



Horsetooth Mountain Open Space Adaptive Management Plan

June 2022





Background, Objectives & Process

Background & Planning Context

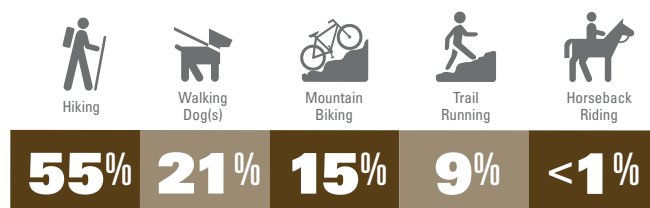
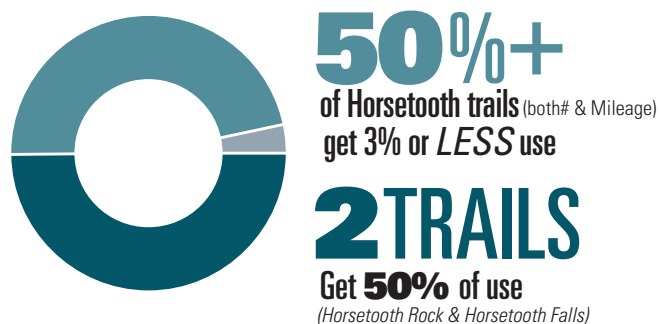
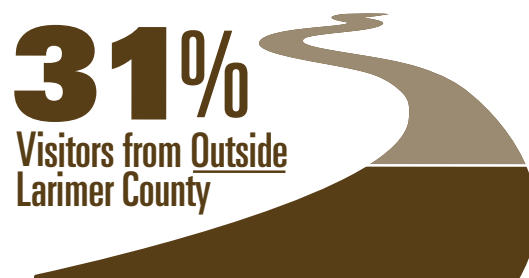
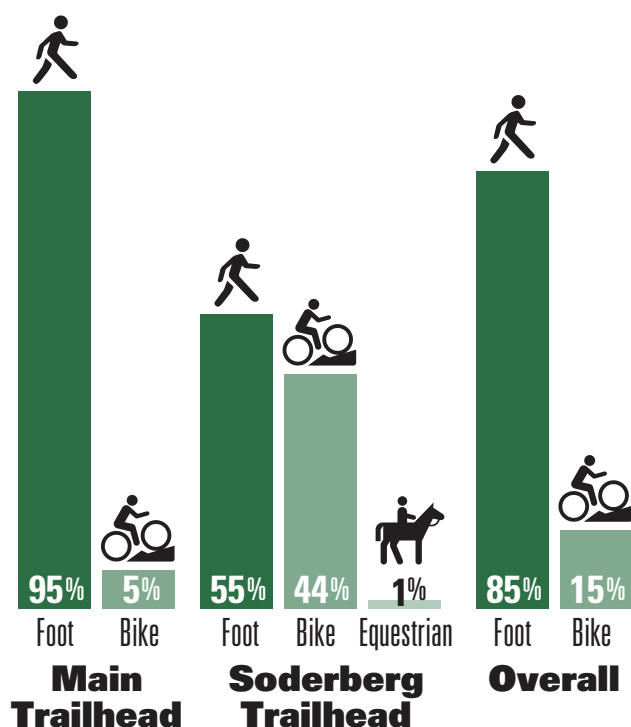
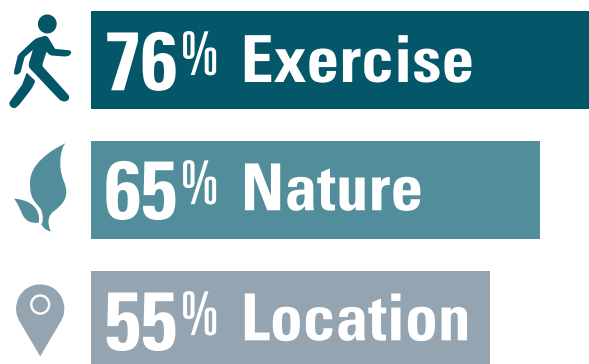
Horsetooth Mountain Open Space (HTMOS) was originally acquired by Larimer County in 1982. Since then, using Help Preserve Open Spaces sales tax dollars, the Larimer County Department of Natural Resources (LCDNR) has expanded the Open Space by purchasing adjacent properties. Management of the Open Space is currently guided by the 2006 Horsetooth Mountain Open Space Management Plan. With key objectives to improve visitor experience, enhance natural resource values, and maintain operational feasibility and sustainability, this plan update includes recommended adaptive management approaches and criteria to manage HTMOS in the future.

HTMOS is located west of Fort Collins, is comprised of 3,269 acres, and was purchased by Larimer County through a series of land acquisitions spanning 1982-2017. HTMOS is bounded by Lory State Park to the north, Horsetooth Reservoir to the east, and private lands/subdivision on portions to the west, east and south. Within HTMOS, there are 29 miles of natural surface trails accessed by two primary trailheads, the main parking area along County Road 38E and the Soderberg Trailhead.

In 2018, LCDNR conducted a statistically valid visitor use study at HTMOS in partnership with Colorado State University to help inform future management by gathering data on overall number of visitors, type and distribution of visitor use, and perceptions of crowding and conflict. A summary of key findings is displayed on page 2 and the full study, *Understanding Our Visitors – Larimer County Visitor Use Study*, is available online.

Updated information about visitation, growing population and associated demand for outdoor recreation, and changing ecological conditions have highlighted the need to review and update management actions at HTMOS. With key objectives to improve visitor experience, enhance natural resource values, and maintain operational feasibility and sustainability, this plan update includes recommended adaptive management approaches and criteria to manage the open space.

Understanding Our Visitors –
Larimer County Visitor Use Study - Key Findings:



Plan Objectives & Adaptive Management

The management planning process for HTMOS is intended to allow LCDNR to be responsive and adaptable to changing conditions. Rather than developing a plan with a prescriptive list of management actions to occur within a long-term time frame, this plan will provide management actions to be implemented in the near term (1-5 years) and outline a framework for which future management decisions will be evaluated.

As conditions change, additional land is acquired, new recreational uses emerge and visitation increases and changes, future management of HTMOS will be guided by the three objectives below.



- Provide a quality outdoor recreational experience: A core service provided by LCDNR is public access to land that provides visitors a chance to recreate in a natural outdoor setting and supporting this access with adequate infrastructure for a safe and enjoyable experience.
- Protect and enhance natural resource conditions: Concurrent with the provision of public access for recreation is LCDNR's responsibility to protect and improve the integrity of natural, cultural, and agricultural resources. The boundaries of HTMOS contain sensitive and important habitat that will be enhanced, and negative impacts minimized.
- Sustainable and feasible operations: To be responsible stewards of public funding and resources, LCDNR will strive to meet the first two objectives above while ensuring that management actions are operationally sustainable with staff and financial resources for the long-term.



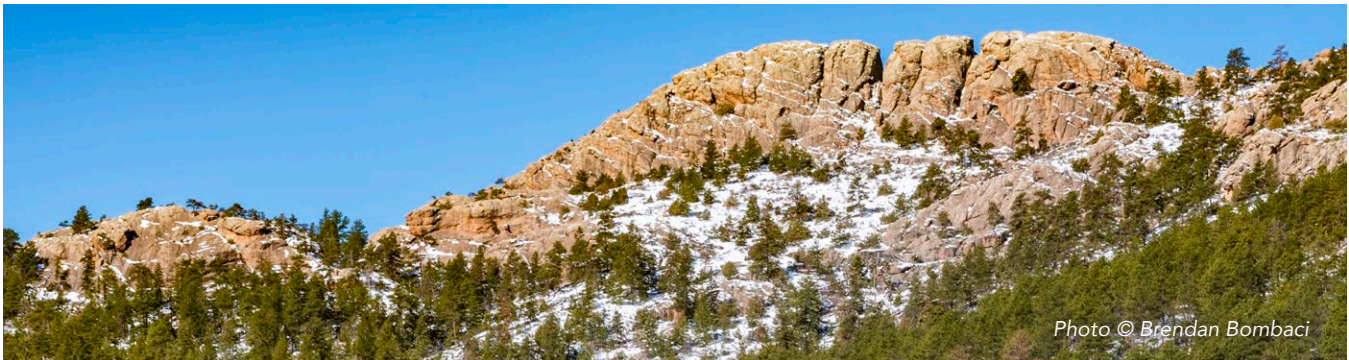
Public Feedback Process

Throughout 2021, LCDNR worked to collect quality and comprehensive feedback from the public on an ongoing basis and at key milestones during the process. This input was collected through a stakeholder group, an online platform, surveys, an interactive map, public forums and on-site “trailhead tables”. Additionally, feedback was sought from both the Larimer County Board of County Commissioners and Open Lands Advisory Board, a 12-member citizen advisory board.

Stakeholder Focus Groups:

At the outset of the planning effort, a group was formed to provide expertise and guidance intended to represent diverse and comprehensive interests in the management of HTMOS. This group, displayed below, provided invaluable feedback and, as needed, LCDNR will continue to rely on its representatives as management actions are implemented in the future. Stakeholder meetings were held to discuss and solicit feedback on specific management concepts.





Public Feedback Tools:

Through a project website, input was collected online through two surveys and associated interactive maps as well as an open forum comment board. Additionally, LCDNR staff hosted virtual public forums to collect input and distributed trailhead surveys. These opportunities to provide feedback were publicly shared through press releases, social media, newsletters, a project webpage, an e-mail project subscriber list, and stakeholder group communications. During the two phases of public feedback, 6,448 individuals provided input through the website.

Opportunities and Ideas Development - Public Forum, Survey, and Map #1:

A virtual public meeting was held on August 9, 2021 to introduce participants to the project objectives and online platform and to promote the first survey.

The first survey and interactive map were intended to obtain general themes and ideas for how to improve HTMOS. They were available from July 28 through October 1, 2021 and were also sent to stakeholder groups and community organizations with an intention to collect comprehensive feedback reflective of the entire community, in particular from groups that may be historically underrepresented. In total, 726 surveys were completed, and 199 map comments were posted. Additionally, each comment added to the map allowed a user's reaction through a "like", "dislike", or by adding further comments which generated more robust feedback at this initial stage.

Public Priority Theme Summary

Following the first phase of stakeholder and public feedback, several themes emerged as preferred objectives and public priorities for the plan. These themes helped LCDNR craft management concepts for consideration before seeking a second round of more targeted community feedback. Themes included:

- Increase quality of recreation experience by improving trail sustainability and connectivity. Specific trail system themes include providing intermediate access to upper trails, achieving more balanced difficulty levels, improving connectivity & wayfinding, implementing one-way directional option(s), and improving sustainability
- Identify potential to improve ecological function & reduce fragmentation.
- Expand opportunities for additional education, inclusion, and outreach.
- Address wildfire risk.

Management Concepts Analysis - Public Forum, Survey, and Map #2:

A second virtual public meeting was held on September 28, 2021 to share proposed management concepts based off the public's priority themes gathered from the first round of feedback and direct attendees to the website for additional feedback.

Once the first round of public feedback was collected, twenty management concepts were developed, and a second survey and map were released to get targeted public feedback on them. This phase generated 411 completed surveys and an additional 461 map comments.

Additionally, the Open Lands Advisory Board and the Board of County Commissioners were updated and gave feedback throughout the process.

Planned Management Actions

Based on the plan objectives and public feedback described above, management actions to improve visitor experience, enhance natural resource values, and maintain operational feasibility and sustainability, are described below. These management actions will be implemented between 2022-2026, after which time, LCDNR will evaluate future management decisions against these objectives.

Improved Visitor Experience

Trail system

The following enhancements to the trail system are intended to meet the primary objectives informed by public and staff input including a more balanced level of difficulty, improved connections, greater sustainability, increased intermediate single-track access to upper trails, and improved wayfinding (Letters correspond to map below). It should be noted that the alignments shown on the map are conceptual only. While the objectives of each concept will remain, the actual alignment may differ during construction.



- A. Add a 1.6-mile new trail connection between the Soderberg Trailhead and Stout Trail near the Towers Road/Stout Trail intersection. This connection is intended to provide an intermediate-level and single-track alternative to Towers Road as well as a more direct connection/improved junction with Nomad Trail. Consider 2-directional use for hiking and equestrian, and uphill-only for bikes.

Discussion: This trail concept was the most publicly supported enhancement to the trail system and will be LCDNR's highest priority to complete. It will improve connectivity, provide an intermediate single-track route, and minimizes natural resource impacts/fragmentation. (High priority)

- B. Realign sections of the existing Stout Trail to improve intermediate sections between Towers Road and Sawmill Trail and extend Stout Trail by approximately 0.4 miles to connect Sawmill and Loggers trails. Consider renaming this section to improve wayfinding.

Discussion: This concept could improve intermediate access to the upper trails, help balance difficulty levels and improve connectivity and wayfinding. It was a favorable concept during public feedback but will require significant effort for relatively small impact to the trail system objectives and will be a lower priority to implement. (Low priority)

- C. Create new, intermediate-level, approximately 0.2-mile realignment of Herrington Trail to cross Towers Rd at a single junction. It will be renamed to Sawmill Trail. Approximately 0.1 miles of the former connection will be restored to a natural state.

Discussion: This concept will improve intermediate access to the upper trails, help balance difficulty levels and improve connectivity and wayfinding. As a very favorable concept during public feedback, it will be a high priority. (High priority)

- D. Carey Springs Extension/Loggers Restoration. 0.5 miles new. 0.8 miles restored.

Discussion: There are many options for implementing this concept. Primary objectives are to provide improved connectivity, eliminate unsustainable segments, and evaluate a downhill directional option. This concept was very publicly supported and LCDNR will coordinate with trail-focused stakeholders to further evaluate options. (Medium priority)

- E. Realign approximately 1.0 mile of Spring Creek Trail to create improved intermediate -level connections to the Towers Road/Carey Spring Trail junction as well as the Wathan Trail/Spring Creek Trail junction. Restore approximately 0.6 miles of trail along the valley bottom and 0.12 miles of the steep, unsustainable road between Towers Road and the valley bottom.

Discussion: This trail concept was a well-received enhancement to the trail system and is intended to improve ecological conditions, connectivity, and sustainability. The primary objective is to restore an old, highly eroded two track road and relocate the trail out of the riparian corridor to improve ecological condition. This concept is a lower priority relative to others. (Medium priority)

- F. Realign approximately 0.8 miles of Spring Creek Trail between the Stout/Spring creek junction and the Spring Creek/Wathan junction to improve sustainability.

Discussion: This concept originated from the objective to improve intermediate access to the upper trail system from the main trailhead. Considering topographic constraints, meeting that objective would be challenging without major reroutes. However, there are potential changes aimed at improving trail sustainability. This concept will be carried forward but as a low priority and with a primary objective of increased sustainability. (Low priority)

- H. Realign approximately 1.4 miles of Stout Trail to create a more sustainable grade and reduce erosion. As feasible, create a more intermediate level trail by reducing grades but retain the current views and some technical sections.

Discussion: This trail concept was a well-received enhancement to the trail system and is intended to balance difficulty levels and improve sustainability. (Medium priority)

- I. Add a 0.2-mile hiking-only connection between upper Horsetooth Rock Trail and Westridge Trail, creating an additional loop option.

Discussion: This trail concept was a popular enhancement to the trail system and will be a high priority to complete. (High priority)

- Adjust trail names and improve wayfinding

Discussion: When trail concepts are implemented, LCDNR will revise trail names, update maps, and add appropriate signage to improve ease of wayfinding.

Trail concepts evaluated; Not recommended

- G. Westridge Trail. Realign approximately 0.5 miles to remove uphill sections but maintain technical difficulty and make a downhill only directional segment.

Discussion: While this concept would address feedback seeking a downhill directional trail, the public feedback indicated that this wasn't the desired location. Additionally, it receives very little use relative to other trails. As such, LCDNR will not make changes to this section of trail.

- J. Mill Creek Trail readjustment. Restore unsustainable section and add connection to Carey Springs Trail. This will add a new loop option, improve sustainability, and expand an intact habitat patch.

Discussion: While this concept would expand intact habitat, and improve the sustainability of Mill Creek Trail, it was highly unfavorable during public feedback collection. As such, LCDNR will leave the existing trail intact at this time, while continuing to monitor use and sustainability over time, and make adaptive changes as needed.

- K. New trailhead and trail accessing the southwest portion of HTMOS.

Discussion: While adding a new trailhead in Redstone Canyon or along County Road 38E along with new trails in the southwest portion of HTMOS was suggested during the public feedback period, those additions are not viable/feasible at this time for the following reasons:

- Upper connection from Mill Creek into Lory State Park

Discussion: Some comments collected through public feedback suggested adding a trail connection from the western portion of Mill Creek Trail to the trail system in Lory State Park. A trail addition in this area would have to traverse Mill Creek canyon which is a steep, rugged and remote area within HTMOS. Any trail would require many switchbacks on both sides of the canyon and likely be rated difficult. It would also bisect one of the larger intact habitat areas including an important riparian corridor. Additionally, Mill Creek Trail receives relatively low use. Adding difficult and expensive trail that would receive low use and have negative impacts to natural resource values does not meet the objectives outlined for the trail system.

Management zoning:

The 2006 Horsetooth Mountain Open Space Management Plan outlines management zones that define the physical and social setting for appropriate use. While additional land has been added to HTMOS in this area since that plan, the area has historically been zoned as a "Sensitive Resource Protection" or "Primitive" zone, which guide LCDNR to limit public access. The 2006 Horsetooth Mountain Open Space Management Plan outlines management zones that define the physical and social setting for appropriate use. This southwest portion of HTMOS area has historically been zoned as a "Sensitive Resource Protection" or "Primitive" zone, which guides the focus of management to protect ecological resources and limit public access. Additional land has been added to HTMOS in this area to further protect sensitive resource values and expand this "Sensitive Resource Protection" zone.

New trails in the southwest portion of HTMOS:

New connections from the conceptual trailheads considered above or new trail connections to the existing system would result in significant habitat fragmentation of the existing “Sensitive Resource Zone” this area is designated due to various rare plants and intact natural wildlife habitat. In addition, trails may be prohibited by the Golden and Bald eagle Protection Act due to the presence of a nearby Golden eagle nest. If allowed by the U.S. Fish and Wildlife Service, any trails in this area would need to be closed for a significant portion of the year to limit impacts to the nest. This closure would follow Colorado Parks & Wildlife recommendations of ¼-mile closure year-round and 1/2-mile closure during the nesting/breeding season. Additionally, given topographic constraints, a new trail would be very difficult on steep terrain both from a potential parking area and to connect to the existing trail system but would be easy in between, thus not meeting goals to provide more balanced and accessible level trails.

Redstone Canyon trailhead:

In 2018, LCDNR conducted a feasibility and cost analysis that incorporated public input from a variety of stakeholders, general public, members of the Redstone Canyon Homeowner’s Association, and other homeowners near or adjacent to HTMOS. Landowners living in Redstone Canyon expressed opposition to additional recreation development, citing concerns of trespassing and additional wildfire risk to the area. The feasibility and cost analysis showed that the addition of a trailhead would trigger the need to complete very costly road improvements to County Road 25E. Additionally, site constraints and ownership boundaries would limit the size of the trailhead to approximately 30-40 parking spaces. The high cost (approximately \$2 million) for road improvement to access a relatively small trailhead, that would serve a small number of users, wouldn’t be a responsible use of public funding, negating the plan’s objective to offer actions that support financial feasibility and operational sustainability.

County Road 38E trailhead:

Site constraints along 38E would limit the potential size of the trailhead to 20-30 parking spaces and a trail connection would be difficult to construct.

Additional Recreation Opportunities

- Designate 1-2 additional rock-climbing areas.

Discussion: This concept was largely supported through the public input process. LCDNR will coordinate with the local rock-climbing community to identify areas, ensure access that limits natural resource impacts, and monitor use and impacts over time. (High priority)

- Concept AA: Formalize and improve the “powerline” connection from County Road 38E to the Blue Sky Trail. This addition will improve connectivity to the surrounding trail system and improve safety.

Discussion: The concept primarily follows an existing social trail, has minimal resource impacts, will improve connectivity in the Horsetooth area and is low cost to improve. While outside the boundaries of HTMOS, the concept will improve connectivity in the area, thus was included as a concept in this plan. This concept was very supported and will be a high priority. (High priority)

- Concept BB: South Bay to Inlet Bay Trail. While outside the boundaries of HTMOS, a new trail is planned to connect the Horsetooth Reservoir South Bay day use area to the Blue Sky Trail generally following the shoreline of Horsetooth Reservoir. This connection will improve access to HTMOS and trail connectivity in the surrounding area.

Discussion: This concept was envisioned and included in the 2017 Larimer County Parks Master Plan. Since then, the concept has further evolved to a proposed alignment and LCDNR collected additional public feedback in conjunction with the HTMOS plan. This concept was strongly supported and will be a high priority. Since the proposed trail is on property owned by the U.S. Bureau of Reclamation, it is subject to additional approval. (High priority)

Parking & Trailheads

Main Trailhead

- Redesign parking area to improve flow and ease congestion
 - o Eliminate one existing turn-around location
 - o Add parking spaces as feasible
 - o Redesign kiosk & restroom area to decrease user congestion

Discussion: The 2018 visitor study at HTMOS indicated that the only area that is approaching unacceptable crowding thresholds is within the main trailhead. As a step towards alleviating visitors' feeling of crowdedness, LCDNR will redesign portions of the parking area to improve vehicle and foot traffic flow.

- Improve kiosk area
 - o Harden surface and improve drainage around restroom, kiosk, and drinking fountain.
 - o Update informational kiosk including the map and educational materials.

Discussion: The kiosk area is the primary location to welcome visitors and share information. Improvements will be designed to promote responsible and safe use of the open space by providing the most important safety and helpful educational information to visitors.

Soderberg Trailhead

- Retain existing horse trailer parking area and adapt use based on high-use period demand.

Discussion: Public feedback indicated a desire to retain horse trailer parking, citing limited horse trailer parking availability nearby, but also noted that there are often available horse trailer parking spots when the car lot is full. Rather than reconfigure parking spots, the horse trailer parking will remain, and LCDNR staff will monitor the parking areas during high-use times and adjust available horse trailer parking based on current demand.





Enhanced Ecological Condition

- Restore and enhance the Redstone Creek riparian corridor

Discussion: This important riparian area has been impacted by grazing cattle, erosion, and encroachment of invasive weed species. LCDNR will seek to better control or eliminate access by cattle and restore a healthy, ecologically productive riparian corridor. A portion of HTMOS is within the Redstone Canyon Homeowners Association (HOA) and LCDNR will coordinate with the HOA on grazing recommendations and potential restoration.

- Seasonal raptor closures

- o Continue raptor closure on west side of Horsetooth Rock

Discussion: There is an active, documented prairie falcon nest on the west side of Horsetooth Rock and a historically active golden eagle nest on the large rock feature immediately west of Horsetooth Rock (Outer Space rock). While one or both of these nests remain active, LCDNR will continue access closures on an ongoing basis as guided by Colorado Parks & Wildlife and U.S. Fish & Wildlife Service recommendations.

- o Lift Spring Creek Trail closure for golden eagles

Discussion: While active in the near past, the golden eagle nest driving the closure of a section of the Spring Creek Trail has not been utilized for four years. LCDNR will continue to monitor the nest site but will lift the closure in 2022 unless future eagle activity is observed.

- Pursue additional conservation lands

Discussion: As outlined in the 2015 Larimer County Open Lands Master Plan, the foothills west of Ft. Collins and Loveland are a priority land conservation area. LCDNR will continue to pursue conserving lands in fee title or conservation easements in the area to protect ecological resources and potentially provide additional future public access.

- Vegetation management

- o Invasive species control
- o Forest management
- o Evaluate appropriate grazing regime and fencing for cattle

Discussion: Appropriate vegetation management will meet the objectives to improve ecological conditions and reduce risk of catastrophic wildfire. Appropriate grazing on open space will allow for riparian and upland conditions to improve and regain proper function along Redstone Creek. Livestock grazing can also be used to target conservation outcomes such as encouraging resilient native plant communities. Continuing to partner with the Colorado State Forest Service to develop and implement forest stewardship plans at HTMOS will create habitat heterogeneity while reducing the risk of a catastrophic wildfire. Recommendations from these plans shall include activities including, but not limited to, appropriate fuels mitigation (ex. thinning), snags per acre, and habitat improvement.



Improved Operational and Financial Sustainability

HTMOS is the only property in the Larimer County-managed system that is open 24 hours a day, seven days a week. In the past two years, visitation at HTMOS has grown significantly, which has increased public safety incidences requiring response, specifically in the main trailhead parking area. Transient population conflicts, illegal camping, underage drinking, illegal shooting, officer obstruction, suicide, and other offenses have regularly required law enforcement support at the open space during nighttime. In addition, neighbor concerns about wildfire risk from illegal camping and visitor search and rescues have remained. To address these issues, a full nighttime closure at HTMOS was proposed for public feedback and received significant opposition. Yet, feedback showed support for closure hours that provided flexibility at night for night events and to accommodate before and after work schedules. The public also supported aligning potential night closure hours at HTMOS with adjacent public lands (Lory State Park and Fort Collins Natural Areas). Therefore, the following nighttime management actions include:

Nighttime Use

- Close HTMOS between 11:00 p.m. to 4:00 a.m.
- Retain backcountry camping sites and manage within existing LCDNR reservation and fee system
- Continue limited nighttime educational programming
- Allow limited nighttime use by special permit

Discussion: The purpose for this recommendation is founded in abating public safety concerns, operational/staffing considerations, along with public feedback. Adding backcountry campsites to the current LCDNR reservation system aligns HTMOS with all other Larimer County-managed campsites, adds a level of user accountability, and helps mitigate concerns of illegal campfires. Online reservation processing necessitates that LCDNR add a fee to cover the administrative and maintenance costs.

Education & Outreach

- Update trailhead kiosks
- Re-evaluate and improve suggested one-way loop routes (Horsetooth Rock & Horsetooth Falls trails)
- Continue to offer volunteer opportunities
- Engage community members/groups for trail improvements, litter clean up, and other critical Department needs

Discussion: LCDNR will continue efforts to effectively engage and communicate with visitors to promote responsible stewardship, improved safety, and increased environmental education. Modernization of signage infrastructure, updated maps, and stewardship messaging will allow LCDNR to communicate more effectively with visitors.

Management actions evaluated; not recommended

- Reservation system

Discussion: While many public land managers are implementing reservation systems to manage crowding and growing visitation, LCDNR is not recommending a reservation system at HTMOS at this juncture for two primary reasons; 1) Public feedback has indicated strong opposition, 2) Challenges from heavy visitation have not reached a threshold requiring limiting visitation through a reservation requirement.

- Adding flush restrooms at main trailhead

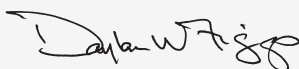
Discussion: In 2019, LCDNR conducted a feasibility and cost study to consider a plumbing upgrade to the restrooms at the main trailhead, converting them from vault toilets by connecting to water and sewer. While this would likely improve the visitor experience and would save the ongoing costs of periodically pumping the vaults, the cost to upgrade to a flush system was extremely high. The high cost is due to the proximity to existing utilities and, even with cost savings over time, it would take decades to recoup the costs and be an irresponsible use of public funds. LCDNR may reconsider in the future if new utilities are added closer to the trailhead.

Conclusion

Implementation of the management actions described above will take place over the next 1-7 years. Beyond that timeframe, management decisions will be based on criteria that emphasize improved visitor experience, enhanced ecological condition, and operational sustainability.

In conclusion, the Larimer County Department of Natural Resources would like to express its deepest gratitude to all of the community members that contributed to the development of this plan.

Adopted June 10, 2022 by the Larimer County Department of Natural Resources.



Daylan Figgs

Director, Department of Natural Resources
6/10/2022



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Connect With Us:
Larimer County Department of Natural Resources
1800 S. County Road 31
Loveland, CO 80537
(970) 619-4570
larimer.org/naturalresources



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