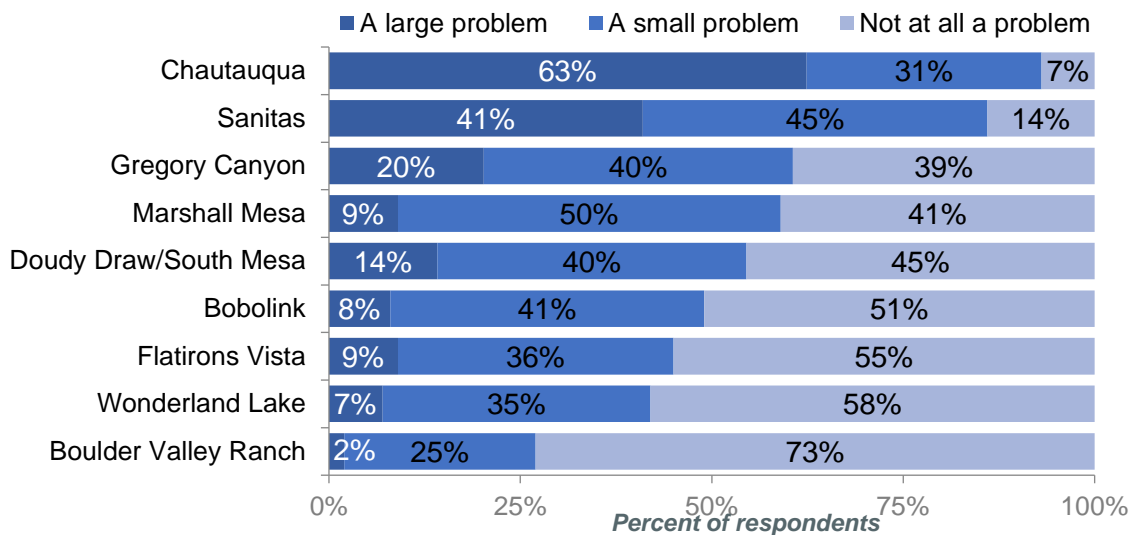


Figure 3.2.2: Resident Perceptions of Crowding on or near Trails  
 (Source: 2019 OSMP Master Plan Survey)

Solutions to address concerns about crowding and overuse will also vary by location. For example, closing parking lots when they are full is only feasible where OSMP trailheads are supported by OSMP-managed trailheads and adjacent areas will not be impacted by displaced parking. In some cases, visitors park on public streets owned by the city or Boulder County, which cannot be closed. Therefore, an adaptive, flexible and successful recreation management program will require a toolkit of instruments rather than one single tool. To assemble this toolkit of solutions, staff will incorporate lessons learned over the years, as well as best practices from land managers across the country. For example, the Interagency Visitor Use Management Council guides federal land management agencies through a step-wise process to understand and address visitor use (Figure 3.2.3).

## Visitor Use Management Framework

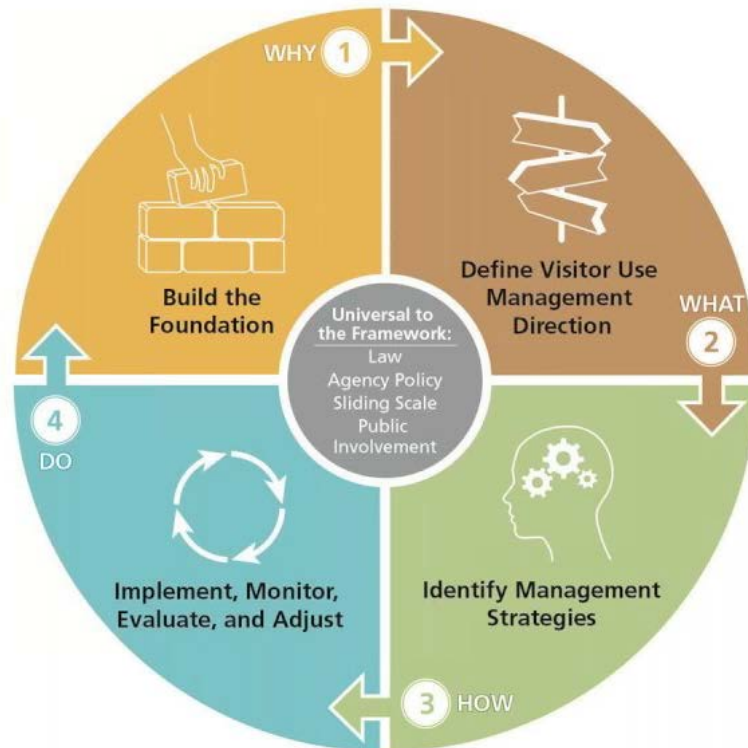


Figure 3.2.3: Federal Visitor Use Management Framework

This strategy guides staff to use best practices in updating the *2005 Visitor Master Plan* that will serve as the foundation for community conversations about which tools may be appropriate as we prepare the visitor use management toolkit. In developing this toolkit, OSMP will be able to bring forward our long history of managing visitor use using existing guidance from approved plans.

For example, implementing this strategy also involves our ongoing program to manage how and when visitors use Open Space, including muddy trail closures, wildlife closures, permit programs and limiting certain uses to certain trails. In the NTSA, there is also guidance on temporal separation for the Mahogany Loop Trail. These provide a good foundation for exploring how to manage increased visitation and the adverse effects it can cause.

Beyond that, a suite of interrelated Master Plan strategies addresses visitor use management from several angles, establishing agreement around meaningful parameters to advance the conversation. Strategy EHR.2 (**Close and restore undesignated trails in sensitive habitat areas**) describes a commitment to reduce the occurrence of undesignated pathways, which are some of the most visible effects of increased use. Strategy EHR.3 (**Extend requirements to stay on designated trails into targeted locations**) helps clarify regulations for visitors and minimizes impacts to sensitive habitat adjacent to trails. Strategy CCEI.5 (**Enhance signs and communications**) would inspire learning about nature, which often encourages visitors to protect it and can illustrate actions visitors can take to reduce conflicts between activities.

The full suite of outcomes and strategies in **Responsible Recreation, Stewardship and Enjoyment** approaches visitor use and experience holistically, describing aspirations and approaches for both ecosystem health and visitor enjoyment amid increasing use. For example, strategy RRSE.2 (**Encourage multimodal access to trailheads**) sets up future conversations with partners around coordinated transportation solutions for parking congestion, which closely correlates with perceived crowding on the trails (Master Plan Survey Report, 2019).

### *Community Voices*

A suite of questions in the 2019 OSMP Master Plan survey sought to understand residents' perceptions of visitation levels and use patterns. Concerns about crowding on trails showed up strongly, especially at certain sites; concerns about parking congestion even more strongly. To address these concerns, residents showed support for steering visitors away from high use areas by creating amenities that attract people elsewhere. However, most said that they themselves would rather access open space as they do now - rather than making different individual choices to reduce conflict.

As Figure 3.2.4 shows, over 80 percent of residents also support the following management approaches for high use areas:

- Increasing education/outreach about trail etiquette (97 percent)
- Providing low- or no-cost shuttles to trailheads (87 percent)

- Closing trails for a period of time to protect wildlife and habitats (86 percent)

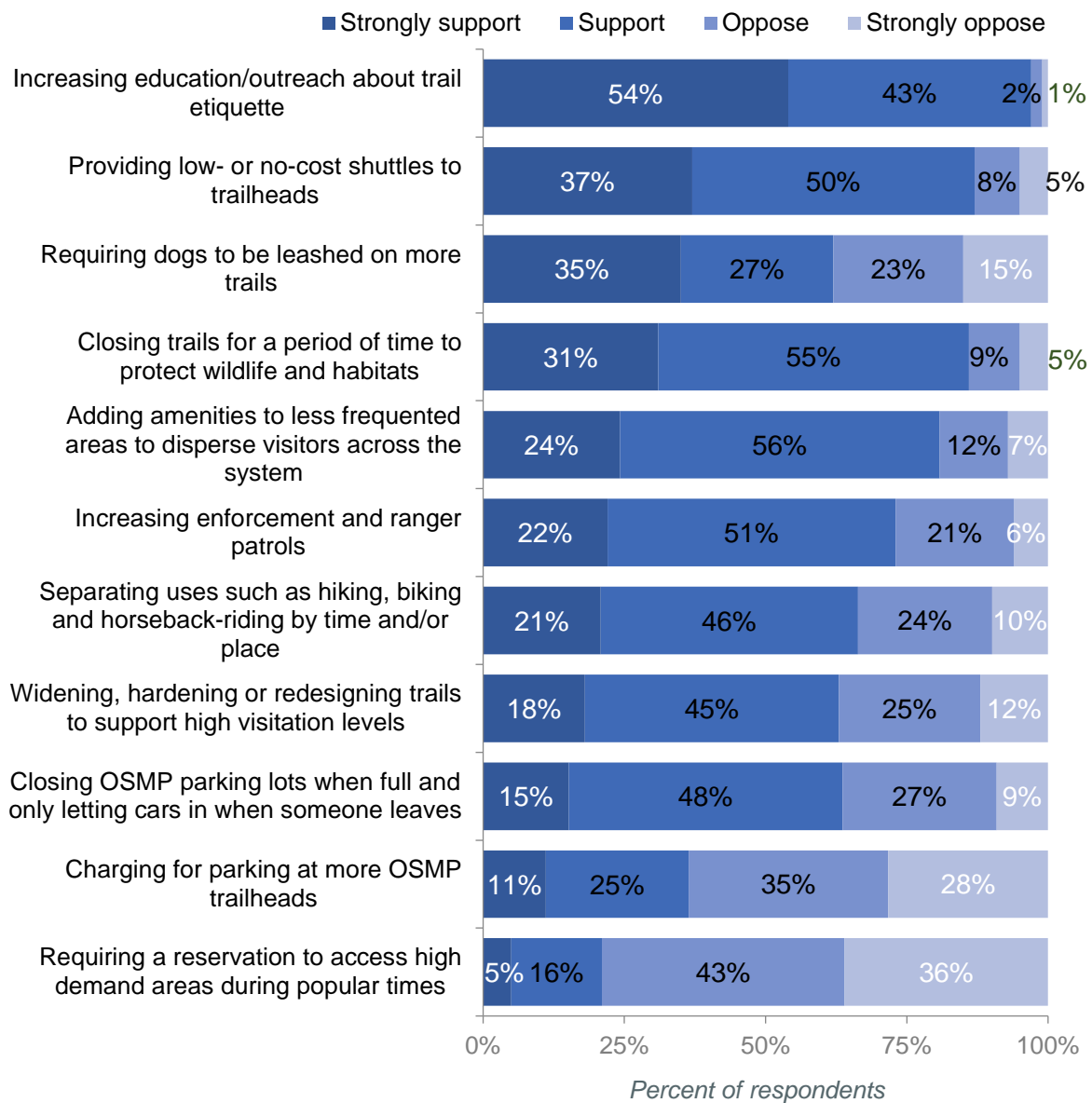


Figure 3.2.4: Resident Support or Opposition to Potential Management Approaches in High Use Areas  
 (Source: 2019 OSMP Master Plan Survey)

Like this strategy suggests, an adaptive management toolkit will further explore these and other tools and related strategies to achieve desired conditions at specific sites throughout the system.



**\*RRSE.8) REVIEW AND IMPROVE FEE-BASED RECREATION PROGRAMS:** Support enjoyable and compatible recreation experiences by periodically evaluating and refining fee-based recreation programs, commercial use permits and related regulations to make programs easier to understand for visitors and easier to manage for staff.

\*This strategy is a high priority for the next decade.

Proactive fee-based recreation planning and program management enhances our ability to ensure that people can enjoy specific recreation experiences on our open space lands that require additional administrative support to manage. For some activities that are consistent with charter purposes for OSMP but have the potential to result in disproportionate impacts to resources or others' enjoyment, the opportunity to engage in these activities requires adhering to program specifications and paying program registration or permit fees to recover the costs of program administration and oversight. For example, OSMP requires annual, limited or event commercial use permits for nonprofit and for-profit groups who themselves charge a fee for a service that brings people or animals to OSMP lands or facilities.

In addition, the City of Boulder has one of the very few open space or park systems in the Front Range where dog guardians may manage their dogs off-leash. To enjoy this privilege, dog guardians and their dogs must follow voice and sight control (V & S) requirements, and their dog must visibly display a valid V & S program tag. After attending a V & S education class, dog guardians can register with the program and purchase a tag for each off-leash dog.

Requests for participation in fee-based programs are growing and program administration is becoming more complex, which adds demands to staff time. From 2016 to 2018, the number of commercial use permits issued grew by over 60 percent, bringing in \$34,600 in fee revenue in 2018. For the V&S program, requirements and regulations have grown more complex over time, which presents challenges for both visitors trying to understand the rules and rangers trying to enforce them.

This strategy will guide staff to periodically evaluate the requirements and regulations related to fee-based **programs**, as well as other recreation-based programs, in order to continue providing compatible and positive experiences for all visitors while minimizing impacts to natural resources. It will encourage staff to consider **program enhancements** that improve the level of compliance with participation and program requirements which then result in responsible visitor actions and behaviors.

Another specific intent for **program enhancements** is to improve the effectiveness of communicating program expectations and to reduce the reliance on enforcing regulations while honoring the diversity of experiences that create unique visits to OSMP lands. Evaluations will focus on fee-based recreation programs such as V & S programs, commercial use permitting, and shelter and facility rentals, but could also include consideration of non-fee programs such as fixed hardware climbing, hang gliding/paragliding, special use event permits as well as others.

### *Community Voices*

Half of city residents would like more off-leash opportunities to walk their dogs. The other half would like more opportunities to visit areas where dogs are not allowed. Not only were nearly equal proportions leaning one way or the other, the strength of the sentiment in both directions was also nearly equal.

**RRSE.9) DEVELOP A LEARNING LABORATORY APPROACH TO RECREATION:** Combine community engagement results with scientific research and comprehensive data analysis to understand trends, develop and assess practical initiatives, and design management approaches that seek to improve community well-being, enjoyment, understanding and stewardship.

OSMP is committed to continued research and monitoring to better understand how and why visitors enjoy our lands. We also seek practical applications of that data to provide the most value for visitors and ecological health alike.

This strategy supports our human dimensions **program** and will lead to a series of **projects** that can improve the way we share information with the public and the way we design and maintain trails and visitor infrastructure. It also guides staff to partner with the community to build a common understanding of Boulder's emerging recreation needs and trends, the positive effects open space has on our lives and our community and the ways this information can inform open space management.

A similar strategy has also been developed in the **Ecosystem Health and Resilience** focus area.

### *Community Voices*

Over 80 percent of residents would prefer using the following tools to learn more about OSMP:

- On-site signs, including links to online content;

- Website content, including interactive data dashboards and videos; and
- Graphic materials like handouts, brochures and maps that summarize technical information.

## Advancing Community-wide Goals

The Master Plan advances community-wide objectives described in the city's Sustainability and Resilience Framework. For example, outcomes and strategies within the Responsible Recreation, Stewardship and Enjoyment focus area strongly support and align with the following objectives within this framework:

- Accessible & Connected Community;
- Healthy & Socially Thriving Community; and
- Livable Community.

The Master Plan also integrates and applies community-wide policies in the Boulder Valley Comprehensive Plan (BVCP) to OSMP lands and management practices. Outcomes and strategies within Responsible Recreation, Stewardship and Enjoyment strongly support and align with BVCP policies, including:

- 2.01 Unique Community Identity
- 2.26 Trail Corridors / Linkages
- 8.17 Trails Network

Guidance in this focus area will also support community conversations in the future as the BVCP periodically gets updated. For example, RRSE outcomes and strategies may inform BVCP updates that incorporate OSMP Master Plan policies regarding trail design, visitor amenities and visitation growth, as well as transportation, mobility and accessibility.

## 3.3 Agriculture Today and Tomorrow

*Our legacy and future are based on working landscapes that are in harmony with nature.*

### Introduction

#### *Boulder's Agricultural Heritage*

For over 150 years, Boulder's lands and waters have served as the foundation of a strong, resilient agricultural system. In the mid-19th century, agricultural production developed in the Boulder Valley to supply the gold mining camps with food (Ag Plan, 2017). Today, farmers and ranchers still work these same lands, providing food and products to the community and fostering a scenic legacy of pastoral barns, fields and fences. The city preserves these agricultural uses to support agricultural viability as well as the native plants and animals who rely on agricultural lands as habitat. We also deeply value our relationships with ranchers, farmers and the many community members who enjoy and appreciate these lands.

#### *Integrating Past Planning*

OSMP's Agricultural Resources Management Plan (Ag Plan) was approved by City Council in 2017. Many of the draft master plan strategies combine management policies from the Ag Plan and others more directly restate them, but all are consistent with the Ag Plan. Including this focus area in the OSMP master plan integrates recommendations with other focus areas and management strategies, allowing prioritization to occur across all charter purposes. The Ag Plan will be updated periodically to address changing conditions.

### Outcomes: Agriculture Today and Tomorrow

The following outcomes describe staff and community aspirations for agricultural over the next decade and beyond.

- A. **VIABLE AGRICULTURAL LIVELIHOODS:** The city's ranchers and farmers are valued and supported in their contributions to the stewardship of Boulder's agricultural heritage.
- B. **SUSTAINABLE, PRODUCTIVE AGRICULTURE:** OSMP's agricultural lands and infrastructure remain productive and sustainable long into the future.

- C. **DIVERSE AGRICULTURAL PRODUCTS FOR LOCAL MARKETS:** A diversity of food and agricultural products is grown on suitable open space properties to better meet the changing demands of the local agricultural economy and the needs of ranchers, farmers and city residents.
- D. **HIGH-VALUE HABITAT ON RANCHES AND FARMS:** City agricultural lands provide high-value habitat for rare and native species, integrating both agricultural and ecosystem objectives.
- E. **SOIL HEALTH AND RESILIENCE:** Appropriate agricultural practices protect high-quality soils from erosion, improve agricultural productivity, maintain soil health and increase resilience in a changing climate.
- F. **RESILIENT AND EFFICIENT WATER SUPPLY:** OSMP emerges as a leader in the acquisition and preservation of water assets and the application of innovative irrigation practices that anticipate environmental change.
- G. **APPRECIATION FOR WORKING LANDSCAPES:** Community members experience and better understand working landscapes, contributing to the preservation of Boulder’s agricultural lands and heritage.

## Strategies: Agriculture Today and Tomorrow

**\*ATT.1) MAINTAIN INFRASTRUCTURE FOR AGRICULTURE AND WATER:** Focus investments on maintaining and improving existing agricultural infrastructure to standards—both water-related and structural.

\*This strategy is a high priority for the next decade.

OSMP supports the livelihoods of the farmers and ranchers who partner with the city to steward the land. These highly specialized partners produce local food, feed and fiber while helping maintain healthy and productive working landscapes and locally valued viewsheds. These same farmers and ranchers play a critical role in conducting routine maintenance on irrigation and agricultural infrastructure while managing open space lands through grazing and haying operations.

A variety of maintenance **projects** will help implement this strategy, focusing work on maintaining and improving existing agricultural infrastructure. In addition, OSMP staff will develop a **program** to describe the Facility Condition Index for agricultural buildings, irrigation infrastructure and fencing. Afterward, we would seek to develop a maintenance and replacement program to keep the majority of the infrastructure in good condition.

### *Community Voices*

Community engagement revealed that infrastructure and agricultural assets were highly valued, especially when it comes to water. One resident said, “Developing resources are important now because of the uncertain future. We need to plan for this and fix what we have.”

## **ATT.2) INTEGRATE NATIVE ECOSYSTEMS AND AGRICULTURE:**

While maintaining the viability of agricultural operations, maintain and improve the quality of habitat on agricultural lands through staff programs and partnerships with ranchers and farmers.

A focus of OSMP’s agricultural management approach is the integration of agriculture with ecological stewardship, which aligns with the **Ecosystem Health and Resilience** focus area. OSMP uses agricultural management practices that benefit ecological conditions and restore ecosystems. For example, OSMP’s network of ditches creates habitat for sensitive and threatened species like the Preble’s meadow jumping mouse (Ag Plan, 2017).

To implement this strategy, we will support and maintain working agricultural lands that support native plants and wildlife by developing an agricultural ecology **program**. This strategy would also guide the establishment of a native plant propagation **program**, directly integrating agriculture with ecosystem restoration by growing native plants for use in restoration projects. Monitoring is an important aspect of any **program**, so OSMP staff may also develop a procedure to monitor the overall quality of habitat on agricultural lands.

### *Community Voices*

When asked on an online questionnaire about their preferences regarding approaches to preserving agricultural heritage, members of the public prioritized “maintaining working agricultural lands that support native plants and wildlife” above all other options (Engagement Window 3 Summary Report, 2019).

### **ATT.3) SUPPORT THE SUCCESS OF RANCHERS AND FARMERS:**

Where appropriate, evaluate and pilot cost-sharing, partnerships and other mechanisms to encourage both responsible land stewardship and economic viability for a diverse range of current and future farmers and ranchers on OSMP lands.

Agricultural practices in Boulder have emerged from the institutional knowledge of local ranchers and farmers and observations over generations of experience. The resulting landscape and food on our tables exemplify a unique agricultural heritage that is valued in the community. Today, OSMP leases about 15,000 acres of working lands, mostly for grazing, to farmers and ranchers, many of whom have been working these lands for more than 30 years.

These long-term partnerships, which are beneficial to both the city and lessees, support the local agricultural heritage of Boulder Valley and provide for continuous stewardship of the working landscape. As farmers and ranchers age, there is concern about the transition from one generation of ranchers and farmers to the next, and the viability or potential loss of this heritage (System Overview, 2018).

OSMP staff will explore the feasibility of developing a partnerships **program** to provide affordable housing for farmworkers. Another way OSMP staff will support our ranchers and farmers is by encouraging the next generation of farmworkers through an agricultural scholarship **program**.

#### *Community Voices*

Community input echoed the idea that OSMP should continue to expand partnerships with ranchers and farmers. One comment at a community workshop was, "Encourage more collaboration between OSMP and farmers, and between regional farmers."

### **ATT.4) DIVERSIFY AGRICULTURAL OPERATIONS:** Partner with open space ranchers and farmers to analyze and where appropriate expand the variety of agricultural operations on OSMP lands, focusing on the infrastructure and technical assistance needed to support local food systems, including diversified vegetable farming, pastured livestock, micro dairies and taking products to market.

OSMP currently has 470 acres of agricultural land dedicated to community farming and the production of local food products, which includes vegetable, meat and dairy

production for local sale. Further diversifying the agricultural variety improves Boulder's food system resiliency. The Boulder community continues to value locally grown foods at Boulder markets, restaurants and tables (System Overview, 2018; Ag Plan, 2017; Agricultural Program, 2019).

Our local producers include:

- Richard and Linda Biella direct-market natural beef animals locally within Boulder County, approximately 35-40 head a year.
- Anne Cure, of Cure Organic Farm, leases 20 acres for organic vegetable production adjacent to her base operation on Valmont Road. In 2018, she produced over 110,000 pounds of organic vegetables that were sold to local consumers.
- Eric and Jill Skokan, of Black Cat Farm, lease 190 acres which they use for grazing sheep and growing vegetables. Their meat and vegetables are marketed through their two restaurants, their CSA, local grocery stores, and the Boulder and Longmont Farmers' Markets.
- 63<sup>rd</sup> Street Farm, operated by Amanda and Brian Scott, leases 45 acres and supports 320 CSA members and hope to grow to support up to 450 CSA members.

Implementing this strategy will lead to **programs** that expand and diversify operations, such as an agricultural infrastructure enhancement program that would underwrite the development of diversified vegetable farming, pastured livestock and micro-dairies. Other efforts may include developing an agricultural equipment and service library for sharing high capital cost needs across a range of producers or grant writing support to help ranchers and farmers find alternative revenue sources.

### ***Community Voices***

Increasing understanding and appreciation of local agriculture by providing information about locally grown products was ranked highly in the Agriculture Today and Tomorrow questionnaire for how the city should focus on agriculture over the next 10 years.



**ATT.5) ENHANCE ENJOYMENT AND PROTECTION OF WORKING LANDSCAPES:** Partner with community members, farmers and ranchers to maintain and enhance the views of working landscapes and historic structures which are enjoyed by the community.

To better connect urban society and agricultural activities, it is necessary to cultivate an interest and desire to enjoy, participate and learn about farming and ranching. Conducting baseline inventories and condition assessments of agriculturally related viewsheds would help us know what we have and prioritize efforts to preserve the most valued views of working landscapes and historic structures for years to come.

OSMP staff will implement this strategy by accelerating a cultural landscape preservation program, and identifying agriculturally related structures, sites, and landscapes that are eligible for recognition at the federal, state or local level.

*Community Voices*

Community have expressed through the master plan process a desire to more fully understand the agricultural past of the area while also preserving views and landscapes. One community member said, "I love scenic agriculture!"

**ATT.6) REDUCE OR ELIMINATE PESTICIDE USE:** Reduce or eliminate the use of pesticides wherever possible. When reduction or elimination of pesticides is not possible, use the least toxic and least persistent pesticide that is effective.

OSMP already encourages integrated pest management and has an existing review and approval/denial process for chemical treatments (Ag Plan, 2017). An important factor in finding the least toxic and least persistent pesticide includes assessing the potential impacts of pesticides to natural controls (natural enemies) and pollinators (System Overview, 2018).

OSMP policy currently focuses on non-chemical pest management. Further advancing this work would involve creating a cost-sharing program to encourage reduced risk chemicals and elimination of pesticide use. In order to encourage accountability, this strategy will enable us to implement a surface water monitoring program to audit pesticide use on or near city agricultural lands.

### *Community Voices*

One community member passionately said, “Show the path, be the light. Stop poisoning our lands, soils, our foods and ourselves. We become what we do and consume! Let it be nutritious and as poison free as possible!” In the 2019 Master Plan Survey, a little more than half (56 percent) of respondents opposed integrating the targeted use of synthetic chemical sprays (herbicides) into the broader management approach.

**\*ATT.7) REDUCE AGRICULTURAL IMPACTS FROM PRAIRIE DOGS:** Increase the viability of agricultural operations to the extent possible by reducing impacts from prairie dogs on agricultural lands, especially in prioritized irrigated fields, while maintaining ecologically sustainable prairie dog populations across the landscape.

\*This strategy is a high priority for the next decade.

Prairie dogs are often considered “keystone” species, providing prey and landscape structure while supporting a healthy native plant community in some sites. However, in highly fragmented areas where prairie dogs cannot move or migrate naturally, population densities of prairie dog colonies increase, which can negatively impact grassland health and agricultural productivity through extended periods of unusually high grazing pressure from the prairie dogs (Ag Plan, 2017).

One way to reduce local impacts to farmland is to develop an agriculturally viable cropping **program** that naturally discourages prairie dogs. These cropping systems could include food forests, polyculture orchards, and tall and fast growing annual and perennial diverse cover crop mixes. Another approach that would address local impacts would be to develop and implement a rapid response restoration and re-colonization prevention **program** to reduce the presence of prairie dogs on irrigated agricultural lands.

This strategy also involves exploring **projects** that can consider changes to prescriptive grazing, vegetation restoration and non-native vegetation management to encourage faster recovery of vegetation in potential prairie dog relocation and agricultural restoration sites. It also involves clarifying how **planning** efforts can inform updates to policies and regulations applying to irrigated agricultural lands. For example, implementing this strategy would involve updates to sections of the Grassland Ecosystem Management Plan, as guided by EHR.5 (**Manage entire ecosystems using a holistic approach to planning**).

### *Community Voices*

In the 2019 Master Plan Survey, 59 percent of respondents supported, to some degree, the use of lethal control to remove prairie dog colonies from areas on or near irrigated farmland.

**ATT.8) PLAN FOR THE FUTURE OF WATER:** Develop and implement a water management approach that balances sustainable agricultural operations, ecosystem stewardship, protection of OSMP water rights, efficiency of water use and resilience in a more variable climate.

A continued focus of the city's agricultural program is to provide farmers and ranchers with technical support and affordable land and access to water where available. Lessees continue to play a critical role in distributing water rights across our landscape and conducting routine maintenance on irrigation (System Overview, 2018; Ag Plan, 2017).

OSMP will implement this strategy by completing a full analysis of OSMP's portfolio of water rights **program** and incorporating it into OSMP's asset management system. This information will inform future **planning** efforts for our water in a way that balances resiliency and efficiency. We also hope to use this strategy to develop a water resources **plan** to make sure OSMP water rights are being used for their highest benefit, which will inform future implementation **projects**.

### *Community Voices*

Water and irrigation were two main themes from community engagement related to this focus area. One community member said "Due to climate change this issue is even more pressing. Encourage practical and helpful agricultural practices like irrigation canals." In the 2019 Master Plan Survey, 99 percent of people found preserving water rights for native ecosystems and local agriculture important to some degree when thinking about acquiring and protecting land and resources.

**\*ATT.9) ENHANCE SOIL HEALTH AND RESILIENCE:** Manage agricultural activities in tilled lands and native grasslands to prevent soil erosion, maintain and improve soil health, sequester carbon and protect ecosystem function.

\*This strategy is a high priority for the next decade.

Maintaining healthy soils is critical for the long-term sustainability of agricultural lands (Ag Plan, 2017). Healthy and productive soils allow farmers to obtain high crop yields with lower expenses and less damage to the environment. Intact soils also stabilize slopes, slow floodwaters, and support millions of species of insects, bacteria and fungi. The sequestration of atmospheric carbon is another essential ecosystem service provided by soils.

In the Boulder Valley, agricultural lands represent one of the biggest opportunities for accelerating carbon sequestration using innovative farming practices to build organic soil matter, like compost application. This strategy involves developing a soil health **program** using national best practices such as cover cropping and crop rotation to maintain soil health. These efforts will help us ensure the sustainability of agricultural land. Another practice this might include is the creation of a soil health monitoring **program** to track soil organic matter and soil health over time.

### *Community Voices*

The Boulder community has identified climate change mitigation and erosion prevention as benefits of improving soil health (Ag Plan, 2017).

## **Advancing Community-wide Goals**

The master plan advances community-wide objectives described in the city's Sustainability and Resilience Framework. For example, outcomes and strategies within the Agriculture Today and Tomorrow focus area strongly support and align with the following objectives within this framework:

- Safe Community;
- Economically Vital Community; and
- Responsibly Governed Community.

The master plan also integrates and applies community-wide policies in the Boulder Valley Comprehensive Plan (BVCP) to OSMP lands and management practices. Outcomes and strategies for Agriculture Today and Tomorrow strongly support and align with BVCP policies, including some examples below:

- 3.13 Water Conservation
- 3.27 Water Resource Planning & Acquisition
- 3.09 Integrated Pest Management
- 9.03 Sustainable Food Production & Agricultural Practices
- 9.04 Soil Health & Soil Carbon Sequestration
- 9.05 Access to Healthy Food

RRSE outcomes and strategies may also inform BVCP updates that incorporate OSMP master plan policies regarding agricultural infrastructure, increasing the variety of operations and protecting viewsheds and working landscapes, among others.

## 3.4 Community Connection, Education and Inclusion

*Together, we build an inclusive community of stewards and seek to find our place in open space.*

### Introduction

#### *Meaningful Connections with Nature*

Open space allows for more than recreation. Nature can replace the humdrum and stress of everyday life with joy, peace and perspective for those who experience it. During the course of the Master Plan process, OSMP staff asked thousands of Boulder residents and visitors why the city's open space system is important to them. The following responses - and so many other enthusiastic ones like them - led to the creation of this focus area:

- "Open space can teach people about their local landscape through a sense of place, can help them learn about science, and their own history."
- "Connecting my children with nature is an important way for me to teach them values about conservation and stewardship of the natural environment."
- "It's vital for my mental and physical well-being. It's as simple as that."
- "The more we can connect with nature, the more likely we are to protect nature."
- "Open space was bought to be enjoyed by all."

#### *Modern-Day Life*

Since 2000, the demographic composition of Boulder has been shifting. The number of city residents of Latino origin has increased 8 percent, and more baby boomers are choosing to "age in place," retiring in their own homes, communities and neighborhoods. Meanwhile, national trends suggest youth spend less time exploring the outdoors; data and experience indicate that screen time is replacing these connections with nature (Futerra, 2017). Meanwhile, obesity and mental health issues are on the rise (Frumkin, 2017).

While the benefits of time outdoors include cognitive development, higher academic performance, and improved physical and mental health (Klepeis, 2001), Boulder

residents report lack of time as the most common reason they do not visit OSMP more often. Not feeling welcome or safe is another barrier for some (2019 OSMP Master Plan Survey).

The future of OSMP depends on our strategic response to these changes. We must embrace diversity - as many land managers have around the country - and foster a welcoming, inclusive approach to stewardship. Greater social mixing, civic participation, and a sense of belonging will emerge, resulting in greater care of the lands we all value so deeply.

Boulder's human and natural environment are interdependent. The ways each of us choose to care for ourselves, others and the places to which we are connected influence both our environment and our communities (E Movement, 2018).



Figure 3.4.1 Master Plan engagement with family-based champions of nature in the Latino community.  
Photo credit: Rocio De Prado

## Outcomes: Community Connections, Education and Inclusion

The following outcomes describe staff and community aspirations for the next decade and beyond.

1. **INSPIRING ENVIRONMENTAL EDUCATION:** Visitors participate in education programs and other forums that deepen their sense of place and appreciation

for Boulder's natural, cultural and scenic heritage and broaden their understanding of OSMP land and its management.

2. **FULFILLING COMMUNITY INVOLVEMENT:** Community volunteerism, partnerships and neighborhood involvement serve an increasingly vital role in OSMP's fulfillment of the City Charter Purposes for open space.
3. **LIFETIME CONNECTIONS WITH NATURE:** Long-term connections with OSMP lands are strengthened and deepened over the course of our lives and across generations.
4. **PHYSICAL AND MENTAL well-being:** Increase awareness of the benefits of nature and the ways visiting OSMP lands can reduce stress and increase physical and mental well-being.
5. **ENGAGED YOUTH INSPIRED BY NATURE:** OSMP is an emerging leader in promoting an increase in the time that youth spend outdoors and caring for their open space system.
6. **PROMOTING EQUITY & INCLUSION:** We are all part of an inclusive community, where all people feel welcome, safe and able to enjoy the benefits of open space.
7. **CONNECTIONS TO BOULDER'S PAST:** Cultural landscapes and historic resources on OSMP lands are preserved so that people can enjoy and understand the places and stories of Boulder's past.

## Strategies: Community Connections, Education and Inclusion

**CCEI.1) INSPIRE ENVIRONMENTAL LITERACY AND NEW INVOLVEMENT IN OSMP:** Foster interest, competence and confidence in enjoying and sustaining the OSMP system through a continuum of educational and service-learning experiences for people of all ages.

Interpretive, educational and service-learning programs encourage land stewardship and understanding about our lands. They also stimulate a sense of joy and contentment that improves quality of life in our community.

In both English and Spanish, educational hikes and programs interpret Boulder's landscape, telling dramatic stories of geological uplift, tumultuous floods, and rare plants and animals in decline. Serving about 10,000 people a year, these in-person



**educational programs** encourage competence and capacity to understand nature in new and important ways. Often, education also leads to action, and we have seen increased interest over the years in volunteer and service-learning opportunities to help take care of the land. To ensure open space protection long into the future, we must continue to reach new audiences and inspire awe and understanding of nature and open space.

This strategy guides staff to enhance and connect environmental education with service-learning to establish a clear continuum of opportunities. It would involve a **project** to evaluate and update education **programs** to increase literacy about the relationship of environment and people. Implementation would also be guided by consistent interpretive **program** themes that help visitors connect with and appreciate Boulder's natural and cultural history.

The strategy also relates to educational opportunities for youth as described in CCEI.7: Connect Youth to Nature, and to the learning laboratory approach for conservation and recreation described in EHR.8 and RRSE.9. Together, this suite of management approaches will inspire commitments to environmental stewardship, volunteerism, citizen science and resource monitoring.

### ***Community Voices***

The desire to be involved with OSMP can be seen throughout the community engagement for the Master Plan. One community member said, "Teach skills! Get them integrated with the environment and in communion with it." Another said they would like to see, "[Spanish; English] Horarios accesibles para ser voluntaria y para los que pueden trabajar en el verano; Accessible hours for those that want to volunteer and for those that can work in the summer" (Engagement Window 3 Summary, 2019). In the statistical survey for the master plan there was strong support for using education on trail etiquette to help manage areas with high use.

Among those members of the Latino community who participated in one or more Master Plan focus groups, many valued education highly. In a summary report of findings from these diverse, multicultural residents, staff of El Centro AMISTAD described the importance participants placed on education, training and research:

*"The most needed trainings, according to our participants, had to do with climate, hiking culture and natural resources. These trainings need to be inclusive, not just for the Spanish-speaking community, but for all residents."*

**CCEI.2) CULTIVATE LEADERS IN STEWARDSHIP:** Advance skill-building and training for volunteers and stewards through expanded mentorship and leadership opportunities, increasing OSMP's capacity to address needs and support involvement in open space management.

There is strong and growing momentum for advancing skill-building and leadership opportunities through Boulder's citywide volunteer cooperative. In 2018, more than 2,100 OSMP-specific volunteers saved the department about \$500,000, contributing almost 19,000 hours, which is equivalent to 13 full-time employees. OSMP staff also work with volunteers, nonprofits and partners to grow volunteer leaders, who in turn further increase our capacity to deliver on City Charter purposes for open space.

As interest in stewardship and conservation efforts from the community grows, this strategy guides the development of clear **service and leadership pathway programs** to cultivate volunteer leaders of all ages who have the experience, confidence and skills to help lead volunteer crews. Implementation would include enhancing mentoring and internship opportunities. To increase exposure to and knowledge of land management practices, it would also include expanding on-the-ground **volunteer projects** to include a wider range of opportunities, such as social trail restoration, vegetation management, seed collection, forest thinning, trail maintenance and more.

#### *Community Voices*

Skill-building and volunteerism have been consistent themes throughout community engagement for the Master Plan. In an online community questionnaire in fall 2018, 42 percent of respondents said they would volunteer more with OSMP if they knew more about opportunities. Forty percent also expressed an interest in personal or career development in open space management saying they would volunteer more if they had opportunities to build skills around land management and conservation.

**CCEI.3) FOSTER WELLNESS THROUGH IMMERSION IN THE OUTDOORS:** Working with schools and organizations, raise awareness of how open space improves physical and mental well-being.

Our City Charter guides OSMP staff to manage the land for its contribution to the quality of life of the community. Compelling research continues to surface on the physiological, neurological, psychological, and social benefits of natural environments

and nature immersion (Klepeis, 2001). However, other research shows that people spend about 90 percent of their time inside buildings or vehicles (Klepeis, 2001).

OSMP plays an instrumental role in addressing human wellness by deepening relationships with nature. As reported in the System Overview, staff are seeing an increased demand for activities that appear to be in direct response to the stresses of a fast-paced lifestyle. These requests have led to an increase in **programs** that support relaxing, meditating and unstructured time in nature, including **nature play programs** for youth and guided meditations for adults that also increases environmental about the land.

In response to these emerging needs, implementation of this strategy will involve the continuation or enhancement of **programs** that help reduce stress for Boulder residents and provide a deeper connection with the land around them. Best practices such as those described in the Governor's Office OutdoorRx report would influence our approach to sustaining and improving the health of our community. Partnerships with schools, hospitals and community organizations would also be central to developing a coordinated and efficient approach to delivering these **programs**.

### *Community Voices*

Participants have been receptive to learning about and experiencing the physical and mental health benefits of being in nature. One community member said, "I liked the concept of "sense of belonging" connected to outdoor life. As foreigners, we tend not to have a sense of belonging. The idea of getting some through nature is a good one. Sometimes one needs guidance and your organization seems to provide it."

## **CCEI.4) HEIGHTEN COMMUNITY UNDERSTANDING OF LAND MANAGEMENT EFFORTS:** Increase understanding and involvement of OSMP management and planning efforts through targeted education and stewardship engagement in support of on-the-ground action.

After the September 2013 floods, OSMP offered informational hikes and volunteer **projects** to areas impacted by the flood. Together with the community, we built the vision for restoration and recovery. Almost 1,500 volunteers gave us about 8,000 hours of their time to help rebuild and restore their open space. This type of collaboration is a model for future efforts. Tailored **education programs** about particular open space areas, resources or management issues can also support City Charter purposes for Open Space by inspiring the community, neighborhoods and individuals to care for the nature in their backyards.

By positioning community-owned natural lands as places for meaningful experience and learning, this strategy encourages education and involvement in **land management plans, programs and projects**. Implementation would involve collaboration among staff and volunteers to anticipate and coordinate upcoming efforts. One goal would be to design and implement tailored **educational programs** in advance of and during on-the-ground action to build understanding about the purpose and need of those **projects**. Another goal would be to ignite curiosity and discovery as residents become more aware of and involved in important work to care for Boulder's public lands over time.

### *Community Voices*

Results from the **Community Connection, Education and Inclusion** questionnaire from 2018 indicate that 40 percent of respondents would volunteer if they had the opportunity to build skills and knowledge around land management conservation. In the same questionnaire nearly 20 percent of respondents indicated they would volunteer if there was the opportunity to meet in person and socialize. In person engagement was also prioritized in the 2019 Master Plan Survey where 57 percent of respondents said they would be likely to educate themselves and participate in OSMP through public lectures, seminars and forums. Another 58 percent of respondents said they would be likely to participate in other in-person educational opportunities.

**\* CCEI.5) ENHANCE SIGNS AND COMMUNICATIONS:** Foster discovery, enjoyment and stewardship through a coordinated effort to enhance signs, communications and media that incorporate effective design, messaging and languages for a range of audiences.

\*This strategy is a high priority for the next decade.

Signs and other interpretive media are used to share important information, tell essential stories about Boulder's natural and cultural history and support learning. Sometimes they also seek to guide or change behaviors by including rules and regulations. Continuous improvement in the design, placement and content of signs will help visitors find their way, learn about the land, and take care of OSMP.

This strategy will support the continued provision of interpretive signs, amenities and exhibits, supporting **educational programs** and facilities that inspire understanding of the OSMP landscape. For example, staff have identified important themes to guide storytelling and help visitors understand, enjoy and protect nature. Using these themes, future **projects** will then improve the educational content and quality of interpretive stories throughout the landscape.

This strategy also guides **projects** to enhance signs as well as web and print content to improve comprehension for a broader range of audiences. For example, Spanish translations, universal graphic symbols and other design improvements will inspire more discovery, wonder and feelings of safety and belonging.

### ***Community Voices***

Results from the 2016 Resident Survey suggest that 9 in 10 residents visiting OSMP areas use directional signs and that 8 in 10 consider them very important or moderately important. This reliance on signs was echoed by community members throughout the OSMP Master Plan process. Some asked for “More signs that teach us” or “signs to expand sense of place and understanding of the land to allow for self-guided tours and information for all” (Engagement Window 3 Summary Report, 2019).

In the 2019 Master Plan Survey, residents also ranked on-site signs, including links to online content, highest when asked which tools they are most likely to use to learn more about OSMP.

**\* CCEI.6) WELCOME DIVERSE BACKGROUNDS AND ABILITIES:** Improve understanding, services and amenities for underserved communities through outreach, listening sessions, culturally-relevant programming, language translations, visual signs and materials, and other creative means of empowering and engaging underserved members of our community.

\*This strategy is a high priority for the next decade.

Among the Latino community, language is barrier to visiting OSMP more. In a report on Master Plan focus group findings, authors describe how participants talked about their visits to OSMP lands: “Not having language access to the written materials in the parks, not being able to understand the information already there, as well as not understanding the “unwritten” cultural rules when one goes to the outdoors.” All participants also agreed that signs and other graphic materials need to be more prominent and visible. Some expressed fear of being in nature (Martinez and Abajo, 2018).

For over a decade, OSMP staff have reached out to typically underserved groups including the Latino community and people experiencing disabilities. In 2018, we provided 80 Spanish and bilingual presentations and connected with nearly 2,500 Spanish speakers through **programs and events**.

This strategy builds on the important work over the last decade. It guides future **projects** such as surveys, focus groups, workshops, or other listening sessions to

further understand barriers to visiting open space and ways to improve the situation. It will inspire OSMP staff to equitably distribute **educational programs** across the landscape to ensure a range of neighborhoods and demographics have equal opportunities to learn about the land. This work may also involve enhancing partnerships with community-based organizations to support an OSMP community liaison to work in underserved communities.

For this strategy to come to life, collaboration among our staff, residents and citywide workgroups will inform improvements. For example, improving restrooms and benches to better accommodate babies and families will require an interdisciplinary approach to design. Implementing this strategy also supports other focus area strategies, including **RRSE.1 (Support a range of recreational opportunities; RRSE.3 (Provide welcoming and inspiring visitor amenities) and ATT.5 (Enhance enjoyment and protection of working landscapes).**

### *Community Voices*

In one Master Plan focus group, participants quickly developed a sense of pride and stewardship when provided with information about OSMP. One shared, “Now, if I see someone leaving their dog’s poop there, I can tell them that’s not okay” (Martinez and Abajo, 2018).

**\* CCEI.7) CONNECT YOUTH TO NATURE:** Foster youth interest, competence and confidence in enjoying and preserving nature through a continuum of educational and service-learning experiences.

\*This strategy is a high priority for the next decade.

Nature stimulates imagination and creativity. Therefore, youth need repeated access to nearby nature like a backyard or neighborhood parks as well as Open Space. In our city, partnerships and **programming** have been successful strategies to get youth outdoors. OSMP’s traditional **education programs** include school field trips, Meadow Music, the Wake Up the Bear event, school assemblies, classroom **programs** and the Junior Ranger **program**. More recently, we have expanded our opportunities for access to nature through **programs** like Nature Play and Storytime Hikes to feel awe, find joy, gain understanding and build appreciation over time of our connection to nature. To develop these **programs**, we collaborate with many partner agencies including Growing Up Boulder (GUB), Youth Opportunities Advisory Board (YOAB) and E-Movement (a community-wide effort to educate Boulder County youth to engage in environmental stewardship).

In 2018, OSMP's winter wildlife education programs totaled 77 presentations reaching 1,800 children. Another new program - developed by volunteers - teaches third graders in Boulder Valley School District (BVSD) about the natural habitat and the history of animals found in the area. This program demonstrates the strong collaboration between OSMP staff and the Boulder community.

In the future this strategy will help us to maintain and expand the Junior Ranger program so that youth can continue to be involved in priority natural resource management projects. To further engage youth, OSMP will expand upon the success of the now 54-year old Junior Ranger program by increasing the number of crews over a ten-year period. Programming would continue to focus on trails, conservation and ranger naturalist skills, while also introducing a focus on agriculture and other open space topics such as inclusion.

Implementation will also include program improvements to develop and communicate a clear continuum for youth to connect with nature through environmental education, nature play, stewardship and service learning experiences. A Staff project will also explore the potential for forming a youth advisory board and additional mentorship opportunities.

### ***Community Voices***

Many community members identified the role programming and partnerships could play in getting youth outdoors. At a community meeting when one mother was asked about how her children could be more involved with OSMP she said, "[Spanish; English] Que las escuelas hicieran programas de ir una vez y mas a las montañas; Schools should have programs that regularly take students out to the mountains," and "[Spanish; English] Ofrecen programas para visitantes para que los pequeños reconozcan la naturaleza; Offer visitor programs for small children so they recognize nature" (Engagement Window 3 Summary Report, 2019). Another community member stated that OSMP is important to them because "being outdoors is an important part of my parenting strategy."

**\* CCEI.8) CONSULT AND COLLABORATE WITH FEDERALLY RECOGNIZED NATIVE AMERICAN NATIONS AND HELP SUPPORT INDIGENOUS PEOPLES:** Work in partnership with American Indian Tribes and other city departments through formal government-to-government consultations to support Tribal Nations and Indigenous Peoples' connections to their ancestral homelands.

\*This strategy is a high priority for the next decade.

In accordance with the city's interest in improving relationships with tribes and indigenous people, we must work to understand, honor and promote the history and culture of the indigenous people associated with Boulder. This will include opportunities to integrate Native American perspectives into OSMP management practices. We will also work to preserve, appreciate and honor the intangible traditions and cultural resources of those indigenous to the lands of Boulder.

Implementation would require a **program** to guide formal and regular government-to-government consultations, as well as the ways staff will continue working with the local indigenous community. We will also support local organizations to help the community understand, honor and promote knowledge of Native Americans' historical presence in the Boulder Valley and their forced removal from the area, which in turn will enable visitors to learn from and about Native American Nations and Indigenous Peoples. Implementation will also include, through consultation, a process for acknowledging and respecting Native American stewardship of Boulder lands at public events and in **educational programming**.

### ***Community Voices***

During the Master Plan process, community members encouraged staff to continue engaging with Tribal Nations and Indigenous Peoples (Engagement Window 3 Summary Report, 2019).

## **CCEI.9) PRESERVE AND INTERPRET BOULDER'S CULTURAL HERITAGE: Complete an inventory and resource management approach for OSMP-managed cultural landscapes and historic resources to improve community connections with Boulder's past.**

OSMP's cultural resources provide a record of near-constant human use and occupation of the Boulder Valley for as much as 10,000 years. These resources are non-renewable, and once damaged or lost, they are gone forever. Cultural resources are precious, and their conservation is crucial because they tell the story of how our community has become what it is today.

Additionally, there are opportunities to renovate and protect relicts like historic buildings on city property for today's relevant uses. One of the main ways that people currently benefit from these resources is by driving past open space and seeing historic patterns and structures in the landscape such as irrigation ditches, agricultural outbuildings and historic residences among others. Because the way we experience this scenery enhances a sense of place for many, OSBT adopted cultural



resource protection as part of the *Long Range Management Policies* in 1995 with primary goals of inventory, protection, and sharing stories with the public. There is also consistent citywide guidance in the *Boulder Valley Comprehensive Plan* and City of Boulder *Historic Preservation Plan* to care for these resources.

To build off citywide work being done on this strategy, OSMP staff will complete a **project** that will inventory and assess cultural landscapes and resources to evaluate local, state and national significance in addition to opportunities for interpretation. We will also prioritize investments in **projects** that protect cultural landscapes and resources as well as historic districts and historic buildings. The success of this strategy will depend on exploring and expanding volunteer opportunities to support cultural resource management.

### ***Community Voices***

Boulder residents value the history of their landscape as a means of explaining the present and providing a sense of place, value and pride in their community. One community member simply said this, “Preserve more than buildings but the traditions and culture. There are opportunities to tell those stories through resource protection and interpretation.” (Engagement Window 3 Summary Report, 2019).

## **Advancing Community-wide Goals**

The Master Plan advances community-wide objectives described in the city’s Sustainability and Resilience Framework. For example, outcomes and strategies within the Community Connection, Education and Inclusion focus area strongly support and align with the following objectives within this framework:

- Healthy & Socially Thriving Community;
- Accessible & Connected Community;
- Responsibly Governed; and
- Economically Vital Community.

Outcomes and strategies within Community Connection, Education and Inclusion also support and align with BVCP policies, including the following examples:

- 2.09 Neighborhoods as Building Blocks
- 2.27 Preservation of Historic & Cultural Resources
- 2.32 Preservation of Archeological Sites & Cultural Landscapes
- 8.08 Health & well-being
- 10.02 Community Engagement

- 10.05 Support for Volunteerism
- 10.06 Youth Engagement

CCEI outcomes and strategies may also inform BVCP updates that incorporate OSMP Master Plan policies. For example, the BVCP does not currently include policy guidance on consulting with Native American nations and supporting Indigenous Peoples.

## 3.5 Financial Sustainability

*Shifting financial conditions require planning for the future.*

### Introduction

OSMP is committed to providing the level of service that the community has come to expect. Yet in a new era, with financial uncertainty, what will the future hold? More extreme weather events? More visitors with less capacity to accommodate them? Fewer youth connecting to nature? More need to preserve our natural resources as climate change threats increase?

As the city's open space system has expanded over the last 120 years, it has grown closer to realizing the vision of an urban core surrounded by acres of open space. Opportunities for large-scale land acquisitions are fewer than before, and stewardship of a larger maturing system requires more attention.

A current climate of reduced funding for the department will mean difficult decisions about what aspects of service delivery will be emphasized over others. This is not to say services will go away, but there will be fewer dollars spread across them. Even services or master plan strategies that are emphasized may not be fully funded, due to the reality of reduced sales tax revenues. Our goal is to do more with less money, but the reality is that some needs will not be fully met. Alternatively, a future with restored funding will create more opportunities to deliver on open space services. In any potential future, there are challenges ahead that require a thoughtful approach to managing public funding and public lands.

This focus area - Financial Sustainability - is one that supports all others. Stable funding, sound inventory data with modern asset management systems, and an engaged professional workforce are all necessary for implementing all aspects of OSMP service delivery. Taking care of our natural areas, farms and ranches means protecting Boulder's long-term financial investment in open space. Maintaining trails extends their life cycle and stretches public dollars further.

Residents agree. Over 70 percent feel this focus area is absolutely essential or very important (2019 OSMP Master Plan Survey).

## Outcomes: Financial Sustainability

The following outcomes describe staff and community aspirations for what financial sustainability will look like for OSMP over the next decade and beyond.

- A. **LASTING VALUE FOR THE COMMUNITY:** OSMP effectively and efficiently manages city taxpayer dollars to build both trust and lasting open space value.
- B. **RESILIENCE TO CHANGE:** Financial management strengthens adaptability and resilience to local, national and global market forces and environmental change.
- C. **PROTECTED INVESTMENTS:** The community's long-term investment in open space is protected or enhanced by prioritizing maintenance of OSMP properties and assets.
- D. **TARGETED ACQUISITIONS:** Strategic acquisition of land, mineral and water interests continue to play an important role in preserving, enhancing and managing Boulder's legacy of preservation, agriculture and passive recreation.
- E. **EFFECTIVE COMMUNICATION:** Financial information is proactively and clearly communicated to promote accountability, increase community understanding of OSMP financial management, and ensure alignment of spending with community priorities.

## Strategies: Financial Sustainability

**FS.1) STABILIZE FUNDING:** Steadily generate funds through sales and use tax collections while strategically leveraging other revenue streams to support OSMP's capacity to deliver open space services and value.

Managing sales tax increments and diversifying funding streams where appropriate are critical in continuing to maintain a large land management system. Approximately 12 percent of OSMP funding comes from sources other than sales tax, including state lottery funds, grants and fees such as parking, facility rentals and permits. Further **program** diversification would include additional grant coordination, partnerships and a review of fee structures as it relates to strategy **RRSE.8**.

### Community Voices

Residents were asked if they would support a tax measure to restore dedicated sales tax revenues to OSMP. Support was quite strong, with about 9 in 10 saying they would strongly support or support (Figure 3.5.1).

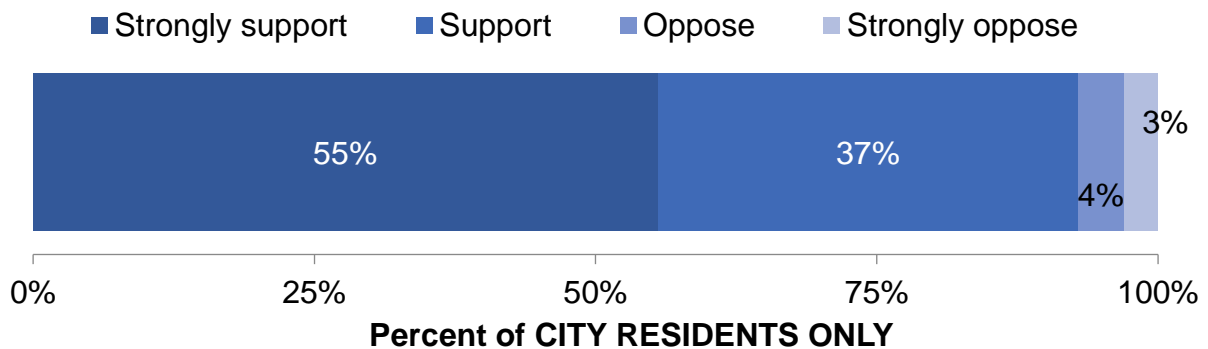


Figure 3.5.1: City Residents Support for Tax Measure

**FS.2) BUDGET FOR FUTURE UNCERTAINTY:** Create, optimize, and manage budgets that anticipate major change drivers such as extreme weather events and fluctuations in revenue and spending.

By responsibly developing and managing department budgets, OSMP will maintain the public trust and communicate department strategic direction. We also recognize that cyclic economic conditions can affect available revenue, causing fluctuations from year to year. Expenses over the last 10 years varied from year to year, which will likely continue over the next decade.

Fires and floods will also get more intense and more frequent in years to come, requiring us to save for those rainy or hot days ahead. This strategy will guide an agile budget program that anticipates and prepares for financial realities in years to come. We will incorporate lessons learned from the 2013 flood and continue to maintain reserves that can support operations during extreme weather events and/or disaster response and recovery.

**FS.3) UNDERSTAND TOTAL COST OF SYSTEM MANAGEMENT:** Adopt or create models to understand the total value and cost of managing the OSMP system and its many diverse assets, including investment tracking for upfront and ongoing costs regarding natural land management, agriculture, trails and other infrastructure.

Effective management systems and processes are critical to the work we do in the field and to the ways visitors enjoy and help care for the system. For example, resource assessments and inventories help us identify critical needs and opportunities. They also track investments over time and identify process improvements to help ensure effective use of public funding.

As we increasingly use technology to improve business practices, we are better able to understand current conditions and recognize the entire costs of managing all aspects of the system. We get better at clearly communicating the state of the OSMP system to the public for whom it is managed. We improve our ability to attend to the greatest needs. For example, by knowing and comparing the relative condition of forests to grasslands, we can invest time and money in the most important places.

Implementing this strategy would include update programs to improve our inventory of assets, green and built, as well as building better cost estimating tools to understand and anticipate life cycle costs for all programs and services. Building a comprehensive asset management system will include trails, agricultural infrastructure, education, enforcement and habitats. It will also involve making strategic program investments in technology to best manage, analyze and report data.

**FS.4) TAKE CARE OF WHAT WE HAVE:** Focus investments on retaining the health of ecosystems on OSMP properties, as well as maintenance of existing trails, amenities and agricultural infrastructure.

Our legacy system has grown dramatically in size and is facing greater challenges from climate change and increased visitation. As we continue to acquire more land or build new trails, we also add maintenance and management costs over the long term. Just as regular visits to the doctor keeps us healthy, preventative maintenance of our assets extends their life cycle. Therefore, programs maintaining existing assets will be emphasized more than projects adding new trails, properties or other assets.

Similarly, preservation of healthy ecosystems should be prioritized as it is more cost-effective than restoring degraded ecosystems.



*Figure 3.5.2 Restoring landscapes such as these - where agricultural practices and long-term prairie dog occupation have degraded the health of native grasslands - is more expensive and difficult compared to maintaining good conditions for healthy ecosystems.*

### **Community Voices**

Taking care of what we have can be some of the most rewarding and important work we, as OSMP staff do, especially when it involves partnerships with community volunteers to take care of the land. For example, the Flatirons Climbing Council (FCC) holds an annual “Trash Bash,” when members pick up garbage, maintain climbing trails, define safe and enjoyable climbing routes, and communicate climbing route closures to protect raptors. For instance, an OSMP Volunteer stated, “Volunteering with OSMP has made me realize how important it is to use open spaces wisely and participate in its future and its preservation.”

In the 2019 Master Plan Survey, when it came to trails within the OSMP system, three-quarters preferred that OSMP focus more on the maintenance and design of the existing trails, while one-quarter preferred that OSMP focus on building new trails. Roughly the same percentage preferred conserving ecosystems on existing lands over

acquiring new lands to conserve. Both of these examples reflect a growing understanding that maintaining the system as a proportion to adding to the system will be in a ratio that has a growing percentage toward taking care of what we have, yet still allows for new acquisitions that support conservation, adds trails, or improves agriculture as part of a strategic approach to planning for system expansion.

**FS.5) TARGET ACQUISITIONS:** Prioritize opportunities to acquire land, mineral and water interests in the Area III - Rural Preservation Area of the Boulder Valley Comprehensive Plan to advance its goals, OSMP Master Plan focus areas and city charter purposes for open space.

Since 1898, roughly \$650 million has been spent to acquire 46,000 acres of open space. This bold and innovative approach has created a large land management area around Boulder that is both unique and complex. Securing a large percentage of the land around Boulder, has created an open space system three times the size of the city itself. As large-scale opportunities for land acquisitions in the Boulder Valley decline, the pace of OSMP acquisitions is slowing and property values trends are forecast to increase (see Table 3.5.1).

DECADE	NUMBER OF ACQUISITIONS	ACRES ACQUIRED OR PROTECTED
1967 - 1977	68	8,312
1978 - 1987	112	7,554
1988 - 1997	112	9,167
1998 - 2007	100	12,107
2008 - 2017	18	1,850

Table 3.5.1: Acquisition by Decade since 1967 Sales Tax

As the OSMP system matures, future acquisitions of land, water and mineral interests must be more strategic and focused to help take care of what we have. For example, acquiring land in areas where invasive species are threatening existing OSMP properties would allow greater control and restoration success.

This level of focus also translates into specific areas in which OSMP would prioritize opportunities to acquire land, water and mineral interests (see Figure 3.5.3 below). In



the Boulder Valley Comprehensive Plan (BVCP) - a compact between the City of Boulder and Boulder County detailing how land should be developed and preserved in Area III, the Rural Preservation Area defines lands around the city where community members have agreed it is important to limit development and preserve rural landscape character. In keeping with the BVCP and OSMP's 2013-2019 Acquisition Update, Area III lands would, therefore, remain an important geographic focus for future OSMP acquisitions program in order to achieve these community-wide goals. Approximately 2,200 acres in the Area III - Rural Preservation Area - can serve OSMP charter purposes and help advance master plan strategies through future acquisitions over time.

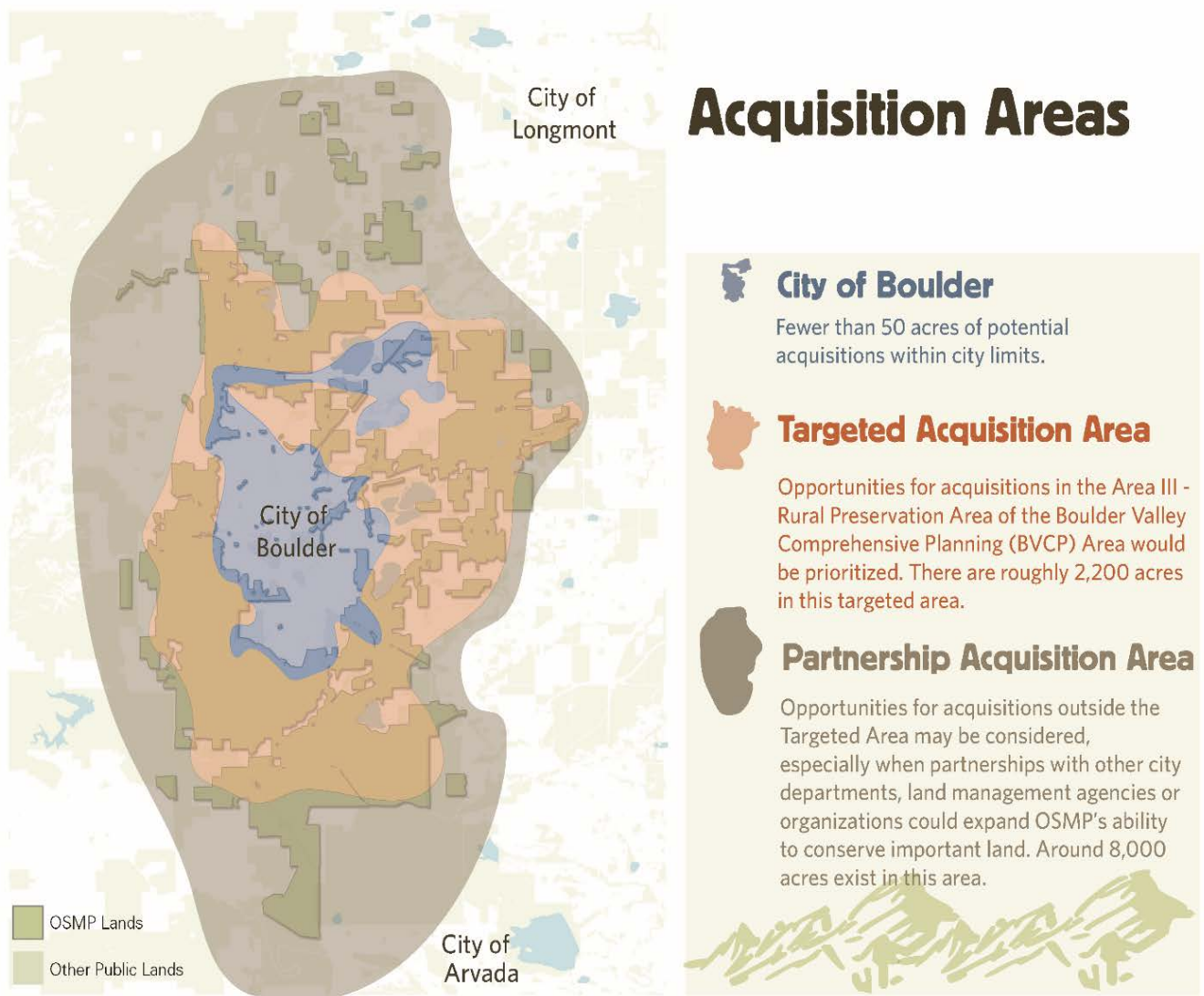


Figure 3.5.3: Acquisition Areas

### *Community Voices*

In the 2019 OSMP Master Plan Survey, roughly 9 in 10 residents identified the following two reasons as most important for acquiring new properties in the future:

- to protect waterways such as floodplains, rivers, streams and wetland areas; and
- to protect and connect high-quality habitat for plants and animals.

These findings are consistent with residents' strong support for ecosystem health and resilience overall: 74 percent of residents feel it is absolutely essential for the future of Boulder's open space system. Based on the rural landscape character of Area III, potential acquisitions in this part of Boulder Valley would offer opportunities to advance these community priorities for the acquisition program.

**FS.6) PARTNER TO PROTECT LANDS BEYOND TARGET AREA:** Consider acquisition of land, mineral and water interests outside the Boulder Valley Comprehensive Plan boundary where partnership opportunities help leverage costs and advance master plan focus areas and charter purposes for OSMP.

All open space acquisitions depend on the right opportunity presenting itself at the right time. Beyond strategy FS.5 above, this acquisition strategy addresses opportunities beyond the boundaries of the Boulder Valley Comprehensive Plan as they arise. It guides staff to consider these opportunities in these areas only if partnerships with other agencies or organizations can leverage initial and ongoing costs (Figure 3.5.3 above). Doing so would allow OSMP to build connections that expand habitat blocks and improve trail connections. For example, the partnership with Jefferson County Parks and Open Space to jointly purchase Lippincott Ranch preserves new wildlife corridors and protects scenic viewsheds. Under this program model, OSMP staff will partner with neighboring counties and municipalities to acquire and protect land beyond the BVCP planning area.

### **FS.7) PARTICIPATE IN OTHER ACQUISITION OPPORTUNITIES:**

Consider acquisition of land, water and mineral interests within Area I and II of the Boulder Valley Comprehensive Plan only when coupled with planning, development or annexation projects or where citywide priorities or partnership opportunities emerge.

Acquiring property interests within other areas of the BVCP planning area is infrequent and usually tied to specific citywide priorities or coupled with a land use or development project. In Area I, which is within city limits, and in Area II, where the city and county have agreed that annexation into the city may be considered, there may be future needs to use partnerships to acquire real estate interests.

In Areas I and II, this strategy involves partnering with other city departments to evaluate the appropriateness of potential acquisitions with the BVCP land use designation Open Space-Other (OS-O) as they become available or go through the city's planning and development review processes. The OS-O land use designation represents the city and county's long-standing interest in potential preservation through a range of mechanisms, including potential acquisition by OSMP, where the OS-O designation directly aligns with OSMP charter purposes and the OSMP acquisition program would advance master plan outcomes and strategies.

### **FS.8) EVALUATE EXISTING REAL ESTATE ASSETS ON OSMP LANDS:** To improve the protection of, and align with, Open Space purposes in the City Charter, assess real estate assets and explore alternative preservation and stewardship options to better enable staff to steward and manage for those purposes.

Over the long history of OSMP acquisitions, assets such as buildings, houses, agricultural structures, and/or other real estate interests have been acquired. Often these interests were acquired as part of a larger real estate deal, where the central purpose for acquisition was to support conservation, agriculture or passive recreation activities.

Today, some of these real estate assets may not serve city charter purposes directly or efficiently. We can strengthen OSMP's ability to preserve important ecosystems, trails and other assets by reducing short- and long-term maintenance needs for real estate assets that are not absolutely essential to City Charter purposes.

For example, a **project** to evaluate houses and related infrastructure will explore appropriate management approaches. Where doing so would improve OSMP's ability to steward mission-critical assets elsewhere on the system, options may include repurposing residences for agricultural tenants or ranger use, exploring partnerships in the management and/or ownership of real estate interests, or deconstructing or selling real estate interests.

**FS.9) INVEST IN WORKFORCE DEVELOPMENT AND OPERATIONAL NEEDS:** To provide effective management of the OSMP system over time, maintain a workforce that benefits not only from experience but also ongoing training and is team-oriented and equipped with adequate resources to meet the expectations of the community.

Investing in our own staff creates a dynamic system of experts that can provide greater value to the community at large. It also reduces employee turnover, increasing our return on investment over the long term. This strategy involves investing in staff training and development to maintain effective and relevant open space services. It also includes improving collaboration with other city departments to eliminate inefficiencies of overlapping responsibilities including how we work together on citywide issues that require partnerships and collaboration.

This strategy also involves updating a **program** evaluating needs for staff offices, maintenance yards and other operational needs. This will require careful consideration to ensure costs are kept to a minimum, yet facilities can still serve staff needs for a maturing land system. In addition, any updates to facilities should include a community and volunteer component that is welcoming and provides for greater understanding of how land management operations are carried out.

**FS.10) UPDATE PLANNING FRAMEWORK:** Refine OSMP planning methods and products to better inform and prioritize the efficient use of funding.

Financial sustainability for OSMP involves knowing in advance what work is needed to sustain the system over time and ensuring money is available to address the greatest needs and opportunities. Planning does just that - it offers community members, OSMP staff and decision makers the chance to discuss ideas and determine the most effective approaches for future management. It will become increasingly important

for OSMP plans to present recommendations that are informed and constrained by financial realities. Future planning will help pinpoint the most important work that can be achieved with anticipated funding and staffing levels.

To that end, this strategy directs staff to re-evaluate our approach to planning. The new framework must fully integrate all charter purposes into decision-making. It must provide management guidance for natural, agricultural, recreational, cultural and scenic resources, as well as programming for education, enforcement, maintenance and operations. With many systemwide plans already in place covering the aforementioned functions of the department, some system plans could be updated while others will be new for OSMP.

Refinements to the existing planning framework will also likely include guidance regarding approaches for both broad area planning and site planning for specific areas. This approach will involve implementation of master plan strategies through a series of follow-up planning efforts that will inform more detailed work planning and budgeting (see section 4). For example, conceptual site plans for smaller geographies would guide management in areas with concentrated visitor amenities like trailheads. This level of initial site planning - done within a broader area planning process - would enable projects to be implemented immediately after plan completion, with clear documentation of feasibility, benefits, cost and other relevant attributes of these finer scaled sites. Area plans would then inform systemwide work-planning and capital improvements planning by providing a set of prioritized actions, related costs and a phased approach for implementation within financial and staffing constraints.

Developing and confirming the above **planning** approaches will follow completion of the master plan. OSMP staff will further explore potential changes to the department's strategic approach to planning with the Open Space Board of Trustees in 2020.

## ***Advancing Community-wide Goals***

The 2019 OSMP Master Plan integrates the Sustainability and Resilience Framework into its outcomes and strategies within each focus area in order to ensure alignment with citywide priorities. Outcomes and strategies within Financial Sustainability strongly support and align with the following goals within this framework:

- Responsibly Governed Community;
- Economically Vital Community; and
- Safe Community.

Outcomes and strategies within Financial Sustainability also support and align with BVCP policies, including the following examples:

- 2.04 Open Space Preservation
- 5.15 Economic Resilience
- 10.01 High-Performing Government
- 10.02 Community Engagement

Guidance in this focus area will also support community conversations in the future as the BVCP periodically gets updated.

## SECTION 4: OUR PRIORITIES

*"The idea of wilderness needs no defense. It only needs defenders."*  
- Edward Abbey

OSMP is experiencing significant changes to its current funding structure. Two of the three sales tax increments that make up the Open Space Fund will be reduced or repurposed for other city business by January 2020, reducing OSMP revenues by about 30 percent or roughly \$9 million. In addition, sales and use tax revenues citywide are expected to remain relatively flat over the coming years. It is estimated that sales and use tax revenues will account for 90 percent of OSMP funding into the foreseeable future. While **Section 3** of the master plan describes outcomes and strategies to ensure broad financial sustainability for the department, this section describes a realistic approach for implementing the master plan within financial constraints, with an eye to future possibilities as potential new sales tax increments or additional revenue sources become available.

This initial action-orientated approach within the master plan organizes the strategies into how they can be implemented and gives clarity to staff and community members about which strategies OSMP will emphasize first with the greatest financial support. It is also important to note all strategies that have emerged in the master plan are viewed as important to meeting City Charter open space purposes. Therefore, the strategies that are not the highest priority will still be funded, but to a lesser degree and/or may be on a slower timeline to implement. Also, in stewarding a complex system, implementation of many of the strategies will cross between various focus areas, advancing more than one set of outcomes and strategies.

After the master plan is adopted, staff will develop a detailed implementation plan in 2020. The implementation plan will provide more detail for determining the planning efforts, programs and projects needed to advance the master plan's policy guidance. As annual work planning and budget cycles align in future years, staff will continue engaging with the Open Space Board of Trustees (OSBT) to discuss progress and confirm subsequent approaches to advancing master plan strategies. Through the approval process for the department's budget, City Council will also have annual opportunities to review and discuss progress.

## Financial Overview

### *Past and Anticipated Revenues*

As of 2018, three citizen-approved sales tax increments (Table 4.1) provided 88 percent of all OSMP funding, evidence that City of Boulder residents continue to recognize the value of open space to the community. By approving tax increases on a regular basis, Boulder residents have created a remarkable open space legacy for themselves and future generations.

Year	Amount	Terms
1967	0.40 percent	Approved in perpetuity
1989	0.33 percent	<ul style="list-style-type: none"> <li>• Was reduced to 0.22 percent January 1, 2019</li> <li>• Will be reduced again January 1, 2035 to 0.10 percent and exist in perpetuity</li> </ul>
2003	0.15 percent	<ul style="list-style-type: none"> <li>• Will be repurposed for transportation uses as of January 1, 2020</li> <li>• Will be repurposed again for general city purposes January 1, 2030</li> <li>• Will expire December 31, 2031</li> </ul>

*Table 4.1: Sales Tax Details*

These citizen-approved measures supporting OSMP were designed to sunset at certain times to account for declining acquisition needs over time. Therefore, as planned, OSMP revenues declined in 2019 and are expected to do so again in 2020. OSMP has been preparing for these changes through a series of actions to reduce the impact:

- paying down outstanding obligations for past acquisitions,
- maintaining strong fund balances,
- improving efficiency of internal processes,
- expiring vacant positions where appropriate,
- scaling back or deferring projects and programs,
- being responsible stewards of Open Space Fund dollars in a fiscally constrained time, and
- increasing reserve funds to account for economic fluctuations.



In addition to dedicated sales tax for Open Space purposes expiring, an annual transfer of funds from the city’s general fund to OSMP also ends in 2019. Like the sales tax increment changes, the expiration of general funding has been expected and planned for, but this change will further tighten total revenues for OSMP, amounting to an overall \$10 million annual reduction.

In 2006, after a period of frequently declining revenues, the Boulder City Council appointed a Blue-Ribbon Commission to study revenue policy issues confronting the city. The commission’s 2008 report to council identified strategies and practices to stabilize revenues over the short- and long-term. Recommendations included:

- Renew expiring sales taxes without a sunset;
- Diversify revenues;
- Review fees for appropriate cost recovery; and
- Leverage diverse funding and revenue opportunities.

Strategies described in the Financial Sustainability focus area incorporate this guidance into OSMP’s financial management approach. For example, strategy **FS.1 (Stabilize funding)** describes intentions to further enhance the diversity of revenue streams support OSMP operations. Beyond sales and use tax revenues, additional funding currently comes from state lottery funds, grants and fees for parking, facility rentals, commercial and special use permits, Voice and Sight permits, agricultural leases and other property leases as shown in Table 4.2.

Revenue Type	Actual 2018 Revenue
Net Sales Tax Revenue	\$31,906,622
Federal Emergency Management Agency (FEMA) Flood Reimbursement	\$12,478
Investment Income	\$580,892
Lease and Miscellaneous Revenue	\$906,607
General Fund Transfer	\$1,080,529
Grants	\$51,016

Table 4.2 Revenue Type and Amount

Overall, the 2018 revenues outperformed projections citywide. Open Space Fund revenues exceeded projections by approximately \$500,000, and the initial “no growth” scenario for the sales and use tax was revised to “slow growth” for 2019 and out-years. The increased revenue projections are especially relevant for OSMP as the department derives most of its funding from sales and use tax (see Figure 4.1 below).

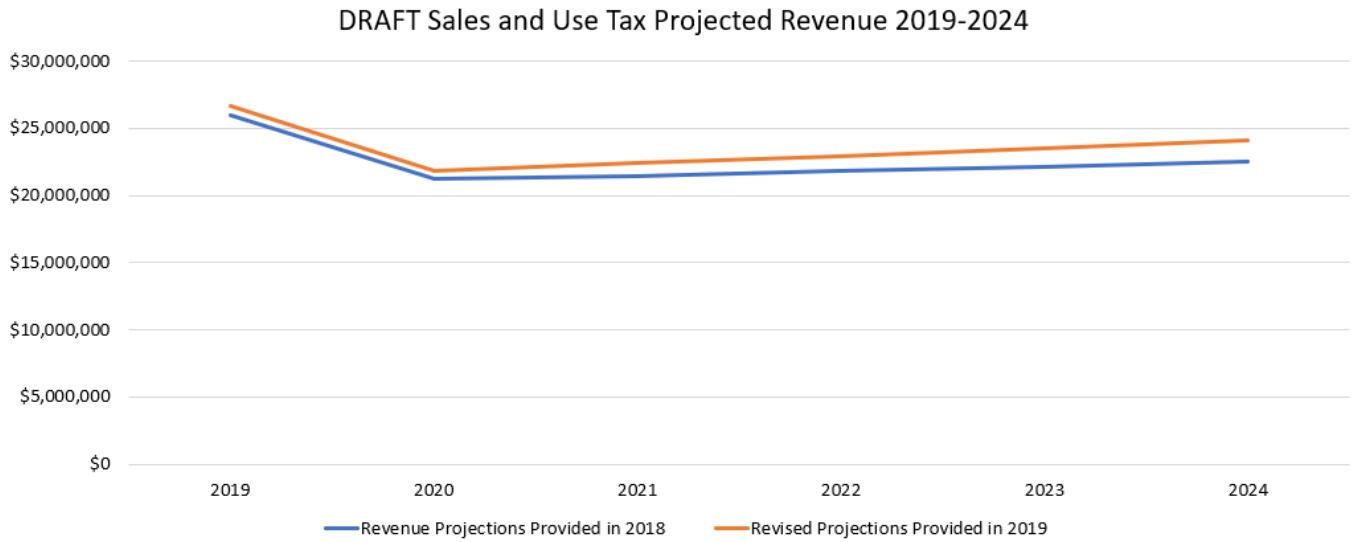


Figure 4.1 DRAFT Sales and Use Tax Projections

### ***Past and Current Spending***

Funding and spending limitations as well as other external factors will impact OSMP’s annual budgets over the next 10 years. For example, extreme weather events, rising land values, increasing visitation, cyclic economic conditions and other factors could impact both available revenue and spending needs. A look back on the last decade reveals a pattern of dips and spikes in spending, in particular around flood recovery and major Open Space acquisitions. Strong financial management enabled these expenditures, from saving for one-time expenditures such as acquisitions, to building contingency reserves, to maintaining fund balance (Figure 4.2).

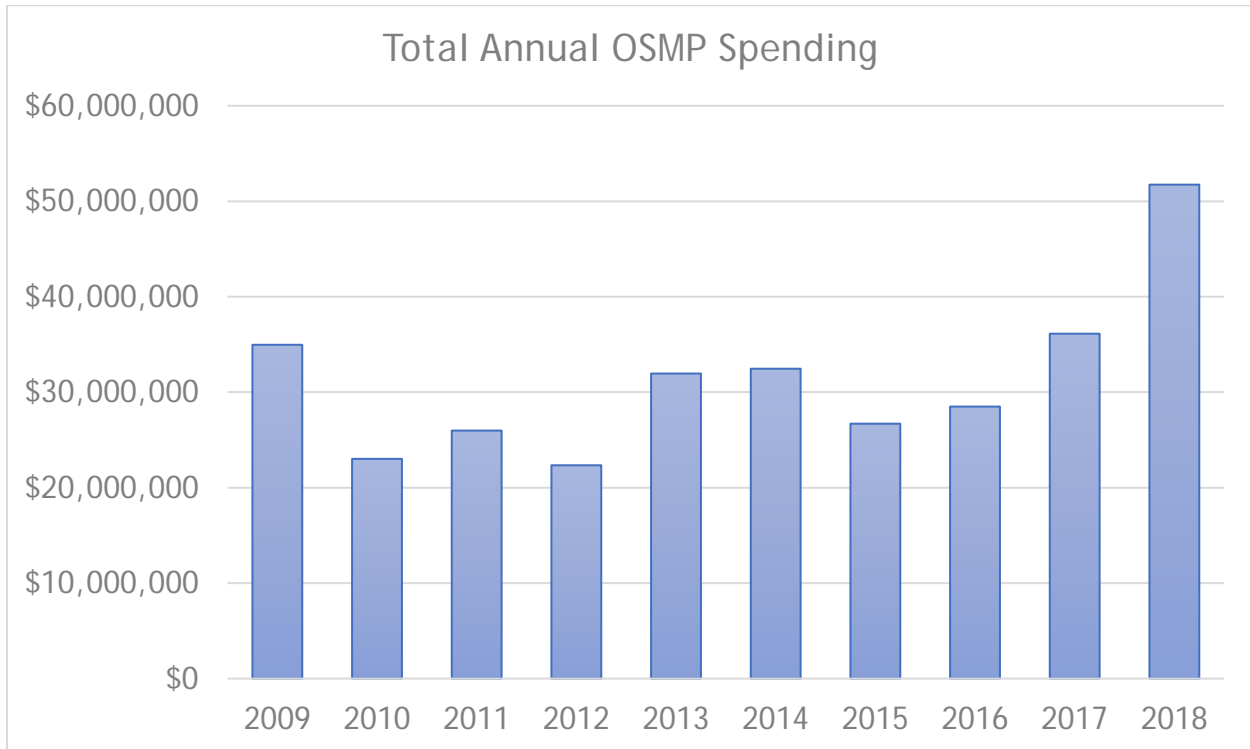


Figure 4.2 OSMP Spending Over Time

Annual budgets are typically designed to include capital improvements, planning efforts, programs and projects, base operations and maintenance, annual debt payments, cost allocation and reserves.

As described in the 2018 System Overview Report, the City of Boulder’s Capital Improvement Program (CIP) is a six-year plan for public investments in physical improvements. It is an essential implementation tool for carrying out the Boulder Valley Comprehensive Plan’s policies for the orderly and efficient provision of urban facilities and services. For OSMP, the capital improvements budget typically funds acquisitions, major maintenance projects to restore habitat or improve trail conditions, needed upgrades to agriculture and water related infrastructure, and major planning efforts.

Annual CIP spending for OSMP in recent years has ranged from about \$5 million to \$11.5 million. However, Figure 4.3 below shows CIP funding by year since 2012 to demonstrate that spending during flood recovery (peaking in 2016) exceeded the pre-flood average CIP for the department (\$4 to \$5 million annually). Thinking ahead to the next decade of CIP spending, a likely \$10 million annual reduction in total revenues will limit our spending capacity, reinforcing the need to prioritize strategies in the master plan.

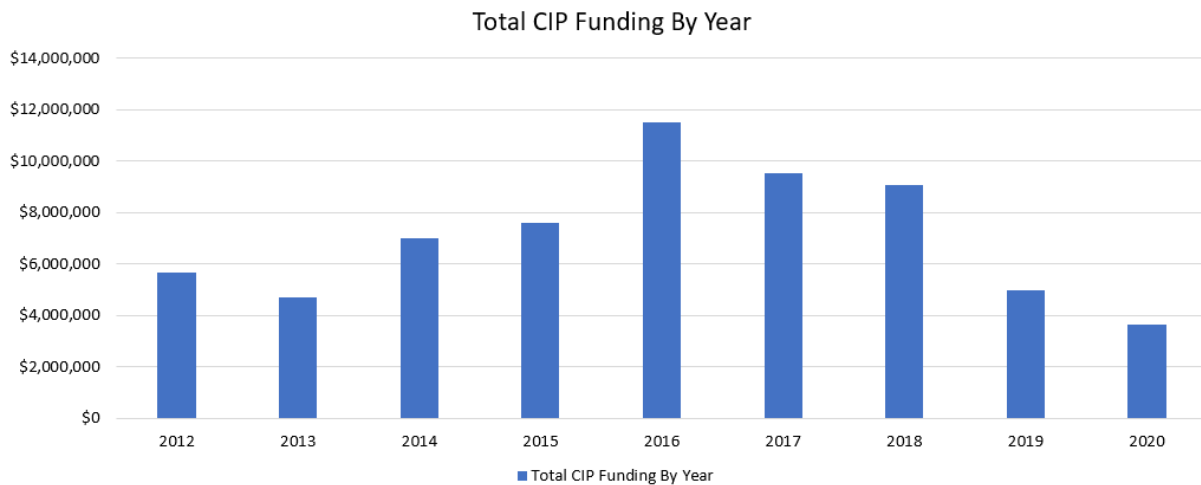


Figure 4.3 Total CIP Funding by Year

(NOTE: 2020 budget is shown as proposed. It will get finalized later in 2019.)

## Community Priorities: Inputs to Financial Decision-making

Over 4,000 community residents, the Open Space Board of Trustees (OSBT), and OSMP staff have informed draft funding priorities and budget targets represented in this section of the draft master plan. By plan completion, these will be further refined with additional input from the public, OSBT, Planning Board and City Council. To date, tools for understanding community priorities have included a public workshop, a statistically valid survey, an online, open participation survey and micro-engagements with members of the community that are often less heard from in public processes.

Across all focus areas, the community and OSBT have generally emphasized the need to take care of what we have, placing less emphasis on new acquisitions or trails. Input has also confirmed the primary importance of ecosystem health and resilience, as well as community values supporting recreation and connections with open space. A full analysis of input can be found in the [Forth Window Engagement Summary Report](#).

To understand what the community values most, staff asked members of the public to what degree each focus area is important for the future of Boulder's open space system. The figure below (Figure 4.4) illustrates that at least 91 percent of residents

feel all focus areas are at least somewhat important, with Ecosystem Health and Resilience emerging as the most important.

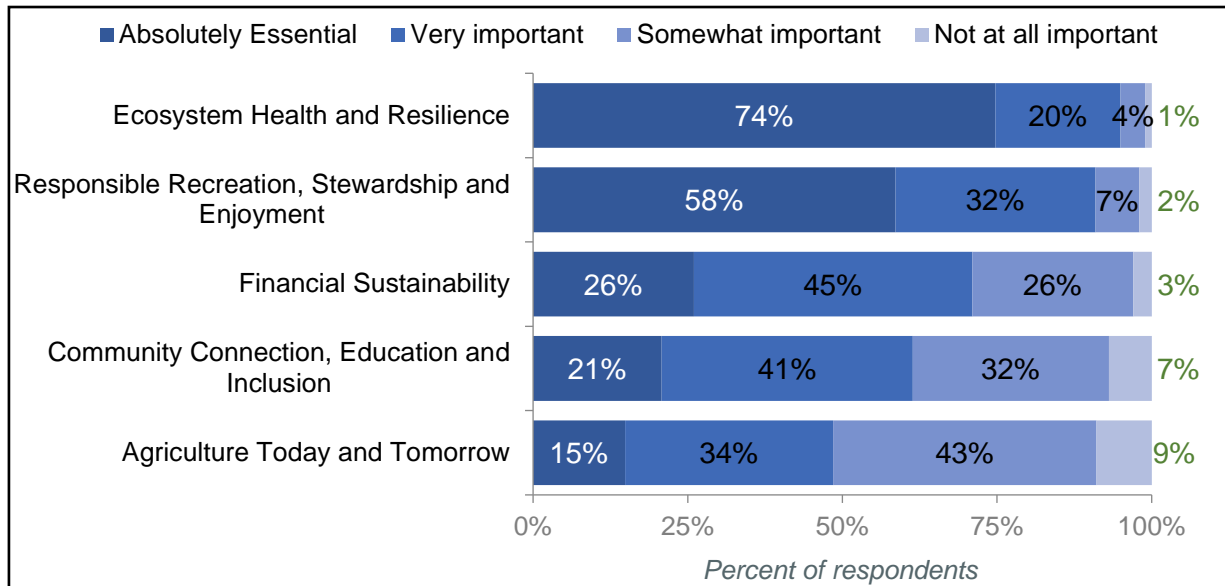


Figure 4.4: Importance of Focus Areas

In both community surveys, at a community workshop and through in-person micro-engagements, staff also asked community members the following question:

*City staff must consider competing priorities to develop a budget for OSMP management. What if it were up to you? With \$5 increments being the smallest amount you might use, if you had \$100 to spend, how would you allocate those funds across the 10 management activities below?*

Those management activities and the results are presented below in two formats below: 1) Table 4.3 that compares the average allocation of funds for each activity, with the top and 2) Figure 4.4 that illustrates relative importance of each activity using findings from the statistically valid survey only. For both, the top three activities are highlighted to demonstrate both the variety and similarity of findings across engagement platforms.

	Community Workshop	All Micro-engagements	Statistically Valid Survey	Open Participation Survey
Restoring degraded ecosystems and wildlife habitat.	\$17.20	\$15.91	\$16.43	\$15.34
Maintaining and improving trails and visitor amenities.	\$15.00	\$9.77	\$15.67	\$18.73
Providing education, outreach and volunteer programs.	\$4.50	\$9.03	\$7.04	\$6.57
Engaging underserved communities, including the Latino community and those experiencing disabilities.	\$9.10	\$10.70	\$6.65	\$5.03
Reducing visitor impacts to the natural environment in light of increased visitation trends.	\$12.30	\$8.84	\$9.61	\$10.79
Developing youth opportunities to spend more time in nature.	\$6.50	\$8.26	\$6.87	\$5.96
Maintaining and improving the condition of OSMP ranches and farms.	\$11.40	\$6.39	\$6.14	\$5.92
Acquiring more open space.	\$8.90	\$7.57	\$15.01	\$17.33
Researching and monitoring open space resources and trends.	\$7.80	\$7.54	\$5.92	\$5.38
Preparing for extreme weather events like flooding, fire and drought.	\$7.20	\$10.43	\$10.72	\$9.04

Table 4.3: Average allocation by engagement platform with top three highlighted for each engagement platform

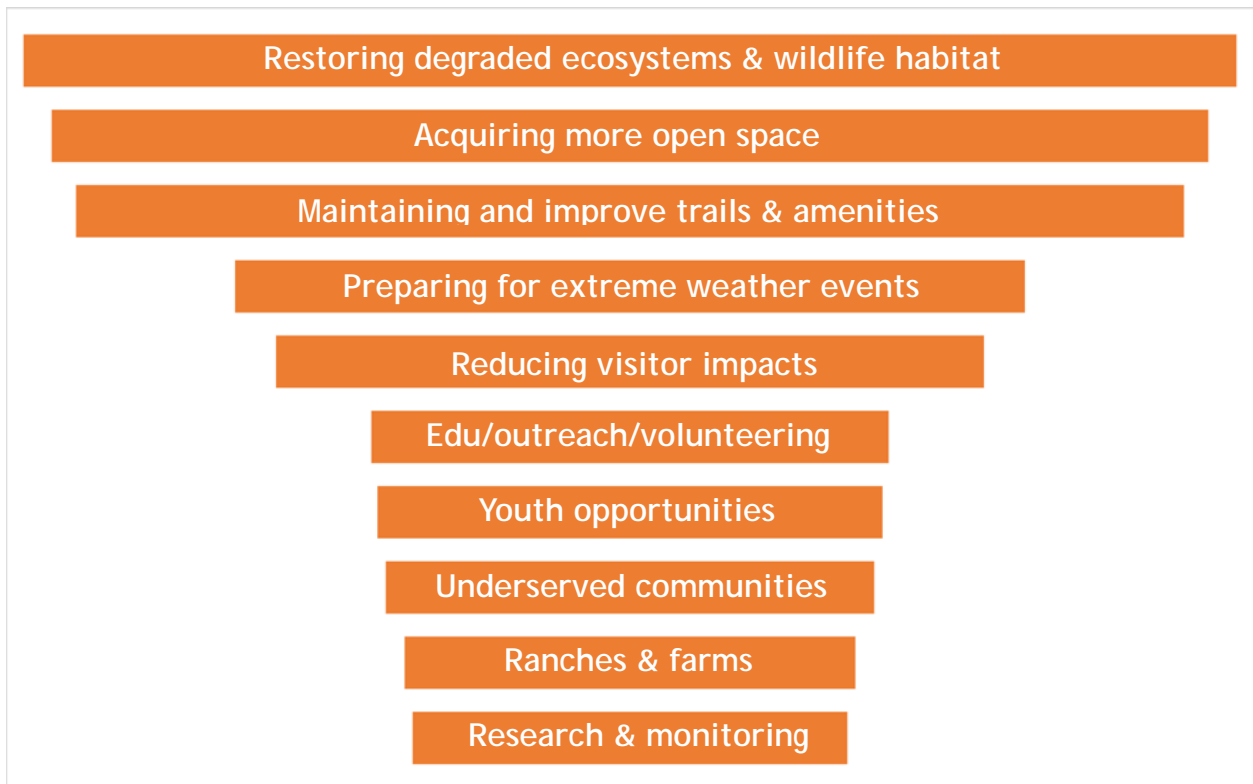


Figure 4.4: Relative importance of management activities with top three highlighted (2019 OSMP Master Plan Survey)

In total, community members consistently ranked the following two activities highly:

- restoring degraded ecosystems and wildlife habitat; and
- maintaining and improving trails and visitor amenities.

These findings are consistent with the level of importance residents assigned Ecosystem Health and Resilience and Responsible Recreation, Stewardship and Enjoyment respectively.

In addition, the following activities also emerged as important to residents:

- acquiring more open space;
- preparing for extreme weather events:
- engaging underserved communities, including the Latino community and those experiencing disabilities; and
- reducing visitor impacts to the natural environment in light of increased visitation trends.

The survey also asked questions about certain topics in several ways to help staff and decision makers understand more depth and nuance in residents' preferences. For example, while residents ranked acquisitions third most important in the \$100 question, another question asks residents to help staff balance needs related to both conservation of existing lands and acquisition of new ones (Figure 4.5). In this case, residents placed more emphasis on improving ecosystem health on existing lands over acquiring new lands. Together, these findings suggest that it is important to both continue our acquisition program and to emphasize the care and maintenance of all lands we own and acquire.

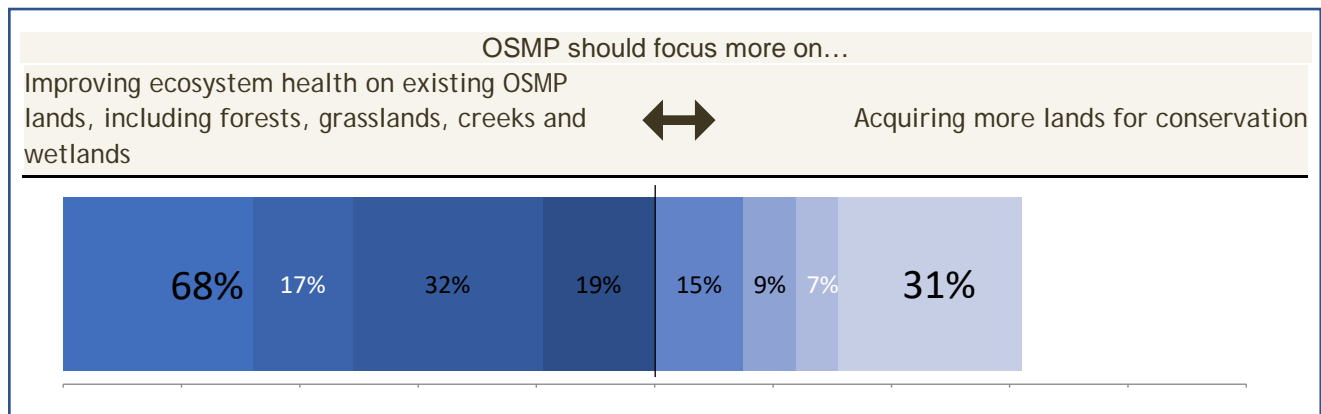


Figure 4.5: Resident preferences on balancing conservation of existing lands with acquiring new ones to conserve (Source: 2019 OSMP Master Plan Survey)

This community input informed the refinement and prioritization of strategies and draft budget targets described in the sections below.

## Focusing on Our Priorities

Implementing and funding the master plan will require a strategic approach to managing the budget over the next decade. By developing three potential funding scenarios, staff has worked with the community and OSBT to anticipate what the future may look like, to prepare for different options, and to focus investments in time and money on shared priorities.

As one potential future, scenario 1 reflects the \$10 million annual budget reduction starting in 2019. Scenario 2 describes what may happen if some or all of that sales tax funding is restored, and scenario 3 anticipates the potential for additional funding beyond scenario 2 levels. As Figure 4.6 below illustrates, it becomes incrementally easier to advance more master plan strategies - and to scale up work on important strategies - as more funding becomes available.



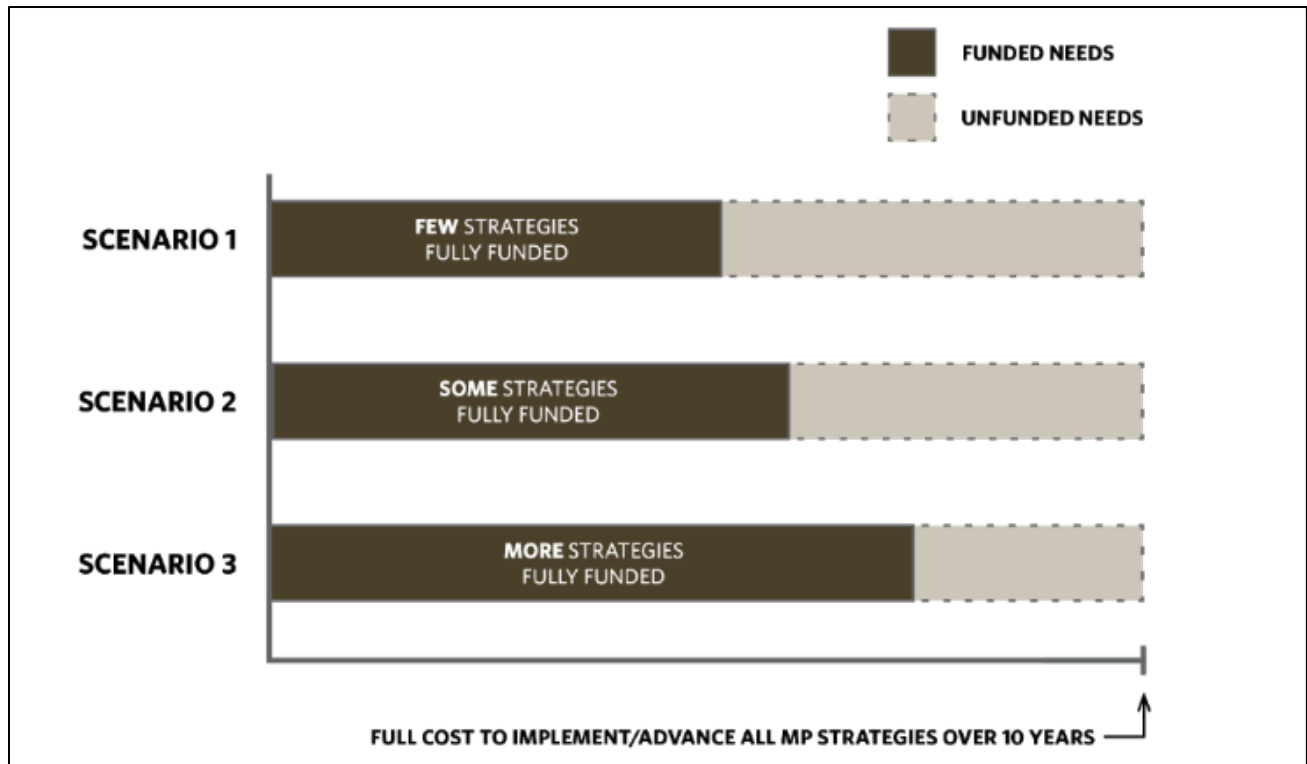


Figure 4.6: Implementation of the Master Plan by Scenario

Under the fiscally constrained budget in scenario 1, high priority strategies in the master plan would be emphasized, especially in the first few years of implementation. Staff would kick-start plan implementation by initially devoting the most time and funding to these, while still advancing other strategies at a slower rate. Regular reporting and consultation with OSBT would then provide annual opportunities to update workplan and budget priorities for implementing master plan commitments in subsequent years. If additional funding becomes available, as in scenarios 2 and 3, staff would scale up efforts and funding as illustrated in the Figure 4.7.

SCENARIO 1 Reduced Funding	SCENARIO 2 Restored Funding	SCENARIO 3 Additional Funding
<ul style="list-style-type: none"><li>• Focus limited funding on accelerating high priority strategies first</li><li>• Make slow, steady progress towards implementing other strategies as capacity allows</li></ul>	<ul style="list-style-type: none"><li>• Devote more funding to scaling up work on high priority strategies</li><li>• Increase pace for implementing other strategies</li></ul>	<ul style="list-style-type: none"><li>• Maximize funding for high priority strategies</li><li>• Further accelerate pace for implementing other strategies</li></ul>

Figure 4.7: Potential scenarios for implementing master plan strategies

However, even in strong financial circumstances, real limitations will temper our ability to fully meet community desires or expectations. For example, invasive weeds or trail maintenance present ongoing management challenges that staff will likely continue addressing well beyond the 10-year master plan time horizon. This gap between desired conditions and our capacity to achieve them over the next decade is important for setting realistic expectations for the future.

## ***Reduced Funding***

Under scenario 1, staff would initiate master plan implementation by focusing time and money, especially in the first few years, to the high priority strategies shown below. These strategies - and the outcomes they advance - would directly guide work planning and budgeting, especially in the first few years.

High priority strategies include:

- ATT.1 Maintain infrastructure for agriculture and water
- ATT.7 Reduce agricultural impacts from prairie dogs
- ATT.9 Enhance soil health and resilience
- CCEI.5 Enhance signs and communications
- CCEI.6 Welcome diverse backgrounds and abilities
- CCEI.7 Connect youth to nature
- CCEI.8 Consult and collaborate with federally recognized Native American Nations and help support indigenous peoples

- EHR.1 Conserve and restore Boulder’s natural heritage
- EHR.2 Reduce undesignated trails
- EHR.3 Extend on-trail requirements
- EHR.4 Reduce human disturbance
- EHR.5 Manage entire ecosystems using a holistic approach to planning
- EHR.6 Control invasive species
- RRSE.4 Update guidelines and standards for quality trail design and construction
- RRSE.5 Reduce the trail maintenance backlog
- RRSE.7 Manage increasing visitation
- RRSE.8 Review and improve fee-based recreation programs

Under this scenario, annual funding for capital improvements, programs and projects would emphasize maintenance of existing lands, trails and programs over new initiatives and acquisitions. For example, reducing the trail maintenance backlog would be emphasized over adding new trail mileage. While new trail mileage may be added under this scenario, less funding would be devoted to it. New or enhanced efforts that we are unable to initiate early in our ten-year planning horizon would be pursued later or as staff capacity and funding allow.

It is important to note in this fiscally constrained scenario, the overall level of service OSMP can provide may go down. For example, staff can accomplish fewer restoration and acquisition projects and less trail and facility maintenance under these financial constraints. This means that while the above strategies would guide work planning and budgeting, few of them would be fully funded as limited funding has to cover a wide variety of department needs. Rather, gradual progress would be made over time for most strategies, and conditions at some locations across the system may not improve or may even decline as projects and programs get deferred until more funding and resources become available.

### ***Possibilities with Additional Funding***

The 2019 OSMP Master Plan Survey found that 92 percent of city residents would support a measure to restore sales taxes for OSMP back to 2018 levels. If, in the future, residents were to support a restoration of some or all of that sales tax funding

for OSMP, additional funding would come available in the future, bringing revenues closer in line with 2018 levels.

Under scenario 2, this additional funding would allow staff to maintain 2018 levels of service and scale up funding for master plan implementation projects. For example, this funding would provide additional capacity to pursue more restoration and conservation projects, make additional progress toward reducing the trail maintenance backlog, and incorporate more forward-thinking approaches to climate change, soil health, youth engagement, inclusion and volunteers. OSMP's work program would still support implementation across all focus areas, with an emphasis on Ecosystem Health and Resilience and Responsible Recreation, Stewardship and Enjoyment.

In addition, funding may also be generated through grants or other sources of funds. For example, strategy 1 under the Financial Sustainability focus area (FS.1: Stabilize funding) captures staff intentions to diversify and stabilize funding by seeking grants and other options. If funding were to exceed 2018 levels, capacity would increase to address programs and projects previously reduced or deferred. Under this scenario 3, additional funding would also allow greater funding levels to support more robust implementation of more master plan strategies and improve the overall condition of the system across the focus areas.

## **Master Plan Implementation Over the Next Decade**

This section outlines a general approach to implementing strategies in the master plan to achieve desired outcomes for each focus area. The next step will be to develop a more detailed implementation plan in 2020, in consultation with OSBT, which directs annual work planning and budget processes. The goal of implementation planning is to have a fully prioritized, multiyear workplan in place by 2021, along with a broader approach laid out for the next decade that best achieves policy direction in the master plan.

### ***An Integrated Work Plan and Budget Process***

As stewards of public funding, our staff are always seeking process improvements, especially as it comes to delivering effective services and managing taxpayer dollars consistent with community values and priorities. Already, we have developed and implemented a new work planning system, increasing our ability to plan further ahead. We have also updated inventories and tracking systems, and with strategic policy guidance in the Master Plan, we can now improve even further and better plan

for, implement, share and track our work and investments that advance shared outcomes. We can now develop our work plans and budgets with an understanding that they reflect both community interests and staff expertise.

For example, under all scenarios, staff will align spending on master plan implementation with the focus areas as Table 4.4 demonstrates. These focus areas reflect broadly held values shared by community members and staff. As such, focus areas help guide staff on how to best steward the public’s money. As strategy 2 under Financial Sustainability describes (**FS.2 Budget for future uncertainty**), staff need flexibility in designing and managing budgets to account for uncertainty such as future floods we cannot predict. This proactive and transparent approach to uncertainty is reflected in the range of spending targets described below.

Focus Areas	Target Percentage Range of Annual Spending on Master Plan Implementation
Ecosystem Health and Resilience	25-40%
Responsible Recreation, Stewardship and Enjoyment	20-35%
Agriculture Today and Tomorrow	15-30%
Community Connection, Education and Inclusion	10-25%
Financial Sustainability*	10-25%

Table 4.4 Focus Area Spending

*\* Plans, programs and projects under the Financial Sustainability focus area - including acquisitions - often support multiple charter purposes and outcomes across multiple focus areas. In some cases, these projects may meet specific charter purposes or focus area outcomes, in which case the cost of those efforts may be assigned to a primary focus area. Examples include acquiring trail easements (RRSE), inventories for agricultural and water infrastructure (ATT), or acquiring properties that connect critical habitat (EHR).*

Findings from the 2019 OSMP master plan will also further inform departmental budgeting. For example, findings demonstrate that three-quarters of residents would prefer that OSMP focus more on the maintenance and design of the existing trails, while one-quarter preferred that OSMP focus on building new trails. Roughly the same percentage preferred conserving ecosystems on existing lands over acquiring new lands to conserve (2019 OSMP Master Plan Survey). In response, staff will continue to focus on taking care of what we have while advancing investments in new acquisitions, trails or other infrastructure at a slower rate.

## Implementation Initiatives

The three-year outlook for detailed work planning will take an integrated approach to advancing high priority strategies - and other strategies as capacity allows - using an integrated suite of programs, projects and planning efforts. The goal is to find the most efficient means and best practices for advancing the master plan.

### Program and Projects

Implementation toward most master plan strategies can be started through programs or projects immediately or with minimum planning to provide guidance beyond the master plan itself. Often times, these strategies are further supported by prior plans that were completed recently. In these cases, staff and the community have clear and shared understandings about the policies guiding the work. For example, because the Agricultural Resources Management Plan (Ag Plan) was completed in 2017, that guidance directly informed master plan strategies in the Agriculture Today and Tomorrow (ATT) focus area. Therefore, most ATT strategies can be advanced through initiatives like developing a native plant propagation program that were already approved in the Ag Plan. Certain ATT strategies that may require future planning guidance (i.e., ATT.7: Reduce agricultural impacts from prairie dogs) are described later in the section below.

Table 4.5 illustrates example programs or projects for high priority strategies, some of which reflect and confirm existing commitments from past plans, policies or citywide guidance. Other initiatives have emerged from community and staff input shared throughout the master plan process and are sufficiently guided by the master plan to support early implementation. In all cases, these preliminary examples are not exhaustive and do not include the full suite of programs and projects that will help advance master plan implementation over the next decade and beyond.

High Priority Strategy	Example Implementation Programs or Projects
EHR.1: Conserve and restore Boulder’s natural heritage	Phased projects to restore lower Boulder Creek
EHR.2: Reduce undesignated trails	Projects to restore undesignated trail segments as guided by past trail study area plans
EHR.4: Reduce human disturbance	Program to monitor and improve natural sounds and night skies
EHR.6: Control invasive species	Tall oatgrass treatment projects

High Priority Strategy	Example Implementation Programs or Projects
RRSE.4: Update guidelines and standards for quality trail design and construction	Design and construction program to develop and implement best practices
RRSE.5: Reduce the trail maintenance backlog	Ongoing trail maintenance program
RRSE.7: Manage increasing visitation	Ongoing program to manage temporary trail closures for muddy trails, wildlife, etc.
RRSE.8 Review and improve fee-based recreation programs	Program enhancements to improve Voice and Sight compliance
ATT.1: Maintain infrastructure for agriculture and water	Agricultural maintenance program to track the facility condition index of agricultural and water infrastructure
ATT.9 Enhance soil health and resilience	Soil health program to monitor conditions and encourage best practices
CCEI.5: Enhance signs and communications	Projects to improve educational content and interpretive signs
CCEI.6: Welcome diverse backgrounds and abilities	Projects such as listening sessions to further understand barriers to visiting open space
CCEI.7: Connect youth to nature	Enhancing the Junior Ranger program
CCEI.8: Consult and collaborate with federally recognized Native American Nations and help support indigenous peoples	Program to support ongoing formal consultations

Table 4.5: Example Implementation Programs and Projects for High Priority Strategies

In the case of financial sustainability strategies, all have sufficient guidance from citywide policies and practices to support immediate implementation. In addition, while not considered high priority strategies at this time, other strategies such as those below can still proceed gradually or incrementally as capacity allows, without major additional planning:

- EHR.8: Develop a learning laboratory approach to conservation
- EHR.9: Offset and reduce greenhouse gas emissions
- RRSE.1: Support a range of recreational opportunities

- RRSE.2: Encourage multimodal access to trailheads
- RRSE.3: Provide welcoming and inspiring visitor amenities
- RRSE.6: Improve trail connections
- RRSE.9: Develop a learning laboratory approach to recreation
- ATT.2: Integrate native ecosystems and agriculture
- ATT.3: Support the success of ranchers and farmers
- ATT.4: Diversify agricultural operations
- ATT.5: Enhance enjoyment and protection of working landscapes
- ATT.6: Reduce or eliminate pesticide use
- CCEI.1: Inspire environmental literacy and new involvement in OSMP
- CCEI.3: Foster wellness through immersion in the outdoors
- CCEI.2: Cultivate leaders in stewardship
- CCEI.4: Heighten community understanding of land management efforts
- CCEI.9: Preserve and interpret Boulder's cultural heritage

### ***Future Planning***

Other implementation initiatives will be more complex, requiring collaborative - and sometimes site-specific - decision-making through additional public engagement and consultation with OSBT and City Council. Often these complexities stem from interrelationships among multiple focus areas, outcomes and strategies and the need to integrate multiple City Charter purposes for open space. To develop more clarity and coordination, full implementation of these more complex strategies would be driven by planning efforts before a full suite of programs and projects would begin.

For example, although some progress can be made towards the following strategies, fully implementing them would involve updating visitor use management guidance in the 2005 Visitor Master Plan:

- RRSE.1: Support a range of recreational opportunities
- RRSE.2: Encourage multimodal access to trailheads
- RRSE.7: Manage increasing visitation



- EHR.2: Reduce undesignated trails
- EHR.3: Extend on-trail requirements
- CCEI.5: Enhance signs and communications

Similarly, updating components of the *Grassland Ecosystem Management Plan* would help fully implement strategies on managing entire ecosystems (EHR.5), improving soil health (ATT.9), reducing impacts from prairie dogs on irrigated farmland (ATT.7), and others such as EHR.8: **Develop a learning laboratory approach to conservation.**

After master plan adoption, plans for specific area of the OSMP system will also integrate a series of master plan strategies across focus areas and provide more detail on how they will be implemented in specific locations. This approach mirrors the way subarea plans help integrate and apply Boulder Valley Comprehensive Plan policies to certain parts of the city's urban core.

**Strategy FS.10: Update planning framework** captures a staff commitment to refine the planning process used to guide and deliver on-the-ground programs and projects. The details of this new approach will be determined with OSBT guidance in 2020.

Pending completion of that effort, future area plans (for example, for the eastern quadrant of the OSMP system) would likely provide more specific guidance on how to implement particular master plan strategies on the ground, such as:

- EHR.1: Conserve and restore Boulder's natural heritage
- EHR.2: Reduce undesignated trails
- EHR.3: Extend on-trail requirements
- RRSE.3: Provide welcoming and inspiring visitor amenities
- RRSE.6: Improve trail connections
- RRSE.7: Manage increasing visitation
- CCEI.6: Welcome diverse backgrounds and abilities
- CCEI.4: Heighten community understanding of land management efforts
- CCEI.5: Enhance signs and communications
- ATT.2: Integrate native ecosystems and agriculture
- ATT.5: Enhance enjoyment and protection of working landscapes

## Tracking Progress

Extensive and meaningful engagement with thousands of community members and OSMP staff has directly informed the Draft OSMP Master Plan. That amount of time and effort on the part of so many deserves follow through and clear reporting.

The final master plan will describe real agreements between the community, staff, OSBT, Planning Board and City Council about how to manage the public's lands into the future. To honor those commitments, staff will produce an annual report on progress, showing the degree to which staff have advanced each strategy in any given year. This report card will describe progress simply and graphically for a broad audience. Staff will also communicate successes, challenges and proposed next steps to OSBT each year, and adjust future work plans and budgets in response to board feedback.

We will also continue to use research, monitoring and the best available science and data to describe trends and manage adaptively. For example, as we continue assessing the health of our native grasslands and forests over time, we can evaluate and adjust our approach to conserving and restoring Boulder's natural heritage (EHR.1). Similarly, community surveys will help us understand how well we are doing at supporting a range of recreational opportunities (RRSE.1) or connecting youth to nature (CCEI.7). Monitoring soil conditions in grasslands, farms and ranches will measure progress toward enhancing soil health and resilience (ATT.9). The annual budget process is an opportunity to report on the stability of OSMP funding (FS.1). As staff track and communicate our status, we will also gather input from the community to determine the effectiveness of programs and projects that advance master plan strategies.

The Open Space Board of Trustees will be consulted at each step of the process, which continues and improves our current approach. For example, annual OSBT consultation would include:

1. Review of accomplishments for the past year as well as the status of initiatives that were not completed;
2. Review and prioritization of potential future initiatives; and
3. Development of the annual budget request, policy issues, and success measures for initiatives planned for the upcoming year.

This approach will ensure that the OSMP master plan is a living document used to improve the OSMP system in a way that reflects the community's goals well into the future.

## ***Getting to Work***

The master plan process has helped us all talk about the future of OSMP. By engaging with each other so respectfully, we have all built trust, empathy and optimism. Now the work begins. The time is upon us for carrying our legacy of land management into another century.

Scientists, land managers and volunteers have demonstrated that patient, careful coordination can bring deteriorated areas back as healthy ecosystems or well-loved trails back to good condition. Even if funding declines in the coming years, we can still expand these successes elsewhere across the system.

As we think to the future what we hope the next decade brings, here is a summary of the high priority strategies we will get to work on first with your help, following City Council approval of the final Master Plan:

- Keeping healthy habitats healthy and bringing degraded ones into better condition;
- Taking care of and improving the condition of our existing assets, including trails, visitor amenities, agricultural structures and water infrastructure;
- Addressing visitation growth;
- Enhancing soil health and carbon storage in irrigable agricultural lands to improve productivity and slow the effects of climate change; and
- Fostering environmental literacy, wellness and stewardship among youth and underserved communities.

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