BOULDER COUNTY PLANNING COMMISSION
PUBLIC HEARING

Wednesday, August 19, 2020 at 1:30 p.m.

Due to COVID-19 this hearing will be held virtually.

PUBLIC HEARING

STAFF PLANNER: Summer Frederick, AICP

Docket SU-19-0009: Boulder Rifle Club, Inc.
Request: Special Use review to allow for the construction of five new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, five 3,132-square-foot range shelters, three 144-square-foot bathroom facilities, and one 1,612-square-foot range shelter on parcels #146307001001 and #146307001002.

Location: 4810 N. 26th Street, Parcel #s 146307001001 and 146307001002, at the northern terminus of N 26th Street, approximately 0.68 mile north of its intersection with US 36, in Section 7, Township 1N, Range 70W.

Zoning: Agricultural (A) Zoning District

Applicant/Property Owner: Boulder Rifle Club, Inc., c/o Steve Martin
Agent: Rosi Dennett, Front Range Land Solutions

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SUMMARY

The applicant requests approval of a Special Review for a Firing Range, Outdoor use and to allow for the construction of five new ranges (300-yard, 200-yard, 100-meter, 50-meter, and 25-meter), five 3,132-square-foot range shelters, a 20,050-square-foot indoor range building, three 144-square-foot bathroom facilities, and associated parking areas on the approximately 18-acre parcel #146307001002. The applicant also requests a modification to existing Special Review (SU-87-
13) to allow for the construction of one 1,612-square-foot range shelter and expanded parking area at the approximately six-acre parcel located at 4810 N 26th Street (parcel #146307001001). The parcels are located in the Agricultural (A) zoning district (the “subject properties”).

DISCUSSION

According to a Board of County Commissioners’ Action Letter dated January 29, 1988, Docket SU-87-13 was conditionally approved by the Boulder County Commissioners at a duly called and heard public hearing held on January 28, 1988. The letter states the Board of County Commissioners approved the request for a Rifle Range with the following conditions:

1. That closing of the gap in the east berm be completed within one year of approval by the Board of County Commissioners.
2. That the applicants cooperate with the Boulder County Health Department to resolve any noise complaints resulting from the site.
3. That revegetation of the site to prevent erosion and cover bare earth be commenced and continued as a priority of site completion.
4. That the privy on the site be returned to standards set by the Boulder County Health Department.
5. That a general clean-up of the site and removal of excess tires, abandoned vehicles, and other trash be commenced immediately, and that clean-up of the site is maintained.
6. That in five years the Planning Commission and Board of County Commissioners review the approval with regard to compliance with conditions and Special Use criteria then in effect.

Proposal
The Boulder Rifle Club proposes to expand the existing Rifle Club to include new ranges open to the public and improvements to the existing, membership-only ranges. The application indicates the member-only ranges will remain closed to the public and continue to only be available to members. Proposed development includes the construction of five new ranges (300-yard, 200-yard, 100-meter, 50-meter, and 25-meter), five 3,132-square-foot range shelters, a 20,050-square-foot indoor range building, three 144-square-foot bathroom facilities, and associated parking areas on the approximately 18-acre parcel #146307001002, as well as one 1,612-square-foot range shelter and expanded parking area on the approximately six-acre parcel located at 4810 N 26th Street (parcel #146307001001). The proposal also includes safety structures associated with each of the proposed ranges, new and expanded parking areas, and significant overlot grading associated with the proposed development and the proposed drainage plan.

Figure 1: Proposed site plan
The Rifle Club intends to construct the proposed development using the following phasing plan:

Phase 1:
- New 100-meter, 50-meter, and 25-meter outdoor ranges with side range barriers, backstops, and firing shelters,
- One vault toilet,
- Associated parking lots,
- Access road improvements,
- Property entrance gate,
- Detention pond,
- Emergency water cisterns,
- New firing structure and side range barrier associated with the existing 200-yard range,
- Expanded parking lot construction, and
- Gate installation at the west boundary of the existing Rifle Club parcel.

Phase 2:
- New 200-yard and 300-yard ranges with side range barriers, backstops, and firing shelters,
- A vault toilet, and
- Associated parking lots.

Phase 3:
- New indoor range building,
- Sewage system tank installation,
- Associated parking lots, and
- Proposed landscaping.

Staff notes that the Boulder Rifle Club has also submitted a Subdivision Exemption application requesting to adjust the south-eastern boundary line of parcel #146307001001 to reflect a recent transfer of a portion of parcel #146307000014 from the City of Boulder to the Boulder Rifle Club. Because work proposed through the Special Review application is located on the portion of property to be transferred, staff recommends a condition of approval requiring the Subdivision Exemption application be approved and all post-approval requirements be completed prior to the submission of any permit applications related to work proposed in this Special Review application.

Northern Front Range Recreational Sport Shooting Management Partnership (Front Range Partnership)
Along with Clear Creek, Gilpin, and Larimer Counties, Colorado Parks and Wildlife, and the US Forest Service, Boulder County is a member of the Northern Front Range Recreational Sport Shooting Management Partnership (Front Range Partnership). The Partnership was formed in 2013 to collaborate in a public process to inform solutions intended to address the safety issues of recreational sport shooting on US Forest Service owned lands. These safety concerns stem from the lawful discharging of firearms for both hunting and target or recreational sport shooting in the Arapahoe and Roosevelt National Forests (ARNF). ARNF are in the Front Range area where the population increased from 3.9 million to 4.4 million during the years between 2010 and 2016, are the fourth most visited National Forests in the nation and have approximately 19,000 residences and other structures within their boundaries. Usage and development pressures are anticipated to increase with the continued growth in the area.

On June 13, 2019, the ARNF Forest Supervisor signed the document titled Decision Notice and Finding of No Significant Impact – Recreational Sport Shooting (Attachment E). This document sets forth the intention of the US Forest Service to close lands within the ARNF identified as unsuitable for recreational sport shooting via a forest order once shooting opportunities at developed shooting ranges become available to the public. Such ranges must provide lanes of
enough length to allow for the common sighting of rifles in additional to shorter-length pistol lanes.

The three ranges included in Phase 1 of the proposal – the 100-meter, 50-meter, and 25-meter ranges – are intended to fulfill the requirements of the Decision Notice, and thus to provide for the closure of identified areas of the ARNF to recreational sport shooting.

REFERRALS

The application was referred to the standard agencies and adjacent property owners. Copies of all responses received by the Community Planning & Permitting Department are included in Attachment C of this document. A summary of each response follows.

**Boulder County Building Safety & Inspections Services Team** – This team reviewed the submitted application materials and indicated building and grading permits are required, Observation Reports are required, plumbing fixtures must meet or exceed the requirements of IBC Chapter 29, designs need to provide for accessibility, parking, signage, routes, fixtures and features and must meet wind and snow loads, the Fire Protection District must provide written approval of building permit plans and specifications of the project, and the applicant shall schedule an appointment with Michelle Huebner to review construction drawings. Michelle Huebner’s contact information can be found on the referral response document.

**Boulder County Parks & Open Space – Conservation Easement Team** – This division reviewed the submitted application materials and identified the existing conservation easement (CE), acknowledged the CE does not allow a shooting range, and also acknowledged the need to fulfill the county’s commitment to the Northern Front Range Recreational Sport Shooting Management Partnership (02/01/2018 BOCO letter). The referral expressed overall support of the proposal subject to following condition, which addresses the CE:

> The applicant shall contact the Parks & Open Space Department and negotiate a restrictive covenant that will allow a public shooting range (with related improvements) and that will replace the existing conservation easement. This change from a conservation easement to a restrictive covenant is necessary to fulfill Boulder County’s commitment in the Northern Front Range Recreational Sport Shooting Management Partnership to implement a landscape-level, multi-jurisdictional strategy to provide safe, responsible and accessible recreational sport shooting opportunities, as expressed by Boulder County’s Board of County Commissioners in a letter to Colorado Parks and Wildlife dated February 1, 2018.

**Boulder County Parks and Open Space Department, Natural Resources Planner** – This division reviewed the submitted application materials and confirmed the subject property has the following Boulder County Comprehensive Plan designations:

- Environmental Conservation Area (ECA) – Boulder Valley Ranch/Beech
- Adjacent to Public Lands – City of Boulder OSMP, on north and west; the City also owns the parcel to the east, but it is not managed as open space
- Adjacent to Public Trail – Hidden Valley Trail, to the north; about 570 linear feet distant from the parcel, at its closest
- Nearby Critical Wildlife Habitats – Lappin Pond, nearly adjacent on west; and BLIP Ponds, downstream to east
- Prairie Dogs – minimal
- Wetlands – marginal or none
- Significant Agricultural Lands of Local Importance – marginal, and no longer viable

This division’s referral comments acknowledged several improvements in the revised and additional application materials, including the completed fossil site investigation, improved erosion control plan,
more detailed and complete revegetation plan, and the completed professional wildlife biologist report which indicates that no significant wildlife impact should result from the proposed development.

Remaining concerns were expressed related to the proposed northern retaining wall that is located approximately 10 feet from existing surface flow. Questions were raised about what types of materials might be excavated from the site and whether materials would be recycled, disposed of, or reburied on-site.

Finally, the following suggestions were made for recommended conditions of approval:

- Additional erosion control measures be in place around the area of the proposed northern retaining wall,
- A commitment of record that specifies what types of materials are excavated on-site during construction and what has been done to dispose of said materials,
- A prairie dog fence be constructed along the west side of the proposed facility,
- A Weed Control Plan be submitted, and
- All Russian-olive trees be removed from site.

**Boulder County Development Review Team-Engineering** – This division reviewed the submitted application materials and conformed legal access to the subject parcels is demonstrated via adjacency to N. 26th Street, a public right-of-way. Staff indicated the proposed paved access drive complies with Boulder County Multimodal Transportation Standards and acknowledged that the average daily trips (ADT) are projected to approximately double: from 86 to 190 ADT on weekdays, and from 262 to 576 ADT on weekends.

Staff also reviewed the submitted Traffic System Impact Study and found the study appropriately considered the traffic impacts.

Several recommended conditions of approval were listed in the referral comments, including:

- Submission of Traffic Control Plan or Method of Handling Traffic, Hauling Plan must be submitted with Traffic Control Plan.
- Written permission from ditch company for discharge into Farmers Ditch required.
- Boulder County Stormwater Quality Permit required.
- Access Permit to be issued concurrently with Building Permit.

**Boulder County Public Health** – This agency reviewed the submitted application materials and indicated repair permits for existing vault toilets were approved 04/18/79 and 09/28/94, and the applicant must apply for an OWTS permit for the proposed upgrades to existing toilet facilities and for the proposed new toilet facilities.

**Colorado Department of Public Health & Environment** – This agency reviewed the application and indicated the applicant must comply with all applicable rules and regulations, including but not limited to those related to hazardous and solid waste, water quality (administered by the Water Quality Control Division), clean water, which may include a stormwater discharge permit if construction disturbs more than one acre in surface area, air quality, and Health Equity and Environmental Justice.

**Public Comment** – Staff notes that the public notice area was expanded from those parcels within 1,500 feet of the subject parcels’ boundaries to parcels within one-mile of the subject parcels’ boundaries.
In response to the original referral notification and the re-referral notification, staff received approximately 300 comments from community members via email and phone. Submitted comments expressed both support and opposition to the proposal.

Those in support of the proposal cited expanded gun safety educational opportunities, convenience of range location, increased safety on federal recreational lands when those lands are closed to recreational sport shooting, and the overall design of the proposed development as reasons for support.

Those in opposition cited increased traffic, increased volume and frequency of noise, safety concerns for users of nearby open space and trails, and increased gun usage in the County as reasons for concern.

Agencies replying with No Concern – Boulder County Historic Preservation Team, Colorado Division of Water Resources, Xcel

CRITERIA REVIEW AND ANALYSIS

Community Planning & Permitting staff has reviewed the conditions and standards for approval of a Special Review per Section 4-601.A of the Boulder County Land Use Code, and finds the following:

A. A use will be permitted by special review or limited impact special review only if the Board finds that the proposed use meets the following criteria as applicable:

1. Except as otherwise noted, the use will comply with the minimum zoning requirements of the zoning district in which the use is to be established, and will also comply with all other applicable requirements;

Firing Range, Outdoor (as defined in Article 4-510.A.1 of the Land Use Code) are permitted by Special Use Review in the Agricultural zoning district. Appropriate county permits must be obtained for all proposed structures and site development, including but not limited to building permits, grading permits, onsite wastewater treatment system permits, and stormwater quality permits. Additionally, proposed uses and construction are required to comply with all applicable Standards and Codes, including but not limited to Multimodal Transportation Standards, the appropriate Fire Safety Code, and any state and federal licensing regulations.

Article 4-510.A.5.a.i establishes shooting and target area setbacks from residential structures (whether permanent or seasonal), lodging or other occupiable or occupied structures not on the subject property, county platted subdivisions, county townsites, designated recreational trails, open space areas where off-trail use is allowed, designated campgrounds whether public or private, and/or any other potential hazards as identified through Special Use Review (Figure 2).
<table>
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<th>Minimum Distance</th>
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<tr>
<td>Direction of fire and/or shotfall zone</td>
<td>Maximum distance of projectile travel unless mitigated.</td>
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<td></td>
<td>No closer than 1,320 feet from the list defined in 4-510.A.5.a.i.</td>
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<tr>
<td>All other directions</td>
<td>No closer than 400 feet from the list defined in 4-510.A.5.a.i.</td>
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<td>Office, restrooms, classroom space, or other related range areas where weapons are not being fired</td>
<td>Default zoning district setback.</td>
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**Figure 2: Setback Summary for Firing Range, Outdoor**

The proposed ranges are approximately 600 feet from the Hidden Valley Trail, a trail that is part of the Mesa Reservoir trail network, owned and operated by the City of Boulder Open Space and Mountain Parks (OSMP). While this does not meet the required 1,320-foot setback, Article 4-510.A.5.a.i allows for consideration of a decrease in setback requirements based on range design, operational plans, topographic features, noise studies, and/or manmade improvements, including but not limited to backstop and side berms, bullet traps, ricochet catchers, and overhead or ground safety baffles which provide sufficient safety measures to protect adjacent properties. The proposed range design includes safety measures such as backstops, range barriers, overhead baffles, and firing range shelters, all of which work to keep the Surface Danger Zone fully contained within each range as shown in Figure 3.

**Figure 3: Site plan demonstrating Surface Danger Zone (shown by red crosshatch) contained within proposed ranges.**
Additionally, the entire Mesa Reservoir trail complex is scheduled for a public engagement, design, permitting, and construction process during the period from 2021 to 2026. This process will include work to relocate the Hidden Valley Trail farther away from the proposed ranges. In the application materials, the applicant states their commitment to contribute monies and collaborate with the City on this work, and staff has recommended a condition of approval reflecting this commitment.

As shown in Figure 4, it appears that the northern portion of the side range barrier associated with the existing 200-yard range is within the Agricultural zoning district’s required 7-foot side yard setback. To address this, staff recommends a condition of approval requiring one of the following:

1. The applicant submit a revised site plan with specific measurements showing the proposed barrier is more than 7 feet from the eastern parcel boundary.
2. The applicant apply for a setback Variance for the proposed location of the barrier. If the Variance application is denied by the Board of Adjustment, the applicant must submit a revised site plan showing the barrier is outside the required 7-foot setback.

Figure 4: Proposed site plan showing side range barrier possibly encroaching in required eastern side-yard setback.

The vacant subject property, parcel #146307001002, is currently encumbered by a conservation easement held by the Boulder County Parks & Open Space Department. Terms of the conservation easement do not allow for a Firing Range, Outdoor use on the parcel.
Parks & Open Space staff’s referral response states support of the proposal with a recommended condition of approval requiring the applicant to negotiate a Restrictive Covenant intended to replace the existing conservation easement. In order to ensure the proposed Firing Range, Outdoor use is allowed, staff recommends a condition of approval requiring the negotiated Restrictive Covenant be recorded with the Boulder County Clerk & Recorder’s office prior to the submission of any permit applications with the Community Planning & Permitting Department.

Article 4-516.V.5.c of the Land Use Code establishes minimum requirements for the number of electric vehicle charging stations that must be constructed for new or expanded parking lots totaling 15 or more spaces. In this case, the following requirements apply:

- One Level 2 or Level 3 charging station be constructed for the first 15 spaces
- If no Level 3, one additional Level 2 station for each additional 25 spaces (8 stations for 209 spaces)
- If Level 3 is installed, no additional stations required

Staff recommends a condition of approval requiring the construction of electric vehicle charging stations in accordance with the requirements of Article 4-516.V.5.c.

Staff also notes that this application is subject to Article 4-602.F: Special Provisions – Firing Range, Outdoor (see below for analysis). This section of the Land Use Code establishes additional standards that apply to the development of proposed outdoor firing ranges upon application for a special use permit. These standards are discussed in detail later in this document.

Staff finds that, as conditioned, this criterion can be met.

2. The use will be compatible with the surrounding area. In determining compatibility, the Board should consider the location of structures and other improvements on the site; the size, height and massing of the structures; the number and arrangement of structures; the design of structures and other site features; the extent of site disturbance, including, but not limited to, any grading and changes to natural topography; and the nature and intensity of the activities that will take place on the site. In determining the surrounding area, the Board should consider the unique location and environment of the proposed use; assess the relevant area that the use is expected to impact; and take note of important features in the area including, but not limited to, scenic vistas, historic townsites and rural communities, mountainous terrain, agricultural lands and activities, sensitive environmental areas, and the characteristics of nearby development and neighborhoods;

The subject properties are bordered to the north, east, and west by parcels owned by the City of Boulder Open Space and Mountain Parks (OSMP). The western parcel is currently leased as an active agricultural operation. The parcels to the north and east are part of OSMP Mesa Reservoir trail complex and managed open space, respectively. The parcel to the south is a privately-owned residential parcel.

The subject Firing Range, Outdoor use is proposed on a parcel immediately adjacent to the parcel where the existing Rifle Club is located and operated. Both parcels are owned by the Rifle Club. The proposed development includes several engineered aspects that are intended to increase the safety of and mitigate the noise impacts of the proposed and existing ranges. Such mitigation measures include 11-foot tall side range barriers, 20-foot tall backstops, overhead baffles, and three-sided, insulated firing shelters. As shown in Figure 3 above, these mitigation measures contain the Surface Danger Zone completely within the proposed ranges.
Given the relatively undeveloped nature of the surrounding parcels, the proposed engineered safety and mitigation measures, and the existing Rifle Club use, as conditioned, staff finds this criterion can be met.

3. **The use will be in accordance with the Boulder County Comprehensive Plan;**

The subject property contains the following Comprehensive Plan designations:

- Environmental Conservation Area (ECA) – Boulder Valley Ranch/Beech
- Adjacent to Public Lands – City of Boulder OSMP, on north and west; the City also owns the parcel to the east, but it is not managed as open space
- Adjacent to Public Trail – Hidden Valley Trail, to the north; about 570 linear feet distant from the parcel, at its closest
- Nearby Critical Wildlife Habitats – Lappin Pond, nearly adjacent on west; and BLIP Ponds, downstream to east
- Prairie Dogs – minimal
- Wetlands – marginal or none
- Significant Agricultural Lands of Local Importance

Referral response comments from the Parks & Open Space Natural Resource Planner acknowledged improvements in the revised and additional application materials, including the completed fossil site investigation, improved erosion control plan, more detailed and complete revegetation plan, and the completed report performed by a professional wildlife biologist which indicates that no significant wildlife impact should result from the proposed development.

While items of continued concern were identified during review and analysis of the revised materials, County staff acknowledges the applicant’s intent to develop the site in such a manner that will mitigate many of the issues associated with the Comprehensive Plan designations. In order to address identified items of concern, staff recommends conditions of approval requiring the applicant submit a Revegetation Plan, a Weed Management Plan, and an Environmental Stewardship Plan to address the identified concerns.

Furthermore, Goal I.1 of the Boulder County Comprehensive Plan states:

> The County should encourage and promote coordination and cooperation between federal, state, and local government entities charged with making decisions which significantly affect land use in Boulder County.

The proposed development is intended to support the work of the Front Range Partnership and the Decision of the US Forest Service to allow for areas of identified USFS land to be closed to recreational sport shooting.

Therefore, as conditioned, Staff finds this criterion can be met.

4. **The use will not result in an over-intensive use of land or excessive depletion of natural resources. In evaluating the intensity of the use, the Board should consider the extent of the proposed development in relation to parcel size and the natural landscape/topography; the area of impermeable surface; the amount of blasting, grading, or other alteration of the natural topography; the elimination or disruption of agricultural lands; the effect on significant natural areas and environmental resources; the disturbance of plant and animal habitat, and wildlife migration corridors; the relationship of the proposed development to natural hazards; and available mitigation measures such as the preservation of open lands,**
the addition or restoration of natural features and screening, the reduction or rearrangement of structures and land disturbance, and the use of sustainable construction techniques, resource use, and transportation management;

The proposed development is to take place on the currently developed Rifle Club parcel as well as on the vacant parcel that has historically been used as a construction debris dump site. The current and previous use of the land has created an area of land with little natural resource value.

The submitted grading and drainage plan and the revegetation plan show the applicant’s intention to create a comprehensive stormwater management system on-site, as well as providing for vegetation that will assist in the prevention of site erosion. Staff has recommended a condition of approval requiring additional landscaping intended to mitigate potential visual impacts of the proposed development, but believes that the additional landscaping will also help in the restoration of natural features and screening.

To ensure the continued use of the subject parcel as a Firing Range, Outdoor does not result in an over-intensive use of land, the Conservation Easement Team of Boulder County Parks & Open Space has required that the existing Conservation Easement be replaced with a Restrictive Covenant which will specify the use of the subject properties is limited to what is approved through this Special Review process. Staff recommends a condition of approval incorporating this requirement.

Therefore, staff finds that as conditioned this criterion can be met.

5. **The use will not have a material adverse effect on community capital improvement programs;**

With the construction of the proposed additional outdoor ranges, the proposed use is anticipated to result in more frequent and sustained noise impacts on visitors using the neighboring OSMP lands, specifically the Hidden Valley Trail. As was discussed in previous criterion analysis, the Hidden Valley Trail is part of the Mesa Reservoir system that is scheduled for process, review, permitting, and construction 2021 to 2026.

Staff’s recommended condition of approval requiring the applicant to collaborate with OSMP staff to determine an appropriate relocation of the Hidden Valley Trail, and to provide monetary support for the physical trail relocation work is intended to ensure the proposed Firing Range, Outdoor use will not have a material adverse effect on community capital improvement programs.

Therefore, as conditioned, staff finds this criterion can be met.

6. **The use will not require a level of community facilities and services greater than that which is available;**

Staff has recommended conditions of approval to ensure the proposed development will meet all requirements of the appropriate Fire Protection District’s Fire Code, have adequate water supply, and that proposed vault toilets will be appropriately permitted; therefore, as conditioned, Staff finds this criterion can be met.

7. **The use will support a multimodal transportation system and not result in significant negative impacts to the transportation system or traffic hazards;**

The subject property is accessed via N. 26th Street, a gravel Boulder County owned and
maintained right-of-way (ROW). Adjacency to this public ROW establishes legal access.

Development Review-Engineering staff reviewed the submitted Transportation System Impact Study and found the traffic impacts had been appropriately considered.

The proposal indicates the applicant’s intention to provide for a new access to the public ranges on parcel #146307001002 while keeping the currently used access to the existing Rifle Club. The existing access will be used only by Rifle Club members and law enforcement officials. Both the proposed and existing access ways meet the Boulder County Multimodal Transportation Standards.

Submitted site plans and other application materials indicate that 20 bicycle parking spaces will be provided at 10 different bike racks throughout the new and expanded parking areas.

In order to ensure the transportation network is not negatively impacted during construction, staff has recommended a condition of approval requiring the applicant submit a Traffic Control Plan or Method of Handling Traffic, and that a hauling plan be submitted with Traffic Control Plan.

Therefore, as conditioned, Staff finds this criterion can be met.

8. **The use will not cause significant air, odor, water, or noise pollution;**

Staff has not identified any potential air, odor, or water pollution as a result of the proposed use.

Because the proposed development covers an area greater than one-acre, a Boulder County Stormwater Quality Permit is required. Staff has recommended a condition of approval requiring an SWQP application be submitted with building permit application materials.

A noise study and an associated addendum to the original study were submitted for review. The noise study and associated recommended conditions of approval are discussed in more detail below in Special Provision 4-602-F.1.c.

Therefore, as conditioned, staff finds this criterion can be met.

9. **The use will be adequately buffered or screened to mitigate any undue visual impacts of the use;**

As previously stated, the subject properties are surrounded on the west, north, and east by OSMP owned parcels that are used for active agriculture and recreation, and on the south by a privately-owned residential parcel.

The new indoor range building is proposed in the far southern portion of parcel #146307001002, approximately 45 feet from the access extension from N 26th Street and immediately across from the residential property to the south. Due to the open nature and topography of the area it is anticipated that the proposed indoor range building will be visible from parcels to the west and south, and the proposed ranges will be visible from the northern parcels where heavily used OSMP trails are located.
As shown in Figure 5, the two-story building is currently proposed at a height of approximately 38 feet from existing grade on the eastern façade. Submitted elevations (Figures 6 and 7) show that this proposed height presents a large bulk and mass that will create a significant visual impact to neighboring residential property as well as neighboring open space parcels.

All other structures, either proposed or existing, associated with the Boulder Rifle Club operations are 20 feet tall or shorter. In order to mitigate visual impacts, staff has recommended a condition of approval requiring the height of the indoor range building be reduced to approximately 25 feet or less from existing grade.
In order to mitigate potential visual impacts of installed lighting on neighboring properties, staff has recommended a condition of approval restricting the hours that outdoor lighting may be used to the hours of operation.

Application materials show a line of trees are to be planted in front of the proposed indoor range building along the southern parcel boundary that is immediately adjacent to N. 26th Street. To provide adequate visual buffering and screening, staff recommends a condition of approval requiring the applicant to work with the Natural Resource Planner and Wildfire Mitigation Specialists to create an expanded Landscaping Plan that includes plantings of trees and other vegetation at various points along the perimeters of the subject parcels.

Therefore, as conditioned, staff finds this criterion can be met.

10. **The use will not otherwise be detrimental to the health, safety, or welfare of the present or future inhabitants of Boulder County;**

As previously discussed, the range design includes several engineered safety features, including but not limited to backstops, range barriers, and overhead baffles. Considering these features, along with analysis provided for the other criteria found in Article 4-601.A and the standards found in Article 4-602.F and recommended conditions of approval, staff finds no detrimental impacts have been identified regarding health, safety or welfare.

Staff also notes that the proposed use will increase the safety of present or future inhabitants of Boulder County on US Forest Service owned lands by allowing for the closure of those lands to recreational sport shooting.

Therefore, staff finds this criterion can be met.

11. **The use will establish an appropriate balance between current and future economic, environmental, and societal needs by minimizing the consumption and inefficient use of energy, materials, minerals, water, land, and other finite resources.**

The proposed Special Review and Modification request are intended to allow for the continued and expanded use of the Boulder Rifle Club, thus providing outdoor ranges available for public use. These proposed ranges are also intended to meet the requirements of the Decision Notice and to allow for the closure of identified US Forest Service areas to recreational sport shooting.

The proposed development associated with this application is located either on the parcel where the Rifle Club is currently located, or on the immediately adjacent parcel that has been historically used as a construction debris dump site. This historic use of the currently vacant parcel has left construction debris on-site, located to a significant depth and thus creating a parcel that is not suitable to many other uses allowed in the Agricultural zoning district.

Therefore, Staff finds this criterion is met.

12. **The use will not result in unreasonable risk of harm to people or property – both onsite and in the surrounding area – from natural hazards. Development or activity associated with the use must avoid natural hazards, including those on the subject property and those originating off-site with a reasonable likelihood of affecting the subject property. Natural hazards include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls; flash flooding corridors, alluvial fans, floodways, floodplains, and flood-prone areas; and avalanche corridors; all as identified in the Comprehensive Plan Geologic Hazard and Constraint Areas**
Map or through the Special Review or Limited Impact Special Review process using the best available information. Best available information includes, without limitation, updated topographic or geologic data, Colorado Geologic Survey landslide or earth/debris flow data, interim floodplain mapping data, and creek planning studies.

The subject properties are in areas identified as having high swelling soil potential and high landslide susceptibility. These identified areas cover the entirety of both parcels making it impossible for proposed development to avoid them.

A Preliminary Geotechnical Subsurface Exploration Report was submitted with application materials. The findings of this report focus on the presence of construction debris/landfill materials on the vacant subject parcel, and briefly discussed possible methods of construction based on the findings. Additional and more detailed soils analysis and engineered plans will be required during the building permit application process, ensuring that proposed development will be constructed in such manner that mitigates potential issues caused by identified natural hazards.

Therefore, as conditioned, staff finds that the danger from natural hazards can be mitigated to a reasonable level and this criterion can be met.

13. The proposed use shall not alter historic drainage patterns and/or flow rates unless the associated development includes acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including without limitation the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geologic Survey landslide, earth/debris flow data, and creek planning studies, all as applicable given the context of the subject property and the application.

A complete and thorough drainage study and associated plan were submitted with the application materials. Development Review-Engineering staff reviewed the information and found the increase in runoff has been considered and planned in an appropriate manner. Staff further noted that the ultimate discharge for drainage will be the Farmers Ditch and recommended a condition of approval requiring written approval from the ditch company for the discharge into the ditch. Such written approval must be provided with application materials submitted for Phase 1 building permits.

Therefore, as conditioned, Staff finds that this criterion can be met.

SPECIAL PROVISIONS

Community Planning & Permitting staff also reviewed the conditions and standards for approval of a Special Review for Firing Range, Outdoor per Section 4-602.F of the Boulder County Land Use Code, and finds the following:

1. In addition to satisfying the special use criteria of Section 4-601, the following standards shall apply to the development of proposed outdoor firing ranges upon application for a special use permit. The County may vary from these standards where the applicant has demonstrated, and a professional engineer registered in the State of Colorado or other equally qualified individual has verified, that the proposed facility includes alternative designs and features, either natural or manmade, that will otherwise mitigate the potential adverse impacts to the health, safety and welfare of owners or users of neighboring properties and the general public. The County may also impose stricter standards based on range design, environmental resources and other site-specific factors.
a. Range Design

(i) Pistol and Rifle Firing Ranges. Pistol and rifle firing range design shall include sufficient land area under control of the applicant for the Surface Danger Zone to accommodate the ballistics of the highest-powered firearms and the range of ammunition that may be used in the permitted firing activities. Such geographic areas shall be designed based on industry-accepted range design guidelines, standards, and best practices. Such spatial requirements may be reduced in consideration of natural topographic features or manmade improvements, including but not limited to, backstop and side berms, bullet traps, ricochet catchers, and overhead or ground safety baffles which will provide sufficient safety measures to protect persons or adjacent properties. The range design and operation will dictate the Surface Danger Zone. The Surface Danger Zone will, in turn, affect setback distances.

As shown in Figure 8, the proposed range design includes 11-foot high side range barriers for each outdoor range, 20-foot tall backstops, bullet traps, and overhead safety baffles.

Figure 8: Drawing showing overhead baffles, side wall barriers, and backstops

Figure 3 (shown in 4-601.A.1 criteria analysis) demonstrates these engineered measures work to contain the Surface Danger Zone within the limits of the proposed ranges.
Staff has recommended a condition of approval approving the range design as proposed in application materials submitted on June 2, 2020.

Therefore, as conditioned, staff finds this standard can be met.

(ii) Shotgun Ranges.
The proposed range is not a Shotgun Range; therefore, this standard is not applicable.

b. Security. The entire perimeter of a Firing Range shall be fenced and signed to reduce the potential for trespass onto the property. In some areas topography or natural barriers may make fence placement unnecessary. In addition, warning signs identifying the range shall be posted around the perimeter of the parcel or parcels on which the firing range is located such that each sign is visible and legible from the next sign (generally 200 yards but more frequently placed, depending on topography and vegetation). Where wildlife is a concern, fencing should be designed and installed to be wildlife safe while maintaining all measures to secure a firing range and reduce potential for trespass on the property.

In submitted materials, the applicant indicates their commitment to constructing fencing and posting required signs along the perimeter of the subject parcels, and that the proposed fencing is to match that which already exists. The Parks & Open Space Natural Resource Planner has indicated that wildlife safe fencing is not necessary for the subject properties but does recommended a prairie dog fence be placed along the western parcel boundary of parcel #146307001002. Staff has recommended a condition of approval reflecting this suggestion.

Therefore, as conditioned, staff finds this standard can be met.

c. Noise. All firing line locations shall be located and maintained such that the sound levels generated by the discharge of firearms on the range do not exceed a 65 dB peak impulse response at existing residential structures (whether permanent or seasonal), lodging, or other occupiable or occupied structures not on the subject property. The applicant shall submit a noise study proving the proposed range will meet this standard at time of application. All noise studies shall be performed by a professional engineer registered in the State of Colorado or other equally qualified individual and shall take the topography of the surrounding area into account.

A Noise Study (the Study), conducted by Behrens and Associates, Inc. and dated May 2019 was submitted with original application materials with an addendum dated May 2020 submitted with revised and additional application materials. Study materials include a series of Noise Contour Maps that show the geographic limits of where noise generated from existing and proposed ranges can be heard at different decibels. These maps show that noise generated by the majority of the ranges does not exceed the 65db limit established in this standard.

However, as shown in Figures 9 and 10, which show noise generated from the existing 200-yard and proposed 300-yard ranges, a portion of the residence located on the immediately adjacent parcel to the south falls within the range above 65dB, even with proposed noise mitigation measures. In order to meet the maximum allowed noise levels as established in this standard, staff has recommended a condition of approval requiring additional noise mitigation measures be constructed for these ranges.
Figure 9: Noise Contour Map for Mitigated 200-yard Range with residence on southern adjacent parcel shown to be within 65dB range.
Additionally, application materials are inconsistent regarding the proposed firing shelter associated with the existing 100-yard range. The application narrative indicates the firing shelter is a part of the proposal, as does the Noise Study Addendum. However, the firing shelter is not shown as proposed on submitted site plans or fact sheets. When reviewing the Noise Contour Maps for this range (Figures 11 and 12), it is clear that the firing shelter is necessary to ensure the noise levels at the residence located on the immediately adjacent parcel to the south do not exceed the established 65dB limit. Staff has recommended a condition of approval requiring that the firing shelter be constructed at the existing 100-yard range.

Figure 10: Noise Contour Map for Mitigated 300-yard Range with residence on southern adjacent parcel shown to be within 65dB range.

Figure 11: Noise Contour Map for Existing Unmitigated 100-yard Range with residence on southern adjacent parcel shown to be within 65dB range.
Therefore, as conditioned, staff finds this standard can be met.

\section*{d. Range Orientation.} All firing lines should be aimed at target lines to the northeast, north or northwest unless sufficient screening, natural or manmade, is demonstrated to eliminate the effects of glare from the sun.

All firing lines in proposed and existing ranges are aimed at target lines to the north; therefore, staff finds this standard is met.

\section*{e. All backstops shall have sufficient depth, based on industry-accepted range design guidelines, of sand or other similar soft earthen material that is free of rocks, stones and other hard objects that may result in ammunition ricochets. All manmade berms shall be designed to reduce the potential for erosion. All backstops and berms shall be maintained to perform their intended functions. Parallel ranges separated by bulletproof barriers or berms shall be a minimum eight feet high. Backstops shall be a minimum twenty feet high.}

Application materials show that engineered range design for the proposed outdoor ranges includes side range barriers 11 feet in height and backstops 20 feet in height. Figure 13 shows proposed construction including these safety measures, and staff has recommended a condition of approval requiring construction of ranges to specifications as shown in the application materials submitted on June 2, 2020.
f. **Firing Ranges shall be developed such that there are no traveled roadways, trails, streams, ponds, lakes, or wetlands located within the Surface Danger Zone or within any Shotfall Zone.**

Submitted site plans show that no traveled roadways, trails, streams, ponds, lakes, or wetlands are located within the Surface Danger Zone or within any Shotfall Zone; therefore, staff finds this standard is met.

g. **The developer or operator of the Firing Range facility shall provide to the Land Use Department, at the time of application for the building permit final inspection, a certification prepared by a professional engineer registered in the State of Colorado or other equally qualified individual confirming that the Firing Range facility has an Environmental Stewardship Plan. The Environmental Stewardship Plan may include semi-annual soil and water sampling, regular liming of the soil to prevent lead migration, reclamation and recycling of expelled ammunition and lead, and must comply with the Best Management Practices, specifically relating to lead management, as specified by the Environmental Protection Agency’s (EPA’s) most current edition of Best Management Practices for Lead at Outdoor Shooting Ranges.**

Staff has recommended a condition of approval requiring a certification prepared by a professional engineer registered in the State of Colorado or other equally qualified individual confirming that the Boulder Rifle Club has an Environmental Stewardship Plan. Staff has also recommended a condition of approval requiring the Environmental Stewardship Plan include, but not be limited to, the following items: semi-annual water and soil sampling, specifics related to processes for reclamation and recycling of expelled ammunition and lead, and that the components of the Plan must comply with the Best Management Practices, specifically related to lead management, as specified by the EPA’s most current edition of Best Management Practices for Lead at Outdoor Shooting Ranges.

Therefore, as conditioned, staff finds this standard can be met.

h. **Operational Requirements**

(i) **Hours of operation will be limited to the hours between 7 a.m. to 7 p.m. with the exception of shooting for educational or law enforcement activities which will be allowed until 9 p.m. one day per week, unless more restrictive hours are necessary to address impacts to neighboring areas. Training areas are allowed to remain in operation up to two hours past sunset for up to five days per month.**

Staff has recommended a condition of approval restricting hours of operation to 7:00 am or sunrise, whichever is later to dusk or 7:00 pm, whichever is earlier, with one day per week having a closing time of 9:00 pm for educational or law enforcement activities. Hours after 7:00 pm or dusk shall only be for education or law enforcement
activities.

Therefore, as conditioned, staff finds this standard can be met.

(ii) Alcohol or drugs must not be permitted on site.

Staff has recommended a condition of approval prohibiting the use of alcohol and drugs on the subject properties; therefore, staff finds, as conditioned, this standard can be met.

(iii) No tracer rounds or incendiary rounds permitted.

Staff has recommended a condition of approval prohibiting the use of tracer and incendiary rounds at the proposed and existing ranges; therefore, staff finds, as conditioned, this standard can be met.

(iv) A Fire Safety and Response Plan must be filed and approved by the local fire protection district and Sheriff as part of the development agreement.

Staff has recommended a condition of approval requiring a Fire Safety and Response Plan and associated written approval of the plan from the local fire protection district and the Sheriff be included in the required development agreement as an Exhibit.

Therefore, as conditioned, staff finds this standard can be met.

(v) At each Firing Range, there shall be operational large fire extinguishers, always immediately available for emergency use, stored at all shooting and target areas. Number of extinguishers to be determined during the Special Use Review process.

Staff has recommended a condition of approval requiring the applicant work with the local fire protection district to determine the appropriate location and number of fire extinguishers to be immediately available for emergency use both on all existing ranges and all proposed ranges. The number and location of these extinguishers shall be documented in the Safety Plan required in standard viii below.

Therefore, as conditioned, staff finds this standard can be met.

(vi) The site plan shall satisfactorily mitigate the risk of wildfire both to the subject property and those posed to neighboring properties in the surrounding area by the proposed development. In assessing the applicable wildfire risk and appropriate mitigation measures, the Director shall consider the referral comments of the County Wildfire Mitigation Coordinator and the applicable fire district, and may also consult accepted national standards as amended, such as the Urban-Wildland Interface Code; National Fire Protection Association (NFPA); International Fire Code; and the International Building Code.

In order to ensure the proposed development shall satisfactorily mitigate any future risk of wildfire, staff has recommended a condition of approval requiring the applicant to work with the Boulder County Wildfire Mitigation Team to create an appropriate Wildfire Mitigation Plan, and that the Wildfire Mitigation Plan be submitted as part of any building permit applications associated with Phase 1 construction.

Therefore, as conditioned, staff finds this standard can be met.
(vii) **On site emergency communication system required.**

Staff has recommended a condition of approval requiring documentation of an on-site emergency communication system be submitted to the Community Planning & Permitting Department prior to scheduling final inspections for Phase I construction.

Therefore, as conditioned, staff finds this standard can be met.

(viii) **A Safety Plan must be filed with and approved by the Land Use Department and the Sheriff and range rules must be posted on site.**

A. **Supervision. To receive a reduction in setbacks:** (1) a firing range shall have at least one trained safety officer present when open to the public and (2) a range member who has passed the minimum training requirements of the range shall be present when the facility is closed to the public.

In order to allow the construction of the proposed new ranges within approximately 600 feet of the Hidden Valley Trail, staff has recommended a condition of approval requiring a trained safety officer be present when the ranges are open to the public, and a member who has passed the minimum training requirements of the range be present when the facility is closed to the public.

Staff has also recommended a condition of approval requiring a Safety Plan be filed with the Community Planning & Permitting Department as part of any building permit application associated with construction proposed in Phase 1.

Therefore, as conditioned, staff finds this standard can be met.

(ix) **Through the Special Review process the Board of County Commissioners (BOCC) may require periodic reviews to assure effective monitoring and operation of the range to protect the health and safety of those in the area and to ensure compliance with the Special Use Review approval. If at any time the BOCC finds the operation does not meet the design or operational expectations, they may modify existing conditions or impose additional conditions to address concerns including, without limitation, requiring on-site range staff, cameras, or corrective design measures.**

In order to ensure effective monitoring and operation of the proposed ranges, staff has recommended a condition of approval requiring the Boulder Rifle Club operations be reviewed by Community Planning & Permitting staff one year after the first building permit has been closed. If this review determines that any of the Boulder Rifle Club’s design or operations do not meet expectations, Community Planning & Permitting staff shall present the review findings to the Board of County Commissioners who may choose to modify existing conditions of approval or impose additional conditions to address identified concerns.

Therefore, as conditioned, staff finds this standard can be met.

i. **Enforcement.**

   (i) **Firing range noise violations will be enforced if the following criteria are met:**

   (A) A civil action or criminal penalty shall only be commenced against an approved range or its owners or operators following a written complaint from a resident of Boulder County. Grounds for commencing civil action or penalty include noise in excess of permitted levels emanating from a range that results from the operation or use of the range.
(B) Written complaints must contain the name and address of the complainant, how long the complainant has resided at the address indicated, and the times and dates upon which the alleged excessive noise occurred. Enforceable complaints must meet the criteria of C.R.S. § 25-12-109, as amended.

Staff notes that enforcement of complaints received related to Boulder Rifle Club operations shall be processed according to provisions set forth in this section.

Therefore, staff finds this standard is met.

(ii) Notwithstanding 4-602.F.1.j.i. above, any other provisions of this section may be enforced under Article 17 of the Code, or by any legal or equitable means recognized by the Colorado State Statutes and the Colorado Court Rules, as amended.

j. Any future expansion that results in additional firing positions, including without limitation a lengthened daily period of operations or increased length of the direct fire zone or the area of the shotfall zone to accommodate the use of firearms not identified in the then-existing Special Use permit application will constitute a substantial modification under 4-603 of the Code. Changes that are not a substantial modification and are routine maintenance include simple, small-scale activities (e.g., repairing structures such that a building permit is not required under the Code) associated with regular and general upkeep of an existing building, firing line, target line, parking lots, etc. Routine maintenance activities are associated with maintaining a facility, not expansion or new construction.

Staff has recommended a condition of approval requiring any change that is not a defined minor modification as defined in this section be approved through a Special Review process; therefore, as conditioned, staff finds this standard can be met.

RECOMMENDATION

The Community Planning & Permitting staff recommends that the Boulder County Planning Commission conditionally approve and recommend that the Board of County Commissioners Conditionally Approve SU-19-0009: Boulder Rifle Club as described in the application materials, subject to the following conditions:

1. The applicant shall provide a Development Agreement, for review and approval by County staff, prior to the issuance of any permits by the Boulder County Community Planning & Permitting Department.

2. The applicant shall comply with all applicable local, state, and federal regulations and obtain and maintain necessary permits.

3. The submitted Subdivision Exemption application shall be approved, and all post-approval requirements shall be met prior to the recordation of the Development Agreement.

4. The applicant shall obtain all required building and grading permits.

5. The design professional responsible for the design or a similarly qualified Colorado-licensed professional is to observe the grading and submit a stamped report to the Building Safety & Inspection Services Team for review and approval. The final report is to state that the work has been completed in substantial conformance with the approved engineered plan.
6. The applicant shall work with the City of Boulder Open Space and Mountain Parks staff on plans to relocate the Hidden Valley Trail and the implementation work to physically relocate the trail. Additionally, the applicant shall pay the committed $30,000.00 or an alternative amount agreed upon by both parties to the City of Boulder Open Space and Mountain Parks to be used for the relocation of the Hidden Valley Trail.

7. The applicant shall submit a revised site plan with specific measurements showing the proposed side range barrier associated with the existing 200-yard range barrier is more than 7 feet from the eastern parcel boundary, or the applicant shall apply for a setback Variance for the proposed location of the barrier. If the Variance application is denied by the Board of Adjustment, the applicant must submit a revised site plan showing the barrier is outside the required 7-foot setback.

8. The applicant shall contact the Parks & Open Space Department and negotiate a restrictive covenant that will allow a public shooting range (with related improvements) and that will replace the existing conservation easement. This change from a conservation easement to a restrictive covenant is necessary to fulfill Boulder County’s commitment in the Northern Front Range Recreational Sport Shooting Management Partnership to implement a landscape-level, multi-jurisdictional strategy to provide safe, responsible and accessible recreational sport shooting opportunities, as expressed by Boulder County’s Board of County Commissioners in a letter to Colorado Parks and Wildlife dated February 1, 2018.

9. The finalized Restrictive Covenant shall be recorded with the Boulder Clerk and Recorder’s office prior to the submission of any permit applications to the Community Planning & Permitting Department.

10. Revised site plans showing the locations of electric vehicle charging stations required per Article 4-516.V.5.c. shall be submitted with application materials submitted for building permits associated with Phase 1 construction.

11. The applicant shall provide a Revegetation Plan as part of any building permit application associated with Phase 1 construction.

12. The applicant shall provide a Weed Control Plan as part of any building permit application associated with Phase 1 construction.

13. The required Weed Control Plan shall include specifics related to the removal of all Russian-olive trees located on the subject properties.

14. The applicant shall submit a Traffic Control Plan or Method of Handling Traffic with building permit application materials. The Traffic Control Plan shall include a Haul Plan.

15. A Stormwater Quality Permit application shall be submitted with the first building or grading permit application.

16. Lights, as shown on the submitted lighting plan, shall only be on during approved hours of operation.

17. The applicant shall reduce the height of the new indoor range building to approximately 25 feet above existing grade and shall submit new plans reflecting the required change with building permit application.

18. The applicant shall work with the Natural Resource Planner and Wildfire Mitigation Specialists to create an expanded Landscaping Plan that includes plantings of trees and other vegetation at various points along the perimeters of the subject parcels. The finalized
Landscaping Plan shall be submitted with the building permit application for Phase 1 construction.

19. The applicant shall provide written documentation from the ditch company that manages Farmers Ditch approving the drainage plan that includes discharge into the Farmers Ditch.

20. Development on both subject parcels shall conform with plans submitted to Community Planning & Permitting Department on June 2, 2020, including the firing shelter associated with the existing 100-yard range.

21. The applicant shall install safety fencing and signage along the entire perimeter of the subject properties. The fence along the western subject property line shall be a prairie dog fence.

22. The applicant shall submit revised plans that include additional sound mitigation measures for the proposed 300-yard and existing 200-yard ranges, and the proposed firing shelter at the existing 100-yard range. These measures shall ensure that the 65 dB maximum allowed noise level is met for the residence located on the immediately adjacent parcel to the south.

23. The applicant shall submit a certification prepared by a professional engineer registered in the State of Colorado or other equally qualified individual confirming that the Boulder Rifle Club has an Environmental Stewardship Plan. The Environmental Stewardship Plan shall include, but not be limited to, the following items: semi-annual water and soil sampling and specifics related to processes for reclamation and recycling of expelled ammunition and lead. The components of the Plan must comply with the Best Management Practices, specifically related to lead management, as specified by the EPA’s most current edition of Best Management Practices for Lead at Outdoor Shooting Ranges.

24. Approved hours of operation are limited to: 7:00 am or sunrise, whichever is later to – dusk or 7:00 pm, whichever is earlier, with one day per week having a closing time of 9:00 pm for educational or law enforcement activities. Hours after 7:00 pm or dusk shall only be for education or law enforcement activities.

25. No alcohol or drugs shall be allowed on the subject properties.

26. No tracer rounds or incendiary rounds shall be allowed at any of the Boulder Rifle Club ranges.

27. The applicant shall submit an approved Fire Safety and Response Plan and associated written approval of the plan from the local fire protection district and the Sheriff as an Exhibit to the required Development Agreement.

28. The applicant shall submit a Wildfire Mitigation Plan with building permit applications for Phase 1 construction.

29. The applicant shall submit documentation of an on-site emergency communication system with building permits for Phase 1 construction.

30. One trained safety officer during all hours open to the public and one range member who has passed minimum training requirements during hours when facilities are used but not open to the public shall be on-site.

31. The applicant shall submit a Safety Plan with building application materials associated with construction of Phase 1.
32. The applicant shall submit to Community Planning & Permitting staff an Annual Report detailing all Boulder Rifle Club operations and physical site conditions one year after the date building permits are closed for Phase 1 construction. Staff shall review the annual report and make a determination if subsequent annual reports are required.

33. Only that which is proposed in this application is approved through this Special Review. Any expansion or substantial change to the physical layout of the subject properties, or the operations of the Boulder Rifle Club shall be subject to a new Special Review application process.

34. The Applicant shall be subject to the terms, conditions, and commitments of record and in the file for Docket SU-19-0009: Boulder Rifle Club.
MEMO TO: Referral Agencies
FROM: Summer Frederick, AICP, Principal Planner
DATE: June 28, 2019
RE: Docket SU-19-0009

Docket SU-19-0009: Boulder Rifle Club, Inc.

Request: Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building on parcels #146307001001 and #146307001002.

Location: 4810 N. 26th Street, Parcel #s 146307001001 and 146307001002, at the northern terminus of N 26th Street, approximately 0.68 mile north of its intersection with US 36, in Section 7, Township 1N, Range 70W.

Zoning: Agricultural (A) Zoning District
Applicant/Property Owner: Boulder Rifle Club, Inc., c/o Steve Martin
Agent: Rosi Dennett, Front Range Land Solutions

Special Use Review / Site Specific Development Plan is required of uses which may have greater impacts on services, neighborhoods, or environment than those allowed with only Building Permit Review. This process will review compatibility, services, environmental impacts, and proposed site plan.

This process includes public hearings before the Boulder County Planning Commission and the Board of County Commissioners. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of these hearings.

The Land Use staff, Planning Commission, and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter. Late responses will be reviewed as the process permits; all comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to review the entire file at the Land Use Department, 13th and Spruce, Boulder. If you have any questions regarding this application, please contact the Land Use Department office at 720-564-2603 or via email at sfrederick@bouldercounty.org.

Please return responses to the above address by August 2, 2019.

_____ We have reviewed the proposal and have no conflicts.
_____ Letter is enclosed.

Signed ______________________________ PRINTED
Name _______________________________
Agency or Address ______________________________

Please note that all Land Use Department property owner’s mailing lists and parcel maps are generated from the records maintained by the County Assessor and Treasurer Office. We are required to use this list to send notices to
the “property owner” of land in Boulder County. If you feel that you should not be considered a “property owner,” or if the mailing address used is incorrect, please contact the County Assessor’s Office at (303) 441-3530.
# Boulder County Land Use Department

**Application Form**

<table>
<thead>
<tr>
<th>Project Number</th>
<th>SU-19-0009</th>
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<tbody>
<tr>
<td>Project Name</td>
<td>BOULDER RIFLE SOUTH = WEST RANGES</td>
</tr>
<tr>
<td>Location(s)/Street Address</td>
<td>4800 NORTH 26TH STREET, NORTH OF BOULDER, EAST OF KS HIGHWAY 26, AND NORTH OF YARMOUTH AVENUE AT TERMINUS OF NORTH 26TH STREET.</td>
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<tr>
<td>Proposed Water Supply</td>
<td>WATER STORAGE TANKS, SEPTIC TANKS, SEPTIC VALVES</td>
</tr>
</tbody>
</table>

| Applicants: |
|-------------|-----------------|
| Applicant/Project Owner | BOULDER RIFLE CLUB, INC. (C/O STEVEN MARTIN, PRESIDENT) |
| Mailing Address | 1000 BOULDER DRIVE, SUITE 200, BOULDER, CO 80301 |
| City | BOULDER |
| State | CO |
| Zip Code | 80301 |
| Phone | 303-441-3930 |
| Fax | 303-441-4856 |
| Email: | planning@bouldercounty.org |

| Applicant/Property Owner/Agent/Consultant | J. WHISMAN (C/O BOULDER COUNTY PARKS) |
| Mailing Address | 1501 STURM ROAD, LONGMONT, CO 80503 |
| City | LONGMONT |
| State | CO |
| Zip Code | 80503 |
| Phone | 303-678-6263 |
| Fax | - |
| Email Address | JWHISMAN@BoulderCounty.org |

| Applicant/Project Owner | ROGER DEWETTI, PC, LAND SOLUTIONS |
| Mailing Address | 210 LINCOLN STREET, LONGMONT, CO 80501 |
| City | LONGMONT |
| State | CO |
| Zip Code | 80501 |
| Phone | 303-682-9729 |
| Fax | - |

**Certification**

I certify that I am signing this Application Form as an owner of record of the property included in the Application. I certify that the information and exhibits I have submitted are true and correct to the best of my knowledge. I undersand that all materials required by Boulder County must be submitted prior to having this matter processed. I understand that public hearings or meetings may be required. I understand that I must sign an Agreement of Payment for Application processing fees, and that additional fees or materials may be required as a result of considerations which may arise in the processing of this docket. I understand that the road, school, and park dedications may be required as a condition of approval.

I understand that I am consenting to allow the County Staff involved in this application or their designees to enteronto and inspect the subject property at any reasonable time, without obtaining any prior consent.

All landowners are required to sign application. If additional space is needed, attach additional sheet signed and dated.

**Signature of Property Owner**

**Printed Name**

**Date**

**Signature of Property Owner**

**Printed Name**

**Date**

The Land Use Director may waive the landowner signature requirement for good cause, under the applicable provisions of the Land Use Code.

Form: P/11 - Rev. 04.28.16 - g:publications/planning/P011PlanningApplicationForm.pdf

* Final approval may be subject to conditions.
May 23, 2019

Rosi Dennett, AICP
Front Range Land Solutions
for Boulder Rifle Club Inc.
210 Lincoln St.
Longmont, CO 80501

Re: Conservation Easement Program approval to submit Special Use application to the Land Use Department for the Bexco CER conservation easement property at 4923 N. 26th Street, Unincorporated Boulder County

Dear Ms. Dennett,

Staff has reviewed the Boulder Rifle Club’s Special Use Land Use application for an expansion of the shooting range over the property described above. The property is encumbered with a conservation easement that is recorded in the real estate records of Boulder County, Colorado at Reception No. 1942070 on May 24, 1999.

The applicants propose expanding the shooting range from the adjacent unencumbered parcel at 4810 N. 26th Street onto the conservation easement parcel at 4923 N. 26th Street. Although the proposal is in conflict with the terms of the existing conservation easement over the property, the attached letter from the Board of County Commissioners dated February 1, 2018 states that the county commits to work to revise the existing conservation easement on the property to allow a shooting range use; therefore, the Conservation Easement Program at Parks & Open Space consents to the submission of this application to the Land Use Department. Please note that this letter only serves as approval to submit the application to the Land Use Department for review and does not serve as final approval from Parks & Open Space. As a referral agency, Parks & Open Space will receive the submitted application directly from Land Use as a part of the formal review process and staff will continue to work with the applicants to allow a shooting range use on the conservation easement property. Final approval may be subject to conditions.

Please submit this letter with your application to the Land Use Department.

Thank you,
Melissa Arnold

Conservation Easement Program Manager
(303) 678-6266
marnold@bouldercounty.org

ATTACHMENT A
February 1, 2018

Colorado Parks and Wildlife
Jim Guthrie, SRTG Program Coordinator

Via e-mail @ jim.guthrie@state.co.us

Re: Support for Boulder Rifle Club’s application for Shooting Range Design Funding

Dear Mr. Guthrie:

The Boulder County Commissioners are happy to provide this letter of support for the Boulder Rifle Club’s (BRC) application for a Shooting Range Design grant from Colorado Department of Parks and Wildlife. This grant will be used for design of a public shooting facility adjacent to BRC’s Boulder shooting range.

The Boulder County Commissioners have been part of the Northern Front Range Recreational Sport Shooting Management Partnership (the Partnership) for a number of years. The Partnership is working to develop a landscape-level, multi-jurisdictional strategy to provide safe, responsible and accessible recreational sport shooting opportunities while addressing conflicts near residential areas and with other recreation users across the northern Colorado Front Range. Boulder County’s support for this grant application, as well as our commitment to work with BRC to develop a new public sport shooting facility is an exciting collaboration to further the work of the Partnership.

If the Rifle Club is successful in obtaining this grant, Boulder County commits to provide funding of up to $15,625 toward the 25% match requirement and to work to revise the existing Conservation Easement on the Club’s property to allow a shooting range use.

An expanded facility at BRC could provide a 300-yard range as well as other shorter distance ranges totaling approximately 30 lanes. This facility will support additional shooting opportunities that are safe and affordable to different types of shooters, increasing the variety of public shooting opportunities in Boulder County.

If you have any additional questions, please feel free to contact Michelle Krezek, Commissioners’ Deputy, at Mkrezek@bouldercounty.org or 303-441-3561.

Sincerely,

Cindy Domenico, Chair
For the Board of County Commissioners
BOULDER RIFLE RANGE
Special Use

DEVELOPMENT REPORT

May 28, 2019

Applicant/Property Owner:
Boulder Rifle Club Inc.
Steven Martin, President
PO Box 21197
Boulder, CO 80308
303-499-9002
president@boulderrifleclub.com

Prepared by:
Rosi Dennett, AICP
Front Range Land Solutions
210 Lincoln Street
Longmont, CO 80501
303-682-9729
rosidennett@gmail.com
DEVELOPMENT REPORT

This report is written to correspond to the application submittal requirements in Section 3 and the special use requirements in Section 4-600, 4-601 and 4-602 of the Boulder County Land Use Code.

Background

Boulder Rifle Club, Inc. is the owner of two adjacent properties (totaling 24.87 acres) that are located approximately ½ mile north of the intersection of Yarmouth Avenue and 26th Street, north of Boulder, in the East Quarter of Section 7, Township 1 North, Range 70 West. Both properties were used for years for informal recreational shooting before they became respectively a shooting range and construction debris landfill. The existing rifle range (known as the South Range) is located on the eastern parcel and is governed by Boulder County Special Use # SU-87-13. This parcel consists of 6.23 acres with an address of 4810 North 26th Street. A portion of the western parcel was used for years as a construction debris landfill. The western parcel is now vacant and comprises 18.64 acres. Both parcels are accessed via an existing road easement off North 26th Street.

The United States Forest Service has been working with Boulder, Larimer, Gilpin and Clear Creek Counties on the Recreational Sport Shooting Management Project to close down the informal target practice sites in the mountains, specifically in the Arapahoe National Forest, because of public safety concerns. To provide alternative shooting ranges for the public, each county has committed to supporting supervised and safe outdoor shooting ranges open to the general public that also provide gun safety education opportunities.

Unsupervised recreational shooting on USFS land within Boulder County has created significant safety concerns for years, and several wildfires have been attributed to casual shooting in Lefthand Canyon.

The existing South Range, operated by the Boulder Rifle Club, is a membership only facility with a long waiting list of interested potential members. Because the Boulder Rifle Club also owns the property adjacent to and west of the existing site, the opportunity exists to expand the operations to construct new ranges (indoor and outdoor) that can be open to the public. Boulder County currently has no public shooting ranges.
The subject properties are located within Boulder County's Agricultural zoning district which allows for a shooting range by special review. The vacant western parcel currently has a County conservation easement on it that will need to be removed or modified to allow for a shooting range.

The existing South Range consists of four outdoor ranges (25 yards, 50 yards, 100 yards and 200 yards) with firing shelters, side berms and backstops, a classroom and indoor firing range, two restroom buildings with vaulted toilets and a building for storage of targets.

Both properties are located within the southern edge of the Boulder Valley Ranch Environmental Conservation Area designation in the Boulder County Comprehensive Plan. The northeast portion of the site is designated as Significant Agricultural Land of Local Importance, and the extreme northeast corner is designated as Significant Agricultural Land of Statewide Importance. A wetland designation is also indicated on the northern portion of the drainage area that is located between the two subject properties. The subject properties are located within Area III of the Rural Preservation Area designation in the Boulder Valley Comprehensive Plan.

Proposal Description

This is a request for approval of a special use for a rifle range on the western subject property (known as the West Range) and a special use amendment to SU-87-13 for improvements to the existing South Range. A special review is also required for a use that generates traffic volumes in excess of 150 average daily trips per lot. In addition, more than 500 cubic yards of material will be necessary to move as part of the grading plan to ensure proper drainage which requires a limited impact special use.

To provide new and improved facilities for the public and Boulder Rifle Club members, five new outdoor ranges (300 yards, 200 yards, 100 meters, 50 meters and 25 meters) and an indoor range are proposed on the West Range property. These improvements will provide supervised, safe, and noise-mitigated shooting opportunities as well as opportunities for increased gun safety education classes, hunter safety classes, and training and practice facilities for local law enforcement officers.

Each outdoor range will have 8-foot tall ballistic barriers along the sides, a 20-foot tall ballistic backstop, and a firing shelter with ceiling baffles. These noise mitigation features also provide safe areas from one range to the other which reduces the size of the Surface Danger Zone of each range (as shown on the Site Plan).

The South Range currently averages 43 persons per weekday and 131 persons per weekend when mild weather permits. At total buildout, the proposed total of
11 ranges at both the West Range and South Range may average 95 persons per weekday and 288 persons per weekend when mild weather permits. Hours of operation will be 7 am or sunrise, whichever is later, to dusk, 7 days per week, with occasional after-dark training of law enforcement officials. The outdoor facilities will be available as weather permits with much less use anticipated during the winter months. The indoor facility may be used after dark, but essentially no noise will escape it.

Staffing at the West Range will include one employee per outdoor range plus one floater employee. The indoor range will have three employees for a total of 9 employees on site when all of the proposed facilities are constructed and available to the public for use.

Construction Phasing

The improvements will be constructed in phases as funds are acquired.

Phase 1 includes West Range construction of three outdoor ranges (25 meters, 50 meters and 100 meters) with side perms, backstops, firing shelters, vault toilets and parking lot. Access road improvements, property entrance gate, detention pond and water cisterns will also be constructed in the first phase. South Range improvements will also occur in the first phase and include construction of new firing structures on the 200-yard range and 100-yard range, side berm work on the 200-yard range, parking lot construction, gate installation at the west boundary of the South Range property and some regrading.

Phase 2 consists of West Range construction of the 200-yard range and 300-yard range with side berms, backstops, firing shelters, vault toilet and parking lot.

Phase 3 includes construction of the indoor range building, sewage system tank installation, parking lot and landscaping.

Water & Sewer

No public water or sewer services are available to this site. Two water cisterns will be installed, as shown on the Site Plan, for potable water and firefighting water. A water line will be extended to the indoor range building and the outdoor range vault toilets, as shown on the Utility Plan. The ADA-compliant vault toilets will have water-flushing toilets and hand-washing facilities.

The vault toilets will be pumped as needed. As described in the Preliminary Design Report by Engineer Ed Glassgog of Scott Cox & Associates, the sewage system for the indoor range building will be an enclosed vault with no leach field and will also be periodically pumped as needed. The location of this vault is noted on the Site Plan.
Access, Parking and Traffic

Historically, the access to the South Range was through City property with an access agreement, but an existing access through the western parcel will be the main access to both ranges. That access continues onto an existing road within a 30-foot wide easement for a distance of approximately 700 feet to 26th Street.

Small parking lots are dispersed throughout the site adjacent to each outdoor range and the indoor range and will provide a total of 209 parking spaces, including 18 ADA-accessible parking spaces. All roadways and parking lots on site will be gravel surfaces.

The Traffic Study was completed by Delich Associates and concludes the proposal is feasible from a traffic engineering standpoint. The total traffic generation full build out may be approximately 190 daily trip ends, 3 morning peak hour trip ends, and 38 afternoon peak hour trip ends. The existing street system is adequate to serve the proposed improvements. In addition, the closure of the informal recreational shooting areas throughout the canyons of Boulder County will reduce a significant amount of traffic to and from those mountain sites. The Boulder County Sheriff's Office and other law enforcement agencies with jurisdiction receive approximately 600 complaint calls per year regarding concerns with recreational shooting in the canyons.

Drainage and Grading

The drainage report and grading plans were completed by Rocky Ridge Civic Engineering. Surface drainage will be directed to the detention pond shown on the plans which will discharge stormwater drainage at a rate that does not exceed historic levels of drainage from this site. To minimize having to haul material offsite, the grading plans were designed to accommodate most of the soil onsite. The projected amount of material to be moved is 46,844 cubic yards of cut and 48,180 cubic yards of fill. All grading will be completed in accordance with County regulations, including the use of dust suppression methods.

Acoustics

Behrens and Associates, Inc. completed an extensive noise study which included a sound level survey at various locations within the residential area to the south of the site. The proposed firing structures mitigate noise levels to the acceptable range below the Land Use Code limit of 65 dB maximum impulse. Even though County approval of the existing South Range predates the Land Use Code sound requirement, this proposal includes adding the new firing shelters to the 100-yard and 200-yard ranges to reduce the existing noise levels as funds become available.
Architectural Design

The firing shelters and indoor range building were designed by Thomas Moore Architects to be functional while maintaining as low a profile on the landscape as possible. Elevation drawings of the proposed structures and floor plans are included with this application submittal. Photos of the existing structures at the South Range are also included.

The firing structures are three-sided structures of approximately 3,100 sq.ft. They are typically 15.5 ft. tall at the roof ridge and will be constructed with sound baffling and ballistic materials to absorb sound and negligent discharge. The exterior materials will be standing seam metal roofing in a dark or neutral color and fiber-cement board and batten siding, in tan or earth-tone colors.

The proposed two-story indoor range building has a footprint of 15,060 sq.ft. with a roof ridge height of approximately 38 feet above grade at the main entry. Exterior materials include standing seam metal roofing in a dark or neutral color, board and batten siding with a masonry wainscot at selected elevations. The color palette for this and all the new site buildings is a blend of warm earth-tones that will not stand out in sharp contrast with the surrounding environment. The building forms are “agrarian” in scale and form. Landscaping to screen the south side of the new indoor range building will be a wind-row of evergreens with a rock-mulch base. All disturbed areas will be seeded with native grasses and mowed for weed control.

The floor plans of the indoor range building specify the uses of the structure which include 16 firing lanes and lockers in the lower bulletproof level and classroom space, office space, restrooms and incidental-sales space in the upper level. The classroom space is primarily for public gun safety training, and the incidental-sales space is for those members of the public who would like to purchase guns or ammunition for use in the ranges. Gun repair service shall also be provided.

Outdoor Lighting

All outdoor lighting will be in accordance with Land Use Code requirements including the use of down-casting, dark sky cutoff fixtures. Lighting will be minimized to the building access points, at the gates and along the driveway as shown on the Site Plan and will be turned off when the facilities are closed.

Neighborhood Meeting

A neighborhood meeting will be held in June, and the neighbors in the residential area to the south were notified when the acoustics consultants were taking noise measurements for the Noise Study. Five of these neighbors offered properties
for the sound monitoring survey that was a part of the Noise Study. Most of the concerns expressed to date by neighbors center on noise and traffic levels.

Section 3-203.E.1. Development Report Submittal Requirement Standards

a. **Address list of adjacent property owners**

The adjacent property owners are as follows:

To the south: George Grandits & Ann Miller  
4725 N. 26th Street  
Boulder, CO 80301

To the west, north and east: Boulder Open Space and Mountain Parks  
PO Box 791  
Boulder, CO 80306

b. **Description of site features**

The western property slopes from southwest to northeast with a drainage channel along the northern and eastern perimeter of the parcel. The eastern property slopes from east to west toward the drainage channel. The southern portion of the western parcel is part of an old dump site of construction debris. The western parcel is vacant with sparse ground cover and the existing rifle range, as previously described, is located on the eastern property.

c. **Soil characteristics**

According to the Soil Survey of the Boulder County Area by the United States Department of Agriculture Soil Conservation Service, the soils on this property are classified as Terrace Escarpments, Te, in the majority of the South Range site and Renohill Loam, ReD, 3 to 9 percent slopes in the majority of the West Range site with the City Dump noted on the southern portion of the West Range site.

Terrace escarpments are on side slopes of old outwash fans and terraces and consist of undifferentiated shallow soils that have many cobbles and stones on the surface. Runoff is rapid, and the erosion hazard is high. Only limited moisture is available for plants because these undifferentiated soils are shallow. Terrace escarpments are not suited to cultivation.

Renohill loam is made up of moderately deep, well-drained soils, but the surface layer is a loam that is 3 to 4 inches thick. Runoff is rapid on this soil, and the erosion hazard is high. This soil is unsuited to cultivation.
In February, Soilogic completed a Preliminary Geotechnical Subsurface Exploration Report, which is included with this application. Test borings in the area of the proposed indoor range building indicate the subsurface materials consist of a thin mantle of sparse vegetation and topsoil underlain by lean clay approximately 13 to 15 feet below ground surface and sand containing construction debris approximately 31 to 39 feet below the surface. This debris is likely associated with the past usage of the site as part of the City’s construction debris dump site. This level was underlain with claystone/siltstone bedrock approximately 35 to 40 feet below ground surface, and no groundwater was encountered. An engineered pier foundation system will be included in the construction of the indoor range building.

d. Flora and Fauna

The subject property has been significantly disturbed over the years with periodic grading and landfill dumping. The years of site disturbance have resulted in sparse vegetation with weedy plant species interspersed with native vegetation. Several mature trees on the south side of the existing classroom and indoor range building and one at the northwest corner of the building will remain. The intermittent shrubbery vegetation along the northern portion of the drainage area between the two properties will also be left undisturbed.

The vacant site had prairie dogs years ago, but none are currently present. The South Range is being colonized by prairie dogs from the adjacent City property to the east, but the prairie dogs won’t be disturbed by the minimal proposed improvements to the existing range. The occasional typical wildlife can be seen passing through the nearby City Open Space area, but no known wildlife corridors are identified on the subject property.

e. Cultural Resources

No cultural resources have been identified on the property.

f. Potential Radiation Hazard

No known radiation hazards have been identified by the State or County Public Health Departments, but hazard mitigation measures will be taken if deemed necessary.

g. Service Abilities

No service providers have indicated a problem with the ability to serve this development. All required permits will be obtained by the appropriate agencies prior to commencement of operations.
h. **Financial Guarantees**

If the provision of financial guarantees is warranted for any of the proposed improvements, a bank-approved letter of credit will be provided as an attachment to the development agreement.

**Section 4-602 Special Use Standards and Conditions**

1. **Except as otherwise noted, the use will comply with the minimum zoning requirements of the zoning district in which the use is to be established, and will also comply with all other applicable requirements;**

The proposal will comply with the applicable sections of the County Land Use Code. The proposed uses are allowed in the Agricultural zoning district, and the new structures will meet the bulk requirements (such as setbacks and maximum building height). The additional requirements for an outdoor shooting range (such as 8-foot tall ballistic side barriers and 20-foot tall backstops) will also be met.

Section 4-510.A.5.a.(i) allows for the 1320-foot setback from designated recreational trails to be reduced based on an engineered study and property mitigation which reduces the Surface Danger Zone as shown on the engineering plans. The closest public trail to the north of the subject property is the City's Hidden Valley Trail which is understood to be relocated farther north in the near future. The trail is currently approximately 600 feet north and outside of the Surface Danger Zone of the closest range.

2. **Will be in harmony with the character of the neighborhood and compatible with the surrounding area;**

With the addition of noise mitigation features of the new firing shelters to be constructed at all of the new outdoor ranges and two of the existing ranges, the proposed use will be compatible with the surrounding area. City Open Space land surrounds the site on all sides with the exception of 267 feet along the southern boundary which is adjacent to the access road and a large residential lot is located to the south side of the access road.

3. **Will be in accordance with the Comprehensive Plan;**

As previously stated, the properties have been significantly disturbed over the years with mostly disturbed environmental resources apparent today. The site is located on the southern edge of the Comprehensive Plan designations (Boulder Valley Ranch Environmental Conservation Area,
Significant Agricultural Land of Local Importance, and Wetland). Specifically, the wetland designation along the drainage area to the north of that site that extends slightly on the subject property was likely from years ago when overflow from the Silver Lake Ditch occurred which is no longer running in this area. The drainage area now acts as a natural drainage area that will continue to exist through the site.

The proposal furthers the goals in the Comprehensive Plan as follows:

Goal E.5. Adequate facilities and services which provide diverse educational, cultural, and social opportunities should be encouraged.

Goal E.6. Adequate facilities and services to assure the health safety and welfare of all citizens should be promoted.

Goal I.1 The County should encourage and promote coordination and cooperation between federal, state, and local government entities charged with making decisions which significantly affect land use in Boulder County.

The subject property is also located within the Area III – Rural Preservation Area designation in the Boulder Valley Comprehensive Plan. The proposed use is not an over-intensive use of the site in accordance with the criteria specified in Section 1.15 of the Boulder Valley Comprehensive Plan. The projected traffic generation can be adequately handled by the existing street system. The proposed structure footprints cover only 4% of the total land area of the vacant parcel. The proposed usage, including hours of operation and water/wastewater flows are easily accommodated onsite. The outside lighting will be minimal with down-casting cutoff fixtures and will be turned off when the ranges are closed. The noise and safety mitigation features of the firing structures, side barriers and backstops minimize impacts outside of property boundaries. These improvements enable the use to be compatible with the open space land surrounding the property on three sides, and the residential area to the south. No other sites that could be considered more appropriate are known in Boulder County.

(4) Will not result in an over-intensive use of land or excessive depletion of natural resources;

While the subject properties are located within an Environmental Conservation Area, substantial modification of the site has occurred over the years. Extensive grading has occurred on the west parcel by previous landowners with the relocation of the drainage area to the north around the construction debris landfill that encroaches onto the southern portion
of the site. Proposed improvements on the South Range are for noise mitigation only.

Sufficient space exists at the West Range for the proposed outdoor ranges, firing shelters and indoor range. Only 4% of the total land area will be covered with structures.

(5) **Will not have a material adverse effect on community capital improvement programs;**

No community capital improvement programs will be affected by this proposal.

(6) **Will not require a level of community facilities and services greater than that which is available;**

The proposed water and sewer storage tanks will be serviced as is necessary, and all necessary permits will be acquired prior to construction.

(7) **Will not result in undue traffic congestion or traffic hazards;**

As described in the attached traffic analysis, the proposed use will not create undue traffic congestion or traffic hazards and will gradually eliminate some existing public trips to the mountain dispersed shooting sites, and trips for law enforcement in those areas.

(8) **Will not cause significant air, odor, water, or noise pollution;**

The existing use does not create significant pollution. All outdoor lighting will be shielded with down-casting fixtures and will be turned off after operating hours. The Environmental Stewardship Plan will mitigate any potential lead pollution. As described in the Noise Study, proposed and existing ranges will meet the Land Use Code noise level requirements.

(9) **Will not require amendment to the Regional Clean Water Plan;**

The proposal will not require an amendment to the Regional Clean Water Plan.

(10) **Will be adequately landscaped, buffered, and screened;**

The proposed indoor range building will be screened with trees along the southern perimeter. The ranges and firing structures will be screened and buffered by being lowered in the ground with 8-foot tall side barriers and 20-foot tall backstops.
(11) Will not otherwise be detrimental to the health, safety, or welfare of the present or future inhabitants of Boulder County.

No public shooting range currently exists in Boulder County. Providing this sound and danger mitigated range for public use provides a beneficial and safe alternative to continued recreational shooting in the foothills of Boulder County.

Section 4-602.F.1. Special Review Standards for Outdoor Firing Range

a. Range Design

(i) Pistol and rifle firing ranges

The range design is included in this submittal and provides 8-foot tall ballistic side barriers, 20-foot ballistic backstops, and firing structures that absorb sound and negligent discharge. These features baffle sound, maximize safety between the ranges and minimize the amount of area in the Surface Danger Zone (as shown on the Site Plan).

(ii) Shotgun ranges

No shotgun ranges are proposed.

b. Security

The entire property perimeter is fenced, and a controlled gate will manage the vehicular access onsite. Warning signs will be posted along the fence.

c. Noise

The improvements have been designed in accordance with recommendations for noise mitigation as stated in the Noise Study and will be in compliance with the County Land Use noise level requirements.

d. Range Orientation

All firing lines are aimed at target lines to the north.

e. Backstops and Bulletproof Barriers or Berms

The backstops and bulletproof side barriers will be constructed in accordance with the engineering plans included with this submittal.
f. **Surface Danger Zone**

No traveled roadways, trails, streams, ponds, lakes or wetlands are located within the Surface Danger Zones of the outdoor ranges as shown on the engineering plans.

g. **Environmental Stewardship Plan**

An Environmental Stewardship Plan will be provided to the Land Use Department prior to building permit stage and will include Best Management Practices for lead management. The backstops have been designed to permit a viable reclamation of lead.

h. **Operational Requirements**

(i) **Hours**

Hours of operation will be limited to the hours between 7 am or sunrise, whichever is later, to dusk (or 7 pm) with the exception of using the indoor facility and shooting for educational or law enforcement activities which will be until 9 pm one day per week.

(ii) **No Alcohol or Drugs**

No alcohol or drugs are allowed on site.

(iii) **No Tracer or Incendiary Rounds**

No tracer, incendiary rounds or exploding targets are allowed on site.

(iv) **Fire Safety and Response Plan**

A fire safety and response plan will be filed and approved by Boulder Rural Fire District and County Sheriff as part of the development agreement.

(v) **Fire Extinguishers**

Large fire extinguishers will be available for emergency at all shooting ranges in accordance with direction by the Boulder Rural Fire District.
(vi) **Wildfire Mitigation**

Appropriate wildfire mitigation measures will be followed in accordance with recommendations of the County Wildfire Mitigation Coordinator and Boulder Rural Fire District.

(vii) **Onsite Emergency Communication System**

An onsite emergency communication system will be installed.

(viii) **Safety Plan and Range Rules**

A safety plan will be filed with and approved by the Land Use Department and Sheriff, and range rules will be posted on site. At least one of the employees on site when open to the public will be a trained safety officer, and a range member who has passed the minimum training requirements of the range shall be present when the facility is open to members only.

(ix) **Periodic BOCC Reviews**

Periodic reviews will be accommodated, if the BOCC deems they are necessary.

i. **Enforcement**

Potential enforcement actions by the County of noise violations or other violations is understood.

j. **Future Expansion**

It is also understood that future expansion may considered a substantial modification which would require an amendment to the special use permit.
CONSULTANTS

Architect: Tom Moore
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garrett@rockyridgemteam.com

Septic Engineer: Ed Glassgow
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Acoustics: Justin Puggioni & Tom Carter
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jpuggioni@baenc.com 424-456-7055
tcarter@baenc.com 970-314-3915

Planner: Rosi Dennett, AICP
Front Range Land Solutions
210 Lincoln Street
Longmont, CO 80501
303-682-9729
rosidennett@gmail.com
May 24, 2019

Boulder Rifle Club, Inc.
PO Box 21197
Boulder, CO 80308

Reference: Earthwork Calculations
Boulder Rifle Range - Boulder County, Colorado
Rocky Ridge Civil Engineering Project No. 778-1

To whom it may concern:

Rocky Ridge Civil Engineering (RRCE) performed cut and fill volume calculations for the grading improvements associated with the proposed Boulder Rifle Range located at 4923 N. 26th Street, in Boulder County, Colorado. These calculations are based on the architectural plans prepared by Thomas Moore Architecture and the grading plans prepared by RRCE dated May 24, 2019.

Our calculations show the proposed site improvements will require approximately 46,844 cubic yards of cut and 48,180 cubic yards of fill. This earthwork volume does not include the Boulder County “Earthwork and Grading” standard exempt earthwork up to ten feet around the perimeter of the building foundations and roadbase material required for the proposed access. The total estimated quantity of qualified material to be moved is 95,024 cubic yards.

Our calculations show all building foundation excavations and incidental backfill will require approximately 8,881 cubic yards of cut and 2,434 cubic yards of fill. The required roadbase material for the proposed access road is calculated to be approximately 2,373 cubic yards. The existing site is known as a historic garbage dump and substantial amounts of waste material is expected to be encountered and will need to be removed from the site. This volume of material has not been calculated.

Autodesk Civil 3D 2019 was utilized to perform the cut and fill calculations.

Please let me know if you have any questions or comments.

Sincerely,

Garrett C. Walstad, P.E.
garrett@rockyridgecivil.com
Rocky Ridge Civil Engineering

Attachments:
Boulder County LISUR Fact Sheet
Earthwork Exhibit
Grading Calculation
Cut and fill calculations are necessary to evaluate the disturbance of a project and to verify whether or not a Limited Impact Special Use Review (LISR) is required. A Limited Impact Special Use Review is required when grading for a project involves more than 500 cubic yards (minus normal cut/fill and backfill contained within the foundation footprint).
If grading totals are close to the 500 yard trigger, additional information may be required, such as a grading plan stamped by a Colorado Registered Professional Engineer.

Earth Work and Grading
This worksheet is to help you accurately determine the amount of grading for the property in accordance with the Boulder County Land Use Code. Please fill in all applicable boxes.

Note: Applicant(s) must fill in the shaded boxes even though foundation work does not contribute toward the 500 cubic yard trigger requiring Limited Impact Special Use Review. Also, all areas of earthwork must be represented on the site plan.

<table>
<thead>
<tr>
<th>Cut</th>
<th>Fill</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driveway and Parking Areas</td>
<td>7,196</td>
<td>3,488</td>
</tr>
<tr>
<td>Berm(s)</td>
<td>124</td>
<td>10,669</td>
</tr>
<tr>
<td>Other Grading</td>
<td>39,524</td>
<td>34,023</td>
</tr>
<tr>
<td>Subtotal</td>
<td>46,844</td>
<td>48,180</td>
</tr>
</tbody>
</table>

* If the total in Box 1 is greater than 500 cubic yards, then a Limited Impact Special Review is required.

Excess Material will be Transported to the Following Location:

<table>
<thead>
<tr>
<th>Excess Materials Transport Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Disposal</td>
</tr>
</tbody>
</table>

Ongoing efforts will be made to ensure overall earth work at the site is balanced throughout construction.

Is Your Property Gated and Locked?
Note: If county personnel cannot access the property, it could cause delays in reviewing your application.

Certification
I certify that the information submitted is complete and correct. I agree to clearly identify the property (if not already addressed) and stake the location of the improvements on the site within four days of submitting this application. I understand that the intent of the Site Plan Review process is to address the impacts of location and type of structures, and that modifications may be required. Site work will not be done prior to issuance of a Grading or Building Permit.

Signature
Date 05/24/2019
ATTACHMENT A

Site Plan Review Fact Sheet

The applicant(s) is/are required to complete each section of this Site Plan Review (SPR) Fact Sheet even if the information is duplicated elsewhere in the SPR application. Completed Fact Sheets reduce the application review time which helps expedite the Director's Determination. Please make duplicates of this SPR Fact Sheet if the project involves more than two structures.

Structure #1 Information

<table>
<thead>
<tr>
<th>Type of Structure: (e.g. residence, studio, barn, etc.)</th>
<th>NEW PIT TOILET - TYP. OF 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Deconstruction:</td>
<td>sq. ft.</td>
</tr>
</tbody>
</table>

Are new floor areas being proposed where demolition will occur?
- [□] No
- [☑] Yes (include the new floor area square footage in the table below)

<table>
<thead>
<tr>
<th>Proposed Floor Area (New Construction Only)</th>
<th>Residential</th>
<th>Non-Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished</td>
<td>Unfinished</td>
<td>Total</td>
</tr>
<tr>
<td>Basement:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>First Floor:</td>
<td>144 sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Second Floor:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Garage:</td>
<td>Attached</td>
<td>Detached</td>
</tr>
<tr>
<td>*Covered Porch:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Total:</td>
<td>144 sq. ft.</td>
<td>144 sq. ft.</td>
</tr>
</tbody>
</table>

Total Bedrooms: N/A

Structure #2 Information

<table>
<thead>
<tr>
<th>Type of Structure: (e.g. residence, studio, barn, etc.)</th>
<th>RANGE SHELTER - TYPICAL OF 1 AT EXISTING OUTDOOR RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Deconstruction:</td>
<td>sq. ft.</td>
</tr>
</tbody>
</table>

Are new floor areas being proposed where demolition will occur?
- [□] No
- [☑] Yes (include the new floor area square footage in the table below)

<table>
<thead>
<tr>
<th>Proposed Floor Area (New Construction Only)</th>
<th>Residential</th>
<th>Non-Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished</td>
<td>Unfinished</td>
<td>Total</td>
</tr>
<tr>
<td>Basement:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>First Floor:</td>
<td>1,612 sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Second Floor:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Garage:</td>
<td>Attached</td>
<td>Detached</td>
</tr>
<tr>
<td>*Covered Porch:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Total:</td>
<td>1,612 sq. ft.</td>
<td>1,612 sq. ft.</td>
</tr>
</tbody>
</table>

Total Bedrooms: N/A

*See Article 18-131A for definition of covered porch.

Determining Floor Area

Floor Area is measured in terms of square feet. The total square footage is as everything within the exterior face of the exterior walls including garages and basements. Covered porch area that is attached to the principal structure is not included (see Article 18-131A). The shaded area on the diagram indicates the area counted as square feet.

Residential vs. Non-Residential Floor Area

Residential Floor Area includes all attached and detached floor area (as defined in Article 18-162) on a parcel, including principal and accessory structures used or customarily used for residential purposes, such as garages, studies, pool houses, home offices and workshops. Gazebos and carports up to a total combined size of 400 square feet are exempt. Barns used for agricultural purposes are not considered residential floor area.

Note: If an existing wall(s) and/or roof(s) are removed and a new wall(s)/roof(s) are constructed, the associated floor area due to the new wall(s)/roof(s) are considered new construction and must be included in the calculation of floor area for the Site Plan Review and shown on this Fact Sheet.

If a Limited Impact Special Review is required, then call 303-441-3930 and ask for a new Pre-Application conference for the Limited Impact Special Review.
**Site Plan Review Fact Sheet**

The applicant is required to complete each section of this Site Plan Review (SPR) Fact Sheet even if the information is duplicated elsewhere in the SPR application. Completed Fact Sheets reduce the application review time which helps expedite the Director's Determination. Please make duplicates of this SPR Fact Sheet if the project involves more than two structures.

### Structure #1 Information

<table>
<thead>
<tr>
<th>Type of Structure: (e.g. residence, studio, barn, etc.)</th>
<th>NEW INDOOR RANGE BUILDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)</td>
<td>N/A sq. ft.</td>
</tr>
</tbody>
</table>

Are new floor areas being proposed where demolition will occur?  
☐ No  ☐ Yes (include the new floor area square footage in the table below)

<table>
<thead>
<tr>
<th>Proposed Floor Area (New Construction Only)</th>
<th>Residential</th>
<th>Non-Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished</td>
<td>Unfinished</td>
<td>Total</td>
</tr>
<tr>
<td>WALK-OUT LOWER LEVEL Basement:</td>
<td>15,000 sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>First Floor:</td>
<td>5,050 sq. ft.</td>
<td>N/A sq. ft.</td>
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<tr>
<td>Second Floor:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>Garage:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
</tr>
<tr>
<td>*Covered Porch:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
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<tr>
<td>Total:</td>
<td>20,050 sq. ft.</td>
<td>sq. ft.</td>
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</tbody>
</table>

### Structure #2 Information

<table>
<thead>
<tr>
<th>Type of Structure: (e.g. residence, studio, barn, etc.)</th>
<th>RANGE SHELTER - TYPICAL OF 5 AT NEW OUTDOOR RANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)</td>
<td>N/A sq. ft.</td>
</tr>
</tbody>
</table>

Are new floor areas being proposed where demolition will occur?  
☐ No  ☐ Yes (include the new floor area square footage in the table below)

<table>
<thead>
<tr>
<th>Proposed Floor Area (New Construction Only)</th>
<th>Residential</th>
<th>Non-Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished</td>
<td>Unfinished</td>
<td>Total</td>
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<tr>
<td>Basement:</td>
<td>N/A sq. ft.</td>
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<td>First Floor:</td>
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<td>Garage:</td>
<td>N/A sq. ft.</td>
<td>N/A sq. ft.</td>
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<td>*Covered Porch:</td>
<td>332 sq. ft.</td>
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<td>Total:</td>
<td>3,132 sq. ft.</td>
<td>sq. ft.</td>
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</tbody>
</table>

*See Article 18-131A for definition of covered porch.*

---

**Project Identification:**

**Project Name:** BOULDER RIFLE CLUB-RANGE EXPANSION  
**Special Use Application**

**Property Address/Location:** 4810 N. 26TH STREET, BOULDER, CO

**Current Owner:** BOULDER RIFLE CLUB, INC.  
**ATTN: STEVE MARTIN, PRESIDENT**

**Size of Property in Acres:** 24.87 ACRES, TOTAL

**Determining Floor Area**

Floor Area is measured in terms of square feet. The total square footage is as everything within the exterior face of the exterior walls including garages and basements. Covered porch area that is attached to the principal structure is not included (see Article 18-131A). The shaded area on the diagram indicates the area counted as square feet.

**Residential vs. Non-Residential Floor Area**

Residential Floor Area includes all attached and detached floor area (as defined in Article 18-162) on a parcel, including principal and accessory structures used or customarily used for residential purposes, such as garages, studies, pool houses, home offices and workshops. Gazebos and carports up to a total combined size of 400 square feet are exempt. Barns used for agricultural purposes are not considered residential floor area.

**Note:** If an existing wall(s) and/or roof(s) are removed and a new wall(s)/roof(s) are constructed, the associated floor area due to the new wall(s)/roof(s) are considered new construction and must be included in the calculation of floor area for the Site Plan Review and shown on this Fact Sheet.

If a Limited Impact Special Review is required, then call 303-441-3930 and ask for a new Pre-Application conference for the Limited Impact Special Review.
May 23, 2019

Boulder Rifle Club Inc.
Steven Martin, President
P. O. Box 21197
Boulder, Colorado 80308

Ladies and Gentlemen:

The purpose for this report is to present information regarding wastewater disposal for the proposed Boulder Rifle Club expansion on the property west and southwest of the existing range at 4810 North 26th Street in Boulder County, Colorado. The county has not yet assigned an address to this property, but the parcel number is 146307001002.

We have reviewed the plan for the proposed expansion, have reviewed borings completed on the property and have discussed this, in a very preliminary fashion, with the Boulder County Health Department.

The driving factor on this site is the presence of landfill materials. Two borings were completed to determine the depth of these materials and they found 31 to 39 feet to native soil through the landfill. This has a major impact on the wastewater disposal, as we will discuss below.

The Boulder County Health Department always prefers and generally requires the installation of a standard onsite wastewater treatment system that processes the wastewater through a septic tank and then disposes of the effluent by infiltration into the soil or by evaporation and transpiration or a combination of these. However, the presence of the landfill materials makes the installation of any type of system than involves infiltration impossible as landfill materials are
not suitable for this due to their variability and the depth to native soils is so deep that there is no practical way of accomplishing this. This leaves us with a fully lined evapotranspiration system option only. While this would suffice, it also dramatically increases the required area and some of these can occupy a very large area and likely impact the proposed use of the property. Therefore, my discussion with the health department focused on a possible alternative, that being the use of a vault (or vaults) and/or a vault privy (or multiple vault privies). They were receptive to this, given the factors that I have discussed in this report. It may be important to note that the existing rifle club structures, on the adjacent property, utilize vaults.

In summary, the presence of the landfill materials makes the construction of a standard onsite wastewater treatment system difficult to impossible and in our preliminary discussion with the Health Department, they have indicated that it is likely that they would allow the use of vaults or vault privies for this project.

Thank you for consulting with us. If there are any questions or comments regarding this report, please do not hesitate to contact us.

Sincerely,

SCOTT, COX AND ASSOCIATES, INC.

By M. Edward Glasgow, PE
February 6, 2019

Boulder Rifle Club
4810 North 26th Street
Boulder, Colorado 80301

Attn: Mr. Steve Martin

Re: Preliminary Geotechnical Subsurface Exploration Report
A portion of the Boulder Rifle Club property
4810 North 26th Street
Boulder County, Colorado
Soilogic Project # 18-1384

Mr. Martin:

Soilogic, Inc. (Soilogic) personnel have completed the preliminary geotechnical subsurface exploration you requested for a portion of the Boulder Rifle Club organization property, located on North 26th Street near Boulder, in unincorporated Boulder County, Colorado. The results of our preliminary exploration are included with this report.

The subsurface materials encountered in the completed test borings consisted of a thin mantle of sparse vegetation and topsoil underlain by brown/gray/rust/black lean clay with sand which contained concrete and asphalt fragments, gravel, rebar and other apparent construction debris. Based on discussion with the owner/client, we understand this material is likely associated with a past usage of the property as a municipal construction debris dump site. The lean clay fill varied from very stiff to hard in terms of consistency and extended to depths ranging from approximately 13 to 15 feet below ground surface, where it was underlain by trash and other debris which we understand is most likely associated with a landfill that occupied the property previous to the municipal dump. The trash and other unidentified debris appeared to extend to depths ranging from approximately 31 to 39 feet below ground surface, where it was underlain by dark gray/gray/blue-gray weathered to very hard claystone/siltstone bedrock. The bedrock extended to the maximum depths explored, approximately 35 and 40 feet below ground surface.

Groundwater was not encountered in either of the site borings to the depths explored when checked immediately after completion of drilling.
Due to the presence of municipal construction debris fill underlain by trash and other miscellaneous debris extending to depths greater than 30 feet below ground surface at this site, deep foundation systems extended to bear on the underlying bedrock should be employed for support of any proposed buildings to be constructed on this property. Due to the depth which the existing fill was observed to extend, complete removal and replacement of existing trash/debris in order to develop suitable conditions for support of spread footing foundations is not considered a feasible alternative. Building floor slabs should be structurally supported independent of the subgrade materials. Deep foundation systems would extend the foundation elements through the landfill trash/debris of unknown engineering characteristics and found them in claystone/sandstone bedrock which underlies the site. Overexcavation/backfill procedures could be considered to redevelop a zone of low volume change potential material below exterior flatwork and pavement improvements, reducing the potential for total and differential settlement of those supported elements subsequent to construction. The risk of some movement cannot be eliminated and some limited movement of these improvements should be expected subsequent to construction. Installation of underground utilities within trash/debris landfill materials will most likely require special trench stabilization and overexcavation/backfill procedures. Preliminary recommendations concerning drilled pier design criteria for building foundations, structurally-supported floors, utility installation and overexcavation/backfill procedures for exterior flatwork and site pavement improvements can be provided to you upon request.
We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the enclosed information or if we can be of further service to you in any way, please do not hesitate to contact us.

Very Truly Yours,
Soilogic, Inc.

Zach Gordon, E.I.
Project Engineer

Reviewed by:

Darrel DiCarlo, P.E.
Senior Project Engineer
BOULDER RIFLE CLUB PROPERTY PRELIMINARY EXPLORATION/FILL EVALUATION
NORTH 26TH STREET, BOULDER COUNTY, COLORADO
## BOULDER RIFLE CLUB FILL EVALUATION

### 4810 NORTH 25TH STREET, BOULDER, COLORADO

#### LOG OF BORING B-1

**Project # 18-1384**  
**January 2019**

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<th>Sheet</th>
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<td>24 Hours After Drilling</td>
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<tr>
<th>USCS</th>
<th>SOIL DESCRIPTION</th>
<th>Depth (ft)</th>
<th>Sample</th>
<th>&quot;N&quot; (%)</th>
<th>MC (%)</th>
<th>DD (pcf)</th>
<th>q_u (psf)</th>
<th>% Swell @ 500 psf</th>
<th>Swell Pressure (psf)</th>
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</thead>
<tbody>
<tr>
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<td>4</td>
<td>EXISTING FILL MATERIAL:</td>
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<td>(ASSOCIATED WITH MUNICIPAL DUMP)</td>
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<td>CONCRETE, ASPHALT fragments, REBAR</td>
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### Boulder Rifle Club Fill Evaluation

**Location:** 4810 North 26th Street, Boulder, Colorado

**Project #:** 18-1384

**January 2019**

#### Log of Boring B-1 Continued

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**Notes:**

- Estimated Swell Pressure at 500 psf
- Swell Pressure (psf)
- Atterberg Limits (LL, PI)
- % Passing # 200 Sieve (%)
## BOULDER RIFLE CLUB FILL EVALUATION

**4810 North 26th Street, Boulder, Colorado**

**Project # 18-1384**

**January 2019**

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BOULDER RIFLE CLUB FILL EVALUATION
4810 NORTH 26TH STREET, BOULDER, COLORADO
Project #: 18-1384
January 2019

LOG OF BORING B-2 Continued

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## UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests

<table>
<thead>
<tr>
<th>Coarse Grained Soils</th>
<th>Gravels</th>
<th>Clean Gravels</th>
<th>Cu &gt; 4 and 1 ≤ Cc &lt; 3&lt;sup&gt;a&lt;/sup&gt;</th>
<th>GW</th>
<th>Well graded gravel&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 50% retained on No. 200 sieve</td>
<td>More than 50% of coarse fraction retained on No. 4 sieve</td>
<td>Less than 5% fines&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Cu &lt; 4 and/or 1 &gt; Cc &gt; 3&lt;sup&gt;c&lt;/sup&gt;</td>
<td>GP</td>
<td>Poorly graded gravel&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td>Sands</td>
<td>Gravels with Fines</td>
<td>More than 12% fines&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Fines classify as ML or MH</td>
<td>GM</td>
<td>Silty gravel&lt;sup&gt;g,h&lt;/sup&gt;</td>
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<tr>
<td>50% or more of coarse fraction passes No. 4 sieve</td>
<td></td>
<td></td>
<td>Fines classify as CL or CH</td>
<td>GC</td>
<td>Clayey gravel&lt;sup&gt;g,h&lt;/sup&gt;</td>
</tr>
<tr>
<td>Fine-Grained Soils</td>
<td>Silts and Clays</td>
<td>Inorganic</td>
<td></td>
<td>CL</td>
<td>Lean clay&lt;sup&gt;k,l&lt;/sup&gt;</td>
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<td>50% or more passes the No. 200 sieve</td>
<td>Liquid limit less than 50</td>
<td></td>
<td></td>
<td>ML</td>
<td>Silt&lt;sup&gt;k&lt;/sup&gt;</td>
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<tr>
<td></td>
<td></td>
<td>Organic</td>
<td>Liquid limit - oven dried</td>
<td>OL</td>
<td>Organic clay&lt;sup&gt;k,l,m&lt;/sup&gt;</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Liquid limit - not dried</td>
<td></td>
<td>Organic silt&lt;sup&gt;k,l,o&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inorganic</td>
<td>Pl &gt; 7 and plots on or above “A” line&lt;sup&gt;i&lt;/sup&gt;</td>
<td>CH</td>
<td>Fat clay&lt;sup&gt;j,lm&lt;/sup&gt;</td>
</tr>
<tr>
<td>Silts and Clays</td>
<td></td>
<td></td>
<td>Pl &lt; 4 or plots below “A” line</td>
<td>MH</td>
<td>Elastic silt&lt;sup&gt;j,lm&lt;/sup&gt;</td>
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<tr>
<td>Liquid limit 60 or more</td>
<td></td>
<td>Organic</td>
<td>Liquid limit - oven dried</td>
<td>OH</td>
<td>Organic clay&lt;sup&gt;j,l,m,p&lt;/sup&gt;</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Liquid limit - not dried</td>
<td></td>
<td>Organic silt&lt;sup&gt;j,l,m,o&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

**Highly organic soils:** Primarily organic matter, dark in color, and organic odor

<table>
<thead>
<tr>
<th>Symbol Group</th>
<th>Group Name&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML or SC</td>
<td>Poorly graded sand with silt</td>
</tr>
<tr>
<td>ML or CH</td>
<td>Clayey sand</td>
</tr>
<tr>
<td>ML or SM</td>
<td>Silty sand</td>
</tr>
<tr>
<td>ML or KC</td>
<td>Clayey sand</td>
</tr>
<tr>
<td>ML or GC</td>
<td>Clean Gravel with clay</td>
</tr>
<tr>
<td>ML or GM</td>
<td>Well graded gravel with silt</td>
</tr>
<tr>
<td>ML or GM</td>
<td>Well graded gravel with clay</td>
</tr>
<tr>
<td>ML or GM</td>
<td>Silt</td>
</tr>
<tr>
<td>ML or GM</td>
<td>Clay</td>
</tr>
<tr>
<td>ML or GM</td>
<td>Sand</td>
</tr>
<tr>
<td>ML or GM</td>
<td>Organic gravel</td>
</tr>
</tbody>
</table>

<sup>a</sup>Based on the material passing the 3-in. (75-mm) sieve
<sup>b</sup>If field sample contained cobbles or boulders, or both, add “with cobbles or boulders, or both” to group name.
<sup>c</sup>Gravels with 5 to 12% fines require dual symbols: GW-GM well graded gravel with silt, GW-GC well graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
<sup>d</sup>Sands with 5 to 12% fines require dual symbols: SW-SM well graded sand with silt, SW-SC well graded sand with clay, SP-SC poorly graded sand with silt, SP-SC poorly graded sand with clay.

\[ \text{Cu} = \frac{D_90}{D_10}, \quad \text{Cc} = \frac{(D_0)^2}{D_0 \times D_90} \]

If fines are organic, add "with organic fines" to group name.

1. If soil contains ≥ 15% gravel, add "with gravel" to group name.
2. If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
3. If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
4. If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.
5. If soil contains ≥ 30% plus No. 200 predominantly gravel, add "gravely" to group name.
6. Pl ≥ 4 and plots on or above "A" line.
7. Pl < 4 or plots below "A" line.
8. Pl plots on or above "A" line.

---

For classification of fine-grained soils and fine-grained fraction of coarse-grained soils:

**Equation of "A" line**
Horizontal at Pl=4 to LL=25.5, then Pl=0.73 (LL=20)

**Equation of "U" line**
Vertical at LL=16 to Pl=7, then Pl=0.9 (LL=8)

---

![For classification of fine-grained soils and fine-grained fraction of coarse-grained soils](image-url)
**GENERAL NOTES**

**DRILLING & SAMPLING SYMBOLS:**
- **SS:** Split Spoon - 1/4" I.D., 2" O.D., unless otherwise noted
- **ST:** Thin-Walled Tube - 2.5" O.D., unless otherwise noted
- **RS:** Ring Sampler - 2.42" I.D., 3" O.D., unless otherwise noted
- **CS:** California Barrel - 1.92" I.D., 2.5" O.D., unless otherwise noted
- **BS:** Bulk Sample or Auger Sample

- **HA:** Hand Auger
- **RB:** Rock Bit
- **PA:** Power Auger
- **WBR:** Wash Boring or Mud Rotary
- **HS:** Hollow Stem Auger

The number of blows required to advance a standard 2" O.D. split-spoon sampler (SS) the last 12 inches of the total 18-inch penetration with a 140-pound hammer falling 30 inches is considered the "Standard Penetration" or "N-value." For 2.5" O.D. California Barrel samplers (CB) the penetration value is reported as the number of blows required to advance the sampler 12 inches using a 140-pound hammer falling 30 inches, reported as "blows per inch," and is not considered equivalent to the "Standard Penetration" or "N-value".

**WATER LEVEL MEASUREMENT SYMBOLS:**
- **WL:** Water Level
- **WCI:** Wet Cave in
- **ACR:** After Casing Removal
- **BCR:** Before Casing Removal
- **DR:** Dry Rock
- **DCI:** Dry Cave in
- **AB:** After Boring
- **A46:** Addition of 18 inches, 75 mm, to total depth
- **AV:** A. V. Hole
- **AR:** A. R. Boring
- **WBR:** Wash Boring or Mud Rotary
- **ACR:** After Casing Removal
- **MB:** Mud Boring
- **WS:** While Sampling
- **WD:** While Drilling
- **H:** Hole
- **ACR:** After Casing Removal
- **MB:** Mud Boring
- **WBR:** Wash Boring or Mud Rotary
- **ACR:** After Casing Removal

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. Groundwater levels at other times and other locations across the site could vary. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels may not be possible with only short-term observations.

**DESCRIPTIVE SOIL CLASSIFICATION:** Soil classification is based on the Unified Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand.

Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

### FINE-GRAINED SOILS

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<tbody>
<tr>
<td>&lt; 3</td>
<td>0-2</td>
<td>Very Soft</td>
<td>0-5</td>
<td>&lt; 3</td>
<td>Very Loose</td>
<td>&lt; 24</td>
<td>&lt; 20</td>
<td>Weathered</td>
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<tr>
<td>3-5</td>
<td>3-4</td>
<td>Soft</td>
<td>6-14</td>
<td>4-9</td>
<td>Loose</td>
<td>24-35</td>
<td>20-29</td>
<td>Firm</td>
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<td>6-10</td>
<td>5-8</td>
<td>Medium Stiff</td>
<td>15-46</td>
<td>10-29</td>
<td>Medium Dense</td>
<td>36-60</td>
<td>30-49</td>
<td>Medium Hard</td>
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<tr>
<td>11-18</td>
<td>9-15</td>
<td>Stiff</td>
<td>47-79</td>
<td>30-50</td>
<td>Dense</td>
<td>61-96</td>
<td>50-79</td>
<td>Hard</td>
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<td>19-36</td>
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<td>Very Stiff</td>
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<td>&gt; 50</td>
<td>Very Dense</td>
<td>&gt; 96</td>
<td>&gt; 79</td>
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<td>&gt; 36</td>
<td>&gt; 30</td>
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### COARSE-GRAINED SOILS

**Relative Proportions of Sand and Gravel**

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<th>Descriptive Terms of Other Constituents</th>
<th>Percent of Dry Weight</th>
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<td>Trace</td>
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<td>With</td>
<td>15 - 29</td>
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<td>Modifier</td>
<td>&gt; 30</td>
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**Major Component of Sample**

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<th>Particle Size</th>
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<td>Over 12 in. (300mm)</td>
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<td>12 in. to 3 in. (300mm to 75 mm)</td>
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<td>3 in. to #4 sieve (75mm to 4.75 mm)</td>
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<tr>
<td>#4 to #200 sieve (4.75mm to 0.075mm)</td>
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**Plasticity Description**

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<td>Non-plastic</td>
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<td>Low</td>
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<td>Medium</td>
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<td>High</td>
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**Plasticity Index**

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<td>1-10</td>
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<tr>
<td>11-30</td>
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<td>30+</td>
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November 9, 2018

Helene Levaufre  
Boulder County Transportation Department  
2525 13th Street, P.O. Box 471  
Boulder, CO 80304

Dear Helene:

This Transportation Pre-Application Methodology Letter (TP-AML) addresses the proposed methodology for the transportation system impact analysis per the Boulder County Multimodal Transportation Standards for the expansion of the Boulder Rifle Club in Boulder County. This TP-AML will address the difference in the trip generation as well as other elements. An aerial photograph showing the site location is provided in Appendix A.

The Boulder Rifle Club is located at 4810 North 26th Street. The site access is currently located where 26th Street changes from a north-south street to an east-west street. Access to the site is on 26th Street via the US36/26th Street and US36/Yarmouth Avenue intersections. Twenty-Sixth Street is a two lane gravel road with a posted speed of 30 mph. Based on Boulder County data, the 2016 daily traffic on 26th Street was 320 vehicles just north of US 36. Yarmouth Avenue is a two lane gravel road with a posted speed of 30 mph. No daily traffic volume on Yarmouth Avenue was available. The 26th Street/Yarmouth Avenue intersection has stop sign control on Yarmouth Avenue. The US36/26th Street intersection has stop sign control on 26th Street. There is a southeast bound left-turn lane and a northwest bound right-turn lane on US36 at the US36/26th Street intersection. The US36/Yarmouth Avenue intersection has stop sign control on Yarmouth Avenue. There is a southeast bound left-turn lane on US36 at the US36/Yarmouth Avenue intersection.

Currently the Boulder Rifle Club is approximately 6.23 acres with a 200 yard range, a 100 yard range, a 50 yard range, a 25 yard range, and an indoor 50 foot range on the site. A Rifle Club is not specifically addressed in *Trip Generation, 10th Edition*, ITE, which is the common reference document. The Boulder Rifle Club did a survey of users at each range between 4/4/2018 and 7/21/2018. Table 1 shows the average number of people using each range on a typical day. This reflects a mild weather month condition. Based on discussions with the Boulder Rifle Club, it was determined that approximately 20 percent of users carpool. Therefore, the number of users was reduced by 20% to determine the number of vehicles. The current weekday average daily traffic is 68 trips per day. The weekend average daily traffic is 210 trips per day. The average weekday trip ends per range is 13.6 [(68)/(5)]. The average weekend trip ends per range is 42.0 [(210)/(5)].
The proposal is to develop into the 12 acre parcel to the west with a new indoor range, a 25 yard range, 50 yard range, 100 yard range, 200 yard range, and 300 yard range. This is an increase from 5 ranges to 11 ranges. The proposed site plan is provided in Appendix B. The access drive will be relocated approximately 1,135 feet west of the driveway to the current site. Table 2 shows the proposed trip generation based on the average trips per range. The weekday average daily traffic is expected to be 150 trips per day. The weekend average daily traffic is expected to be 462 trips per day.

The average daily traffic was based on mild weather months when outdoor use is highest. During the winter weather months, outdoor use decreases to approximately 25% of the mild weather use. The indoor range use increases by approximately 25% in the winter. Based on this the estimated winter weekday average daily traffic is 74 trips per day. The winter weekend average daily traffic is 90 trips per day.

The trip distribution for this use is a function of trip production locations in the general vicinity of the site. Preliminary trip distribution is estimated at: 50 percent to/from the south on US36 and 50 percent to/from the north on US36. Future traffic forecasts, if necessary, should be obtained from sources provided by Boulder County Transportation or agreed upon growth rates on the key roads/streets.

The primary travel mode is/will be by private automobile. There is a bus stop near the US36/Jay intersection. It is not likely that users would utilize public transportation and/or bikes. There are no bike lanes on 26th Street and Yarmouth Avenue. Highway 36 is a road with wide paved shoulders.

Using the Boulder County Multimodal Transportation Standards a Transportation System Impact Review would be required based on the average weekday daily traffic and a Transportation System Impact Study would be required based on the average weekend daily traffic for this land use proposal.

Do not hesitate to contact me if you have questions or desire additional information.

Sincerely,

Joseph M. Delich, PE
Professional Engineer

File: 1880LT01
<table>
<thead>
<tr>
<th>Day of the Week</th>
<th>25 Yard Range</th>
<th>50 Yard Range</th>
<th>100 Yard Range</th>
<th>200 Yard Range</th>
<th>Indoor Range</th>
<th>Number of Users</th>
<th>Number of Vehicles</th>
<th>Trip Ends per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>2</td>
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<td>20</td>
<td>16</td>
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<td>Sunday</td>
<td>8</td>
<td>35</td>
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<td>4</td>
<td>13</td>
<td>97</td>
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<td>Weekday Average</td>
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<td>4</td>
<td>11</td>
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<td>34</td>
<td>68</td>
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<tr>
<td>Weekend Average</td>
<td>30</td>
<td>33</td>
<td>26</td>
<td>33</td>
<td>9</td>
<td>131</td>
<td>105</td>
<td>210</td>
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</tbody>
</table>

TABLE 1
Number of Users at Each Range
<table>
<thead>
<tr>
<th>Day of the Week</th>
<th>Existing Trips per Day (5 Ranges)</th>
<th>Average Trips per Range</th>
<th>Proposed Trip Ends per Day (11 ranges)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday average daily Traffic</td>
<td>68</td>
<td>13.6</td>
<td>150</td>
</tr>
<tr>
<td>Weekend Average daily Traffic</td>
<td>210</td>
<td>42.0</td>
<td>462</td>
</tr>
</tbody>
</table>
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B. Count Data
C. Current Peak Hour Operation
D. Short Range (2023) Total Peak Hour Operation
E. Long Range (2040) Total Peak Hour Operation

DELCICH ASSOCIATES

Boulder Rifle Club Project TSIS, March 2019

A57
I. PROJECT DESCRIPTION

This Transportation System Impact Study (TSIS) for the Boulder Rifle Club addresses the capacity, geometric, and traffic control requirements at and near the proposed development. The Boulder Rifle Club is located at 4810 North 26th Street in Boulder County, Colorado.

This study conforms to a Transportation System Impact Study per the Boulder County Multimodal Transportation Standards. A Transportation Pre-Application Methodology Letter was submitted on November 9, 2018. A copy of the Transportation Pre-Application Methodology Letter is provided in Appendix A. The scope of this study was discussed with the owner/developer and Boulder County staff.

Proposed Land Use

The site location is shown in Figure 1. Figure 2 shows a site plan of the proposed Boulder Rifle Club. Currently the Boulder Rifle Club is approximately 6.23 acres with a 200 yard range, a 100 yard range, a 50 yard range, a 25 yard range, and an indoor 50 foot range on the site.

The proposal is to develop into the 12 acre parcel to the west with a new indoor range, a 25 yard range, 50 yard range, 100 yard range, 200 yard range, and 300 yard range. This is an increase from 5 ranges to 11 ranges. The proposed site plan is provided in Appendix B. The access drive will be relocated approximately 1,135 feet west of the driveway to the current site.

Pedestrian, Bicycle, and Transit Travel

Streets near the Boulder Rifle Club do not have sidewalks. Pedestrians will use the shoulders of the roads. Bicycles will share the roadways on 28th Street and Yarmouth Avenue. US36 has paved shoulders that bicycles can/do use. There are no trails in the area.

The Boulder Rifle Club is greater than mile from the closest RTD Route 205. There is a bus stop for Route 205 at the US36/Jay intersection to the south of the Boulder Rifle Club.

There are not many opportunities to encourage multimodal use, since this is a rifle club. The Boulder Rifle Club will encourage carpooling.
II. STUDY AREA

The project site currently is vacant. The land surrounding the site consists of park/open space, a nursery, and a circus school, and park/open space uses. Harlequin’s Garden Nursery and Boulder Circus Center are to the south of the site. There is a park/open space to the east, west, and north of the site.

The nearest signalized intersection in the area is the US36/Jay Road intersection (>1 mile away) and was determined to be outside of the project study area. Unsignalized intersections in the area are US36/26th Street and US36/Yarmouth Avenue intersections with stop control on 26th Street and Yarmouth Avenue, respectively.
III. EXISTING CONDITIONS

Figure 3 shows the existing geometry and multimodal facilities. United States Highway 36 (26th Street) is classified as a NR-A highway. Currently, US36 has a two-lane cross section with auxiliary turn lanes and a posted speed of 55 mph. At the US36/26th Street intersection, US36 has a southeastbound left-turn lane, a through lane in each direction, and a northwestbound right-turn lane. At the US36/Yarmouth intersection, US36 has a southeastbound left-turn lane, a southeastbound through lane, and a northwestbound through/right-turn lane.

26th Street is a local street with a two-lane gravel cross section and a posted speed of 30 mph. 26th Street only has a north leg at the US36/26th Street intersection. At the US36/26th Street intersection, 26th Street has all movements combined into a single lane.

Yarmouth Avenue is a local street with a two-lane gravel cross section and a posted speed of 30 mph. Yarmouth Avenue only has an east leg at the US36/Yarmouth Avenue intersection. At the US36/Yarmouth Avenue intersection, Yarmouth Avenue has all movements combined into a single lane.

Recent daily, morning, and afternoon peak hour traffic counts at the US36/26th Street and US36/Yarmouth Avenue intersections are shown in Figure 4. Raw peak hour traffic counts are provided in Appendix B. The peak hour count data was obtained in March 2019. Using the volumes shown in Figure 4, the current peak hour operation at the US36/26th Street and US36/Yarmouth Avenue intersections are shown in Table 1. Calculation forms for these analyses are provided in Appendix C. The intersections were analyzed using the unsignalized intersection techniques from the 2016 Highway Capacity Manual (6th Edition HCM). At the US36/26th Street intersection, the calculated delay for the southbound approach was commensurate with level of service F. This is considered to be normal during the peak hours at stop sign controlled intersections along arterial streets.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Movement</th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>US36/26th Street (stop sign)</td>
<td>SEB LT</td>
<td>A (0.0 secs)</td>
<td>B (11.7 secs)</td>
</tr>
<tr>
<td></td>
<td>SB LT/RT</td>
<td>F (90.9 secs)</td>
<td>F (60.0 secs)</td>
</tr>
<tr>
<td></td>
<td>OVERALL</td>
<td>A (0.0 secs)</td>
<td>A (0.2 secs)</td>
</tr>
<tr>
<td>US36/Yarmouth Avenue (stop sign)</td>
<td>WB LT</td>
<td>D (34.2 secs)</td>
<td>C (23.6 secs)</td>
</tr>
<tr>
<td></td>
<td>SEB LT</td>
<td>A (8.6 secs)</td>
<td>B (10.5 secs)</td>
</tr>
<tr>
<td></td>
<td>OVERALL</td>
<td>A (0.1 secs)</td>
<td>A (0.1 secs)</td>
</tr>
</tbody>
</table>

Table 1: Current Peak Hour Operation
EXISTING GEOMETRY

Yarmouth Avenue

US36

26th Street

- Denotes Lane

Figure 3

Boulder Rifle Club TSIS, March 2019
Page 6
RECENT DAILY AND PEAK HOUR TRAFFIC

Figure 4
Accident Data and Analysis

Accident data was obtained from the Boulder County for the US36/26th Street and US36/Yarmouth Avenue intersections for a five year period (2012 to 2017). At the US36/26th Street intersection there were two reported accidents: one rear-end accident and one head-on accident. At the US36/Yarmouth Avenue intersection, there were 14 reported accidents: two rear-end accidents, two approach turn accidents, one hitting the curb accident, one overtaking accident, one hitting a fence accident, one sideswipe accident, one accident with a bicycle, two in the embankment accidents, and three accidents hitting a wild animal. The number of accidents at the US36/26th Street and US36/Yarmouth Avenue intersections is typical and what would be expected at a stop sign controlled intersections.
IV. TRIP GENERATION

Trip generation is important in considering the impact of a development such as this upon the existing and proposed street system. Currently the Boulder Rifle Club is approximately 6.23 acres with a 200 yard range, a 100 yard range, a 50 yard range, a 25 yard range, and an indoor 50 foot range on the site. A Rifle Club is not specifically addressed in *Trip Generation, 10th Edition*, ITE, which is the common reference document. The Boulder Rifle Club did a survey of users at each range between 4/4/2018 and 7/21/2018. Table 2 shows the average number of people using each range on a typical day. This reflects a mild weather month condition. Based on discussions with the Boulder Rifle Club, it was determined that approximately 20 percent of users carpool. Therefore, the number of users was reduced by 20% to determine the number of vehicles. The current weekday average daily traffic is 68 trips per day. The weekend average daily traffic is 210 trips per day. The average weekday trip ends per range is 13.6 \( [(68)/(5)] \). The average weekend trip ends per range is 42.0 \( [(210)/(5)] \).

The proposal is to develop into the 12 acre parcel to the west with a new indoor range, a 25 yard range, 50 yard range, 100 yard range, 200 yard range, and 300 yard range. This is an increase from 5 ranges to 11 ranges. The proposed site plan is provided in Appendix B. The access drive will be relocated approximately 1,135 feet west of the driveway to the current site. Table 3 shows the proposed trip generation based on the average trips per range. The weekday average daily traffic is expected to be 150 trips per day. The weekend average daily traffic is expected to be 462 trips per day. To determine the peak hour trip ends, the number of persons using the ranges prior to the peak hour was assumed to be exiting and persons using the ranges during/after the peak hour were assumed to be entering. The expected total weekday person trip generation is: 190 daily trip ends; 3 morning peak hour trip ends; and 38 afternoon peak hour trip ends. The additional weekday person trip generation that is new site generated traffic is: 104 daily trip ends; 2 morning peak hour trip ends; and 20 afternoon peak hour trip ends.
### TABLE 2
Number of Users at Each Range

<table>
<thead>
<tr>
<th>Day of the Week</th>
<th>25 Yard Range</th>
<th>50 Yard Range</th>
<th>100 Yard Range</th>
<th>200 Yard Range</th>
<th>Indoor Range</th>
<th>Number of Users</th>
<th>Number of Person Trip Ends per Day</th>
<th>Vehicle Trip Ends per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>32</td>
</tr>
<tr>
<td>Tuesday</td>
<td>20</td>
<td>8</td>
<td>7</td>
<td>0</td>
<td>6</td>
<td>41</td>
<td>82</td>
<td>66</td>
</tr>
<tr>
<td>Wednesday</td>
<td>17</td>
<td>12</td>
<td>23</td>
<td>1</td>
<td>1</td>
<td>54</td>
<td>.108</td>
<td>86</td>
</tr>
<tr>
<td>Thursday</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>29</td>
<td>61</td>
<td>122</td>
<td>98</td>
</tr>
<tr>
<td>Friday</td>
<td>6</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>21</td>
<td>39</td>
<td>78</td>
<td>62</td>
</tr>
<tr>
<td>Saturday</td>
<td>52</td>
<td>31</td>
<td>15</td>
<td>61</td>
<td>5</td>
<td>164</td>
<td>328</td>
<td>262</td>
</tr>
<tr>
<td>Sunday</td>
<td>8</td>
<td>35</td>
<td>37</td>
<td>4</td>
<td>13</td>
<td>97</td>
<td>194</td>
<td>156</td>
</tr>
<tr>
<td>Weekday Average</td>
<td>12</td>
<td>8</td>
<td>8</td>
<td>4</td>
<td>11</td>
<td>43</td>
<td>86</td>
<td>68</td>
</tr>
<tr>
<td>Weekend Average</td>
<td>30</td>
<td>33</td>
<td>26</td>
<td>33</td>
<td>9</td>
<td>131</td>
<td>262</td>
<td>210</td>
</tr>
</tbody>
</table>

### TABLE 3
Proposed Trip Generation

<table>
<thead>
<tr>
<th>Day of the Week</th>
<th>Existing Person Trips per Day (5 Ranges)</th>
<th>Average Person Trips per Range</th>
<th>Proposed Person Trip Ends per Day (11 ranges)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday average daily Traffic</td>
<td>86</td>
<td>17.2</td>
<td>190</td>
</tr>
<tr>
<td>Weekend Average daily Traffic</td>
<td>262</td>
<td>52.4</td>
<td>576</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day of the Week</th>
<th>Existing Vehicle Trips per Day (5 Ranges)</th>
<th>Average Vehicle Trips per Range</th>
<th>Proposed Vehicle Trip Ends per Day (11 ranges)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday average daily Traffic</td>
<td>68</td>
<td>13.6</td>
<td>150</td>
</tr>
<tr>
<td>Weekend Average daily Traffic</td>
<td>210</td>
<td>42.0</td>
<td>462</td>
</tr>
</tbody>
</table>
V. MODE SHARE

As mentioned before, there are not many opportunities to encourage multimodal use, since this is a rifle club. However, based on discussions with the Boulder Rifle Club it is expected that around 20 percent will carpool. Table 4 shows the person trips by travel mode for the Boulder Rifle Club. Using this information, the additional vehicle trip generation is 82 daily trip ends; 2 (2 in/0 out) morning peak hour trip ends; and 17 (6 in/11 out) afternoon peak hour trip ends.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percent of trips</th>
<th>Number of person trips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AM (in/out)</td>
</tr>
<tr>
<td>Single occupant vehicle</td>
<td>80</td>
<td>2/0</td>
</tr>
<tr>
<td>Carpool</td>
<td>20</td>
<td>0/0</td>
</tr>
<tr>
<td>Bus</td>
<td>0</td>
<td>0/0</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0</td>
<td>0/0</td>
</tr>
<tr>
<td>Walk</td>
<td>0</td>
<td>0/0</td>
</tr>
<tr>
<td>Total number of person trips</td>
<td></td>
<td>2/0</td>
</tr>
<tr>
<td>Total number of vehicle</td>
<td></td>
<td>2/0</td>
</tr>
</tbody>
</table>
VI. BACKGROUND TRAFFIC & ADJACENT DEVELOPMENT

The traffic on US36 in the short range (2023) future and long range (2040) future was increased using the CDOT 20-year factor (1.25). Since 26th Street and Yarmouth Avenue are not through streets, it was determined that the short range (2023) future background traffic was not increased since there are no other proposed developments along 26th Street and Yarmouth Avenue. In the long range (2040) future, 26th Street and Yarmouth Avenue was increased using the CDOT 20-year factor. Figure 5 shows the short range (2023) background daily and peak hour traffic. Figure 6 shows the long range (2040) background daily and peak hour traffic.
SHORT RANGE (2023) BACKGROUND
DAILY AND PEAK HOUR TRAFFIC

Figure 5
LONG RANGE (2040) BACKGROUND DAILY AND PEAK HOUR TRAFFIC

Figure 6

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VII. TRIP DISTRIBUTION & ASSIGNMENT

Trip distribution for Boulder Rifle Club Project was based on existing/future travel patterns, land uses in the area, and consideration of trip attractions/productions for this land use. Figure 7 shows the trip distribution used for Boulder Rifle Club Project. This is a change from the 50/50 split in the TP-AML, based on the existing traffic counts.

Trip assignment is how the generated and distributed trips are expected to be loaded on the street system. The assigned trips are the resultant of the trip distribution process. The site generated peak hour trip assignment for the Boulder Rifle Club Project is also shown in Figure 8. The site generated traffic was combined with the background traffic to determine the total forecasted traffic for the study area. Figures 9 and 10 show the respective short range (2023) and long range (2040) total peak hour traffic at the US36/26th Street and US36/Yarmouth intersections.
Figure 7

TRIP DISTRIBUTION

ATTACHMENT A

Boulder Rifle Club TSIS, March 2019
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SITE GENERATED DAILY AND PEAK HOUR TRAFFIC

Figure 8

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SHORT RANGE (2023) TOTAL DAILY AND PEAK HOUR TRAFFIC

Figure 9

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LONG RANGE (2040) TOTAL
DAILY AND PEAK HOUR TRAFFIC

Figure 10

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VIII. FUTURE CONDITIONS ANALYSIS

Signal Warrants

As a matter of policy, traffic signals are not installed at any location unless warrants are met according to the Manual on Uniform Traffic Control Devices (MUTCD). There are nine signal warrants in the MUTCD. The peak hour warrant is the warrant was evaluated at the US36/26th Street and US36/Yarmouth intersections. This is the only warrant that could be reasonably evaluated in this transportation system impact study. The other warrants are beyond the scope of this study. According to the MUTCD, the standard for applying the peak hour warrant is: the peak hour signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. This intersection and the traffic characteristics do not fit this definition. If peak hour signal warrants will not be met at a given intersection, it is reasonable to conclude that it is not likely that other signal warrants would be met. Of peak hour signal warrants are met, it merely indicates that further evaluation should occur in the future as the development occurs. However, a judgment can be made that some intersection will likely meet other signal warrants.

Using the short range (2023) and long range (2035) peak hour traffic, the US36/26th Street and US3/Yarmouth Avenue intersections will not meet the lower threshold for the minor street in the peak hour volume signal warrant.

Operation Analysis

Operation analyses were performed at the US36/26th Street and US3/Yarmouth Avenue intersections. The operation analyses were conducted for the short range analysis, reflecting a year 2023 condition. The long range analysis reflects a year 2040 condition.

Table 5 shows the short range (2023) total peak hour operation at the US36/26th Street and US3/Yarmouth Avenue intersections with development of the Boulder Rifle Club. Calculation forms are provided in Appendix D. With stop sign control at the US36/26th Street intersection, the calculated delay in the morning and afternoon peak hours for the southbound approach was commensurate with level of service F. Level of service F is considered to be normal during the peak hours at stop sign controlled intersections along arterial streets.

Table 6 shows the long range (2040) total peak hour operation at the US36/26th Street and US3/Yarmouth Avenue intersections with development of the Boulder Rifle Club. Calculation forms are provided in Appendix E. With stop sign control at the US36/26th Avenue intersection, the calculated delay in the morning and afternoon peak hours for the southbound approach was commensurate with level of service F. Level of service F is considered to be normal during the peak hours at stop sign controlled intersections along arterial streets.
### TABLE 5
Short Range (2023) Total Peak Hour Operation

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Movement</th>
<th>Level of Service AM</th>
<th>Level of Service PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>US36/26th Street (stop sign)</td>
<td>SEB LT</td>
<td>A (0.0 secs)</td>
<td>B (12.1 secs)</td>
</tr>
<tr>
<td></td>
<td>SB LT/RT</td>
<td>F (105.2 secs)</td>
<td>F (98.2 secs)</td>
</tr>
<tr>
<td></td>
<td>OVERALL</td>
<td>A (0.0 secs)</td>
<td>A (0.8 secs)</td>
</tr>
<tr>
<td>US36/Yarmouth Avenue (stop sign)</td>
<td>WB LT</td>
<td>E (37.7 secs)</td>
<td>C (23.4 secs)</td>
</tr>
<tr>
<td></td>
<td>SEB LT</td>
<td>A (8.7 secs)</td>
<td>B (10.7 secs)</td>
</tr>
<tr>
<td></td>
<td>OVERALL</td>
<td>A (0.3 secs)</td>
<td>A (0.1 secs)</td>
</tr>
</tbody>
</table>

### TABLE 6
Long Range (2040) Total Peak Hour Operation

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Movement</th>
<th>Level of Service AM</th>
<th>Level of Service PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>US36/26th Street (stop sign)</td>
<td>SEB LT</td>
<td>B (10.1 secs)</td>
<td>A (14.2 secs)</td>
</tr>
<tr>
<td></td>
<td>SB LT/RT</td>
<td>F (167.1 secs)</td>
<td>F (270.3 secs)</td>
</tr>
<tr>
<td></td>
<td>OVERALL</td>
<td>A (0.6 secs)</td>
<td>A (2.2 secs)</td>
</tr>
<tr>
<td>US36/Yarmouth Avenue (stop sign)</td>
<td>WB LT</td>
<td>F (64.9 secs)</td>
<td>E (45.6 secs)</td>
</tr>
<tr>
<td></td>
<td>SEB LT</td>
<td>A (9.1 secs)</td>
<td>B (12.0 secs)</td>
</tr>
<tr>
<td></td>
<td>OVERALL</td>
<td>A (0.6 secs)</td>
<td>A (0.5 secs)</td>
</tr>
</tbody>
</table>
Geometry and Roadway Improvements

The short range (2019) and long range (2035) geometry is the same as the existing geometry.

Based on the 2016 daily count (320 vehicles per day) on 26th Avenue, the existing daily traffic is at 80 percent of the paving threshold (>400 ADT). The short range (2023) total average daily traffic with the Boulder Rifle Club is calculated at 382 ADT. This is near the paving threshold. This is a 16% increase in the daily traffic on 26th Avenue. The long range (2040) total average daily traffic with the Boulder Rifle Club is calculated at 460 ADT. This is over the paving threshold.
IX. CONCLUSIONS & MITIGATION RECOMMENDATIONS

This study assessed the impacts of Boulder Rifle Club development on the short range and long range street system in the vicinity of the proposed development. Boulder Rifle Club is located at 4810 North 26th Street in Boulder County, Colorado. As a result of this analysis, the following is concluded:

- The development of Boulder Rifle Club Project in Boulder County is feasible from a traffic engineering standpoint. The total Boulder Rifle Club will generate approximately 190 daily trip ends; 3 morning peak hour trip ends; and 38 afternoon peak hour trip ends. The additional weekday person trip generation that is new site generated traffic is: 104 daily trip ends; 2 morning peak hour trip ends; and 20 afternoon peak hour trip ends.

- At the US36/26th Street intersection, the calculated delay for the southbound approach was commensurate with level of service F. This is considered to be normal during the peak hours at stop sign controlled intersections along arterial streets.

- It is unlikely that people will walk and bike to the Boulder Rifle Club. Pedestrians will use the shoulders of the roads within this area. Bicycles will share the roadways within this area. US36 has paved shoulders that bicycles can/do use.

- The area is not served by RTD. The nearest route (Route 205) is greater than a mile for the Boulder Rifle Club. There is a bus stop is at the US36/Jay Road intersection, approximately 1.2 miles to the south.

- The US36/26th Street and US3/Yarmouth Avenue intersections will not meet the lower threshold for the minor street in the peak hour volume signal warrant. Therefore, it is unlikely that the US36/26th Street and US3/Yarmouth Avenue intersections will required signalization in the.

- In the short range (2019) future, given the development of Boulder Rifle Club and an increase in background traffic, the US36/26th Street and US3/Yarmouth Avenue intersections operate as shown in Table 4. With stop sign control at the US36/26th Street intersection, the calculated delay in the morning and afternoon peak hours for the southbound approach was commensurate with level of service F. Level of service F is considered to be normal during the peak hours at stop sign controlled intersections along arterial streets.

- In the long range (2035) future, given development of Boulder Rifle Club Project, the US36/26th Street and US3/Yarmouth Avenue intersections operate as shown in Table 5. With stop sign control at the US36/26th Avenue intersection, the calculated delay in the morning and afternoon peak hours for the southbound...
approach was commensurate with level of service F. Level of service F is considered to be normal during the peak hours at stop sign controlled intersections along arterial streets.

- The short range and long range geometry is the same as the existing geometry in Figure 3.

- Based on the 2016 daily count (320 vehicles per day) on 26th Avenue, the existing daily traffic is at 80 percent of the paving threshold (>400 ADT). The short range (2023) total average daily traffic with the Boulder Rifle Club is calculated at 382 ADT. This is near the paving threshold. This is a 16% increase in the daily traffic on 26th Avenue. The long range (2040) total average daily traffic with the Boulder Rifle Club is calculated at 480 ADT. This is over the paving threshold.
Preliminary Drainage Report
Boulder Rifle Range
Boulder County, Colorado

Prepared for:

Boulder Rifle Club
PO Box 21197
Boulder, CO 80308
(303) 548-2945

Prepared by:

Rocky Ridge Civil Engineering
420 21st Avenue, Suite 101
Longmont, Colorado 80501
(303) 651-6626

May 2019

RRCE Job#778-1
Engineer’s Certification

“I hereby certify that this plan and report for the Preliminary Drainage design of the Boulder Rifle Club was prepared by me, or under my direct supervision, in accordance with the provisions of the Boulder County Storm Drainage Criteria Manual.”

Garrett C. Walstad
Registered Professional Engineer
State of Colorado No. 53303
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Vicinity Map

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II. General Location and Description 1
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IV. Existing Drainage Conditions 2
V. Drainage Facility Design 2
VI. Conclusions 4

FEMA - FIRMette

Appendix A- Hydrologic Calculations
Appendix B- Detention Calculations

Map Pocket

D1 - Historic Drainage Plan
D2 - Developed Drainage Plan
BOULDER RIFLE RANGE

SCALE: 1" = 2000'

ATTACHMENT A
I. INTRODUCTION

This report is site specific for improvements to The Boulder Rifle Club, hereinafter called "the Site". The Site will include the construction of a primary building with classroom space, indoor shooting range, and merchandise area, open air shooting ranges with shelters, parking and drive areas, utility services, and drainage infrastructure.

The drainage design concepts of this project are intended to be in conformance with Boulder County Storm Drainage Criteria Manual. Calculations for this report are based on the Major (100-year) and Minor (10-year) storm events.

II. GENERAL LOCATION AND DESCRIPTION

The site is located in the eastern half of Section 7, Township 1 North, Range 70 West of the 6th P.M. The site is bounded by N. 26th Street to the south, and agriculturally zoned City of Boulder property to the north, east and west.

The site includes approximately 24.87 acres and contains the Boulder Rifle Club facility existing structures, gravel parking/drive areas, and walkways.

There are no major or minor drainage ways on or near the site. The site is located within "Zone X - Area of Minimal Flood Hazard" according to FEMA Panel 08013CO385J effective December 18, 2012.

III. EXISTING SOIL CONDITIONS

The existing site topography varies significantly with slopes ranging from one to sixty percent grade. Existing ground cover includes mostly barren soils with native grasses, weeds and small shrubs and trees.

Existing soils are hydrologically classified as being primarily Type C and D.

Soilogic completed a Preliminary Geotechnical Subsurface Exploration Report in February 2019, with exploratory holes approximately 35 to 40 feet below ground surface.

The western portion of the site is historically known to have been used as a trash dump. Various debris and hazardous waste may be encountered during the planned construction activities. This material shall be removed from the site and measures taken to mitigate any additional hazardous health and environmental impacts associated with the removal.

The site does not contain any known irrigation infrastructure or encumbrances. There are no known significant geologic features at the site.

Groundwater was not encountered during the subsurface investigation.
IV. EXISTING DRAINAGE CONDITIONS

The existing site drains via sheetflow to an unnamed channel running through the site from the northwest to the southeast. Runoff is conveyed via open channel flow to an existing 48-inch steel culvert, where it is conveyed east via open channel flow, ultimately discharging to the Farmers Ditch. No offsite sheetflow enters the site. Concentrated offsite flows enter the site via open channel flow and are conveyed through the site to the existing outfall.

The primary drainage infrastructure including the open channel and existing outfall from the site are to be maintained throughout the proposed construction.

The existing site has been divided into two (2) drainage basins and have been labeled H1 and H2. An existing drainage plan can be found at the end of this report.

Basin H1 is in the western portion of the site and consists of a gravel access road and mostly barren native soils. Runoff drains via sheetflow northwest to the existing open channel running through the site where flows are conveyed through the existing 48-inch storm sewer outfall, ultimately being discharged to the Farmers Ditch.

Basin H2 is in the eastern portion of the site and consists of the existing Boulder Rifle Club facility buildings, gravel drives and open shooting range areas. Runoff drains via sheetflow northeast to the existing open channel running through the site where flows are conveyed through the existing 48-inch storm sewer outfall, ultimately being discharged to the Farmers Ditch.

Historic runoff values can be found in the Runoff Summary Table included in this report. Additional runoff calculations can be found in the Appendix.

V. DRAINAGE FACILITY DESIGN

Developed drainage patterns will remain consistent with the historic patterns. Runoff drains via sheetflow, open channel flow and storm sewer to the existing drainage channel running through the site where flows are conveyed through the existing 48-inch storm sewer outfall. Runoff from most of the proposed site improvements drains to a proposed detention pond where release is limited to historic rates.

The proposed site has been divided into four (4) drainage basins and have been labeled A1 through A4. A proposed drainage plan can be found at the end of this report.

Basin A1 is in the central portion of site and consists of proposed buildings and associated drives, parking areas, walks, shooting ranges, lawns and the proposed detention pond. Runoff drains via sheetflow, open channel flow and storm sewer to the proposed detention pond where runoff release is limited to historic rates. Release rates from the pond have been further reduced to account for portions runoff from the site that bypass the proposed pond. Runoff is released into the existing drainage swale where it is
conveyed through the existing 48” storm sewer outfall from the site, which is consistent with existing patterns.

Basin A2 is in the eastern portion of site and consists of the existing Boulder Rifle Club facility buildings and associated drives, parking areas, walks, shooting ranges, and lawns. Runoff drains via sheetflow, open channel flow and storm sewer to the existing drainage swale where it is conveyed through the existing 48” storm sewer outfall from the site, which is consistent with existing patterns.

Basin A3 is in the northern perimeter of the site and consists of the existing pervious areas. Runoff drains via sheetflow to the existing drainage swale where it is conveyed through the site to the existing 48” storm sewer outfall from the site, which is consistent with existing patterns.

Basin A4 is in the southern portion of site and consists of several proposed buildings and associated drives, parking areas, walks, and lawns. Runoff drains via sheetflow, open channel flow and storm sewer to the existing drainage swale south of the site where it is conveyed through the existing 72-inch storm sewer south of the site, which is consistent with existing patterns.

Developed runoff values can be found in the Runoff Summary Table included in this report. Additional runoff calculations can be found in the Appendix.

<table>
<thead>
<tr>
<th>Runoff Summary Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basins</td>
</tr>
<tr>
<td>H (Overall Historic)</td>
</tr>
<tr>
<td>H1</td>
</tr>
<tr>
<td>H2</td>
</tr>
<tr>
<td>A (Overall Developed)</td>
</tr>
<tr>
<td>A1</td>
</tr>
<tr>
<td>A2</td>
</tr>
<tr>
<td>A3</td>
</tr>
<tr>
<td>A4</td>
</tr>
</tbody>
</table>

The principle form of water quality is the implementation of Extended Detention Basin. A detention pond has been included in the proposed development to mitigate additional runoff from the increased imperviousness of the site. Runoff from the majority of the proposed site will flow through the proposed detention pond where release will be limited. The proposed pond has been designed to provide the Water Quality Capture Volume (WQCV), 10-year detention volume and 100-year detention volume. Additional water quality features will be implemented in the form of grass buffers, grass-lined swales, and riprap rundowns at concentrated discharge locations.

The “Boulder County Storm Drainage Criteria Manual” (SDM) and “Urban Storm Drainage Criteria Manual” (UD) were used as a basis for the development of this drainage plan and report. The Rational Formula Method was used for runoff calculations.
The Modified FAA Method was used for the required pond volume calculations. Additional calculations can be found in the Appendix of this report.

VI. CONCLUSIONS

The drainage concepts for this project are consistent with current policies and practices for storm drainage management as outlined in the Boulder County Storm Drainage Criteria Manual and the Urban Drainage and Flood Control District's Storm Drainage Criteria Manual.

The concepts presented for this project are also consistent with current policy and practices that allow the continued release of historic runoff while mitigating hazards of flooding. The proposed detention pond was sized for the 100-year developed storm using an allowable (historic) release rate and accounting for those portions of runoff that bypass the site. The site will maintain the flow patterns and release rates as have been historically seen from this Site.

VII. REFERENCES


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/13/2019 at 5:47:49 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.
Appendix A
Hydrologic Calculations
### POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Tripaluk, Dale Unruh, Michael Yekta, Geoffrey Bonin

NOAA, National Weather Service, Silver Spring, Maryland

**PF_tabular | PF_graphical | Maps & aerosols**

## PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)\(^1\)

<table>
<thead>
<tr>
<th>Duration</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>25</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>500</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-min</td>
<td>0.255</td>
<td>0.256</td>
<td>0.346</td>
<td>0.435</td>
<td>0.576</td>
<td>0.699</td>
<td>0.835</td>
<td>0.987</td>
<td>1.21</td>
<td>1.39</td>
</tr>
<tr>
<td>10-min</td>
<td>0.303</td>
<td>0.373</td>
<td>0.507</td>
<td>0.637</td>
<td>0.843</td>
<td>1.02</td>
<td>1.22</td>
<td>1.45</td>
<td>1.77</td>
<td>2.03</td>
</tr>
<tr>
<td>15-min</td>
<td>0.369</td>
<td>0.455</td>
<td>0.618</td>
<td>0.777</td>
<td>1.03</td>
<td>1.25</td>
<td>1.49</td>
<td>1.76</td>
<td>2.15</td>
<td>2.48</td>
</tr>
<tr>
<td>30-min</td>
<td>0.508</td>
<td>0.624</td>
<td>0.847</td>
<td>1.06</td>
<td>1.41</td>
<td>1.71</td>
<td>2.04</td>
<td>2.41</td>
<td>2.95</td>
<td>3.40</td>
</tr>
<tr>
<td>60-min</td>
<td>0.634</td>
<td>0.775</td>
<td>1.04</td>
<td>1.31</td>
<td>1.72</td>
<td>2.09</td>
<td>2.49</td>
<td>2.95</td>
<td>3.60</td>
<td>4.15</td>
</tr>
</tbody>
</table>

\(^1\) Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates for a given duration and average recurrence interval will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.
PDS-based depth-duration-frequency (DDF) curves
Latitude: 40.0660°, Longitude: -105.2663°

Average recurrence interval (years)
- 1
- 2
- 5
- 10
- 25
- 50
- 100
- 200
- 500
- 1000

Average recurrence interval (years)

Maps & aerials
Small scale terrain
Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions: HDSC.Questions@noaa.gov

Disclaimer
The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale. Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)
Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Boulder County Area, Colorado
Survey Area Data: Version 15, Sep 10, 2018
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 28, 2012—Sep 18, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
## Map Unit Legend

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DU</td>
<td>Dumps</td>
<td>6.9</td>
<td>27.2%</td>
</tr>
<tr>
<td>NdD</td>
<td>Nederland very cobbly sandy loam, 1 to 12 percent slopes</td>
<td>0.1</td>
<td>0.3%</td>
</tr>
<tr>
<td>ReD</td>
<td>Renohill loam, 3 to 9 percent slopes</td>
<td>13.6</td>
<td>53.4%</td>
</tr>
<tr>
<td>Te</td>
<td>Terrace escarpments</td>
<td>4.8</td>
<td>19.1%</td>
</tr>
<tr>
<td><strong>Totals for Area of Interest</strong></td>
<td></td>
<td><strong>25.4</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>
Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk "*" denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007 (http://directives.sc.gov.usda.gov/OpenNonWebContent.aspx?content=1775.wba). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

<table>
<thead>
<tr>
<th>Map unit symbol and soil name</th>
<th>Perc. of map unit</th>
<th>Hydrologic group</th>
<th>Depth</th>
<th>USDA texture</th>
<th>Classification</th>
<th>Pct fragments</th>
<th>Percentage passing sieve number</th>
<th>Liquid limit</th>
<th>Plasticity index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unified</td>
<td>AASHTO</td>
<td>&gt;10 inches</td>
<td>3-10 inches</td>
<td>4</td>
</tr>
</tbody>
</table>
### Engineering Properties—Boulder County Area, Colorado

<table>
<thead>
<tr>
<th>Map unit symbol and soil name</th>
<th>Pct. of map unit</th>
<th>Hydrologic group</th>
<th>USDA texture</th>
<th>Classification</th>
<th>Pct. of Fragments</th>
<th>Percentage passing sieve number— 4</th>
<th>Percentage passing sieve number— 10</th>
<th>Percentage passing sieve number— 40</th>
<th>Liquid limit</th>
<th>Plasticity index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
</tr>
<tr>
<td>ReD—Renohill loam, 3 to 9 percent slopes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
</tr>
<tr>
<td>Renohill 85 D</td>
<td>0-5</td>
<td>Loam</td>
<td>CL, CL-ML</td>
<td>A-4</td>
<td>0-0-0</td>
<td>100-100</td>
<td>100-100</td>
<td>85-90-95</td>
<td>60-68-75</td>
<td>25-28-30</td>
</tr>
<tr>
<td></td>
<td>5-15</td>
<td>Silty clay</td>
<td>MH, ML</td>
<td>A-7</td>
<td>0-0-0</td>
<td>100-100</td>
<td>100-100</td>
<td>95-98-100</td>
<td>90-93-95</td>
<td>45-50-55</td>
</tr>
<tr>
<td></td>
<td>15-20</td>
<td>Silty clay loam</td>
<td>ML</td>
<td>A-4, A-7</td>
<td>0-0-0</td>
<td>100-100</td>
<td>100-100</td>
<td>95-98-100</td>
<td>85-90-95</td>
<td>30-40-50</td>
</tr>
<tr>
<td></td>
<td>20-24</td>
<td>Weathered bedrock</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Te—Terrace escarpments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
<td>L-R-H</td>
</tr>
<tr>
<td>Terrace escarpments 100 A</td>
<td>0-6</td>
<td>Gravely sand</td>
<td>SP, SP-SM</td>
<td>A-1</td>
<td>0-0-0</td>
<td>55-68-80</td>
<td>50-63-75</td>
<td>25-38-50</td>
<td>0-5-10</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>6-60</td>
<td>Gravely sand, very gravelly sand, gravelly coarse sand</td>
<td>GW, GW-GM, SW, SW-SM</td>
<td>A-1</td>
<td>0-0-0</td>
<td>45-55-65</td>
<td>40-50-60</td>
<td>20-25-30</td>
<td>0-5-10</td>
<td>—</td>
</tr>
</tbody>
</table>

### Data Source Information

Soil Survey Area: Boulder County Area, Colorado  
Survey Area Data: Version 15, Sep 10, 2018
Table 6-3. Recommended percentage imperviousness values

<table>
<thead>
<tr>
<th>Land Use or Surface Characteristics</th>
<th>Percentage Imperviousness (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business:</strong></td>
<td></td>
</tr>
<tr>
<td>Downtown Areas</td>
<td>95</td>
</tr>
<tr>
<td>Suburban Areas</td>
<td>75</td>
</tr>
<tr>
<td><strong>Residential lots (lot area only):</strong></td>
<td></td>
</tr>
<tr>
<td>Single-family</td>
<td></td>
</tr>
<tr>
<td>2.5 acres or larger</td>
<td>12</td>
</tr>
<tr>
<td>0.75 – 2.5 acres</td>
<td>20</td>
</tr>
<tr>
<td>0.25 – 0.75 acres</td>
<td>30</td>
</tr>
<tr>
<td>0.25 acres or less</td>
<td>45</td>
</tr>
<tr>
<td>Apartments</td>
<td>75</td>
</tr>
<tr>
<td><strong>Industrial:</strong></td>
<td></td>
</tr>
<tr>
<td>Light areas</td>
<td>80</td>
</tr>
<tr>
<td>Heavy areas</td>
<td>90</td>
</tr>
<tr>
<td><strong>Parks, cemeteries</strong></td>
<td>10</td>
</tr>
<tr>
<td><strong>Playgrounds</strong></td>
<td>25</td>
</tr>
<tr>
<td><strong>Schools</strong></td>
<td>55</td>
</tr>
<tr>
<td><strong>Railroad yard areas</strong></td>
<td>50</td>
</tr>
<tr>
<td><strong>Undeveloped Areas:</strong></td>
<td></td>
</tr>
<tr>
<td>Historic flow analysis</td>
<td>2</td>
</tr>
<tr>
<td>Greenbelts, agricultural</td>
<td>2</td>
</tr>
<tr>
<td>Off-site flow analysis (when land use not defined)</td>
<td>45</td>
</tr>
<tr>
<td><strong>Streets:</strong></td>
<td></td>
</tr>
<tr>
<td>Paved</td>
<td>100</td>
</tr>
<tr>
<td>Gravel (packed)</td>
<td>40</td>
</tr>
<tr>
<td>Drive and walks</td>
<td>90</td>
</tr>
<tr>
<td>Roofs</td>
<td>90</td>
</tr>
<tr>
<td>Lawns, sandy soil</td>
<td>2</td>
</tr>
<tr>
<td>Lawns, clayey soil</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 6-4. Runoff coefficient equations based on NRCS soil group and storm return period

<table>
<thead>
<tr>
<th>NRCS Soil Group</th>
<th>Storm Return Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-Year</td>
</tr>
<tr>
<td>A</td>
<td>( C_A = 0.84i^{1.302} )</td>
</tr>
<tr>
<td>B</td>
<td>( C_B = 0.84i^{1.169} )</td>
</tr>
<tr>
<td>C/D</td>
<td>( C_{CD} = 0.83i^{1.122} )</td>
</tr>
</tbody>
</table>

Where:

\( i = \% \) imperviousness (expressed as a decimal)

\( C_A = \) Runoff coefficient for Natural Resources Conservation Service (NRCS) HSG A soils

\( C_B = \) Runoff coefficient for NRCS HSG B soils

\( C_{CD} = \) Runoff coefficient for NRCS HSG C and D soils.

The values for various catchment imperviousness and storm return periods are presented graphically in Figures 6-1 through 6-3, and are tabulated in Table 6-5. These coefficients were developed for the Denver region to work in conjunction with the time of concentration recommendations in Section 2.4. Use of these coefficients and this procedure outside of the semi-arid climate found in the Denver region may not be valid. The UD-Rational Excel workbook performs all the needed calculations to find the runoff coefficient given the soil type and imperviousness and the reader may want to take advantage of this macro-enabled Excel workbook that is available for download from the UDFCD’s website www.udfcd.org.

See Examples 7.1 and 7.2 that illustrate the Rational Method.
## Hydrologic Soil Type: D

### Historic Basin Calculations

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (sq ft)</th>
<th>Area (AC)</th>
<th>% Imperv</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>13,565</td>
<td>0.31</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Drive/Walk</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Gravel Street</td>
<td>85,988</td>
<td>1.97</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>Historic</td>
<td>983,950</td>
<td>22.59</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,083,503</strong></td>
<td><strong>24.874</strong></td>
<td>6.1%</td>
<td>0.04</td>
<td>0.09</td>
<td>0.18</td>
<td>0.51</td>
</tr>
</tbody>
</table>

### Developed Basin Calculations

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (sq ft)</th>
<th>Area (AC)</th>
<th>% Imperv</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>42,361</td>
<td>0.97</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Drive/Walk</td>
<td>7,843</td>
<td>0.18</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Gravel Street</td>
<td>128,158</td>
<td>2.94</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>Lawn</td>
<td>905,141</td>
<td>20.78</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,083,503</strong></td>
<td><strong>24.874</strong></td>
<td>10.6%</td>
<td>0.08</td>
<td>0.12</td>
<td>0.21</td>
<td>0.53</td>
</tr>
</tbody>
</table>

### Basin H1 Calculations

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (sq ft)</th>
<th>Area (AC)</th>
<th>% Imperv</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Drive/Walk</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Gravel Street</td>
<td>20,301</td>
<td>0.47</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>Historic</td>
<td>756,306</td>
<td>17.36</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>776,607</strong></td>
<td><strong>17.828</strong></td>
<td>3.0%</td>
<td>0.02</td>
<td>0.06</td>
<td>0.15</td>
<td>0.50</td>
</tr>
</tbody>
</table>

### Basin H2 Calculations

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (sq ft)</th>
<th>Area (AC)</th>
<th>% Imperv</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>13,565</td>
<td>0.31</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Drive/Walk</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Gravel Street</td>
<td>65,687</td>
<td>1.51</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>Historic</td>
<td>277,644</td>
<td>6.23</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>386,896</strong></td>
<td><strong>7.645</strong></td>
<td>14.0%</td>
<td>0.10</td>
<td>0.15</td>
<td>0.24</td>
<td>0.54</td>
</tr>
</tbody>
</table>

### Basin A1 Calculations

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (sq ft)</th>
<th>Area (AC)</th>
<th>% Imperv</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>23,226</td>
<td>0.53</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Drive/Walk</td>
<td>5,949</td>
<td>0.14</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Gravel Street</td>
<td>51,402</td>
<td>1.18</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>Lawn</td>
<td>415,645</td>
<td>10.00</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>516,224</strong></td>
<td><strong>11.851</strong></td>
<td>10.8%</td>
<td>0.08</td>
<td>0.12</td>
<td>0.21</td>
<td>0.53</td>
</tr>
</tbody>
</table>

### Basin A2 Calculations

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (sq ft)</th>
<th>Area (AC)</th>
<th>% Imperv</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>13,697</td>
<td>0.31</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Drive/Walk</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Gravel Street</td>
<td>50,243</td>
<td>1.15</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>Lawn</td>
<td>242,956</td>
<td>5.58</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>366,896</strong></td>
<td><strong>7.645</strong></td>
<td>12.1%</td>
<td>0.09</td>
<td>0.13</td>
<td>0.22</td>
<td>0.53</td>
</tr>
</tbody>
</table>

### Basin A3 Calculations

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (sq ft)</th>
<th>Area (AC)</th>
<th>% Imperv</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Drive/Walk</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Gravel Street</td>
<td>1,788</td>
<td>0.04</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>Lawn</td>
<td>207,437</td>
<td>4.76</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>205,225</strong></td>
<td><strong>4.803</strong></td>
<td>2.3%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
</tbody>
</table>

### Basin A4 Calculations

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (sq ft)</th>
<th>Area (AC)</th>
<th>% Imperv</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>5,438</td>
<td>0.12</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Drive/Walk</td>
<td>1,894</td>
<td>0.04</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>Gravel Street</td>
<td>24,722</td>
<td>0.57</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>Lawn</td>
<td>19,103</td>
<td>0.44</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>51,158</strong></td>
<td><strong>1.174</strong></td>
<td>33.0%</td>
<td>0.25</td>
<td>0.31</td>
<td>0.38</td>
<td>0.62</td>
</tr>
<tr>
<td>Calculation of Peak Flow using Rational Method</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>![Table Image]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ATTACHMENT A
Appendix B
Detention Calculations
## OVERALL SITE ALLOWABLE RELEASE RATE

UDFCD, Volume 2, Chapter 12

Soil Type: D

\[ q = P C_1 S C_2 \left( \frac{L^2}{A} \right) \]

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>(q) (cfs/acre)</th>
<th>(P) (inches)</th>
<th>(S) (ft/ft)</th>
<th>(L) (ft)</th>
<th>(A) (ac)</th>
<th>(C1)</th>
<th>(C2)</th>
<th>(C3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>0.309</td>
<td>1.31</td>
<td>0.055</td>
<td>1454</td>
<td>24.874</td>
<td>0.5375</td>
<td>0.1901</td>
<td>-0.4055</td>
</tr>
</tbody>
</table>

\[ Q_{10} = 0.309 \text{ cfs/acre}, \quad Q_{100} = 1.595 \text{ cfs/acre} \]

\[ P1 = 1.31 \text{ inches}, \quad S = 0.055 \text{ ft/ft} \]

\[ L = 1454 \text{ ft}, \quad A = 24.874 \text{ ac} \]

\[ A = 1083503 \text{ ft}^2, \quad C1 = 0.5375 \]

\[ C2 = 0.1901, \quad C3 = -0.4055 \]

90% Historic

\[ Q_{10} = 6.93 \text{ cfs}, \quad Q_{100} = 35.70 \text{ cfs} \]

\[ Q_{10} = 0.28 \text{ cfs/acre}, \quad Q_{100} = 1.44 \text{ cfs/acre} \]

## PROPOSED BASIN RELEASE RATES

**FROM RATIONAL CALCS**

<table>
<thead>
<tr>
<th>BASIN ID</th>
<th>AREA (AC)</th>
<th>(Q_{10})</th>
<th>(Q_{100})</th>
<th>DISCHARGE LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASIN A1</td>
<td>11.85</td>
<td>4.27</td>
<td>20.30</td>
<td>PROPOSED POND</td>
</tr>
<tr>
<td>BASIN A2</td>
<td>7.045</td>
<td>3.31</td>
<td>15.21</td>
<td>FREE RELEASE</td>
</tr>
<tr>
<td>BASIN A3</td>
<td>4.803</td>
<td>1.16</td>
<td>7.32</td>
<td>FREE RELEASE</td>
</tr>
<tr>
<td>BASIN A4</td>
<td>1.174</td>
<td>1.51</td>
<td>4.76</td>
<td>FREE RELEASE</td>
</tr>
</tbody>
</table>

## DETENTION POND PROPOSED ALLOWABLE RELEASE RATE

**OVERALL MINUS FREE RELEASE**

<table>
<thead>
<tr>
<th>(Q_{10})</th>
<th>(Q_{100})</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.95 cfs</td>
<td>8.41 cfs</td>
</tr>
<tr>
<td>0.04 cfs/acre</td>
<td>0.34 cfs/acre</td>
</tr>
<tr>
<td>Drain time:</td>
<td>40 hrs</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
</tr>
</tbody>
</table>

WQCV = a(0.91t^3 - 1.19t^2 + 0.78t)

<table>
<thead>
<tr>
<th>a=</th>
<th>1.0 cfs/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>l=</td>
<td>0.11 %/100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WQCV=</th>
<th>0.070 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>WQCV=</td>
<td>0.146 ac-ft</td>
</tr>
<tr>
<td>WQCV=</td>
<td>6342 ft^3</td>
</tr>
</tbody>
</table>
**DETENTION VOLUME BY THE MODIFIED FAA METHOD**

**(Note: for catchments less than 90 acres, CUHP hydrograph and routing are recommended)**

### Determination of Minor Detention Volume Using Modified FAA Method

<table>
<thead>
<tr>
<th>Design Information (Input)</th>
<th>Determination of Average Outflow from the Basin (Calculated):</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Catchment Design Improvements</td>
<td>- Rainfall Intensity</td>
</tr>
<tr>
<td>- Catchment Drainage Area</td>
<td>- Inflow Volume</td>
</tr>
<tr>
<td>- Predevelopment N&amp;CS Soil Group</td>
<td></td>
</tr>
<tr>
<td>- Return Period for Detention Control</td>
<td></td>
</tr>
<tr>
<td>- Time of Concentration of Watershed</td>
<td></td>
</tr>
<tr>
<td>- Alluvial Unit Release Rate</td>
<td></td>
</tr>
<tr>
<td>- One-Acre Precipitation</td>
<td></td>
</tr>
</tbody>
</table>

#### Design Rainfall IDF Formula: \( I_{F,0.3} = C \cdot P \cdot D \cdot T_{20} \)

<table>
<thead>
<tr>
<th>Coefficient One</th>
<th>Coefficient Two</th>
<th>Coefficient Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>( C )</td>
<td>( P )</td>
<td>( D )</td>
</tr>
<tr>
<td>0.04</td>
<td>1.31</td>
<td>0.709</td>
</tr>
</tbody>
</table>

### Determination of Major Detention Volume Using Modified FAA Method

#### Design Information (Input): Catchment Design Improvements | Determination of Average Outflow from the Basin (Calculated):

<table>
<thead>
<tr>
<th>Design Information (Input)</th>
<th>Determination of Average Outflow from the Basin (Calculated):</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Catchment Design Improvements</td>
<td>- Rainfall Intensity</td>
</tr>
<tr>
<td>- Catchment Drainage Area</td>
<td>- Inflow Volume</td>
</tr>
<tr>
<td>- Predevelopment N&amp;CS Soil Group</td>
<td></td>
</tr>
<tr>
<td>- Return Period for Detention Control</td>
<td></td>
</tr>
<tr>
<td>- Time of Concentration of Watershed</td>
<td></td>
</tr>
<tr>
<td>- Alluvial Unit Release Rate</td>
<td></td>
</tr>
<tr>
<td>- One-Acre Precipitation</td>
<td></td>
</tr>
</tbody>
</table>

#### Design Rainfall IDF Formula: \( I_{F,0.3} = C \cdot P \cdot D \cdot T_{20} \)

<table>
<thead>
<tr>
<th>Coefficient One</th>
<th>Coefficient Two</th>
<th>Coefficient Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>( C )</td>
<td>( P )</td>
<td>( D )</td>
</tr>
<tr>
<td>0.51</td>
<td>2.67</td>
<td>0.68</td>
</tr>
</tbody>
</table>

#### Using Modified FAA Method

<table>
<thead>
<tr>
<th>Major Detention Storage Volume (cfs)</th>
<th>Major Detention Storage Volume (acre-ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>47,202 cfs</td>
<td>1.004 acre-ft</td>
</tr>
</tbody>
</table>

#### Using Modified FAA Method

<table>
<thead>
<tr>
<th>Major Detention Storage Volume (cfs)</th>
<th>Major Detention Storage Volume (acre-ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>107,167 cfs</td>
<td>2.406 acre-ft</td>
</tr>
</tbody>
</table>

---

**Project:** Boulder Rifle Club  
**Basin D: Overall**

**Determination of Minor Detention Volume Using Modified FAA Method**

<table>
<thead>
<tr>
<th>Design Information (Input)</th>
<th>Determination of Average Outflow from the Basin (Calculated):</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Catchment Design Improvements</td>
<td>- Rainfall Intensity</td>
</tr>
<tr>
<td>- Catchment Drainage Area</td>
<td>- Inflow Volume</td>
</tr>
<tr>
<td>- Predevelopment N&amp;CS Soil Group</td>
<td></td>
</tr>
<tr>
<td>- Return Period for Detention Control</td>
<td></td>
</tr>
<tr>
<td>- Time of Concentration of Watershed</td>
<td></td>
</tr>
<tr>
<td>- Alluvial Unit Release Rate</td>
<td></td>
</tr>
<tr>
<td>- One-Acre Precipitation</td>
<td></td>
</tr>
</tbody>
</table>

#### Design Rainfall IDF Formula: \( I_{F,0.3} = C \cdot P \cdot D \cdot T_{20} \)

<table>
<thead>
<tr>
<th>Coefficient One</th>
<th>Coefficient Two</th>
<th>Coefficient Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>( C )</td>
<td>( P )</td>
<td>( D )</td>
</tr>
<tr>
<td>0.51</td>
<td>2.67</td>
<td>0.68</td>
</tr>
</tbody>
</table>

#### Using Modified FAA Method

<table>
<thead>
<tr>
<th>Major Detention Storage Volume (cfs)</th>
<th>Major Detention Storage Volume (acre-ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>47,202 cfs</td>
<td>1.004 acre-ft</td>
</tr>
</tbody>
</table>

#### Using Modified FAA Method

<table>
<thead>
<tr>
<th>Major Detention Storage Volume (cfs)</th>
<th>Major Detention Storage Volume (acre-ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>107,167 cfs</td>
<td>2.406 acre-ft</td>
</tr>
</tbody>
</table>
DETENTION VOLUME BY THE MODIFIED FAA METHOD
(See USDCM Volume 2 Storage Chapter for description of method)

Boulder Riffle Club

Inflow and Outflow Volumes vs. Rainfall Duration

Volume (Cubic Feet)

Duration (Minutes)
### PROPOSED POND STAGE-STORAGE TABLE

<table>
<thead>
<tr>
<th>Stage WSE feet</th>
<th>$A$ ft²</th>
<th>$V_{\text{Incremental}}$ ft³</th>
<th>$V_{\text{Cumulative}}$ ft³</th>
<th>ac-ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,405.75</td>
<td>268</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5,406.00</td>
<td>867</td>
<td>142</td>
<td>142</td>
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<tr>
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<td>1,526</td>
<td>299</td>
<td>441</td>
<td>0.010</td>
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<tr>
<td>5,406.50</td>
<td>2,324</td>
<td>481</td>
<td>922</td>
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</tr>
<tr>
<td>5,406.75</td>
<td>3,267</td>
<td>699</td>
<td>1,621</td>
<td>0.037</td>
</tr>
<tr>
<td>5,407.00</td>
<td>4,373</td>
<td>955</td>
<td>2,576</td>
<td>0.059</td>
</tr>
<tr>
<td>5,407.25</td>
<td>5,651</td>
<td>1,253</td>
<td>3,829</td>
<td>0.088</td>
</tr>
<tr>
<td>5,407.50</td>
<td>7,081</td>
<td>1,592</td>
<td>5,421</td>
<td>0.124</td>
</tr>
<tr>
<td><strong>WQCV</strong></td>
<td>5,407.75</td>
<td>8,583</td>
<td>1,958</td>
<td>7,379</td>
</tr>
<tr>
<td>5,408.00</td>
<td>10,084</td>
<td>2,333</td>
<td>9,712</td>
<td>0.223</td>
</tr>
<tr>
<td>5,408.25</td>
<td>11,670</td>
<td>2,719</td>
<td>12,431</td>
<td>0.285</td>
</tr>
<tr>
<td>5,408.50</td>
<td>13,345</td>
<td>3,127</td>
<td>15,558</td>
<td>0.357</td>
</tr>
<tr>
<td>5,408.75</td>
<td>15,108</td>
<td>3,557</td>
<td>19,115</td>
<td>0.439</td>
</tr>
<tr>
<td>5,409.00</td>
<td>16,957</td>
<td>4,008</td>
<td>23,123</td>
<td>0.531</td>
</tr>
<tr>
<td>5,409.25</td>
<td>18,803</td>
<td>4,470</td>
<td>27,593</td>
<td>0.633</td>
</tr>
<tr>
<td>5,409.50</td>
<td>20,732</td>
<td>4,942</td>
<td>32,535</td>
<td>0.747</td>
</tr>
<tr>
<td>5,409.75</td>
<td>22,767</td>
<td>5,437</td>
<td>37,972</td>
<td>0.872</td>
</tr>
<tr>
<td>5,410.00</td>
<td>24,901</td>
<td>5,959</td>
<td>43,931</td>
<td>1.009</td>
</tr>
<tr>
<td><strong>10-YEAR</strong></td>
<td>5,410.25</td>
<td>27,084</td>
<td>6,498</td>
<td>50,429</td>
</tr>
<tr>
<td>5,410.50</td>
<td>29,295</td>
<td>7,047</td>
<td>57,477</td>
<td>1.319</td>
</tr>
<tr>
<td>5,410.75</td>
<td>31,312</td>
<td>7,576</td>
<td>65,052</td>
<td>1.493</td>
</tr>
<tr>
<td>5,411.00</td>
<td>33,219</td>
<td>8,066</td>
<td>73,119</td>
<td>1.679</td>
</tr>
<tr>
<td>5,411.25</td>
<td>35,046</td>
<td>8,533</td>
<td>81,652</td>
<td>1.874</td>
</tr>
<tr>
<td>5,411.50</td>
<td>36,850</td>
<td>8,987</td>
<td>90,639</td>
<td>2.081</td>
</tr>
<tr>
<td>5,411.75</td>
<td>38,687</td>
<td>9,442</td>
<td>100,081</td>
<td>2.298</td>
</tr>
<tr>
<td><strong>100-YEAR</strong></td>
<td>5,412.00</td>
<td>40,648</td>
<td>9,917</td>
<td>109,998</td>
</tr>
</tbody>
</table>

Detention/Water Quality Pond Volume
Boulder Rifle Club
Boulder County, CO

Detention/Material Quality
Pond Volume
Boulder County, CO

778-1 BASIN\&DETENTION

A110
Boulder Rifle Club Noise Study

May 22, 2019

Prepared for:
Boulder Rifle Club Inc
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Acoustical Technical Director

Jason Peetz
Engineering Manager
1. Introduction

The following report provides a noise study of the Boulder Rifle Club (40° 3'57.39"N, 105°15'50.59"W) located in Boulder, Colorado. The Boulder Rifle Club is proposing to expand by adding 5 outdoor firing ranges and one indoor firing range to the west of the current facility. The length of the proposed outdoor firing ranges will be 25 meters, 50 meters, 100 meters, 200 yards and 300 yards, adding to the existing 50-yard, 100-yard and 200-yard outdoor ranges as shown in Figure 1-1. A sound level survey was performed at various locations within residential areas to the south of the site to analyze the noise impact of Boulder Rifle Club operations on the local environment. The proposed area of the Boulder Rifle Club is subject to the Boulder County Land Use Code, which will be used to assess the expected noise levels from each outdoor firing range.

The following is provided in this report:

- An introduction to the fundamentals of noise and a summary of the noise standards used in the assessment.
- Presentation of sound level survey results.
- Discussion of noise modeling methodology, results and analysis of proposed mitigation.
2. Noise Fundamentals

2.1 Environmental Noise

Sound is most commonly experienced by people as pressure waves passing through air. These rapid fluctuations in air pressure are processed by the human auditory system to produce the sensation of sound. The rate at which sound pressure changes occur is called the frequency. Frequency is usually measured as the number of oscillations per second or Hertz (Hz). Frequencies that can be heard by a healthy human ear range from approximately 20 Hz to 20,000 Hz. Toward the lower end of this range are low-pitched sounds, including those that might be described as a “rumble” or “boom”. At the higher end of the range are high-pitched sounds that might be described as a “screech” or “hiss”.

Environmental noise generally derives, in part, from a combination of distant noise sources. Such sources may include common experiences such as distant traffic, wind in trees, and distant industrial or farming activities. These distant sources create a low-level "background noise" in which no particular individual source is identifiable. Background noise is often relatively constant from moment to moment, but varies slowly from hour to hour as natural forces change or as human activity follows its daily cycle.

Superimposed on this low-level, slowly varying background noise is a succession of identifiable noisy events of relatively brief duration. These events may include the passing of single-vehicles, aircraft flyovers, screeching of brakes, and other short-term events. The presence of these short-term events causes the noise level to fluctuate. Typical indoor and outdoor sound levels are shown in Figure 2-1. The outdoor sound levels in Figure 2-1 are shown as examples only to conceptualize the decibel scale and should not be applied to any specific location. Detailed acoustical definitions have been provided in Appendix A.

![Figure 2-1 Typical Indoor and Outdoor Sound Levels](image-url)
2.2 Relative Loudness Perception

The relative loudness of environmental correlates a decibel change in sound levels with a perceived relative loudness shown in Table 2-1. The sound level change is applicable in the field as opposed to a quiet laboratory environment where smaller sound level differences could be perceived. A decrease of 10 dB is perceived as half as loud and similarly a decrease of 20 dB is perceived as ¼ as loud. Sound level increases are perceived similarly, with a 10 dB increase perceived as a doubling of loudness and a 20 dB increase perceived as 4 times as loud.

<table>
<thead>
<tr>
<th>Sound Level Change</th>
<th>Relative Loudness</th>
<th>Acoustic Energy Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 dB(A)</td>
<td>Reference</td>
<td>0</td>
</tr>
<tr>
<td>-3 dB(A)</td>
<td>Barely Perceptible Change</td>
<td>50%</td>
</tr>
<tr>
<td>-5 dB(A)</td>
<td>Readily Perceptible Change</td>
<td>67%</td>
</tr>
<tr>
<td>-10 dB(A)</td>
<td>Half as Loud</td>
<td>90%</td>
</tr>
<tr>
<td>-20 dB(A)</td>
<td>1/4 as Loud</td>
<td>99%</td>
</tr>
<tr>
<td>-30 dB(A)</td>
<td>1/8 as Loud</td>
<td>99.9%</td>
</tr>
</tbody>
</table>

*Table adapted from FHWA Highway Traffic Noise: Analysis and Abatement Guidance, revised December 2010.*
3. Noise Standards

The noise standards applicable to the Boulder Rifle Club are shown in this section.

3.1 Boulder County Land Use Code

The proposed area of the Boulder Rifle Club is subject to Boulder County Land Use Code 4-602 Special Provisions F. Special Review for Firing Range Outdoor 1.c. Noise. This section states, “All firing line locations shall be located and maintained such that the sound levels generated by the discharge of firearms on the range do not exceed a 65 dB peak impulse response at existing residential structures (whether permanent or seasonal), lodging or other occupiable or occupied structures not on the subject property. The applicant shall submit a noise study proving the proposed range will meet this standard at time of application. All noise studies shall be performed by a professional engineer registered in the State of Colorado or other equally qualified individual and shall take the topography of the surrounding area into account.”

The noise metric is stated in the Land Use Code as “peak impulse response” however, there is conflicting technical terminology used in this phrase. The “peak” sound level is a measurement of the instantaneous sound level with no time weighted average applied. It does not include an RMS (root-mean squared) average as does other acoustic metrics which are averaged over a specific time period. In contrast, the “impulse response” is a time weighted RMS average over 35 milliseconds. The maximum level of a sound measurement is the highest RMS average sound level recorded within a specific time period. As the peak sound level is not an RMS average, it is not technically possible to have a peak impulse response metric. For the purpose of this assessment, the metric described in the Boulder County Land Use Code has been interpreted as a maximum impulse response assuming that the word “peak” was used incorrectly instead of the word “maximum”.

The applicable noise limit for the proposed area of the Boulder Rifle Club based on the Land Use Code is therefore interpreted as 65 dB maximum impulse response measured at the existing residential structures. There is currently no applicable noise limit for the existing area of the Boulder Rifle Club as the code was not in effect during development of this area and cannot be applied retroactively.
4. Sound Level Survey

4.1 Sound Level Survey Procedure

Prior to construction of the Boulder Rifle Club expansion, a sound level survey of the existing operations was conducted south of the Boulder Rifle Club where the closest residences and businesses are located to measure and document the sound levels in the area. Four Type 1 sound level meters were deployed nearby the site at the locations shown in Figure 4-1.
The monitoring locations were chosen based on availability of permission from other properties in the area. Location 1 was placed at the American Legion Club property at 4760 28th Street, Boulder approximately 0.5 miles southwest of the Boulder Rifle Club. Location 2 was placed on a residential property at 2133 Yarmouth Avenue, Boulder approximately 0.4 miles south of the Boulder Rifle Club. Location 3 was placed at the Harlequin’s Gardens property at 4795 N 26th Street, Boulder approximately 0.3 miles south of the Boulder Rifle Club. Location 4 was placed on a residential property at 4725 26th Street, Boulder approximately 0.4 miles south of the Boulder Rifle Club.

Each sound level meter utilized conforms to Type 1 as per ANSI S1.4 Specification for Sound Level Meters. The meters were calibrated before and after the measurement period. The instrumentation details are presented in Table 4-1.

<table>
<thead>
<tr>
<th>Location</th>
<th>Instrument</th>
<th>Manufacturer/Model</th>
<th>Serial Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sound Level Meter</td>
<td>SVANTEK SVA N971 Sound Level Meter</td>
<td>44563</td>
</tr>
<tr>
<td>2</td>
<td>Sound Level Meter</td>
<td>SVANTEK SVA N971 Sound Level Meter</td>
<td>51620</td>
</tr>
<tr>
<td>3</td>
<td>Sound Level Meter</td>
<td>SVANTEK SVA N971 Sound Level Meter</td>
<td>61561</td>
</tr>
<tr>
<td>4</td>
<td>Sound Level Meter</td>
<td>SVANTEK SVA N971 Sound Level Meter</td>
<td>56158</td>
</tr>
</tbody>
</table>

The sound level meters were deployed on Friday, February 8, 2019 and programmed to continuously monitor and record unweighted maximum impulse sound levels. The meters were retrieved on Monday, February 11, 2019.

### 4.2 Sound Level Survey Results

Figure 4-2 and Figure 4-3 show the 5-minute unweighted maximum impulse sound levels on graphs for the duration of the monitoring period. For each day of the measurement period when the Boulder Rifle Club is operating between 7 am and 7 pm, statistical averages of the 5-minute unweighted maximum impulse sound level were calculated and shown in Table 4-2.

<table>
<thead>
<tr>
<th>Day</th>
<th>Location 1</th>
<th>Location 2</th>
<th>Location 3</th>
<th>Location 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am to 7:00pm</td>
<td>80</td>
<td>78</td>
<td>77</td>
<td>78</td>
</tr>
<tr>
<td>February 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00 am to 7:00pm</td>
<td>84</td>
<td>81</td>
<td>79</td>
<td>80</td>
</tr>
<tr>
<td>February 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00 am to 7:00pm</td>
<td>83</td>
<td>80</td>
<td>81</td>
<td>80</td>
</tr>
<tr>
<td>February 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00 am to 12:00pm</td>
<td>91</td>
<td>91</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>February 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Locations 1 and 4 show a lot of variability in maximum impulse sound levels at all hours. With such frequent sound level spikes during the day, more than the amount of gunshots over the same period (confirmed by Boulder Rifle Club), it is reasonable to assume that sources such as traffic, environmental noise and other human activity unrelated to the Boulder Rifle Club dominate the sound environment.

As shown in Figure 4-2 and Figure 4-3, most of the measured 5-minute maximum impulse sound levels during the hours of 7 pm to 7 am exceed the Boulder Land Use Code noise limit of 65 dB. During these hours, the Boulder Rifle Club is closed showing that the ambient levels are already higher than the stated limit. As a result, it would be difficult
to measure shooting noise in isolation for comparison against the 65 dB limit. The noise modeling conducted in the next section calculates only the shooting noise in isolation and can be used to determine the contribution of shooting noise on the overall noise environment.

The temperature, humidity, wind speed, wind direction and precipitation data were sourced using the Ft Collins Regional weather station located approximately 25 miles northeast of the site (www.wunderground.com). The temperatures recorded nearby the site ranged between 5 degrees and 39 degrees Fahrenheit for the measurement period. Wind was mostly calm with only short periods above 10 mph. There was no recorded precipitation for the duration of the monitoring period. A table showing of the temperature, humidity, wind speed and wind direction is included in Appendix B.
Figure 4-2 Location 1 and 2 Measured Sound Pressure Levels (dB Maximum Impulse, 5-min)
Figure 4-3  Location 3 and 4 Measured Sound Pressure Levels (dB Maximum Impulse, 5-min)
5. Boulder Rifle Club Noise Modeling

5.1 Noise Modeling Methodology

The noise modeling was completed with use of three-dimensional computer noise modeling software. All models in this report were developed with SoundPLAN 8.0 software using the ISO 9613-2 standard. Noise levels are predicted based on the locations, noise levels and frequency spectra of the noise sources, and the geometry and reflective properties of the local terrain, buildings and barriers. To ensure a conservative assessment and compliance with ISO 9613-2 standards, light to moderate winds are assumed to be blowing from the source to receptor. The predicted noise levels represent only the contribution of shooting noise from the Boulder Rifle Club and do not include ambient noise or noise from other facilities. Actual field sound level measurements may vary from the modeled noise levels due to other noise sources such as traffic, other facilities, other human activity, or environmental factors.

5.2 Noise Sources

Sound measurements were conducted at the Boulder Rifle Club on the morning of Friday, February 8, 2019 using a Type 1 SVANTEK SVAN 979 Sound Level Meter (serial number 69426) set to record unweighted maximum pulse sound levels. Individual shots were fired from a 0.22 caliber long rifle (22LR) and a 0.300 Winchester Magnum (300WM) at the existing 200 yard range. During the test firing, noise measurements were conducted at varying angles and distances to quantify each firearm as a noise source.

As shooting noise is highly directional, with louder sound levels in the direction of fire, varying angles during the measurement period allowed directionality to be included in the model. Using the noise measurement data, sound power levels were calculated in SoundPLAN for the operation of each firearm and shown in Table 5-1.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sound Power Level (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22LR</td>
<td>152</td>
</tr>
<tr>
<td>300WM</td>
<td>168</td>
</tr>
</tbody>
</table>
An appropriate caliber firearm out of the two firearms tested was selected by Boulder Rifle Club and used as the sound source for each range modeled individually at the respective firing bay. Each unmitigated scenario and the noise source included in the model are summarized in Table 5-2.

<table>
<thead>
<tr>
<th>Range</th>
<th>Noise Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing- 25 yard</td>
<td>22LR</td>
</tr>
<tr>
<td>Existing- 50 yard</td>
<td>22LR</td>
</tr>
<tr>
<td>Existing- 100 yard</td>
<td>300WM</td>
</tr>
<tr>
<td>Existing- 200 yard</td>
<td>300WM</td>
</tr>
<tr>
<td>Proposed- 25 meters</td>
<td>22LR</td>
</tr>
<tr>
<td>Proposed- 50 meters</td>
<td>22LR</td>
</tr>
<tr>
<td>Proposed- 100 meters</td>
<td>300WM</td>
</tr>
<tr>
<td>Proposed- 200 yard</td>
<td>300WM</td>
</tr>
<tr>
<td>Proposed- 300 yard</td>
<td>300WM</td>
</tr>
</tbody>
</table>

As the metric for assessment is the maximum impulse measured within 35 milliseconds, it is assumed that multiple shots within this period are highly unlikely and therefore not included in the modeling. As a result, only one noise source was assumed for each existing and proposed range included in the modeling.

Distance measurements at the locations shown in Figure 4-1 were also used to calculate sound levels from the shooting testing on February 8. For the shots that were distinguishable from the ambient sound environment, an excess attenuation correction applicable to distance calculations was determined. Excess attenuation is due to atmospheric effects over large distances that are unique to the environment where the sound is propagating into. The sound modeling calculation method used, ISO 9613-2, calculates a steady state noise level over predictable weather conditions. When calculating sound sources such as shooting noise from actual sound measurements, the local atmospheric effects can cause sound levels to vary highly, therefore an overall correction is applied to the distance measurements based on the measurements of noise at distance in the direction of interest. This correction was calculated at -18 dB and used in the calculation of noise levels at the receptors in Figure 5-1.
5.3 Receptors

Receptors 1 to 3 have been chosen to evaluate noise at the closest residential structures as per the Boulder County Land Use Code. An additional receptor was added, Receptor 4, to evaluate noise at the Harlequin’s Gardens property at the request of the Boulder Rifle Club. As the property is a business and not a residence, Receptor 4 is not subject to the Boulder County Land Use Code and there are no regulatory noise limits applicable to this property. Figure 5-1 shows the receptor locations on a map.
5.4 Unmitigated Noise Modeling Results

Unmitigated scenarios were modeled at each range for the existing and proposed areas. The results of the unmitigated noise modeling for the existing ranges are presented in Table 5-3. The locations in the tables correspond to the receptor locations identified in Figure 5-1.

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Predicted Sound Pressure Level (dB Maximum Impulse)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25-yard range (22LR)</td>
</tr>
<tr>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>30</td>
</tr>
</tbody>
</table>

The predicted unmitigated sound pressure levels for the existing ranges are between 28 dB and 37 dB for the 25 yard range, between 30 dB and 38 dB for the 50 yard range, between 66 dB and 72 dB at the 100 yard range and between 67 and 71 at the 200 yard range at the receptors. The results show that the 22LR modeled for the 25 yard and 50 yard ranges is significantly quieter than the 300WM modeled for the 100 yard and 200 yard ranges.

To determine the impact on the noise environment of the existing range, the calculated statistical average maximum impulse sound levels at the closest locations for Receptor 3 and 4 are compared with the loudest calculated modeling results in Table 5-3.

<table>
<thead>
<tr>
<th>Day</th>
<th>Location 3</th>
<th>Location 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am to 7:00pm February 8</td>
<td>77</td>
<td>78</td>
</tr>
<tr>
<td>7:00 am to 7:00pm February 9</td>
<td>79</td>
<td>80</td>
</tr>
<tr>
<td>7:00 am to 7:00pm February 10</td>
<td>81</td>
<td>80</td>
</tr>
<tr>
<td>7:00 am to 12:00pm February 11</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Loudest modeled sound level at closest receptor</td>
<td>71</td>
<td>67</td>
</tr>
</tbody>
</table>

The modeled sound levels at Receptor 3 are at least 11 dB less than the measured average maximum impulse sound levels showing that for most of a typical day, gunshot noise does not significantly contribute to the noise environment at this location. Similarly, the modeled sound levels at Receptor 4 are at least 6 dB less than the measured average maximum impulse sound levels showing that for most of a typical day, gunshot noise does not dominate the noise environment at this location. As the modeled sound pressure levels of the gunshot noise in isolation are below the daytime sound levels measured in Table 4-2, the ambient sound levels unrelated to the Boulder Rifle Club generally dominate over the gunshot noise from the range.

The results of the noise modeling are also shown as noise contour maps in Appendix C. The noise contours are provided in 5 dB increments with the color scale indicating the sound level of each contour.
The results of the unmitigated noise modeling for the proposed range are presented in Table 5-5.

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Predicted Sound Pressure Level (dB Maximum Impulse)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25-meter range (22LR)</td>
</tr>
<tr>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>2</td>
<td>38</td>
</tr>
<tr>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>33</td>
</tr>
<tr>
<td>Boulder County noise limit at residential structures (Receptors 1 to 3)</td>
<td>65</td>
</tr>
</tbody>
</table>

The predicted unmitigated sound pressure levels at the proposed range are between 31 dB and 38 dB for the 25 meter range, between 32 dB and 38 dB for the 50 meter range, between 66 dB and 73 dB for the 100 meter range, between 66 and 74 for the 200 yard range and between 67 and 74 for the 300 yard range at the receptors. The predicted unmitigated noise modeling results show that the 25 meter and 50 meter ranges comply with the Boulder County Land Use Code and the 100 meter, 200 yard and 300 yard ranges exceed the Boulder County Land Use Code. Noise mitigation is therefore required for the proposed 100 meter, 200 yard and 300 yard ranges.

### 5.5 Mitigation Scenarios

Noise mitigation was included in the modeling for the existing and proposed areas of the Boulder Rifle Club. Despite no regulation requiring noise mitigation at the existing range, noise mitigation for the 100 yard and 200 yard ranges were included at the request of the Boulder Rifle Club. The proposed ranges included in the mitigation modeling were the 100 meter, 200 yard and 300 yard ranges. The noise mitigation scenarios included in the modeling are summarized in Table 5-6.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Existing 100y range with firing shelter</td>
</tr>
<tr>
<td>2</td>
<td>Existing 200y range with firing shelter</td>
</tr>
<tr>
<td>3</td>
<td>Proposed 100m range with firing shelter</td>
</tr>
<tr>
<td>4</td>
<td>Proposed 200y range with firing shelter</td>
</tr>
<tr>
<td>5</td>
<td>Proposed 300y range with firing shelter</td>
</tr>
</tbody>
</table>

The firing shelter mentioned in Table 5-6 is designed to shield noise in all directions except the line of fire. Baffles separate the firing bays and the entrance includes a 90 degree bend to shield noise in the southern direction. The firing bay drawings and acoustical specifications used in the analysis are shown in Appendix D.
The location of the firing shelters are for the existing and proposed scenarios respectively are shown in Figure 5-2 and Figure 5-3.

Figure 5-2 Location of Firing Shelters on Existing Ranges (Scenario 1 and Scenario 2)
Figure 5-3 Location of Firing Shelters on Proposed Ranges (Scenario 3 to 5)
5.6 Mitigated Noise Modeling Results

The results of the noise modeling and the predicted reduction achieved by the mitigation for the existing 100 yard and 200 yard ranges are presented in Table 5-7 and Table 5-8. The locations in the tables correspond to the receptor locations identified in Figure 5-1.

### Table 5-7 Existing 100y Range Preliminary Mitigated Noise Modeling Results

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Predicted Sound Pressure Level (dB Maximum Impulse)</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unmitigated</td>
<td>Mitigated Scenario 1</td>
</tr>
<tr>
<td>1</td>
<td>68</td>
<td>60</td>
</tr>
<tr>
<td>2</td>
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<td>3</td>
<td>66</td>
<td>57</td>
</tr>
<tr>
<td>4</td>
<td>70</td>
<td>61</td>
</tr>
</tbody>
</table>

### Table 5-8 Existing 200y Range Preliminary Mitigated Noise Modeling Results

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Predicted Sound Pressure Level (dB Maximum Impulse)</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unmitigated</td>
<td>Mitigated Scenario 2</td>
</tr>
<tr>
<td>1</td>
<td>70</td>
<td>61</td>
</tr>
<tr>
<td>2</td>
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<td>65</td>
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<tr>
<td>3</td>
<td>67</td>
<td>58</td>
</tr>
<tr>
<td>4</td>
<td>71</td>
<td>63</td>
</tr>
</tbody>
</table>

The predicted mitigated sound pressure levels for the existing ranges are between 57 dB and 64 dB for the 100 yard range and between 58 dB and 65 dB for the 200 yard range at the receptors. With the inclusion of the mitigation in Scenario 1, the predicted sound level reduction is between 8 dB and 9 dB. With the inclusion of the mitigation in Scenario 2, the predicted sound level reduction is between 6 dB and 9 dB.

The results of the noise modeling and the predicted reduction achieved by the mitigation for the proposed 100 meter, 200 yard and 300 yard ranges are presented in Table 5-9 to Table 5-11.

### Table 5-9 Proposed 100m Range Preliminary Mitigated Noise Modeling Results

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Predicted Sound Pressure Level (dB Maximum Impulse)</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unmitigated</td>
<td>Mitigated Scenario 3</td>
</tr>
<tr>
<td>1</td>
<td>70</td>
<td>59</td>
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<tr>
<td>2</td>
<td>73</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>66</td>
<td>55</td>
</tr>
<tr>
<td>4</td>
<td>69</td>
<td>58</td>
</tr>
</tbody>
</table>

**Boulder County noise limit at residential structure**: 65 dB
The predicted mitigated sound pressure levels from the proposed 100 meter range are between 55 dB and 62 dB for Scenario 3 at the receptors. With the inclusion of the mitigation in Scenario 3, the predicted sound level reduction is 11 dB.

The predicted mitigated sound pressure levels from the proposed 200 yard range are between 55 dB and 63 dB for Scenario 4 at the receptors. With the inclusion of the mitigation in Scenario 4, the predicted sound level reduction is 11 dB.

The predicted mitigated sound pressure levels from the proposed 300 yard range are between 56 dB and 65 dB for Scenario 5 at the receptors. With the inclusion of the mitigation in Scenario 5, the predicted sound level reduction is between 9 dB and 11 dB.

The results of the noise modeling are also shown as noise contour maps in Appendix E. The noise contours are provided in 5 dB increments with the color scale indicating the sound level of each contour.
6. Conclusion

A noise study of the Boulder Rifle Club was conducted which included noise monitoring while the range was operating and noise modeling of the existing and proposed ranges. A sound level survey was performed at various locations within the residential areas to the south of the site to analyze the effect of Boulder Rifle Club operations on the local environment. The proposed area of the Boulder Rifle Club is subject to Boulder County Land Use Code, which was used to assess the expected noise levels from each outdoor firing range.

The applicable noise limit for the proposed area of the Boulder Rifle Club based on the Land Use Code is interpreted as 65 dB maximum impulse response measured at the existing residential structures. There is currently no applicable noise limit for the existing area of the Boulder Rifle Club as the code was not in effect during development of this area and cannot be applied retrospectively.

The results of the sound level survey show that that sources such as traffic, environmental noise and other human activity unrelated to the Boulder Rifle Club dominated the sound environment at the monitoring locations. For most of the monitoring period, the measured ambient levels when the firing range was not in operation were already higher than the stated limit.

The predicted unmitigated sound pressure levels at the proposed range are between 31 dB and 38 dB for the 25 meter range, between 32 dB and 38 dB for the 50 meter range, between 66 dB and 73 dB for the 100 meter range, between 66 and 74 for the 200 yard range and between 67 and 74 for the 300 yard range at the receptors. The predicted unmitigated noise modeling results show that the 25 meter and 50 meter ranges comply with the Boulder County Land Use Code and the 100 meter, 200 yard and 300 yard ranges exceed the Boulder County Land Use Code. Noise mitigation is therefore required for the proposed 100 meter, 200 yard and 300 yard ranges.

With the inclusion of the firing structure at the proposed ranges and the 100 yard and 200 yard existing ranges, the sound levels due to the Boulder Rifle Club at the nearest residences are below the Boulder County Land Use Code limit of 65 dB maximum impulse.
Appendix A - Glossary of Acoustical Terms
Ambient Noise
The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources both near and far.

Average Sound Level
See Equivalent-Continuous Sound Level

Decibel (dB)
The basic unit of measurement for sound level.

Direct Sound
Sound that reaches a given location in a direct line from the source without any reflections.

Energy Basis
This refers to the procedure of summing or averaging sound pressure levels on the basis of their squared pressures. This method involves the conversion of decibels to pressures, then performing the necessary arithmetic calculations, and finally changing the pressure back to decibels.

Equivalent-Continuous Sound Level (Leq)
The average sound level measured over a specified time period. It is a single-number measure of time-varying noise over a specified time period. It is the level of a steady sound that, in a stated time period and at a stated location, has the same sound energy as the time-varying sound. For example, a person who experiences an Leq of 60 dB for a period of 10 minutes standing next to a busy street is exposed to the same amount of sound energy as if he had experienced a constant noise level of 60 dB for 10 minutes rather than the time-varying traffic noise level.

Fast Response
A setting on the sound level meter that determines how sound levels are averaged over time. A fast sound level is always more strongly influenced by recent sounds, and less influenced by sounds occurring in the distant past, than the corresponding slow sound level. For the same non-steady sound, the maximum fast sound level is generally greater than the corresponding maximum slow sound level. Fast response is typically used to measure impact sound levels.

Frequency
The number of oscillations per second of a sound wave

Hourly Average Sound Level (HNL)
The equivalent-continuous sound level, Leq, over a 1-hour time period.

Impact Noise
The noise that results when two objects collide.

Impulse Noise
Noise of a transient nature due to the sudden impulse of pressure like that created by a gunshot or balloon bursting.

Insertion Loss
The decrease in sound power level measured at the location of the receiver when an element (e.g., a noise barrier) is inserted in the transmission path between the sound source and the receiver.
Inverse Square Law
A rule by which the sound intensity varies inversely with the square of the distance from the source. This results in a 6dB decrease in sound pressure level for each doubling of distance from the source.

Masking
The process by which the threshold of hearing for one sound is raised by the presence of another sound.

Maximum Sound Level (Lmax)
The greatest sound level measured on a sound level meter during a designated time interval or event.

Noise Reduction
The difference in sound pressure level between any two points.

Octave
The frequency interval between two sounds whose frequency ratio is 2. For example, the frequency interval between 500 Hz and 1,000 Hz is one octave.

Octave-Band Sound Level
For an octave frequency band, the sound pressure level of the sound contained within that band.

One-Third Octave
The frequency interval between two sounds whose frequency ratio is $2^{(1/3)}$. For example, the frequency interval between 200 Hz and 250 Hz is one-third octave.

One-Third-Octave-Band Sound Level
For a one-third-octave frequency band, the sound pressure level of the sound contained within that band.

Peak Sound Level (Lpk)
The maximum instantaneous sound level during a stated time period or event.

Point Source
A source that radiates sound as if from a single point.

Receiver
A person (or persons) or equipment which is affected by noise.

Reflected Sound
Sound that persists in an enclosed space as a result of repeated reflections or scattering. It does not include sound that travels directly from the source without reflections.

Reverberation
The persistence of a sound in an enclosed or partially enclosed space after the source of the sound has stopped, due to the repeated reflection of the sound waves.

Slow Response
A setting on the sound level meter that determines how measured sound levels are averaged over time. A slow sound level is more influenced by sounds occurring in the distant past that the corresponding fast sound level.
Sound
A physical disturbance in a medium (e.g., air) that is capable of being detected by the human ear.

Sound Absorption Coefficient
A measure of the sound-absorptive property of a material.

Sound Insulation
The capacity of a structure or element to prevent sound from reaching a receiver room either by absorption or reflection.

Sound Level Meter (SLM)
An instrument used for the measurement of sound level, with a standard frequency-weighting and standard exponentially weighted time averaging.

Sound Power Level
A physical measure of the amount of power a sound source radiates into the surrounding air. It is measured in decibels.

Sound Pressure Level
A physical measure of the magnitude of a sound. It is related to the sound’s energy. The terms sound pressure level and sound level are often used interchangeably.

Sound Transmission Class (STC)
A single number rating used to compare the sound insulation properties of walls, floors, ceilings, windows, or doors. This rating is designed to correlate with subjective impressions of the ability of building elements to reduce the overall loudness of speech, radio, television, and similar noise sources in offices and buildings.

Spectrum
The spectrum of a sound wave is a description of its resolution into components, each of different frequency and usually different amplitude.

Tone
A sound with a distinct pitch

Transmission Loss (TL)
A property of a material or structure describing its ability to reduce the transmission of sound at a particular frequency from one space to another. The higher the TL value the more effective the material or structure is in reducing sound between two spaces. It is measured in decibels.

Windscreen
A porous covering for a microphone, designed to reduce the noise generated by the passage of wind over the microphone.
Appendix B - Weather Data
<table>
<thead>
<tr>
<th>Time</th>
<th>Temperature</th>
<th>Humidity</th>
<th>Wind</th>
<th>Wind Speed</th>
<th>Wind Gust</th>
<th>Precip.</th>
<th>Precip Accum</th>
</tr>
</thead>
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<td>26°F</td>
<td>51%</td>
<td>E</td>
<td>6 mph</td>
<td>0 mph</td>
<td>0.0 in</td>
<td>0.0 in</td>
</tr>
<tr>
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<td>53%</td>
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<td>0.0 in</td>
</tr>
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<td>0 mph</td>
<td>0.0 in</td>
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</tr>
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</tr>
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<td>CALM</td>
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<td>0 mph</td>
<td>0.0 in</td>
<td>0.0 in</td>
</tr>
<tr>
<td>5:56 PM</td>
<td>12°F</td>
<td>77%</td>
<td>S</td>
<td>6 mph</td>
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<td>0.0 in</td>
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</tr>
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<td>84%</td>
<td>CALM</td>
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<td>84%</td>
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<td>0.0 in</td>
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</tr>
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<td>88%</td>
<td>CALM</td>
<td>0 mph</td>
<td>0 mph</td>
<td>0.0 in</td>
<td>0.0 in</td>
</tr>
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<td>SE</td>
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<td>0.0 in</td>
<td>0.0 in</td>
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<td>76%</td>
<td>E</td>
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<td>N</td>
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<td>58%</td>
<td>E</td>
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</tr>
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<td>0.0 in</td>
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<td>8:56 AM</td>
<td>34°F</td>
<td>56%</td>
<td>E</td>
<td>14 mph</td>
<td>0 mph</td>
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<td>E</td>
<td>8 mph</td>
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<td>30°F</td>
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<td>NNE</td>
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</tr>
<tr>
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<td>81%</td>
<td>NE</td>
<td>8 mph</td>
<td>0 mph</td>
<td>0.0 in</td>
<td>0.0 in</td>
</tr>
<tr>
<td>2:56 PM</td>
<td>24°F</td>
<td>81%</td>
<td>NE</td>
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<td>3:52 PM</td>
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<td>E</td>
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</tr>
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<td>3:56 PM</td>
<td>23°F</td>
<td>81%</td>
<td>E</td>
<td>5 mph</td>
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<td>SE</td>
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<td>0 mph</td>
<td>0.0 in</td>
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</tr>
<tr>
<td>5:56 PM</td>
<td>21°F</td>
<td>88%</td>
<td>E</td>
<td>10 mph</td>
<td>0 mph</td>
<td>0.0 in</td>
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<td>89%</td>
<td>E</td>
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<td>0.0 in</td>
<td>0.0 in</td>
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<tr>
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<td>19°F</td>
<td>93%</td>
<td>E</td>
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<td>ESE</td>
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<td>7:56 PM</td>
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<td>88%</td>
<td>ESE</td>
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<td>0.0 in</td>
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<td>SSE</td>
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</tbody>
</table>
## Weather Data

**Behrens and Associates, Inc.**  
*Environmental Noise Control*

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<th>Wind Speed</th>
<th>Wind Direction</th>
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<td>88 %</td>
<td>SE</td>
<td>10 mph</td>
<td>0 mph</td>
<td>0.0 in</td>
<td>122°F</td>
<td>0.0 in</td>
</tr>
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<td>0.0 in</td>
<td>122°F</td>
<td>0.0 in</td>
</tr>
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<td>92 %</td>
<td>SE</td>
<td>6 mph</td>
<td>0 mph</td>
<td>0.0 in</td>
<td>122°F</td>
<td>0.0 in</td>
</tr>
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<td>11:56 PM</td>
<td>17 F</td>
<td>92 %</td>
<td>SSE</td>
<td>5 mph</td>
<td>0 mph</td>
<td>0.0 in</td>
<td>122°F</td>
<td>0.0 in</td>
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<td>92 %</td>
<td>ESE</td>
<td>6 mph</td>
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<td>0.0 in</td>
<td>122°F</td>
<td>0.0 in</td>
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<tr>
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<tr>
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Appendix C - Unmitigated Noise Contour Maps
Figure C-1 Noise Contour Map of Existing 25-yard Range (dB Maximum Impulse)
Figure C-2 Noise Contour Map of Existing 50-yard Range (dB Maximum Impulse)
Figure C-3 Noise Contour Map of Existing 100-yard Range (dB Maximum Impulse)
Figure C-4 Noise Contour Map of Existing 200-yard Range (dB Maximum Impulse)
Figure C-5 Noise Contour Map of Proposed 25-meter Range (dB Maximum Impulse)
Figure C-6  Noise Contour Map of Proposed 50-meter Range (dB Maximum Impulse)
Figure C-7 Noise Contour Map of Proposed 100-meter Range (dB Maximum Impulse)
Figure C-8 Noise Contour Map of Proposed 200-yard Range (dB Maximum Impulse)
Behrens and Associates, Inc.
Environmental Noise Control

Figure C-9 Noise Contour Map of Proposed 300-yard Range (dB Maximum Impulse)
Appendix D - Firing Shelter Drawings and Specifications
Firing Shelters at Existing 100 yard and 200 yard Ranges

Firing Shelters at Proposed Ranges
### Transmission Loss of Firing Shelter Building Assemblies

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Firing Shelter Drawings and Specifications [40]
Appendix E - Mitigated Noise Contour Maps

Mitigated Noise Contour Maps
Figure E-10  Noise Contour Map of Existing Mitigated 100-yard Range (dB Maximum Impulse)
Figure E-11 Noise Contour Map of Existing Mitigated 200-yard Range (dB Maximum Impulse)
Figure E-12 Noise Contour Map of Proposed Mitigated 100-meter Range (dB Maximum Impulse)
Figure E-13 Noise Contour Map of Proposed Mitigated 200-yard Range (dB Maximum Impulse)
Figure E-14 Noise Contour Map of Proposed Mitigated 300-yard Range (dB Maximum Impulse)
PERMANENT SEEDING MIX

Plants Seed Mix

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PERMANENT SEEDING MIX

Straw Bale Barrier Installation

1. Excavate the Trench

2. Wedge Loose Stakes Between Bale

3. Backfill and Complete the Excavated Trench

Straw Bale: 6' x 6' x 6'

Silth Fence

1. Excavate a 6' x 6' Trench

2. Set Posts

3. Attach Wood Posts to Posts of Core Walls of Core Walls and Excavate Trench

Section Drawing

Legend

- High Ridge
- Other Ridge
- Straw Bale Control
- Halt Protection
- Temporary Seeding
ATTACHMENT A

ACCESS ROAD CL PROFILE
SCALE: (V) 1" = 20' (V) 1" = 4'
START STA: 15+60.00, END STA: 21+00.00

BOULDER COUNTY STANDARD ACCESS PULL-OUT

BOULDER COUNTY STANDARD ACCESS TURNAROUNDS
**TLOW-LED**

**Construction:**
- Steel backing with brass.
- Repetitive in Ultra tempered glass.
- 24V.
- Shading 2% - 10% included.

**Notes:**
- Fireproof construction (based on lath metal)
- Optional recessed 2/3 diameter to 3/4 diameter.
- Optional battery backup.
- ETL and UL listed.
- UL listed to UL500
- UL approved.
- LED Components
- Rechargeable Module
- CM - 60
- 120V/208V/230V/277V 60Hz standard.
- 3 Year Warranty on LED Components

**ORDERING INFORMATION**

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</tbody>
</table>

**Halo Commercial**

**PRODUCT DESCRIPTION**

- **TLOW-LED**
- **TLOW-LED**
- **TLOW-LED**
- **TLOW-LED**

**PERFORMANCE - 500 Lumens - 12V DC**

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</tr>
<tr>
<td>TLOW 12-LED</td>
<td>500</td>
<td>12V DC</td>
</tr>
</tbody>
</table>

**DIMENSIONS**

- **Height:** 6" - 12" / **Depth:** 6" - 12" / **Width:** 6" - 12"
MEMO TO: Referral Agencies  
FROM: Summer Frederick, AICP, Planning Division Manager  
DATE: June 11, 2020  
RE: Re-Referral for Docket SU-19-0009

THIS IS A RE-REFERRAL FOR THE DOCKET LISTED BELOW

This docket is being re-noticed because revised and additional materials have been submitted by the applicant.

IF YOU HAVE REPLIED TO THE ORIGINAL REFERRAL LETTER AND HAVE NO FURTHER COMMENTS, NO ACTION IS REQUIRED.

**Docket SU-19-0009: Boulder Rifle Club, Inc.**

Request: Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building on parcels #146307001001 and #146307001002.

Location: 4810 N. 26th Street, Parcel #s 146307001001 and 146307001002, at the northern terminus of N 26th Street, approximately 0.68 mile north of its intersection with US 36, in Section 7, Township 1N, Range 70W.

Zoning: Agricultural (A) Zoning District  
Applicant/Property Owner: Boulder Rifle Club, Inc., c/o Steve Martin  
Agent: Rosi Dennett, Front Range Land Solutions

Special Use Review / Site Specific Development Plan is required of uses which may have greater impacts on services, neighborhoods, or environment than those allowed with only Building Permit Review. This process will review compatibility, services, environmental impacts, and proposed site plan.

This process includes public hearings before the Boulder County Planning Commission and the Board of County Commissioners. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of these hearings.

The Community Planning & Permitting staff, Planning Commission, and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter to the Community Planning & Permitting Department at P.O. Box 471, Boulder, Colorado 80306 or via email to planner@bouldercounty.org. All comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to call the Community Planning & Permitting Department at 303-441-3930 or email planner@bouldercounty.org to request more information. If you have any questions regarding this application, please contact me at 720-564-2603 or sfrederick@bouldercounty.org.

Please return responses to the above address by **July 16, 2020.**
(Please note that due to circumstances surrounding COVID-19, application timelines and deadlines may need to be modified as explained in the CPP Notice of Emergency Actions issued March 23, 2020 (see https://boco.org/covid-19-cpp-notice-20200323).

_____ We have reviewed the proposal and have no conflicts.
_____ Letter is enclosed.

Signed _______________________________ PRINTED
Name____________________________
Agency or Address _________________________________________________________________

Please note that all Community Planning & Permitting Department property owner’s mailing lists and parcel maps are generated from the records maintained by the County Assessor and Treasurer Office. We are required to use this list to send notices to the “property owner” of land in Boulder County. If you feel that you should not be considered a “property owner,” or if the mailing address used is incorrect, please contact the County Assessor’s Office at (303) 441-3530.
June 1, 2020

Summer Frederick, Staff Planner
Boulder County Community Planning & Permitting
PO Box 471
Boulder, CO 80306

Re: Docket SU-19-0009 Boulder Rifle Club Referral Response

Dear Summer,

This is the Boulder Rifle Club’s response to referral comments received from neighbors, referral agencies, and the County-hired consultant (C. Vargas & Associates). We have been in contact with Clark Vargas regarding his comments stated in his March 18, 2020 memorandum, and the attached updated plans reflect the results of those discussions. In addition, updated grading plans and drainage report are attached as well as a noise study addendum, a paleontological evaluation, wildlife impact assessment, and neighborhood meeting notes.

The following topics reflect the most recent updates to the plans and include those areas of interest or concern expressed in the various referral responses.

Site Plan

The site plan has been updated to reflect the recent agreement with the City of Boulder to acquire the strip of land (approximately .73 acre) along the southern boundary of the existing range where some of the range and parking lot improvements are located. The Boulder Rifle Club previously had an easement with the City for use of that area. The new agreement also includes the right for continued use of the existing access by rifle club members to the existing range.

Range Design

The updated plans show that the Surface Danger Zone is within the boundaries of each range in accordance with County Land Use Code requirements. The attached response by Thomas Moore Architects dated May 12, 2020 addresses each comment stated by Clark Vargas. The additional details of the range construction (including shooting shelters, baffles, side barriers, and backstops) are shown on the attached plans. Specifically, horizontal range baffles have been added to each range as recommended by C. Vargas & Associates.
Noise Impacts

As demonstrated in the originally-submitted noise study, the proposal meets the Land Use Code requirements with noise levels below the Code limit of 65 dB maximum impulse. In addition, new firing shelters to the existing 100-yard and 200-yard ranges will reduce existing noise levels. The acoustic consultants, Behrens & Associates, expanded the noise modelling to include some of the immediately adjacent City Open Space land to the north and west. Those results are attached.

Grading and Drainage

The attached drainage plans reflect the updated calculations based on the modifications made to the design of the ranges. The stormwater detention basin is sized appropriately to ensure historic rates of offsite drainage are maintained. Cut and fill calculations have been updated to reflect the current grading plans.

Construction Plan Review

Specific construction plans will be provided to the County Engineer prior to commencement of each construction phase that will include the hauling plan for material to be removed from the site, haul routes, and traffic control measures. To minimize having to haul material offsite, the grading plans were designed to accommodate most of the soil onsite. All grading will be completed in accordance with County regulations, including the use of dust suppression methods. Construction Phase 1 includes construction of Ranges 3, 4, and 5. Phase 2 includes construction of Ranges 1 and 2, and Phase 3 includes construction of the Indoor Range.

Paleontological Evaluation

A paleontological evaluation of the site was conducted, and the resulting report is attached. The site was surveyed, and only two fossils were found and determined to be undistinguishable for rarity, excellent preservation, abundance, or large assemblage of species. The locations of the fossils at the northern edge of the subject property will be left undisturbed and lies outside of the proposed range construction area. This area will be protected by barriers during construction.

Wildlife Impacts

Ecologist Jerry Powell of Wildlife Specialties surveyed the site and reviewed the proposed plans. His May 16, 2020 letter (see attached) expresses his professional opinion that the site is substantially disturbed, no native plant communities are present, no critical wildlife habitat is present, and no sensitive
wildlife species are dependent upon it. The detention pond addition to the site will further help in preventing unwanted movement of potential contaminants into the drainages and ponds downstream. He concludes that eliminating recreational shooting in the surrounding foothills and mountains and controlling it at the proposed location will have a much greater positive impact on wildlife and natural habitats than allowing shooting to occur as it currently does.

Revegetation Plan and Weed Management

At the end of each construction phase, all disturbed areas will be re-seeded with a County-approved upland native grassland seed mix. In addition to mowing when necessary, weed management will be an integrated approach using mowing and chemical control (spot application) as necessary.

Neighborhood Meeting

On August 13, 2019, a neighborhood meeting was held at the US Forest Service office building on Yarmouth. Seven residents attended, along with one reporter and one attorney representing a neighbor. The notes from that meeting are attached. Increased noise and traffic were the primary concerns. The acoustic consultant and traffic engineer explained how the proposal meets County requirements for noise and traffic generation.

Miscellaneous Items

The site plan has been modified to include bicycle parking, as County staff requested. All new electrical lines will be installed underground, and the existing overhead electrical line will remain ballistically protected above the horizontal range baffles and outside of the line of fire. All outdoor lighting will be shielded with “dark sky” compliant fixtures in accordance with County requirements as shown on the Site Photometric Analysis drawings. The outdoor lights will be turned off after operating hours. The Boulder Rifle Club has committed to pay City Open Space $30,000 for trail relocation, signage, and fencing.

This concludes our response to the referral comments, and we look forward to presenting the proposal to Planning Commission and the Board of County Commissioners. Please let us know if you need any additional information at this time. Thank you for your consideration.

Sincerely,

Rosi Dennett, AICP
Planning Consultant for BRC

Attachments
EASEMENT EXHIBIT

IN THE SOUTHEAST QUARTER OF SECTION 7
TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M.
BOULDER COUNTY, COLORADO

4810 NORTH 26TH STREET
RIFLE CLUB BUILDING

EASEMENT HATCHED AREA
31,850 SQUARE FEET

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<tr>
<td>L2 - SOUTH 00°03'37&quot; EAST / 70.0 FEET</td>
</tr>
<tr>
<td>L3 - NORTH 89°37'31&quot; EAST / 455.0 FEET</td>
</tr>
<tr>
<td>L4 - NORTH 00°03'37&quot; WEST / 70.0 FEET</td>
</tr>
</tbody>
</table>

SCALE: 1" = 100'
U.S. SURVEY FEET

PREPARED BY LEE STADELE / PLS 26300

17158c-1.dwg, 18 October 2016
**LOW-LED**

*Construction:*  
- Steel housing and shelves  
- Glass diffuser and clear tempered glass  

*Light Source:*  
- LED  
- Dimming: 0-10V  

*Features:*  
- 3000K (neutral white)  
- Optional louver  
- Photocontrol option  
- 10-year warranty on LED components

**ORDERING INFORMATION**

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| TLOW-4-LD | 120V    | 104W    | 14W     | White  | Steel    | 3000K, 3000K  
| TLOW-11-LD| 120V    | 119W    | 11W     | White  | Steel    | 3000K, 3000K  
| TLOW-13-LD| 120V    | 130W    | 13W     | White  | Steel    | 3000K, 3000K

*Example:* TLOW-10-LED-1-1-1W-1M-CEG43

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**Halo Commercial**

*Specifications:*  
- LED light source  
- Dimmable  
- Available in various sizes  
- High-efficiency design  
- Long-life  
- Suitable for indoor and outdoor applications

*Ordering Information:*  
- Standard options include...  
- Custom configurations available  
- 5-year warranty

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**Halo Commercial**

*Performance Data:*

- Lumens: 1900  
- Color Temperature: 3000K  
- Input Voltage: 120V  
- Power Factor: 0.95

*Technical Specifications:*

- Electrical: 120V-277V, 277V-480V  
- Junction Box: NEMA 4X  
- Mounting: Surface Mount  
- Dimming: 0-10V, 1-10V

---

**Halo Commercial**

*Performance Data:*

- Lumens: 1500  
- Color Temperature: 3000K  
- Input Voltage: 120V  
- Power Factor: 0.95

*Technical Specifications:*

- Electrical: 120V-277V, 277V-480V  
- Junction Box: NEMA 4X  
- Mounting: Surface Mount  
- Dimming: 0-10V, 1-10V

---

**Halo Commercial**

*Performance Data:*

- Lumens: 1800  
- Color Temperature: 3000K  
- Input Voltage: 120V  
- Power Factor: 0.95

*Technical Specifications:*

- Electrical: 120V-277V, 277V-480V  
- Junction Box: NEMA 4X  
- Mounting: Surface Mount  
- Dimming: 0-10V, 1-10V

---

**Halo Commercial**

*Performance Data:*

- Lumens: 2000  
- Color Temperature: 3000K  
- Input Voltage: 120V  
- Power Factor: 0.95

*Technical Specifications:*

- Electrical: 120V-277V, 277V-480V  
- Junction Box: NEMA 4X  
- Mounting: Surface Mount  
- Dimming: 0-10V, 1-10V

---

**Halo Commercial**

*Performance Data:*

- Lumens: 2200  
- Color Temperature: 3000K  
- Input Voltage: 120V  
- Power Factor: 0.95

*Technical Specifications:*

- Electrical: 120V-277V, 277V-480V  
- Junction Box: NEMA 4X  
- Mounting: Surface Mount  
- Dimming: 0-10V, 1-10V

---

**Halo Commercial**

*Performance Data:*

- Lumens: 2400  
- Color Temperature: 3000K  
- Input Voltage: 120V  
- Power Factor: 0.95

*Technical Specifications:*

- Electrical: 120V-277V, 277V-480V  
- Junction Box: NEMA 4X  
- Mounting: Surface Mount  
- Dimming: 0-10V, 1-10V
RESPONSES TO COMMENTS  
FROM C. VARGAS & ASSOCIATES MEMORANDUM DATED MARCH 18, 2020  
SUBJECT: BOULDER RIFLE CLUB – REVIEW OF SUBMITTAL DATED 8-28-2019  
PROJECT NO: 20003.09

Responses are given in the **BOLD** text following the memorandum comments.

*We have conducted a review of the drawings provided G0, A1, A3.1, G1.01, C2.02, C2.02, C2.05, C3.01, C3.02, C3.03, C3.04 and C3.05, pursuant to 4-602 F 1.a (I). Architectural drawings by Moore and Civil drawings by Rocky Ridge and the application from the owner The Boulder Rifle and pistol Club (Club)(Applicant).*

The main purpose of this review are the requirement of the club to demonstrate their control of the Surface Danger Zone (SDZ) within the lands owned or controlled by the applicant.

**Drawing**  
**THE REVISIONS NOW INCORPORATED INTO THE SUBMITTAL SET DOES DEMONSTRATE THAT THE SDZ IS WITHIN THE BOUNDARIES OF EACH RANGE, ON LANDS OWNED AND CONTROLLED BY THE BOULDER RIFLE CLUB**

*G0 attempts to do that but does not demonstrate meeting the requirements.  
SEE REVISIONS TO THE PLANS AND ADDITIONAL SECTION VIEWS THROUGH THE RANGES*

An SDZ is the depiction of the area in danger from the maximum range ammunition allowed, for each range, since each is constructed at a different elevation on G0. The zone shown for range (1) the 300 yd range is a short-truncated cone that does not run the max distance of a 7.62 x51 (.308), which is over 17,000 ft. the 25 M range shows something similar. All ranges need to establish their SDZ.  
**G-0 NOW SHOWS SDZ**

The county requires Backstops 20 ft high and appropriate height side berms to contain the horizontal travel of projectiles. That being met and no fully automatic arms being used, or grenades or other explosive devises being allowed there is no necessity to consider the 100’ secondary danger areas or the 5-degree ricochet areas.  
**THE 5-DEGREE RICOCHET AREAS HAVE BEEN REMOVED**
What remains to be analyzed is the projection of the direct fire zone and the 5-degree impact area. Those are to be addressed by the analysis of over shots. That is overshots over the backstop up to the muzzle rise of 29 degrees above horizontal. Those shots are then purportedly contained by the extended roof overhang shown on A3.1 legend “note 10”.

THE ANALYSIS OF OVER SHOTS IS ILLUSTRATED IN THE RANGE SECTIONS- OVER SHOTS ARE BEING CONTAINED WITH RANGE BAFFLES AND THE ROOF OVERHANG

I think, I understand what is intended, and that is to meet the “No Blue Sky “concept of design that, if you cannot see blue sky a direct bullet can’t get out. We note the length of the shed does not vary, the height to the bottom of the overhang does and the width of ballistic steel on the roof needs to be set by the 29-degree angle from the allowed worst shooting position.

SEE RANGE SECTIONS, INCLUDING SECTIONS THROUGH EACH SHED.
29 DEGREE ANGLES FROM THE SHOOTING LINE AT THE WORST POSITION, HAVE BEEN ANALYZED AT EACH RANGE.

There are 3 shooting positions to be analyzed. First is standing at 5.5’AAF, second is sitting at 3.5 AFF and third is prone 1’ AFF. What modality of Shooting is being allowed in each shed? That has to be stated on the drawings.

THE REQUESTED SHOOTING MODES AT EACH RANGE HAVE BEEN ANALYZED.

We note that only rifle sitting benches are being provided thru out, with a low single baffled roof overhang that will not be very comfortable sound wise and will be loud for the shooters. We suggest that at least pistol benches for standing should also be provided, for ranges 4 & 5.

ROOF LINES HAVE BEEN PULLED BACK FOR MORE COMFORTABLE SHOOTING.

I’ve numbered public ranges 1-5 for ease of reference and range control. Ranges 4 and 5 should be pistol ranges for standing and sitting, ranges 2 & 3 rifle benches for standing sitting and prone. On range 1, you might consider rifle benches, for sitting and prone on a “prone table 42” AFF”. The owner needs to
decide what he wants, once it is decided we have to live with it, and I’ll review it that way. Note: Prone, at 12” AFF, creates the greatest number of baffles.

THE BRC (OWNER) HAS DETERMINED TO PROVIDE PRONE TABLES- SO SITTING AND PRONE POSITIONS ARE THE SAME ELEVATION.

We noted that a standard shooting shed is being provided and are for 12 lanes each, for a lane spacing of 7.25’. We point out the required lane widths for ranges 1-3 is 6’ and for ranges 4&5 is 4’. owner can get more yield in the same space, about 18 more positions. At $12.00 a visit, is an additional income streams for practically the same construction cost.

THE BRC HAS DETERMINED TO PROVIDE THE WIDER LANES.

On Dwg. G0 we note the general note “Typical Boulder County Standard SDZ”, there is no Boulder SDZ. The SDZ is Physical phenomenon as to where a firearm, fired at a ground target projectile might end and create the SDZ. The task is to prove the bullet will stay on the property. The county requirement is that the projectile stays within the applicant’s property or on properties he controls (my interpretation).

The general note further states and we modified to state what was I tended 20’ backstop, 8 ft side walls and cantilevered (ballistic) roof limiting escape angles (use trajectories) to below (add 6” on side walls top and 2’) on backstops tops.

THIS NOTE WILL BE ADDED AND DIMENSIONS INCORPORATED TO RANGE SECTION DETAILS AND BAFFLES.

This general note requirements is not sufficient information to evaluate the safety requirement to keep the bullet on the applicant-controlled property at this approval level. It must be shown for each range.

ACKNOWLEDGED- ADDITIONAL SECTIONS AND PLAN REVISIONS, INCLUDING THE ADDITION OF RANGE BAFFLES HAVE BEEN PROVIDED FOR EACH RANGE.

The quality of the back stop must be demonstrated that it can stop the maximum projectile, store the projectile “ballistic sand or rubber bullet catcher” and be able to be accessed for projectile recycle (generally a 10’ graded access). The back stop proposed looks like a vertical wall with sloped ballistic sand or rubber impact face please provide a section for each to understand the intent.

THE BACKSTOP ASSEMBLY HAS BEEN SELECTED AND SHOWN ON THE REVISED PLANS- SEE DETAIL 7 ON SHEET A2.1.

The side walls are proposed at 8’ and look like “Hesco Bags” or “Mafia Blocks” and we are sure higher walls will be required may vary 12’to 14’ for the overhead baffles to frame into. Do a wall height analysis with longitudinal and cross sections.

SECTIONS HAVE CONFIRMED 11’ HIGH SIDE WALLS.

We need a section to depict the wall and a longitudinal section or view depicting the top elevations of each, this is requested for each range, as each has its own ballistic solution but since ranges are nested at stepped floor elevation the worst condition governs.

SECTIONS FOR EACH RANGE HAVE BEEN ADDED- SHEETS A2.1 AND A2.2.

We suggest that a series of firing range FR drawings to succinctly depict the ballistic containment design for the purposes of the next review submittal so compliance can be simply read and ascertained. I suggest that the Submittal be modified to rename Dwg. G0 “Master Conceptual Plan” and that a table of range spaces be provided defined ranges 1-5, to defined as to firing distance firing lane width, number of lanes each, etc. That a range plan transverse section from and thru the shooting shed thru, the backstop be developed showing the firing line target lines as intended. And label each element. This transverse section must demonstrate the “No blue sky “design. This section determines the height of walls show elevations to the bottom of the roof overhang detail and or how many baffle lines may be required to fully contain the projectiles.

TABLE HAS BEEN ADDED TO SHEET G0- SECTIONS ILLUSTRATE BAFFLES AND CONTAINMENT FOR “NO BLUE SKY” DESIGN.
In addition, show cross sections for each range showing the height of targets intended and side wall elevations.

**SECTIONS HAVE BEEN ADDED WITH TARGET HEIGHTS AND SIDE WALL ELEVATIONS**

For the maintenance road between ranges 2 and 3 shown a cross sections showing that the road is shadowed and if not limit access with locked gates.

**CROSS SECTIONS HAVE BEEN ADDED ON SHEET A2.2**

All firing lines need to meet the 180-degree rule in that is the berm must extend to 5’ behind the firing line. If that is not possible then add steel to the shooting shed wall and devise access control to that range. Provide for access to the back stops. We see about 15 additional drawings added to the set, but all are layer management of existing work.

**SIDEWALLS HAVE BEEN EXTENDED AT EACH BUILDING AND FENCING ADDED TO PREVENT ACCESS EXCEPT THROUGH BUILDING.**

That being said and from my prior range planning work in the Denver Metropolitan area for CPW. I’m enthused about this project. It is a much-needed project for the State of Colorado and its citizens. It will go a long way towards solving the Front Range problem in the National Forest. I also understand the amount of effort that has gone into the design. My comments are made to not create any major redesign of the grading effort. I’m willing to have the designers conference contact me with questions and I’ll provide the accepted industry prior solutions to these design problems. I have also spoken with CPW about design details, I provided prior to CPW and they have stated are not yet approved as CPW Standards but are certainly available as a reference as to how ranges are designed.

Civil comment consists of Two, (1) C2.02 in the grading show horizontal target line parapets for each target line.

**TARGET LINES ARE NOW HORIZONTAL, NOT SLOPING WITH THE GRAD.**

(2) C2.03 inlets a and b have to be the siltation type overflow inlets, so silt settles and does not overflow.

**INLETS HAVE BEEN PROVIDE WITH 2’ SUMPS, IN ORDER TO MITIGATE ANY LEAD SEDIMENT. ROUTING MAINTENANCE WILL INCLUDE CLEANING INLET SUMPS.**

**END OF COMMENT/RESPONSE**
May 27, 2020

Boulder Rifle Club, Inc.
PO Box 21197
Boulder, CO 80308

Reference: Earthwork Calculations
Boulder Rifle Range - Boulder County, Colorado
Rocky Ridge Civil Engineering Project No. 778-1

To whom it may concern:

Rocky Ridge Civil Engineering (RRCE) performed cut and fill volume calculations for the grading improvements associated with the proposed Boulder Rifle Range located at 4923 N. 26th Street, in Boulder County, Colorado. These calculations are based on the architectural plans prepared by Thomas Moore Architecture and the grading plans prepared by RRCE dated May 27, 2020.

Our calculations show the proposed site improvements will require approximately 60,304 (57,193 @ West Range, 3,111 @ East Range) cubic yards of cut and 50,961 (47,651 @ West Range, 3,310 @ East Range) cubic yards of fill. This earthwork volume does not include the Boulder County “Earthwork and Grading” standard exempt earthwork up to ten feet around the perimeter of the building foundations and roadbase material required for the proposed access. The total estimated quantity of qualified material to be moved is 100,043 cubic yards.

Our calculations show all building foundation excavations and incidental backfill will require approximately 8,776 cubic yards of cut and 2,446 cubic yards of fill. The required roadbase material for the proposed access road is calculated to be approximately 2,373 cubic yards. The existing site is known as a historic garbage dump and substantial amounts of waste material is expected to be encountered and will need to be removed from the site. This volume of material has not been calculated, however a state of 9,143 cubic yard of overall cut is proposed. The proposed detention pond has been designed with this in mind, having the ability to incorporate more cut as required by lowering the freeboard berm.

Autodesk Civil 3D 2020 was utilized to perform the cut and fill calculations. Please let me know if you have any questions or comments.

Sincerely,

Garrett C. Walstad, P.E.
garrett@rockyridgecivil.com
Rocky Ridge Civil Engineering

Attachments:
Boulder County LISUR Fact Sheet
Earthwork Exhibit
Grading Calculation
Cut and fill calculations are necessary to evaluate the disturbance of a project and to verify whether or not a Limited Impact Special Use Review (LUSR) is required. A Limited Impact Special Use Review is required when grading for a project involves more than 500 cubic yards (minus normal cut/fill and backfill contained within the foundation footprint).

If grading totals are close to the 500 yard trigger, additional information may be required, such as a grading plan stamped by a Colorado Registered Professional Engineer.

Earth Work and Grading
This worksheet is to help you accurately determine the amount of grading for the property in accordance with the Boulder County Land Use Code. Please fill in all applicable boxes.

Note: Applicant(s) must fill in the shaded boxes even though foundation work does not contribute toward the 500 cubic yard trigger requiring Limited Impact Special Use Review. Also, all areas of earthwork must be represented on the site plan.

Earth Work and Grading Worksheet:

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* If the total in Box 1 is greater than 500 cubic yards, then a Limited Impact Special Review is required.

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<tbody>
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<td>Foundation</td>
<td>8,776</td>
<td>2,446</td>
<td>11,222</td>
</tr>
</tbody>
</table>

Material cut from foundation excavation that will be removed from the property

Excess Material will be Transported to the Following Location:

Excess Materials Transport Location: Western Disposal

Ongoing efforts will be made to ensure overall earth work at the site is balanced throughout construction.

Is Your Property Gated and Locked?
Note: If county personnel cannot access the property, it could cause delays in reviewing your application.

Certification
I certify that the information submitted is complete and correct. I agree to clearly identify the property (if not already addressed) and stake the location of the improvements on the site within four days of submitting this application. I understand that the intent of the Site Plan Review process is to address the impacts of location and type of structures, and that modifications may be required. Site work will not be done prior to issuance of a Grading or Building Permit.

Signature

Date 05/27/2020
Preliminary Drainage Report
Boulder Rifle Range
Boulder County, Colorado

Prepared for:

Boulder Rifle Club
PO Box 21197
Boulder, CO 80308
(303) 548-2945

Prepared by:

Rocky Ridge Civil Engineering
420 21st Avenue, Suite 101
Longmont, Colorado 80501
(303) 651-6626

Revised: May 2020
May 2019

RRCE Job#778-1
Engineer’s Certification

“I hereby certify that this plan and report for the Preliminary Drainage design of the Boulder Rifle Club was prepared by me, or under my direct supervision, in accordance with the provisions of the Boulder County Storm Drainage Criteria Manual.”

Garrett C. Walstad
Registered Professional Engineer
State of Colorado No. 53303
# Table of Contents

Vicinity Map

I. Introduction 1
II. General Location and Description 1
III. Existing Soil Conditions 1
IV. Existing Drainage Conditions 2
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VI. Conclusions 4
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FEMA - FIRMette
Appendix A- Hydrologic Calculations
Appendix B- Detention Calculations

Map Pocket
D1 - Historic Drainage Plan
D2 - Developed Drainage Plan
I. INTRODUCTION

This report is site specific for improvements to The Boulder Rifle Club, hereinafter called “the Site”. The Site will include the construction of a primary building with classroom space, indoor shooting range, and merchandise area, open air shooting ranges with shelters, parking and drive areas, utility services, and drainage infrastructure.

The drainage design concepts of this project are intended to be in conformance with Boulder County Storm Drainage Criteria Manual. Calculations for this report are based on the Major (100-year) and Minor (10-year) storm events.

II. GENERAL LOCATION AND DESCRIPTION

The site is located in the eastern half of Section 7, Township 1 North, Range 70 West of the 6th P.M. The site is bounded by N. 26th Street to the south, and agriculturally zoned City of Boulder property to the north, east and west.

The site includes approximately 24.87 acres and contains the Boulder Rifle Club facility existing structures, gravel parking/drive areas, and walkways.

There are no major or minor drainage ways on or near the site. The site is located within “Zone X - Area of Minimal Flood Hazard” according to FEMA Panel 08013CO385J effective December 18, 2012.

The site is located downstream of the BLIP and Lappin Ponds which are designated as Critical Wildlife Habitat in the Boulder County Comprehensive Plan. The site ultimately drains into Sixmile Reservoir to the east.

III. EXISTING SOIL CONDITIONS

The existing site topography varies significantly with slopes ranging from one to sixty percent grade. Existing ground cover includes mostly barren soils with native grasses, weeds and small shrubs and trees.

Existing soils are hydrologically classified as being primarily Type C and D.

Soilogic completed a Preliminary Geotechnical Subsurface Exploration Report in February 2019, with exploratory holes approximately 35 to 40 feet below ground surface.

The western portion of the site is historically known to have been used as a trash dump. Various debris and hazardous waste may be encountered during the planned construction activities. This material shall be removed from the site and measures taken to mitigate any additional hazardous health and environmental impacts associated with the removal.

The site does not contain any known irrigation infrastructure or encumbrances. There are no known significant geologic features at the site.
Groundwater was not encountered during the subsurface investigation.

IV. EXISTING DRAINAGE CONDITIONS

The existing site drains via sheetflow to an unnamed channel running through the site from the northwest to the southeast. Runoff is conveyed via open channel flow to an existing 48-inch steel culvert, where it is conveyed east via open channel flow, ultimately discharging to Sixmile Reservoir. Concentrated offsite flows enter the site via open channel flow and are conveyed through the site to the existing outfall.

The primary drainage infrastructure including the open channel and existing outfall from the site are to be maintained throughout the proposed construction.

The existing site has been divided into two (2) drainage basins and have been labeled H1 and H2. An existing drainage plan can be found at the end of this report.

Basin H1 is in the western portion of the site and consists of a gravel access road and mostly barren native soils. Runoff drains via sheetflow northwest to the existing open channel running through the site where flows are conveyed through the existing 48-inch storm sewer outfall, ultimately being discharged to the Farmers Ditch.

Basin H2 is in the eastern portion of the site and consists of the existing Boulder Rifle Club facility buildings, gravel drives and open shooting range areas. Runoff drains via sheetflow northeast to the existing open channel running through the site where flows are conveyed through the existing 48-inch storm sewer outfall, ultimately being discharged to the Farmers Ditch.

Historic runoff values can be found in the Runoff Summary Table included in this report. Additional runoff calculations can be found in the Appendix.

V. DRAINAGE FACILITY DESIGN

Developed drainage patterns will remain consistent with the historic patterns. Runoff drains via sheetflow, open channel flow and storm sewer to the existing drainage channel running through the site where flows are conveyed through the existing 48-inch storm sewer outfall. Runoff from most of the proposed site improvements drains to a proposed sand filter detention pond where release is limited to historic rates and robust water quality is provided. No offsite areas contribute runoff to the proposed drainage design.

The proposed site has been divided into four (4) drainage basins and have been labeled A1 through A4. A proposed drainage plan can be found at the end of this report.

Basin A1 is in the central portion of site and consists of the proposed buildings and associated drives, parking areas, walks, shooting ranges, lawns and the proposed detention pond. Runoff drains via sheetflow, open channel flow and storm sewer to the proposed sand filter detention pond where runoff release is limited to historic rates. Release rates from the pond have been further reduced to account for portions runoff from the site that bypass the proposed pond. Runoff is released into the existing drainage...
swale where it is conveyed through the existing 48” storm sewer outfall from the site, which is consistent with existing patterns.

Basin A2 is in the eastern portion of the site and consists of the existing Boulder Rifle Club facility buildings and associated drives, parking areas, walks, shooting ranges, and lawns. Runoff drains via sheetflow, open channel flow and storm sewer to the existing drainage swale where it is conveyed through the existing 48” storm sewer outfall from the site, which is consistent with existing patterns.

Basin A3 is in the northern perimeter of the site and consists of the existing pervious areas. Runoff drains via sheetflow to the existing drainage swale where it is conveyed through the site to the existing 48” storm sewer outfall from the site, which is consistent with existing patterns.

Basin A4 is in the southern portion of site and consists small portions of the proposed gravel drives, parking areas, walks, and lawns. Runoff drains via sheetflow offsite to the existing 72-inch storm sewer south of the site, which is consistent with existing patterns.

Developed runoff values can be found in the Runoff Summary Table included in this report. Additional runoff calculations can be found in the Appendix.

| Runoff Summary Table |
|----------------------|------------------|--------|--------|
| Basins               | Area (acres)     | Q₁₀ (cfs) | Q₁₀₀ (cfs) |
| H (Overall Historic) | 24.87            | 7.44    | 40.5    |
| H1                   | 17.83            | 4.52    | 27.7    |
| H2                   | 7.05             | 2.92    | 12.8    |
| A (Overall Developed)| 24.87            | 10.2    | 47.2    |
| A1                   | 12.56            | 5.23    | 22.6    |
| A2                   | 7.05             | 3.31    | 15.2    |
| A3                   | 4.61             | 1.11    | 7.02    |
| A4                   | 0.66             | 0.59    | 2.32    |

The principle form of water quality is the implementation of a Sand Filter Detention Basin. A sand filter pond has been included in the proposed development to mitigate additional runoff from the increased imperviousness of the site, while providing robust water quality to storm water runoff from the site. Runoff from the majority of the proposed site will flow through the proposed sand filter where detention for the 100-year overall developed site volume is provided and release rates are limited to historic rates. The proposed sand filter pond has been designed to provide the Water Quality Capture Volume (WQCV), 10-year detention volume and 100-year detention volume. The sand filter uses an impermeable liner underneath the perforated underdrain system, which is buried in a sand filter bedding. This system provides the maximum water quality from the proposed shooting range.

Additional water quality features will be implemented in the form of grass buffers, grass-lined swales, and riprap rundowns at concentrated discharge locations. Concentrated
flows are collected in the proposed storm sewer system using trench drains, roof drains and area drains located in pervious areas to promote surface sheetflow and minimize concentrated overland flows, in efforts minimize sediment transport.

The “Boulder County Storm Drainage Criteria Manual” (SDM) and “Urban Storm Drainage Criteria Manual” (UD) were used as a basis for the development of this drainage plan and report. The Rational Formula Method was used for runoff calculations. The Modified FAA Method was used for the required pond volume calculations. Additional calculations can be found in the Appendix of this report.

VI. CONCLUSIONS

The drainage concepts for this project are consistent with current policies and practices for storm drainage management as outlined in the Boulder County Storm Drainage Criteria Manual and the Urban Drainage and Flood Control District's Storm Drainage Criteria Manual.

The concepts presented for this project are also consistent with current policy and practices that allow the continued release of historic runoff while mitigating hazards of flooding. The proposed detention pond was sized for the 100-year developed storm using an allowable (historic) release rate and accounting for those portions of runoff that bypass the site. The site will maintain the flow patterns and release rates as have been historically seen from this Site.

VII. REFERENCES


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/13/2019 at 5:47:49 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.
Appendix A
Hydrologic Calculations
## PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)\(^1\)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Average recurrence interval (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-min</td>
<td></td>
</tr>
<tr>
<td>0.207</td>
<td>(0.169-0.254)</td>
</tr>
<tr>
<td>0.255</td>
<td>(0.208-0.313)</td>
</tr>
<tr>
<td>0.346</td>
<td>(0.282-0.427)</td>
</tr>
<tr>
<td>0.435</td>
<td>(0.352-0.539)</td>
</tr>
<tr>
<td>0.576</td>
<td>(0.454-0.761)</td>
</tr>
<tr>
<td>1.04</td>
<td>(0.532-0.928)</td>
</tr>
<tr>
<td>1.26</td>
<td>(0.699-1.1.13)</td>
</tr>
<tr>
<td>2.04</td>
<td>(0.835-0.987)</td>
</tr>
<tr>
<td>2.47</td>
<td>(1.987-2.000)</td>
</tr>
<tr>
<td>2.95</td>
<td>(2.000-2.013)</td>
</tr>
<tr>
<td>3.60</td>
<td>(2.000-3.000)</td>
</tr>
<tr>
<td>4.15</td>
<td>(2.95-3.59)</td>
</tr>
<tr>
<td>60-min</td>
<td></td>
</tr>
<tr>
<td>0.634</td>
<td>(0.519-0.780)</td>
</tr>
<tr>
<td>0.775</td>
<td>(0.633-0.953)</td>
</tr>
<tr>
<td>1.04</td>
<td>(0.850-1.29)</td>
</tr>
<tr>
<td>1.31</td>
<td>(1.061-1.62)</td>
</tr>
<tr>
<td>1.72</td>
<td>(1.362-2.28)</td>
</tr>
<tr>
<td>2.09</td>
<td>(1.597-2.75)</td>
</tr>
<tr>
<td>2.49</td>
<td>(1.823-3.39)</td>
</tr>
<tr>
<td>2.95</td>
<td>(2.044-4.10)</td>
</tr>
<tr>
<td>3.60</td>
<td>(2.573-5.13)</td>
</tr>
<tr>
<td>4.15</td>
<td>(2.635-5.92)</td>
</tr>
</tbody>
</table>

\(^1\) Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parentheses are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.
PDS-based depth-duration-frequency (DDF) curves
Latitude: 40.0660°, Longitude: -105.2663°

Average recurrence interval (years)

- 1
- 2
- 5
- 10
- 25
- 50
- 100
- 200
- 500
- 1000

Duration

- 5-min
- 10-min
- 15-min
- 30-min
- 60-min
- 2-hr
- 3-hr
- 6-hr
- 12-hr
- 24-hr
- 3-day
- 4-day
- 7-day
- 10-day
- 20-day
- 30-day
- 45-day
- 60-day
- 24-hr

Maps & aerials
Small scale terrain
MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot

Water Features
- Streams and Canals

Transportation
- Rail
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: 
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Boulder County Area, Colorado
Survey Area Data: Version 15, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 28, 2012—Sep 18, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
# Map Unit Legend

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DU</td>
<td>Dumps</td>
<td>6.9</td>
<td>27.2%</td>
</tr>
<tr>
<td>NdD</td>
<td>Nederland very cobbly sandy loam, 1 to 12 percent slopes</td>
<td>0.1</td>
<td>0.3%</td>
</tr>
<tr>
<td>ReD</td>
<td>Renohill loam, 3 to 9 percent slopes</td>
<td>13.6</td>
<td>53.4%</td>
</tr>
<tr>
<td>Te</td>
<td>Terrace escarpments</td>
<td>4.8</td>
<td>19.1%</td>
</tr>
<tr>
<td>Totals for Area of Interest</td>
<td></td>
<td>25.4</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
#### Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk ‘*’ denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007 (http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

<table>
<thead>
<tr>
<th>Map unit symbol and soil name</th>
<th>Pct. of map unit</th>
<th>Hydrologic group</th>
<th>Depth</th>
<th>USDA texture</th>
<th>Classification</th>
<th>Pct Fragments</th>
<th>Percentage passing sieve number—</th>
<th>Liquid limit</th>
<th>Plasticity index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unified</td>
<td>AASHTO</td>
<td>0-10 inches</td>
<td>3-10 inches</td>
<td>4</td>
</tr>
</tbody>
</table>
# Source Information

<table>
<thead>
<tr>
<th>Map Unit Symbol and Name</th>
<th>Soil Parent Material Group</th>
<th>USDA Texture Classification</th>
<th>Pod Properties</th>
<th>Pediment Passing Sieve Number</th>
<th>Percentage Passing Sieve Number</th>
<th>Depth</th>
<th>Strength Index 10</th>
<th>Un-ionized</th>
<th>VASHTO</th>
<th>Limited</th>
<th>USDA Texture</th>
<th>Map Unit Symbol and Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5-1.0</td>
<td>1.2</td>
<td>3</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>100</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>0.5-1.0</td>
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<td>3</td>
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<tr>
<td>0.5-1.0</td>
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<td>3</td>
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<td>10</td>
<td>1</td>
<td>100</td>
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<td>0.5-1.0</td>
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<td>3</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>100</td>
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<td>0.0</td>
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<tr>
<td>0.5-1.0</td>
<td>1.2</td>
<td>3</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>100</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Table Notes:**
- **Map Unit Symbol and Name:** The symbol and name for each map unit.
- **Soil Parent Material Group:** The group representing the origin of the soil.
- **USDA Texture Classification:** The classification of the soil texture.
- **Pod Properties:** The properties of the soil pod.
- **Pediment Passing Sieve Number:** The number of sieves passed by the soil pediment.
- **Percentage Passing Sieve Number:** The percentage of the soil passing through the sieves.
- **Depth:** The depth of the soil layer.
- **Strength Index 10:** The strength index of the soil.
- **Un-ionized:** The un-ionized component of the soil.
- **VASHTO:** The VASHTO index of the soil.
- **Limited:** Indication of any limitations in the soil properties.
- **USDA Texture:** The USDA texture classification of the soil.
Table 6-3. Recommended percentage imperviousness values

<table>
<thead>
<tr>
<th>Land Use or Surface Characteristics</th>
<th>Percentage Imperviousness (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business:</strong></td>
<td></td>
</tr>
<tr>
<td>Downtown Areas</td>
<td>95</td>
</tr>
<tr>
<td>Suburban Areas</td>
<td>75</td>
</tr>
<tr>
<td><strong>Residential lots (lot area only):</strong></td>
<td></td>
</tr>
<tr>
<td>Single-family</td>
<td></td>
</tr>
<tr>
<td>2.5 acres or larger</td>
<td>12</td>
</tr>
<tr>
<td>0.75 – 2.5 acres</td>
<td>20</td>
</tr>
<tr>
<td>0.25 – 0.75 acres</td>
<td>30</td>
</tr>
<tr>
<td>0.25 acres or less</td>
<td>45</td>
</tr>
<tr>
<td>Apartments</td>
<td>75</td>
</tr>
<tr>
<td><strong>Industrial:</strong></td>
<td></td>
</tr>
<tr>
<td>Light areas</td>
<td>80</td>
</tr>
<tr>
<td>Heavy areas</td>
<td>90</td>
</tr>
<tr>
<td><strong>Parks, cemeteries</strong></td>
<td>10</td>
</tr>
<tr>
<td><strong>Playgrounds</strong></td>
<td>25</td>
</tr>
<tr>
<td><strong>Schools</strong></td>
<td>55</td>
</tr>
<tr>
<td><strong>Railroad yard areas</strong></td>
<td>50</td>
</tr>
<tr>
<td><strong>Undeveloped Areas:</strong></td>
<td></td>
</tr>
<tr>
<td>Historic flow analysis</td>
<td>2</td>
</tr>
<tr>
<td>Greenbelts, agricultural</td>
<td>2</td>
</tr>
<tr>
<td>Off-site flow analysis (when land use not defined)</td>
<td>45</td>
</tr>
<tr>
<td><strong>Streets:</strong></td>
<td></td>
</tr>
<tr>
<td>Paved</td>
<td>100</td>
</tr>
<tr>
<td>Gravel (packed)</td>
<td>40</td>
</tr>
<tr>
<td>Drive and walks</td>
<td>90</td>
</tr>
<tr>
<td>Roofs</td>
<td>90</td>
</tr>
<tr>
<td>Lawns, sandy soil</td>
<td>2</td>
</tr>
<tr>
<td>Lawns, clayey soil</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 6-4. Runoff coefficient equations based on NRCS soil group and storm return period

<table>
<thead>
<tr>
<th>NRCS Soil Group</th>
<th>2-Year</th>
<th>5-Year</th>
<th>10-Year</th>
<th>25-Year</th>
<th>50-Year</th>
<th>100-Year</th>
<th>500-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$C_A = 0.84i^{1.302}$</td>
<td>$C_A = 0.86i^{1.276}$</td>
<td>$C_A = 0.87i^{1.232}$</td>
<td>$C_A = 0.88i^{1.124}$</td>
<td>$C_A = 0.85i+0.025$</td>
<td>$C_A = 0.78i+0.110$</td>
<td>$C_A = 0.65i+0.254$</td>
</tr>
<tr>
<td>B</td>
<td>$C_B = 0.84i^{1.169}$</td>
<td>$C_B = 0.86i^{1.088}$</td>
<td>$C_B = 0.81i+0.057$</td>
<td>$C_B = 0.63i+0.249$</td>
<td>$C_B = 0.56i+0.328$</td>
<td>$C_B = 0.47i+0.426$</td>
<td>$C_B = 0.37i+0.536$</td>
</tr>
<tr>
<td>C/D</td>
<td>$C_{CD} = 0.83i^{1.122}$</td>
<td>$C_{CD} = 0.82i+0.035$</td>
<td>$C_{CD} = 0.74i+0.132$</td>
<td>$C_{CD} = 0.56i+0.319$</td>
<td>$C_{CD} = 0.49i+0.393$</td>
<td>$C_{CD} = 0.41i+0.484$</td>
<td>$C_{CD} = 0.32i+0.588$</td>
</tr>
</tbody>
</table>

Where:

\[ i = \text{% imperviousness (expressed as a decimal)} \]

\[ C_A = \text{Runoff coefficient for Natural Resources Conservation Service (NRCS) HSG A soils} \]

\[ C_B = \text{Runoff coefficient for NRCS HSG B soils} \]

\[ C_{CD} = \text{Runoff coefficient for NRCS HSG C and D soils.} \]

The values for various catchment imperviousness and storm return periods are presented graphically in Figures 6-1 through 6-3, and are tabulated in Table 6-5. These coefficients were developed for the Denver region to work in conjunction with the time of concentration recommendations in Section 2.4. Use of these coefficients and this procedure outside of the semi-arid climate found in the Denver region may not be valid. The UD-Rational Excel workbook performs all the needed calculations to find the runoff coefficient given the soil type and imperviousness and the reader may want to take advantage of this macro-enabled Excel workbook that is available for download from the UDFCD’s website www.udfcd.org.

See Examples 7.1 and 7.2 that illustrate the Rational Method.
### HYDROLOGIC SOIL TYPE: D

#### HISTORIC

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>AREA (sf)</th>
<th>AREA (AC)</th>
<th>% IMPERV</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOF</td>
<td>13,565</td>
<td>0.31</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>DRIVE/WALK</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>GRAVEL STREET</td>
<td>85,988</td>
<td>1.97</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>HISTORIC</td>
<td>983,950</td>
<td>22.59</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,083,503</strong></td>
<td><strong>24.874</strong></td>
<td><strong>6.1%</strong></td>
<td><strong>0.04</strong></td>
<td><strong>0.09</strong></td>
<td><strong>0.18</strong></td>
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#### DEVELOPED

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<th>C5</th>
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<th>C100</th>
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<tbody>
<tr>
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<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>DRIVE/WALK</td>
<td>21,467</td>
<td>0.49</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
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<tr>
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<td>2.95</td>
<td>40%</td>
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</tr>
<tr>
<td>LAWN</td>
<td>891,086</td>
<td>20.46</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
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<td>0.49</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,083,503</strong></td>
<td><strong>24.874</strong></td>
<td><strong>11.7%</strong></td>
<td><strong>0.09</strong></td>
<td><strong>0.13</strong></td>
<td><strong>0.22</strong></td>
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</table>

#### BASIN H1

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<th>AREA (sf)</th>
<th>AREA (AC)</th>
<th>% IMPERV</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOF</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>DRIVE/WALK</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>GRAVEL STREET</td>
<td>20,301</td>
<td>0.47</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
</tr>
<tr>
<td>HISTORIC</td>
<td>756,306</td>
<td>17.36</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>776,607</strong></td>
<td><strong>17.828</strong></td>
<td><strong>3.0%</strong></td>
<td><strong>0.02</strong></td>
<td><strong>0.06</strong></td>
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#### BASIN H2

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<th>AREA (sf)</th>
<th>AREA (AC)</th>
<th>% IMPERV</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOF</td>
<td>13,565</td>
<td>0.31</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>DRIVE/WALK</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>GRAVEL STREET</td>
<td>65,687</td>
<td>1.51</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
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<tr>
<td>HISTORIC</td>
<td>227,644</td>
<td>5.23</td>
<td>2%</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>306,896</strong></td>
<td><strong>7.045</strong></td>
<td><strong>14.0%</strong></td>
<td><strong>0.10</strong></td>
<td><strong>0.15</strong></td>
<td><strong>0.24</strong></td>
<td><strong>0.54</strong></td>
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</table>

#### BASIN A1

<table>
<thead>
<tr>
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<th>AREA (sf)</th>
<th>AREA (AC)</th>
<th>% IMPERV</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOF</td>
<td>28,874</td>
<td>0.66</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>DRIVE/WALK</td>
<td>21,467</td>
<td>0.49</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
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<tr>
<td>GRAVEL STREET</td>
<td>64,065</td>
<td>1.47</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
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<tr>
<td>LAWN</td>
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<td>9.93</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>0.15</strong></td>
<td><strong>0.24</strong></td>
<td><strong>0.54</strong></td>
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</table>

#### BASIN A2

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>AREA (sf)</th>
<th>AREA (AC)</th>
<th>% IMPERV</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOF</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>DRIVE/WALK</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
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<tr>
<td>GRAVEL STREET</td>
<td>50,243</td>
<td>1.15</td>
<td>40%</td>
<td>0.30</td>
<td>0.36</td>
<td>0.43</td>
<td>0.65</td>
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<tr>
<td>LAWN</td>
<td>242,956</td>
<td>5.58</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>306,896</strong></td>
<td><strong>7.045</strong></td>
<td><strong>12.1%</strong></td>
<td><strong>0.09</strong></td>
<td><strong>0.13</strong></td>
<td><strong>0.22</strong></td>
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#### BASIN A3

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<th>AREA (AC)</th>
<th>% IMPERV</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOF</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>DRIVE/WALK</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>GRAVEL STREET</td>
<td>1,495</td>
<td>0.03</td>
<td>40%</td>
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<td>0.36</td>
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</tr>
<tr>
<td>LAWN</td>
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<td>4.57</td>
<td>2%</td>
<td>0.01</td>
<td>0.05</td>
<td>0.15</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
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<td><strong>2.3%</strong></td>
<td><strong>0.01</strong></td>
<td><strong>0.05</strong></td>
<td><strong>0.15</strong></td>
<td><strong>0.49</strong></td>
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#### BASIN A4

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<th>AREA (sf)</th>
<th>AREA (AC)</th>
<th>% IMPERV</th>
<th>C2</th>
<th>C5</th>
<th>C10</th>
<th>C100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOF</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>DRIVE/WALK</td>
<td>-</td>
<td>0.00</td>
<td>90%</td>
<td>0.74</td>
<td>0.77</td>
<td>0.80</td>
<td>0.85</td>
</tr>
<tr>
<td>GRAVEL STREET</td>
<td>12,576</td>
<td>0.29</td>
<td>40%</td>
<td>0.30</td>
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<tr>
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<td>0.01</td>
<td>0.05</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td><strong>0.27</strong></td>
<td><strong>0.56</strong></td>
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</table>
## Calculation of Peak Runoff using Rational Method

### Subcatchment Data

<table>
<thead>
<tr>
<th>Subcatchment Name</th>
<th>Basin</th>
<th>AW</th>
<th>MMa</th>
<th>Percent</th>
<th>Depressurization</th>
<th>2-yr</th>
<th>5-yr</th>
<th>10-yr</th>
<th>25-yr</th>
<th>50-yr</th>
<th>100-yr</th>
<th>500-yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>17.83</td>
<td>D</td>
<td>3.0</td>
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<td></td>
<td>3.02</td>
<td>5.00</td>
<td>7.00</td>
<td>9.00</td>
<td>11.0</td>
<td>13.0</td>
<td>15.0</td>
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<tr>
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<td>D</td>
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<td>129.00</td>
<td>0.020</td>
<td>1770.0</td>
<td>0.029</td>
<td></td>
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</tr>
<tr>
<td>H3</td>
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<td>D</td>
<td>2.3</td>
<td>100.00</td>
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<td>2535.0</td>
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</tr>
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<td>99.00</td>
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<td>2080.0</td>
<td>0.024</td>
<td></td>
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</tr>
</tbody>
</table>

### Rainfall Intensity Equation Coefficients

\[
I_{\text{in/hr}} = a \cdot P_{1}^{b} 
\]

Where:
- \( I \): Rainfall intensity
- \( P_{1} \): 1-hour rainfall depth
- \( a, b \): Coefficients

### Selected Values

<table>
<thead>
<tr>
<th>Rainfall Intensity, ( I ) (in/hr)</th>
<th>Peak Flow, ( Q ) (cfs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.02</td>
<td>0.06</td>
</tr>
<tr>
<td>0.06</td>
<td>0.15</td>
</tr>
<tr>
<td>0.09</td>
<td>0.24</td>
</tr>
<tr>
<td>0.10</td>
<td>0.15</td>
</tr>
<tr>
<td>0.13</td>
<td>0.19</td>
</tr>
</tbody>
</table>

### Runoff Equations

- **Overland Flow**
  - For urban areas:
  - Time of Concentration: \( t_{c} = 0.14I + 9 \) (min)
  - For non-urban areas:
  - Time of Concentration: \( t_{c} = 0.14I + 14 \) (min)

- **Channelized Flow**
  - For urban areas:
  - Time of Concentration: \( t_{c} = 0.17I + 15 \) (min)
  - For non-urban areas:
  - Time of Concentration: \( t_{c} = 0.17I + 20 \) (min)

### Calculation of Peak Runoff

**Rainfall Intensity Equation**

\[
I_{\text{in/hr}} = 28.50 \cdot P_{1}^{0.786} 
\]

**Computation of Peak Runoff**

- **Overland Flow**: \( Q = C_{H} \cdot L_{1} \cdot S_{1} \) (cfs)
- **Channelized Flow**: \( Q = C_{S} \cdot L_{2} \cdot S_{2} \) (cfs)

**Time of Concentration**

- **Computed**: \( t_{c} = t_{d} + t_{l} \) (min)
- **Regional**: \( t_{c} = 17I^{2} + 9I + 5 \) (min)
- **Selected**: \( t_{c} = \max(5, \min(15, 20)) \) (min)

**Peak Flow Rate**

\[
Q = C \cdot I \cdot (1 - C_{P}) 
\]
Appendix B
Detention Calculations
Allowable Release
Boulder Rifle Club
Boulder County, CO

OVERALL SITE ALLOWABLE RELEASE RATE

UDFCD, Volume 2, Chapter 12
Soil Type: D

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q&lt;sub&gt;10&lt;/sub&gt; =</td>
<td>0.309 cfs/acre</td>
</tr>
<tr>
<td>P1 =</td>
<td>1.31 inches</td>
</tr>
<tr>
<td>S =</td>
<td>0.055 ft/ft</td>
</tr>
<tr>
<td>L =</td>
<td>1454 ft</td>
</tr>
<tr>
<td>A =</td>
<td>24.874 ac</td>
</tr>
<tr>
<td>A =</td>
<td>1083503 ft²</td>
</tr>
<tr>
<td>C1 =</td>
<td>0.5375</td>
</tr>
<tr>
<td>C2 =</td>
<td>0.1901</td>
</tr>
<tr>
<td>C3 =</td>
<td>-0.4055</td>
</tr>
<tr>
<td>Q&lt;sub&gt;100&lt;/sub&gt; =</td>
<td>1.595 cfs/acre</td>
</tr>
<tr>
<td>P1 =</td>
<td>2.49 inches</td>
</tr>
<tr>
<td>S =</td>
<td>0.055 ft/ft</td>
</tr>
<tr>
<td>L =</td>
<td>1454 ft</td>
</tr>
<tr>
<td>A =</td>
<td>24.874 ac</td>
</tr>
<tr>
<td>A =</td>
<td>1083503 ft²</td>
</tr>
<tr>
<td>C1 =</td>
<td>1.3053</td>
</tr>
<tr>
<td>C2 =</td>
<td>0.1651</td>
</tr>
<tr>
<td>C3 =</td>
<td>-0.3490</td>
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90% Historic

<table>
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<tbody>
<tr>
<td>Q&lt;sub&gt;10&lt;/sub&gt; =</td>
<td>6.93 cfs</td>
</tr>
<tr>
<td>Q&lt;sub&gt;100&lt;/sub&gt; =</td>
<td>35.70 cfs</td>
</tr>
<tr>
<td>Q&lt;sub&gt;10&lt;/sub&gt; =</td>
<td>0.28 cfs/acre</td>
</tr>
<tr>
<td>Q&lt;sub&gt;100&lt;/sub&gt; =</td>
<td>1.44 cfs/acre</td>
</tr>
</tbody>
</table>

PROPOSED BASIN RELEASE RATES
(FROM RATIONAL CALCS)

<table>
<thead>
<tr>
<th>Basin ID</th>
<th>Area (Ac)</th>
<th>Q&lt;sub&gt;10&lt;/sub&gt;</th>
<th>Q&lt;sub&gt;100&lt;/sub&gt;</th>
<th>Discharge Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basin A1</td>
<td>12.56</td>
<td>5.21</td>
<td>22.51</td>
<td>Proposed Pond</td>
</tr>
<tr>
<td>Basin A2</td>
<td>7.045</td>
<td>3.31</td>
<td>15.21</td>
<td>Free Release</td>
</tr>
<tr>
<td>Basin A3</td>
<td>4.605</td>
<td>1.13</td>
<td>7.14</td>
<td>Free Release</td>
</tr>
<tr>
<td>Basin A4</td>
<td>0.662</td>
<td>0.59</td>
<td>2.31</td>
<td>Free Release</td>
</tr>
</tbody>
</table>

DETENTION POND PROPOSED ALLOWABLE RELEASE RATE
OVER-DETAINING (OVERALL MINUS FREE RELEASE)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q&lt;sub&gt;10&lt;/sub&gt; =</td>
<td>1.90 cfs</td>
</tr>
<tr>
<td>Q&lt;sub&gt;100&lt;/sub&gt; =</td>
<td>11.04 cfs</td>
</tr>
<tr>
<td>Q&lt;sub&gt;10&lt;/sub&gt; =</td>
<td>0.08 cfs/acre</td>
</tr>
<tr>
<td>Q&lt;sub&gt;100&lt;/sub&gt; =</td>
<td>0.44 cfs/acre</td>
</tr>
</tbody>
</table>
**WATER QUALITY CAPTURE VOLUME**

<table>
<thead>
<tr>
<th>UDFCD, Volume 3, Chapter 3</th>
<th>( WQCV = a(0.91I^2 - 1.19I^2 + 0.78I) )</th>
</tr>
</thead>
</table>

**Sand Filter**

- Drain time: 12 hrs

<table>
<thead>
<tr>
<th>WQCV Coefficient</th>
<th>Overall</th>
<th>Developed</th>
</tr>
</thead>
<tbody>
<tr>
<td>a=</td>
<td>I=</td>
<td>A=</td>
</tr>
<tr>
<td></td>
<td>0.117 %/100</td>
<td>24.874 acres</td>
</tr>
<tr>
<td>WQCV=</td>
<td>0.061 inches</td>
<td></td>
</tr>
<tr>
<td>WQCV=</td>
<td>0.127 ac-ft</td>
<td></td>
</tr>
</tbody>
</table>

| WQCV= | 5,522 \( \text{ft}^3 \) |
|       | 0.127 ac-ft |
Project: Boulder Rifle Club
Basin ID: Overall

Design Information (Input):

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Coefficient</th>
<th>Coefficient</th>
<th>Coefficient</th>
<th>Coefficient</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>28.50</td>
<td>C3</td>
<td>0.789</td>
<td>C2</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Design Rainfall IDF Formula: 

\[ i = \frac{C1 \times P1}{(C2 + Tc)^{C3}} \]

Allowable Unit Release Rate: 

\[ q = 0.44 \text{ cfs/acre} \]

Predevelopment NRCS Soil Group Type: D

Project:

<table>
<thead>
<tr>
<th>Rainfall</th>
<th>Rainfall</th>
<th>Inflow Adjustment</th>
<th>Average Outflow</th>
<th>Storage Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>3005</td>
<td>0.07</td>
<td>93,339</td>
<td>0.51</td>
<td>181,361</td>
</tr>
<tr>
<td>2905</td>
<td>0.07</td>
<td>92,666</td>
<td>0.51</td>
<td>175,392</td>
</tr>
<tr>
<td>2805</td>
<td>0.07</td>
<td>91,975</td>
<td>0.51</td>
<td>169,422</td>
</tr>
<tr>
<td>2605</td>
<td>0.08</td>
<td>90,531</td>
<td>0.51</td>
<td>157,482</td>
</tr>
<tr>
<td>2355</td>
<td>0.08</td>
<td>88,596</td>
<td>0.51</td>
<td>142,558</td>
</tr>
<tr>
<td>2305</td>
<td>0.08</td>
<td>88,189</td>
<td>0.51</td>
<td>139,573</td>
</tr>
<tr>
<td>2255</td>
<td>0.08</td>
<td>87,775</td>
<td>0.51</td>
<td>136,588</td>
</tr>
<tr>
<td>2205</td>
<td>0.09</td>
<td>87,354</td>
<td>0.51</td>
<td>133,603</td>
</tr>
<tr>
<td>2155</td>
<td>0.09</td>
<td>86,925</td>
<td>0.51</td>
<td>130,618</td>
</tr>
<tr>
<td>2055</td>
<td>0.09</td>
<td>86,043</td>
<td>0.51</td>
<td>124,649</td>
</tr>
<tr>
<td>1955</td>
<td>0.10</td>
<td>85,125</td>
<td>0.51</td>
<td>118,679</td>
</tr>
<tr>
<td>1805</td>
<td>0.10</td>
<td>83,675</td>
<td>0.52</td>
<td>109,724</td>
</tr>
<tr>
<td>1655</td>
<td>0.11</td>
<td>82,125</td>
<td>0.52</td>
<td>100,770</td>
</tr>
<tr>
<td>1155</td>
<td>0.14</td>
<td>75,967</td>
<td>0.52</td>
<td>70,921</td>
</tr>
<tr>
<td>1005</td>
<td>0.16</td>
<td>73,695</td>
<td>0.52</td>
<td>61,966</td>
</tr>
<tr>
<td>955</td>
<td>0.16</td>
<td>72,876</td>
<td>0.52</td>
<td>58,981</td>
</tr>
<tr>
<td>805</td>
<td>0.19</td>
<td>70,189</td>
<td>0.52</td>
<td>50,027</td>
</tr>
<tr>
<td>705</td>
<td>0.21</td>
<td>68,158</td>
<td>0.52</td>
<td>44,057</td>
</tr>
<tr>
<td>455</td>
<td>0.29</td>
<td>61,768</td>
<td>0.54</td>
<td>29,132</td>
</tr>
</tbody>
</table>

Mod. FAA Minor Storage Volume: 

\[ V = 0.84 \text{ acre-ft} \]

Mod. FAA Major Storage Volume: 

\[ V = 2.22 \text{ acre-ft} \]

Detention Volume Using Modified FAA Method:

\[ V = 36,941 \text{ cubic feet} \]

\[ V = 96,802 \text{ cubic feet} \]

(See USDCM Volume 2 Storage Chapter for description of method)
DETENTION VOLUME BY THE MODIFIED FAA METHOD
(See USDCM Volume 2 Storage Chapter for description of method)

Boulder Rifle Club
Basin ID: Overall

Inflow and Outflow Volumes vs. Rainfall Duration

- Minor Storm Inflow Volume
- Minor Storm Outflow Volume
- Minor Storm Storage Volume
- Major Storm Inflow Volume
- Major Storm Outflow Volume
- Major Storm Storage Volume
Example Zone Configuration (Retention Pond)
---

Watershed Information
- Wetted BMP Type: Retention Pond
- Wetted Area: 25.87 acres
- Wetted Area Length: 1,944 ft
- Wetted Area Slope: 0.55
- Percent Impervious: 77.10%
- Percentage Hydrologic Soil Group A: 82.6%
- Percentage Hydrologic Soil Group B: 8.5%
- Percentage Hydrologic Soil Group C/D: 0%
- Location for 1-h Rainfall Depths: User Input

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Detention Basin Stage-Storage Table Builder

<table>
<thead>
<tr>
<th>Stage (ft)</th>
<th>Depth Increment (ft)</th>
<th>Area (ac)</th>
<th>Area (ft²)</th>
<th>Volume (ft³)</th>
<th>Volume (ac-ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.127</td>
<td>0.30</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.263</td>
<td>0.35</td>
<td>0.040</td>
<td>0.040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.736</td>
<td>0.50</td>
<td>0.128</td>
<td>0.128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.436</td>
<td>0.75</td>
<td>0.242</td>
<td>0.242</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.236</td>
<td>1.00</td>
<td>0.369</td>
<td>0.369</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.036</td>
<td>1.25</td>
<td>0.496</td>
<td>0.496</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.836</td>
<td>1.50</td>
<td>0.623</td>
<td>0.623</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.636</td>
<td>1.75</td>
<td>0.749</td>
<td>0.749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.436</td>
<td>2.00</td>
<td>0.876</td>
<td>0.876</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table continues with similar entries for different stages, with columns for Stage, Depth Increment, Area (ac), Area (ft²), Volume (ft³), and Volume (ac-ft).
DETENTION BASIN OUTLET STRUCTURE DESIGN

Project: Boulder Rifle Club
Basin ID: Overall Site Detention

Example Zone Configuration (Retention Pond)

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration BMP)

<table>
<thead>
<tr>
<th>Calculated Parameters for Underdrain</th>
<th>Total (all zones)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underdrain Orifice Depth = 2.00 ft</td>
<td>2.222</td>
</tr>
<tr>
<td>Underdrain Orifice Diameter = 1.77 inches</td>
<td></td>
</tr>
<tr>
<td>Underdrain Orifice Area = 0.0 ft²</td>
<td></td>
</tr>
<tr>
<td>Underdrain Orifice Depth = 0.07 feet</td>
<td></td>
</tr>
</tbody>
</table>

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation BMP)

<table>
<thead>
<tr>
<th>Calculated Parameters for Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invert of Lowest Orifice = N/A ft (relative to basin bottom at Stage = 0 ft)</td>
</tr>
<tr>
<td>Depth at top of Zone using Orifice Plate = N/A ft (relative to basin bottom at Stage = 0 ft)</td>
</tr>
<tr>
<td>Orifice Plate: Orifice Vertical Spacing = N/A inches</td>
</tr>
<tr>
<td>Orifice Plate: Orifice Area per Row = N/A sq. inches</td>
</tr>
</tbody>
</table>

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

<table>
<thead>
<tr>
<th>Calculated Parameters for Vertical Orifice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invert of Vertical Orifice = 1.00 N/A ft (relative to basin bottom at Stage = 0 ft)</td>
</tr>
<tr>
<td>Depth at top of Stage using Vertical Orifice = 3.50 N/A feet</td>
</tr>
<tr>
<td>Vertical Orifice Height = 6.00 N/A inches</td>
</tr>
<tr>
<td>Vertical Orifice Width = 10.50 N/A inches</td>
</tr>
</tbody>
</table>

User Input: Overflow Weir (Dropbox with Flat or Sloped Grate and Outlet Pipe OR Rectangular/Trapezoidal Weir and No Outlet Pipe)

<table>
<thead>
<tr>
<th>Calculated Parameters for Overflow Weir</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overflow Weir Front Edge Height, Ho = 4.00 N/A ft (relative to basin bottom at Stage = 0 ft)</td>
</tr>
<tr>
<td>Overflow Weir Front Edge Length = 3.00 N/A feet</td>
</tr>
<tr>
<td>Overflow Weir Grate Slope = 3.00 N/A H:V</td>
</tr>
<tr>
<td>Horiz. Length of Weir Side = 3.00 N/A feet</td>
</tr>
<tr>
<td>Overflow Grate Area % = 70% N/A</td>
</tr>
<tr>
<td>Debris Clogging % = 50% N/A</td>
</tr>
</tbody>
</table>

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

<table>
<thead>
<tr>
<th>Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth to Invert of Outlet Pipe = 2.50 N/A ft (distance below basin bottom at Stage = 0 ft)</td>
</tr>
<tr>
<td>Outlet Pipe Diameter = 18.00 N/A inches</td>
</tr>
<tr>
<td>Restrictor Plate Height Above Pipe Invert = 8.00 N/A inches</td>
</tr>
<tr>
<td>Half-Central Angle of Restrictor Plate on Pipe = 1.46 N/A radians</td>
</tr>
</tbody>
</table>

User Input: Emergency Spillway (Rectangular or Trapezoidal)

<table>
<thead>
<tr>
<th>Calculated Parameters for Spillway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spillway Invert Stage = 7.00 N/A ft (relative to basin bottom at Stage = 0 ft)</td>
</tr>
<tr>
<td>Spillway Crest Length = 20.00 N/A feet</td>
</tr>
<tr>
<td>Spillway End Slopes = 4.00 H:V</td>
</tr>
<tr>
<td>Freeboard above Max Water Surface = 0.50 N/A feet</td>
</tr>
</tbody>
</table>

Boulevard Hydrograph Results

The user can override the default CUHP Hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).
### Inflow Hydrographs

The user can override the calculated inflow hydrographs from this workbook with inflow hydrographs developed in a separate program.

#### Inflow Hydrographs

| Time Interval | 0:00:00 | 0:05:00 | 0:10:00 | 0:15:00 | 0:20:00 | 0:25:00 | 0:30:00 | 0:35:00 | 0:40:00 | 0:45:00 | 0:50:00 | 0:55:00 | 1:00:00 | 1:05:00 | 1:10:00 | 1:15:00 | 1:20:00 | 1:25:00 | 1:30:00 | 1:35:00 | 1:40:00 | 1:45:00 | 1:50:00 | 1:55:00 | 2:00:00 | 2:05:00 | 2:10:00 | 2:15:00 | 2:20:00 | 2:25:00 | 2:30:00 | 2:35:00 | 2:40:00 | 2:45:00 | 2:50:00 | 2:55:00 | 3:00:00 | 3:05:00 | 3:10:00 | 3:15:00 | 3:20:00 | 3:25:00 | 3:30:00 | 3:35:00 | 3:40:00 | 3:45:00 | 3:50:00 | 3:55:00 | 4:00:00 | 4:05:00 | 4:10:00 | 4:15:00 | 4:20:00 | 4:25:00 | 4:30:00 | 4:35:00 | 4:40:00 | 4:45:00 | 5:00:00 | 5:05:00 | 5:10:00 | 5:15:00 | 5:20:00 | 5:25:00 | 5:30:00 | 5:35:00 | 5:40:00 | 5:45:00 | 5:50:00 | 5:55:00 | 6:00:00 |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
**EMERGENCY SPILLWAY - 100-YR UNDETAİNED (BASİN A1)**

**Trapezoidal Weir**
- Crest = Sharp
- Bottom Length (ft) = 20.00
- Total Depth (ft) = 1.00
- Side Slope (z:1) = 4.00

**Highlighted Calculations**
- Weir Coeff. Cw = 3.10
- Compute by: Known Q
- Known Q (cfs) = 22.62

- Depth (ft) = 0.49
- Q (cfs) = 22.62
- Area (sqft) = 10.76
- Velocity (ft/s) = 2.10
- Top Width (ft) = 23.92
Boulder Rifle Club Noise Study Addendum

May 8, 2020

Prepared for:

Boulder Rifle Club Inc
P.O. Box 21197
Boulder, CO 80308

Prepared by:

Behrens and Associates, Inc.
13806 Inglewood Avenue
Hawthorne California, 90250

Justin Puggioni
Acoustical Technical Director

Jason Peetz
Engineering Manager
1. Introduction

The following report addendum provides an expansion of the previously completed noise study for the Boulder Rifle Club (40° 3'57.39"N, 105° 15'50.59"W) located in Boulder, Colorado. The addendum is an addition to the initial noise study report titled, “Boulder Rifle Club Noise Study” dated May 22, 2019. As explained in the initial study, The Boulder Rifle Club is proposing to expand by adding 5 outdoor firing ranges and one indoor firing range to the west of the current facility. The length of the proposed outdoor firing ranges will be 25 meters, 50 meters, 100 meters, 200 yards and 300 yards, adding to the existing 50-yard, 100-yard and 200-yard outdoor ranges.

Noise modeling was conducted for an expanded study area in response to Boulder County comments regarding areas that were not previously covered in the initial study area. The expanded study area is shown in Figure 1-1.

Figure 1-1 Boulder Rifle Club Expanded Study Area
2. Boulder Rifle Club Noise Modeling

2.1 Noise Modeling Methodology

The noise modeling was completed with use of three-dimensional computer noise modeling software. All models in this report were developed with SoundPLAN 8.0 software using the ISO 9613-2 standard. Noise levels are predicted based on the locations, noise levels and frequency spectra of the noise sources, and the geometry and reflective properties of the local terrain, buildings and barriers. To ensure a conservative assessment and compliance with ISO 9613-2 standards, light to moderate winds are assumed to be blowing from the source to receptor. The predicted noise levels represent only the contribution of shooting noise from the Boulder Rifle Club and do not include ambient noise or noise from other facilities. Actual field sound level measurements may vary from the modeled noise levels due to other noise sources such as traffic, other facilities, other human activity, or environmental factors.

2.2 Noise Sources

Sound measurements were conducted at the Boulder Rifle Club on the morning of Friday, February 8, 2019 using a Type 1 SVANTEK SVAN 979 Sound Level Meter (serial number 69426) set to record unweighted maximum pulse sound levels. Individual shots were fired from a 0.22 caliber long rifle (22LR) and a 0.300 Winchester Magnum (300WM) at the existing 200 yard range. During the test firing, noise measurements were conducted at varying angles and distances to quantify each firearm as a noise source.

As shooting noise is highly directional, with louder sound levels in the direction of fire, varying angles during the measurement period allowed directionality to be included in the model. Using the noise measurement data, sound power levels were calculated in SoundPLAN for the operation of each firearm and shown in Table 2-1.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sound Power Level (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22LR</td>
<td>152</td>
</tr>
<tr>
<td>300WM</td>
<td>168</td>
</tr>
</tbody>
</table>
An appropriate caliber firearm out of the two firearms tested was selected by Boulder Rifle Club and used as the sound source for each range modeled individually at the respective firing bay. Each unmitigated scenario and the noise source included in the model are summarized in Table 2-2.

### Table 2-2 Unmitigated Noise Sources Modeled

<table>
<thead>
<tr>
<th>Range</th>
<th>Noise Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing- 25 yard</td>
<td>22LR</td>
</tr>
<tr>
<td>Existing- 50 yard</td>
<td>22LR</td>
</tr>
<tr>
<td>Existing- 100 yard</td>
<td>300WM</td>
</tr>
<tr>
<td>Existing- 200 yard</td>
<td>300WM</td>
</tr>
<tr>
<td>Proposed- 25 meters</td>
<td>22LR</td>
</tr>
<tr>
<td>Proposed- 50 meters</td>
<td>22LR</td>
</tr>
<tr>
<td>Proposed- 100 meters</td>
<td>300WM</td>
</tr>
<tr>
<td>Proposed- 200 yard</td>
<td>300WM</td>
</tr>
<tr>
<td>Proposed- 300 yard</td>
<td>300WM</td>
</tr>
</tbody>
</table>

As the metric for assessment is the maximum impulse measured within 35 milliseconds, it is assumed that multiple shots within this period are highly unlikely and therefore not included in the modeling. As a result, only one noise source was assumed for each existing and proposed range included in the modeling.

Distance measurements at the locations shown in the ambient sound level survey were also used to calculate sound levels from the shooting testing on February 8. For the shots that were distinguishable from the ambient sound environment, an excess attenuation correction applicable to distance calculations was determined. Excess attenuation is due to atmospheric effects over large distances that are unique to the environment where the sound is propagating into. The sound modeling calculation method used, ISO 9613-2, calculates a steady state noise level over predictable weather conditions. When calculating sound sources such as shooting noise from actual sound measurements, the local atmospheric effects can cause sound levels to vary highly, therefore an overall correction is applied to the distance measurements based on the measurements of noise at distance in the direction of interest. This correction was calculated at -18 dB and used in the calculation of noise levels.
2.3 Mitigation Scenarios

Noise mitigation was included in the modeling for the existing and proposed areas of the Boulder Rifle Club. Despite no regulation requiring noise mitigation at the existing range, noise mitigation for the 100 yard and 200 yard ranges were included at the request of the Boulder Rifle Club. The proposed ranges included in the mitigation modeling were the 100 meter, 200 yard and 300 yard ranges. The noise mitigation scenarios included in the modeling are summarized in Table 2-3.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Existing 100y range with firing shelter</td>
</tr>
<tr>
<td>2</td>
<td>Existing 200y range with firing shelter</td>
</tr>
<tr>
<td>3</td>
<td>Proposed 100m range with firing shelter</td>
</tr>
<tr>
<td>4</td>
<td>Proposed 200y range with firing shelter</td>
</tr>
<tr>
<td>5</td>
<td>Proposed 300y range with firing shelter</td>
</tr>
</tbody>
</table>

The firing shelter mentioned in Table 2-3 is designed to shield noise in all directions except the line of fire. Baffles separate the firing bays and the entrance includes a 90 degree bend to shield noise in the southern direction. The firing bay drawings and acoustical specifications used in the analysis are shown in Appendix D.
The location of the firing shelters are for the existing and proposed scenarios respectively are shown in Figure 2-1 and Figure 2-2.

Figure 2-1 Location of Firing Shelters on Existing Ranges (Scenario 1 and Scenario 2)
Figure 2-2 Location of Firing Shelters on Proposed Ranges (Scenario 3 to 5)
2.4 Noise Contour Maps

The noise modeling results are presented as noise contour maps in Appendix B to cover the expanded study area shown in Figure 1-1. The noise contour maps are shown in 5 decibel increments using the unweighted maximum impulse metric consistent with the Boulder County Land Use Code. A table referencing the noise maps is shown in Table 2-4.

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3. Conclusion

An expansion of the initial noise study for the Boulder Rifle Club was conducted in response to Boulder County comments regarding areas that were not previously covered in the initial study area. The noise modeling results are presented as noise contour maps in Appendix B to cover the expanded study area shown in Figure 1-1. The noise contour maps are shown in 5 decibel increments using the unweighted maximum impulse metric consistent with the Boulder County Land Use Code.
Appendix A - Glossary of Acoustical Terms
**Ambient Noise**
The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources both near and far.

**Average Sound Level**
See Equivalent-Continuous Sound Level

**Decibel (dB)**
The basic unit of measurement for sound level.

**Direct Sound**
Sound that reaches a given location in a direct line from the source without any reflections.

**Energy Basis**
This refers to the procedure of summing or averaging sound pressure levels on the basis of their squared pressures. This method involves the conversion of decibels to pressures, then performing the necessary arithmetic calculations, and finally changing the pressure back to decibels.

**Equivalent-Continuous Sound Level (Leq)**
The average sound level measured over a specified time period. It is a single-number measure of time-varying noise over a specified time period. It is the level of a steady sound that, in a stated time period and at a stated location, has the same sound energy as the time-varying sound. For example, a person who experiences an Leq of 60 dB for a period of 10 minutes standing next to a busy street is exposed to the same amount of sound energy as if he had experienced a constant noise level of 60 dB for 10 minutes rather than the time-varying traffic noise level.

**Fast Response**
A setting on the sound level meter that determines how sound levels are averaged over time. A fast sound level is always more strongly influenced by recent sounds, and less influenced by sounds occurring in the distant past, than the corresponding slow sound level. For the same non-steady sound, the maximum fast sound level is generally greater than the corresponding maximum slow sound level. Fast response is typically used to measure impact sound levels.

**Frequency**
The number of oscillations per second of a sound wave

**Hourly Average Sound Level (HNL)**
The equivalent-continuous sound level, Leq, over a 1-hour time period.

**Impact Noise**
The noise that results when two objects collide.

**Impulse Noise**
Noise of a transient nature due to the sudden impulse of pressure like that created by a gunshot or balloon bursting.

**Insertion Loss**
The decrease in sound power level measured at the location of the receiver when an element (e.g., a noise barrier) is inserted in the transmission path between the sound source and the receiver.
Inverse Square Law
A rule by which the sound intensity varies inversely with the square of the distance from the source. This results in a 6dB decrease in sound pressure level for each doubling of distance from the source.

Masking
The process by which the threshold of hearing for one sound is raised by the presence of another sound.

Maximum Sound Level (Lmax)
The greatest sound level measured on a sound level meter during a designated time interval or event.

Noise Reduction
The difference in sound pressure level between any two points.

Octave
The frequency interval between two sounds whose frequency ratio is 2. For example, the frequency interval between 500 Hz and 1,000 Hz is one octave.

Octave-Band Sound Level
For an octave frequency band, the sound pressure level of the sound contained within that band.

One-Third Octave
The frequency interval between two sounds whose frequency ratio is $2^{1/3}$. For example, the frequency interval between 200 Hz and 250 Hz is one-third octave.

One-Third-Octave-Band Sound Level
For a one-third-octave frequency band, the sound pressure level of the sound contained within that band.

Peak Sound Level (Lpk)
The maximum instantaneous sound level during a stated time period or event.

Point Source
A source that radiates sound as if from a single point.

Receiver
A person (or persons) or equipment which is affected by noise.

Reflected Sound
Sound that persists in an enclosed space as a result of repeated reflections or scattering. It does not include sound that travels directly from the source without reflections.

Reverberation
The persistence of a sound in an enclosed or partially enclosed space after the source of the sound has stopped, due to the repeated reflection of the sound waves.

Slow Response
A setting on the sound level meter that determines how measured sound levels are averaged over time. A slow sound level is more influenced by sounds occurring in the distant past that the corresponding fast sound level.
Sound
A physical disturbance in a medium (e.g., air) that is capable of being detected by the human ear.

Sound Absorption Coefficient
A measure of the sound-absorptive property of a material.

Sound Insulation
The capacity of a structure or element to prevent sound from reaching a receiver room either by absorption or reflection.

Sound Level Meter (SLM)
An instrument used for the measurement of sound level, with a standard frequency-weighting and standard exponentially weighted time averaging.

Sound Power Level
A physical measure of the amount of power a sound source radiates into the surrounding air. It is measured in decibels.

Sound Pressure Level
A physical measure of the magnitude of a sound. It is related to the sound’s energy. The terms sound pressure level and sound level are often used interchangeably.

Sound Transmission Class (STC)
A single number rating used to compare the sound insulation properties of walls, floors, ceilings, windows, or doors. This rating is designed to correlate with subjective impressions of the ability of building elements to reduce the overall loudness of speech, radio, television, and similar noise sources in offices and buildings.

Spectrum
The spectrum of a sound wave is a description of its resolution into components, each of different frequency and usually different amplitude.

Tone
A sound with a distinct pitch

Transmission Loss (TL)
A property of a material or structure describing its ability to reduce the transmission of sound at a particular frequency from one space to another. The higher the TL value the more effective the material or structure is in reducing sound between two spaces. It is measured in decibels.

Windscreen
A porous covering for a microphone, designed to reduce the noise generated by the passage of wind over the microphone.
Appendix B - Expanded Study Area Noise Contour Maps
Figure B-1 Noise Contour Map of Existing 25-yard Range (dB Maximum Impulse)
Figure B-2 Noise Contour Map of Existing 50-yard Range (dB Maximum Impulse)
Figure B-3 Noise Contour Map of Existing 100-yard Range (dB Maximum Impulse)
Figure B-4 Noise Contour Map of Existing 200-yard Range (dB Maximum Impulse)
Figure B-5 Noise Contour Map of Proposed 25-meter Range (dB Maximum Impulse)
Figure B-6  Noise Contour Map of Proposed 50-meter Range (dB Maximum Impulse)
Figure B-7 Noise Contour Map of Proposed 100-meter Range (dB Maximum Impulse)
Figure B-8 Noise Contour Map of Proposed 200-yard Range (dB Maximum Impulse)
Figure B-9  Noise Contour Map of Proposed 300-yard Range (dB Maximum Impulse)
Figure B-10  Noise Contour Map of Existing Mitigated 100-yard Range (dB Maximum Impulse)
Figure B-11  Noise Contour Map of Existing Mitigated 200-yard Range (dB Maximum Impulse)
Figure B-12 Noise Contour Map of Proposed Mitigated 100-meter Range (dB Maximum Impulse)
Figure B-13  Noise Contour Map of Proposed Mitigated 200-yard Range (dB Maximum Impulse)
Figure B-14 Noise Contour Map of Proposed Mitigated 300-yard Range (dB Maximum Impulse)
Appendix C - Firing Shelter Drawings and Specifications
Firing Shelters at Existing 100 yard and 200 yard Ranges

Firing Shelters at Proposed Ranges
Transmit Loss of Firing Shelter Building Assemblies

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Background

One section of the Boulder Rifle Club (BRC) Lappin Property (the West Range) contains an ephemeral creek. About 60 years ago, as a part of landfill operation the creekbed was displaced into a channel excavated for the purpose, adjacent to the north property boundary. As a part of the land use application process, BRC was asked to examine the artificial channel for paleontological resources.

Discussion

Most of the property was used as a landfill for construction debris, which is up to 40 feet thick in the south and central parts of the property. This channel exposes some ledge fragments and soils recently developed on the upper member of the Cretaceous Pierre Shale.\(^1\) It is apparent that a lobe of the dump

extended to the north property boundary before the channel was cut; debris in the form of bedsprings, broken bottles and similar industrial fragments are found on both sides of the cut and in the natural soils just beyond the boundary fence. The marine shale in the cut is relatively infertile – in the approximately 60 years since the channel was cut and the creek was diverted into it, no visible vegetation has colonized it. This contrasts with the natural channel in the top of the image, extending downstream past the club facilities, where vegetation including a cottonwood overstory has developed.

**Fossils in the Pierre Shale Exposure on the Property**

While the Cretaceous period (145 – 66 mya) elsewhere was known for some of the grandest of land dinosaurs, and their sudden end at the Cretaceous-Paleogene Extinction Event, the central part of what would become the United States was then filled by the Western Interior Seaway. From this seaway precipitated the Pierre Shale, which is characterized by marine fossils. The massive mosasaurs and plesiosaurs for which the Cretaceous Seaway is known elsewhere are absent in this area. In the geologic map of the Boulder quadrangle, Wrucke and Wilson placed characteristic fossil isohyets – lines connecting points of equal age as manifested by a defining fossil type – on the surface of the Pierre Shale in the area of the channel. Because the actual rock surface lay under a thick layer of prairie soil that was not worth stripping, these lines were inferred; note the question marks:

*Figure 2 Study section is near the reference mark 2782.*
For purposes of reference, images of the defining fossils used by Wrucke and Wilson are shown below.

*Didymoceras cheyenense*, described in 1856, is an ammonite cephalopod with a tightly scrolled shell and loosely hooked tip.²

*Exiteloceras jenneyi* is a loosely curled ammonite, first described in 1894.³

**Procedure**

Both sides of the channel were examined for about 500 feet to determine whether fossils were present on the soil surface. Several fragments were found. While most fragments were too small to be worth photographing or attempting identification, there were 2 of interest. One of them is apparently predicted by the quadrangle map:

![Figure 3 Insufficient detail due to poor fossilization, but possibly Exiteloceras jenneyi](image)

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² Downloaded from Wikipedia: By Apokryltaros at English Wikipedia, CC BY-SA 3.0, [https://commons.wikimedia.org/w/index.php?curid=7458575](https://commons.wikimedia.org/w/index.php?curid=7458575), 4-10-20.

Bivalves were too common, and existed for too long a period, to be usable as a time-segment indicator.

**Summary of the BRC Fossil Site**

Unlike, for instance, the spectacular Baculites Mesa near Pueblo, Colorado, whose exposure of Pierre Shale covers the same period and offers an amazing revelation of oceanic life toward the close of the Western Interior Seaway, the (two) fossils found on the BRC site are not distinguished for rarity, for excellent preservation, for abundance, or for a large assemblage of species. While the site where they are found is part of the property proposed for new range construction, it lies outside of the actual range construction area and will be protected by barriers during construction. The plan is to leave these fossils undisturbed. The little that is there will not be lost to this land use change.
Re: Boulder Rifle Club – Response to Boulder County Parks and Open Space

Dear Rosi:

This morning I visited the area at Boulder Rifle Club where new recreational shooting facilities are proposed. As has been noted in other correspondence (including Parks and Open Space) this site is very disturbed with no native plant communities present within the upland areas in which the proposed facility would be located. Several of the non-native invasive species present are identified by the state of Colorado as “List B” species. For List B species local governments and other interested parties are directed to develop and implement state noxious weed management plans designed to stop the continued spread of these species. In addition, several of the plant species present are identified by Boulder County as noxious. The site on which the public shooting facility would be built is part of what was historically the City of Boulder landfill. The area has been increased in elevation by the addition of up to 15 feet of fill over the old dump, in many locations towards the north end of the property large amounts of concrete and asphalt are visible. This is not a pristine location and has been heavily modified, leveled, and filled over the years.

The County’s letter identified concerns regarding wildlife and critical wildlife habitats. It must be stated that no critical wildlife habitat is mapped on or occurs at the project site. The County had concerns with the pond west (upstream) of the site and identified it as potential habitat for several County listed sensitive species. While visiting the project area the rifle range was in use and shooting was occurring regularly. Wildlife observed at or near the pond included Canada geese, Red-tailed hawks, and coyotes. None of these reacted to the sounds of shooting; the coyotes did respond negatively to the constant recreation of people using the trails north of the project area by running into the northwest corner of the project area then following the drainage upstream past the pond to escape people. No other reactions were noted, and specifically no action was noted while live firing was occurring. The continual use of the range over many decades has undoubtedly been a part of the local wildlife’s environment and habituation has occurred. Also, a number of the mammalian species referenced in the County’s letter for the most part are crepuscular (active at dusk/dawn) or nocturnal (night). Thus most mammals would not be near the range while shooting was occurring during daylight hours (when human recreation is occurring on the adjacent trails and disturbing the wildlife). Research funded in part by Boulder County and the City of Boulder has shown that humans walking negatively impacts nesting birds. When dogs are accompanying the humans the negative impacts increase substantially. The constant use of
the trails likely has limited avian nesting and decreased use of the area during the day more than the shooting has or will.

The drainage on the north end of the project area will not be changed and this area will still allow for wildlife movement as it is protected from view from either the north or south. It is likely that most wildlife movement occurs in this area because it is visually separated from the existing shooting facilities and the trails to the north. This movement corridor will not be impacted.

The County also expressed concern in the letter with the ponds downstream. Currently any runoff from the project area (and the landfill materials on which it is located as well as former land fill areas owned by the City of Boulder east of the project area) drains into the drainages on which the ponds are located. The addition of a detention pond will help to prevent unwanted movement of potential contaminants into the drainages and the ponds downstream.

Lastly, it is important that the bigger picture be looked at in this case. The site is very disturbed, no native plant communities are present, no critical wildlife habitat is present, no sensitive wildlife species are dependent upon it, and disturbance has been ongoing at this location since its time as a landfill. Eliminating recreation shooting in the surrounding foothills and mountains and controlling it at the proposed location will have a much greater positive impact on wildlife and natural habitats than allowing shooting to occur as it currently does. Shooting in the forest is loud, can start fires, often results in people leaving waste, and lead from bullets is not contained in a controlled area. This location is the best opportunity to have a safe, noise abated area for people to enjoy recreational shooting.

Please contact me if you have questions.

Sincerely,

[Signature]

Jerry Powell, M.S.
Certified Ecologist
**BRC Neighborhood Meeting**

**2019-08-18 19:05**

**Notes**

Attendees: 7 residents, 1 neighbors’ attorney, 1 reporter
Gov’t Attendees: Garry Sanfacon (County), Matt Henry (USFS) and 2 County Sheriff officers
Presenters: Rosi Dennett (Planner), Tom Moore (Architect), Andrew Truitt (Acoustics), Tom Carter (Acoustics), Joe Delich (Traffic Engineer), Garrett Walstad (Civil Engineer) and 3 BRC Board members

Rosi: Introduction and purpose of meeting to provide further explanation of proposal and answer questions and listen to concerns.

Garry: Explained the Recreational Sport Shooting Partnership and how USFS had identified 80,000 acres in Boulder County that are not appropriate for dispersed shooting and are proposed for closure. Two ranges are needed in Boulder County as alternatives. Education of shooters and other forest users is also a priority. Boulder County is not taking a stand yet on this proposal.

1: How is the letter from Cindy Domenico expressing support for this project “not taking a stand?”
Garry: Support for CPW grant and for project to be considered. Support for design and planning, not approval of this specific proposal.

Rosi: BRC is a private club and will remain private. Emphasis is on development of 5 new outdoor and one indoor range. Proposal includes mitigation of noise for several existing outdoor ranges. Purpose for new range is safe place to shoot for the public. Recent Land Use code changes for outdoor ranges – 7AM to 7PM, one day per week open to 9PM. Questions and comments about hours of operation.

Rosi: Description of site plan.
Tom: Discussion of site plan – Gates, Fire access, Movie, 3D description, firing line shelters... Sight-line and ballistically constrained... View through several ranges. Sectional view of firing line shelter.

2: Question and discussion of maximum caliber firearm allowed.

Andrew: Noise presentation. Boulder County is unique in that it requires both a measurement and modelling for noise. 65db peak impulse is the county limit. Deployed sound level meters at
4 locations for a period of 3 days. Measured ambient noise levels as well as during shooting activity. Modelling of both existing and proposed ranges. Topology has a great effect on noise. Start with unmitigated model and then apply mitigation to reduce levels.

3: Did you model multiple shots fired? 
Andrew: Yes.

4: Lately it seems quieter, can you discuss why? 
Andrew: No data from 2 years ago... Ambient levels already exceed 65db at many times throughout the day. Different metrics for measuring sound. Sound is non-linear so 70db is TWICE as noisy as 60db. Suggestion – compare unmitigated vs. mitigated for Receptor 4 70db -> 59db.

Joe:  
Weekday 86 trips vs 190 trips  
Weekend - 262 trips vs 576 trips

Andrew: Mitigation will reduce impact of additional shooters because of firing line shelters and noise is non-linear.

5: Increase in use will increase noise. 
Andrew: Noise is subjective...reiterated how noise was measured to meet County Land Use Code requirements.

6: What about traffic? 26th St is very busy. Circus is very busy. 
Joe: 382 average daily trips is below the 500 daily trips that is the paving threshold.

7: What about construction? How long will I be hearing the construction traffic? 
Rosi: Explained the 3 phases of construction.

8: What about the decrease in property value? 
Rosi: Did not do adjacent property value analysis, but proposal includes improvements to reduce neighboring impacts of existing range which has been in operation at this site for many years.

Rosi: Thanked everyone for attending, explained future hearings that will be scheduled with Planning Commission and County Commissioners and encouraged neighbors to send their comments to Boulder County. Meeting notes and sign-in sheet will be emailed to everyone who signed in.
<table>
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<th>EMAIL ADDRESS</th>
</tr>
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<tr>
<td>Tom More</td>
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<tr>
<td>Rosi Dennett</td>
<td>210 LINCOLN, LONGMONT</td>
<td><a href="mailto:rosidennett@gmail.com">rosidennett@gmail.com</a></td>
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</tbody>
</table>
ATTACHMENT C
MEMO

TO: Summer Frederick, AICP, Principal Planner
FROM: Ron Flax, Chief Building Official
DATE: August 1, 2019

RE: Referral Response, Docket SU-19-0009: Boulder Rifle Club. Club, Inc. Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building on parcels #146307001001 and #146307001002.

Location: 4810 N. 26th Street

Thank you for the referral. We have the following comments for the applicants:

1. **Building Permits.** Building permits, plan review and inspection approvals and a Certificate of Occupancy (“C.O.”) are required for each new building on the parcel that is over 120 sq ft in size, greater than 12’ tall, or has utility services that serve the structure. Any additions, deconstruction, alterations, remodeling, and any electrical, mechanical or plumbing work, etc. also require building permits. Separate building permits are required for each structure.

   For a complete list of when building permits are required, please refer to the county’s adopted 2015 editions of the International Codes and code amendments, which can be found via the internet under the link:


   The **International Existing Building Code** (IEBC) will guide the process for the building code analysis for existing structures.


2. **2015 International Green Construction Code** (“IGCC”). Boulder County’s adoptions of the 2015 editions of the International Codes include the IGCC as applying to buildings or complexes of buildings on the same property with 25,000 sq. ft. or more of floor area. Thus, the provisions of the IGCC will apply to the construction involved in this proposal.

3. **Minimum Plumbing Fixtures.** The plumbing fixtures count needs to meet or exceed the requirements of IBC Chapter 29, including the need for accessible restrooms and fixtures.
4. **Accessibility.** Chapter 11 of the IBC and referenced standard ICC A117.1-09 provide for accessibility for persons with disabilities. Any building permit submittals are to include any applicable accessibility requirements, including accessible parking, signage, accessible routes and accessible fixtures and features.

5. **Design Wind and Snow Loads.** The design wind and ground snow loads for the property are 160 mph (Vult) and 40 psf, respectively.

6. **Fire Department.** It appears that the site is served by Boulder Rural Fire Protection District. A separate referral response from the fire department should also be forthcoming. The fire department may have additional requirements in accordance with their International Fire Code ("IFC") adoption. Also the Fire Protection District must provide written documentation to Boulder County Building Safety and Inspection Services approving the building permit plans and specifications of projects before the building permit can be issued.

7. **Plan Review.** The items listed above are a general summary of some of the county's building code requirements. A much more detailed plan review will be performed at the time of building permit(s) application, when full details are available for review, to assure that all applicable minimum building codes requirements are to be met.

If the applicants should have questions or need additional information, we are happy to work with them toward solutions that meet minimum building code requirements. Please call (720) 564-2640 or contact us via e-mail at building_official@bouldercounty.org
MEMO TO: Referral Agencies  
FROM: Summer Frederick, AICP, Principal Planner  
DATE: June 28, 2019  
RE: Docket SU-19-0009

**Docket SU-19-0009: Boulder Rifle Club, Inc.**

**Request:** Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building on parcels #146307001001 and #146307001002.

**Location:** 4810 N. 26th Street, Parcel #s 146307001001 and 146307001002, at the northern terminus of N 26th Street, approximately 0.68 mile north of its intersection with US 36, in Section 7, Township 1N, Range 70W.

**Zoning:** Agricultural (A) Zoning District

**Applicant/Property Owner:** Boulder Rifle Club, Inc., c/o Steve Martin

**Agent:** Rosi Dennett, Front Range Land Solutions

Special Use Review / Site Specific Development Plan is required of uses which may have greater impacts on services, neighborhoods, or environment than those allowed with only Building Permit Review. This process will review compatibility, services, environmental impacts, and proposed site plan.

This process includes public hearings before the Boulder County Planning Commission and the Board of County Commissioners. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of these hearings.

The Land Use staff, Planning Commission, and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter. Late responses will be reviewed as the process permits; all comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to review the entire file at the Land Use Department, 13th and Spruce, Boulder. If you have any questions regarding this application, please contact the Land Use Department office at 720-564-2603 or via email at s frederick@bouldercounty.org.

Please return responses to the above address by **August 2, 2019.**

We have reviewed the proposal and have no conflicts.

Letter enclosed.

Signed [Signature]  
Name: [Name]

Agency or Address: [Agency Address]

Conservation Ensement

Please note that all Land Use Department property owner's mailing lists and parcel maps are generated from the records maintained by the County Assessor and Treasurer Office. We are required to use this list to send notices to

Deb Gardner  County Commissioner  
Elise Jones  County Commissioner  
Matt Jones  County Commissioner
August 1, 2019

Summer Frederick, AICP
Principal Planner
Boulder County Land Use Department
2045 13th Street
Boulder, CO 80302

RE: Referral Response for Docket SU-19-0009 for Conservation Easement Property at 4923 N. 26th Street

Dear Summer,

Staff has reviewed the referral for docket SU-19-0009, Boulder Rifle Club’s Special Use Land Use application for an expansion of a shooting range from an adjacent property onto the subject property described above. The subject property is encumbered with a conservation easement that is recorded in the real estate records of Boulder County, Colorado at Reception No. 1942070 on May 24, 1999. Staff support the proposal subject to the condition described in this letter.

A shooting range use (with related improvements) is not currently permitted on the subject property under the existing conservation easement; however, the Parks & Open Space Department recognizes that the conservation easement encumbering the subject property needs to be changed to fulfill Boulder County’s commitment in the Northern Front Range Recreational Sport Shooting Management Partnership to implement a landscape-level, multi-jurisdictional strategy to provide safe, responsible and accessible recreational sport shooting opportunities, as expressed by Boulder County’s Board of County Commissioners in a letter to Colorado Parks and Wildlife dated February 1, 2018. The development of a facility on the subject property will provide shooting opportunities that are safe and affordable to different types of shooters and will increase the variety of public shooting opportunities in Boulder County.

Therefore, Parks & Open Space supports this docket for approval, subject to the following condition:

The applicant shall contact the Parks & Open Space Department and negotiate a restrictive covenant that will allow a public shooting range (with related improvements) and that will replace the existing conservation easement. This change from a conservation easement to a restrictive covenant is necessary to fulfill Boulder County’s commitment in the Northern Front Range Recreational Sport Shooting Management Partnership to implement a landscape-level, multi-jurisdictional strategy to provide safe, responsible and accessible recreational sport shooting opportunities, as expressed by Boulder County’s Board of County Commissioners in a letter to Colorado Parks and Wildlife dated February 1, 2018.
Please note that the rationale language described in the foregoing condition needs to be included in Land Use’s final list of conditions, so that the reason Parks & Open Space is willing to modify the existing conservation easement is readily apparent in the approval document.

Please let me know if you have any questions about this condition of approval.

Thank you,

Melissa Arnold
Conservation Easement Program Manager
(303) 678-6266
marnold@boulercounty.org
MEMO TO: Referral Agencies
FROM: Summer Frederick, AICP, Principal Planner
DATE: June 28, 2019
RE: Docket SU-19-0009

Docket SU-19-0009: Boulder Rifle Club, Inc.
Request: Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building on parcels #146307001001 and #146307001002.

Location: 4810 N. 26th Street, Parcel #s 146307001001 and 146307001002, at the northern terminus of N 26th Street, approximately 0.68 mile north of its intersection with US 36, in Section 7, Township 1N, Range 70W.

Zoning: Agricultural (A) Zoning District
Applicant/Property Owner: Boulder Rifle Club, Inc., c/o Steve Martin
Agent: Rosi Dennett, Front Range Land Solutions

Special Use Review / Site Specific Development Plan is required of uses which may have greater impacts on services, neighborhoods, or environment than those allowed with only Building Permit Review. This process will review compatibility, services, environmental impacts, and proposed site plan.

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Please return responses to the above address by August 2, 2019.

☐ We have reviewed the proposal and have no conflicts,
Do ☐ Letter is enclosed.

Signed

Name: Jessica Frederick
Agency or Address: Land Use Historic Review

Please note that all Land Use Department property owner’s mailing lists and parcel maps are generated from the records maintained by the County Assessor and Treasurer Office. We are required to use this list to send notices to

Deb Gardner County Commissioner    Elise Jones County Commissioner    Matt Jones County Commissioner
MEMO TO: Referral Agencies
FROM: Summer Frederick, AICP, Principal Planner
DATE: June 28, 2019
RE: Docket SU-19-0009

**Docket SU-19-0009: Boulder Rifle Club, Inc.**

Request: Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building on parcels #146307001001 and #146307001002.

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Zoning: Agricultural (A) Zoning District

Applicant/Property Owner: Boulder Rifle Club, Inc., c/o Steve Martin
Agent: Rosi Dennett, Front Range Land Solutions

Special Use Review / Site Specific Development Plan is required of uses which may have greater impacts on services, neighborhoods, or environment than those allowed with only Building Permit Review. This process will review compatibility, services, environmental impacts, and proposed site plan.

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Please return responses to the above address by **August 2, 2019**.

_____ We have reviewed the proposal and have no conflicts.

 X Letter is enclosed.

Signed [Matt Ashley] PRINTED
Name Matt Ashley, Associate Property Agent
Agency or Address City of Boulder Open Space and Mountain Parks

Please note that all Land Use Department property owner’s mailing lists and parcel maps are generated from the records maintained by the County Assessor and Treasurer Office. We are required to use this list to send notices to Deb Gardner County Commissioner Elise Jones County Commissioner Matt Jones County Commissioner
the “property owner” of land in Boulder County. If you feel that you should not be considered a “property owner,” or if the mailing address used is incorrect, please contact the County Assessor’s Office at (303) 441-3530.
Referral Docket SU-19-0009
Boulder Rifle Club Special Use Review
August 2, 2019

City of Boulder Planning Department Comments:

Thank you for the opportunity to comment on these applications. City staff understands and recognizes the larger issue this proposal is attempting to address and remains committed to regional and statewide coordination on matters of shared concern.

The subject property is located within the Planning Area for the Boulder Valley Comprehensive Plan (BVCP), a jointly adopted plan by the city and county. The property lies outside the Boulder city limits and is designated Open Space – Other on the Land Use Map. The Open Space – Other designation indicates public and private land designated prior to 1981 that the city and county would like to preserve through various methods including but not limited to intergovernmental agreements, dedications or acquisitions. However, the land use designation appears to be consistent with the Open Space – Development Rights (or Restrictions) designation due to the conservation easement held by Boulder County Parks and Open Space encumbering the property. As a result, staff may examine a land use change on the site during the next regular update to the BVCP.

This property is also located within Area III – Rural Preservation of the BVCP, which is “where the city and county intend to preserve existing rural land uses and character” (BVCP Policy 1.12). The property is not eligible for annexation.

BVCP Policy 1.14 states that “new urban development” should not occur unless and until adequate urban facilities and services are available. City staff finds that the current proposal does not constitute New Urban Development for the following reasons:

- The proposal does not require a full range of urban facilities and services;
- The daily trips and number of users are relatively modest;
- The intensity and design of outdoor lighting; and
- The lack of an alternative site for that is appropriate for the proposed activity.

Our comments are based on the stated level of use. Future expansions could require urban services and as such, may need to be located within and served by the City of Boulder.

City of Boulder Open Space and Mountain Parks (OSMP) Comments:

Thank you for the opportunity to review the application referenced above. The property’s entire northern, eastern, and western boundaries are adjacent to City of Boulder Open Space and Mountain Parks.

P.O. Box 791 ∙ Boulder, Colorado 80306-0791 ∙ www.bouldercolorado.gov ∙ (303)441-3002 ∙ Fax (303)441-4478
Mountain Parks (OSMP) land. Please consider the following comments regarding this development application:

The proposal would create visual, noise and visitor experience impacts to OSMP’s open space system as an adjacent neighbor. As currently designed, the proposed range improvements are approximately 600 feet from the Hidden Valley Trail. OSMP recognizes that the Rifle Club has proposed engineered solutions, including berms and walls, to mitigate the normal County requirements of a 1,320-foot setback from all public trails and rights-of-way. In order to best mitigate noise and safety concerns and enhance the visitor experience, OSMP supports using both the engineered solutions and the 1,320-foot trail setback, however OSMP also notes the proposed Surface Danger Zone of the 300 yard range encroaches onto OSMP land which could impact the city’s ability to use that land for recreation, agriculture, resource conservation and other charter purposes. If that area is a requirement of approval, the applicant should redesign the range to eliminate encroachment on and impacts to OSMP.

Trail work for the Hidden Valley Trail has been planned as part of the OSMP North Trail Study Area (NTSA). Route changes to the Hidden Valley Trail were identified as part of the NTSA to mitigate noise and safety concerns and enhance the visitor experience. These route changes are anticipated to cost in the range of $500,000 to $1,000,000 depending on the final location and design. The entire trail complex around Mesa Reservoir is scheduled for public process/design/permitting/construction from 2021 to 2026. The applicant has expressed an interest in working with the City to provide funding toward projects in the area to realign the trail and improve visitor experience and the City would ask that this collaboration and proposed funding contribution be a condition of approval of this expansion.

If trail realignment is not required, given the size and location of the proposed development, there are likely to be impacts to the public’s viewshed from the adjacent open space and the Hidden Valley Trail. OSMP supports efforts and requirements by county staff to have the applicant design and landscape the proposed development to minimize impacts to the viewshed and maintain trees and vegetation that could help in screening.

All open space fences and boundaries must be respected at all times. No gates or other access points will be allowed from the subject property onto city owned open space lands without approval from OSMP. OSMP would like to highlight the need for thoughtful design of access roads, parking, and signage to prevent the possibility of guests and club members parking in the ROW, blocking existing OSMP gates and parking on OSMP property at peak usage times. It should be noted that the applicant currently uses the adjacent city-owned (not OSMP managed) parcel to the south for parking and access, but the current proposal locates all parking and access routes on the Boulder Rifle Club parcels. The applicant and the city are in discussions related to the Boulder Rifle Club’s interest regarding continued use of this neighboring parcel.

Weapons and shooting on or onto OSMP property is prohibited. BRC 5-8-3, 5-8-4, & 5-8 6 (and others) are in place to prohibit hunting, shooting on or onto, and possession of firearms on OSMP.

OSMP requests that an Environmental Impact Report be written prior to approval of the application to better understand possible impacts to resources and proposed mitigation measures related to construction and increased use. This report is requested due to the following potential environmental issues and impacts:
- There are wetland areas on the subject property as identified by the county. Therefore, OSMP suggests that the county consider the impacts to wildlife corridors and wetland habitat when evaluating the location and permissible size of the proposed development.

- The ponds on adjacent OSMP properties support native fish and act as a native fish refugia for Colorado Parks and Wildlife. The ponds support breeding populations of Plains Top Minnow – a Tier 1 species of greatest conservation need in CPW’s State Wildlife Action Plan. Because of this, the ponds are also considered Critical Wildlife Habitat in the Boulder County Comprehensive Plan’s Environmental Resources Update. OSMP requests extensive requirements for dust and erosion control and other appropriate measures be taken during construction as a condition of approval to avoid introducing silt or other materials into the ponds to ensure the aquatic habitat is not compromised.

- The application notes that an acoustic survey was conducted for the neighborhoods, but not on OSMP. This is a concern as the rifle club sits in a drainage that is a wildlife movement corridor. OSMP staff have observed mountain lions, coyotes, and deer using this area. Increased human use, increased light pollution and noise may negatively impact the way wildlife currently use the area. An acoustic survey on OSMP land should be a requirement of approval. Also, a study of light pollution spilling out onto OSMP land as a result of the new use should be a requirement of approval. Both the acoustic survey and the light study should include potential mitigation measures that could be taken if the levels are found to be excessive.

- Expansion and increased use of the facility may contribute to more lead on adjacent OSMP grasslands and in surface and groundwater discharge. OSMP would like more information on proposed contamination and abatement measures and requests the County require the use of lead-free and frangible rounds to mitigate this impact to wildlife health and water quality.

Construction access across city owned open space lands, storage of construction material or dumping of construction debris on city-owned open space lands are not allowed. Additionally, no dumping of trash, tree limbs, lawn clippings, or other debris is allowed on city-owned open space land and the trimming or removal of existing vegetation from OSMP property, or planting vegetation on OSMP property is prohibited.

The applicant should provide additional details regarding weed control and landscaping, including proposed native seed mix. Non-native plant materials should not be planted, particularly Mediterranean sage, myrtle spurge, purple loosestrife, Russian olive, or any other State of Colorado listed noxious weed species.

Following are some sources of information about the use of local native plants in landscaping:

https://conps.org/gardening-with-native-plants/

https://bouldercolorado.gov/osmp/tips-for-growing-native-plants
Apart from questions above related to wildlife impacts, the applicant’s commitments regarding outdoor lighting and building design and color palette to minimize visual impact as well as noise abatement measures should be included as conditions of approval.

The applicant can expect to experience conditions on the neighboring open space consistent with prairie dog occupation.

The applicant should be informed that the adjacent open space property is currently leased as an agricultural operation. The applicants should expect the operation of machinery, spreading of manure and other fertilizers, the feeding and pasturing of livestock, and the application of herbicides, insecticides, or application of irrigation water.

OSMP recognizes that there is a significant public benefit to providing a public shooting range that meets the requirements for the United States Forest Service (USFS) to close most of the dispersed shooting areas west of the City of Boulder. While these areas are not directly part of the OSMP system, they are likewise used to recreate by OSMP’s constituency. OSMP staff comments must balance protection of OSMP interests, while also being cognizant of the significant net public benefits to its constituents as well as local law enforcement. The possibility of OSMP Rangers and Boulder Police Department Officers getting additional range time and having unique training facilities, would have a positive professional impact on the City’s law enforcement officers and the public they serve. The current Rifle Club president has already extended the use of existing facilities to OSMP Rangers for additional training days in 2018 and 2019.

Please feel free to contact me if you have any questions or comments about this response.

Matt Ashley, Associate Property Agent, City of Boulder OSMP
Ashleym@bouldercolorado.gov
July 15, 2019

TO: Staff Planner, Land Use Department

FROM: Jessica Epstein, Environmental Health Specialist

SUBJECT: SU-19-0009: Boulder Rifle Club, Inc. project

OWNER: BOULDER RIFLE CLUB INC

PROPERTY ADDRESS: 4810 N. 26th Street (parcel # 146307001001) and parcel # 146307001002

SEC-TOWN-RANGE: 7-1N-70

The Boulder County Public Health (BCPH) – Environmental Health division has reviewed the submittals for the above referenced docket and has the following comments.

OWTS:

1. BCPH issued a repair permit for the installation of a vault toilet on 12/20/77. BCPH approved the installation on 4/19/79. The permit number is ON0005194.

2. BCPH issued a repair permit for the installation of a vault toilet on 9/6/94. BCPH approved the installation on 9/28/94. The permit number is ON0005192.

3. The owner or their agent (e.g., contractor) must apply for an OWTS permit for the proposed upgrades to the toilet facilities on the property. The OWTS permit must be issued prior to installation and before a building permit can be obtained. The OWTS must be installed, inspected and approved before a Certificate of Occupancy or Final Building Inspection approval will be issued by Land Use.

This concludes comments from the Public Health – Environmental Health division at this time. For additional information on the OWTS application process and regulations, refer to the following website: www.SepticSmart.org. If you have additional questions about OWTS, please do not hesitate to contact Jessica Epstein at (303) 441-1138.

Cc: OWTS file, owner, Land Use Department
TO: Summer Frederick, Land Use Department
FROM: Ron West, Natural Resource Planner
DATE: March 4, 2020
SUBJECT: Docket SU-19-0009, Boulder Rifle Club

Site Conditions

I have reviewed the submitted materials, and visited the parcel(s) on July 22, 2019. (Staff is mostly limiting discussion here to the larger of the two parcels – the “new” site.) Almost the entire 25-acre parcel has been either historically used as a major landfill, or has been heavily graded. The latter grading was to move the original creek channel – moved from crossing the center of the parcel, to a new channel that mostly hugs the northern edge of the parcel. The drainage flows from west to east.

After the landfill closed, it appears that there was never any formal revegetation of the site; current vegetation is almost all non-native species with a great number and density of noxious weeds. The county-listed noxious weed -- Scotch thistle -- is particularly dense, forming what is essentially a “forest” of huge, seven-foot plants over a large portion of the site.

Other county-listed noxious weeds are musk thistle, diffuse knapweed, and myrtle spurge. Other non-natives include sweet clover, curly dock, salsify, bindweed, storksbill, tree-of-heaven (Ailanthus), mullein, tumble mustard, cheat, smooth brome, Russian-olive, and alyssum. Several of these are state-listed noxious weeds. Two of the limited native species on-site are snakeweed and curly cup gumweed.

Prairie dogs are on-site as well, but of a limited area and number. There are also large expanses of broken concrete and rock on the surface and there are at least two, apparent groundwater monitoring wells, likely abandoned.

It is possible that the rare native – Bell’s twinpod (Physaria bellii) – occurs on shale outcrops near the north and west boundaries, but staff did not observe any. Staff did find paleontological resources in the northern shales – apparently Cretaceous bivalves.

County Comprehensive Plan Designations

The site has the following designations in the Boulder County Comprehensive Plan, and from other resource inventories.

- Environmental Conservation Area (ECA) – Boulder Valley Ranch/Beech
- Adjacent to Public Lands – City of Boulder OSMP, on north and west; the City also owns the parcel to the east, but it is not managed as open space
- Adjacent to Public Trail – Hidden Valley Trail, to the north; about 570 linear feet
distant from the parcel, at its closest
- Nearby Critical Wildlife Habitats – Lappin Pond, nearly adjacent on west; and BLIP Ponds, downstream to east
- Prairie Dogs – minimal
- Wetlands – marginal or none
- Significant Agricultural Lands of Local Importance – marginal, and no longer viable

Discussion

Staff has many questions on the details of the proposal. The main characteristic of the project would be a very large amount of grading. However, nearly all grading would take place in known deposits of municipal and construction refuse. Most of the site was used as a landfill, over several decades. Test bores of the subsurface confirm this at the site of the proposed structures, and historic aerial photos shown extensive and massive disturbances across the parcel.

It is unclear why such a large detention basin is necessary. This would cover a significant portion of the site. It was staff’s understanding that the “surfaces” of the shooting ranges are intended to be re-vegetated after construction, and periodically mowed. If this is incorrect, then they should be re-vegetated. Drawing C2.05 shows seeding only outside the range surfaces, and the existing ranges on the small parcel are not vegetated. Why not? A low-growth native species, such as buffalo grass, could be appropriate, though other native and non-native species could be considered.

Is such a large basin necessary for stormwater control? Is this because of the run-off from unvegetated ranges? This size could be necessary, but more information is required. Does the basin need to be designed for a 100-year event (see Drawing C2.02)? Staff is concerned about drainage and water quality off-site and downstream, given the important fish ponds to the east (see below).

The Preliminary Drainage Report states that flows from the parcel discharge “…to the Farmers Ditch.” This is not correct; the Farmers Ditch does cross this drainage, about 1700 feet to the east, but staff believes that there is no hydrologic connection between the ditch and the drainage. The report also states that, “No offsite sheetflow enters the site,” yet topographically some sheetflow on the west and north of the parcel enters drainages on the parcel.

Staff is concerned about what might be a huge quantity of refuse that would be exhumed during grading, given the proposal’s intention to re-use most of the cut on-site. The application states that, “…the grading plans were designed to accommodate most of the [cut] soil onsite” (page 5). Staff’s concern is that much of this material will not be “soil” at all. Contrary to page 5, the May 24, 2019, letter from Rocky Ridge Civil Engineering states that, “…substantial amounts of waste material is expected to be encountered and will need to be removed from the site.”

For example, would large pieces or quantities of broken concrete, or car bodies, or other large debris be re-buried in the areas of fill? (Staff also notes that the Grading Worksheet shows over 5000 cubic yards of excess cut, but believes that these numbers may have been
refined/changed, since the worksheet is from May 2019.)

At least some of this material should probably be removed from the parcel, and some could possibly be recycled, including concrete and scrap metals. It seems to be largely an “unknown” about what and how much of any type of material might be excavated, and decisions will be necessary on an on-going and case-by-case basis. However, some general approach to these excavations needs to be determined and approved before construction begins.

Critical Wildlife Habitats: An unnamed drainage flows across the north end of the parcel, from west to east. Its channel was moved, likely in the 1980’s, from flowing through the landfill site/parcel, to its current alignment on the north. This unnamed drainage eventually flows into Sixmile Reservoir to the east.

“BLIP” Ponds are three dammed ponds on this drainage, about 1700 feet to the east (named after Boulder Land, Irrigation and Power). Lappin Pond is another dammed pond, only 150 feet upstream from the subject parcel. All four of these ponds are designated as Critical Wildlife Habitat (CWH) in the Comprehensive Plan (CWH number 82).

The BLIP Ponds are being used as rearing habitat for plains topminnow (*Fundulus sciadicus*), one of Colorado’s small native “minnows.” The topminnow is a “Tier 1” species, which is of greatest conservation concern in the State Wildlife Action Plan, and is also a species of special concern in the county Comprehensive Plan. Management of this population is a joint effort between Open Space and Mountain Parks and Colorado Parks and Wildlife. One of the threats to the species is siltation/reduced water quality. Therefore, stormwater and erosion control both during construction and post-construction is a primary concern for the project. At least one iteration of the construction drawings – perhaps at 60 or 90 percent – should be reviewed by the county.

Other species use these ponds, primarily birds. At least 10 additional county species of concern likely use the ponds – avocet, bittern, yellow-headed blackbird, wood duck, great egret, chorus frog, great blue and black-crowned night herons, kingfisher, and tiger salamander.

Impacts to the amphibians are not expected, with the same caveat as above about maintaining good water quality. Potential impacts to the birds (all the above species are dependent on water bodies) would also key into water quality, however the biggest unknown is their responses to the sound of gunfire. Lappin pond is only about 600 linear feet from the closest new firing area, with other firing areas progressively more distant. The closest of the BLIP Ponds would be about 1800 feet distance from the closest new firing area.

It is likely that gunfire will disturb some avian use of the ponds, particularly at Lappin. However, there are several existing conditions that might lessen the new impacts. The existing shooting range already produces, at times, abundant sounds of gunfire. The most heavily used of the existing ranges is likely the indoor one, which can be used in all weather. The building itself mitigates sound impacts, while existing berms at the outdoor ranges partially mitigate gunfire sounds. The existing outdoor ranges are even closer to BLIP Ponds than the new ranges would be – about 1300 linear feet. The existing outdoor ranges are farther away from Lappin Pond than the new ranges would be – about 1100 feet.
Additionally, the BLIP Ponds are open to public for off-trail use (with a designated public trail only about 800 feet away), and human disturbances at the ponds – especially for waterfowl -- are on-going but irregular. Lappin Pond is currently closed to public use.

Finally, the “tolerance and acclimation” to gunfire sounds of individual bird species varies among species, yet remains largely an unknown factor.

Prairie Dogs: The application states that “…none are currently present.” Staff observed a small colony in the southern portion of the parcel, and 2018 aerial photos show about ten active burrows. This relatively small number could probably be passively moved to the west, where larger numbers exist on OSMP lands. A prairie dog barrier fence would likely be necessary to keep them from re-colonizing the parcel after construction.

Grading: The application shows some of the southern portion of the site is to be lowered by up to 16 feet, while some of the northern portion of the site is to raised by up to 19 feet. Some of the latter is apparently to accommodate backstops/berms. Staff does not have concerns with these topographic changes, per se, but does note the following particular areas.

Fill is to placed to the “bottom” of part of the drainage that runs south-to-north on the western edge of the site. The existing east side of this drainage is already steep and in unconsolidated material. Most importantly, this drainage runs off the subject parcel, on to OSMP lands, and into Lappin Pond, which is a Critical Wildlife Habitat. The new fill may make this eastern side even steeper. Robust erosion control and adequate revegetation is critical here.

At the northern end of the long ranges, a retaining wall is proposed behind the backstops. How would this be constructed while machinery stays out of the flowing bottom of the drainage on the north end? Again, this area is unconsolidated material and the drainage flows directly off-site to the east, to BLIP Ponds Critical Wildlife Habitat. Robust erosion control and adequate revegetation is also critical here.

Finally, the north, northeast, and eastern outside slopes of the retaining pond are to be steep and within feet of the existing drainage that flows to BLIP Ponds. Again, erosion control and revegetation are critical. For all of these areas, a simple silt fence would likely not be enough, and erosion control logs, hay bales or other methodologies should be added.

An Environmental Stewardship Plan is noted on page 13 of the Narrative. Would any other “ecological” aspects be addressed in this document, beyond lead management?

Discussions of expected impacts to adjacent City of Boulder lands is deferred to the Open Space and Mountain Parks Department.

Neither wetlands nor Agricultural Lands should be significantly impacted.

Recommendations

- The above questions and discussion points need to be addressed.
- A Revegetation Plan is required that includes native grass species to be used, mapped
delineation of all disturbance areas (this includes construction staging areas, roads, utility lines, and septic system), locations of silt fences or erosion control logs, and matting requirements where necessary.

- An extensive Weed Control Plan is required that includes the mapping of county-listed, noxious weed species on the entire parcel, with their intended control techniques specified. At the least, the county-listed noxious weeds -- Scotch and musk thistle, diffuse knapweed, and myrtle spurge -- are on-site.

- All Russian-olive trees – a state-listed noxious weed – on both properties should be cut down and immediately treated with a systemic herbicide to prevent re-sprouting.

- Surveys for both *Physaria* and paleontological resources are necessary, including an evaluation of the extent fossils.

- How and where will the facility be fenced?

- New electrical service to the facility must be installed underground.

- There is an existing overhead power line that traverses the parcel east/west. Wouldn’t this line potentially be in the line-of-fire of the longer ranges?
August 9, 2019

TO: Summer Frederick, AICP, Principal Planner; Land Use Department

FROM: Amelia Willits, Development Review Planner

SUBJECT: Docket # SU-19-0009: Boulder Rifle Club, Inc.

The Transportation Department has reviewed the above referenced docket and has the following comments:

1. The subject property is accessed via N 26th Street, a gravel Boulder County owned and maintained right-of-way (ROW) with a Functional Classification of Collector. Legal access has been demonstrated via adjacency to this public ROW.

2. There is no evidence of an existing Access Permit. An Access Permit shall be issued at the time of building permit review. No special application procedure is necessary, the Access Permit shall be issued concurrently with the Building Permit.

3. The proposed paved access drive varies 18 feet to 24 feet in width, which is in compliance with the Boulder County Multimodal Transportation Standards (“the Standards”). The grade of the existing gravel driveway is flat, which is in conformance with the Standards.

4. There shall be accommodations for one bicycle parking space for every 10 automobile parking spaces, per Article 5.6.5.3 of the Standards. The bicycle parking spaces shall be no more than 50 feet from the proposed entrance of the Future Indoor Range Building, four Range Shelters and the exiting Indoor Range Building A. Two bicycle parking racks are indicated on the plans, at the southwestern portion of the new development, however, for the use, a total of 20 bicycle parking spaces are required.

5. The applicant shall provide landscape screening along N 26th Street of the surface lot, as outlined in Article 5.6.2.5 – Landscaping, of the Standards, to reduce the visibility of the proposed surface lot from the public view.

6. Staff has reviewed the Transportation System Impact Study (TSIS) and finds that traffic impacts have been appropriately considered. Additionally, as mentioned in the application materials and TSIS, it appears that the primary goal for the earthwork is to balance on-site; staff agrees with this approach. However, also included in the narrative and application materials is the statement: “The existing site is known as a historic garbage dump and substantial amounts of waste material is expected to be encountered and will need to be removed from the site. This volume of material has not been calculated”. Staff understands that the nature of the material prevents an accurate estimation of waste material, but this prevents staff from being able to consider and respond to the possible traffic-related impact that the waste removal may generate. If the amount of waste to be disposed of off-site is significant, the applicant may be required to submit a Traffic Control Plan, or Method of Handling Traffic, to mitigate impacts to the surrounding properties and traveling public. The applicant may also be required to supply a hauling plan, with haul routes identified, and locations of disposal sites.
7. Staff has reviewed the Preliminary Drainage Report, submitted with the application materials and finds that the increase in runoff has been considered and planned in an appropriate manner. The applicant should be aware, however, that no drainage impacts shall be diverted onto neighboring properties.

8. As a part of Boulder County’s water quality protection and municipal separate storm sewer system construction program, a stormwater quality permit (SWQP) is required because the area of disturbance on the subject property exceeds one acre in size. The SWQP will need to be submitted with any building or grading permit applications and obtained prior to any work beginning on this project.

This concludes our comments at this time.
TO: Ms. Summer Frederick  
FROM: Ing. Clark Vargas, P.E., SME  
DATE: March 18, 2020  
SUBJECT: Boulder Rifle Club  
Review of Submittal Dated 8-28-19  
Proj#  20003.09

We have conducted a review of the drawings provided G0, A1, A3.1, G1.01, C2.02, C2.02, C2.05, C3.01, C3.02, C3.03, C3.04 and C3.05, pursuant to 4-602 F 1.a (I). Architectural drawings by Moore and Civil drawings by Rocky Ridge and the application from the owner The Boulder Rifle and pistol Club (Club)(Applicant).

The main purpose of this review are the requirement of the club to demonstrate their control of the Surface Danger Zone (SDZ) within the lands owned or controlled by the applicant.

Drawing G0 attempts to do that but does not demonstrate meeting the requirements.

An SDZ is the depiction of the area in danger from the maximum range ammunition allowed, for each range, since each is constructed at a different elevation on G0. The zone shown for range (1) the 300 yd range is a short-truncated cone that does not run the max distance of a 7.62 x51 (.308), which is over 17,000 ft. the 25 M range shows something similar. All ranges need to establish their SDZ.

The county requires Backstops 20 ft high and appropriate height side berms to contain the horizontal travel of projectiles. That being met and no fully automatic arms being used, or grenades or other explosive devises being allowed there is no necessity to consider the 100’ secondary danger areas or the 5-degree ricochet areas.

What remains to be analyzed is the projection of the direct fire zone and the 5-degree impact area. Those are to be addressed by the analysis of over shots. That is overshots over the backstop up to the muzzle rise of 29 degrees above horizontal. Those shots are then purportedly contained by the extended roof overhang shown on A3.1 legend “note 10”.

I think, I understand what is intended, and that is to meet the “No Blue Sky “concept of design that, if you cannot see blue Sky a direct bullet can’t get out. We note the length of the shed does not vary, the height to the bottom of the overhang does and the width of ballistic steel on the roof needs to be set by the 29-degree angle from the allowed worst shooting position.

There are 3 shooting positions to be analyzed  First is standing at 5.5’AAF, second is sitting at 3.5 AFF and third is prone 1’ AFF. What modality of Shooting is being allowed in each shed? That has to be stated on the drawings.
We note that only rifle sitting benches are being provided thru out, with a low single baffled roof overhang that will not be very comfortable sound wise and will be loud for the shooters. We suggest that at least pistol benches for standing should also be provided, for ranges 4 & 5.

I’ve numbered public ranges 1-5 for ease of reference and range control. Ranges 4 and 5 should be pistol ranges for standing and sitting, ranges 2 & 3 rifle benches for standing sitting and prone. On range 1, you might consider rifle benches, for sitting and prone on a “prone table 42” AFF”. The owner needs to decide what he wants, once it is decided we have to live with it, and I’ll review it that way. Note: Prone, at 12” AFF, creates the greatest number of baffles.

We noted that a standard shooting shed is being provided and are for 12 lanes each, for a lane spacing of 7.25’. We point out the required lane widths for ranges 1-3 is 6’ and for ranges 4&5 is 4’. owner can get more yield in the same space, about 18 more positions. At $12.00 a visit, is an additional income streams for practically the same construction cost.

On Dwg. G0 we note the general note “Typical Boulder County Standard SDZ”, there is no Boulder SDZ. The SDZ is Physical phenomenon as to where a firearm, fired at a ground target projectile might end and create the SDZ. The task is to prove the bullet will stay on the property.

The county requirement is that the projectile stays within the applicant’s property or on properties he controls (my interpretation).

The general note further states and we modified to state what was I tended ... with mitigating 20’ backstop,8 ft side walls and cantilevered (ballistic) roof limiting escape angles (use trajectories) to below (add 6” on side walls top and 2’) on backstops tops.

This general note requirements is not sufficient information to evaluate the safety requirement to keep the bullet on the applicant-controlled property at this approval level. It must be shown for each range.

The quality of the back stop must be demonstrated that it can stop the maximum projectile, store the projectile “ballistic sand or rubber bullet catcher” and be able to be accessed for projectile recycle (generally a 10’ graded access). The back stop proposed looks like a vertical wall with sloped ballistic sand or rubber impact face please provide a section for each to understand the intent.

The side walls are proposed at 8’ and look like “Hesco Bags” or “Mafia Blocks” and we are sure higher walls will be required they may vary 12‘to 14’for the overhead baffles to frame into. Do a wall height analysis with longitudinal and cross sections.

We need a section to depict the wall and a longitudinal section or view depicting the top elevations of each, this is requested for each range, as each has its own ballistic solution but since ranges are nested at stepped floor elevation the worst condition governs.

We suggest that a series of firing range FR drawings to succinctly depict the ballistic containment design for the purposes of the next review submittal so compliance can be simply read and ascertained. I suggest that the Submittal be modified to rename Dwg. G0 “Master Conceptual Plan” and that a table of range spaces be provided defined ranges 1-5, to defined as to firing distance firing lane width, number of lanes each, etc. That a range plan transverse section from and thru the shooting shed thru, the backstop be developed showing the firing line target lines as intended. And label each element. This transverse section must demonstrate the
“No blue sky “design. This section determines the height of walls show elevations to the bottom of the roof overhang detail and or how many baffle lines may be required to fully contain the projectiles.

In addition, show cross sections for each range showing the height of targets intended and side wall elevations.

For the maintenance road between ranges 2 and 3 shown a cross sections showing that the road is shadowed and if not limit access with locked gates.

All firing lines need to meet the 180-degree rule in that is the berm must extend to 5’ behind the firing line. If that is not possible then add steel to the shooting shed wall and devise access control to that range. Provide for access to the back stops. We see about 15 additional drawings added to the set, but all are layer management of existing work.

That being said and from my prior range planning work in the Denver Metropolitan area for CPW. I’m enthused about this project. It is a much-needed project for the State of Colorado and its citizens. It will go a long way towards solving the Front Range problem in the National Forest. I also understand the amount of effort that has gone into the design. My comments are made to not create any major redesign of the grading effort. I’m willing to have the designers conference contact me with questions and I’ll provide the accepted industry prior solutions to these design problems. I have also spoken with CPW about design details, I provided prior to CPW and they have stated are not yet approved as CPW Standards but are certainly available as a reference as to how ranges are designed.

Civil comment consists of Two, (1) C2.02 in the grading show horizontal target line parapets for each target line.

(2) C2.03 inlets a and b have to be the siltation type overflow inlets, so silt settles and does not overflow

Call me if you have any questions.

Encl: Drawings
MEMO

TO: Summer Frederick, AICP, Planning Division Manager
FROM: Michelle Huebner, Plans Examiner Supervisor
DATE: June 14, 2020

RE: Referral Response, SU-19-0009: Boulder Rifle Club, Inc. Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building.

Location: 4810 N. 26th Street

Thank you for the referral. We have the following comments for the applicants:

1. **Building Permits.** Building permits, plan review and inspection approvals and a Certificate of Occupancy (“C.O.”) are required for any new buildings. Separate building permits are required for each structure.

   For a complete list of when building permits are required, please refer to the county’s adopted 2015 editions of the International Codes and code amendments, which can be found via the internet under the link:


2. **Minimum Plumbing Fixtures.** The plumbing fixtures count needs to meet or exceed the requirements of IBC Chapter 29, including the need for accessible restrooms and fixtures.

3. **Accessibility.** Chapter 11 of the IBC and referenced standard ICC A117.1-09 provide for accessibility for persons with disabilities. Any building permit submittals are to include any applicable accessibility requirements, including accessible parking, signage, accessible routes and accessible fixtures and features.

4. **Grading Permit.** A separate grading permit and plan review and inspections approvals are required for the proposed non-foundational grading. Please refer to the county’s adopted 2015 editions of the International Codes and code amendments, including IBC Appendix Chapter J for grading.
5. **Observation Reports.** The design professional responsible for the design or a similarly qualified Colorado-licensed design professional is to observe the grading and submit a stamped report to Building Safety & Inspection Services for review and approval. The final report is to state that the work has been completed in substantial conformance with the approved engineered plans.

6. **Design Wind and Snow Loads.** The design wind and ground snow loads for the property are 160 mph (Vult) and 40 psf, respectively.

7. **Fire Department.** It appears that the site is served by BOULDER RURAL Fire Protection District. A separate referral response from the fire department should also be forthcoming. The fire department may have additional requirements in accordance with their International Fire Code (“IFC”) adoption. Also, the Fire Protection District must provide written documentation to Boulder County Building Safety and Inspection Services approving the building permit plans and specifications of projects before the building permit can be issued.

8. **Plan Review.** The items listed above are a general summary of some of the county’s building code requirements. A much more detailed plan review will be performed at the time of building permit(s) application, when full details are available for review, to assure that all applicable minimum building codes requirements are to be met.

9. **Meeting.** When you are ready to review construction drawings with the plan review team. Please make an appointment with our Plans Examiner Supervisor Michelle Huebner. mhuebner@bouldercounty.org 720-564-2616.

If the applicants should have questions or need additional information, we'd be happy to work with them toward solutions that meet minimum building code requirements. Please call (720) 564-2640 or contact us via e-mail at building@bouldercounty.org
Thank you for contacting the Colorado Department of Public Health and Environment (CDPHE). Please note that the following requirements and recommendations apply to many but not all projects referred by local governments. Also, they are not intended to be an exhaustive list and it is ultimately the responsibility of the applicant to comply with all applicable rules and regulations. CDPHE’s failure to respond to a referral should not be construed as a favorable response.

**Hazardous and Solid Waste**

The applicant must comply with all applicable hazardous and solid waste rules and regulations.

Hazardous waste regulations are available here: [https://www.colorado.gov/pacific/cdphe/hwregs](https://www.colorado.gov/pacific/cdphe/hwregs).

Solid waste regulations are available here: [https://www.colorado.gov/pacific/cdphe/swregs](https://www.colorado.gov/pacific/cdphe/swregs).

Applicable requirements may include, but are not limited to, properly characterizing all wastes generated from this project and ensuring they are properly managed and disposed of in accordance with Colorado’s solid and hazardous waste regulations.

If you have any questions regarding hazardous and/or solid waste, please contact CDPHE’s Hazardous Materials and Waste Management Division (HMWMD) by emailing comments.hmwmd@state.co.us or calling 303-692-3320.

**Water Quality**

The applicant must comply with all applicable water quality rules and regulations. The Water Quality Control Division (WQCD) administers regulatory programs that are generally designed to help protect both Colorado’s natural water bodies (the clean water program) and built drinking water systems. Applicants must comply with all applicable water quality rules and regulations relating to both clean water and drinking water. All water quality regulations are available here: [https://www.colorado.gov/pacific/cdphe/water-quality-control-commission-regulations](https://www.colorado.gov/pacific/cdphe/water-quality-control-commission-regulations).

**Clean Water Requirements**

Applicable clean water requirements may include, but are not limited to, obtaining a stormwater discharge permit if construction activities disturb one acre or more of land or if they are part of a larger common plan of development that will disturb one or more acres of land. In determining the area of construction disturbance, WQCD looks at the entire plan, including disturbances associated with utilities, pipelines or roads constructed to serve the facility.
Please use the Colorado Environmental Online Services (CEOS) to apply for new construction stormwater discharge permits, modify or terminate existing permits and change permit contacts.

For CEOS support please see the following WQCD website: https://www.colorado.gov/pacific/cdphe/cor400000-stormwater-discharge
or contact:
Email: cdphe_ceos_support@state.co.us or cdphe_wqcd_permits@state.co.us
CEOS Phone: 303-691-7919
Permits Phone: 303-692-3517

Drinking Water Requirements

Some projects may also need to address drinking water regulations if the proposed project meets the definition of a “Public Water System” per the Colorado Primary Drinking Water Regulations (Regulation 11):

A Public Water System means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least 25 individuals daily at least 60 days per year. A public water system is either a community water system or a non-community water system. Such term does not include any special irrigation district. Such term includes:

(a) Any collection, treatment, storage, and distribution facilities under control of the supplier of such system and used primarily in connection with such system.

(b) Any collection or pretreatment storage facilities not under such control, which are used primarily in connection with such system.

If applicable, the project would need to meet all applicable requirements of Regulation 11 including, but not limited to, design review and approval; technical, managerial and financial review and approval; having a certified operator; and routine monitoring and reporting. For questions regarding drinking water regulation applicability or other assistance and resources, visit this website: https://www.colorado.gov/pacific/cdphe/tools-drinking-water-facilities-managers

If you have any other questions regarding either clean or drinking water quality, please contact CDPHE’s WQCD by emailing cdphe.commentswqcd@state.co.us or calling 303-692-3500.

Air Quality

The applicant must comply with all relevant state and federal air quality rules and regulations. Air quality regulations are available here: https://www.colorado.gov/pacific/cdphe/aqcc-regs.
Air Pollutant Emissions Notices (APENs) and Permits

Applicable requirements may include, but are not limited to, reporting emissions to the Air Pollution Control Division (APCD) by completing an APEN. An APEN is a two in one form for reporting air emissions and obtaining an air permit, if a permit will be required. While only businesses that exceed the Air Quality Control Commission (AQCC) reporting thresholds are required to report their emissions, all businesses - regardless of emission amount - must always comply with applicable AQCC regulations.

In general, an APEN is required when uncontrolled actual emissions for an emission point or group of emission points exceed the following defined emission thresholds:

<table>
<thead>
<tr>
<th>Pollutant Category</th>
<th>UNCONTROLLED ACTUAL EMISSIONS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Attainment Area</td>
</tr>
<tr>
<td>Criteria Pollutant</td>
<td>2 tons per year</td>
</tr>
<tr>
<td>Lead</td>
<td>100 pounds per year</td>
</tr>
<tr>
<td>Non-Criteria Pollutant</td>
<td>250 pounds per year</td>
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</tbody>
</table>

Uncontrolled actual emissions do not take into account any pollution control equipment that may exist. A map of the Denver Metropolitan Ozone Non-attainment area can be found on the following website: [http://www.colorado.gov/airquality/ss_map_wm.aspx](http://www.colorado.gov/airquality/ss_map_wm.aspx).

In addition to these reporting thresholds, a Land Development APEN (Form APCD-223) may be required for land development. Under Colorado air quality regulations, land development refers to all land clearing activities, including but not limited to land preparation such as excavating or grading, for residential, commercial or industrial development. Land development activities release fugitive dust, a pollutant regulation by APCD. Small land development activities are not subject to the same reporting and permitting requirements as large land activities. Specifically, land development activities that are less than 25 contiguous acres and less than 6 months in duration do not need to report air emissions to APCD.

It is important to note that even if a permit is not required, fugitive dust control measures included in the Land Development APEN Form APCD-223 must be followed at the site. Fugitive dust control techniques commonly included in the plan are included in the table below.

<table>
<thead>
<tr>
<th>Control Options for Unpaved Roadways</th>
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<tbody>
<tr>
<td>Watering</td>
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<tr>
<td>Paving</td>
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<tr>
<td>Graveling</td>
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<td></td>
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<tr>
<td>Use of chemical stabilizer</td>
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<tr>
<td>Controlling vehicle speed</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Control Options for Mud and Dirt Carry-Out Onto Paved Surfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravel entry ways</td>
</tr>
<tr>
<td>Covering the load</td>
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<tr>
<td></td>
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<tr>
<td>Washing vehicle wheels</td>
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<tr>
<td>Not overfilling trucks</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Options for Disturbed Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watering</td>
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<tr>
<td>Revegetation</td>
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<tr>
<td></td>
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<tr>
<td>Application of a chemical stabilizer</td>
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<tr>
<td>Controlling vehicle speed</td>
</tr>
<tr>
<td>Compaction</td>
</tr>
<tr>
<td>Wind Breaks</td>
</tr>
<tr>
<td>Synthesis or Natural Cover for Slopes</td>
</tr>
</tbody>
</table>

Additional information on APENs and air permits can be found on the following website: [https://www.colorado.gov/pacific/cdphe/air/do-you-need-an-apen](https://www.colorado.gov/pacific/cdphe/air/do-you-need-an-apen). This site explains the process to obtain APENs and air quality permits, as well as information on calculating emissions, exemptions, and additional requirements. You may also view AQCC Regulation Number 3 at [https://www.colorado.gov/pacific/cdphe/aqcc-reg](https://www.colorado.gov/pacific/cdphe/aqcc-reg) for the complete regulatory language.

If you have any questions regarding Colorado’s APEN or air permitting requirements or are unsure whether your business operations emit air pollutants, please call the Small Business Assistance Program (SBAP) at 303-692-3175 or 303-692-3148.

If you have more general questions about air quality, please contact CDPHE’s APCD by emailing [cdphe.commentsapcd@state.co.us](mailto:cdphe.commentsapcd@state.co.us) or calling 303-692-3100.

**Health Equity and Environmental Justice**

CDPHE notes that certain projects have potential to impact vulnerable minority and low-income communities. It is our strong recommendation that your organization consider the potential for disproportionate environmental and health impacts on specific communities within the project scope and if so, take action to mitigate and minimize those impacts. This includes interfacing directly with the communities in the project area to better understand community perspectives on the project and receive feedback on how it may impact them during development and construction as well as after completion. We have included some general resources for your reference.

Additional Resources:
- [CDPHE’s Health Equity Resources](https://www.colorado.gov/pacific/cdphe/health-equity)
- [CDPHE’s Checking Assumptions to Advance Equity](https://www.colorado.gov/pacific/cdphe/checking-assumptions)
- [EPA’s Environmental Justice and NEPA Resources](https://www.epa.gov/environmental-justice)

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C29
MEMO TO: Referral Agencies  
FROM: Summer Frederick, AICP, Planning Division Manager  
DATE: June 11, 2020  
RE: Re-Referral for Docket SU-19-0009

THIS IS A RE-REFERRAL FOR THE DOCKET LISTED BELOW

This docket is being re-noticed because revised and additional materials have been submitted by the applicant.

IF YOU HAVE REPLIED TO THE ORIGINAL REFERRAL LETTER AND HAVE NO FURTHER COMMENTS, NO ACTION IS REQUIRED.

Docket SU-19-0009: Boulder Rifle Club, Inc.
Request: Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building on parcels #146307001001 and #146307001002.
Location: 4810 N. 26th Street, Parcel #s 146307001001 and 146307001002, at the northern terminus of N 26th Street, approximately 0.68 mile north of its intersection with US 36, in Section 7, Township 1N, Range 70W.
Zoning: Agricultural (A) Zoning District
Applicant/Property Owner: Boulder Rifle Club, Inc., c/o Steve Martin
Agent: Rosi Dennett, Front Range Land Solutions

Special Use Review / Site Specific Development Plan is required of uses which may have greater impacts on services, neighborhoods, or environment than those allowed with only Building Permit Review. This process will review compatibility, services, environmental impacts, and proposed site plan.

This process includes public hearings before the Boulder County Planning Commission and the Board of County Commissioners. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of these hearings.

The Community Planning & Permitting staff, Planning Commission, and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter to the Community Planning & Permitting Department at P.O. Box 471, Boulder, Colorado 80306 or via email to planner@bouldercounty.org. All comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to call the Community Planning & Permitting Department at 303-441-3930 or email planner@bouldercounty.org to request more information. If you have any questions regarding this application, please contact me at 720-564-2603 or sfrederick@bouldercounty.org.

Please return responses to the above address by July 16, 2020.
(Please note that due to circumstances surrounding COVID-19, application timelines and deadlines may need to be modified as explained in the CPP Notice of Emergency Actions issued March 23, 2020 (see https://boco.org/covid-19-cpp-notice-20200323).

☐ We have reviewed the proposal and have no conflicts.
☐ Letter is enclosed.

Signed _________________________________ PRINTED
Name____________________________
Agency or Address _________________________________________________________________

Please note that all Community Planning & Permitting Department property owner’s mailing lists and parcel maps are generated from the records maintained by the County Assessor and Treasurer Office. We are required to use this list to send notices to the “property owner” of land in Boulder County. If you feel that you should not be considered a “property owner,” or if the mailing address used is incorrect, please contact the County Assessor’s Office at (303) 441-3530.

Sarah Brucker
Colorado Division of Water Resources

ATTACHMENT C
MEMO TO: Referral Agencies  
FROM: Summer Frederick, AICP, Planning Division Manager  
DATE: June 11, 2020  
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**Docket SU-19-0009: Boulder Rifle Club, Inc.**

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Location: 4810 N. 26th Street, Parcel #s 146307001001 and 146307001002, at the northern terminus of N 26th Street, approximately 0.68 mile north of its intersection with US 36, in Section 7, Township 1N, Range 70W.

Zoning: Agricultural (A) Zoning District

Applicant/Property Owner: Boulder Rifle Club, Inc., c/o Steve Martin

Agent: Rosi Dennett, Front Range Land Solutions

Special Use Review / Site Specific Development Plan is required of uses which may have greater impacts on services, neighborhoods, or environment than those allowed with only Building Permit Review. This process will review compatibility, services, environmental impacts, and proposed site plan.

This process includes public hearings before the Boulder County Planning Commission and the Board of County Commissioners. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of these hearings.

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Please return responses to the above address by **July 16, 2020.**
(Please note that due to circumstances surrounding COVID-19, application timelines and deadlines may need to be modified as explained in the CPP Notice of Emergency Actions issued March 23, 2020 (see https://boco.org/covid-19-cpp-notice-20200323).

We have reviewed the proposal and have no conflicts.

X Letter is enclosed.

Signed _________________________________ PRINTED
Name ______________________________
Agency or Address _________________________________________________________________

Please note that all Community Planning & Permitting Department property owner’s mailing lists and parcel maps are generated from the records maintained by the County Assessor and Treasurer Office. We are required to use this list to send notices to the “property owner” of land in Boulder County. If you feel that you should not be considered a “property owner,” or if the mailing address used is incorrect, please contact the County Assessor’s Office at (303) 441-3530.

Matt Ashley, Associate Property Agent
City of Boulder Open Space and Mountain Parks
CITY OF BOULDER

Referral Docket SU-19-0009
Boulder Rifle Club Special Use Review
July 16, 2020

City of Boulder Planning Department Comments:

Thank you for the opportunity to comment on the re-referral of this application. City staff understands and recognizes the larger issue this proposal is attempting to address and remains committed to regional and statewide coordination on matters of shared concern.

The subject property is located within the Planning Area for the Boulder Valley Comprehensive Plan (BVCP), a jointly adopted plan by the city and county. The property lies outside the Boulder city limits and is designated Open Space – Other on the Land Use Map. The Open Space – Other designation indicates public and private land designated prior to 1981 that the city and county would like to preserve through various methods including but not limited to intergovernmental agreements, dedications or acquisitions. However, the land use designation appears to be consistent with the Open Space – Development Rights (or Restrictions) designation due to the conservation easement held by Boulder County Parks and Open Space encumbering the property. As a result, staff may examine a land use change on the site during the next regular update to the BVCP.

This property is also located within Area III – Rural Preservation of the BVCP, which is “where the city and county intend to preserve existing rural land uses and character” (BVCP Policy 1.12). The property is not eligible for annexation.

BVCP Policy 1.14 states that “new urban development” should not occur unless and until adequate urban facilities and services are available. City staff finds that the current proposal does not constitute New Urban Development for the following reasons:

- The proposal does not require a full range of urban facilities and services;
- The daily trips and number of users are relatively modest;
- The intensity and design of outdoor lighting is not excessive; and
- The lack of an alternative site that is appropriate for the proposed activity.

Our comments are based on the stated level of use. Future expansions could require urban services and as such, may need to be located within and served by the City of Boulder.

City of Boulder Open Space and Mountain Parks (OSMP) Comments:

Thank you for the opportunity to review the re-referral of the application referenced above. The property’s entire northern, eastern, and western boundaries are adjacent to City of Boulder Open Space and Mountain Parks (OSMP) land. Please consider the following comments regarding this development application:
The proposal would create visual, noise and visitor experience impacts to OSMP’s open space system as an adjacent neighbor. The applicant has provided additional noise studies from the surrounding OSMP lands which show noise will be similar to or exceed the current levels. With the expansion, and projected increase in use, the noise impacts are expected to be more frequent and lasting. Additionally, as currently designed, the proposed range improvements are approximately 600 feet from the Hidden Valley Trail. OSMP recognizes that the Rifle Club has proposed engineered solutions, including berms and walls, to mitigate the normal County requirements of a 1,320-foot setback from all public trails and rights-of-way. In order to best mitigate noise and safety concerns and enhance the visitor experience, OSMP supports using both the engineered solutions and the 1,320-foot trail setback.

Trail work for the Hidden Valley Trail has been planned as part of the OSMP North Trail Study Area (NTSA). Route changes to the Hidden Valley Trail were identified as part of the NTSA to mitigate noise and safety concerns and enhance the visitor experience. These route changes are anticipated to cost in the range of $500,000 to $1,000,000 depending on the final location and design. The entire trail complex around Mesa Reservoir is scheduled for public process/design/permitting/construction from 2021 to 2026. The applicant has expressed an interest in working with the City to provide funding toward projects in the area to realign the trail and improve visitor experience and the City would ask that this collaboration and a significant funding contribution be a condition of approval of this expansion, especially if the applicant desires or is required to relocate the trail within a specified timeframe. The applicant notes a commitment of $30,000 toward trail relocation, signage and fencing. It should be noted, the applicant made a payment in this amount as part of an agreement with the City where the payment was characterized as compensation for transfer of other city-owned land. The applicant has made no payment to the open space fund.

If trail realignment is not required, given the size and location of the proposed development, there are likely to be impacts to the public’s viewshed from the adjacent open space and the Hidden Valley Trail. OSMP supports efforts and requirements by county staff to have the applicant design and landscape the proposed development to minimize impacts to the viewshed and maintain trees and vegetation that could help in screening.

Weapons and shooting on or onto OSMP property is prohibited. BRC 5-8-3, 5-8-4, & 5-8 6 (and others) are in place to prohibit hunting, shooting on or onto, and possession of firearms on OSMP.

Expansion and increased use of the facility may contribute to more lead on adjacent OSMP grasslands and in surface and groundwater discharge. OSMP would like more information on proposed contamination and abatement measures and requests the County require the use of lead-free and frangible rounds to mitigate this impact to wildlife health and water quality.

Construction access across city owned open space lands, storage of construction material or dumping of construction debris on city-owned open space lands are not allowed. Additionally, no dumping of trash, tree limbs, yard waste, or other debris is allowed on city-owned open space land and the trimming or removal of existing vegetation from OSMP property, or planting vegetation on OSMP property is prohibited.

All open space fences and boundaries must always be respected. No gates or other access points will be allowed from the subject property onto city owned open space lands without approval from OSMP. OSMP would like to highlight the need for thoughtful design of access roads, parking, and signage to prevent the possibility of guests and club members parking in the ROW, blocking existing OSMP gates and parking on OSMP property at peak usage times.
OSMP recommends the following seed mix instead of the mix in the applicant’s revegetation plans:

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Variety</th>
<th>% of Mix</th>
<th>PLS Lbs. per acre (Broadcast Seeding Rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pascopyrum smithii</td>
<td>Western wheatgrass</td>
<td>Arriba</td>
<td>20</td>
<td>6.4</td>
</tr>
<tr>
<td>Elymus lanceolatus</td>
<td>Thicksipe wheatgrass</td>
<td>Criliana</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Elymus trachycaulus</td>
<td>Slender wheatgrass</td>
<td>Pryor</td>
<td>10</td>
<td>2.2</td>
</tr>
<tr>
<td>Nassella viridula</td>
<td>Green needlegrass</td>
<td>Lodorm</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Bouteloua curtipendula</td>
<td>Sideoats grama</td>
<td>Butte</td>
<td>15</td>
<td>2.7</td>
</tr>
<tr>
<td>Chondrosum gracile</td>
<td>Blue grama</td>
<td>Bad River</td>
<td>15</td>
<td>0.9</td>
</tr>
<tr>
<td>Sporobolus cryptandrus</td>
<td>Sand dropseed</td>
<td>Native</td>
<td>10</td>
<td>0.1</td>
</tr>
<tr>
<td>Buchloe dactyloides</td>
<td>Buffalograss</td>
<td>Bison</td>
<td>5</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Total PLS Lbs. per acre</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>18.9</strong></td>
</tr>
</tbody>
</table>

The applicant’s commitments regarding outdoor lighting and building design and color palette to minimize visual impact as well as noise abatement measures should be included as conditions of approval. The applicant should also be required to submit a weed control plan.

The applicant can expect to experience conditions on the neighboring open space consistent with prairie dog occupation.

The applicant should be informed that the adjacent open space property is currently leased as an agricultural operation. The applicants should expect activities consistent with agricultural use, such as the operation of machinery, spreading of manure and other fertilizers, the feeding and pasturing of livestock, use of irrigation water, and the application of herbicides and insecticides.

OSMP recognizes that there is a significant public benefit to providing a public shooting range that meets the requirements for the United States Forest Service (USFS) to close most of the dispersed shooting areas west of the City of Boulder. While these areas are not directly part of the OSMP system, they are likewise used to recreate by OSMP’s constituency. OSMP staff comments must balance protection of OSMP interests, while also being cognizant of the significant net public benefits to its constituents as well as local law enforcement.

Please feel free to contact us if you have any questions or comments about this response.

Bethany Collins, Real Estate Supervisor, OSMP, collinsb@bouldercolorado.gov, 720-415-1543
Matt Ashley, Associate Property Agent, OSMP, ashleym@bouldercolorado.gov, 303-828-6402
Phil Kleisler, Senior Planner, PDS, kleislerp@bouldercolorado.gov, 303-441-4497
We have reviewed the re-referral for SU-19-0009, Boulder Rifle Club, Inc., and do not have any additional or revised comments to provide. Please continue to refer to our previous comment letter of July 17, 2019. The signed response form for the re-referral is attached for your records. Thanks,

Sarah Brucker
Water Resources Engineer

P 303.866.3581 x 8249
1313 Sherman St., Suite 821 Denver CO 80203
sarah.brucker@state.co.us | www.colorado.gov/water

On Thu, Jun 11, 2020 at 2:13 PM Milner, Anna <amilner@bouldercounty.org> wrote:

Please click here to access the electronic Re-Referral packet for SU-19-0009, Boulder Rifle Club, Inc. project at 4810 N. 26th Street (parcel #146307001001) and parcel # 146307001002.

Please return responses and direct any questions to Summer Frederick by July 16, 2020. (Boulder County internal departments and agencies: Please attach the referral comments in Accela.)

Best Regards,

Anna

Anna Milner | Admin. Lead Tech.

Boulder County Community Planning & Permitting (formerly Land Use and Transportation) – We’ve become a new department!

Pronouns: she/her/hers
PLEASE NOTE: In an effort to mitigate the spread of COVID-19, the Boulder County Community Planning & Permitting physical office at 2045 13th St. in Boulder is CLOSED to the public until further notice. We will continue to operate remotely, including the online acceptance of building permits and planning applications. Please visit our webpage at www.boco.org/cpp for more detailed information and contact emails for groups in our department. You may also leave a message on our main line at 303-441-3930 and the appropriate team member will return your call. Thank you for your adaptability and understanding in this extraordinary time!
Subject: Referral packet for SU-19-0009, Boulder Rifle Club, Inc. project at 4810 N. 26th Street (parcel # 146307001001) and parcel # 146307001002

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Best Regards,

Anna

Anna Milner
Admin. Lead Tech. | Planning Division
Boulder County Land Use Dept. | PO Box 471 | Boulder, CO 80306

(720) 564-2638 (Direct) | (303) 441-4856 (Fax)

amilner@bouldercounty.org

www.bouldercounty.org
MEMO TO: Referral Agencies  
FROM: Summer Frederick, AICP, Planning Division Manager  
DATE: June 11, 2020  
RE: Re-Referral for Docket SU-19-0009

THIS IS A RE-REFERRAL FOR THE DOCKET LISTED BELOW
This docket is being re-noticed because revised and additional materials have been submitted by the applicant.

IF YOU HAVE REPLIED TO THE ORIGINAL REFERRAL LETTER AND HAVE NO FURTHER COMMENTS, NO ACTION IS REQUIRED.

Docket SU-19-0009: Boulder Rifle Club, Inc.
Request: Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 5 3,132-square-foot range shelters, 3 144-square-foot bathroom facilities, and 1 1,612-square-foot existing range building on parcels #146307001001 and #146307001002.

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☐ We have reviewed the proposal and have no conflicts.
☐ Letter is enclosed.

Signed _________________________________ PRINTED
Name _________________________________
Agency or Address _________________________________

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July 17, 2020

TO: Summer Frederick, AICP, Planning Division Manager; Community Planning & Permitting, Zoning Development Review

FROM: Amelia Willits, Engineering Development Planner II; Community Planning & Permitting, Development Review - Engineering

SUBJECT: Docket # SU-19-0009: Boulder Rifle Club, Inc. Re-referral

4810 N 26th Street, Parcels #146307001001, 146307001002

The Engineering Development Review Team has reviewed the above re-referred docket and has the following comments:

1. The subject property is accessed via N 26th Street, a gravel Boulder County owned and maintained right-of-way (ROW) with a Functional Classification of Collector. Legal access has been demonstrated via adjacency to this public ROW.

2. The proposed paved access drive varies 18 feet to 24 feet in width, which is in compliance with the Boulder County Multimodal Transportation Standards (“the Standards”). The grade of the existing gravel driveway is flat, which is in conformance with the Standards.

3. The applicant shall provide landscape screening along N 26th Street of the surface lot, as outlined in Article 5.6.2.5 – Landscaping, of the Standards, to reduce the visibility of the proposed surface lot from the public view.

4. Staff reviewed the Transportation System Impact Study (TSIS) submitted with the original application. Staff found that traffic impacts had been appropriately considered.

   a. As mentioned in the previous referral, dated August 9, 2019, it appeared that the primary goal for the earthwork was to balance on-site; staff agrees with this approach. However, included in the narrative and application materials was the statement: “The existing site is known as a historic garbage dump and substantial amounts of waste material is expected to be encountered and will need to be removed from the site. This volume of material has not been calculated”. Staff understands that the nature of the material prevents an accurate estimation of waste material, but this prevents staff from being able to consider and respond to the possible traffic-related impact that the waste removal may generate. In order to ensure that traffic impacts are mitigated, the applicant must submit a Traffic Control Plan, or Method of Handling Traffic, to the Development Review - Engineering team for review and approval at permitting. The applicant will also be required to supply a hauling plan, with haul routes identified, and locations of disposal sites, along with the Traffic Control Plan.

   b. The Average Daily Trips projected for the proposed improvements approximately double, from 86 average daily trips (ADT) on weekdays to 190 ADT; 262 ADT on weekends to 576 ADT. While historically paving of the road would be evaluated around 500 ADT or less, no paving will be required at this time due to the rural nature...
of the development and will need coordination and agreement with other property owners in the area.

5. There shall be accommodations for one bicycle parking space for every 10 automobile parking spaces, per Article 5.6.5.3 of the Standards. The bicycle parking spaces shall be no more than 50 feet from the proposed entrance of the Future Indoor Range Building, four Range Shelters and the existing Indoor Range Building A. Two bicycle parking racks are indicated on the plans, at the southwestern portion of the new development, however, for the use, a total of 20 bicycle parking spaces are required. Several more areas for bike parking have been indicated on the updated plans submitted with the revised materials, but staff is unable to determine the amount of additional bike parking. The applicant must label the amount of bike parking on updated plans submitted for permitting.

6. Staff has reviewed the Revised Drainage Report, submitted with the new application materials and finds that the increase in runoff has been considered and planned in an appropriate manner. The revised report identifies that the ultimate discharge for the drainage will be the Farmers Ditch. The applicant must provide a copy of written permission from the Farmers Ditch to discharge into the ditch, at permitting.

7. As a part of Boulder County’s water quality protection and municipal separate storm sewer system construction program, a stormwater quality permit (SWQP) is required because the area of disturbance on the subject property exceeds one acre in size. The SWQP will need to be submitted with any building or grading permit applications and obtained prior to any work beginning on this project.

8. An Access Permit shall be issued at the time of building permit review. No special application procedure is necessary, the Access Permit shall be issued concurrently with the Building Permit.

This concludes our comments at this time.
MAINTENANCE ELIGIBILITY PROGRAM (MEP)
MHFD Referral Review Comments

Date: July 20, 2020
To: Summer Frederick
   (via email)
RE: MHFD Referral Review Comments

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Boulder Rifle Club</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Boulder</td>
</tr>
<tr>
<td>Drainageway:</td>
<td>Sixmile Reservoir Drainage</td>
</tr>
</tbody>
</table>

This letter is in response to the request for our comments concerning the referenced project. We have reviewed this proposal only as it relates to maintenance eligibility of major drainage features, in this case:

Sixmile Reservoir Drainage

We have the following comments to offer:

1. It appears that many of our previous comments remain unaddressed. These comments were provided to the County in a UDFCD Maintenance Eligibility Program memo dated August 1, 2019. If the stream is to become eligible for MHFD maintenance assistance we would require these comments to be addressed. If the County does not desire for the major drainageway components of this project to be eligible for MHFD maintenance then we have no further comments, and will identify the stream as ineligible for future MHFD maintenance assistance. Future CIP participation between the County and MHFD remains an option for the major drainageway components. Please let us know if further discussion on the August 2019 comments is needed.

We appreciate the opportunity to review this proposal. Please feel free to contact me with any questions or concerns.

Sincerely,

Jim Watt, PE, CFM
Project Manager, Watershed Services
Mile High Flood District
TO: Summer Frederick, Community Planning & Permitting Department
FROM: Ron West, Natural Resource Planner
DATE: July 18, 2020
SUBJECT: Docket SU-19-0009, Boulder Rifle Club, re-referral

Staff has reviewed the newly submitted materials, and has limited comments in addition to those in the original POS referral memo dated March 4, 2020, appended below.

Several improvements to the application have been added:

- A Fossil Site Investigation was completed – report dated April 12, 2020 – that evaluated the extent fossils in the northern drainage. The report identifies the fossils and concludes that they “…are not distinguished for rarity, for excellent preservation, for abundance, or for a large assemblage of species,” and further notes that the fossil area is not to be disturbed during construction. Staff concurs.
- The Erosion Control Plan has been significantly improved, which should prevent stormwater contamination of the downstream Critical Wildlife Habitat at BLIP Ponds.
- It has been clarified that the surfaces of the firing ranges will be revegetated with native grass species, reducing potential for stormwater runoff.
- A report responding to initial wildlife concerns was completed by a professional biologist. Staff largely agrees with its conclusions -- that no significant wildlife impacts should result from the new facility.

Staff still has some concern at the retaining wall (and grading) at the northern end of the longest new range. The northern apex of the retaining wall would be only about ten feet from the surface flow of the creek. Within this ten feet, it is necessary to allow room for construction, while also including both a silt fence and a construction fence. Staff suggests additional erosion control measures here, during construction and prior to revegetation.

Staff is also still concerned about the excavated refuse material that will be unearthed during grading. What type of materials will be hauled from the site and/or recycled? Some type of commitment of record needs to be included. This could include a list of refuse types – concrete, asphalt, scrap metal, etc. – that would be recycled, and what type of refuse material will be reburied as fill on-site.

Drawing C2.01 includes the label: “verify ownership and condition of existing monitor well,” at two locations. Drawing C2.05 shows: “cleanout (monitoring well),” at these locations. What is the intended disposition of these wells? Are they necessary? What is the purpose of the wells? Are both to be retained?
A prairie dog barrier fence on the west side of the facility should be included as a commitment, as suggested earlier by staff.

At the time of building permit, a Weed Control Plan is required that includes the mapping of county-listed, noxious weed species on the entire parcel, with their intended control techniques specified. All Russian-olive trees – a state-listed noxious weed – on both properties could be cut down and immediately treated with a systemic herbicide to prevent re-sprouting.

The original application Narrative stated that an “Environmental Stewardship Plan will be provided…prior to building permit stage….” A draft of this needs to be reviewed, and, besides lead management, what will be included in this Plan? Staff suggests that the long-term Weed Management Plan be a part of this, as well as further revegetation if initial seeding is not successful in some areas, long-term maintenance of the prairie dog fence, maintenance of the silt deposits in the retention pond, etc. In other words, all activities at the facility that have to do with environmental stewardship should be compiled into one document, for the use of future managers.

Staff notes that a survey for the rare plant Physaria was not completed, but acknowledges that very little of the shale barrens where it could occur are being disturbed.
TO: Summer Frederick, Land Use Department  
FROM: Ron West, Natural Resource Planner  
DATE: March 4, 2020  
SUBJECT: Docket SU-19-0009, Boulder Rifle Club

Site Conditions

I have reviewed the submitted materials, and visited the parcel(s) on July 22, 2019. (Staff is mostly limiting discussion here to the larger of the two parcels – the “new” site.) Almost the entire 25-acre parcel has been either historically used as a major landfill, or has been heavily graded. The latter grading was to move the original creek channel – moved from crossing the center of the parcel, to a new channel that mostly hugs the northern edge of the parcel. The drainage flows from west to east.

After the landfill closed, it appears that there was never any formal revegetation of the site; current vegetation is almost all non-native species with a great number and density of noxious weeds. The county-listed noxious weed -- Scotch thistle -- is particularly dense, forming what is essentially a “forest” of huge, seven-foot plants over a large portion of the site.

Other county-listed noxious weeds are musk thistle, diffuse knapweed, and myrtle spurge. Other non-natives include sweet clover, curly dock, salsify, bindweed, storksbill, tree-of-heaven (Ailanthus), mullein, tumble mustard, cheat, smooth brome, Russian-olive, and alyssum. Several of these are state-listed noxious weeds. Two of the limited native species on-site are snakeweed and curly cup gumweed.

Prairie dogs are on-site as well, but of a limited area and number. There are also large expanses of broken concrete and rock on the surface and there are at least two, apparent groundwater monitoring wells, likely abandoned.

It is possible that the rare native – Bell’s twinpod (Physaria bellii) – occurs on shale outcrops near the north and west boundaries, but staff did not observe any. Staff did find paleontological resources in the northern shales – apparently Cretaceous bivalves.

County Comprehensive Plan Designations

The site has the following designations in the Boulder County Comprehensive Plan, and from other resource inventories.

- Environmental Conservation Area (ECA) – Boulder Valley Ranch/Beech
- Adjacent to Public Lands – City of Boulder OSMP, on north and west; the City also owns the parcel to the east, but it is not managed as open space
- Adjacent to Public Trail – Hidden Valley Trail, to the north; about 570 linear feet distant from the parcel, at its closest
- Nearby Critical Wildlife Habitats – Lappin Pond, nearly adjacent on west; and BLIP Ponds, downstream to east
- Prairie Dogs – minimal
- Wetlands – marginal or none
- Significant Agricultural Lands of Local Importance – marginal, and no longer viable

Discussion

Staff has many questions on the details of the proposal. The main characteristic of the project would be a very large amount of grading. However, nearly all grading would take place in known deposits of municipal and construction refuse. Most of the site was used as a landfill, over several decades. Test bores of the subsurface confirm this at the site of the proposed structures, and historic aerial photos show extensive and massive disturbances across the parcel.

It is unclear why such a large detention basin is necessary. This would cover a significant portion of the site. It was staff’s understanding that the “surfaces” of the shooting ranges are intended to be re-vegetated after construction, and periodically mowed. If this is incorrect, then they should be re-vegetated. Drawing C2.05 shows seeding only outside the range surfaces, and the existing ranges on the small parcel are not vegetated. Why not? A low-growth native species, such as buffalo grass, could be appropriate, though other native and non-native species could be considered.

Is such a large basin necessary for stormwater control? Is this because of the run-off from unvegetated ranges? This size could be necessary, but more information is required. Does the basin need to be designed for a 100-year event (see Drawing C2.02)? Staff is concerned about drainage and water quality off-site and downstream, given the important fish ponds to the east (see below).

The Preliminary Drainage Report states that flows from the parcel discharge “…to the Farmers Ditch.” This is not correct; the Farmers Ditch does cross this drainage, about 1700 feet to the east, but staff believes that there is no hydrologic connection between the ditch and the drainage. The report also states that, “No offsite sheetflow enters the site,” yet topographically some sheetflow on the west and north of the parcel enters drainages on the parcel.

Staff is concerned about what might be a huge quantity of refuse that would be exhumed during grading, given the proposal’s intention to re-use most of the cut on-site. The application states that, “…the grading plans were designed to accommodate most of the [cut] soil onsite” (page 5). Staff’s concern is that much of this material will not be “soil” at all. Contrary to page 5, the May 24, 2019, letter from Rocky Ridge Civil Engineering states that, “…substantial amounts of waste material is expected to be encountered and will need to be removed from the site.”

For example, would large pieces or quantities of broken concrete, or car bodies, or other large debris be re-buried in the areas of fill? (Staff also notes that the Grading Worksheet shows over 5000 cubic yards of excess cut, but believes that these numbers may have been refined/changed, since the worksheet is from May 2019.)

At least some of this material should probably be removed from the parcel, and some could possibly be recycled, including concrete and scrap metals. It seems to be largely an
“unknown” about what and how much of any type of material might be excavated, and
decisions will be necessary on an on-going and case-by-case basis. However, some general
approach to these excavations needs to be determined and approved before construction
begins.

Critical Wildlife Habitats: An unnamed drainage flows across the north end of the parcel,
from west to east. Its channel was moved, likely in the 1980’s, from flowing through the
landfill site/parcel, to its current alignment on the north. This unnamed drainage eventually
flows into Sixmile Reservoir to the east.

“BLIP” Ponds are three dammed ponds on this drainage, about 1700 feet to the east (named
after Boulder Land, Irrigation and Power). Lappin Pond is another dammed pond, only 150
feet upstream from the subject parcel. All four of these ponds are designated as Critical
Wildlife Habitat (CWH) in the Comprehensive Plan (CWH number 82).

The BLIP Ponds are being used as rearing habitat for plains topminnow (*Fundulus
sciadicus*), one of Colorado’s small native “minnows.” The topminnow is a “Tier 1” species,
which is of greatest conservation concern in the State Wildlife Action Plan, and is also a
species of special concern in the county Comprehensive Plan. Management of this population
is a joint effort between Open Space and Mountain Parks and Colorado Parks and Wildlife.
One of the threats to the species is siltation/reduced water quality. Therefore, stormwater and
erosion control both during construction and post-construction is a primary concern for the
project. At least one iteration of the construction drawings – perhaps at 60 or 90 percent –
should be reviewed by the county.

Other species use these ponds, primarily birds. At least 10 additional county species of
concern likely use the ponds – avocet, bittern, yellow-headed blackbird, wood duck, great
egret, chorus frog, great blue and black-crowned night herons, kingfisher, and tiger
salamander.

Impacts to the amphibians are not expected, with the same caveat as above about maintaining
good water quality. Potential impacts to the birds (all the above species are dependent on
water bodies) would also key into water quality, however the biggest unknown is their
responses to the sound of gunfire. Lappin pond is only about 600 linear feet from the closest
new firing area, with other firing areas progressively more distant. The closest of the BLIP
Ponds would be about 1800 feet distance from the closest new firing area.

It is likely that gunfire will disturb some avian use of the ponds, particularly at Lappin.
However, there are several existing conditions that might lessen the new impacts. The
existing shooting range already produces, at times, abundant sounds of gunfire. The most
heavily used of the existing ranges in likely the indoor one, which can be used in all weather.
The building itself mitigates sound impacts, while existing berms at the outdoor ranges
partially mitigate gunfire sounds. The existing outdoor ranges are even closer to BLIP Ponds
than the new ranges would be – about 1300 linear feet. The existing outdoor ranges are
farther away from Lappin Pond than the new ranges would be – about 1100 feet.

Additionally, the BLIP Ponds are open to public for off-trail use (with a designated public
trail only about 800 feet away), and human disturbances at the ponds – especially for
waterfowl – are on-going but irregular. Lappin Pond is currently closed to public use.
Finally, the “tolerance and acclimation” to gunfire sounds of individual bird species varies among species, yet remains largely an unknown factor.

Prairie Dogs: The application states that “…none are currently present.” Staff observed a small colony in the southern portion of the parcel, and 2018 aerial photos show about ten active burrows. This relatively small number could probably be passively moved to the west, where larger numbers exist on OSMP lands. A prairie dog barrier fence would likely be necessary to keep them from re-colonizing the parcel after construction.

Grading: The application shows some of the southern portion of the site is to be lowered by up to 16 feet, while some of the northern portion of the site is to raised by up to 19 feet. Some of the latter is apparently to accommodate backstops/berms. Staff does not have concerns with these topographic changes, per se, but does note the following particular areas.

Fill is to placed to the “bottom” of part of the drainage that runs south-to-north on the western edge of the site. The existing east side of this drainage is already steep and in unconsolidated material. Most importantly, this drainage runs off the subject parcel, on to OSMP lands, and into Lappin Pond, which is a Critical Wildlife Habitat. The new fill may make this eastern side even steeper. Robust erosion control and adequate revegetation is critical here.

At the northern end of the long ranges, a retaining wall is proposed behind the backstops. How would this be constructed while machinery stays out of the flowing bottom of the drainage on the north end? Again, this area is unconsolidated material and the drainage flows directly off-site to the east, to BLIP Ponds Critical Wildlife Habitat. Robust erosion control and adequate revegetation is also critical here.

Finally, the north, northeast, and eastern outside slopes of the retaining pond are to be steep and within feet of the existing drainage that flows to BLIP Ponds. Again, erosion control and revegetation are critical. For all of these areas, a simple silt fence would likely not be enough, and erosion control logs, hay bales or other methodologies should be added.

An Environmental Stewardship Plan is noted on page 13 of the Narrative. Would any other “ecological” aspects be addressed in this document, beyond lead management?

Discussions of expected impacts to adjacent City of Boulder lands is deferred to the Open Space and Mountain Parks Department.

Neither wetlands nor Agricultural Lands should be significantly impacted.

Recommendations

- The above questions and discussion points need to be addressed.
- A Revegetation Plan is required that includes native grass species to be used, mapped delineation of all disturbance areas (this includes construction staging areas, roads, utility lines, and septic system), locations of silt fences or erosion control logs, and matting requirements where necessary.
• An extensive Weed Control Plan is required that includes the mapping of county-listed, noxious weed species on the entire parcel, with their intended control techniques specified. At the least, the county-listed noxious weeds -- Scotch and musk thistle, diffuse knapweed, and myrtle spurge -- are on-site.
• All Russian-olive trees – a state-listed noxious weed – on both properties should be cut down and immediately treated with a systemic herbicide to prevent re-sprouting.
• Surveys for both *Physaria* and paleontological resources are necessary, including an evaluation of the extent fossils.
• How and where will the facility be fenced?
• New electrical service to the facility must be installed underground.
• There is an existing overhead power line that traverses the parcel east/west. Wouldn’t this line potentially be in the line-of-fire of the longer ranges?
MEMORANDUM FOR RECORD

TO: Summer Frederick
   Boulder County Community Planning & Permitting Department

FROM: Ing. Clark Vargas, P.E., SME

DATE: 07/07/20

SUBJECT: Boulder County Shooting Range Safety Review
           Review of Revised Submittal - Re-Referral for Docket SU-19-0009
           Proj# 20003.09

We have received and reviewed the 2nd Submittal of Application Materials forwarded July 2, 2020.

We have specifically reviewed the June 11, 2020 Memo to Review Agencies and the June 1, 2020 response to comments by the Boulder Rifle Club contained therein.

We have read all materials presented but not specifically reviewed materials to be reviewed by others, including drainage, noise study, historical artifacts, wildlife or neighbor input.

Our review includes two telephone conferences with the Club Designer that clarified and expanded on our previous comments prior to the revised submittal and is the basis of our final review.

We concur with Front Range Land Solutions, the response to CVA’s comments dated June 1, 2020 that memo and the reference drawings demonstrated the intent for bullet containment for all shooting positions that occur downrange. Horizontal containment is provided by the backstop and the bullet trap, two ballistic side berms per range are provided and ballistic walls each side of the covered shooting sheds are also provided. The side walls are specifically important to stop bullets since the side berms do not extend to 5’ up range of the firing lines.

Vertical containment and the elimination of over shots is provided by the ballistic roof protection of each shed roof and subsequent baffle lines designed to the “No Blue Sky” concept from the shooting positions allowed and enumerated on Dwg, G0.

That being said, that is what is shown on the Construction Drawings and intended. Proof of the design is the construction completion and the “As Built” drawings demonstration that “No Blue Sky” can be seen from any of the allowable shooting positions for each range.
Based on the foregoing, we have no objection, based on the designed ballistic containment being provided, to the issuance of the permit.
July 15, 2020

Boulder County Land Use
PO Box 471
Boulder, CO  80306

Attn:  Summer Frederick

Re:  Boulder Rifle Club, Inc. - 2nd referral – Case # SU-19-0009

Public Service Company of Colorado’s (PSCo) Right of Way & Permits Referral Desk has reviewed the second referral special use plans for Boulder Rifle Club, Inc. and has no apparent conflict.

Please be aware PSCo owns and operates existing overhead electric distribution facilities within the proposed project area. Should the project require any new natural gas or electric service or modification to existing facilities, the property owner/developer/contractor must complete the application process via xcelenergy.com/InstallAndConnect.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 for utility locates prior to construction.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office:  303-571-3306 – Email: donna.l.george@xcelenergy.com
ATTACHMENT

D
Please see this gets to Board of Boulder County Commissioners asap! Please acknowledge that they have received this letter. thank you goatrowe@yahoo.com
July 21, 2019

Michelle Krezek @ bouldercounty.org

Re: #SU-19-009

Dear County Commissioners:

REALLY??!!! I cannot believe this Board of County Commissioners would even consider-let alone recommend-an expansion of the Boulder Rifle Club located in North Boulder!

For the following reasons, I hope you regain your sense of decency and rescind your tacit approval and "exciting collaboration" of this ill-conceived proposal:

1.) This "Gun Club" has never or ever will be, good neighbors. Our neighborhood first fought their expansion proposal in 2004 – and here we are again! The issues have never been resolved:

a.) Too much traffic and very little, if any, speed control. Their "members" drive too fast and too recklessly on our neighborhood dirt roads. We know our neighbors and these violators do NOT live in the neighborhood! We fear for our children and pets to even cross the roads!

b.) The noise is ungodly! They have no respect for time limits (firing before or right at dawn and after dark, especially early fall). The firing is all types- from loud bangs to the pop, pop, pop of handguns. Any visitors I have to my home, always ask- "What is that banging- new construction, at this hour?"

They wanted to run sound tests on our properties, but I am concerned: WHO ran these? ---the Club, where they picked the time, places and types? I noticed that right after they requested sound monitors, the 'Club' went silent for a few days. Was this when they were running the tests? Were any of the neighbors involved in determining when and how these sound tests were administered? How independent, if at all, were these tests done??
c.) Again, a 1% notification zone of affected neighbors is not adequate in this case. Sound travels much much farther than the 1% area notified by Land Use requirements. The Gun Club has proven to be bad neighbors and want to expand?!!! You are only notifying 1% of the people affected by these bad neighbors?! We, the affected, ARE VOTERS and are entitled to notification. Land Use Property Notification Guidelines do not cover Noise areas!!! All the way to Jay Road, people complain about the noise from the gun club!! If one of our neighbors had not required notification of your plans to allow this cancer in our neighborhood to grow - we would not have had a say in this ruling. We pay our taxes and we request due representation in our government! This plan goes well beyond "Not in My Backyard!"

2.) Are you "denizens of wildlife and quality growth limits" aware that this area is a major wildlife corridor? We have Mtn. Lions, Bear, Bobcats, Coyotes, Raccoons, Raptors, and Deer, through our properties every single day! The Gun Club, for heaven’s sake, Is right off a Riparian Corridor! Are you quite willing to risk destroying that wildlife corridor AND able to take the fallout with the entire community, when it is made public that you will be responsible for it’s demise?! I have all that wildlife, including deer, owls, eagles, hawks, raccoons, and coyotes walking past my door every night. I shall not forgive you, if you destroy their lives and well-being just so a few people can fire their weapons without traveling to a safer spot. The wildlife is an integral part of what makes Boulder unique and special.

3.) Fire hazards are ripe in this area. The US Forest Service is closing their Mountain Firing Range for this very reason...because of FIRE HAZARDS innate to firing ranges! Now you want to bring this increased risk into our area?!!! We are all on wells and cisterns in this area. We do NOT have the ability to fight fast moving ground fires. We (and you) cannot afford to take the risks that an expanded Rifle/Firing Range would mean to our community. One spark - ONE SPARK-can set this whole area into flames! You should be shutting down this reckless gun club( please review their accident record) – instead of looking to expand it!
4.) This “Club” has been unpermitted for years! They have NOT gone through normal channels that everyday citizens are required to deal with for even the smallest expansions! Our “good neighbors” like Harlequin Gardens petitioned for a small expansion of their business and was denied. It is a far far less impactful business than the Gun Club! The Forest Service met with us before they built their office here and were gracious enough to meet with us, and assume and maintain a “small footprint” in our neighborhood. The Gun club has never once extended any advance notice or even compromise to the neighborhood, but rather, has wanted to “bully” us and run-around the political channels of the County to get what they want for their profit only!!! AND now – you write a letter of recommendation from the Commissioners for their ILLEGAL expansion?! They are not even legally permitted to exist in our area! Now you are going to permit them, give them an expansion and not even allow us the ability to request notification for input?!!! You notified 1% of the area affected!!! This is government and Land Use Code at it’s very worst!

I request-no, demand- that you DO NOT ALLOW this travesty to unfold! We, too, have property rights, quality of life rights, and voting rights! This expansion flies in the face of all three! I cannot fathom why you would even consider this – unless it may be politically expedient. Fear not – our neighborhood, though small, has rights and you will hear mightily about any decision to forward the Gun Club Expansion- which, I might add, puts the Boulder City Mall within rifle range of their high-powered rifles. Bullets fired at their present targets, have soared to the City Open Space trails above the rifle range, as it is presently located.

I leave you with these two thoughts: Do you want to be held responsible for a spreading wildfire on the City of Boulder’s doorstep or a murder on the Boulder City Mall or Open Space Trail by a deranged rifle shooting within range from the Gun Club, especially if it is expanded??

One last note, we in the neighborhood just experienced the death of a horse, idly eating in a pasture, right down the road from the BRC – shot by a young man with a rifle purported to be seen coming from the gun club prior to the horse’s death. The owner was distraught, rightly so, and was going door to door throughout our neighborhood.
to find his horse’s killer. Would you like to live near these “good” neighbors?!

Thank you for your time.

Sincerely,

Glenda Rowe
2075 Yarmoouth Ave. Boulder, CO 80301
goatrowe@yahoo.com
Boulder County Property Address: 5124 North Foothills Highway Boulder CO 80302
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Daniel Weller
Email Address: gulstream0777@gmail.com
Phone Number: (303) 413-8572
Please enter your question or comment: Ladies & Gentlemen,

I am writing to oppose the expansion proposal of the Boulder Rifle Club. I live approximately 1 mile directly to the West of the Boulder Rifle Club property.

I believe the proposed expansion of the Boulder Rifle Club will negatively effect property values of my property, and those of my neighbors, due to increased noise and traffic. Safety of Boulder County Open Space users will also be severely compromised. An expanded rifle range of this proposed size most definitely DOES NOT fit into the character of the surrounding area, as was stated in the application materials.

The sound studies included in the plan documents were all conducted to the south of the property and UPWIND of the current and proposed Rifle Club configurations. The prevailing winds in this area, on an almost daily basis, are from the east and southeast, which places my property to the west directly DOWNWIND of the Rifle Club; however NO sound studies were conducted DOWNWIND of the property. Due to the prevailing winds and the topography between the Rifle Club and my property, gun and rifle shots are loud and clear at my property, and as far West as the Dakota Ridge Subdivision, whenever the ranges at the rifle club are in use. Adding several larger ranges further to the west of the current rifle club site will magnify and nearly quadruple the noise pollution at my location and in the Dakota Ridge Subdivision. I request that the applicant conduct further sound studies directly to the WEST of the proposed expansion area DOWNWIND. The Boulder County Sheriff's Office and City of Boulder Police departments always notify me and my neighbors whenever they destroy explosives at the Rifle Club site......why do you think they do that? It is because sound most definitely travels WEST in this area!

The Boulder County Open space trails in this area are highly utilized on a daily basis. Many of the trails meander very close to the current and proposed Rifle Club sites. Many cattle also graze on the Open Space land surrounding the Rifle Club each year. I stopped hiking these areas many years ago due to the danger of ricochets and mis-fired bullets. The public must be provided with many more details on how safety issues at the newly proposed ranges will be mitigated. The Forest Service is closing many of their shooting areas due to public users not following the rules. What steps will the Rifle Club take to minimize risks surrounding the expanded site? How will Rifle Club rules (as well as City, County and State regulations) be monitored and enforced on a daily basis?

I notice the applicant provided a detailed traffic study of the 26th & Yarmouth intersections with Hwy 36. However, I do not see any details pertaining to the additional traffic moving through the intersections of Jay Road & Hwy 36, and Broadway & Hwy 36. The Jay Road and Broadway intersections with Hwy 36 are already becoming overloaded many times throughout the day. The turn lane from Hwy 36 to Jay Road is so busy at times that traffic backs up for nearly a mile during rush hours. How is the additional traffic to/from the expanded Rifle Club going to be mitigated along this already busy stretch of highway? What upgrades will be mandated at the 26th Street and Yarmouth intersections with Highway 36? Will speed limits be reduced?

Finally, there are some other items I do not see fully addressed in the application materials:

How will the Bell's TwinPod, an endangered and very rare species of plant that is prevalent in this area on private property and Open Space, be affected by this expansion?
Prairie Dogs are given a passing mention in the application materials. Prairie Dog colonies are quite active on the surrounding Open Space and private properties. I do not believe it to be accurate when the applicant states that there are "no active colonies on the property". How is that even possible? What steps will the applicant take to minimize disturbances to the Prairie Dog colonies that are active on the surrounding Open Space?

Will the applicant be required to asphalt the current gravel roads to/from their property? If not, how will Boulder County and the applicant mitigate the large amount of dust that will be blown around the area due to the extra vehicle traffic on the gravel roads?

Will high powered rifles (such as those currently banned in the City of Boulder) also be banned at the Rifle Club site? If not, will there be a new independent study conducted to put the fears of the Lake Valley Estates residents to rest?

I vehemently oppose this expansion project. My family and I have gotten used to the daily patter of gunshot noise from the Rifle Club over the years....we generally move indoors and close the windows whenever the ranges are active. However, if the noise due to expanded ranges quadruples and is heard sunrise to sunset every day, then doing anything outdoors will be unbearable. Our property values will plummet because new families moving into the area will never want to live near such a noisy enterprise. A project of this magnitude just does not fit into the neighborhood; nor will it allow Open Space users to enjoy the quiet beauty of nature in a safe environment.

Please consider my comments and questions as you prepare to deliberate this application. Thank you very much for your time.

Sincerely,
Daniel Weller

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Dear commissioners,

As a home owner in the Valhalla Subdivision I am opposed to the expansion of the rifle range and the use of high powered rifles. The noise from the existing rifle range is already disrupting the peace and quiet of our neighborhood. Walks on open space are ruined by the continued noise from guns being discharged. The noise also frightens our pets when walking in the neighborhood.

Sincerely,

Lea Peshock
4888 Valkyrie Drive

Sent from my iPhone
Hi,

We live on Valkyrie Drive and have two young children 2 & 5 years old. This is terrifying to hear that Boulder is in support of this expansion and is funding the effort. We as a family and a neighborhood are fully opposed to the expansion of a public gun facility. There is a reason this has not been allowed in the past and it should be mandated that gun use expansion will not be supported by Boulder County. We hope you strongly reconsider putting this into action.

Thank you,
Danielle
Dear County Commissioners,

What on earth are you doing allowing high-powered rifles and a new and expanded gun range next to the already existing Boulder Rifle Range. My kids have run on trails nearby that already have bullets whizzing by with NO warnings.

Don’t put our lives in danger.
Don’t add high-powered rifles.

I imagine that you do not live anywhere near this area. Let’s put it near your backyards. See how you feel about it.

Elizabeth Brussell
4798 Valhalla Drive
Boulder, CO 80301
303-947-5958
To: Planning Board Re: North Boulder Shooting Range Proposal

The size of the proposed addition to the gun range seems EXCESSIVE. Is Boulder trying to attract shooters from the entire metro area? And who pays for that?

The proximity of many more proposed shooting areas to open space which by your own documentation is becoming more heavily used year by year is a safety nightmare and recipe for disaster. Noise pollution is a factor here as well. Perhaps the indoor element could be expanded (20,000 feet proposed??) to limit exposure by the public to live rounds.

Kate Barberis
4475 51 St
Boulder
Dear Sirs:

My wife and I are long time residents of North Rim in Lake Valley. We are very concerned with the safety and noise associated with the proposed range expansion. Several years ago a bullet from the range passed through a neighbor’s house. As it is we hear the firing routinely and believe that will increase significantly with the expansion. Please ensure that any expansion makes safety of our neighborhood and noise abatement a priority.

Thank you,

Gary and Peggy Voorheis
4247 Pebble beach Drive
Niwot, CO 80503
303 955 6262
We would be in favor of the expansion. It would create a place for gun owners to practice in a safe environment and keep those from practicing in the areas that are not conducive to the public or forest areas. An indoor range would be great and since the existing range has a several year waiting list it appears to be something that people in the community would embrace.

Thank you.

Sent from my iPad
I object to any expansion of this facility due to safety factors for surrounding trails and neighborhoods. Thank u.

Joye Fuller
Valhalla neighborhood

Sent from my iPhone
Boulder County Property Address: 4810 N 26TH STREET
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: David Jilk
Email Address: dave@jilk.com
Phone Number: (303) 499-3300
Please enter your question or comment: To whom it may concern:

It has come to our attention that the Boulder Rifle Club (BRC) is proposing a large expansion. As residents of the south side of Pebble Beach Drive in the Lake Valley neighborhood, we are among those potentially affected by this proposal. We just learned of this proposal and have not yet had an opportunity to review the actual text of the proposal, so our comments at this stage are somewhat general and based on the article in the Daily Camera.

We generally support the idea of improving public shooting facilities in exchange for eliminating shooting in nearby wilderness areas. We frequent the wilderness and it is disconcerting to hear gunshots in these wild areas when one does not know from where they emanate or whether the shooter has taken adequate precautions. Further, it greatly diminishes the quality of the wilderness experience.

We can hear the rifle reports from BRC from the deck of our home, and to some extent inside our home. It is particularly noticeable on weekends. It is not all that loud but the nature of the sound (sharp, repetitive, and continuing) can be quite irritating. Our impression is that the BRC proposal includes noise mitigation measures. We request that as part of this noise mitigation effort, BRC perform some actual testing of noise levels today and find a scientific method of estimating the noise levels as mitigated, from both Lake Valley and from some of the intervening open space. If the experienced noise level of an individual shot is significantly reduced, then the increase in usage should not be objectionable.

Whether or not the stray bullet encountered previously (2010) on Pebble Beach Drive originated from BRC, this possibility remains a concern. We believe this is very important as the BRC facilities become open to a larger membership base or even to the public. Members of a selective private club have a high degree of knowledge and care and accidental shots (such as a semi-automatic double-fire) are much less likely; as the facility is used more widely, one can expect participants with considerably less experience. This dramatically increases the risk to public safety.

We therefore request that ballistics calculations be prepared on the full range of expected gun and ammunition types, and that the height of the barrier be set so that a stray bullet passing over the barrier would always land north of the latitude of Neva Road. This area is almost entirely unpopulated open space and ranch land. I am not a ballistics expert but brief online research suggests that this distance (about 2.5 miles) is well within the range of many rifle types (see, e.g., http://bulletin.accurateshooter.com/2015/02/understanding-how-rifle-angle-alters-long-range-trajectories). Lighter ammunition and calibers that cannot reach that distance may require different or additional mitigations.

Thank you for taking into account our concerns and our safety, as affected residents and taxpayers of Boulder County, on these matters.

Dave Jilk and Maureen Amundson
4204 Pebble Beach Drive
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Hi Summer Frederick,

attached are our comments for now

Mikl and Eve Brawner
Comments on the proposed expansion of the Rifle Range from 2 to 7 ranges and from a private club to a public shooting range.

We would like to be a good neighbor. We know the Rifle Club existed before we moved into the area in 1986. Even though we are one of the closest homes to the Range and regularly hear gun fire, we have never made any complaints against the existing range.

However after careful examination of the sound report by Behrans and Assoc., we are not at all satisfied that this expansion will not significantly increase the noise on our property and surrounding area.

First of all, the decibel level figures only show the average level. Many sound events were far over the average. We perceive specifics, not averages.

Second, we feel disrespected that the report concludes that our property 4795 is a business and therefore the sound levels need not be subject to the noise limit code (65 decibels). Whoever put up the monitoring devices on our property (with our permission), knew there is a residence there.

According to the Feb 1 2018 letter to Jim Guthrie of the CO Parks & Wildlife org and signed by Cindy Domenico, about "Support for Bldr Rifle Club’s application for shooting range design funding", "An expanded facility at Boulder Rifle Club could provide a 300 yard range as well as other shorter distance ranges totaling approximately 30 lanes."

We must assume that with 30 lanes, many shots could be fired at the same time which would increase the decibel level. So why does the sound study state that multiple shots occurring within a 35 milisecond period is unlikely. This goes against reason.

In addition, the sound tests were conducted with a 22 long rifle and a .300 Winchester Magnum on a 200 yard range. Are those the biggest, loudest guns fired on a 200 yard range? If a 300 yard range is added, isn’t that to allow even bigger guns? Why were those guns not tested?

And nothing in the report addresses the additional Number of shots. Noise is not just about loudness; it is also about the number of noise events, the shots. With 30 lanes, we are going to hear a lot more shots. It’s one thing to hear folks target practicing; it’s another to sound like you’re in a war zone.

Also the mitigated sound levels for the 200 and 300 yard proposed ranges are so close to the 65 decibel code limit that if bigger guns are used or there is some miscalculation in their study, the actual sounds could easily be over the allowed noise limit. Once the range is built and in use, then what?

We think it would be better if the county or some independent group ordered and paid for the sound study.

Couldn’t the shooting range on Nelson Road be expanded? Our 600 acre area so close to Boulder is bound to be filled with houses someday.

Mild and Eve Brawner
4795 N. 26th St.
You've got to be kidding me!!!!!!!!!!!!!!!
Expanding the Gun Club near residential neighborhoods. How much money crossed your palms to approve this new insanity. NO. If you must shoot something ...go WAY out East, or maybe next to the commissioners homes.

Sabine Painter
Valhalla Dr.
Boulder, CO 80301
From: Kim Friel
To: Boulder County Board of Commissioners
Cc: Jonathan Koehn; Jackie Koehn; Alex Viggio; Alex Viggio; Lucia Robinson; Brady Robinson; Rachel Bachman; John Bachman
Subject: Expansion of Rifle Range in Boulder - Area III Planning Reserve - my concerns
Date: Monday, July 29, 2019 6:08:32 PM
Attachments: Outlook-now3riso.png

Dear County Commissioners,

I've been very concerned lately regarding article in the Daily Camera the other day about rifle range that is 1 mile north of my house is going to be expanding by quite a bit and will be open to the public vs, the private club it is now.

For past 2 years I've been woken up with gunshots starting at 7am and going all day, found out it's the Sheriff's department annual training. I've emailed Garry Sanfacon, Project Coordinator for the Northern Front Range Recreational Sport Shooting Management Partnership, (He's the point person regarding rifle range expansion in North Boulder) for past 2 years to state my concerns about this. He's never replied with any kind of ideas or concerns.

So you can imagine my concern that this will now be our potential new normal up here in North Boulder - hearing gunshots going off from dawn to dusk every day.

I know there is discussions considering various options for development in the future such as family housing, etc. My question is would the gun range be compatible for future uses.

I would like to see plans for expansion on the gun range delayed until a detailed plan is in place for future development IF and WHEN it is annexed to the City of Boulder in order to meet their goals for sustainable development and meeting needs for affordable housing.

Kind Regards,

Kim Friel
Broker Associate
303-408-4064
www.kimfriel.com

I always have time for your referrals
From: LISA A RENFREE
To: #LandUsePlanner
Subject: Boulder Rifle Club expansion #SU-19-0009
Date: Tuesday, July 30, 2019 11:28:32 AM
Importance: High

To Whom it May Concern:

I am writing to oppose the proposed expansion of the Rifle Club. I frequently walk in that Open Space area. To open this Club to the Public is disconcerting to say the least! Private Members are the safer route. There been reports of stray bullets flying in the past & when you’re out enjoying the Open Space, to be leery of bullets? Absurdity! Unable to 'prove' it came from the Rifle Club, but should we have to worry?! The noise these guns create is a nuisance (already not in "harmony")! To contemplate even more people coming, with firearms down a residential street is horrifying! North Twenty-Sixth Street already endures a tremendous amount of traffic not only from the Rifle Club, but from the Nursery and Circus as well. This is too close to folks who enjoy and take pleasure in the Open Spaces Boulder County provides and in my opinion, this proposal would endanger the people who reside in this area.

Please do NOT approve this expansion.

Kind Regards,

Lisa Renfree
Boulder County Property Address: 4089 Spy Glass Lane, Longmont 80503
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Jan Fincher
Email Address: janfincher@centurylink.net
Phone Number: (303) 444-5834

Please enter your question or comment: Regarding the Rifle Club expansion, please "NO". I live on the south end of the North Rim development in Lake Valley. I regularly walk my dog on the open space south of our home. This area is no place for an outdoor rifle range in the first place. Just the noise is bad enough. And an off-target shot can't be recalled. Adding more outdoor ranges is dangerous, noise-polluting (you cannot hide that sound), and makes no sense. Expanding outdoor shooting range in a residential area? What about that is a good idea? I would support more indoor ranges. Enclose the bullet. Enclose the noise. Seems like there is plenty of room for that.

Thank you for considering my input.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address : 4092 PEBBLE BEACH DR
Name: Stanton Manzanares
Email Address: stan.manzanares@gmail.com
Phone Number: (303) 810-1055
Please enter your question or comment: To whom it may concern,

Having an outdoor rifle range that borders Open Space and a multitude of neighborhoods in close proximity is a bad idea. In addition to the possibility of stray bullets landing in open space and throughout our communities, the constant use of high-powered rifles and automatic weapons without question sounds like a war zone. This is not conducive for habitat, open space recreators or peace of mind for surrounding neighborhoods.

The proposed expansion of the Boulder Rifle Club should not be approved.

The only way I believe we should support the rifle club is to have one with fully enclosed structures. It is a win/win for all involved. Indoor shooting ranges are common in highly populated communities. Although once the case, the Boulder Rifle Club is no longer seated in a rural environment. Open Space and high-density growth from Boulder continue to envelop from all directions. The gun club can have a long and prosperous future simply by planning now and transitioning to a venue with 100% indoor ranges.

Kind regards,
Stan Manzanares

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 3939 Pebble Beach Drive
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: John Price
Email Address: john@mesatrailresearch.com
Phone Number: (720) 479-4880

Please enter your question or comment: In our neighborhood we hear incessant and continuous booming blasts from the rifle club. It drives us crazy. It is worse on the adjacent open space. I urge the City to approve only a FULLY ENCLOSED facility for the future. This is the obvious way to go in an urban environment, and it will guarantee cordial future relationships between all stake holders.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
<table>
<thead>
<tr>
<th>From:</th>
<th>Wufoo</th>
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<tbody>
<tr>
<td>To:</td>
<td>LandUsePlanner</td>
</tr>
<tr>
<td>Subject:</td>
<td>Ask a Planner - Web inquiry from Edward Klimkowsky - SU-19-0009</td>
</tr>
<tr>
<td>Date:</td>
<td>Tuesday, July 30, 2019 1:36:40 PM</td>
</tr>
</tbody>
</table>

Boulder County Property Address: 4112 Greens Place, Longmont, CO 80503
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Edward Klimkowsky
Email Address: edklim@comcast.net
Phone Number: (303) 444-4250
Please enter your question or comment: I do not have any reservation about this proposal.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 6630 Putter Court, Longmont, CO 80503

If your comments are regarding a specific docket, please enter the docket number: SU-19-0009

Name: Lauri Larson
Email Address: lhlarson2@gmail.com
Phone Number: (303) 247-0072

Please enter your question or comment: I'm very concerned about the additional volume of shooting activity that would arise from an expanded shooting range. On a weekend, it's already stressful to hear the pop pop of gunfire in the mornings. With the expanded range, the pop of gunfire would continue for much more of the day and be more prevalent during weekdays. Please reconsider the expansion to a less suburban area.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4665 Palmer Ct.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Rachel Bacon
Email Address: bacon.rachellee@gmail.com
Phone Number: (616) 638-0368
Please enter your question or comment: I do not support the Boulder Rifle Club expansion of their outdoor range. As a homeowner in the Lake Valley Neighborhood the sound of gunshots are already quite prevalent. While the noise is in the distance, as a mother of young children, the sound is alarming. Even though I know where the gunshots are coming from, it is still a source of stress and I think the majority of the 315 homes in the Lake Valley neighborhood would agree with me. I am also an avid user of the open space trails in the area and I am not confident in the plans to mitigate ALL possibility of ANY stray bullet leaving the expanded ranges. The open space trails are heavily used and I worry with increased usage the chance for a catastrophic event also increases.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
To Whom it May Concern,

I am expressing my opposition to the proposed expansion of the Boulder rifle range. The increase in that very loud gunfire will certainly disturb the neighboring homes, mine included. My poor dog is already terrified with what goes on there now. I find the sound of gunfire very unsettling. Even hiking the Eagle Trail we are dealing with those disturbing gunshots. My neighbor even had a bullet wiz by his head while hiking. And they want more powerful guns allowed? Please no on this. It really needs a more remote facility.

Thank you,
Rhonda Hermsen
4236 Pleasant Ridge Road
Boulder

Sent from my iPad
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Sandra Zeller - SU-19-0009
Date: Tuesday, July 30, 2019 6:22:02 PM

Boulder County Property Address: 3906 Iron Ct longmont CO
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Sandra Zeller
Email Address: zumbrota@msn.com
Phone Number: (201) 527-0845
Please enter your question or comment: I own a house in the Lake Valley Community and am VERY OPPOSED to the outdoor expansion of the gun club. Indoor ranges with appropriate noise control is acceptable, but outdoor expansion would be a detriment to open space preserve near my house
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Hello,

My name is Sally Renfree and my address is 4715 N. 26th St. Boulder CO 80301. I am writing to express my opposition to the expansion of the private shooting range on N 26th St. I have seen the multiplication of car trips on this narrow dirt road over the years. Our requests for paving or chip seal have gone unheeded. The posted speed limit is rarely adhered to by those that frequent the shooting range or the circus establishment. This causes a lot of dust and concern for the safety of our children, dogs, and those of us who walk and bike in the area. Already it is difficult to exit onto highway 36 due to the traffic, the not well planned speed limits and the continuous lane feeding from Jay road.

In this time of daily shootings throughout the US no one wants to have an increase of armed individuals driving through the neighborhood every day.

I ask you with the conviction of a Boulder resident for over 50 years please do not approve this expansion. Please do not destroy our neighborhood.

sincerely,

Sally Renfree
I am writing in regards to the expansion of the shooting range on N 26th. Specifically I am concerned about the expanded use of high powered rifles. I live on the west side of Valhalla subdivision and the sound of the gunfire from the range currently is noticeable but tolerable. The occasional sound of a high powered rifle borders on obnoxious, but due to the infrequency is no big deal. I am worried that the increased use of these rifles will be a serious detriment to the enjoyment of my home.

Thank you
John Crittenden
4771 Valhalla Dr
Hello,

I live in the Waterstone Development East of 51st Street. I want to state my vehement opposition to the expansion of the Boulder Rifle Club. There is already considerable noise associated with the gun club, particularly on weekends when people are out trying to enjoy free time. I cannot take my dog on walks on the weekend because of the incessant shooting.

I absolutely oppose any expansion to the rifle club. If you have any questions, please do not hesitate to contact me.

Thank you,
Diane Achman
973-902-9292
From: Emily Tuckman
To: Boulder County Board of Commissioners
Subject: The gun range in north boulder
Date: Tuesday, July 30, 2019 10:19:31 AM

Dear friends at the commissioners office,
I heard that you are thinking of expanding the gun range just north of Boulder. I urge and encourage you NOT to. I have a 3 year old who goes to school at Boulder Journey and I would so appreciate the range not getting larger.
So much appreciation!
Yours Emily Tuckman

Sent with autocorrect typos from my iPhone
Dear Planning Department,  

July 31, 2019  

I am writing concerning docket #SU-19-0009. I am a resident of area 3, at 2129 Yarmouth Ave and received a postcard from you. I see that you are again considering enlarging the Boulder Gun Club. It appears they are not only increasing the size of the range, they are applying to become a public venue. As a resident of the area I see several problems with enlarging the area: from increased traffic, to increase noise pollution and safety concerns of stray bullets. These are just a few issues that need to be addressed. Boulder Gun Club is a private organization. Changing it status to a public venue will change the nature of our community.  

I hope you will consider having an open meeting so the residents and public can voice their concerns before making a final decision.  

Thank you for consider this proposal.  

Tom Levy  
2129 Yarmouth Ave  
Boulder, CO. 80301  

from my iPad
Boulder County Property Address: 180 Sky Trail Rd
Name: Deb Bothner
Email Address: dobothner@gmail.com
Phone Number: (303) 442-0433

Please enter your question or comment: No, no, no! We do not need or want this in our community!!!!

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: Lake Valley
Name: Annemiek Kamphuis
Email Address: amkamphuis@hotmail.com
Please enter your question or comment: Dear Sir, Madam,

We would like to give our input regarding the planned expansion of the Boulder Rifle Club. We live in Lake Valley, close enough that we are within hearing distance of any shooting at this club - which is a nuisance as it is. The planned expansion including multiple long-range lanes seems a terrible idea. Both for the increase in noise hindrance from more people shooting as well as people using long-range and more powerful weapons, but especially since it seems incredibly hazardous and irresponsible to have such an outdoor facility near where people live (the Lake Valley and North Rim neighborhoods) and go for recreation (the Boulder Valley Ranch Open Space). It is unacceptable for there to be any chance at all of stray bullets. Any facility as proposed including long-range lanes should be far away from communities and public lands.

Sincerely,
Annemiek Kamphuis
Daniël van der Laan

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 3910 Newport Lane
Name: Brad Petrasek
Email Address: brad@genesisbcs.com
Phone Number: (713) 205-2056
Please enter your question or comment: Will the Boulder Rifle Club become a public range or remain private?
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
I am opposed to the proposed expansion of the shooting range. I live east of the site and routinely travel along Highway 36 in the vicinity of the existing gun club.

I assert that I have the right to live without the sound of gunfire and without the concern that errant bullets will escape the boundaries of the gun club injuring me or others.

High capacity weapons at the gun club should never be permitted. Citizens of Boulder County have a right to peace, and quiet and safety.

As Boulder has grown around the existing gun club the preexisting use and scale of operation of the gun club had been tolerated. Expansion is inappropriate and a danger and nuisance to the community.

Gun owners should not have the right to exceed noise standards in our county.

This expansion if permitted will likely lead to injury and death. Let's save those lives and stop the expansion before tragedy occurs.

Please check box below *

- I acknowledge receipt of the Open Records Notification
Boulder County Property Address: 6439 Ace Ct., Longmont, CO 80503
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Tony Greif
Email Address: tonygreif@comcast.net

Please enter your question or comment: I, and many of my neighbors in Lake Valley Estates and North Rim are completely opposed to the expansion of this gun range based on noise and safety issues. In fact, I am opposed to its existence in any form. The frequent loud noises that emanate from the range disturb the quiet enjoyment of our properties and disturb our peace. These ranges should not be allowed so close to residential areas. Regarding safety, someone may be shot and the county will be at fault. I am attaching comments from two of my neighbors, with whom I agree entirely:

"The Boulder Comprehensive Plan for Area III Planning Reserve has been identified by the County Commissioners as one of the sites for the expansion of gun ranges in Boulder County. There is still discussion considering various options for development in this Planning Reserve Area for future uses such as family housing, etc. The question is would the gun range be compatible for future uses. It should be delayed until there are details in the Comprehensive Plan for any future compatible development in this planning reserve area. This area has been reserved for future expansion when needed to meet the needs of increasing population in the city and county of Boulder. A very strong case could be made to delay the shooting range until a detailed plan is in place for future development IF and WHEN it is annexed to the City of Boulder in order to meet their goals for sustainable development and meeting needs for affordable housing. It seems inappropriate to put a massive shooting range that primarily affects our low income population, should that be one of the future uses for this planning reserve area. Also, past proposals for a Sports Complex were requested because it impacted the local population. Any expansion of current use should be rejected until Comprehensive Plans revisions are approved and in place. William and Lori Neff"

"In addition to the possibility of stray bullets landing in Open Space and throughout our community proper, the constant barrage of high powered rifles and automatic weapons without question sounds like a war zone. This is not conducive for habitat, open space recreators or peace of mind in a bedroom neighborhood. I urge all residents to band together immediately to provide public comments vehemently condemning not only the expansion, but the club altogether.

The only way I believe we should support the rifle club is with fully enclosed facilities. Indoor shooting ranges are common in densely populated communities. No reason why it shouldn't be done here. We are no longer in a rural environment. High density growth from Boulder continues in all directions. The gun club can have a long future simply by creating a 100% indoor venue. Just say no to anything less."

Thank you for your attention in this matter.

Tony Greif

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Kirsten Erkfritz - SU-19-0009
Date: Thursday, August 1, 2019 9:48:58 AM

If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Kirsten Erkfritz
Email Address: kirstenraercerkfritz@gmail.com
Phone Number: (303) 957-7126
Please enter your question or comment: I am adamantly against a firing range going up near my million dollar home. I have ptsd and cannot handle the sound of gunshots. This is too close to neighborhoods. If you allow this to go through I will sue the city and county, and I'm guessing I won't be the only one. Take this shit out of city limits and out past 55th into industrial area.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
To Whom It May Concern:

We recently moved into the Waterstone neighborhood after completing an extensive and expensive remodel/update to the home.

It has just come to my attention that we already hear noise from the gun club. If it is allowed to expand, this will become an even bigger problem.

Not only will it impact property values, but that then impacts tax revenue in a negative way. My husband, Mark, and I are in strong opposition to expanding the gun club in any way.

Bernee D. L. Strom
Homeowner
5303 Westridge Drive
Boulder, CO 80301
Hello COB-
Please accept this letter of opposition concerning the gun range.
The number one issue is safety first-larger numbers of people coming with firearms.

Colorado is such a big state, why does it have to be anywhere near a residential area??
There are kids biking all over, houses, dogs, and there of been cases of stray bullets.
And when we heard that semi automatic guns were going to be allowed— that is even more horrifying. How on earth could anyone think that is something we want to be around or hear??

I have no idea what the protocol is for vetting all of these people coming to shoot, but I am concerned about safety issues, increasing numbers of people with guns, the sounds we will hear at our home...we picked this neighborhood because of the peace and quiet, and it just seems extremely unnecessary.

It seems like it is a situation of somebody's wants, and nobody's needs!

I wonder at the thought process and rationale of these folks who think that anyone would welcome the safety and noise issues. And would be ignorant and unthoughtful about where people live.

I question the judgment of those that would put their need to shoot over quality of life in this area — Those of us that have invested our time and money into Boulder County to have peaceful properties so we can enjoy being outside without hearing shotgun and machine gun fire.

Thank you for your consideration.
Krysla Gallagher
Waterstone, Boulder

Sent from my iPhone
Hello.
We live in the Waterstone neighborhood that is within the noise corridor of the gun range. We object to the expansion because it will affect the peacefulness of our neighborhood.
Alaine Lerner
5345 Waterstone Dr.
Boulder, CO 80301
--
Alaine Lerner
303-909-1050
To Boulder County Officials,

About fifteen Years ago the Boulder County Land Use advised the Commissioners to deny the Boulder Rifle Clubs Request for a similar expansion mentioning the lack of noise, traffic, and SAFETY studies. Well, this time the gun club did impressive looking albeit dubious* traffic and noise studies, but NO SAFETY STUDY?????

In this case two out of three really will NOT do! After all a bullet from a high powered rifle can travel 3 miles.
About 1000 people live down range.
Article 4.4-602/F 1a(i) of the county code states that a firing range should control all land in the surface danger zone. The Boulder Rifle Club clearly does NOT!
The fact no one's been hit yet isn't a safety study!
Maybe members of the Rifle club and Sheriff's Dept are just good shots!
Probably a lot better that the general public would be
Even if the range were grandfathered .Which it is not .It would be no excuse to compromise safety or destroy neighborhoods and property values.

SILENCED
800 people with guns, driving past our houses who know damn well we don't want them there and don't appear to care would be intimidating enough if they weren't accompanied by sheriff's deputies (who we're supposed to call if we have a problem).Like that would ever happen.
If we felt there was a safe place to express our concerns all these years; there would be a whole lot more reports of noise, speeders, dust, rude behavior, threats and stray bullets.

Of course if significant numbers of less disciplined shooters are added to the mix; life here would most likely become intolerable even without factoring in the noise. It would feel even more like an occupying force than it does now, but with less discipline and more force. Who would want to live in such a place? Really how many hundreds of thousands of dollars of equity am I to lose for the sake of the Boulder Rifle Club?

Highest and best use??

Creating the county's only public firing range in area 3 would be a very big deal.
What could have been a tech center, affordable housing, or some center for some future cutting edge wonder that might define this city instead would be devoted to Gun enthusiasts.

Notification ??
Yes, the "area" residents have been "notified". Notified with only about ten thin postcards sent out right before July 4th weekend (to less than 1% of those affected). Giving us 30 days to respond! We were promised 15 yrs ago this inappropriate adherence to the 1500 foot radius rule wouldn't happen again. It just did! This time we should get that in writing.

Shoot first?
If anyone is actually hit by a bullet from this ridiculously situated range; this city will be swarmed by journalists and lawyers from all over. They'd be real good at asking the questions that would be better to ask now.

Sincerely,

John Arkin (owner)
2275 Yarmouth Ave
Boulder, Co 80301
Boulder County Property Address: 6451 Ace Court, Longmont, CO 80503
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Mary Uchida
Email Address: mary.uchida@comcast.net
Phone Number: (303) 939-8881
Please enter your question or comment: I have a comment about the rifle club expansion application. I live in Lake Valley and on nearly any summer day we can hear the shooting from the nearby rifle club. We hike several times each week on the open space trails and the shooting reverberates through the valley. I am extremely concerned that expanding the shooting range will have a material negative impact on our neighborhood and our enjoyment of our home and nearby trails. I understand that shooting in forest land is an issue and that more gun range space is needed, but I strongly disagree with expanding the shooting range so close to Boulder and our adjacent neighborhood to the north. Please deny the application and encourage the applicant to find a more remote location for additional recreational shooting facilities. Thank you.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Dear Planners,

I'm writing this to the Planner and Commissioners in reference expansion of the that I oppose this expansion of the Rifle Club. I understand the need but I will break down the reasons why I'm not in favor of the expanded Range.

1. Land Use. There is several hundreds of acres in this area surrounded by open space and trails. The use of this Property in this area would be better served to subdivide the large parcels into smaller lots and affordable living. The expanded Rifle Range would restrict this growth and lower property values.
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Lisa Carmichael
Email Address: garylisa@gmail.com
Phone Number: (303) 818-7111
Please enter your question or comment: It's inappropriate to allow for the expansion of the rifle club so close to open space. We use that open space to walk and it's already dangerous enough with the existing use. There is no noise abatement so close to residential. I live on Pleasant Ridge Road and the existing rifle club is noisy enough. This expansion would encourage the use of large bore extremely noisy rifles. I would hope that you turn down this application and you agree that this would not be good for Boulder.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
We are sending this correspondence upon learning of the Boulder Rifle Club’s Shooting Range expansion in north Boulder. My wife and I have been residents of the Lake Valley community that is located north of the shooting range for 28 years. We’ve often been subjected to the repeated sounds of firearms from the range and there’s been times when the noise is continuous for hours at a time. This, combined with at least one stray bullet having been reported by a neighbor raises questions as to the safety of the existing range to the Lake Valley community, let alone an expansion. We didn’t express our concerns in the past as the rifle club existed before we moved into the community and we rationalized the situation as ‘tolerable’. The current expansion proposal that includes not just an additional indoor firing range, but 5 outdoor ranges, dramatically changes the dynamics. We can no longer turn a blind eye (or ear in this matter) and feel an obligation to express our concerns. As such, we submit this correspondence and offer the following:

- A select few homes immediately adjacent to the range were notified of the planned expansion. The county has an obligation to notify and solicit feedback from all parties that may be affected by the range’s expansion. This includes any and all communities that could be affected by increased traffic, safety and noise pollution. While in our case traffic is not an issue, safety and noise pollution certainly are. In granting an open air expansion of the range to a larger community, the county is enabling the likelihood of increased stray bullets and noise pollution.

- We understand a study was performed. It did not, however, address the Lake Valley community. As we are already adversely affected by the range’s noise pollution, failure to take into consideration how the expansion may affect Lake Valley is not aligned with the safety and wellbeing of the county’s residents. The study suggests that for the residents adjacent to the shooting range, the increased noise levels from the shooting range would be difficult to discern from the background ambient noise. This may be the case along the corridor south of the range with the higher population and increased traffic that contributes to the background ambient noise. This is NOT the case for Lake Valley that is surrounded by Boulder County Open Space and where our ambient noise levels are significantly lower than those noted in the study. Our mornings are frequently interrupted by the sounds of individual firearms being discharged from the shooting range with noise levels well above ambient conditions. We do not feel we should be subjected to YET MORE noise pollution from the rifle range.

- I am also concerned that the study used surface weather data from the Fort Collins regional weather station. The front range of Colorado presents one of the most complex weather regimes in the county, with significant variances in localized wind, temperature and moisture fields. At a minimum, the study should have collected surface weather recorded immediately adjacent to the site. This could have been achieved with the deployment of a modest amount of supplemental instrumentation. Rather, the study used public domain data from a remote location that WAS NOT representative of the study area.

- As a trained atmospheric scientist with over 30 years of experience and expertise in the use of atmospheric instrumentation, I understand how the lower atmosphere influences acoustic wave propagation. A proper noise
mitigation study would taken into consideration the lower 2-3 km of the atmosphere (also referred to as the 'boundary layer'), the advection of the acoustic waves by the winds aloft, and the 'reflection' of acoustic waves off of upper-level atmospheric structures. Further, the study should be performed under a range of seasonal and synoptic (i.e. large scale) weather patterns. Studies of this nature typically run 12 or more months and require regular monitoring of the atmosphere using vertically pointing remote sensing and/or balloon-borne instrumentation. A mere 3-day study like the one performed by Behrens & Associates and one which didn't consider the upper atmosphere is, in my professional opinion, completely inadequate for assessment of the situation, let alone used as basis for granting approval of the expansion plan.

- Resulting noise mitigation plans often require intermittent controls when atmospheric conditions are favorable to 'reflecting' the acoustic waves downward and towards nearby residential areas. While counterintuitive, under certain atmospheric conditions the acoustic energy originating from the rifle range can be louder at distances further away, like at Lake Valley, than at residences immediately adjacent to the range.

- My wife and I do not have a strong position for or against the use of firearms or individuals exercising their constitutional rights to use firearms. What we object to, and object to strongly, however, is the county's failure to perform due diligence in informing residents that would be affected, the lack of transparency, and having done a study of insufficient rigor upon which critical risk management decisions are being made.

- As an individual that has used firearms in shooting ranges, I implore the county to consider granting the expansion only under the condition that it is a fully enclosed facility; a position my wife supports as well. We see this as the only option for eliminating the noise and occasional stray bullets and ensuring the safety and well being of the residents of Lake Valley and those within the broader Boulder County community.

Sincerely,
Herb Winston
6375 Eagle Ct
Longmont, CO 80503

Attached is a PDF file of this correspondence

Attach a photo or document (optional): https://bouldercounty.wufoo.com/cabinet/78f2c93c-8751-4411-b466-8683340f1335 - 441.26 KB
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Alastair Brogan  
Address: 5288 Westridge Ave, Boulder CO 80301

I hereby give notice of my objection of the:

EXPANSION OF A **NEW PUBLIC GUN FACILITY SLATED** TO BE BUILT NEXT TO THE EXISTING BOULDER RIFLE CLUB (ON N. 26TH STREET - WEST OF THE HOMES ON THE WEST END OF PLEASANT RIDGE).

I also will hold Boulder County directly responsible for any harm to myself, family dogs or real estate value that this could cause in the future.

I have personal experience if a girl being shot and killed from a stray round originating from a military facility while serving. Why on earth would a rifle range be built close to a populated space goes beyond rational thinking.

Alastair Brogan
Please take note of our strong objection to expanding the gun facility. I note in the past the commission has wisely rejected such expansion.

This expansion will benefit no one living in the area, will create a noise and traffic headache, and will surely decrease the property values of all located in the area. Such decrease in property values will hurt the county and the ongoing demands and reviews of the property values, the noise complaints, etc. will create more work for County employees and taxpayers.

The only ones benefiting will be the gun facility owner and individuals who don’t live in the area and won’t have to travel as far to participate in this activity.

P. Pacey

Sent from my iPhone
Dear Boulder County Officials:

I apologize because I just sent an incomplete Email and somehow was sent without my completion. I stated that I oppose the expansion of the Rifle Club for various reasons. I recognize the need but not the expansion or the location of the existing Club, here are some reasons.

1. Land Use. This area seems like it would be better served with subdividing the large parcels into smaller lots with affordable living.
   The Rifle Club sits between open space and Trails with population centers on all sides. This expansion would restrict the entire area and lower Real Estate Values.

2. Noise. The noise is intense at times especially in the very early morning. I hear complaints from residents in all the surrounding areas. The noise is already loud and from early morning to dark and expansion would of course be three times worse. At times it sounds like the shots being fired in my back yard.
   There's a Real Estate term that states everyone is allowed “Quiet Enjoyment” of their Property and we certainly don't have that in this area.

3. Traffic. The traffic here on N 26th And Yarmouth Avenue seems non stop. On N 26th Street There are only 7 Residential homes and a Circus Property with two apartments along with a Tree Nursery. I can't even imagine what the increase in traffic would do on a already very busy road. The noise and dust and people driving fast is almost unbearable now.

4. Safety. All these elements and the huge increase in members and then to triple the size of Rifle Club adds up to a unsafe environment.
   I realize the Club is private at the present time. I also realize the need of training facilities for the Police. I don't understand and agree with turning the Club public would intensify the traffic, noise, and safety issues that already exists. This just isn't the right location for this location and would effect future generations and slow progress for this area. Unfortunately there are just too many people in the line of fire.

Mark Dolfin
2541 Yarmouth Avenue
We support plans for the new Public Gun Facility, Boulder Rifle Club, near our house. Our neighborhood is in the noise corridor.

Thank you -

Megan & David Boyle
5405 Westridge Drive

303-883-3995
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Phil Griffin - SU-19-0009
Date: Friday, August 2, 2019 3:28:25 PM

Boulder County Property Address: 6620 Fairways Drive
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Phil Griffin
Email Address: pbg57@yahoo.com

Please enter your question or comment: I am opposed to any above-ground, outdoor expansion of the Boulder Rifle Club.

As a 27 year resident of Lake Valley, I can tell you the sound of the rifle club is already a continuous presence for us. Any increase in noise levels will turn an already annoying situation into a truly desperate one.

Given the increasing density of Boulder County, I believe it is paramount the Land Use Department act on behalf of all concerned parties and either deny the rifle club expansion or required a completely indoor or underground facility that reduces, not increases, current noise levels.

Thank you for your consideration of my opinion.

Phil Griffin
6620 Fairways Drive
Lake Valley Subdivision

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
I live at 2473 Sumac Avenue, just across 36 from N 26th. I have heard shooting noise from the gun range as it now exists. I do not support the expansion of the gun range and the increased noise and traffic. Originally, the location of the present gun range was appropriately placed on the far outskirts of town. Now, with the changes to Boulder, it no longer is. If they would like to have a big gun range, they need to go further east to outside of the densely settled area.

Please do not approve this application.

Paula Breymeier
Dear Planners of Land Use,

I am glad we are going to restrict target practice in the mountains. However, the gun range at North 26th Street in Boulder should all be enclosed to decrease the startling noise of gun shots and to increase the safety for people.

Thank you very much,

Phoebe Norton
4089 Spyglass Lane

Sent from my iPad
Hello Summer,

I sent two emails last night because one was sent by mistake without completing. I was wondering and hoping that you received both Emails. Please contact me and let me know if you received two Emails and according to my phone two were sent.

Thank You
Mark Dolfin
I am writing on behalf of homeowners in Boulder who would be adversely affected by the application of the Boulder Rifle Club to expand their operations.

Please see the attached letter.

Dale Pugh Law
11374 Xavier Drive, #202
Westminster, CO 80031
720. 231.5628
dalepugh52@gmail.com
August 2, 2019

Sent via email to: planner@bouldercounty.org
sfrederick@bouldercounty.org

Boulder County Land Use Department
2045 13th Street
Boulder, Colorado

Re: Docket#: SU-19-0009: Boulder Rifle Club, Inc.

Dear Department Staff and Summer Frederick,

I am writing on behalf of homeowners living north of the Boulder Rifle Club (BRC) and the proposed area for expansion. The special use application to expand the current rifle range area was previously submitted in similar form in 2003-2004 under Docket#: SU-03-06 Boulder Rifle Club. At that time objections to the expansion included issues of safety, noise, compatibility with the surrounding neighborhood, adequacy of revegetation of new berms, blowing dust and traffic. The Land Use Department recommended to the Boulder County Board of Commissioners that they DENY the rifle club’s application which they did. The homeowners I represent north of the BRC believe that all the issues apparent in 2003-2004 against granting the BRC application exist today. In writing to your Department today, my clients wish to concentrate on just the issue of safety.

In 2009 a hiker was nearly hit by an errant shot which officials at the time determined must have come from the BRC. On May 23, 2010, a former resident living north of the BRC, Jeff Boxer, had an errant shot come through his living room window. I was representing Mr. Boxer at that time and inquired into the circumstances of the errant shot and its ramifications for a potential criminal and/or civil case.

Interestingly, I am a former U.S. Marine Corps firearms instructor and a former Special Agent of the FBI. Mr. Boxer was, and continues to be, a nationally recognized expert in issues related to firearms deployment, bullet trajectories, ballistics, weapons, line of sight, and human factors. Together we provided the District Attorney and Sheriff’s Office with ample evidence that the bullet which went through Mr. Boxer’s window came from a high powered rifle being utilized by a member of the Boulder Rifle Club. Despite prohibitions for firing of high powered rifles, evidence was presented that such a weapon was fired that day from the BRC and that the trajectory of the bullet came from the BRC. Unfortunately the Sheriff’s Office declined to test the weapon and bullet fired into Mr. Boxer’s home. Although it is not my purpose to relitigate that event, it should be noted that many members of the Boulder Police Department and the Boulder County Sheriff’s Office are also members of the Boulder Rifle Club.
The homeowners I represent do not believe anything was done to ensure their safety in 2010, nor will be done to ensure their safety now if the proposed expansion of the BRC is approved. Beyond the issues noted in 2003/2004, especially the safety issue, which my clients believe to be continuing, the reputation of the BRC within the surrounding community which will be affected by any expansion is, frankly, that the BRC cannot be trusted to ensure the safety of the community. My clients believe their personal safety, and that of their families, is of far more importance than the commercial interests of expansion by the BRC. They also believe the Land Use Department and Boulder County Commissioners should put their constituent homeowners’ concerns over the Boulder Rifle Club.

Therefore, we object to the expansion of the BRC and ask that the Land Use Department recommend to the Boulder County Commissioners to DENY the application.

Very truly yours,

Dale Pugh, Esq.
Boulder County Property Address: 942 Lykins Avenue

If your comments are regarding a specific docket, please enter the docket number: SU-19-0009

Name: Marianne Gatten
Email Address: mkgatten@yahoo.com
Phone Number: (303) 449-4914

Please enter your question or comment: Does the expansion of the gun club impact the open space that it is near? Today the hiking trail has a caution warning hikers about stray bullets. With this expansion does it make the trail unusable because of an increase in the potential for stray bullets? Maybe it's an indoor range with no impact, I just don't know details of the project.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N. 26th
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: stephanie seeley
Email Address: princessfree55@yahoo.com
Phone Number: (562) 400-7567
Please enter your question or comment: I would like to know when the public hearing is for the above expansion of the rifle range.
Many people in Lake Valley would like to attend to understand what kind of sound abatement will be used.
Please advise
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
We are opposed to the expansion of the Boulder Rifle Club. We already hear the shotguns and the gun club's expansion will further encroach on our peace and quiet. We are also very opposed to allowing high powered rifles at the club. It is a risk to hikers, bikers and other persons who use the surrounding open space for enjoyment. There must be a balance between those who wish to enjoy the shooting range and those of us who live in areas impacted by the noise. The expansion would ultimately impact our real estate values; as the noise is a nuisance and could frighten buyers away.

Please do the right thing and leave the conservation easement as is, and block the expansion of this facility.

We appreciate your consideration.

Dick & Ellen Williams
5355 Westridge Drive
Boulder, CO 80301
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Sabrina Neu
Email Address: sabrina.m.neu@gmail.com
Please enter your question or comment: Hello, I am very concerned that there has been no communication to nearby residential neighborhoods about this proposed Boulder Rifle Club property expansion. I live on Yarmouth Ave and only found out by accident when perusing postings on the local Nextdoor site.

Is there a plan for any community input or public comment hearing?

I have strong concerns about negative impact to the nearby community (noise, traffic) of such a massive expansion.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Rachel Lederman - SU-19-0009
Date: Monday, August 5, 2019 3:35:38 PM

Boulder County Property Address: Boulder Rifle Club
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Rachel Lederman
Email Address: rachel@sweetsadie.com
Phone Number: (917) 312-2102
Please enter your question or comment: I am very opposed to the expansion of the Boulder Rifle Club. We are constantly bombarded by gun noise, fear for our lives. We want the whole thing shut down and closed not an expansion. We can not enjoy the open space with constant fear of getting shot! How can this even be considered with all of the gun violence in our nation. Who are talking to by allowing this to expansion? Gun people are more important? This city is saying guns are more important than our health. It is time to shut down the Rifle Club, not expand it.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 2575 Forest Avenue
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Leonard Weed
Email Address: weedzoo@gmail.com
Phone Number: (303) 444-9224
Please enter your question or comment: there is no reason for an outside range expansion. If additional space is needed to train new gun owners, an enclosed controlled facility is the best option. It's time for us to accept that the "old days" of shooting rats at the dump is long gone. Responsible gun ownership today should be all about instruction in care and carefulness, a job best handled in a controlled classroom environment.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Amy Chan
Email Address: echans@mac.com
Please enter your question or comment: I oppose this application to increase the size of the rifle range. We need LESS guns in our society, not more. Keep guns OUT of Boulder!
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Bryan Hoff - SU-19-0009
Date: Tuesday, August 6, 2019 4:19:22 PM

Boulder County Property Address: 6255 Red Hill Rd
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Bryan Hoff
Email Address: bryan_hof@hotmail.com
Phone Number: (503) 702-1676
Please enter your question or comment: I just found out that the Boulder Rifle Club is looking to expand. I think this is a great idea! When I worked in Golden, I occasionally visited a range there. Since I left that job, I have not gone to a range. It would be wonderful to be able to go to a range in Boulder occasionally to train and potentially take additional classes.

I've also heard that the rifle club has a 10+ wait list. Think this shows the demand, from our liberal county, that there are a lot of folks interested. This sounds like a long overdue project. It also should keep people from going into the forests to shoot and leaving a mess. I favor the project!
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Grant Hickman - SU-19-0009
Date: Tuesday, August 6, 2019 4:45:19 PM

If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Grant Hickman
Email Address: ghickman@pmglending.com
Phone Number: (303) 817-8776

Please enter your question or comment: I am a resident in the Lake Valley Subdivision, 6780 Golf Club Dr, and am commenting on the Rifle club expansion. The amount of gunshots heard throughout the neighborhood is already appalling and to increase it further with automatic weapons and triple the amount of ranges, all pointing directly towards our neighborhood is unconscionable. It will sound like a war zone out there. Please re-consider this application and if they need more room, make it an indoor facility. That will solve all the noise problems.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Kim Friel - SU-19-0009
Date: Tuesday, August 6, 2019 4:59:24 PM

Boulder County Property Address: 4810 N 26TH STREET
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Kim Friel
Email Address: kim@Kimfriel.com

Please enter your question or comment: I’ve been very concerned lately regarding article in the Daily Camera the other day about rifle range that is 1 mile north of my house is going to be expanding by quite a bit and will be open to the public vs, the private club it is now.

For past 2 years I’ve been woken up with gunshots starting at 7am and going all day, found out it’s the Sherrif’s department annual training. I’ve emailed Garry Sanfacon, Project Coordinator for the Northern Front Range Recreational Sport Shooting Management Partnership, (He’s the point person regarding rifle range expansion in North Boulder) for past 2 years to state my concerns about this. He’s never replied with any kind of ideas or concerns - just sent me information about the upcoming plans.

So you can imagine my concern that this will now be our potential new normal up here in North Boulder - hearing gunshots going off from dawn to dusk every day.

I know there is discussions considering various options for development in the future such as family housing, etc. My question is would the gun range be compatible for future uses.

I would like to see plans for expansion on the gun range delayed until a detailed plan is in place for future development IF and WHEN it is annexed to the City of Boulder in order to meet their goals for sustainable development and meeting needs for affordable housing.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Dear Sue Frederick,

I'm aware of plans to expand the shooting range at 4810 North 26th Street to give access to a much larger population of recreational shooters. I also know there are sites for feedback and information.

I am a homeowner who lives nearby. I am fully against this expansion which will without a doubt cause a decrease in safety in the area and excessive increase in noise pollution by gunshots.

We already hear, understand, and tolerate law enforcement shooting practice breaking into the mornings with the report of guns being fired.

I have fired guns at a shooting range, have family members and friends I dearly respect who enjoy shooting and hunting as a safely practiced sport. I have nothing against safe shooting practices.

A shooting range near homes, and near hiking areas where stray bullets have already near-missed hikers is counter to safety and consideration of citizenry.

As a slight aside: On the day after the vote banning automatic weapons in Boulder someone fired their automatic weapon repeatedly, outdoors, across the road from the Dakota Rigde Village Homeowners Association where I am an Owner and Board Member. It felt threatening to the area and dominated the nearby neighborhood. The shots came from the direction of the shooting range at N 26th Street, however the reports were much closer than usual and clearly outdoors as if less than a football field’s distance away.

What's the idea in expanding the shooting range at 26th Street near homes and hiking trails? - Especially given the health and safety issue for wildlife, humans, hikers, pets, and passing vehicular traffic??

I imagine you already know that an attempt was made to construct such a shooting range near Hygiene and it was soundly protested against and defeated.

I am against expansion of this gun range at N 26th Street.

Thank you for your service.

Sincerely,

Julie Connaghan
911-A Laramie Blvd.
Boulder, CO 80304
303-440-5271
Boulder County Property Address: 4810 N 26TH STREET
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: mitchell galnick
Email Address: mgalnick@comcast.net
Please enter your question or comment: As a long time Lake Valley resident I have become accustomed to the various shooting ranges in close enough proximity to us to have an effect (this one, the American Legion and the private on Lucetta's ranch). While it would be more pleasant (less noise, no chance of stray bullets) not to have any of them they presently have only a marginal effect on our enjoyment of our property. A massive change in the size and use of the existing special use seems unwarranted. I have no problems with any additional buildings but the addition of 5 new ranges, more than doubling their capacity and moving from a private club to a public situation open from sunrise to dark will cause irreparable harm to our quality of life and should not be allowed. I understand that the County is looking for a place to have public shooting but this close to a few thousand residents seems to fail many of the criteria for the expansion of the special use. A special use is one that may be allowed if developed in a way that is located, designed, and operated in harmony with neighboring development and the surrounding area. This certainly seems to fail this test. During the review process, the county considers location, design, configuration, intensity, and impacts by comparing the proposal to the code criteria and the use can operate in a sustainable way with minimal danger or impact to the users, the natural environment, or the developed environment. Again, pretty much a failure as I see it even if the ranges point SOUTH instead of right at us; more Noise, more Danger!
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26TH STREET
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: John Bachman
Email Address: soyled@gmail.com
Phone Number: (303) 588-5756
Please enter your question or comment: Given the current climate around guns, etc. I would prefer that the rifle range (that is within earshot of my house) NOT be expanded
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4258 26th st., 4258 26th st.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Rachel Bachman
Email Address: rachelinboulder@gmail.com
Phone Number: (303) 717-6378
Please enter your question or comment: I live across 28th street close to the private firing range and have just heard of the expansion of the Rifle Range. Due to the current climate and my stance on Gun Control, I am strongly against this project. It is already way too close to major residential areas (Palo, Holiday, Dakota, etc...) and it is ridiculous to consider expanding this range. Please let me know if I can do anything else to encourage this project from getting dropped.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4120 Niblick Drive, Longmont, CO 80503
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Jill Valenti
Email Address: jillvalenti27@gmail.com
Please enter your question or comment: It does not make sense to expand a range that is so close to residential property. As Boulder expands this area will be densely populated by residential neighborhoods. It is not safe and makes for too much noise pollution for current and future residential neighborhoods.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 2477 Vine Pl
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Alev Viggio
Email Address: alevviggio@gmail.com
Phone Number: (303) 990-2803
Please enter your question or comment: I am against the expansion of the Rifle Range. I live very close to this location and even at its current size hear gunshots. I've lived in my home for over 21 years and do not want to worry about potential shootings and gunshots as I'm in my backyard. One of the reasons we live in Boulder is for the outdoor life and quality of life.

Thank you for considering my comments.

Regards,
Alev Viggio

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 6990 Lake View Point Drive (80503)
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Abigail Wright
Email Address: abigail@mirandaproductions.com
Phone Number: (303) 819-7030
Please enter your question or comment: We object to the proposed expansion of the Boulder Rifle Club. We live to the north of the Club, next to Left Hand Valley Reservoir. We hear the sounds of gunfire on summer mornings, especially in the summer. It is unnerving, though I understand it is an established business that was there before we moved to the neighborhood, and it would be unfair to complain about its existence.

However, our part of Boulder County can no longer be considered rural. Expanding the Rifle Club to the degree proposed would exponentially increase the noise we now hear. And what about the wildlife that lives just north of the city? It's well known that the sound of firecrackers terrorizes animals and birds, and disrupts their mating and nesting. This does not seem to be a proposal that is in sync with Boulder's environmental goals. Please say no.

Respectfully,
Abigail Wright
6990 Lake View Point Drive
Longmont CO 80503

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 1707 HAWTHORN PL
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Sameer Brenn
Email Address: sameer@creativedestruction.com
Phone Number: (303) 569-4439

Please enter your question or comment: I write in support of the expansion of the Boulder rifle club. The rifle club has a long waiting list for memberships and additional capacity would help it serve the unmet demand in Boulder for a safe firearms range.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Samuel Williams
Email Address: samuel.g.williams@gmail.com
Please enter your question or comment: As a North Boulder resident, I am completely opposed to any expansion that will a) increase the amount of audible gunshot noise, b) increase the possibility for gun-related injury and/or death along the North Boulder road and trail system, and c) increase the ability to use an assault-style weapon in any capacity.

Please inform me (and the rest of North Boulder) of the date and location for public hearing regarding the proposed expansion of the Boulder Rifle Club facilities. I would like to be counted among the many opponents of this proposal.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Howard Kaushansky
Email Address: howard@kaushansky.com
Phone Number: (303) 517-6500
Please enter your question or comment: I want to express my strong support for the expansion of the Boulder Rifle Club. People in the mountain communities and the Commissioners have been working long and hard to implement the Forest Service's plan to close designated portions of the forest to recreational shooting and expansion of the Boulder Rifle Club is the last hurdle to providing safety to those living and recreating in the area. This is a matter of life and death and the Club expansion can make the County safer for many thousands of people who live and recreate here.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4145 Autumnnet
Name: J M Scott
Email Address: jannscottlive@gmail.com
Phone Number: (303) 447-8531

Please enter your question or comment:

1. Need to have a Range Master on duty whenever range is open.
2. There must be qualified staff on.
3. Must be open to public and not a private club.
4. Similar to rec centers.
5. Must follow all Boulder gun law including no high capacity magazines and no assault weapons.
6. Must have fire arms classes available at all open times.
7. Safety is Paramount and there must be a staff on site to ensure safety.
8. This must not be a haven for Militias, Extremists, White supremacist groups and all attendees or members must be vetted with background checks.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26TH STREET
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: David Jilk
Email Address: dave@jilk.com
Phone Number: (303) 499-3300

Please enter your question or comment: This is a follow-up to our previous note. We have now had an opportunity to review the proposal materials, and have some additional comments.

1. The proposal emphasizes that the plan is in compliance with County code. However, this proposal includes a request to modify a conservation easement. Therefore compliance with code would be the absolute minimum standard that one would expect the project to meet. In consideration for modification of the conservation easement, the County can and should expect a higher bar to be met.

2. The noise report was extensive but only considered properties to the south of the range, and therefore did not include Lake Valley, which is in the direction the muzzles are pointed. Further, for a firing range the decibel level of the sound is not the only consideration as to whether the noise pollution is within acceptable bounds. Thus requiring decibel levels lower than general standards are appropriate, and merely meeting code is not sufficient.

The planned mitigation appears to be a positive step. However, it is not clear whether baffling is directional in its effects. If the mitigation emphasizes the residences to the south of the range, and the baffling is directional, then it will not help at Lake Valley and conceivably could make it worse. The plan needs to include an estimate of how the noise levels at Lake Valley will be affected.

3. Similarly with respect to safety, the plan emphasizes the Boulder County Surface Danger Zone standards. We do not have the expertise to evaluate these standards, though we know a rifle bullet can travel much further than 1,320 feet. What we care about is: where will a bullet land if a participant accidentally double-fires (or similar mishap) and the bullet escapes the facility above the side or back stops. This needs to be considered in addition to any minimum code standards in place at the County. If it is even possible for it to land in Lake Valley or Boulder Valley Ranch, I don’t see how the County could in good conscience approve the modification of the conservation easement.

Thank you.

Dave Jilk & Maureen Amundson
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 1674 magnolia dr
Name: chris seideman
Email Address: e112258@yahoo.com
Phone Number: (303) 241-7705

Please enter your question or comment: I just want to note that after the closing of left hand Canyon to shooting I was immediately noticed an increase in shooting in my neighborhood. Sometimes I feel like I live in the war zone. Really appreciate if they could open up a safe place to recreational shooters other than my neighborhood thanks

Chris seideman

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Eric Seidel
Email Address: ejseide17@gmail.com
Please enter your question or comment: As a resident living on Magnolia Rd in Nederland, I am in full support of closing the Magnolia area to recreational shooting and I support the expansion of the Boulder Rifle Club. Thank you for your efforts in making Magnolia a safer and quieter place, in a place where we are at a high risk for wildfires, as well as “close calls” with recreational shooting.

Eric Seidel
107 Pine Glade Rd
Nederland, CO 80466
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 157 Cumberland Gap Rd., Nederland, CO
Name: Elizabeth Powers
Email Address: highpnt@yahoo.com
Phone Number: (720) 304-8924

Please enter your question or comment: I totally support the opening and expansion of new and safe shooting ranges in Boulder and closing down recreational shooting in and around the Magnolia area. Shooting around these residential areas are way too dangerous. Let's be proactive and create safety verses having to react to a tragedy caused by an accidental shooting.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26TH STREET
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: DIANA LESKELA
Email Address: dleskela@gmail.com
Phone Number: (720) 539-6044
Please enter your question or comment: I am writing in support of the proposed construction of additional ranges and buildings at the Boulder Gun Club. This expansion will provide much needed training and firearms practice space. Safe and legal practice spaces are sadly lacking in our community. Responsible gun ownership is built on a foundation of 1) proper training 2) ethics learned from responsible gun owners 3) regular and consistent practice. I believe we need to support the gun club’s expansion so that we can encourage gun owners and people interested in guns to adopt the sport and to practice in a safe, responsible environment where they have a chance to model behavior from other responsible gun owners.

Especially outdoors long range practice is sorely lacking locally. I am tired of encountering gun owners who feel they have no closer areas to practice than in the national forest. This expansion will be useful not just to the Gun Club members but to the broader community.

As a note, I am not a Gun Club member myself, just a supportive community member and active user of the adjacent Boulder County open space north of the Gun Club.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Claire Farley
Email Address: clairetfarley@gmail.com
Phone Number: (303) 442-9102
Please enter your question or comment: I support this application to expand Boulder Rifle Club. Boulder County needs this safe place for shooting practice. As an already respected and safe shooting range, Boulder Rifle Club is the best possible entity to provide expanded shooting facilities.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Christel Markevich - SU-19-0009
Date: Thursday, August 08, 2019 3:48:16 PM

Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Christel Markevich
Email Address: christelmarkevich@gmail.com
Phone Number: (303) 442-4475
Please enter your question or comment: Dear Commissioners,

I am supporting the expansion of the Boulder Rifle Club and I am grateful for all your great work.

Christel Markevich
5560 Magnolia Drive
Nederland, CO 80466

phone: 303 442 4475
christelmarkevich@gmail.com

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Mark Foreman
Email Address: mark.foreman@colorado.edu
Please enter your question or comment: Dear County Commissioners,
I write in support of Boulder Rifle Club’s expansion plans.

I live near National Forest land in the WUI and am well aware that it’s legal to shoot on these same NF lands. We moved from St. Paul, MN 5 years ago, where the sound of gun shots are followed closely by sirens, and are still disturbed by the too-frequent sounds of gunfire in our “back yard”. Shooting has been outlawed in urban areas and should be outlawed in the WUI for the same reasons.

I know you’ve heard the stories of near accidents and the sometimes reckless behavior of recreational target shooters in the same forests used by hikers, bikers and wildlife. I wish the shooters better understood how many houses are scattered in the hills, how dense the trails are and the movement patterns of the elk and moose. Even safely shooting into a backdrop and conscientiously cleaning up afterward has a large impact on the people and animals who live here.

Hunting and target shooting are not the same and although I would prefer to have no shooting in the WUI, I appreciate that hunters fire only a shot or two and not hundreds of rounds over long periods of time with various caliber weapons.

As a local volunteer firefighter I’m obliged to point out that target shooting is a common source of wildfires.

My understanding is that if there are more places for target shooters to shoot in the front range, then the Forest Service can disallow shooting in the front range WUI National Forest. I implore you commissioners to facilitate additional and/or expanded shooting facilities like that proposed by the Boulder Rifle Club so that the Forest Service can make our forests safer and more peaceful.

I feel badly about assuming a NIMBY argument and don’t presume that neighbors of the Rifle Club enjoy listening to gunfire any more than I do. But at least they won’t fear being shot accidentally in their homes, or be deterred from hiking because shooters (with ear-protection) are using the trails, or have to pick up boxes of shell casings, or put out fires ignited by errant tracers.

Thanks for the opportunity to comment.
Mark Foreman, Ph.D.
Nederland, CO 80466
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Alicia Grayson
Email Address: aliciaggrayson@gmail.com
Please enter your question or comment: I am in support of the expansion of Boulder Rifle club as a way to provide recreational shooting opportunities for those who want to while closing designated portions of the national forest in Boulder County south of Highway 7.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 57 Aspen Way, Nederland, Unincorporated Boulder County
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Dennis Whalen
Email Address: Dennis.W.Whalen@gmail.com
Phone Number: (303) 862-1501
Please enter your question or comment: I am writing in support of the Boulder Rifle Club's expansion. The club's expansion will allow responsible gun owners to be more familiar and comfortable with their weapons, and is expected to reduce the overall noise emitted from the Rifle Club. In addition, it's my understanding that there is a possibility that following the approval of this expansion the US Forest Service will close shooting the Forest Services properties located in the Southern portion of Western Boulder County, which will result in the safer movement of people and animals, and a much quieter environment.
Public record acknowledgement: I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: To: Wufag #LandUsePlanner Subject: Ask a Planner - Web inquiry from Darlene Reed - SU-19-0009 Date: Thursday, August 8, 2019 9:20:04 AM

Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Darlene Reed
Email Address: darlenerreed@comcast.net
Phone Number: (720) 431-9880
Please enter your question or comment: I support the expansion of the Boulder Rifle Club which will provide a safe opportunity for recreational shooters
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 881 Pine Glade Road
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: brian whitney
Email Address: bwhitney881@gmail.com
Phone Number: (303) 886-4188

Please enter your question or comment: I fully support this docket to allow the Boulder Rifle Club to create more area for legal shooting which in turn will close down random areas in the foothills where people current fire guns in the forest according to the USFS plan. Here is why:

My family are long time residents of Boulder County (Magnolia Road area in SW BOCO). Like many other residents in the foothills, we spend much of our time walking, running, biking, X-country skiing, etc on the many trails in our area. In the last few years, with more and more people moving to BOCO and the advent of social media, we have noticed more and more shooting in and around the areas/trails people frequent for exercise. I myself came upon a group of 3 teenagers firing a gun right off the main old Boy Scout camping area last year at mile 8 of Magnolia (the same place a fire was started summer of 2017). I called this into the only enforcer I believe we have for USFS lands, Paul Krisanits.

Although I know noise is a big factor for many of my neighbors, for myself and some others, the key problems here are random firing into the woods where people recreate and also the constant possibility of creating a wildfire with sparks from say bullets hitting rocks. The vast majority of people shooting up here are not residents that are responsible, but don't understand the implications and dangers of shooting in an intermix area of forest and houses. And without proper signage and only one enforcement officer, it is only a matter of time when either a wildfire starts or somebody gets hurt.

Thus, if we can offload the shooting pressures and dangers to the Boulder Rifle Club, a long time BOCO facility/area and close down shooting where it is dangerous, I think you will find that most people in the intermix areas of BOCO would agree with me.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Dear Boulder County,

I have been a Boulder county resident for 34 years. I have lived on Magnolia Dr. hiking, horseback riding, running and boating on Gross Reservoir almost every day. In the past 8 years the gun shooting has increased to dangerous levels. Many times, I have felt in danger of being shot by accident by recreational shooting on public land.

Under the Forest Plan, Boulder County wants to limit this hazard in the foothills and mountains where there is no safe area to ride, run hike anymore. However, Boulder County needs to have a gun range south of Highway 7, which includes the Magnolia area. Boulder Rifle Club wants to expand its facility. I fully support this solution!

Lake Valley residents fear and increase of noise. I feel without the expansion, there is an inevitable death by recreational shooter coming our way on Magnolia. It is out of control. From what I’ve heard the plans for the expansion may actually lower overall noise. Saving lives, is paramount.

I support of the expansion of the Boulder Rifle Club. The Commissioners have listened to the countless stories of close calls with recreational shooting and have worked hard on this solution. Please do not change course now.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.

Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: virginia schick
Email Address: virginia.schick@gmail.com

Please enter your question or comment: Dear Boulder County,

I have been a Boulder county resident for 34 years. I have lived on Magnolia Dr. hiking, horseback riding, running and boating on Gross Reservoir almost every day. In the past 8 years the gun shooting has increased to dangerous levels. Many times, I have felt in danger of being shot by accident by recreational shooting on public land.

Under the Forest Plan, Boulder County wants to limit this hazard in the foothills and mountains where there is no safe area to ride, run hike anymore. However, Boulder County needs to have a gun range south of Highway 7, which includes the Magnolia area. Boulder Rifle Club wants to expand its facility. I fully support this solution!

Lake Valley residents fear and increase of noise. I feel without the expansion, there is an inevitable death by recreational shooter coming our way on Magnolia. It is out of control. From what I’ve heard the plans for the expansion may actually lower overall noise. Saving lives, is paramount.

I support of the expansion of the Boulder Rifle Club. The Commissioners have listened to the countless stories of close calls with recreational shooting and have worked hard on this solution. Please do not change course now.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 156 Cumberland Gap Rd., Nederland, CO 80466
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Paul DeLong
Email Address: pdelong.born.to.cyle@gmail.com
Phone Number: (303) 417-0627
Please enter your question or comment: I'm in support of the expansion of the Boulder Rifle Club and believe this will reduce the risk of injury and provide a quieter experience in the forests surrounding Boulder by giving more people access to a safe, controlled place to shoot firearms.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N. 26th St.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Lora Thorne-Smith
Email Address: lori.thornesmith@gmail.com
Phone Number: (303) 444-5655
Please enter your question or comment: I’m writing in support of the Boulder Rifle Club’s application for expansion.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Leigh Benson - SU-19-0009
Date: Thursday, August 8, 2019 1:14:40 PM

Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Leigh Benson
Email Address: sonofben4@me.com
Phone Number: (303) 263-5064

Please enter your question or comment: I am in support of expanding the Boulder Rifle Club facilities, to provide more access to this sport in a safe and controlled environment. Without such an expansion, the club may not be able to admit new members -- particularly young members -- resulting in age discriminatory practices. Plus, without such an expansion, people seeking target practice opportunities will just head to the nearest forest; this is unsafe for families who live near these areas or are out enjoying other recreational activities in the forest. I live in an area close to a forest space often visited by recreational shooters, and I fear they do not know they are practicing in our backyards! Being unfamiliar with the area, they may not recognize that they are shooting near mountain homes and trails. The Boulder Rifle Club is trying valiantly to constructively address this unmet need in our community and we should support them. This is the option that will provide the greatest safety to all.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: Nederland
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: John Colton
Email Address: jcolton321@gmail.com
Please enter your question or comment: I am writing in support of the expansion of Boulder Rifle Club facility. The improvements to this facility will allow for the safe practice and education of Boulder County firearm owners. In my opinion, a review of the application and its supporting documentation indicates the area and infrastructure improvements will adequately address any impacts create by the expansion. In some cases, it would appear to improve safety and environmental impacts. For example, shelters proposed will reduce overall noise impacts while also reducing the risk to injury of accidental discharges.
Thank you for your consideration,
John Colton
Boulder County Resident
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N. 26th St.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Dr. Bea Knight-Johnson
Email Address: beakj@earthlink.net
Phone Number: (303) 440-6526
Please enter your question or comment: I support the application for expansion submitted by the Boulder Rifle Club.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Dear Commissioners,

I am supporting the expansion of the Boulder Rifle Club and I am grateful for all your great work.

Christel Markevich
5560 Magnolia Drive
Nederland, CO 80466

phone: 303 442 4475
cristelmarkevich@gmail.com

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Thank you

Howard Kaushansky
303 517 6500

On Aug 8, 2019, at 1:46 PM, Frederick, Summer <sfrederick@bouldercounty.org> wrote:

Good afternoon, Howard.

Thank you for your comments regarding the land use application SU-19-0009: Boulder Rifle Club. Your email has been added to the project file and is now part of the public record and available for review.

Regards,
Summer

Summer Frederick, AICP
Principal Planner | Boulder County Land Use Department
2045 13th Street; Boulder, CO 80302
Ph: 720.564.2603
sfrederick@bouldercounty.org
www.bouldercounty.org/lu

-----Original Message-----
From: Wufoo
Sent: Wednesday, August 7, 2019 9:57 PM
To: #LandUsePlanner <Planner@bouldercounty.org>
Subject: Ask a Planner - Web inquiry from Howard Kaushansky - SU-19-0009

Boulder County Property Address: 4810 N 26th Street If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Howard Kaushansky
Email Address: howard@kaushansky.com
Phone Number: (303) 517-6500
Please enter your question or comment: I want to express my strong support for the expansion of the Boulder Rifle Club. People in the mountain communities and the Commissioners have been working long and hard to implement the Forest Service's plan to close designated portions of the forest to recreational shooting
and expansion of the Boulder Rifle Club is the last hurdle to providing safety to those living and recreating in the area. This is a matter of life and death and the Club expansion can make the County safer for many thousands of people who live and recreate here.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Mark Foreman
Email Address: mark.foreman@colorado.edu
Please enter your question or comment: Dear County Commissioners,
I write in support of Boulder Rifle Club's expansion plans.

I live near National Forest land in the WUI and am well aware that it's legal to shoot on these same NF lands. We moved from St. Paul, MN 5 years ago, where the sound of gun shots are followed closely by sirens, and are still disturbed by the too frequent sounds of gunfire in our "back yard". Shooting has been outlawed in urban areas and should be outlawed in the WUI for the same reasons.

I know you've heard the stories of near accidents and the sometimes reckless behavior of recreational target shooters in the same forests used by hikers, bikers and wildlife. I wish the shooters better understood how many houses are scattered in the hills, how dense the trails are and the movement patterns of the elk and moose. Even safely shooting into a backdrop and conscientiously cleaning up afterward has a big impact on the people and animals who live here.

Hunting and target shooting are not the same and although I would prefer to have no shooting in the WUI, I appreciate that hunters fire only a shot or two and not hundreds of rounds over long periods of time with various caliber weapons.

As a local volunteer firefighter I'm obliged to point out that target shooting is a common source of wildfires.

My understanding is that if there are more places for target shooters to shoot in the front range, then the Forest Service can disallow shooting in the front range WUI National Forest. I implore you commissioners to facilitate additional and/or expanded shooting facilities like that proposed by the Boulder Rifle Club so that the Forest Service can make our forests safer and more peaceful.

I feel badly about assuming a NIMBY argument and don't presume that neighbors of the Rifle Club enjoy listening to gunfire any more than I do. But at least they won't fear being shot accidentally in their homes, or be deterred from hiking because shooters (with ear-protection) are using the trails, or have to pick up boxes of shell casings, or put out fires ignited by errant tracers.

Thanks for the opportunity to comment.
Mark Foreman, Ph.D.
Nederland, CO 80466
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Claire Farley - SU-19-0009
Date: Thursday, August 8, 2019 10:41:00 PM

Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Claire Farley
Email Address: clairetfarley@gmail.com
Phone Number: (303) 442-9102
Please enter your question or comment: I support this application to expand Boulder Rifle Club. Boulder County needs this safe place for shooting practice. As an already respected and safe shooting range, Boulder Rifle Club is the best possible entity to provide expanded shooting facilities.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Eric Seidel
Email Address: ejseidel17@gmail.com
Please enter your question or comment: As a resident living on Magnolia Rd in Nederland, I am in full support of closing the Magnolia area to recreational shooting and I support the expansion of the Boulder Rifle Club. Thank you for your efforts in making Magnolia a safer and quieter place, in a place where we are at a high risk for wildfires, as well as "close calls" with recreational shooting.

Eric Seidel
107 Pine Glade Rd
Nederland, CO 80466
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Alicia Grayson
Email Address: aliciaggrayson@gmail.com
Please enter your question or comment: I am in support of the expansion of Boulder Rifle club as a way to provide recreational shooting opportunities for those who want to while closing designated portions of the national forest in Boulder County south of Highway 7.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: chris seideman
To: Frederick, Summer
Subject: Re: Ask a Planner - Web inquiry from chris seideman -
Date: Thursday, August 8, 2019 6:00:42 PM

thank you

On Thursday, August 8, 2019, 01:45:34 PM MDT, Frederick, Summer <sfrederick@bouldercounty.org> wrote:

Good afternoon, Chris.

Thank you for your comments regarding the land use application SU-19-0009: Boulder Rifle Club. Your email has been added to the project file and is now part of the public record and available for review.

Regards,

Summer

Summer Frederick, AICP
Principal Planner | Boulder County Land Use Department
2045 13th Street; Boulder, CO 80302
Ph: 720.564.2603
sfrederick@bouldercounty.org
www.bouldercounty.org

-----Original Message-----
From: Wufoo
Sent: Thursday, August 8, 2019 5:54 AM
To: #LandUsePlanner <Planner@bouldercounty.org>
Subject: Ask a Planner - Web inquiry from chris seideman -

Boulder County Property Address : 1674 magnolia dr
Name: chris seideman
Email Address: e112258@yahoo.com
Phone Number: (303) 241-7705
Please enter your question or comment: I just want to note that after the closing of left hand Canyon to shooting I was immediately noticed an increase in shooting in my neighborhood. Sometimes I feel like I live in the war zone. Really appreciate if they could open up a safe place to recreational shooters other than my neighborhood thanks chris seideman Public record acknowledgement: I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 1092 Twin Sisters Rd
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Tedd Beegle
Email Address: teddngwen@peoplepc.com
Phone Number: (720) 839-5971
Please enter your question or comment: We strongly support approval of the expansion of the Boulder Rifle Club shooting range. The uncontrolled shooting all around is very dangerous and disruptive. The expanded range should allow the closing of the Forest Service lands to shooting, a great step in the right direction.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4106 Spy Glass Lane
Name: casey longo
Email Address: caseylongo@hotmail.com
Phone Number: (720) 217-5695

Please enter your question or comment: My family have deep and serious concerns about expanding the rifle club. The noise on weekends is already disruptive; to have it expand to 4x the size is unacceptable. It will affect our day to day comfort in our homes and our quality of life. Ask yourself: how would you like to listen to guns being fired every single day from dawn to dusk? We strongly oppose the expansion of the rifle club.

I am also concerned that there has been zero notification from the county for the people in our neighborhood. We are close to the club and have received nothing.

I want to be notified as to when the meeting is.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 1107 Pine Glade Road
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Jennifer Stewart
Email Address: Larkspur@mrice.net
Phone Number: (303) 862-2506
Please enter your question or comment: I support Boulder County's plans to open new shooting ranges for recreational shooting and target practice. Shooting needs to take place in safe designated areas, for the safety of all.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26TH STREET

If your comments are regarding a specific docket, please enter the docket number: SU-19-0009

Name: Laurel Amsel
Email Address: blckbird64@yahoo.com
Phone Number: (303) 618-5123

Please enter your question or comment: Please, please, please do not approve this request in full. I live in the Holiday Neighborhood in North Boulder right on the perimeter of highway 36. I already deal with the noise from the American Legion trap shooting range that is quite disturbing, not only from sound, but also PTSD related to guns. If the Boulder Rifle Club wants to build bathrooms and an indoor shooting range on their property where I will not be subjected to hearing shots being fired, I have no problem with that. However, if there is any chance that I will be subjected to hearing gun shots, I feel you MUST take into consideration the reality of today's world here in the U.S. I have been held up at gunpoint so I deal with the PTSD of that situation. I had no idea when I bought my home in the Holiday Neighborhood I was going to have to listed to the trap shooting on a regular basis. I live in a high density residential area where many people have dogs, quite a few of whom are traumatized by the sound of gun shots. Young people today have never lived in a time when school shootings were basically unheard of. With my own PTSD, I wonder what it would be like for children of any age in our neighborhood to have to hear guns shooting due to this request for expansion by the Boulder Rifle Club. PLEASE take all of this into consideration when deciding to approve this proposal. Thanks so much for taking my concerns to heart! Laurel Amsel

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 1092 Twin Sisters Rd
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Tedd Beegle
Email Address: teddngwen@peoplepc.com
Phone Number: (720) 839-5971
Please enter your question or comment: We strongly support approval of the expansion of the Boulder Rifle Club shooting range. The uncontrolled shooting all around is very dangerous and disruptive. The expanded range should allow the closing of the Forest Service lands to shooting, a great step in the right direction.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Andy Malkiel - Boulder Gun Club Expansion Proposal
Date: Friday, August 09, 2019 2:46:55 PM

Boulder County Property Address: 4810 N 26th St Boulder
If your comments are regarding a specific docket, please enter the docket number: Boulder Gun Club Expansion Proposal
Name: Andy Malkiel
Email Address: ajm2135@comcast.net
Phone Number: (303) 638-9206

Please enter your question or comment: I regularly use the Hidden Valley Trail just north of the Boulder Gun Club and have some concerns about the proposed expansion. After reviewing the plans, my concerns are as follows:
A) Despite having a cantilevered roof over the shooting stations, I'm concerned that only a 20' backstop is not adequate enough to prevent a stray bullet from exiting the shooting range, as it wouldn't require much of an angle from 900' away, to clear 20'. I would prefer to see a 30' barrier, while keeping the angles and height of the shooting station roof the same as proposed for a 20' backstop. An extra 10' above what's planned would hopefully mitigate any potential for accidents involving people hiking only a few hundred yards away. While there is a small hill between the 2 longer shooting ranges and the trail, it is significantly less of a barrier, for example, than the plateau behind the existing shooting ranges. The guns that will be used in the 2 longer ranges will, by virtue of the length, be high powered rifles, easily capable of traveling a few hundred yards (and more) past the barriers. In addition, there will be virtually no natural barrier between the 3 shorter shooting ranges and the trail. A 20' backstop will be the only barrier. Erring on the side of safety where people's lives are concerned seems the judicious approach.
B) I would like to see the Gun Club and Open Space work something out to put a dog proof fence south of the section of the Hidden Valley Trail that goes E-W. A dog that bolted, for whatever reason, could easily go into the "Danger Zone" (as drawn in the submitted plans). The Gun Club's own fencing, which consists of strands of wire, will not prevent a dog from entering the area.
C) The traffic study only looked at the intersections of Hwy 36 and Yarmouth or 26th St. It did not take into consideration the impact the extra traffic will have at the intersection of Jay and Hwy 36, especially for the left-turn lane (heading south on 36, turning east onto Jay). Since that light has been changed to mainly a red or green arrow, traffic wanting to turn left onto Jay already backs up into main section of 36! Given the extra 90-100 vehicles a day expected during the week, and the extra 200-300 vehicles a day expected on the weekends, with 75% of the traffic expected to head south on 36 from Yarmouth or 26th, this seems like a potential problem.
D) I believe the Gun Club should be required to improve the sound baffling of the existing shooting areas either before or at the same time as the new areas are being developed. It seems short-sighted to not take care of what's already being used and bring it up to the standards of the newer facility. I would be in support of the expansion if these areas are addressed. Thank you, Andy Malkiel

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 1107 Pine Glade Road
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Jennifer Stewart
Email Address: Larkspur@mric.net
Phone Number: (303) 862-2506
Please enter your question or comment: I support Boulder County’s plans to open new shooting ranges for recreational shooting and target practice. Shooting needs to take place in safe designated areas, for the safety of all.
Public record acknowledgement: I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26th St Boulder

If your comments are regarding a specific docket, please enter the docket number: Boulder Gun Club Expansion Proposal

Name: Andy Malkiel
Email Address: ajm2135@comcast.net
Phone Number: (303) 638-9206

Please enter your question or comment: I regularly use the Hidden Valley Trail just north of the Boulder Gun Club and have some concerns about the proposed expansion. After reviewing the plans, my concerns are as follows: A) Despite having a cantilevered roof over the shooting stations, I'm concerned that only a 20' backstop is not adequate enough to prevent a stray bullet from exiting the shooting range, as it wouldn't require much of an angle from 900' away, to clear 20'. I would prefer to see a 30' barrier, while keeping the angles and height of the shooting station roof the same as proposed for a 20' backstop. An extra 10' above what's planned would hopefully mitigate any potential for accidents involving people hiking only a few hundred yards away. While there is a small hill between the 2 longer shooting ranges and the trail, it is significantly less of a barrier, for example, than the plateau behind the existing shooting ranges. The guns that will be used in the 2 longer ranges will, by virtue of the length, be high powered rifles, easily capable of traveling a few hundred yards (and more) past the barriers. In addition, there will be virtually no natural barrier between the 3 shorter shooting ranges and the trail. A 20' backstop will be the only barrier. Erring on the side of safety where people's lives are concerned seems the judicious approach. B) I would like to see the Gun Club and Open Space work something out to put a dog proof fence south of the section of the Hidden Valley Trail that goes E-W. A dog that bolted, for whatever reason, could easily go into the "Danger Zone" (as drawn in the submitted plans). The Gun Club's own fencing, which consists of strands of wire, will not prevent a dog from entering the area. C) The traffic study only looked at the intersections of Hwy 36 and Yarmouth or 26th St. It did not take into consideration the impact the extra traffic will have at the intersection of Jay and Hwy 36, especially for the left-turn lane (heading south on 36, turning east onto Jay). Since that light has been changed to mainly a red or green arrow, traffic wanting to turn left onto Jay already backs up into main section of 36! Given the extra 90-100 vehicles a day expected during the week, and the extra 200-300 vehicles a day expected on the weekends, with 75% of the traffic expected to head south on 36 from Yarmouth or 26th, this seems like a potential problem. D) I believe the Gun Club should be required to improve the sound baffling of the existing shooting areas either before or at the same time as the new areas are being developed. It seems short-sighted to not take care of what's already being used and bring it up to the standards of the newer facility. I would be in support of the expansion if these areas are addressed. Thank you, Andy Malkiel

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26TH STREET
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Laurel Amsel
Email Address: bleckbird64@yahoo.com
Phone Number: (303) 618-5123
Please enter your question or comment: Please, please, please do not approve this request in full. I live in the Holiday Neighborhood in North Boulder right on the perimeter of highway 36. I already deal with the noise from the American Legion trap shooting range that is quite disturbing, not only from sound, but also PTSD related to guns. If the Boulder Rifle Club wants to build bathrooms and an indoor shooting range on their property where I will not be subjected to hearing shots being fired, I have no problem with that. However, if there is any chance that I will be subjected to hearing gun shots, I feel you MUST take into consideration the reality of today's world here in the U.S. I have been held up at gunpoint so I deal with the PTSD of that situation. I had no idea when I bought my home in the Holiday Neighborhood I was going to have to listed to the trap shooting on a regular basis. I live in a high density residential area where many people have dogs, quite a few of whom are traumatized by the sound of gun shots. Young people today have never lived in a time when school shootings were basically unheard of. With my own PTSD, I wonder what it would be like for children of any age in our neighborhood to have to hear guns shooting due to this request for expansion by the Boulder Rifle Club. PLEASE take all of this into consideration when deciding to approve this proposal. Thanks so much for taking my concerns to heart! Laurel Amsel
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 159 Coyote Ct
Name: Michael Samuels
Email Address: mickeysamuels@hotmail.com
Phone Number: (303) 258-3434

Please enter your question or comment: I support the expansion of the Boulder Rifle Club target shooting area.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address : 159 Coyote Ct
Name: michael samuels
Email Address: mickeysamuels@hotmail.com
Phone Number: (303) 258-3434
Please enter your question or comment: I support the expansion of the boulder rifle club target shooting area
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Yvonne Short - SU-19-0009
Date: Saturday, August 10, 2019 4:52:43 PM

Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Yvonne Short
Email Address: ysgh@earthlink.net
Please enter your question or comment: I'd like to voice my strong support for expansion of The Boulder Riffle Club facilities.
Expansion of the club facilities will substantially increase the safety of both mt. residents and the large numbers of nat. forest visitors in my neighborhood near Gross Dam. The preponderance of people recreating in the area are not shooters. Having lived here for over 31 yrs. I can attest to numerous "near misses" of residents with stray bullets over the years with increasing frequency in the past 5 yrs. Who knows how many visitors have had similar close calls.
In addition to the "regular" repetitive gun fire we've also experienced occasional semi-automatic and even one or two automatic gun fire instances rip into in our normally quiet rural neighborhood. It has frayed more nerves than you can imagine and resulted in a pressure cooker of frustration up here for well over a decade. Without adequate police or ranger enforcement it's an accident waiting to happen.
PLEASE approve the special use permit for the B.R.C. and move shooting to a safe facility!
Thank you.
yvonne short
Public record acknowledgement: I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
According to the Boulder County Assessor documents there are large parcels owned by the City of Boulder that are in RESERVE for future development surrounding the proposed Rifle Club expansion. With all the talk about lack of affordable housing in the city I would hope that city officials would be very concerned about this proposed expansion.

Furthermore, according to a letter dated May 23, 2019 to Rosi Dennett, AICP Front Range Land Solutions for Boulder Rifle Club Inc. 210 Lincoln St. Longmont, CO 80501 from Melissa Arnold Conservation Easement Program Manager (303) 678-6266

“Although the proposal is in conflict with the terms of the existing conservation easement over the property, the attached letter from the Board of County Commissioners dated February 1, 2019 states that the county commits to work to revise the existing conservation easement on the property to allow a shooting range use; therefore, the Conservation Easement Program at parts & Open Space consents to the submission of this application to the Land Use Department. Please note that this letter only serves as approval to submit the application to the Land Use Department for review and does not serve as final approval from Parks & Open Space.”

1. Is the City of Boulder going to allow Boulder County to expand the rifle club at the expense of future affordable housing and other public uses that ARE incompatible with a HIGH VOLUME shooting range?
2. Will the Boulder County Commissioners sweep aside previous agreed upon conservation easements to allow a rifle range expansion?

Sent from Mail for Windows 10
Dear Commissioners,

I would like to support the expansion of the Boulder Rifle Club, and consequent the closure of shooting on Forest Service lands in the Boulder County residential neighborhoods.

Shooters are always shooting along the Switzerland Trail on Sugarloaf. People walk their dogs, ride horses, hike, ride bikes, cross country ski, along the Switzerland Trail and often experience shots going over their heads, or just in front of them. These shooters shoot at trees and have killed some trees. They leave their targets and gun shells all over the forests. Their shooting scares wild life.

These shooters should be able to shoot in a regulated shooting range, not in National Forests where they endanger people, trees, domestic animals, and wildlife. Shooting can also start a forest fire which is a constant threat in the forests in Boulder County where there are lots of residents.

Please support the expansion of the Boulder Rifle Club, and the ban of target shooting in our national forests in and around residential areas in Boulder County.

Thank you for your consideration.

Arleen Miller
173 Wild Tiger Rd
Sugarloaf
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Yvonne Short
Email Address: ysgb@earthlink.net
Please enter your question or comment: I'd like to voice my strong support for expansion of The Boulder Riffle Club facilities.
Expansion of the club facilities will substantially increase the safety of both mt. residents and the large numbers of nat. forest visitors in my neighborhood near Gross Dam. The preponderance of people recreating in the area are not shooters. Having lived here for over 31 yrs. I can attest to numerous "near misses" of residents with stray bullets over the years with increasing frequency in the past 5 yrs. Who knows how many visitors have had similar close calls.
In addition to the "regular" repetitive gun fire we've also experienced occasional semi-automatic and even one or two automatic gun fire instances rip into in our normally quiet rural neighborhood. It has frayed more nerves than you can imagine and resulted in a pressure cooker of frustration up here for well over a decade. Without adequate police or ranger enforcement it's an accident waiting to happen.
PLEASE approve the special use permit for the B.R.C. and move shooting to a safe facility!
Thank you.
yvonne short
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
To: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Karl Dickenses - SU-19-0009
Date: Sunday, August 11, 2019 10:33:06 AM

Boulder County Property Address: 1130 Pine Glade Rd
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Karl Dickenses
Email Address: shai5dove@aol.com
Please enter your question or comment: I am writing to express support for the expansion of the Boulder Rifle Club as described in the docket SU 19 0009. It will provide better shooting options for Boulder County and visiting recreational shooters and allow for more safe conditions in the Boulder County National Forest areas.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26TH
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Alex Markevich
Email Address: ajmarkevich@gmail.com
Phone Number: (303) 442-4475
Please enter your question or comment: A public shooting range near Boulder, CO is necessary for the reasons stated in the permit application. I support the approval of this permit.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4537 Apple Way
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Mary Richardson
Email Address: mary rich63@gmail.com
Phone Number: (303) 579-4797
Please enter your question or comment: Please carefully consider this expansion! We live 1.5 miles from the range and regularly hear the shooting in our neighborhood. Presently, the noise significantly impacts our and our pet's outdoor experience. I can't imagine that would do anything but deteriorate with the proposed expansion. Furthermore, we hike in the open space surrounding our home and to Boulder Valley Ranch and have frequently been fearful of a stray bullet. The safety of the area is in jeopardy.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 1130 Pine Glade Rd
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Karl Dickensheets
Email Address: shai5dove@aol.com
Please enter your question or comment: I am writing to express support for the expansion of the Boulder Rifle Club as described in the docket SU-19-0009. It will provide better shooting options for Boulder County and visiting recreational shooters and allow for more safe conditions in the Boulder County National Forest areas.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4057 Niblick Dr
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Robin Laurel
Email Address: robin.laurel2@gmail.com
Phone Number: (303) 601-6811

Please enter your question or comment: On the expansion of the rifle club:
According to the Boulder County Assessor documents there are large parcels owned by the City of Boulder that are in RESERVE for future development surrounding the proposed Rifle Club expansion. With all the talk about lack of affordable housing in the city I would hope that city officials would be very concerned about this proposed expansion.

Furthermore, according to a letter dated May 23, 2019 to Rosi Dennett, AICP Front Range Land Solutions for Boulder Rifle Club Inc. 210 Lincoln St. Longmont, CO 80501 from Melissa Arnold Conservation Easement Program Manager (303) 678-6266

'Although the proposal is in conflict with the terms of the existing conservation easement over the property, there is a letter from the Board of County Commissioners dated February 1, 2019 states that the county commits to work to revise the existing conservation easement on the property to allow a shooting range use; therefore, the Conservation Easement Program at Parks & Open Space consents to the submission of this application to the Land Use Department. Please note that this letter only serves as approval to submit the application to the Land Use Department for review and does not serve as final approval from Parks & Open Space.'

1. Is the City of Boulder going to allow Boulder County to expand the rifle club at the expense of future affordable housing and other public uses that ARE incompatible with a HIGH VOLUME shooting range?
2. Will the Boulder County Commissioners sweep aside previous agreed upon conservation easements to allow a rifle range expansion?

I am opposed to the expansion. Guns are not where we want to be in this present world. Plus, the additional noise is disconcerting.

Robin Laurel

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4537 Apple Way
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Mary Richardson
Email Address: mary.rich63@gmail.com
Phone Number: (303) 579-4797

Please enter your question or comment: Please carefully consider this expansion! We live 1.5 miles from the range and regularly hear the shooting in our neighborhood. Presently, the noise significantly impacts our and our pet's outdoor experience. I can't imagine that would do anything but deteriorate with the proposed expansion. Furthermore, we hike in the open space surrounding our home and to Boulder Valley Ranch and have frequently been fearful of a stray bullet. The safety of the area is in jeopardy.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4057 Niblick Dr
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Robin Laurel
Email Address: robin.laurel2@gmail.com
Phone Number: (303) 601-6811
Please enter your question or comment: On the expansion of the rifle club:
According to the Boulder County Assessor documents there are large parcels owned by the City of Boulder that are in RESERVE for future development surrounding the proposed Rifle Club expansion. With all the talk about lack of affordable housing in the city I would hope that city officials would be very concerned about this proposed expansion.
Furthermore, according to a letter dated May 23, 2019 to Rosi Dennett, AICP Front Range Land Solutions for Boulder Rifle Club Inc. 210 Lincoln St. Longmont, CO 80501 from Melissa Arnold Conservation Easement Program Manager (303) 678-6266
'Although the proposal is in conflict with the terms of the existing conservation easement over the property, there is a letter from the Board of County Commissioners dated February 1, 2019 states that the county commits to work to revise the existing conservation easement on the property to allow a shooting range use; therefore, the Conservation Easement Program at Parks & Open Space consents to the submission of this application to the Land Use Department. Please note that this letter only serves as approval to submit the application to the Land Use Department for review and does not serve as final approval from Parks & Open Space.'
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Robin Laurel

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26TH
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Alex Markevich
Email Address: ajmarkevich@gmail.com
Phone Number: (303) 442-4475
Please enter your question or comment: A public shooting range near Boulder, CO is necessary for the reasons stated in the permit application. I support the approval of this permit.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4810 N 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Mary Randall
Email Address: heartrockmr@gmail.com
Phone Number: (303) 444-4770
Please enter your question or comment: Concerning the expansion of the Boulder Rifle Club-I'm in favor of this expansion as it attracts guns owners to a more condensed area while other areas become safer with less noise. Hopefully the expansion provides a more attractive place for gun owners where they'll love going. It makes sense for all.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 3520 Copper Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Toni Leskela
Email Address: Toni.Leskela@backcountryaccess.com
Phone Number: (303) 523-4350

Please enter your question or comment: I strongly support adding to range. Boulder needs to make clear that this city is welcoming EQUALLY also hunters and marksmen's. I am worried about bullying culture in here and division in whole of usa it is causing. Please keep Boulder diverse also in opinion, it is richness!

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Hi Summer

I was very happy to see that the county was planning to either introduce new public ranges or expand BRC, which currently has a ten-year waitlist for membership.

My concern with the expansion of BRC is that the club currently requires NRA membership to join. If this is an expansion for the public, it’s inappropriate to demand support and membership to what amounts to a political advocacy group. I would also not support membership being contingent on support of PETA, the ACLU, or the National Right to Life. It’s just a gun range, and if it’s being used in lieu of a new public shooting facility, mandatory membership to any organization, right or left, is simply wrong.

If you’re aware of whether this is or is not the plan, I would be grateful for any information you’re able to provide.

Please do not use my name not anywhere for any purpose. I’m happy for my comments to be shared anonymously.

Kind regards
Matthew
I have been in Boulder since 1969, and have used this range long before it was formalized as a club. This is a necessary upgrade to make a safe convenient designated area for shooting without displacing to non-designated areas on Forest Service or BLM. I also live in Edwards, CO, and face the same issues as we work with the BLM to establish designated areas for public shooting. Without these easily accessible areas there will be continued random use on public lands with the associated trash, noise and safety. I find it amusing those that move in the vicinity of the range then complain about the noise. This range has been here for over 60 years. This expansion is worthwhile and appropriate. I strongly encourage the approval.

John Lovett
970-376-2727
Hi Summer, I'm a 40 year resident of Boulder county and wanted to voice my disapproval of the proposed range expansion. We live in the Orange Orchard neighborhood, and can currently hear the range loud and clear. As a retiree, I walk my dog twice a day in our private open space as well as the county open space just west of our subdivision. Unfortunately, she is gun shy and becomes highly anxious and wants to high-tail it home whenever she hears a shot. It's way too bad as is, but the expansion would make it unbearable. Please do whatever it takes to kill this plan. There has to be a more remote and less intrusive location if the shooters insist on blasting their weapons. FYI, I'm a gun owner, but don't see the need to inflict needless noise on my community. In today's environment of mass shootings, promoting more gun usage is just plain wrong.

Thanks,

Joe Richardson
303 875 0985
gelcojoe@gmail.com
Rifle range noise - As a follow up to the email I just sent, it's 7:24 am on Wednesday and I'm now sitting on my sofa, reading the newspaper with one window cracked open to our back yard. I can hear the report of semi-automatic gun fire loud and clear as evidenced by my dog's hasty retreat to our basement. I won't be walking her this morning which is a real bummer for both of us.

On Wed, Aug 14, 2019 at 6:39 AM Frederick, Summer <sfrederick@bouldercounty.org> wrote:

Hello. I am out of the office until Monday, August 19. While I am away I will have very limited access to email, so will likely reply to your email when I return to the office.

Have a good day!

-Summer

--
Joe Richardson
303 875 0985
geicojoe@gmail.com
From: Dirk Friel
To: Frederick Summer
Subject: Boulder rifle Club - Lots of noise this morning
Date: Wednesday, August 14, 2019 8:02:23 AM

Summer,

I was awakened this morning by the sound of many (hundreds) rounds of gun shots which I assume are coming from the Rifle Club. If this is the new norm in north Boulder our home value will plummet and I will find a new city to move to.

This is very sad as we moved to north Boulder for the peace and quiet. I live at 4277 26th street and I must be more than a mile away from the shooting range itself. I can’t imagine if they add five additional shooting ranges to what they already have now.

I would vote to not expand the club due to the overwhelming negative response from landowners in north Boulder who don’t wish to wake up every morning like I did today.

I’m also a business owner that employ’s 175 in the city. My business will not be affected by the horrible new norm of gun shots, but other business owners that live and work in north Boulder may be swayed to leave and take their business with them.

Dirk Friel
4277 26th st
Boulder, CO
80304

--
Dirk Friel
Chief Evangelist, Co-Founder
Peaksware:
TrainingPeaks - TrainHeroic - MakeMusic - Alfred Music
https://www.instagram.com/dirkfriel/

"We help people achieve their best through deliberate practice."
I am writing to you to express my support for the expansion of the Boulder Rifle Club and the addition of a public range. I am not a member of the club, nor am I a member of any other shooting club. I have been more and more frustrated of the past years in regards to being able to safely and effectively practice with my rifle for deer and elk hunting. I have always been remiss to just go out in the forest and shoot due to concerns of angering neighboring property owners. Let's be realistic about this. A place to safely practice shooting is not only desired but needed in this county. Despite the loud opposition to people owning or using guns there is, I believe, a silent majority that would welcome better access to a range. I understand that residents close to Boulder Rifle Club don't want more noise but with the proposed construction standards I don't see it as a problem. It seems like no matter where a proposed range could be there will always be those that just don't want it. Please step up and help this process forward to a successful completion. I am one who will welcome not having to drive an hour and a half to Pawnee Buttes to use that range. Membership options in all outdoor ranges within an hour and a half of Boulder are nil.

Thanks
Sean Metrick
Boulder, CO
Summer,

What my concern about the rifle range expansion is that even though the noise mitigation meets Boulder County ordinance guidelines of 65 decibels (per today's article in Daily Camera), it DOES NOT pass city of Boulder noise regulations. (see below). So even though rifle range is in Boulder County territory, the noise affects City of Boulder residences.

The city has three noise regulations.  
1) “Disruption of quiet enjoyment of the home” prohibits loud behavior that disrupts neighbors in their own home.

2) "Unreasonable noise" applies to amplified sounds after 11 p.m., loud car stereos on public property anytime, limited construction activity between 5 and 9 p.m., use of lawn maintenance equipment between 9 p.m. and 7 a.m., car alarms lasting more than 5 minutes and other similar noise.

3) “Excessive sound levels” is applied to any loud noise that exceeds 55 decibels between the hours of 7 a.m. and 11 p.m., lowering to a maximum of 50 decibels after 11 p.m.

My family and I have been woken up to the sound of gunshots 3 times these past 2 weeks. I'm assuming it's been these "sound tests" that have been going on. No one wants to hear gunshots going off all day. If we can hear these gunshots now, I can't even imagine what it would be like if the range is able to expand and be open to the public.

I want to have the expansion plans be put on hold until further studies can be made on better uses of the northern corridor into Boulder.

Kim Friel  
Broker Associate  
303-408-4064  
www.kimfriel.com
I always have time for your referrals
From: Wufoo
To: Boulder County Board of Commissioners
Subject: Contact County Commissioners [#1192] - [Name: Friel, Kim] Re: Being Woken Up By Gunshots going off at rifle range
Date: Wednesday, August 14, 2019 7:30:10 AM

Name * Kim Friel
Email * kim@kimfriel.com
Organization (optional) $350,000 or above
Address or General Area (optional) 4277 26th Street Street Address 2 Boulder, CO Boulder United States
Phone Number (optional) (303) 408-4064
Subject * Being Woken Up By Gunshots going off at rifle range

Comments, Question or Feedback *
I wanted to know if there is something that could be done immediately about gunshot noises that have been waking us up now 3 times these past few weeks. Immediate sound mitigation of the rifle range done or having them stop using whatever rifles/weapons that are so loud that their noise carries over to my house which is a mile away. It is very disconcerting to get woken up to gunshots this often and hearing them throughout the day. Up until these past 2 years the rifle range has been a great neighbor and we didn't hear a peep from them. Now it's becoming our new normal. I've spoken with Garry Sanfacon on 2 occasions (he just called me yesterday). All Garry said was for me to send a comment to you.

Please check box below * I acknowledge receipt of the Open Records Notification
Dear Commissioners,

I would like to support the expansion of the Boulder Rifle Club, and consequent the closure of shooting on Forest Service lands in the Boulder County residential neighborhoods.

Shooters are always shooting along the Switzerland Trail on Sugarloaf. People walk their dogs, ride horses, hike, ride bikes, cross country ski, along the Switzerland Trail and often experience shots going over their heads, or just in front of them. These shooters shoot at trees and have killed some trees. They leave their targets and gun shells all over the forests. Their shooting scares wild life.

These shooters should be able to shoot in a regulated shooting range, not in National Forests where they endanger people, trees, domestic animals, and wildlife. Shooting can also start a forest fire which is a constant threat in the forests in Boulder County where there are lots of residents.

Please support the expansion of the Boulder Rifle Club, and the ban of target shooting in our national forests in and around residential areas in Boulder County.

Thank you for your consideration.

Arleen Miller
173 Wild Tiger Rd
Sugarloaf
My name is Catherine Corona. I live at 7679 34th Court, Boulder, CO 80302 Which is on the corner of Nebo Road and 34th Court. When I moved to this beautiful, rural area just north of Boulder to live my dream of a farm in the country but near work in Boulder where I could live with my horses and grown everything I wanted to on my acreage I was shocked after I moved here to hear the pop, pop, pop of gunfire. It is alarming, disturbing and actually traumatizing as it reminds me of war. This is not what I had hoped my peaceful life would include when I moved to beautiful Boulder County lands.

I don’t live that close to the Rifle Club on 26th St. But the gunfire is loud enough even here to be traumatizing.

Please realize that the gunfire is not just confined to a close area near the site on 26th Street but travels the miles to Nebo Road and beyond, especially when the wind blows in certain patterns, which is often. It is the morning gunfire that is the worst.

And it is not just the residents in the Nebo Road, Nimbus Road area that will be effected by the gunfire but the many, many runners and cyclists that enjoy their activities in the pastoral lands close to Boulder. Please don’t wreck it for all of us.

Please do not approve more gunfire noise. We have little rural, agricultural land left in Boulder county, little peace and quiet left. Please vote to preserve what we have near Boulder and decline the expansion of the Rifle Range.

Regards,
Catherine Corona
From: Michael Baker
To: Frederick Summer
Subject: Shooting range
Date: Wednesday, August 14, 2019 10:58:48 AM

I am a sportsman and Boulder County resident of over 30 years who owns both a property on the plains as well in the foothills. I applaud and fully support the USFS and county effort in establishing safe and responsible shooting ranges. I have been closely following and reviewing for years the USFS and Sports Shooting Partnership process and recommendations for the two plains shooting locations. I am in complete agreement with their findings. Boulder County needs to act now!

The amount of dispersed recreational shooting on USFS lands has increased greatly in the last 5-8 years to an almost crisis level. A few of my observations follow.

-Safety first! It is only a matter of time that an accidental shooting occurs under the current conditions. Recreational activities in our mountain lands have increased exponentially. There are more campers, hikers, bikers, fishermen, four wheelers, licensed hunters... and recreational shooters. People have the right to enjoy our public lands, and their private properties, without the fear of being shot. The current model of dispersed shooting on USFS lands is outdated and dangerous.

-I routinely have to interact with shooters near my mountain property and I can't think of one, over the many years, who has been a county mountain resident. They have all been residents of Boulder plains communities. They are also frequently driving into the hills from Weld, Adams, Westminster, and Denver counties. Private properties are scattered throughout USFS property in our hills. While I feel most sports shooters are responsible and law abiding, increasingly more folk with little, or no knowledge of the area, are unfortunately pulling off a road and setting up their own shooting ranges. On three occasions I have had ricocheted rounds whizzing past me while on my property! Place shooting ranges on the plains where most shooting recreationists reside.

-Fire! Exploding targets, tracer rounds, and steel bullets are being used (often illegally) by some dispersed shooters. Public, monitored ranges are needed.

-Wildlife and mountain habitat need protection. Dispersed shooting in the hills is affecting elk and deer herds, birds, water resources etc to a much greater extent than the plains. Tens of thousands of acres in the mountains are currently being degraded with lead and trash left behind.

Sports shooting site selection is going to have an effect on any of those living nearby, but it is the only solution when considering all of our county residents and our collective safety. The Boulder Shooting Club, which has been located there and operating safely for decades, and development of the Lyons area quarry are great solutions to a growing problem that concerns all of our county’s population and those that enjoy our wild lands.

Thank you
Sent from my iPhone
From: NealShirl Schnieder
To: Frederick, Summer
Subject: Boulder Rifle Club
Date: Wednesday, August 14, 2019 2:40:26 PM

Mr. Summer Frederick,
Get New Expanded Gun Range Built!
So all of our club folks don’t have to trek up in the Mountains and shoot away at wild life anymore.

Thank You!

Sent from SmartWatchX13
I am writing to ask that you please leave the Shooting Range at its 26th Street location without an expansion. The noise and danger we all feel, the many residents within earshot and or line of sight of this facility, is real.

The facility sits clearly in the middle of several high density residential subdivision as you must recognize. Orange Orchard, Lake Valley, and the scattered and less dense but no less valued residential homes on 26th and Yarmouth east of 28th. We have owned our home at 5052 N Foothills Hwy due west of the facility since 1991. And have balanced the beauty of a rural existence with the threatening sounds of the shooting range almost 30 years. The thought that the real noise and psychological threats that will result from an expansion is very discouraging.

Over the years that I have lived here, the range has caused residential properties several concerns.
It is my understanding that automatic or semi automatic firings were prohibited, but their unmistakable sounds were noted by neighbors. I personally have walked the public trails behind the house and noted shots too close to have been contained to facility. This was a clear safety violation in a public space. I realize that we are all neighbors here including the Shooting Range. But good neighbors do not jeopardize the real and or psychological well being of their neighbors.

Please help me and my many neighbors enjoy a reasonable degree of peace and safety in our home. And deny any expansion of the Shooting Range

With Appreciation
Lancene Cadora

Sent from my iPhone
Sent from my iPhone
Wufoo
Fri 8/16/2019 128 PM
To: LandUsePlanner <Planner@bouldecounty.org>
Boulder County Property Address: 774 mountain meadows Rd
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Anthony Milazzo
Email Address: sundowntony@gmail.com
Phone Number: (303) 324-0565
Please enter your question or comment: I would just like to voice my support for the proposed Boulder county shooting range. The safety and fire concerns of having people randomly just drive up into these canyons and start shooting are enormous. I think it is extremely important to have a safe place in Boulder county for people to go and shoot.
Thank You
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
I am against the expansion of the gun range off 26th. There is a reason shooters wear ear protection - gun shots are explosively loud, and the sounds carry even further out in that area. If I'm shopping at Harlequin's Gardens nearby and the gun range is active, I leave. You can have berms and walls and run all the tests you want, but bottomline gunfire is unnerving and it is loud.

Thank you for the opportunity to voice my opinion.

Terry Drissell
To: Wufoo
From: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Anthony Milazzo - SU-19-0009
Date: Friday, August 16, 2019 1:28:08 PM

Boulder County Property Address: 774 mountain meadows Rd
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Anthony Milazzo
Email Address: sundowntowny@gmail.com
Phone Number: (303) 324-0565

Please enter your question or comment: I would just like to voice my support for the proposed Boulder county shooting range. The safety and fire concerns of having people randomly just drive up into these canyons and start shooting are enormous. I think it is extremely important to have a safe place in Boulder county for people to go and shoot.

Thank You

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Summer,

I think we can include these comments for the rifle club docket.

Thanks!

Barb

Barb Halpin
Public Information Officer
Boulder County Commissioners' Office
bhalpin@bouldercountry.org
303-441-1622

7am. I was also reading in the newspaper that they have been doing sound decibel level testing at the rifle range lately. So that could explain why we've been hearing gunshots going off more often these last few weeks. All I can say is this has been very disconcerting to us to see that the rifle range may be expanded and open to the public? We do not want this to be our new normal. The rifle range has been a good neighbor for many years, so don't want more noise and traffic in the area. It's getting to be very congested on the Hwy 36 corridor leading out to Lyons already.

Hi Kim,

We’re sorry to learn that you’ve been woken up by gunshots at the rifle range. Are you able to give us a little more information about the time you are hearing the gunfire? If it’s after 7 a.m., it may be that law enforcement is using the range within the range’s operating hours to do training for SWAT and other activities.
To: Summer Frederick

I live in the Dakota Ridge neighborhood. I have been following the news about the Rifle club expansion near my neighborhood. When the club is in use, the entire neighborhood and surrounding parks (Wonderland lake for example) are negatively affected. You hear these banging/popping noises constantly. If it happened for one day, that would be fine. But it happens ALL THE TIME. The plans state that the property on 4810 N. 26th Street will be open weekdays and on the weekends. This is a big problem.

The solution is easy, but it's important to ensure that the architect, Tom Moore, follows through in a way that does not negatively impact the community of tax-paying Americans that surround the club. The solution is to design the rifle club in a way that ensures that the noise from the facility cannot be heard in the surrounding neighborhoods. I highly doubt that the current plan will do this. Tom Moore certainly is capable of doing better. Eight-foot ballistic barriers will not be enough, especially with only a "protective awning" above it. We all know how sound travels. Please make the current plan a serious one. Please respect your fellow God-fearing tax-paying Americans in the area. Double the height and width of the barriers and have the shooters below ground. The earth is an excellent way to mitigate sound. Use sophisticated means to absorb sound above the shooters. Is the Rifle club truly serious about respecting other's rights? Is Tom Moore's plan as thorough as needed, or is he just blowing smoke?

You may not realize it, but this is an opportunity for gun owners to change the minds of those who would otherwise try to infringe on the right to bear arms. It's all about respect. The neighborhood is extremely skeptical of the Rifle club plans and the skills of the architect Tom Moore. We have all been inundated with the constant noise from this same Rifle club in the past. If the Rifle club is able to build a facility that is truly sound-proof and that does not negatively affect the community with annoying noise that will be a big win for gun owners. And future gun clubs and ranges might have a chance to be built in other populated areas, because those clubs could point to the Boulder Rifle Club as an example. I'd love to see that happen, but is that really the goal of Tom Moore and the Boulder Rifle Club?

Sent from my iPad
We live in Swiss Peaks on Sugarloaf Mountain and want to express support for the Rifle Club expansion and closure of the National Forest to target shooting. We mountain residents have experienced multiple incidents of dangerous and illegal target shooting near our homes and across public trails. In order to gain good compliance with the National Forest closure, we think it is important that the expanded Rifle Club shooting range be always open to the general public at a modest cost or free. We'd also suggest that you advertise whether the expanded range will be open daily to the public and what the cost/fee will be, as I could not find those details in the Daily Camera article or the Land Use Dept, Special Use Review documents.

thank you, Paul Hartig
Good afternoon, Paul,

Thank you for your email related to the land use application SU-19-0009: Boulder Rifle Club. Your comments have been added to the project file and are now a part of the public record and are available for review.

Regards,
Summer

Summer Frederick, AICP
Principal Planner | Boulder County Land Use Department
2045 13th Street; Boulder, CO 80302
Ph: 720.564.2603
sfrederick@bouldercounty.org
www.bouldercounty.org/lu

From: Paul Hartig<kestrel@sugarloaf.net>
Sent: Saturday, August 17, 2019 11:57 AM
To: Frederick, Summer <sfrederick@bouldercounty.org>
Subject: Expanded Rifle Club shooting range

We live in Swiss Peaks on Sugarloaf Mountain and want to express support for the Rifle Club expansion and closure of the National Forest to target shooting. We mountain residents have experienced multiple incidents of dangerous and illegal target shooting near our homes and across public trails. In order to gain good compliance with the National Forest closure, we think it is important that the expanded Rifle Club shooting range be always open to the general public at a modest cost or free. We’d also suggest that you advertise whether the expanded range will be open daily to the public and what the cost/fee will be, as I could not find those details in the Daily Camera article or the Land Use Dept, Special Use Review documents.

thank you, Paul Hartig
Good afternoon, Anthony.

Thank you for your email related to the land use application SU-19-0009: Boulder Rifle Club. Your comments have been added to the project file and are now a part of the public record and are available for review.

Regards,
Summer

Summer Frederick, AICP
Principal Planner | Boulder County Land Use Department
2045 13th Street, Boulder, CO 80302
Ph: 720.564.2603
sfrederick@bouldercounty.org
www.bouldercounty.org/lu

-----Original Message-----
From: Wufoo
Sent: Friday, August 16, 2019 1:28 PM
To: #LandUsePlanner <Planner@bouldercounty.org>
Subject: Ask a Planner - Web inquiry from Anthony Milazzo - SU-19-0009

Boulder County Property Address: 774 mountain meadows Rd If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Anthony Milazzo
Email Address: sundowntony@gmail.com
Phone Number: (303) 324-0565

Please enter your question or comment: I would just like to voice my support for the proposed Boulder county shooting range. The safety and fire concerns of having people randomly just drive up into these canyons and start shooting are enormous. I think it is extremely important to have a safe place in Boulder county for people to go and shoot.

Thank You
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Good afternoon, Terry,

Thank you for your email related to the land use application SU-19-0009: Boulder Rifle Club. Your comments have been added to the project file and are now a part of the public record and are available for review.

Regards,
Summer

Summer Frederick, AICP
Principal Planner | Boulder County Land Use Department
2045 13th Street; Boulder, CO 80302
Ph: 720.564.2603
sfrederick@bouldercounty.org
www.bouldercounty.org/lu

I am against the expansion of the gun range off 26th. There is a reason shooters wear ear protection - gun shots are explosively loud, and the sounds carry even further out in that area. If I'm shopping at Harlequin's Gardens nearby and the gun range is active, I leave. You can have berms and walls and run all the tests you want, but bottomline gunfire is unnerving and it is loud.

Thank you for the opportunity to voice my opinion.

Terry Drissell
Good afternoon, Christel.

Thank you for your email related to the land use application SU-19-0009: Boulder Rifle Club. Your comments have been added to the project file and are now a part of the public record and are available for review.

Regards,
Summer

Summer Frederick, AICP
Principal Planner | Boulder County Land Use Department
2045 13th Street; Boulder, CO 80302
Ph: 720.564.2603
s frederick@bouldercounty.org
www.bouldercounty.org/lu

-----Original Message-----
From: Wufoo
Sent: Thursday, August 8, 2019 3:48 PM
To: #LandUsePlanner <Planner@bouldercounty.org>
Subject: Ask a Planner - Web inquiry from Christel Markevich - SU-19-0009

Boulder County Property Address : 4810 N 26th Street If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Christel Markevich
Email Address: christelmarkevich@gmail.com Phone Number: (303) 442-4475 Please enter your question or comment: Dear Commissioners,

I am supporting the expansion of the Boulder Rifle Club and I am grateful for all your great work.

Christel Markevich
5560 Magnolia Drive
Nederland, CO 80466

phone: 303 442 4475
christelmarkevich@gmail.com

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Summer, I have lived in the Valhalla subdivision for 30 years. It is located about a half mile south of the Eagle trailhead. I have been following the expansion proposed for the Boulder Rifle Club. We hear shots fired during days of operation and trail closures have occurred as a result claims of stray shots from the club. I am opposed to any expansion of the range. If there are any opportunities to comment on this expansion my wife I would like to participate.

Thanks, Steve Sergeson, 5054 Valhalla Dr Boulder Co 303 530 2479
Boulder County Property Address: 4582 47th street, boulder, co 80301
If your comments are regarding a specific docket, please enter the docket number: Re:SU-19-0009
Name: susan tauger
Email Address: susantauger@yahoo.com
Phone Number: (303) 449-1444
Please enter your question or comment: We are definitely AGAINST this proposal!!!!!! IT'S AN OUTRAGE! WE NEED LESS, NOT MORE, GUNS IN OUR NEIGHBORHOODS!!!
Also, we frequently hear gunshots from the gun range. This proposal is disconcerting, and is DANGEROUS!!!
PLEASE DO NOT ALLOW THIS TO HAPPEN.
THANK YOU.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
According to the Boulder County Assessor documents there are large parcels owned by the City of Boulder that are in RESERVE for future development surrounding the proposed Rifle Club expansion. With all the talk about lack of affordable housing in the city I would hope that city officials would be very concerned about this proposed expansion.

Furthermore, according to a letter dated May 23, 2018 to Rosi Dennett, AICP Front Range Land Solutions for Boulder Rifle Club Inc. 210 Lincoln St. Longmont, CO 80501 from Melissa Arnold Conservation Easement Program Manager:

"Although the proposal is in conflict with the terms of the existing conservation easement over the property, the attached letter from the Board of County Commissioners dated February 1, 2019 states that the county commits to work to revise the existing conservation easement on the property to allow a shooting range use; therefore, the Conservation Easement Program at Parks & Open Space consents to the submission of this application to the Land Use Department. Please note that this letter only serves as approval to submit the application to the Land Use Department for review and does not serve as final approval from Parks & Open Space."

1. Is the City of Boulder going to allow Boulder County to expand the rifle club at the expense of future affordable housing and other public uses that ARE incompatible with a HIGH VOLUME shooting range?
2. Will the Boulder County Commissioners sweep aside previous agreed upon conservation easements to allow a rifle range expansion?

L Neff

Please check box below *

- I acknowledge receipt of the Open Records Notification
From: GLENDA Rowe  
To: Frederick, Summer  
Subject: Re: SU-19-0009  
Date: Friday, September 13, 2019 5:05:58 PM

Would you please call me as soon as you can? The neighborhood is really wondering what the status is on the SU-19-0009. People want to plan ahead for the hearings, etc. We have not been able to speak with anyone at Land Use...they refer us to you and you haven't returned any of my calls lately. Please let me know if studies are being done and when we should plan for our day of responses! Thank you.  
Glenda Rowe 303/547-2613

On Monday, July 22, 2019, 7:27:34 AM MDT, Frederick, Summer <sfrederick@bouldercounty.org> wrote:

Good morning, Glenda.  

Thank you for your letter related to SU-19-0009: Boulder Rifle Club. The letter has been added to the project file and is now a part of the public record available for review.  

Regards,  
Summer  

Summer Frederick, AICP  
Principal Planner | Boulder County Land Use Department  
2045 13th Street, Boulder, CO 80302  
Ph: 720.564.2603  
sfrederick@bouldercounty.org  
www.bouldercounty.org/lu

-----Original Message-----
From: GLENDA Rowe <goatrowe@yahoo.com>  
Sent: Sunday, July 21, 2019 11:32 PM  
To: #LandUsePlanner <Planner@bouldercounty.org>  
Subject: SU-19-0009

Please see this gets to Board of Boulder County Commissioners asap! Please acknowledge that they have received this letter. thank you goatrowe@yahoo.com
Hey Summer,
Hope all is well.
I just wanted to check in and see where the Boulder Rifle Club expansion was at. I hope to do an update on the plans in the near future.
Thank you,

--

Kelsey Hammon
Public Safety Reporter
Longmont Times-Call/Boulder Daily Camera
303-473-1355
@kelseyhammon2
Hi Summer,

I am reaching out to you as I have lived in the neighborhood off Kelso Rd and 51st St on Valhalla Drive for over 25 years. I had not heard of the $300,000 federal grant the Rifle Club received from the federal government to expand their club until last week. Having lived here for over 25 years we have enjoyed watching owls, eagles, hawks, coyotes, bobcats, prairie dogs, numerous nesting birds and an occasional bear wander through that open space. I am wondering what is going to happen to them once they more than double the size of the rifle club and include target shooting for AR15's. I am not against guns, but many people hike and ride horses back on that peaceful tract of land as well. It is now going to be inundated with the sound of gunshots to say nothing of the unease of hiking in proximity to all that.

I have paid taxes for many years to sustain the open space in Boulder County. What are my rights as a private citizen to enjoy the open space I pay taxes for over a gun club that is going to profit from federal grant money? Most importantly, I would like to know what wildlife impact studies have been done on this area? Who conducted these studies? How do I find them? If they must shoot it should all be inclosed. We have a noise ordinance here as well.

Thank you for your time.

Angela Forest
Boulder County Property Address: 4810 N 26TH STREET, boulder
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Christine Adams
Email Address: himitraadams@gmail.com
Please enter your question or comment: I object to increasing the size of the Boulder Rifle Club.
It is too close to residential areas and Crest View Elementary School
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
September 20, 2019

Re: Planned Boulder Rifle Club Expansion

Terrence & Jennifer Tierney

Homeowners adjacent to the Boulder Rifle Club

3855 Pleasant Ridge Road

Dear Boulder County Planning Department

Attn: Summer Frederick

We, homeowners adjacent to the current Boulder Rifle Club located at 4810 N. 26th St (parcel #146307001001 and parcel # 146307001002), would like to register our **extremely strong objection** to the proposed expansion of the current shooting range (SU-19-0009). There are numerous reasons for our extremely strong objection but primary among them is the safety and welfare concerns we have for ourselves, our neighbors and the abundant wildlife that all exist in close proximity to the Boulder Rifle Club.

We have lived on this property (3855 Pleasant Ridge Road) for 20 years. We have reluctantly come to accept the **present** issues of safety concerns and potential dangers that have come with living near the current shooting range. The future issues that would result from the expansion of this shooting range, which include 5 new ranges and exponentially more members is, frankly speaking, an unacceptable safety risk, detrimental to our property values and a substantial negative impact on our lifestyle.

Over the years we have experienced the frequent loud barrage of handguns, hunting rifles and assault rifle gunfire that has frightened our family, our neighbors and our pets. We have also had experiences whereby friends to the north in Lake Valley have had stray gunfire reach their community. As we understand it presently, it is mostly law enforcement and peace officers who use the current facility. This expansion of the shooting range would open it up to many more users, most of whom would be untrained civilians. That poses an unacceptable risk to our family, our neighbors, our pets and our Lake Valley friends to the north.

Additionally, the corridor that runs west to east from Lee Hill Road is a major artery for wildlife. It traverses the land directly north and south of the shooting range. We know firsthand that wildlife use that corridor every year to access the pastures in the valleys and the riparian land to eat, drink and have their babies. Frequently we see deer, raccoons, bobcats, bear, foxes and even mountain lions. The expansion of this shooting range would dramatically disrupt this wildlife ecosystem. The increase in noise, the increase in traffic and the increase in
potential danger all would result in threats to the people who live nearby and the wildlife corridor that would be undesirable, let alone acceptable.

Finally, we have seen over the years that people wander the open space to the north and the east of our property. They most likely come from the trails near and around Boulder Valley Ranch. Those trails are populated by hikers, bikers and their pets. The expansion of this shooting range would create an unimaginable risk to the safety of these people. God forbid just one errant bullet from a high-powered rifle or an assault style weapon kill or injure a person while they were enjoying the beauty and serenity of these trails. With the approval of this proposed shooting range expansion would come the explicit acceptance of this increased risk, regardless of the intended risk-mitigation measures that are designed into this expansion. As a result of the abovementioned factors, which is by no means a complete list, we are strongly opposed to the approval of the Boulder Rifle Club expansion.

We are happy to provide additional details and/or expand upon our comments in person, on the phone or in a public forum.

Terry & Jenni Tierney

3855 Pleasant Ridge Road
Boulder, Colorado 80301
303-931-8539

--
Terry Tierney
303-931-8539 (mobile)
Flom:

To: Frederick, Summer

Subject: Boulder rifle Club SPR

Date: Tuesday, September 24, 2019 4:11:55 PM

Please let us (the homeowners in this area) know the status of this SPR and if you are receiving out letters for your file. We've sent some directly to the BOCC, do you get these as well? Also, where is Land Use in the process? Are you hiring expertise to review this SPR or just part of it? Please let us know. thanks you

goatrowe@yahoo.com
Good morning, Rowan.

Sending an email to me with your concerns and objections is the best way to have your position included in the public record. Feel free to get in touch via email if you have questions or need additional information.

Regards,
Summer

Summer Frederick, AICP
Principal Planner | Boulder County Land Use Department
2045 13th Street; Boulder, CO 80302
Ph: 720.564.2603
sfrederick@bouldercounty.org
www.bouldercounty.org/lu

Hello,

I found your email as a contact for comments on the Boulder Rifle Club expansion plan. I live in the neighborhood and have numerous concerns and objections concerning this expansion including safety, noise, wildlife, open space use, traffic, etc. I just found out that this was happening and want to voice my concerns and do what I can to object to this expansion. Is there still a forum open for voicing concerns and objections?

Thanks,
Rowan
September 28, 2019

Re: Proposed Expansion of Boulder Rifle Club

Carrie and Thomas Hutchinson
3840 Pleasant Ridge Road

To: Boulder County Planning Department
Attn: Summer Fredrick

We are writing to express our family’s strong opposition to the proposed expansion of the Boulder Rifle Club. Our property is directly adjacent to the eastern border of the Boulder County Open Space that lies to the east and southeast of the rifle club.

We have a myriad of concerns regarding the planned expansion, including but not limited to the safety of our children, ourselves, and the general public. The open space between our property and the rifle club is used by people who wish to walk, hike or run in the beautiful scenery. The thought of a stray bullet striking someone out for a peaceful walk is unacceptable and unspeakable, and the risk of such a tragedy occurring obviously grows with any expansion of the club.

Just as importantly, however, and much more likely, is the detrimental effect the increase in noise and traffic will have on the abundant wildlife that enjoys the varied terrain in this open space. Though our family has lived here for just one year, we have seen plentiful wildlife in the area adjacent to the rifle club. We and our children have delighted in multiple sightings of bears, bobcats, foxes, deer, coyotes, raccoons, and innumerable birds of prey, including golden eagles and great horned owls. We believe that the disturbance caused by the increase in traffic and gunfire, an inevitable consequence of expansion of the rifle club, will irreparably damage the habitat of these animals and effectively place a barrier in the wildlife corridor that runs from the foothills to the fertile wetlands east of the club and south of Boulder Valley Ranch. This barrier would deprive these animals of the crucial riparian habitat in which they find food, water, and places to raise their young, and could also drive them further into the more heavily populated areas of Boulder, with disastrous consequences. The wildlife that depend on this corridor to survive and thrive deserve our utmost consideration and protection, and at the very least studies on the impact of the proposed expansion on their habitat.

The planned expansion of the Boulder Rifle Club presents an unacceptable risk to the safety and welfare of our family, our neighbors, the general public, and the plentiful wildlife in the area. We are strongly opposed to the proposed expansion of the club.

Respectfully,

Carrie and Thomas Hutchinson
3840 Pleasant Ridge Road
Boulder, CO 80301
312-392-7443

Carrie Hutchinson
carriehutchinson@gmail.com
Hello Summer,
We live on the north side of Pleasant Ridge Road a couple miles to the east of the Boulder Rifle Club. We have lived here since 1977. Since that time we have for the most part tolerated the periodic popping noise coming from the gun range. There are times when the atmospheric conditions make it more offensive and unpleasant, much worse than the sound of the drone of traffic from other locations nearby. There have also been times when it has been hot, dry, and windy when we have heard the gunfire from the range and have been concerned about the fire danger. We are concerned about the expansion of the gun range and the increasing amount of noise it would bring. Also the valley behind our home is a wildlife corridor for many species of mammals and birds that inhabit and migrate there. But you have probably heard all this from others in our neighborhood. Just need to add additional weight to their concerns. Also as the population increases in nearby areas (thinking potentially Area III Planning Reserve), expansion of this specific gun range is not appropriate.

We do believe that that a gun range that can educate and train qualified civilians is good. But there is another concern. Members of this club are required to be members of the National Rifle Association. Perhaps this requirement is not related to the specific issue of permitting the expansion. But in this time of increasing gun violence, I am concerned about the club’s membership associated with the NRA.

I hope you and the county planning commission and county commissioners take our concerns into consideration and prevent this expansion.

Best regards,
Kris Berquist

Sent from my iPad
Boulder County Property Address: 1033 Laramie Blvd
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Catherine Doetkott
Email Address: classk118@gmail.com
Phone Number: (718) 216-4535
Please enter your question or comment: I hope this is not approved. Dakota Ridge is residential neighborhood and will be subjected to the noise of the rifle range expansion that will significantly decrease our quality of life in our homes. I'm very concerned. I hope the officials in Boulder County government keep us in mind.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4725 16th St, Unit 101
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Peter Himpsel
Email Address: himpselp@gmail.com
Phone Number: (303) 717-0085

Please enter your question or comment:
Current shooting can be readily heard in the Holiday neighborhood. This may be from trap shooting at the American Legion. If it is from the current Boulder Rifle Club, and from a similar location, then any new development should only be allowed if adequate sound mitigation can be done. Get some people in the north Boulder neighborhoods and fire off some shots. If we can clearly hear it, no go on the outdoor ranges until you can’t hear it. Real simple. 5 ranges sounding off that can be clearly heard (even a little bit) is a clear nuisance and unacceptable.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
I’m writing in support of the Boulder Rifle Club’s proposal for expansion SU-19-0009. I own a home 1 mile away from the parcel in question in North Boulder.

I would expect strong demand for this given recent events and am not surprised to see the Rifle Club planning to expand. Any support of second amendment rights is a positive thing for the community.

Artur Sapek
Dear County Commissioners,

I'm writing to you to express my concerns in reference to Docket SU-19-0009, Special Use Review for the Boulder Rifle Club.

When the Boulder Rifle Club was established it was located in an area with a more limited population. This area has greatly expanded with additional residences. It's adjacent to Boulder Open Space to the north, which is very popular for hikers and Boulder residents with dogs. The Rifle Club is already dangerous along this border.

There is an abundance of wildlife in the area, which would be greatly affected by the additional noise. The Boulder Open Space directly to the east has small ponds and is home to deer, bear, bobcats, mountain lions and numerous small animals that have made their homes in this area. I live down this valley to the east and already can hear the loud shooting.

THE MOST IMPORTANT CONCERN is that in today's climate Boulder County and Boulder City would think that it would be appropriate to encourage more shooting of guns so close to the city. It seems that the Rifle Club should be required to move to a less densely populated area. Shouldn't the county and city be discouraging gun ownership, not encouraging it?

I hope that you don't approve the increased size and scope of this expansion.

Sincerely,
Lisa Carmichael
4549 Pleasant Ridge Road
Boulder, CO 80301

303-818-7111

Most residents move to Boulder to enjoy the peace and quiet of the trails.
Hi Elise and Matt,

My family and I live in the Dakota Ridge neighborhood and recently received a special use review notification to expand the gun range. The range, at its current capacity, already creates quite a bit of noise pollution. It scares our dog so much he can't sit outside, and I know others in the neighborhood would concur.

In addition, the expansion of the outdoor ranges has the potential of further impacting the community's use of the open space in that area. My understanding is that your platform(s) have both expressed a commitment to air/sound pollution as well as maintaining the use and protection of Boulder's open space.

I urge you to decline the proposal of growth for this range. Or if you do decide to approve the growth, I ask that you limit construction to indoor expansion only. The outdoor expansion poses too much of a risk to our open space and our community.

Thank you,
Sarah
Hello,

We received the postcard in the mail about the proposed expansion of the rifle range. We live close by, and do not wish to hear even more shooting. We also enjoy hiking in the open space that is near by, and I fear it will be hazard as well as the nuisance of blasting going off.

Please think of the neighbors near by and do not permit expansion of this range. We really don't need that here in Boulder.

Thank you,

Anita Hechtman
I wish to express my support for the upgrades at the Boulder Rifle Club in north Boulder.

I do not hear any noise coming from the club, and overall I find it an asset to the community for a number of reasons.

1: I no longer take my kids camping in the foothills because of all the bullet casings I have found at campsites over the years. The club provides a controlled, safe environment for people to target practice. Upgrading the club will provide more spaces for more people to use their guns safely.

2: The club provides an environment for people to learn proper gun safety. Without a local gun club, people will go into the foothills and teach themselves. That's a recipe for disaster.

2a: My son when he was younger wanted to learn to shoot. I am not a gun owner, and my whole life have been afraid of guns. However, I did not want my son to be afraid of guns, and if he wanted to learn, he would do it right and take lessons from licensed coaches. I was nervously excited that our local gun club has lessons for kids. We signed my son up, and he has been taking lessons there now for eight years. I too have learned a lot about gun and gun safety, and I’m glad this was available for my son.

3: I’ve met many great people there. We don’t always see eye-to-eye about the second amendment, but I respect the people who manage it, and I’m grateful it’s here and available to those who wish to use it. The upgrades to the facility will be an asset to the community.

If you wish to learn more about the club beyond talking with the principle managers, I recommend talking to those who take lessons, or to the parents of the kids that take lessons. If you need names or numbers, I’d be happy to collect them for you.

Mike McDaniel
4088 Dawn Ct.
Boulder, CO
303.245.0045
As a homeowner in the NOBO area of Boulder, I am strongly against this proposal. This is a densely populated part of Boulder, and many folks would be subject to extreme noise pollution caused by such a development. I would also expect it to have a negative impact on Boulder Valley Ranch, a popular recreating area. There is nothing more annoying that hiking or running in an outdoor space when all you hear in the background are guns.

I expect this kind of ridiculous and reckless development in Weld County, not Boulder County. This is NOT in the best interest of North Boulder and is far out of line with what those of us living in Boulder County expect to have to deal with in our community.

VOTE NO!

Russ Reynolds
4585 13th Street, Unit 1F
Boulder, CO 80304
I am writing in opposition of the proposal to expand the gun range in North Boulder. This range is SO close to neighborhoods full of families and children. My daughter already suffers from anxiety from all the lock-down drills at school and fear of school shootings; the last thing we need is to be increasing the amount of gunshots that we hear from our bedrooms! Please do NOT approve the expansion.

Thank you,

Amy Chan
I am writing regarding Docket #SU-19-0009, Boulder Rifle Club proposal. I am requesting that you do not allow any expansion of outdoor shooting ranges or the addition of any new outdoor shooting ranges. These ranges are very close to residential neighborhoods and we can already frequently hear shooting from our home and the nearby areas. My two young children are rightfully scarred to go enjoy many of the open space trails near our house because of the gun fire they can easily hear nearby. These ranges are already too close to residential space and open space, please do not allow them to further expand outdoors.

Having made the request for no further expansion of outdoor ranges, let me also say I have no objection at all to new indoor ranges. Indoor ranges would present no issue for the surrounding community that I am aware of and as such, I would urge that any expansion be indoors instead of outdoors. Thank you for your consideration of my concerns and those of my family and neighbors.

Best,
Matthew Baris
I am in support of the upgrades to the Boulder Rifle Club.

I did not hear any noises coming from the range. I live across 28th from it.

The Boulder Rifle Club is a valuable asset to this community. Here's why:

1) Provide a safe and controlled place to operate firearms.

2) Provide lessons about gun safety.

3) The people there are amazing and really care about everyone in the range.

If the club got an extension it will provide more space for more shooters. I as a student at the Boulder Rifle Club have learned so much there.

I'm also a Boulder Police Department cadet. All the officers at BPD are very impressed about my knowledge of guns and gun safety. I have the Boulder Rifle Club to thank for that.

Sent from my iPhone
Dear Boulder County Commissioners,

I am writing to you to express my concerns and disapproval for Docket # SU-19-0009: Boulder Rifle Range.

Please do not approve the construction of additional outdoor ranges near North Boulder open space and the adjacent wildlife habitat and migration corridors. The North Boulder Grasslands and B.L.I.P Ponds and Lapin Ponds are too close and the increased gun noise will have an adverse effect on the survival of the 100 plus species of migrating birds as well as the precipitous decline of the grassland breeding birds.

As a longtime Boulder County resident (30 years), my family and I enjoy the outdoor lifestyle and the loving community in North Boulder. The beloved qualities of Boulder County are at odds with an expansion of a gun range that is so close to our favorite trails and residential communities. My wife and two sons no longer enjoy riding the trails around the Boulder Reservoir (Eagle Trail) or hike/jog on our long standing favorite route along Hidden Valley Trail. The Boulder Rifle Club's outdoor ranges don't feel safe and creates a high risk of ricochet (stray bullet can travel 2 miles) like the Hidden Valley incident in 2010, or an accident from bad marksmanship or even an unstable club member.

It's hard to enjoy the outdoors in North Boulder due to the constant, loud and frightening sounds of gunshots (often from high powered, semi-automatic assault rifles with very large caliber). This outdoor shooting range is anti-Boulder (what % of members are from Boulder County), hazardous to natural wildlife, creates risk of fires (one reason the mountain ranges were closed) and demotes participation in outdoor activities.

Please do not approve the construction of additional outdoor ranges, but if you must allow the expansion, please only allow indoor ranges.

Best regards,

Tim Heiman
303-710-5253
From: Rhonda Hermse
To: #LandUsePlanner
Subject: Expansion of Boulder Rifle Club
Date: Monday, June 15, 2020 3:41:50 PM

Dear Commissioners,

I'm writing to you about Docket SU-19-0009, Special Use Review for the Boulder Rifle Club.

I am very much against this expansion. Gun owners have a right to their hobby, but this huge expansion will greatly affect everyone and every creature living in the area. This expansion will attract many more gun owners into our area to use this range. People outside of Boulder will come. The danger as well as the distressing explosions of gunfire will increase dramatically. This is just not remote enough to protect the residents as well as the animals that live in the area. Where are those errant bullets going to land? How much noise pollution will it generate? This is extremely distressing.

Keep the rifle range the same size. If they need more space, they need a more remote location.

Thank you for your consideration
Rhonda Hermse
4236 Pleasant Ridge Road
Boulder CO 80301
303-884-9144
I am against this expansion proposal.

Newton logan  
4517 Apple Way, Boulder, CO 80301  
Sent from my cell phone.
To whom it may concern
I am against any expansion of the Boulder Rifle Club.

Sincerely
Katharine De Simone

Sent from my iPhone
Hello,

We live in Dakota Ridge and received the mailer about the submitted plans of the expansion of the gun range. We live on Terrace Cir N and can see the range from our home. We hear it all the time at this distance (maybe 1-1.5 miles away), even over Hwy 36 traffic. It's a constant pop-pop-pop-pop, all days of the week. There are so many residences, so many families, that live within this area that can hear this as it is now. Adding more ranges and even more sound pollution, especially gunfire is hardly friendly to Boulder's perceived values. We are very much against the expansion. I am a gun owner. I go to a range to shoot 20 miles east of Boulder, away from any residential or city limits. I support gun rights (to a degree). But having this range, this close to residential areas, is a shame.

Michael White
1090 Terrace Cir N
Please don't approve an expansion of the shooting range. It makes our dog miserable and kills the ambience of our neighborhood as well as the open space just west of here. This sort of activity runs counter to the BLM movement and promotes the conservative/Trump/police agenda of use of lethal force. It has no place in Boulder County.

Thanks,
Joe Richardson
Orange Orchard
303-875-0985
Boulder County Property Address: 4810 N. 26th St., parcel #s of N 26th St.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Carrie Bielen Simon
Email Address: carriesimon45@gmail.com
Phone Number: (720) 939-4197
Please enter your question or comment: Yes, I approve! Really excited about the Boulder Rifle Club expanding.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Regard,

Bonnie Gracia
Planner On-call

PLEASE NOTE: In an effort to mitigate the spread of COVID-19, the Boulder County Community Planning & Permitting physical office at 2045 13th St. in Boulder is CLOSED to the public until further notice. We will continue to operate remotely, including the online acceptance of building permits and planning applications. Please visit our webpage at www.boco.org/cpp.

For more detailed information and contact emails for groups in our department. You may also leave a message on our main line at 303-441-3930 and the appropriate team member will return your call.

Thank you for your adaptability and understanding in this extraordinary time!

Community Planning & Permitting - Boulder County
The Boulder County Land Use Department provides building permits and inspections, zoning enforcement, and planning for unincorporated Boulder County.
www.boco.org

for more detailed information and contact emails for groups in our department. You may also leave a message on our main line at 303-441-3930 and the appropriate team member will return your call.

Thank you for your adaptability and understanding in this extraordinary time!

From: Wufoo <no-reply@wufoo.com>
Sent: Tuesday, June 16, 2020 3:56 PM
To: #LandUsePlanner <Planner@bouldercounty.org>
Subject: Ask a Planner - Web inquiry from Carrie Bielen Simon - SU-19-0009

Boulder County Property Address : 4810 N. 26th St., parcel #s of N 26th St.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Carrie Bielen Simon
Email Address: carriesimon45@gmail.com
Phone Number: (720) 939-4197
Please enter your question or comment: Yes, I approve! Really excited about the Boulder Rifle Club expanding.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Planning Commission

Please do not approve the expansion proposal for the Boulder Rifle Club. Approving the expansion will bring more guns to into the city of Boulder as well as larger crowds of people shooting them in relative close proximity to city limits, open space, and residential areas. The proposal is the last thing Boulder County needs. The planning commission shouldn’t favor a small group, especially given tumultuous and polarizing politics, current social unrest and the reputation that Boulder County has as a safe, beautiful and healthy place live. Please keep me informed on the matter.

Thank you
Paul Brooks
North Boulder
720 318 1172
Hello, my wife and I both strongly support the expansion of the Boulder rifle club, as proposed. This kind of facility is long overdue based on the number of people interested in safely pursuing shooting sports. We feel the location and the plan put together by the rifle club is excellent. The acoustic analysis is also important. Please approve this measure. Regards, Gary and Chrysteen Weihe
Sent from my iPhone
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009

Name: Evelyn Moritz
Email Address: billnevelyn@netscape.net
Phone Number: (720) 938-1126

Please enter your question or comment: Have any studies been done or limitations set for how much noise will increase with the Boulder Rifle Club expansion? How much will the frequency of gun shots increase? The expansion is less than a mile from my house.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
By the way, we live in unincorporated Boulder County in North Boulder. Regards, Gary

Sent from my iPhone

> On Jun 16, 2020, at 6:21 PM, Gary Weihe <gweihe@comcast.net> wrote:
> Hi,
> Hello, my wife and I both strongly support the expansion of the Boulder rifle club, as proposed. This kind of facility is long overdue based on the number of people interested in safely pursuing shooting sports. We feel the location and the plan put together by the rifle club is excellent. The acoustic analysis is also important. Please approve this measure. Regards, Gary and Chrysteen Weihe
> Sent from my iPhone
Boulder County Property Address: 4106 Spy Glass Lane
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Cassandra Longo
Email Address: caseylongo@hotmail.com
Phone Number: (720) 217-5695
Please enter your question or comment: We live in Lake Valley, and have been left out of any information regarding
the rifle expansion plan. The neighbors of Lake Valley would like the opportunity to provide input and feedback for
this permit, ASAP as it is moving forward without us receiving any information.
Summer Fredrick is the planner. We would like to speak with someone as soon as possible.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the
Colorado Open Records Act.
Hi there;

I live in Lake Valley currently and have many concerns about the plan proposed to expand the gun range. We are within hearing distance now, sometimes the shooting is loud enough to startle my children, but we did not receive any cards or information about when we can provide feedback.

Please let me know when the public hearing is for this expansion; myself and many neighbors want our voices to be heard as the county make this huge decision with numerous impacts to our property values and daily lives.

In addition, please let know where each county commissioner stands on this issue.

Thank You
Casey Longo
4106 Spy Glass Lane, 80503
I wanted to write in support of the Boulder Rifle Club expansion. I live in the Holiday neighborhood close to the range and would like to see this project move forward after reading the plans and studies associated with the noise and impact.

Christie Propst
1488 Easy Rider Ln
With regard to Boulder Rifle Clubs expansion I am not in favor of the expansion. The sound of gunfire adds to the noise pollution in my North Boulder neighborhood (4664 17th Street). We already have significant noise from Hwy 36 and the skeet shooting range at the American Legion.

Another factor which to consider is that gunfire sounds can be triggering to those suffering from PTSD. Whether it be from service in a branch of military, or the loss of a friend or family member to suicide. I lost a friend to suicide a little over two years ago and the sound that penetrates my neighborhood was very triggering following the loss of my friend.

It’s also difficult to have to explain to my children, “What’s that noise?” There’s also the fear of a stray bullet.

Surely there is more of an out of the way place for this establishment considering it’s need for expansion.

Kind regards,

Janessa Berggren
Hi Summer,

As an owner of an office/business in the Holiday Neighborhood and a resident of Dakota Ridge I’m writing to express my concern with this project. I’m concerned about the noise of gunfire and the safety of stray bullets. I sometimes run or walk the dog between Dakota Ridge and the res and there are signs about possible stray bullets from the rifle range already. We don’t need more guns and bullets in N. Boulder.

Daniel Hirsh
West End Photography, Inc.
1420 Lee Hill Dr. #7
Boulder, CO 80304
303-635-6522 studio
303-415-0545 cell
www.westendphotography.com
Connect on Facebook
Please consider another location for this. While training for area law enforcement is important - the near CONSTANT gun fire noise from the current range is disturbing in our north boulder area. Noise pollution that perhaps exceeds limits.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Jeff Haenke - SU-19-0009: Boulder Rifle Club, Inc.
Date: Thursday, June 18, 2020 10:58:22 PM

Boulder County Property Address: 4810 N. 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009: Boulder Rifle Club, Inc.
Name: Jeff Haenke
Email Address: jeff.haenke@gmail.com
Phone Number: (989) 751-9830

Please enter your question or comment: Will anything be done in regard to sound mitigation? Currently when people are shooting in the range during the day, it is very audible and distracting where I live. I typically have to shut my windows to avoid hearing people use the shooting range. I would like this to be taken into consideration if possible.

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Hello M. Frederick,

I am a resident of the Lake Valley neighborhood, just north of the 5280' limit of the Boulder Rifle Club referral area. I SUPPORT the planned new construction by the BRC, to encourage the safe and responsible training/use of firearms in appropriate areas within Boulder County.

Thank you,
Wilmer Wilson
4061 Spy Glass Lane
Longmont, CO 80503
My comments regarding this proposal is to reduce or disallow adding any additional outdoor shooting ranges.

The outdoor shooting space already has enough noise which can be heard in my neighborhood at Boulder Meadows and can also be heard when on a nice hike at the Boulder Valley Ranch, along the trails on the foothills, and even Heil Valley Ranch.

Adding additional outdoor gunfire noise to this area is not conclusive to an environment that supports the right of peaceful enjoyment. Also we have several neighborhoods surrounding this location that have families with small children growing up. And I and others in this neighborhood with PTSD find the gunfire noise is not conclusive to a mental health environment.

I would support the Club creating an indoor space that would contain this noise.

Sincerely
Kimberly Adams-Moore
4500 19th Street #619
Boulder CO 80404
Hello,

I live near the Rifle Range and the noise (and fear of stray bullets) DOMINATES the entire surrounding area, when hiking at Boulder Valley Ranch or when biking through the Orange Orchard residential neighborhood. This is the current situation. By no means should an expansion be considered!

I would imagine that SIGNIFICANTLY more Boulder residents and families are likely to want a peaceful walk with their dog in Open Space that our tax dollars have paid for than individuals from inside or outside of town who come here to shoot weapons in essentially the same place. There are many areas where people can shoot guns; directly adjacent to popular open space and residential neighborhoods is NOT a good location for this invasive and potentially dangerous activity, period!

Thank you,
Susan

Susan Enfield
720-289-2301
I am writing in support of the expansion of the rifle range. A safe place to practice marksmanship in Boulder is a critical component of public safety. Increasing the size of the range in Boulder will contribute to public safety.
Dear Planning Committee,

I am writing to voice my support of SU-19-0009, the Boulder Rifle Club expansion project. I believe this is sorely needed. I moved to Boulder from Montana for work, and while I have shot competitively at ranges all over the nation, I have never lived in a place where ranges were so full the waiting list is over a decade long. I was horrified to find out Boulder was so full, they were not even taking names for the waiting list.

While I live just above the club range in Dakota Ridge, I have to drive 45 miles each way to a range in Aurora practice. That's the only range I could get into after being on their 3-year waiting list. Ridiculous, right?

I'd love to be able to drive only a few minutes vs. an hour. I fully support the range expansion so we can hopefully gain access to a valuable asset right next door vs. driving for an hour each way to a range.

Further comments regarding typical arguments against the range expansion:

Noise
While I can almost throw a rock and hit the range from my house in Dakota Ridge, I never hear noise from the range whatsoever. I hear more shotgun reports from the trap range, but they are very muted and not a bother at all. Vehicles on 36 are louder.

Wildlife
Like any other range, wildlife are not bothered by its existence and walk across the range area during open hours. Of course this is an immediate cease-fire event, but arguments that wildlife are impacted by the existence of a range are patently false. This is by my direct witness of a variety of wildlife including deer, turkeys, elk, and antelope co-existing at dozens of ranges across our nation (and no, nobody shoots them).

Hiking
If you are hiking within earshot of any range you're going to hear it. The shooting sports are a fully valid pursuit, just like hiking. One does not trump the other, and they need to coexist. For a perfectly serene Colorado hiking experience, there are clearly smarter choices available than right next to a rifle range. Not to say hiking should be restricted near rifle ranges (except downrange, obviously).

Best use of land
I believe this is the best use of the land available, and allows legal firearm owners to enjoy the use of their firearms in a safe manner. The volume of new people entering the shooting sports has grown exponentially in the past few years (especially with the pandemic) and there are many new shooters that need to learn the principles of safety and fundamentals of marksmanship in a controlled, safe environment.

Thank you for taking the time to consider my opinions.
Best Regards,

Bret Heidkamp
President
CROSSTAC Corporation
Montana - Colorado - Florida

CAGE 4R4TI

1010 South Lincoln Ave
Loveland, CO 80537
970.292.6750 x 101

web:
CROSSTAC

videos:
Youtube: CROSSTAC

social:
Facebook: CROSSTAC
Instagram: CROSSTAC
Dear Planners, This email is regarding Docket #SU-19-0009, Boulder Rifle Club proposal. Please do not allow any expansion of the outdoor shooting ranges or any additional new outdoor shooting ranges. These ranges are very close to residential neighborhoods and we often hear shooting from our home which is really disturbing especially in light of all the gun violence in this country and it causes undue stress to many people who recognize the sound of shooting and link it with violence.

I am not able to hike on a number of the open space trails close to our house because of the sound of gun fire as well as the fear of stray bullets. These ranges are already painfully close to residential areas and open space. I do not want to see them expand further.

Some people in this country enjoy guns and some do not. For those who don’t, it’s upsetting and stressful to listed to the gunshots being fired in such a peaceful area, especially now that we are frequently confined to our homes and neighborhoods.

I appreciate your time and hope you will take my comments into consideration. Thank you, Alex Baris
Hello...

I am responding to the badly timed Boulder Rifle Club request for expansion to the current facility in north Boulder.

I have lived in the Holiday neighborhood for 14 years and have accepted the popping sound of shooting that travels over to our neighborhood daily, (initially I thought it was tennis). I have to admit however that an increase in this would be less than welcomed.

We also hike frequently in the beautiful Hidden valley area where the sound of shooting is more intense.

In both these instances the sound is not constant or overwhelming although I can imagine that it could certainly be a trigger (no pun) for someone with PTSD. It is a tolerated noise pollution in this part of north Boulder.

It would seem that increasing the number of ranges particularly outside would be simply inconsiderate to the neighborhoods and trails surrounding the current facility.

They are not in the middle of nowhere, sound travels, let's be good neighbors.

Thank you for consideration...

Sherry Richards

4657 17th St.
Hey Summer,

Sorry, I just realized the noise may be the American Legion across the street so you can disregard this.

Best,

Jeff Haenke

On Fri, Jun 19, 2020 at 7:53 AM Frederick, Summer <sfrederick@bouldercounty.org> wrote:

Good morning, Jeff.

Thank you for your comment related to SU-19-0009: Boulder Rifle Club. Your email has been added to the project file, is now a part of the public record, and is available for review.

Regards,
Summer

Summer Frederick, AICP
Planning Division Manager
Direct: 720-564-2603
Main: 303-441-3930
sfrederick@bouldercounty.org
www.bouldercounty.org

-----Original Message-----
From: Wufoo <no-reply@wufoo.com>
Sent: Thursday, June 18, 2020 10:58 PM
To: #LandUsePlanner <Planner@bouldercounty.org>
Subject: Ask a Planner - Web inquiry from Jeff Haenke - SU-19-0009: Boulder Rifle Club, Inc.

Boulder County Property Address: 4810 N. 26th Street If your comments are regarding a specific docket, please enter the docket number: SU-19-0009: Boulder Rifle Club, Inc.
Name: Jeff Haenke
Email Address: jeff.haenke@gmail.com
Phone Number: (989) 751-9830
Please enter your question or comment: Will anything be done in regard to sound mitigation? Currently when people are shooting in the range during the day, it is very audible and distracting where I live. I typically have to shut my windows to avoid hearing people use the shooting range. I would like this to be taken into consideration if possible.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available
by request under the Colorado Open Records Act.
Dear Planning Committee,

I am writing to voice my support of SU-19-0009, the Boulder Rifle Club expansion project. I believe this is sorely needed. I moved to Boulder from Montana for work, and while I have shot competitively at ranges all over the nation, I have never lived in a place where ranges were so full the waiting list is over a decade long. I was horrified to find out Boulder was so full, they were not even taking names for the waiting list.

While I live just above the club range in Dakota Ridge, I have to drive 45 miles each way to a range in Aurora practice. That’s the only range I could get into after being on their 3-year waiting list. Ridiculous, right?

I’d love to be able to drive only a few minutes vs. an hour. I fully support the range expansion so we can hopefully gain access to a valuable asset right next door vs. driving for an hour each way to a range.

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a fully valid pursuit, just like hiking. One does not trump the other, and they need to coexist.

For a perfectly serene Colorado hiking experience, there are clearly smarter choices available than right next to a rifle range. Not to say hiking should be restricted near rifle ranges (except downrange, obviously).

**Best use of land**

I believe this is the best use of the land available, and allows legal firearm owners to enjoy the use of their firearms in a safe manner. The volume of new people entering the shooting sports has grown exponentially in the past few years (especially with the pandemic) and there are many new shooters that need to learn the principles of safety and fundamentals of marksmanship in a controlled, safe environment.

Thank you for taking the time to consider my opinions.

---

Best Regards,

Bret Heidkamp
President
CROSSTAC Corporation

Montana - Colorado - Florida

CAGE 4R4T1

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Loveland, CO 80537
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Best Regards,

Bret Heidkamp
President
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videos:
Youtube: CROSSTAC

social:
Facebook: CROSSTAC
Instagram: CROSSTAC
Hello,

My name is Tom Sampson. I’ve lived at 4209 Tamarack Court, Boulder, for 31 years. I first moved to Boulder with my parents in 1969, and graduated from Boulder High and CU.

I am opposed to expansion of the Boulder Rifle Club. It is already non-compliant to the Boulder noise ordinances, and it should not be this close to the North Boulder neighborhoods. Please do not grant any construction projects, and seriously consider forcing the Boulder Rifle Club to move further away from neighborhoods. Thank you.

Tom Sampson

sampsontom@comcast.net
Hello,

This comment is in reference to Docket#SU-19-0009

I already left a detailed comment at the first notice of this proposed expansion of the Rifle Club, and I just want to add that I am still waiting to hear if there has been an independent noise study on the proposed expansion.

We have no problem with the proposed 20,050 sq ft indoor range or the proposed bathroom facilities. I do know that even with the indoor expansion we should expect more traffic.

The Rifle Club current ranges were there before we moved there 30 years ago and even though I don't like the sound of guns firing and bombs exploding, I am not going to complain about the current conditions. But I do not want to see approval of 5 new ranges (will that include some 30 new shooting lanes?)

The approx. 600 acres of undeveloped land around Yarmouth and N.26th St will be a residential neighborhood one of these days, and it would not be appropriate to have more gun noises. The Sound Study done does not convince me that there will be less noise.

Mikl Brawner

4795 N. 26th St.
Boulder County Property Address: 2165 Tamarack Ave
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009 Boulder Rifle Club
Name: J Roche
Email Address: jane_roche@comcast.net
Phone Number: (303) 817-0575
Please enter your question or comment: I'm very concerned about the possible expansion of the Boulder Rifle Club for many reasons; traffic on this portion of North Hwy 36 will increase by 60 cars per day on an already very busy portion of the highway & which is also populated by lots of bicyclists. I'm also very sad that there will be wildlife impacts. I've lived in north Boulder for over 20 years and I value the wildlife in this area. I'm also concerned about the noise from the traffic and the shooting. From what I can see the "noise mitigation assessment" is really just a guess. Has anyone really considered what it will sound like when all 60 outdoor lanes are in use? I would like to know. I would like to know why the mountain areas have been closed to shooters? Why is this expansion being considered when we have outdoor areas that could be used that have been closed. I would also like to know if there will be an opportunity for home owners to be included in the conversation and actually have our concerns addressed? Or is this one of those items that has already been decided and we are only being asked so the commissioners can say they "had input from neighbors". I would appreciate an email. Thank you.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
I want to register my opposition to this project. I live at 1820 Mary Lane #4 and my unit backs up to Hwy 36. When people are shooting, I cannot leave any doors or windows open to my condo and cannot use my yard. The gun shots are incredibly loud and sound like they are coming from directly behind my home. My dog cowers in the house and I have to stay behind closed doors and windows.

I am an at risk senior who is spending a great deal of time at home and since the club has reopened and shooting has recommenced, it has been very difficult for me to tolerate. I cannot imagine expanding the club and having even more shooting and even louder noises causing me even more distress.

Some people may say I shouldn’t have bought my condo because the gun club was here first. However, I moved here from out of town and looked at the property several times. I guess it was my bad luck that no one was ever shooting when I was at the property and the fact that it existed was not disclosed to me. If I had known, I most probably would not have moved to this property. Now I am here and hope that there won’t be an expanded club that enables more frequent, more dense shooting and more disturbance to me.

Thank you for reading my comments.

Minna Vallentine
Hi, my name is Matt Rogers and I live in north Boulder. I am responding to Docket #: SU-19-0009: Boulder Rifle Club, Inc. I do not support the expansion of the Boulder Rifle Club's facility in any way, shape, or form. We use the nearby open space and roads for hiking and biking. We feel there is not a safe way to expand the already dangerous facility without further jeopardizing the community.

Thanks,

Matt
From: nimosen
To: #LandUsePlanner
Subject: SU-19-0009
Date: Monday, June 22, 2020 4:48:54 PM

Please do not expand the gun range. It’s noisy already, especially in the morning on weekends.

Thank you,

Neil Rosen, Psy.D., PC
Psychoanalysis
303-494-1116

CONFIDENTIALITY NOTICE: This communication with its contents may contain confidential and/or legally privileged information. It is solely for the use of the intended recipient(s). Unauthorized interception, review, use or disclosure is prohibited and may violate applicable laws including the Electronic Communications Privacy Act. If you are not the intended recipient, please contact the sender and destroy all copies of the communication.
June 20, 2020
RE: SU-19-0009

To Boulder County Commissioners,

I am writing in response to the newly proposed expansion of the previously small and exclusive Boulder Rifle Club. After reading the report I have concerns. Even though the Boulder Rifle Club has been in existence for a long time and has a Use by Right privilege to be at its location, I don’t believe we, as a community, should allow this expansion. At the time the club was established there was an entirely different culture in society around guns and gun ownership.

Today, the topic of guns and gun ownership has become highly political. With current laws we can’t control the numbers and types of guns purchased or the current massive explosion of gun sales due to Covid-19. As the Rifle Club currently exists there is a long waiting list to become a member and use the facility. Law enforcement currently has access to practice their skills at the club, as they should. However, we don’t have to encourage the use of firearms by providing a large facility for the general public’s use. This does not move gun control in a positive direction.

Although a thorough sound report was conducted with reliance on computer modeling, I don’t believe they can, or have adequately modeled all factors including the stillness of the morning air or the geographical features of the natural drainage valley to the east. These echo the existing gun range shots towards the homes to the east and make the shots fired seem very close. In addition, I believe the example of two relatively small-bore rifles as the reference point for the decibel readings skews the report in favor of the Rifle Club and does not address the often much larger weapons fired on the range.

I would also like to point out that the traffic study was unable to predict the increased gun sales of recent events and how this will affect the number of daily trips to and from the club. The current intersection of Hwy 36 and 26th Street is extremely dangerous, as I have personally encountered, leaving Harlequin’s Gardens. A new study would probably, at minimum, require paving of 26th Street and perhaps a new signal at Hwy 36 since the current study was getting close to these requirements without the new circumstances suggesting...
much higher use.

In conclusion, these expansion plans rely too much on skewed studies, shortsighted assumptions, and antiquated laws and regulations. If the expansion is allowed to proceed, we can expect a host of adverse effects that will be difficult to reverse.

I appreciate your time and consideration of my viewpoints.

Sincerely,

Gary Carmichael
303-775-7764
4549 Pleasant Ridge Road
Boulder, CO 80301
Dear Planner,

My wife and I have a family with 3 kids. We live at 1647 yellow pine ave in Holiday neighborhood. I am currently listening to gunshots at this range, and do not enjoy the sound of gunshots. I do not want this rifle range to expand! My kids should not grow up thinking gunshot sounds are common. I do not want more people coming to my area with guns and ammunition. This is not what we need in our communities, especially at this time when mass shootings and police brutality are common. Please take steps to stop this expansion, to rebuild the health and security of our kids, our community, our country.

Thanks

Brian Wildes
720.900.899
I am writing to express my support for the new plan for the Boulder Rifle Range. It is a well-designed plan and it will help improve gun safety by providing opportunities for safe training and practice. Please take the scientific approach and approve the project.

Thank you,
David Kopel
Dear Boulder County Community Planner - I am writing to voice my opposition to expansion of the rifle range in proximity to my home. I live in Silver Sage Village in NOBO. We can hear gun fire now and do not want this expanded. NOBO is growing as a mixed use residential community which Boulder sorely needs. To NOT mess this up by adding more unpleasant noise and use of weapons. STOP the rifle range expansion now!

Sincerely, Ann Miles

Sent from my iPhone
Attn Summer Frederick,

I would like to give you my feedback as to why I am against the expansion of the rifle range. I have lived in the Holiday neighborhood for 6 years now. I live at Silver Sage Village. We are a co-housing community of age 55 and above and our average age is 70. We live a quiet lifestyle and enjoy sitting out in our beautiful garden and walking the neighborhood. The neighborhood consists of a diverse group of people who all enjoy the beauty of the area as is reflected in the gardens, the sound of children at play and neighbors in quiet conversation.

I wanted to give you an idea of our neighborhood to share with the planners. We can hear the rifle shots in our neighborhood. It is loud and distinctive as to what it is. My two young granddaughters come to visit often and I had to explain the loud "popping noise". I can not imagine how adding five additional ranges would increase the annoying and repetitive noise.

When the range was built in the early 20th century, it was built outside the city of Boulder and away from residential neighborhoods for a reason. A place like this disturbs the peace of people living close by. The founders knew this, and so with respect to others they chose a place that was far enough away from homes in order to not disturb others. Fast forward 100 years and you now have communities bordering the club. You have homes and families living a quiet and peaceful life. The land they built on is no longer a suitable place for having a shooting range.

I ask that the planners involved take into consideration all this before making a decision that will affect many neighborhoods surrounding the shooting range. Thank you for allowing me to share what we love and have here in North Boulder and how this expansion will truly affect our lives.

Sincerely, Lindy Cook
Holiday neighbor
I just 8 months ago bought a unit in the Silver Sage Community at Yellow Pine and 16th St. I am horrified that the shooting range above me is expanding. Already the shots that occur there make me jump in my condo and if I happen to be falling asleep -- that's it. Finished.

I am very much against it. I feel it reduces the value of this property. It is a big mistake. It is wrong. I imagine that there was a day when that shooting range was first built that it was far above the edge of town. Today it is not. It is right in it. Our community and hundreds of other people live right close by. Please prevent this expansion.

Janael McQueen
Yellow Pine Av
Boulder 80304
Boulder County Property Address: 4190 19TH ST
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Jacob Segil
Email Address: jacob.segil@colorado.edu
Phone Number: (217) 840-0649
Please enter your question or comment: To whom it may concern,
My family including my wife Carrie, and two sons Noah (age 5) and Ari (age 2) live at 4190 19th St in Boulder. My wife and I strongly opposed the proposal for the Boulder Rifle Club (SU-19-0009). We routinely hear gunshots from our backyard. It is alarming to our children and upsetting to the quiet neighborhood we enjoy here in north Boulder. The proximity to residential areas should be given consideration when allowing even more ranges and thereby gunshots. I firmly believe that this establishment should not be allowed to expand due to the noise concerns of the neighborhoods in north Boulder. Please reach out to me directly for any more documentation that we can provide (contact information below).
Sincerely,
Jacob and Carrie Segil

Jacob Segil
Managing Director, Center for Translational Research 
Research and Innovation Office (RIO)Instructor, Engineering Plus Program College of Engineering and Applied Science University of Colorado Boulder 303-735-7313 jacob.segil@colorado.edu https://www.colorado.edu/faculty/segil/
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
To whom it may concern,

My family including my wife Carrie, and two sons Noah (age 5) and Ari (age 2) live at 4190 19th St in Boulder. My wife and I strongly opposed the proposal for the Boulder Rifle Club (SU-19-0009). We routinely hear gunshots from our backyard. It is alarming to our children and upsetting to the quiet neighborhood we enjoy here in north Boulder. The proximity to residential areas should be given consideration when allowing even more ranges and thereby gunshots. I firmly believe that this establishment should not be allowed to expand due to the noise concerns of the neighborhoods in north Boulder. Please reach out to me directly for any more documentation that we can provide (contact information below).

Sincerely,

Jacob and Carrie Segil

Jacob Segil
Managing Director, Center for Translational Research
Research and Innovation Office (RIO)
Instructor, Engineering Plus Program
College of Engineering and Applied Science
University of Colorado Boulder
303-735-7313
jacob.segil@colorado.edu
https://www.colorado.edu/febundy/segil/
Dear Boulder County Planning & Permitting Department;

I am writing in regards to the proposed expansion of the Boulder Rifle Club. I live at 4715 26th St and am opposed to any expansion.

I am greatly concerned with issues such as noise, safety and infrastructure.

This is a semi-rural area located on a dirt road, we already have excessive traffic and there is no way the road could handle an increase in traffic. There are no lights at either Yarmouth or Violet and trying to exit the neighborhood is already incredibly difficult. We have a tremendous amount of traffic generated by the rifle club, the nursery and the circus center and this road does not hold up to excessive traffic. Not to mention the excessive speed at which many drivers take this road which is dangerous and generates tremendous amounts of dust. Since the flood any time it rains or snows the road becomes nearly impassable and additional traffic would only make it worse. The current infrastructure could not support the public use expansion proposed by the BRC.

We already have a great deal of noise from the rifle club. There are multiple times that I have been woken up before 7:30 am by shooting. When there is heavy use of the range you can hear shooting for many hours throughout the day. I believe it would infringe on my rights as a property owner to have to endure more noise more often were there to be an expansion.

I am very concerned about safety. Currently the range is private with a selection process and required safety classes for members. I absolutely do not support opening this range to the public. I currently feel safe in my neighborhood and that would change if there are going to be all kinds of random people driving around with guns.
There has already been an incidence of a bullet being lodged in the wall of a home on the north rim; the safety measures in place are clearly insufficient. Consideration must be given to the fact that there is a Boulder County Open space trail directly behind the RBC. Any expansion threatens an increased danger not only to those of us that live in the area but also to anyone that uses Boulder County Open Space.

In addition, this neighborhood is home to all kinds of wildlife, birds of prey, coyotes, bobcats, mountain lions, bears; it is a wonderful part of Boulder. I fear for the safety of the wildlife as well as the fact that they may be driven out by the increased noise and traffic.

Please take the neighborhood into consideration when making this decision. I have lived here for 17 years and in Boulder all of my life and would hope that property rights and quality of life are still an important part of the decision making process. Please vote NO on the current or any future proposed expansion of the RBC.

Thank you for your consideration.

Photimi Renfree
4715 26th St
Boulder, CO 80301
720-217-3371
Hello,

I am a property owner in the vicinity of the proposed additional ranges (west side of US 36). I support the addition of an indoor range on the Boulder Rifle Club property and understand that public shooting options in the county are pretty much non-existent. I would prefer not to have additional outdoor ranges, however, because the current ranges already contribute enough noise in the early morning hours and the sound travels remarkably far. The trap shooting at the American Legion takes places in the middle of the day and, after 15 years of living across the street from it, I've learned to tune it out for the most part. The sound from the rifle range is more jarring because it's usually unexpected, especially in the early morning when there's less car traffic to mask it.

I do recognize that we live on the edge of the residential area and there are very few options for placing ranges of any sort, but I would just ask that consideration for nearby residents (even the seemingly far away ones) be taken into account in the approval process.

Thanks,
Taryn Hanson

4712 18th St
Boulder, CO 80304
Hi,
I’m a resident at 1677 Zamia Ave in Boulder. I received a notice about the application of the Boulder Rifle Club, Inc, c/o Steve Martin for the Special Use Review to allow a major expansion of the Boulder Rifle Club. As a resident that lives across 28th Street (from the Rifle club), I’d like to express my OBJECTION to this plan. As it is, much of the Holiday Neighborhood hears the frequent gunfire at the Boulder Rifle Club. It is already a disturbance to residents here, such as myself, and an expansion of the club would make matters worse.
PLEASE DO NOT APPROVE THIS PLAN. It will really affect the quality of life in this neighborhood.

Thanks for you consideration.

Gil Shalit
1677 Zamia Ave, Boulder, 80304
Boulder County Property Address: 4617 17th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Sabrina Neu
Email Address: sabrina.m.neu@gmail.com
Please enter your question or comment: Rather than expand this rifle range, I urge the City to close it. It is a noise nuisance and there seems to be no attention to the lead risk it poses. There are reports of stray bullets. I don’t feel safe walking or biking in nearby Open Space due to this. If the City proceeds it should clearly outline a plan to protect the surrounding community residents, wildlife and Boulder reservoir/watershed from noise, harm and contamination. Has the City ever completed a soil review? If so, is this info readily available?
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Sirs:

I am writing in support of the proposed Boulder Rifle Club Expansion SU-19-0009.

This club was organized in 1923 as the successor to the Boulder Gun Club which existed prior to 1889. The lineage of the club goes back 130 plus years making it one of Boulder County’s oldest institutions. This relates specifically to their proposal as they are the only institution in Boulder County that has the expertise (and land) to safely develop, maintain and operate the type of facility expansion they propose.

The land is located just outside of the north boundary of the City of Boulder making it easily accessible to both the City of Boulder and City of Longmont, two of Boulder County’s major population centers. The land is also about a mile from the USDA Boulder Ranger District making it very accessible to anyone referred to the facility by the Boulder Ranger District.

I live in the Special Use Notification Area at:
4342 Apple Way, Boulder CO 80301

Having lived in Orange Orchard at that address since 2002 and an adjacent house from 1998-2002, I am well situated to comment on the Boulder Rifle Club’s impact on Orange Orchard, Palo Park and Four Mile Creek. Essentially, there is no discernible impact. Not traffic, not noise, not air or water quality.

The proposed expansion will be handled by the right organization in the right place.

You should vote to approve this expansion.

John C Dean
Boulder County Property Address: 4810 N. 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Lance Enholm
Email Address: lanceenholm@me.com
Please enter your question or comment: I want to enter my support for this project and expansion of the Boulder Rifle Club. I am intimately aware of the issues of recreational shooting in the mountains. This expansion is one part of a solution and is needed to move forward with closing some of the forest lands (in Boulder County) to recreational shooting. This proposed facility put forth by the Boulder Rifle Club is well thought out and will provide a safe environment for people to legally shoot.

I urge CP&P as well as the county commissioners to approve this plan at the earliest possible date.

Thank you,

Lance Enholm

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Greetings, Summer Frederick

My comments about SU-19-00:

I strongly am against any expansion at the Boulder County Rifle Club. I live on Orchard Ave in North Boulder and can hear the gunshot noise from my house some days. I wonder how some of the closer neighbors deal with it. I also walk my dog many days at Boulder Valley Ranch and find the gunshot noise frightening. I don’t walk the trail that gets close to the rifle range anymore. I think that there are too many guns in our society and we should work on limiting them and not fostering their use.

Thanks, Wolfgang Reitz
1665 Orchard Ave
Boulder Co 80304
Boulder County Property Address : 4810 N 26TH STREET
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Brian Green
Email Address: brian77green@yahoo.com
Phone Number: (720) 308-3674
Please enter your question or comment: My family is strongly opposed to the new shooting range and facilities of
the boulder rifle club. We don’t want more guns in our neighborhood or the sounds of gunfire. We already hear
gunfire from the American Legion near us which is a nuisance and upsetting to children. And we don’t want pro-gun
people traveling in and out of our neighborhood. We chose to live here because it’s a good place to raise a family.
The proposed facilities make us feel less safe.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the
Colorado Open Records Act.
I am a homeowner in Rural North Boulder on 26th St. I live less than a mile from the Boulder Rifle Club.

**I strongly oppose the proposed expansion of the rifle club.**

My concerns are increased volume and frequency of noise pollution. Noise pollution detracts from overall quality of life in our neighborhood. The 'quietness of the air' is a public good, not unlike water or air quality, and I do not want to see that further eroded in our neighborhood.

On a more personal note, I grew up in an area where gun violence was an issue and I was threatened with a shotgun as a teenager. I am opposed to the expansion of resources for shooting as a sport, because I believed increased ranges will promote the sport in our region and make it more accessible to more people. The more guns are in homes, the increased likelihood of gun violence, successful suicides, and school shootings.

Thank you,
Liz Trimber
July 11, 2020

Boulder County Community Planning & Permitting Department
Docket #: SU-19-0009: Boulder Rifle Club proposed expansion

Dear Boulder County Planning Commission,

I am writing to express my deep concern about the proposed expansion of the Boulder Rifle Club and how the increase in noise from the gunfire activity will negatively impact the surrounding neighborhoods and property owners. Gun shots can already be heard in my neighborhood in Dakota Ridge Village and for this expansion to be allowed in such close proximity to our communities as well as growing population in North Boulder will bring a disruption to the peace and quiet that is so important to the quality of our lives.

Please take into consideration how this expansion would be a noise violation to our communities and encroaches on the lives of the property owners as well as the beautiful trails that exist in this area.

Thank you very much for your assistance!

Lynne Buckley
1047 Laramie Blvd., Unit B
Boulder, CO. 80304
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Alan Dale
Email Address: adale4@yahoo.com
Please enter your question or comment: Please refuse the construction of the five new ranges and range shelters. The noise from the facility already extends well beyond the Boulder Rifle Club property and is disturbing to people and pets in nearby residential areas and to wildlife. Thank you.
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 4148 Amber St.
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Peggy Papper
Email Address: peggycolo@yahoo.com
Phone Number: (303) 443-1457
Please enter your question or comment: Please do not approve this plan by the Boulder Rifle Club. This area is zoned for agriculture, not rifles. Rifle noise is very unsettling anytime but even more so in these troubling times.
Right now you cannot walk on the North Boulder Valley Ranch trail without hearing gun shots. This huge expansion will create more rifle shot noise in our nearby neighborhoods and on the open space trails near the proposed development. This is very disturbing and disruptive. Open space should be areas that we can enjoy for nature. We should not be subjected to hearing rifle shots in and around our homes. We don’t need more gun noise!
This activity is also known to pollute the environment and release toxic material. This is the last thing we need in our neighborhoods and community. Please do not allow this!
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
To whom it may concern:

I have lived in the Dakota Ridge neighborhood since 2015. I have been following the news about the Rifle Club expansion near my neighborhood. In the past, when the Club was in use, the entire neighborhood and surrounding parks (Wonderland lake for example) are negatively affected. You would hear these banging/popping noises constantly. If it happened for one day, that would be fine. But when in regular use, it happens ALL THE TIME. The plans state that the property on 4810 N. 26th Street will be open weekdays and on the weekends. And the plans call for construction of 5 new ranges and other facilities that will greatly expand the footprint and impact of the facility. I am assuming that Steve Martin and the Rifle Club has demonstrated that there is actually that much of a demand/need for this expansion and so I will not dwell on that issue. Instead, I will focus on the noise impact on the community. Noise will be a big problem and will have a continuous negative impact on the surrounding areas, which include not only residential neighborhoods but also retail space and restaurants that rely on outdoor seating.

Fortunately there is a solution, provided that Steve Martin and the Rifle Club, the builders, and the architects take their job seriously. They need to understand that the surrounding community consists of tax-paying Americans, just like them. The solution is to design the Rifle Club in a way that ensures that the noise from the facility cannot be heard in the surrounding neighborhoods. I doubt that the current plans will do this. Last I checked, the plans called for 8-foot ballistic barriers, which will not be enough, especially with only a “protective awning” above it. We all know how sound travels. The Rifle Club needs to respect their fellow God-fearing tax-paying Americans in the area. Double the height and width of the barriers and place the shooters below ground. The earth is an excellent way to mitigate sound. Use sophisticated means to absorb sound above the range. Is Steve Martin and the Rifle Club truly serious about respecting other’s rights?

The architects for the Rifle Club expansion may not realize it, but this is an opportunity for gun owners to change the minds of those who would otherwise try to infringe on the right to bear arms. It’s all about respect. The neighborhood is extremely skeptical of the Rifle Club plans, and perhaps rightly so. We have all been inundated with the constant noise from this same Rifle Club in the past, and that was before any expansion. If the Rifle Club is able to build a facility that is truly sound-proof and that does not negatively affect the community with annoying noise, that will be a big win for gun owners and for our second amendment rights. For example, future gun clubs and ranges will then have a better chance to be built in other populated areas, because those organizations could point to the Boulder Rifle Club as an example. I’d love to see that happen, but is that really the goal of the Boulder Rifle Club expansion?

Dylan J Taatjes
th
From: Linda F. Toukan
To: #LandUsePlanner
Subject: Local Homeowner Comment on Re-Referral for Docket# SU-19-0009 Boulder Rifle Club
Date: Sunday, July 12, 2020 12:15:32 PM

RE: Docket# SU-19-0009 Boulder Rifle Club

I dislike hearing the amount of gunfire which I already hear from Boulder Rifle Club.

I'm against anything that would increase gun/firing noise I hear, so I'm against any outdoor expansion.

OK w/indoor expansion if properly sound-proofed & as long as it doesn't increase gun/firing noise I hear.

Thank you for your consideration.

Linda Toukan,
homeowner in Dakota Ridge Village
Dear Boulder County planners and commissioners,

This letter is about the proposed expansion of the shooting range near north Boulder, docket number SU-19-0009. I reviewed the documentation posted on your web site. It is impressive that the county and the Boulder Rifle Club have taken many aspects in consideration. I support the motivation for this project - diverting target practice from wilderness areas. I appreciate the planned mitigation of noise and traffic loads. There is, however, a major issue with the format of the new facility.

The current shooting range is a club with restricted membership. Even if I am unfamiliar with the membership process, this makes me think that members undergo some kind of vetting. The expanded public range would double or triple gun usage near north Boulder with insufficient oversight. What I am talking about is our inadequate gun ownership regulations on federal level. "Thoughts and prayers" are not the answer to the many mass murders committed by lawful gun owners. Boulder must not be the next Littleton or Aurora.

I am really eager to know the steps that Boulder County and the Boulder Rifle Club will take to ensure our safety. These following measures would immensely decrease the risk from gun violence in Boulder as a result from this expansion:

- Background checks for every user of the public section of the shooting range.
- Ban on military grade assault weapons on the range (since they are the preferred kind of weapons by mass murderers)
- The ownership is to be held liable if gun violence is committed by someone who has used the range.

My hope is that Boulder County will do everything possible to prioritize our safety.

Respectfully,

Georgi Ivanov,
Catherine Brooks,
Roza Ivanova
Marin Ivanov

4550 Broadway St, Unit 212
Boulder, CO 80304
Dear Planning Dept.,

I am writing to state my opposition to the expansion of the Boulder Rifle Club. I think the Rifle Club was less than honest on their report for the sound issues that will happen with the expansion of the gun range. If you take a look at their study, you will see that they performed the sound study during a snow storm! I think that is just one of the problems with the expansion.

Another issue is traffic on 26th st, that will increase quite a bit and there is no place for being able to walk my dog in the area without worrying about being run over on the dirt road. I think the traffic study done by the Rifle Club is also flawed with many more car traveling on the road in any given day.

Please reconsider giving the Boulder Rifle Club a special use permit to expand their operation.

Thank you for your consideration.

Tom Levy
2129 Yarmouth Ave
Boulder, Colorado 80301
Dear Boulder City Planners and others involved in determining whether or not Docket #SU-19-0009 should be approved or not:

I have lived in my home within ear shot of the Boulder Rifle Club (4625 16th St., #2, Boulder, CO 80304) for 11 years and have come to dread the noise pollution it causes with many people shooting there with the current number of ranges. It’s stressful and very unpleasant to be subject to such noise day in and day out and is not good for human health. The current closure has been wonderful and what a neighborhood should sound like i.e. the sounds of nature. This Rifle Club already deprives me and others in the neighborhood of the enjoyment of their property.

No rifle club or gun range should be in ear shot of neighborhoods in order to protect the sanctity of human life as it should be i.e. without such rampant and ongoing gunshot noise. The Boulder Rifle Club already has infiltrated so many people’s lives and deprived them of peaceful living. I implore you to reject the current proposal to expand this rifle club in any manner; i.e. any additional indoor or outdoor ranges. There are multitudes of studies that document how ongoing noise and unexpected noises (such as people shooting at different times and in different noise patterns) negatively impacts human health. We should put human health and life above any greed of the rifle club owner to expand his business for greater profit. The noise pollution I and others suffer as a result of this rifle range is already more than we should have to sustain. I suggest if this rifle club owner wants to expand and build more ranges, that he do so at a location that is at a significant enough distance from neighborhoods so as not to create health and enjoyment compromising situations for those living in neighborhoods. Should all those living in ear shot of the rifle range have to suffer by granting the Boulder Rifle Club owner the convenience of expanding his Club at one location vs. two? I would hope you would put the health and interest of nearby neighbors above such endeavors.

The additional 5 outdoor ranges will make the lives of those living in ear shot of the range a virtual hell with the much greater noise pollution level created by so many new ranges that will undoubtedly draw so many more gun enthusiasts. This very substantial increase in noise pollution should not be allowed near any neighborhood and I certainly don’t want it near mine.

Additionally, I suffer from numerous health conditions already that are worsened by stress and I don’t need or want the added stress of significantly increased noise pollution caused by gunshots during the times the range is open to negative impact my health further.

Please reject the proposal by Steve Martin and the Boulder Rifle Club for the well-being and enjoyment of all neighborhoods already impacted by the current significant
noise pollution it creates.

Thank you for your consideration.

Sincerely,

Kathryn Varga
4625 16th St., #2
Boulder, CO 80304
Boulder Rifle Club, 4810 N. 26th

Please DO NOT allow expansion of the rifle club.
I am a tax paying neighbor who does not appreciate the gunshot noise multiplied by folks coming in from all over the area.

Thank you. Please vote NO.

Thanks,
Mary Ruskusky
475 Avocado Road
Boulder, CO 80304
303.444.7570
DOCKET SU-19-0009
Boulder Rifle Club, 4810 N. 26th

Please DO NOT allow expansion of the rifle club.
We are tax paying neighbors who do not appreciate the gunshot noise multiplied by folks coming in from all over the area. If they want to expand, the rifle club should be moved a considerably greater distance from the city and residential neighborhood.

Thank you. Please vote NO.

Thank you,
Constance Merz and Larry Nygaard
477 Avocado Road
Boulder, CO 80304
303.541-9257
Dear Ms. Frederick,

My name is Sam Hall, and I am the CEO and owner of Boulder Journey School, located at 1919 Yarmouth Ave. I am writing in response to docket # SU-19-0009, for the proposed expansion of the Boulder Rifle Club.

Our school community has children as young as 8 weeks old, and we have children who nap at all hours of the day while we are open. Because we are already able to hear gunshots on our property with the range at its current size, we are very concerned about the increase in noise with the addition of five new exterior ranges. The five additional ranges will also likely lead to an increase in customers at the Rifle Club, so if this project is approved, we anticipate we will hear gunshots more consistently all day, every day, while currently, the gunshots are more intermittent and thus less intrusive. The added noise will be a disturbance to our business, as well as the members of the residential communities that surround us.

Please feel free to contact me with any questions or if you would like more information.

Thank you for your consideration,

Sam Hall

---

Sam Hall
sam.hall@boulderjourneyschool.com
(303)443-8909

CEO
Boulder Journey School
Join our mailing list
Visit our blog
Like us on Facebook
Follow us on Twitter
Follow us on Instagram

President
VideaThes, Inc.
Follow us on Facebook

pronouns: he/him/his
Regarding Boulder rifle club expansion. I’m totally in favor of this as it gives shooting sports a place for training & youth education.
Thx. Allen F Price. 4783 Valhalla, 80301

Sent from my iPhone
July 13, 2020

To: Community Planning and Permitting Department, Boulder County

Dear Sirs,

We (Rosemary and David Getsie) wish to submit our disapproval of the planned expansion of the Boulder Rifle Club, re: Docket # SU-19-0009. There are at least three reasons we have this position.

1. The current facility can certainly accommodate any requirements that our police may have without an expansion. Police training requirements are clearly very important and can be prioritized and satisfied within the current facility.

2. Other options besides the Boulder Rifle Club exist in the front range. Expansion of this facility is not appropriate in a city of tens of thousands of people, when there are alternatives in existence, and rural venues are more suited to the operational characteristics of a range.

3. Any studies that the Rifle Club points to support the expansion would cause minimal environmental and noise impacts are suspect. No one can accurately model these impacts and once the facility is expanded, neighbors and others in vicinity will have to live with the consequences of increased gunfire noise and potential safety risks. The safety, protection of the environment and quality of life for residents in the surrounding area must be protected and not subjugated to the pure financial interests of the Rifle Club.

Thank you for considering our position.

Best Regards

Rosemary and David Getsie

6434 Eagle Court, Lake Valley Subdivision, Unincorporated Boulder County
Please see attached letter noting comments from residents who live near the BRC.

Dale Pugh, Esq.
Dale Pugh Law, LLC
11374 Xavier Drive, #202
Westminster, CO 80031
720.231.5628
dalepugh52@gmail.com
February 17, 2020

Sent via email to: planer@bouldercounty.org
summerfrederick@bouldercounty.org

Boulder County Land Use Department
2045 13th Street
Boulder, Colorado

Re: Docket#: SU-19-0009: Boulder Rifle Club, Inc.

Dear Department Staff and Summer Frederick,

I am writing on behalf of homeowners living north of the Boulder Rifle Club (BRC) and the proposed area for expansion. The special use application to expand the current rifle range area was previously submitted in similar form in 2003-2004 under Docket#: SU-03-06 Boulder Rifle Club. At that time objections to the expansion included issues of safety, noise, compatibility with the surrounding neighborhood, adequacy of revegetation of new berms, blowing dust and traffic. The Land Use Department recommended to the Boulder County Board of Commissioners that they DENY the rifle club’s application which they did. The homeowners I represent north of the BRC believe that all the issues apparent in 2003-2004 against granting the BRC application exist today. I previously wrote to you on August 2, 2019 regarding safety concerns. In writing to your Department today, my clients wish to concentrate on the issue of noise.

The neighbors I represent have long been annoyed by the noise emanating from the Boulder Rifle Club. The reverberation of the gunshots is not only an unwelcome piercing sound but also leaves residents feeling like they live in an uncivilized urban center.

My clients are aware that a sound study was conducted by Behrens and Associates, Inc., during the week of February 8-11, 2019 which was reported May 22, 2019. The report of this study suggested that the noise produced by the gunshot tests was not significantly high, nor higher than the noise levels present at times when the gun range is not open. Specifically, the study notes that the current Land Use Code noise limit is 65 dB and that “traffic, environmental noise and other human activity unrelated to the Boulder Rifle Club dominated the sound environment” and that “the measured ambient levels when the firing range was not in operation were already higher than the stated limit.” See Boulder Rifle Club Noise Study May 22, 2019 by Behrens and Associates, Inc., Section 6. Conclusion

The Noise Study also indicated that when the firing range was open, the unmitigated sound levels ranged from 77 dB to 91 dB at the four locations where the sound measurements were taken. See Boulder Rifle Club Noise Study – Table 4-2 But the study claims that “With
the inclusion of the firing structure at the proposed ranges ... sound levels ... are below the Boulder County Land Use Code limit of 65 dB maximum impulse.” See Boulder Rifle Club Noise Study Section 6. Conclusion.

There are three major problems with the Noise Study which make any recommendations or conclusions irrelevant. The first issue is that the sound study measured noise levels only at locations south of the Boulder Rifle Club. As my clients live north of the Club, the same direction in which shots are fired and the “firing structure” does not impede the sound, there is no information on the noise levels that they would endure.

Second, Behrens and Associates, Inc. state in their report that they utilized climate data as measured from the Ft. Collins weather station some 25 miles away. As will be discussed in the next paragraph, temperature, wind, and snow significantly affect sound quality. The study should have utilized climate data from Boulder which is attached to this letter.

Third, and most significantly, this study was conducted in the month of February when weather conditions are far more conducive to dampening sound levels than in warmer, dryer months. As reflected on the attached Climatologica Data for Boulder, CO – February, 2019, there had been a total of 7.5 inches of new snow in Boulder in the two days preceding the study, February 6-7, 2019. During the four day study period, February 8-11, 2019, there was 4, 3, 3, and 2 inches of snow on the ground those days. Additionally the average daytime temperature ranged from as low as 14.5 degrees F to no more than 27.5 degrees F.

It doesn’t take much more than a cursory GOOGLE search to learn that temperature and wind gradients, as well as relative humidity, influence sound propagation over long distances and further complicate measurements. Additionally, anyone who has lived in Colorado more than a minute knows that weather changes can be significant, abrupt and unpredictable in any 24 hour period.

But it is SNOW that really affects sound propagation. As noted in the attachment, there was 7.5 inches of new snow during the two days before this study. When the ground has a thick layer of fresh, fluffy snow, sound waves are readily absorbed at the snow surface, dampening sound. Therefore it can be reasonably assumed that when this noise study was conducted, the new snow dampened the sound and the sound measurements were affected accordingly. A measurement of 91 dB with fresh snowfall would have been significantly higher without the presence of snow, and that is setting aside issues of temperature, wind and relative humidity. Because of the presence of new snow, and the inability for that snow to have melted during the below freezing periods of the study, the sound measurements do not reliably reflect what they would have been otherwise. And since this study completely ignored the effects on my clients to the north, they are meaningless as far as my clients are concerned.

Finally, during my cursory GOOGLE search, I found the attached article, How loud is too loud? Of greatest interest is the table which reflects decibel levels of common noises at home, work and play. The decibel levels of a rifle (163), a handgun (166) and a shotgun (170) are of special interest.
Unless a new sound study is conducted during a time frame when maximum sound propagation can be reliably measured, the noise issue which would be evident from the proposed expansion of the Boulder Rifle Club cannot be determined.

Therefore, we object to the expansion of the BRC and ask that the Land Use Department recommend to the Boulder County Commissioners to DENY the application.

Very truly yours,

[Signature]

Dale Pugh, Esq.
## Climatological Data for BOULDER, CO - February 2019

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Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).

- Max Temperature: 5pm
- Min Temperature: 5pm
- Precipitation: 5pm
- Snowfall: unknown
- Snow Depth: unknown
How loud is too loud?

Continued exposure to noise above 85 dBA (adjusted decibels) over time will cause hearing loss. The volume (dBA) and the length of exposure to the sound will tell you how harmful the noise is. In general, the louder the noise, the less time required before hearing loss will occur.

According to the National Institute for Occupational Safety and Health, the maximum exposure time at 85 dBA is eight hours. At 110 dBA, the maximum exposure time is one minute and 29 seconds. If you must be exposed to noise, it is recommended that you limit the exposure time and/or wear hearing protection. A three dBA increase doubles the amount of noise, and halves the recommended amount of exposure time.

The following decibel levels of common noise sources are typical, but will vary. Noise levels above 140dBA can cause damage to hearing after just one exposure.

Points of Reference *measured in dBA or decibels

- 0 The softest sound a person can hear with normal hearing
- 10 normal breathing
- 20 whispering at 5 feet
- 30 soft whisper
- 50 rainfall
- 60 normal conversation
- 110 shouting in ear
- 120 thunder
• 50 refrigerator
• 50 – 60 electric toothbrush
• 50 – 75 washing machine
• 50 – 75 air conditioner
• 50 – 80 electric shaver
• 55 coffee percolator
• 55 – 70 dishwasher
• 60 sewing machine
• 60 – 85 vacuum cleaner
• 60 – 95 hair dryer
• 65 – 80 alarm clock
• 70 TV audio
• 70 – 80 coffee grinder
• 70 – 95 garbage disposal
• 75 – 85 flush toilet
• 80 pop-up toaster
• 80 doorbell
• 80 ringing telephone
• 80 whistling kettle
• 80 – 90 food mixer or processor
• 80 – 90 blender
• 80 – 95 garbage disposal
• 110 baby crying
• 110 squeaky toy held close to the ear
• 135 noisy squeeze toys
• 40 quiet office, library
• 50 large office
• 65 – 95 power lawn mower
• 80 manual machine, tools
• 85 handsaw
• 90 tractor
• 90 – 115 subway
• 95 electric drill
• 100 factory machinery
• 100 woodworking class
• 105 snow blower
• 110 power saw
• 110 leaf blower
• 120 chain saw, hammer on nail
• 120 pneumatic drills, heavy machine
• 120 jet plane (at ramp)
• 120 ambulance siren
• 125 chain saw
• 130 jackhammer, power drill
• 130 air raid
• 130 percussion section at symphony
• 140 airplane taking off
• 150 jet engine taking off
• 150 artillery fire at 500 feet
• 180 rocket launching from pad

The Noise Center
To Whom It May Concern,

I have reviewed the submission for expansion and raise the following questions/concerns. I lived in Dakota Ridge from 1999 to 2011 and regularly hike the Dakota Hogback Ridge and therefore, I am very familiar with the noise that is currently generated at the rifle range. I still live in North Boulder, just not in Dakota Ridge.

1) In the analysis a reference is made as follows: "As a result, only one noise source was assumed for each existing and proposed range included in the modeling" 

Yet, there are always multiple shots being fired. This noise from the range as it exists today can be heard all the way up the hillside to the top of the Hogback Ridge. I reviewed the extensive detailed, engineered analysis, but the writers state that noise is subjective. I don't personally think that noise from guns is subjective. It's noise from gunshots right by a residential neighborhood. I can't imagine expanding this range outdoors. Indoors, with noise contained, potentially, but outdoors, no.

2) There is no indication in the report how anyone proposes to persuade those shooters who currently shoot (without permission and without a fee) other than through "education" not to shoot in the "informal sites" where there is currently recreational shooting.

3) I don't see any need to increase recreational sport shooting in Boulder County. In my opinion, this is in direct conflict with the residential use just up the hill from the rifle range and the current disturbing noise.

4) There is another quote from the first report that indicates there is a plan to "reduce existing noise levels as funds "become available". What is to say that they will ever become available? This is vague and unenforceable. If they don't have the funds to deal with the current noise level, how and why should they be allowed to expand the range without requiring the mitigation of current noise levels?

5) The reverberation of 65 CM or decibels is still quite loud. Hearing multiple gun shots all day long is incompatible with residential use.

6) The report focuses on humans who disturb the wildlife by walking through the area and analyzes the fact that the few wildlife noted are not "disturbed" by the gunfire seems quite subjective to me.

When I read the reports regarding wildlife it seemed as if they had a vested interest in seeing the expansion. I have a hard time, as a citizen, seeing that more guns are
better. I think less guns are better and if not less, than contain them inside of a structure. Clearly, they cannot afford to build a structure if they cannot afford to mitigate the current noise level.

As you can tell, I am opposed to any increase in outdoor shooting at the range.

Thank you for your time.

Jill C. Lester, JD
Jill Lester
Boulder County Property Address: 4810 N. 26th Street
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009: Boulder Rifle Club
Name: Laurel Amsel
Email Address: blickbird64@yahoo.com
Phone Number: (303) 618-5123
Please enter your question or comment: As someone who lives very close to the Boulder Rifle Club and has been a victim of gun violence, I respectfully request that Boulder Rifle Club's application for expansion be denied. I especially object to the proposed outdoor ranges since it will make it impossible for me to deal with the PTSD I still experience when I hear gun shots and firecrackers. My home is my place of safety and security in the world. My community garden plot in the Holiday Neighborhood is a main source of fresh food and a therapeutic place for me to spend time every day from May through September. If the Boulder Rifle Club is allowed to go forward with this expansion, I will be subjected to hearing gun shots on a consistent basis and no longer feel safe in my home where I have lived for over 15 years. I moved to Boulder a little over 29 years ago and have worked at CU as a dedicated staff member for 25 years. I am grateful to the City of Boulder for assisting me with affordable housing that is not easy to come by. I love my home and neighborhood and don't want to move due to this possible expansion. I do not know of one neighbor, even those who own guns and enjoy shooting, who want this expansion to be approved. Please take my and others objections seriously and deny this application. Thank you for your time and consideration! Laurel Amsel
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
From: Wufoo
To: #LandUsePlanner
Subject: Ask a Planner - Web inquiry from Don Summerfield - SU-19-0009
Date: Wednesday, July 15, 2020 8:36:52 AM

Boulder County Property Address: 4810 N. 26th street, parcel #5
If your comments are regarding a specific docket, please enter the docket number: SU-19-0009
Name: Don Summerfield
Email Address: dsummerfield@pharmacca.com
Phone Number: (303) 588-3323
Please enter your question or comment: I live a half a mile from the Boulder Rifle Club and the major expansion plans will doubling of the shooting range which is going to increase an already noisy neighborhood with more shooting noise. The expansion will also double the traffic and dust along 26th street. Boulder does not need to expand the rifle club, in fact it should be closed and moved to a rural location. The expansion of this club will negatively impact my property value. I oppose all measures to expand the Boulder Rifle Club.

Sincerely,
Don Summerfield

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Boulder County Property Address: 1950 Orchard Ave
If your comments are regarding a specific docket, please enter the docket number: Docket SU-19-0009
Name: Linda Lawson
Email Address: bluedoor513@gmail.com
Phone Number: (303) 443-8554
Please enter your question or comment: Hello,
I received an email from a neighbor regarding the expansion for the Boulder Rifle Club. She included the document compiled for this request (http://services.boco/doc?DocId=97B69EB5F7-7767-434B-9F9B-17A8306BA1D6%7D)
She also mentioned that tomorrow is the deadline for comment.

I'm wondering if this is still an active land use application because when I search on the Boulder County website there are no results for either 'SU-19-0009' or 'Boulder Rifle Club'.

Please let me know if this is still an open land use application and available for comment.

Thank-you!

Take care,
Linda Lawson
Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Hi,

I am writing in opposition to the proposed expansion of the Boulder Rifle Club as proposed in Docket # SU-19-0009 because of the following reasons.

I believe any additional outdoor gun shooting ranges should be in a more secluded area where the impact will not affect residents of the surrounding area - either the present residents of North Boulder or future residents (plans for that area - phase 3).

Right now in its present capacity the Boulder Rifle Club does impact surrounding neighborhoods. Residents of Dakota Ridge, Lake Valley and North 26th area say they hear the current shooting range. I am extremely concerned that with the additional 60 outdoor shooting lanes these neighbors and a growing area of neighborhoods will be listening to gun shots from 7 am to 7 pm. This is an inappropriate location for an expansion so close to our city.

Additionally, I have issues with the noise study that was submitted. It was conducted on February 8, 2019 - February 11, 2019. The sound tests were taken in the middle of winter where usage of the outdoor shooting range is probably non-existent. In the report, they even come to a conclusion that there was no difference in noise levels between shooting hours and after hours. Why would anyone draw that conclusion given the time of year? Makes no sense. Who is out there shooting in 34 degree weather and is that a fair study period?

It was also unclear how they accounted for the noise of 60 guns going off around the same time (5 new ranges and the Daily Camera article said up to 12 lanes each). How did the noise study account for that? They mentioned some assumptions that did not seem to account for that. I think it would be prudent to have another noise study conducted perhaps paid for by the neighborhoods surrounding the site. It would be interesting to see what they come up with as far as noise impact and might be more unbiased. It’s clear that Boulder County is very interested in this expansion happening due to their reasons of wanting to close shooting in the mountains etc. They are also willing to pay for certain things - change of easement etc.

Other areas of concern are:

Lead contamination from bullets on the ground, significant traffic increase as projected by the traffic study and stray bullets in North Boulder Ranch area.

Please do not approve this expansion in its current state!

I would not be opposed to an expansion of the indoor facility as long as noise abatement was done and surrounding areas will not be paying the price of hearing gun shots in their homes.

Best regards,
Nina

Nina Handler
ninaasnes@comcast.net
1734 Sumac Ave,
Boulder, CO 80304
Hi, comments on this SU review:

From the submission - "ranges may average 95 persons per weekday, 288 persons per weekend." This range is also apparently meant to siphon shooters away from shooting in national forests, part of a 5 county arrangement referenced by Commissioner Domenico. So how many of those 763 people per week are locals? no way of knowing. I get kind of a kick out of the trap shooters at the American Legion, but I don't like the idea of hundreds more people with guns making Boulder their destination. Esp. the kind that used to shoot up national forests illegally.

Thanks. Can you please confirm receipt, and tell me what next steps are before this gets approved.

Thanks.

Don Dulchinos
4865 Dakota Blvd
Boulder, CO 80304
Hi, Summer -

It came to our attention just a few days ago that there was another request from the Rifle Club for the construction of new ranges.

They attempted to expand their club previously in 2003. At that time they wanted to create a 300-yard range for use with high-powered weapons, install a clay bird thrower, plus some other things I believe. I don't find online or in the memo to Referral Agencies any details about the reason now for 5 outdoor ranges, plus an indoor range, plus other facilities. In 2003, we strongly objected to the impact the request would have on possible stray bullets, the negative impact on open space trails and the peaceful enjoyment in the surrounding neighborhoods as defined in the Boulder Comprehensive Plan.

We live in the neighborhood just north of Lake Valley, have owned our property since 1986 and have lived in our house since 1988. The concerns for trail safety, neighborhood safety, noise, traffic, possible wetlands damage, weapons used and property values have not changed in 17 years. The dogs we've owned over the years have also been unable to even walk away from the house, so overcome from fear from the noise when the ranges are being used. With more residents in the areas surrounding the club in that time, these concerns are even more important.

We opposed the request in 2003 and we equally oppose this new request for more ranges and buildings, and respectfully request that the application be denied for expansion of the club.

Sincerely,
Robyn Knox
6940 Lakeview Pt Dr
Dear Summer,

I am writing to you in regards to the Boulder Rifle Club expansion. I live on 26th street, down the street from the BRC with my husband and our two daughters. My main concern about this expansion is regarding traffic on the road. As it stands our road, which is dirt, is already heavily trafficked, therefore causing significant problems for residents, anyone visiting our street, and the county transportation department. These problems include congestion when leaving the neighborhood onto 28th street, excessive road grading requirements, high dust levels, and dangerous driving on an unmonitored road.

First, the congestion on 26th street when entering 28th street can be so significant that it takes an upwards of 10 minutes to turn on to 28th. As a result of these frustrating waits I have seen people pull out at risky times, requiring traffic on 28th to brake quickly and almost causing accidents. Unfortunately, adding to this problem is the fact that right before 26th, going North, the speed limit increases to 55 mph. If the gun range expands these conditions will worsen unless resolved through lowering the speed limit and putting in a stop light.

Secondly, the current traffic is enough to require grading on the road every couple of weeks. Even with this grading the road conditions are often horrible in between grading with ruts and washboards making it near impossible to drive at a normal speed. Unfortunately, many people have discovered that high speeds make the washboarding effect more tolerable, which leads to excessive speeding on the road. If the gun range expands this will get much worse, unless the road is paved.

Another reason that increased traffic causes problems for local residents and wildlife is the high levels of dust churned up by vehicles, especially from speeding vehicles. Road dust has been linked to health problems in humans, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5968206/, and in wildlife, https://www.fws.gov/southeast/articles/the-dirt-road-connection/. Our daughter is especially affected by this dust due to her asthma. She was born and has grown up in this house and we have managed the dust so far with air purifiers and frequent dusting, but the increased traffic has been hard on her, especially given how much time we spend at home, due to Covid-19. I fear that a further increase in traffic, and the dust from this could have detrimental, lasting effects on her health, our health and the health of all the residents in the area.

Finally, because this is considered a county road the speed limit is 35. This is far too fast for a road with residences and an educational center, (The Circus Center). Also, because it’s a county road there is rarely anyone monitoring this road for speeding or anything else. I, myself, have almost been hit several times, just going to get my mail. If the gun range expands we will have even more people driving fast on this road, and more potential for pedestrian/vehicle collisions. Furthermore, the gun range is likely to attract people from other areas that may not be as committed to the safety or well-being of this community.
I believe until the county does a more thorough investigation of the traffic and safety issues caused by the expansion of the Boulder Rifle Club, and the best solutions for these problems, the gun range expansion needs to be put on hold.

Thank you for your time,

-Andee Grandits
Fourth Grade Teacher
Whittier International Elementary
720-561-2451
To whom it may concern,

I am writing in reference to SU-19-0009: Boulder Rifle Club expansion.

I reside at 1057 Laramie Blvd, which is just over a mile away from the facilities' location and I have lived here for just over 5 years. With the exception of the period where the range was closed due to the pandemic lockdown, we hear gunshots from the range on a nearly daily basis.

This type of noise is not something that you ever get used to. It is certainly not musical, nor is it steady or patternable. It is a staccato, unnatural and shocking occurrence to the human ear. This also is not temporary or infrequent. It is a recurring event, almost daily.

I am amazed that the noise surveys by Behren's and Associates included only 4 sampling points from a limited area South of the gun range. This tells me that the BRC is unwilling to truly survey their surroundings and has little concern for their neighbors. At my location, one does not require measuring devices to tell me that I am listening to gunshots. How is it possible to do a sound survey and not include the various neighborhoods including Holiday and Dakota Ridge, to name a few, in close proximity to the site? I also have great concerns that the special use review is being conducted prior to an entire new housing development being completed at the old Armory site. This development is even closer to the gun range than my location and certainly there should be time permitted for input from those residents.

To say that the noise from BRC is essentially disqualified due to it not being louder than the current ambient levels is absurd. How many gunshots are acceptable for residents of North Boulder to be subjected to hearing nearly every day? And inherently, the expansion would increase that frequency.

There is also speculation that the new outdoor ranges will have better noise mitigation. What proof do we have that the new measures will improve the noise mitigation? Considering the lack of extensive sound surveys that have been done to this point, I have little faith that the concerns of surrounding residents will be taken into consideration. What will our recourse be if the new measures do not improve the nuisance?

I don’t see how the argument can be made that BRC “was here first and we should have taken this into consideration when we moved here” can be used as an argument for
expansion. The noise is an annoyance that I have reluctantly accepted, but to apply this reasoning to allow for an increase in public nuisance is not acceptable.

In fairness, I have no problem with the BRC operating at its current level, nor do I oppose the expansion/addition of indoor ranges. However, I stand strongly opposed to any further outdoor ranges being included in the expansion of the BRC.

Thank you.

--

Rob Kurtz
Sent from wct
Hello,

I'm against the huge outdoor expansion of the Boulder Rifle Range. I have no problem with the indoor expansion nor with adding 1 additional outdoor range, perhaps the 300 yard since the current facility is missing that range.

I live at 1950 Orchard near Centennial Middle School and can hear the 'pop, pop, pop' of the gun range. I can't hear it all the time...it depends on the wind etc. But if I can hear it, I can't imagine what it will be like for my neighbors that are closer to the range.

I read the 'Noise Study' conducted by Behrens and Associates, Inc out of California. In looking at the study (5.2 Noise Source), I was surprised to see that only one gun was shooting at a time. The logic is that it is highly unlikely that 2 guns will be going off at the same time.

As the metric for assessment is the maximum impulse measured within 35 milliseconds, it is assumed that multipleshots within this period are highly unlikely and therefore not included in the modeling. As a result, only one noise source was assumed for each existing and proposed range included in the modeling.

I can tell you from experience that it does matter if there are multiple guns going off at/near the same time. When the range is full, there is almost a constant popping noise. I can't imagine what it will be like when there is a 125% increase in the amount of shooting. From where I live, the noise isn't loud but it is annoying and disruptive to the quietness of our neighborhoods.

If you must approve the outdoor ranges, then at least limit the number of ranges that can be used at the same time to 5 (rather than the current proposal of 9). Though it does burden the facility with compliance it also allows the flexibility for shooters to move around to different ranges.

Thank-you for the opportunity to address this issue.

Take care,

Linda Lawson
Attn: Summer Frederick.

Dear Ms Frederick,

I want to state my objection to the proposed expansion of the Boulder Rifle Club.

As a frequent user of the City of Boulder Open Space immediately to the north of the proposed expansion, I don’t believe the proposed backstops provide an adequate barrier to users of that section of the trail that runs east-west immediately to the north of the Rifle Range. I believe this expansion will create a significant hazard to the people and their dogs who use that trail.

I would be ok with this expansion if, and only if, the Rifle Club significantly increased the height and width of the proposed barriers by at least 20' height and 30' width in each direction and installed a significant fence immediately to the north that runs parallel to the full distance of the section of trail that goes east-west, so users’ dogs that may stray in that direction, don’t end up getting too close to the shooting range where they might become target practice.

Thank you for your consideration,
Andy Malkiel
2135 Upland Ave
Boulder, CO 80304
303-638-9206
Thursday, July 16, 2020

Dear Boulder County Officials;

I’m writing this in response to the new Proposal of Docket #SU-19-0009. In reference to The Boulder Rifle Club. I oppose and request that the Boulder County Planning And Permitting Department Deny expansion of Docket #SU-19-0009. For these reasons that I have already established.

1. Land Use

It seems like the best Land Use would be best served as Open Space. This parcel is surrounded by open space with residential houses to the South and actually surrounded by residential homes beyond Open Space in all directions. It seems like all the Open Space adjacent would be deemed as “unsuitable” being so close to the Rifle Club. People have already documented close encounters of bullets overhead and noise claiming that the Open Space is dangerous and not People Friendly. This expansion would only add to the restrictions of the Land Use and the diminishing Real Estate Values.

2. Noise

It’s already been established by people living nearby are extremely bothered, worried, and afraid of the noise coming from Gun Fire from the Rifle Club. We have already experienced and exposed to a inaccurate Sound Study. Many people living in the area claim that the noise exceeds the legal limit by twice the amount of allowable noise. Also, by Law we are entitled to “Quite Enjoyment” of Are Property and we certainly don’t have that pleasure. Many times it feels like shots are being fired in our back yard.

3. Traffic.

I have been here since 1977, there was No Rifle Club. There was certainly some illegal firing of firearms on the subject property which was considered or referred to as the Boulder Dump. I have complained to the Sheriff’s Department on occasion about the noise but it was never followed up and I was never contacted back. There also was basically no traffic and has turned into a serious problem. With only 7 residential homes on North 26th Street along with a Nursery and a Circus building business.

The Rifle Club or the County has Not supplied a accurate Traffic study and their estimations are Not correct. Along with the County taking down the speed limit signs. I guess everyone feels like they can blast down North 26th St. and Yarmouth Ave. And they do, uncontrolled and very out of line acting like it’s a free for all out here and I wonder how they would feel if We returned that attitude back to their neighborhood?

With all these factors combined only adds to the Dust and Noise and the Road Grader doesn’t even bother grading the road because it’s completely a “wash board” after a day or two!

While we’re on the subject of Road Mainstace and control. The Rifle Club is proposing to open this to the public which would only add to the traffic problem. I also noticed they are proposing to completely remove the under surface waste material and fill it in with dirt, along with cost of continual damage to the road due to excessive traffic. There doesn’t seem to be enough Club use or public use to justify the Extremely Massive cost that will be needed to complete this project. Therefore, I move and please ask our Commissioners and Boulder County Planning And Permitting Department to DENY this request to move forward with expansion of the Boulder Rifle Club. It makes no Sense! There are acres and acres and miles and miles of open space that may work. I understand that there may be a need but not in this location. Its better served as open space. That’s what the people want. I also am a responsible Gun Owner and respect my second amendment right to bear arms but that is not the problem here.

The end does not justify the means.

Mark Dolfín
Yarmouth Ave.

Please refer to many other letters that were written last year around this time in August.
From: Brad Thompson  
To: #LandUsePlanner  
Subject: Public comment docket # SU-19-0009  
Date: Thursday, July 16, 2020 8:19:57 PM

To Whom It May Concern:

I am in strong opposition to the constructions of any new outdoor ranges built by the Boulder Rifle Club. I live in the Holiday Neighborhood on Yarmouth Ave. and everyday you can hear guns being fired. The amount of noise pollution from the outdoor rifle ranges is already too much. Think about being outside in your yard or neighborhood grilling, talking with friends, walking your dog or playing with your child and hearing constant gunfire. Does that sound enjoyable to you? Is that something that you’d want to experience in your neighborhood/community?

Between the skeet shooting at the American Legion on 36 and the Boulder Rifle Club gun shots can be clearly heard all the time, both on weekdays and weekends.

Another reason why I'm not in favor of newly constructed outdoor ranges at the Boulder Rifle Club is because of the danger and noise from gun fire to people recreating on the Eagle/Degge/Hidden Valley trails and adjacent trails in N. Boulder. No one wants to be hiking/running/biking and experience the constant discharge of firearms that are being shot in the direction of the trail system. How many errant shots/ricochet bullets have accidentally gone in the direction of the trail system? Just one is too many.

Please do not construct any new outdoor ranges. I have no issue with construction of the indoor ranges because of the reduced noise factor and increased safety factor with indoor ranges.

Thanks,

Brad Thompson
From: Sylvie Chevallier
To: #LandUsePlanner
Subject: SU-19-0009: Boulder Rifle Club Proposal
Date: Thursday, July 16, 2020 8:54:35 PM

Dear County Commissioners, planners, and Open Space Department,

I am so disappointed and saddened that you all are in support of this horrible project. It is bad enough that the current range exists so close to the city and right outside Open Space. I hike on the trails on the south side of Boulder Valley Ranch, and it is so incongruent and disruptive to be in a gorgeous area in nature and have to hear repeated loud gunshots. I cannot believe you are considering this abhorrent expansion! And I pity the poor neighbors who have to live with the increased noise and trauma this will create in this idyllic area.

Please do the right thing for the residents of Boulder and the future of our community and DO NOT approve this!

Sincerely,
Sylvie Chevallier
41-year resident of Boulder
Dear Ms. Frederick,

This message is to support the proposed expansion of Boulder Rifle Club (BRC).

After reading through the available public comments and 300+ pages of technical details in the two submittals, my impression is that those submittals were professionally prepared and that they reasonably addressed the important issues. The comments and revisions from Vargas added very constructive and detailed information from someone with substantial expertise in shooting range design. Those comments certainly improved the overall proposal.

These are complex issues on emotional topics, so there will always be critics. It was a bit disappointing that so few of the public comments recognized the importance of providing public access to a facility that could eliminate the long-standing, dispersed shooting problems in the mountains. I understood that was the primary reason for the proposed expansion.

Many of the opposition comments were clearly written by people with strong feelings who responded after only reading the postcard notifications and without having read the actual submittals. Many of those comments were just factually incorrect. They reflected only the writers' opinion that the range expansion must be a bad idea in a bad location.

Several comments were not relevant to the proposed range expansion and they deserve to be countered by rational and factual information. They did not understand the overall issues or the many years of efforts (by many people and many agencies) that went into the proposals.

I live in a neighborhood that is just east of BRC and several neighbors have strong supporting and opposing opinions on the range expansion ....... or as one neighbor told me, "The beauty of living in a free society is that we are each entitled to our own wrong opinions." I chose not to make the point that we are not entitled to our own facts, so we remain friends.

In my opinion, these are the important issues with my own thumbnail conclusions:

**Safety** - New facility will be much safer than the existing ranges with special deflector enclosures (No Blue-Sky Design) to prevent rounds from leaving the property.

**Drainage** – Drainage will be retained on the existing property.

**Environmental** – Lead bullets will be contained within the facility for proper mitigation.

**Traffic** – Additional traffic on 26th Street will be within County standards.
**Noise** – New sound mitigation structures will enclose shooting stations so that perceived sound levels will be reduced by approximately 50% compared with existing ranges. That fact is buried in the technical jargon of acoustical engineering, so few readers understood that fact. Final, mitigated sound levels will meet County noise standards at nearby residences. While several comments expressed “skepticism” about the “skewed” noise studies, not one person offered any factual information to support their assumptions.

**Wildlife** – Biologists reported that the expanded range will not have significant local impact and will improve overall wildlife habitat in the mountain areas.

With that overview, I hope the BRC range expansion moves forward for the benefit of many citizens of Boulder County.

Thanks.

Bob Hunnes
I realize this is a day late. Please consider this comment regardless. I write in opposition to the request to allow the major expansion of the existing rifle range. Although I am a neighbor and object to the increased noise and open space disruption this expansion would represent, the principal basis for my objection is that this expansion is flatly inconsistent with the nature of our developing North Boulder neighborhood. This land on which the expansion is proposed has been held in a planned reserve, in recognition of the need to preserve land for uses consistent with an expanding urban neighborhood. An expanded rifle range does not meet any of the long term objectives of the comprehensive plan. An enlarged shooting range in an increasingly urban neighborhood is flatly inconsistent with the needs of Boulder City and County for expanded affordable housing, and increased cultural, educational, and commercial amenities. Land is at a premium in North Boulder. Allowing a major expansion of the rifle range would prioritize the interests of a sporting few over the interests of the City and the County as a whole.

Thank you for considering these comments.
Margaret Porter
1654 Yellow Pine Avenue
Boulder, Colorado 80304
303-565-0941

Include this docket # SU-19-0009. Boulder Rifle Club
email: planner@bouldercounty.org
write to: Boulder County Community Planner
PO box 471
Boulder County, 80306
Friends,

Please accept this email, delayed by Covid-19 and life...

As a 40+ year resident of Boulder County I have watched as our cities have grown. Land use, governed by the Comp Plan, has accommodated competing uses in a remarkably visionary manner. I brag about our investment in Open Space and many of the public and private uses of Boulder County land.

Over the years the concept of highest and best use of land has risen in both my consciousness and my opinion.

This special use application should be denied because the expansion requested is incompatible with the future that such a close-in and strategically located parcel deserves. Certainly, the current size and use by the Rifle Club should remain “grandfathered in.” But, as was the case with the Holiday Drive-in (which I was able to patronize in our Corvair convertible), this piece of land deserves a higher and better use in decades to come than the greatly expanded uses requested.

Sincerely and gratefully,

John Huylar
1674 Yellow Pine
Boulder, CO 80304

home: 303-444-4777
Dear Summer Frederick,

I may be late on my commenting on the Rifle Club expansion. If you can add my comments I would appreciate it.

I am a homeowner in North Boulder for 35 years.

Regarding SU-19-00:

I strongly oppose any expansion at the Boulder County Rifle Club. Currently the intersection of Jay and 28th and the Highway 36 corridor in and out of Boulder carries more vehicles than it can handle. Traveling in and out of North 26th (a dirt road) is already a mess.

I live on Orchard Ave in North Boulder and can hear the gunshot noise from my house some days. I cannot imagine what neighbors experience living closer to the range.

I hike and walk my dog many days at Boulder Valley Ranch (top section of mesa where there is a small reservoir for birds and wildlife) as well as off Kelso Road. I’ve heard gunshot noise which is unsettling both for me and my dog. I usually avoid this part of our open space trail as it is too close to the range.

Lastly and most importantly, we as a community and society have way too many guns and needless violence. Who in heavens name needs shooting practice? For what? It’s time to reduce guns, and work to protect our open space lands as places of peace and solitude!

Kind regards,

Elvera Sciarra
1665 Orchard Ave
Boulder 80304

303.250.6438
Dear Summer,

I live in the Holiday Neighborhood and just found out about the potential expansion of the shooting range near our neighborhood. I’m concerned about the potential noise from this expansion. I’m not a fan of gunshots.

Thanks for listening,

Randy Compton
1600 Zamia Ave.
Boulder, CO 80304
Re-Referral for Docket #: SU-19-0009: Boulder Rifle Club, Inc. Proposal: Special Use review to allow for the construction of 5 new ranges (300-yard, 200-yard, 100-meter, 50-meter, 25-meter), a 20,050-square-foot indoor range building, 53,132-square-foot range shelters, 3,144-square-foot bathroom facilities, and 1,612-square-foot existing range building on parcels #146307001001 and #146307001002. Location: 4810 N. 26th Street, parcel #s 146307001001 and 146307001002, at the northern terminus of N 26th Street, approximately 0.68 mile north of its intersection with US 36, in Section 7, Township 1N, Range 70W. Zoning: Agricultural
Applicant/Owner: Boulder Rifle Club, Inc., c/o Steve Martin
Deadline for Response: July 16, 2020
Staff Planner: Summer Frederick
I live close by the range in The Greenstones, indeed directly across the road my bedroom faces north to the range. It seems weekend mornings in particular are popular times to shoot and I am awakened regularly as it is. Simply put, more noise would be worse.

Sincerely,

Niel Rosen

Public record acknowledgement:
I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.
Hi,

I just have a couple of comments/concerns regarding the rifle club expansion.
1. Noise. Recently in summit county they had to reduce the hours of the rifle range due to noise complaints. Expanding the rifle range would result in increased noise to the neighborhood.
2. Weapons. Expanding the rifle range will increase the number of weapons used in Boulder. Is there some way to tie this to increased licencing/regulations/permits/registration/policy or something like that for oversight or to restrict or limit certain unwanted types of weapons used?

-cindy
Subject: Docket SU-19-0009: Boulder Rifle Club

While I have no objection to soundproofed indoor ranges, and I believe anyone who owns a firearm ought to learn to use it safely, I strenuously object to the racket from outdoor ranges. I think even the existing outdoor ranges ought to be replaced with soundproofed indoor ranges. In the unlikely event the club hasn’t noticed, the population in North Boulder has grown dramatically. I’ve lived in the Buena Vista community for 21 years, since it was new. I don’t like hearing the shooting from both the club range and the American Legion shoots. I’m pretty certain the local wildlife doesn’t care for it either. And traffic to the range will adversely affect those who live on the access road. While Americans are entitled (in so many disgusting and sad ways) to own firearms, they are not entitled to have outdoor ranges so close to a densely populated area. Please allow them to build soundproofed indoor ranges, soundproof existing indoor ranges that aren’t soundproofed, and forbid outdoor ranges. Thank you.

Alice Clark
1786 Yaupon Ave.
Boulder, CO 80304
Sent from my iPhone

As a tax paying citizen of North Boulder, I absolutely do not want any more ability for gun lovers to encroach on our environment. It really sucks to hear shots when hiking. Complete opposite of what anybody’s nervous system needs now. Truly traumatic for people not in love with explosives.

No. Just no. So many other things for people to do. Please do not allow expansion!
ATTACHMENT
Decision Notice
and
Finding of No Significant Impact

Recreational Sport Shooting Management

USDA Forest Service
Arapaho and Roosevelt National Forests
Boulder, Clear Creek, Gilpin, Grand, Jefferson, Larimer, and Park Counties, Colorado

Decision and Reasons for the Decision

The population of Colorado’s Front Range grew from 3.9 million to 4.4 million from 2010 to 2016 and that growth is projected to continue well into the future. The Arapaho and Roosevelt National Forests (ARNF) is the fourth most visited National Forest in the nation. In addition to visitors to the ARNF, a complicated ownership pattern with approximately 19,000 residences and other structures exist within the ARNF proclaimed boundary. These pressures are expected to increase with the continued growth of population in this part of the State.

Discharging firearms on National Forest System (NFS) land, both during lawful hunting as well as during target or recreational sport shooting (recreational sport shooting), is governed by the Code of Federal Regulations and applicable local, state, and federal law. However, given the population growth, recreation use and complicated land ownership patterns, the current regulations are not guaranteeing the safety of all of the people who live, work, and recreate within the ARNF region. I have seen with my own eyes instances where homes and outbuildings have been hit by stray bullets likely fired by individuals who did not realize that they were shooting in an unsafe manner. Tragically, people have been struck by stray bullets and seriously injured on the ARNF. Dense trees, ridges and valleys are the very thing that bring so many to our forests but they make it difficult to know for certain who or what may be downrange.

The purpose of this project is to determine where recreational sport shooting is unsuitable at a landscape scale on the ARNF. The need for this project is to address safety concerns given a growing population in and around the ARNF.

I recognize the importance of public lands, especially National Forest System lands, to the longtime and legitimate use of recreational sport shooting. I grew up hunting in the West and frequently took targets to my local National Forest to sight in my hunting rifle and practice shooting. I know how important these lands are to families who want to instill a love for the outdoors in their children and spend summer weekends camping and recreational sport shooting on the ARNF. However, I recognize that the growing Front Range population and increased recreation use of the ARNF are making many areas of the Forest unsuitable for recreational sport shooting.

Additionally, throughout this process I’ve heard concerns from many about the potential for closures to push recreational sport shooting into designated wilderness areas. Wilderness areas on National Forest System lands are managed for wilderness character which comprises five elements: these areas are
natural, provide solitude or unconfined recreation, are undeveloped, are untrammeled, and may contain other features. There is concern that an increase in recreational sport shooting could diminish or degrade wilderness character. Because the purpose of this project is to protect public safety, the decision identifies areas of wilderness with known safety concerns as unsuitable for recreational sport shooting (e.g. very highly-used trails). Areas were not identified as unsuitable for recreational sport shooting because of potential degradation of wilderness character. Existing direction in the Land and Resource Management Plan for the Arapaho and Roosevelt National Forests and Pawnee National Grassland (Forest Plan), as well as Forest Service Manual and Handbook direction, including wilderness character monitoring, are better tools for managing all activities in designated wilderness areas. These tools are specifically developed for each of the wilderness character qualities and allow for monitoring measures and thresholds for change to be identified and tracked in a consistent manner.

While the authority to make this decision is mine alone, the public benefits when a wide variety of perspectives and experiences are drawn upon to develop solutions. My predecessor had the foresight to recognize this and in 2013 the Northern Front Range Recreational Sport Shooting Management Partnership (Front Range Partnership) was formed. Boulder, Clear Creek, Gilpin, and Larimer Counties, as well as Colorado Parks and Wildlife, joined us to address this management issue. These partners brought the unique voices of their constituents, as well as their own expertise and solutions to the table. Development of alternatives to the proposed action was an iterative and collaborative process with the Front Range Partnership. Implementation of this decision will benefit from the participation and cooperation of these same partners and they are as invested as the Forest Service in the overall success of this project.

I have decided to implement a modification of the Local Factors alternative analyzed in the Recreational Sport Shooting Management Environmental Assessment (EA). This decision will amend the Forest Plan to address dispersed recreational sport shooting. There are three main components of this decision: adding language to the Forest Plan directing the management of recreational sport shooting, an analysis of lands unsuitable for recreational sport shooting and an ARNF-wide map indicating where those unsuitable areas are, and an adaptive management plan that will allow the ARNF to respond to future changing conditions that may increase or decrease the safety of recreational sport shooting on the Forests.

Forest Plan Amendment
The following plan components will be added to the Forest Plan (Chapter 1 Forestwide Direction, Section 2 Operational Goals, Standards, and Guidelines, Part 4 Managing for Recreational Users; Dispersed Recreation; page 35 of the 1997 Forest Plan, as amended):

**Opportunities**

- **Desired Condition (DC)** There are a wide variety of recreation opportunities that are appropriate for the setting and other resource values. Conflict between users is minimized.
- **Goal (GO)** Provide for recreational sport shooting opportunities across the ARNF in a manner that protects public health and safety.

**Management**

- **Guideline (GL)** Areas should be identified as unsuitable for recreational sport shooting if they meet any of the following:
Decision Notice and Finding of No Significant Impact
Recreational Sport Shooting Management

- Close proximity of the area to residential development or high recreation use areas;
- Topography or terrain that does not provide for safe and effective backstopping; or
- Other threats to public health and safety.

**Guideline (GL)** Closures of unsuitable areas should be easy for the public to understand and enforceable.

**Map**
This decision implements a modified version of the map analyzed as the Local Factors alternative in the EA. This alternative was developed in conjunction with the Front Range Partnership. It uses three factors to determine which lands are unsuitable for recreational sport shooting. Those factors are residential housing density, high use recreation areas on both NFS and other public lands, and existing conflicts between recreational sport shooting and other uses on NFS and other public lands. The Local Factors alternative was further refined using public input during the fall and winter of 2017. This map identifies those lands that are unsuitable for recreational sport shooting.

Areas identified as unsuitable for recreational sport shooting would be closed to shooting via a forest order once shooting opportunities at developed shooting ranges became available to the public. Areas currently closed to shooting by forest order will remain closed, regardless of when new developed shooting ranges become available. Boulder, Clear Creek, and Gilpin Counties have assumed the responsibility for identifying locations and providing developed shooting ranges to provide recreational sport shooting opportunities for the public prior to the closure of unsuitable areas on NFS lands.

Because most of the NFS lands in Larimer County and Grand County remain open and available for recreational sport shooting there is not a requirement for a developed range to be built in these areas prior to closure of unsuitable areas. Providing opportunities for recreational sport shooting in conjunction with closing unsuitable areas of the ARNF is an important balance in this decision. For that reason, should any of the developed shooting ranges provided by the Boulder, Clear Creek, and Gilpin Counties, or the Forest Service range at Devil’s Nose in conjunction with this decision become no longer available to the public for use, the following will occur. For a period of 6 months to 3 years following closure of the range, the forest supervisor will have the discretion to rescind the closures of unsuitable areas that were associated with that shooting range. If the shooting range is still closed after 3 years, then the forest supervisor must rescind the closures associated with that shooting range. Site-specific closures implemented prior to this decision would not be rescinded. Any new developed shooting ranges would be subject to applicable land use and environmental planning laws.

**Phased closure implementation and developed shooting ranges**
In order to ensure that the public has access to areas where they can safely shoot, closures of unsuitable areas in my decision are contingent upon new public ranges being open. With the exception of Devil’s Nose Shooting Range on the Clear Creek Ranger District (which was authorized in a separate Forest Service decision in January 2015), siting, construction, operation, and maintenance of these ranges is the responsibility of Boulder, Gilpin, and Clear Creek Counties. The counties are exploring potential locations and designs for new shooting ranges. Ranges must provide lanes of sufficient length to allow for the common sighting of rifles in addition to shorter-length pistol lanes. The following describes how and where closures via forest orders will be implemented. For ease of understanding, areas are addressed from south to north.
Southern Clear Creek County, Jefferson County, and Park County: All NFS lands identified as unsuitable for recreational sport shooting between the southern administrative boundary of the ARNF north to I-70 and west to the Clear Creek Ranger District boundary will be closed to recreational sport shooting via a forest order when Devil’s Nose Shooting Range is open to the public for use.

Northern Clear Creek County and Gilpin County: All NFS lands identified as unsuitable for recreational sport shooting between I-70 north to the Gilpin-Boulder County line and west to the Clear Creek Ranger District boundary will be closed to recreational sport shooting via a forest order when a single range with a capacity of at least 25 shooting lanes is open to the public for use within this vicinity. However, if the counties are unsuccessful in identifying a location for a single range with that capacity, each county may locate individual ranges with a capacity of at least 15 shooting lanes each. All NFS lands identified as unsuitable for recreational sport shooting within either Clear Creek or Gilpin Counties would be closed via forest order when the range within that county is open for public use.

Southern Boulder County: All NFS lands identified as unsuitable for recreational sport shooting from the Gilpin-Boulder County line north to the Boulder-Canyon Lakes Ranger District boundary and west to the Boulder Ranger District boundary will be closed to recreational sport shooting via a forest order when a range with a capacity of at least 25 shooting lanes is open to the public for use within this vicinity.

Northern Boulder County and Southern Larimer County: All NFS lands identified as unsuitable for recreational sport shooting from the Boulder-Canyon Lakes Ranger District boundary north to US Highway 34 (including closures on both sides of US Highway 34) and west to the Canyon Lakes Ranger District boundary will be closed to recreational sport shooting via a forest order when a range with a capacity of at least 25 shooting lanes is open to the public for use within this vicinity.

Northern Larimer County and Grand County: Because there are many opportunities available for recreational sport shooting and relatively few areas were identified as unsuitable, those areas may be closed to recreational sport shooting via a forest order without the need for a public shooting range. However, those closures will not go into effect until any of the ranges in the locations described above are open to the public for use.

Compliance with John D. Dingell, Jr. Conservation, Management, and Recreation Act
Between the release of the draft decision notice for this project in September 2018 and signing this final decision notice, Congress passed the John D. Dingell, Jr. Conservation, Management, and Recreation Act and the President signed it into law (Public Law 116-9). Title IV – Sportsmen’s Access and Related Matters, Subtitle B – Sportsmen’s Access to Federal Land, Section 4103 addresses closure of Federal lands to hunting, fishing, and recreational shooting. The implementation of closures in conjunction with this decision will be done in compliance with this law and any implementing regulations.

Adaptive Management Strategy
This decision also includes an adaptive management strategy. This strategy would allow for adjustments to be made in the future based on specific safety monitoring data. This would be accomplished by following a detailed process, an example of which is available in Appendix A of the EA. This process identifies specific monitoring indicators and thresholds (for example, a new residential housing development within ARNF boundaries), and a range of management actions that may be taken in
Response. The Front Range Partnership was instrumental in reaching this decision and therefore they will be participants in any adjustments made in the future. If monitoring indicates that the intended effects of this decision are not being achieved through the initial management action, the action could then be modified using one or more of the adaptive management actions in a way that better achieves the intended results. These actions may include increasing or modifying education efforts for safe and legal shooting, working with the Front Range Partnership to increase shooting opportunities within public shooting ranges, implementing additional site-specific closures if it is determined that no other action would address a safety issue, or potentially re-opening previously closed areas if there is no longer a safety issue. Any potential additional closures would be localized and relatively small in size. Additional closures would be in response to specific safety concerns.

Public Involvement

A legal notice announcing the Recreational Sport Shooting Management project was published in The Coloradoan on May 2, 2015, beginning the public scoping process. About 300 comments were received. Using these public comments and other data, the Forest Service developed a proposed action that was released for public comment in July 2015. The Forest Service held open houses in Nederland, Idaho Springs, Fort Collins, and Granby during August and September 2015. The open houses were well attended and well covered in both broadcast and print news outlets. During this comment period, more than 1,600 public comments were received. These comments focused on suitability of recreational sport shooting areas near homes and wilderness, noise, wildfire risk, shooting ranges, lead, wildlife impacts, and Second Amendment rights.

In the fall of 2017, five alternative maps were made public and the Front Range Partnership held a series of open house meetings in Idaho Springs, Blackhawk, Boulder, and Fort Collins to solicit further feedback. The Front Range Partnership collected over 400 comments regarding the alternatives.

Issues Considered

Using comments from the public, local governments, permittees, and from within the Forest Service, the project interdisciplinary team developed a list of issues to address. The following list of primary issues helped develop alternatives and guide the effects analysis.

- If left unmanaged in the face of increasing Front Range population, sport shooting poses hazards to public safety including fire hazard and risk of direct injury.
- Proposals for different management direction for different areas of the Forests may be confusing for the public and may be difficult to enforce.
- Any proposed management direction would require enforcement and there is a need to consider current and expected Forest Service and cooperator staffing levels.
- Any proposed management direction should be coordinated with opportunities for sport shooting along the Northern Front Range of Colorado.

Concerns identified but not carried forward as issues:

- Any proposed closures may result in displacement of sport shooting including to wilderness areas which may cause conditions incompatible with wilderness character.
The purpose and need for this action are centered on public safety and thus this analysis focused on safety concerns of recreational sport shooting activities. Existing Forest Plan direction, as well as Forest Service Manual and Handbook direction, including wilderness character monitoring, are better tools for managing all activities in designated wilderness areas. These tools are specifically developed for each of the wilderness character qualities and allow for monitoring measures and thresholds for change to be identified and tracked in a consistent manner.

- Any proposed management direction should be compatible with other uses on and adjacent to the National Forest.

The initial proposed action that was released in July 2015 included the potential for developed shooting ranges to be built on National Forest System lands and there was concern from the public about that. That element was dropped from the proposed action and not included in any of the alternatives analyzed. This decision does not include developed shooting ranges on National Forest System lands; however, it does not preclude for future analysis and potential decisions regarding developed shooting ranges.

- Unmanaged sport shooting is associated with resource impacts including but not limited to lead contamination and water quality, impacts to flora and fauna habitat, heritage resources and recreation facilities.

To analyze these impacts at a landscape scale is not feasible, so the analysis in the EA did not address that. Existing Forest Plan direction, as well as State and Federal laws, allow for the protection and management of these resources.

- Unmanaged sport shooting has effects on wildlife including use of winter range, migration, and impacts of noise.

This analysis was focused on safety concerns of recreational sport shooting activities. We will continue to use existing Forest Plan direction, State and Federal laws, as well as our partner wildlife management agencies to manage wildlife concerns on the ARNF and respond to any negative impacts.

- Maps and GIS data used may not account for the presence of all homes adjacent to the National Forest.

This analysis relied on the best available information, both GIS and otherwise, from the Front Range Partnership Counties. The adaptive management strategy will allow for adjustments to be made in the future should there be safety concerns regarding homes that were not initially accounted for or development that may occur at a later date.

- This project infringes on Second Amendment rights.

This was not addressed in any alternative and was dismissed from further study. The Forest’s proposal and alternatives analyzed herein do not infringe on an individual’s right to keep and bear arms, rather it delineates where dispersed recreational sport shooting is unsuitable on the ARNF.
Location
The Recreational Sport Shooting Management Project is located on the Arapaho and Roosevelt National Forests, comprised of four ranger districts (Boulder, Canyon Lakes, Clear Creek and Sulphur Ranger Districts) and overlaps seven counties (Boulder, Clear Creek, Gilpin, Grand, Jefferson, Larimer and Park Counties). There are a total of 1,722,206 acres within the project area which includes 1,404,152 acres of National Forest System lands and 318,053 acres of non-NFS lands (private, county, state, BLM and other ownership). Land ownership patterns on the Forest are highly intermingled within the project area. There are approximately 19,000 structures within the ARNF administrative boundary. This project only applies to the National Forest System lands within the project area.

Finding of No Significant Impact
As the deciding official, I am responsible for evaluating the effects of the project relative to the definition of significance established by the CEQ Regulations (40 CFR 1508.13). I have reviewed and considered the EA and documentation included in the project record, and I have determined that this decision will not have a significant effect on the quality of the human environment. As a result, no environmental impact statement will be prepared. I base my finding on the following:

Context
The significance of an action must be analyzed in several contexts and varies with the setting. In the case of a site-specific action, significance usually depends on the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant (40 CFR 1508.27).

The environmental effects of this project are analyzed at the Forest-wide scale as described for each resource in the EA and in the project record. I have reviewed the cumulative effects of past management combined with this project and reasonably foreseeable activities and conclude that the context of this proposal is limited to the land in and adjacent to the proposed activity location. The analysis indicates that project design and application of Forest Plan standards and guidelines and best management practices, including the proposed amended plan direction, would minimize negative impacts to all resources. Given the localized nature of impacts described in the EA, the project would have no measurable effects at the regional or national levels and therefore consideration of significance will focus on the local setting.

Intensity
Intensity is a measure of the severity, extent, or quantity of effects, and is based on information from the effects analysis of the EA and the references in the project record. The effects of this project have been appropriately and thoroughly considered with an analysis that is responsive to concerns and issues raised by the public and forest service specialists. The Forest Service has taken a hard look at the environmental effects using relevant scientific information and knowledge of site-specific conditions gained from field visits. My finding of no significant impact is based on the context of the project and intensity of effects using the ten factors identified in 40 CFR 1508.27(b).

1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

As described in the effects section (EA, Chapter 3) and project record, there are likely to be beneficial effects, but very few adverse effects to resources from taking the actions outlined in the Local Factors
Alternative. My decision is a slight modification of the map associated with this alternative and there are no substantive differences between the decision and the analysis. In reaching my finding of no significant impact, I did not ignore or trivialize negative effects by offsetting them with beneficial effects. The EA demonstrates that through the development of Forest Plan direction, careful consideration of the map, and an adaptive management strategy, the possible negative effects are relatively minor, and are not directly, indirectly, or cumulatively significant.

2. **The degree to which the proposed action affects public health or safety.**

As discussed throughout this EA and project record, there would be no significant adverse effects on public health and safety because of the project. The project will result in positive effects to public safety. The modified Local Factors Alternative will provide safe shooting opportunities in conjunction with closing unsuitable portions of the ARNF to dispersed sport shooting. Implementation of the project will provide safer experiences on the ARNF for visitors and residents alike.

3. **Unique characteristics of the geographic area such as the proximity to historical or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.**

There are no park lands or prime farmlands in the project area and therefore none would be affected by this project. However, there are nine designated research natural areas, one designated experimental forest, and one designated Wild and Scenic River within the project area. The modified Local Factors Alternative and existing Forest Plan standards and guidelines provide adequate protection of these unique areas. Cultural resources would not be adversely affected by this decision. As a result, the EA clearly demonstrates and discloses that no significant effects to these resources would occur.

4. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.**

In the context of the National Environmental Policy Act, controversy refers to a substantial dispute in the scientific community regarding the effects of an action, not social opposition. Throughout the duration of this analysis, outreach was conducted with the Front Range Partnership; scientific communities including the U.S. Fish and Wildlife Service; as well as extensive public scoping via press releases, public meetings, websites, and public comment periods. Public outreach did not identify any scientific controversy regarding the direct, indirect, or cumulative effects of this project. The interdisciplinary team for this project considered scientific research during both the planning stages as well as in the environmental analysis stage. No controversy was found. Based on these factors, and the analysis provided in the EA and project record, I have concluded that the effects of the selected alternative on the quality of the human environment are not controversial.

5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.**

The effects analyses in this EA demonstrate that the effects of managing recreational sport shooting at a landscape scale are not uncertain or significant and do not involve unique or unknown risks. The body of knowledge gained through years of implementing site-specific closures and professional experience provides a basis for the effects analysis in this EA and supports my determination that there will be no highly uncertain effects, unique or unknown risks associated with this project.
6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

I have determined, that while this is a high profile project, it does not establish precedence for future actions with significant risks to the environment. The effects of implementing the selected alternative were disclosed in the effects section of this EA and the project record, and are within the range of effects of similar actions. The implementation of this decision would not make a commitment to do anything on any other National Forest. For these reasons, I have determined this action does not establish a precedent for future actions with significant impacts.

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.**

The effects sections of this EA disclose the combined effects of this project with other past, present, and reasonably foreseeable future actions. None of the actions included in the selected alternative would create significant impacts alone or when considered with other actions and therefore few cumulative effects were identified in the EA. I have determined that implementing the selected alternative will not result in significant cumulative effects.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.**

The effects analysis of this EA considered impacts on cultural resources. A small sample, 8%, of the project area, has been surveyed for cultural resources. This decision would protect 2,259 previously recorded sites of which 336 are eligible for the NRHP.

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.**

The biological assessment determination for this project is a "No Affect" for all species listed as Threatened under the Endangered Species Act with the potential to occur in the project area. The U.S. Fish and Wildlife Service concurred with that determination.

10. **Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**

As described in the EA and in the project record, the selected alternative fully complies with the requirements of the National Environmental Policy Act, Clean Water Act, Endangered Species Act, National Historic Preservation Act, and the National Forest Management Act. All applicable laws for the protection of the environment are incorporated into the standards and guidelines in the Forest Plan. The selected alternative complies with the Forest Plan, as described above in the rationale for the decision, and in the EA.

I have reviewed the EA, Biological Assessment, and the project file and have determined that no Federal, State or local laws, regulations, or requirements for protection of the environment will be violated with implementation of the decision.
ATTACHMENT E
Decision Notice and Finding of No Significant Impact
Recreational Sport Shooting Management

Findings Required by Other Laws and Regulations
I have determined that the selected alternative is consistent with the Arapaho and Roosevelt National Forests and Pawnee National Grassland Land and Resource Management Plan and therefore this project complies with the National Forest Management Act of 1976. The project was designed to conform to all other laws, regulations, and policies.

Opportunity to Object
This project was subject to both the objection process pursuant to 36 CFR 218, subparts A and B (for the Arapaho and Roosevelt National Forests-wide map of areas identified as unsuitable for recreational sport shooting) as well as 36 CFR 219 subpart B (for the Forest Plan amendment). These objection periods ran concurrently. The objection reviewing officer was Brian Ferebee, Regional Forester. Five objections were received, three of which had standing. The Reviewing Officer found that the analysis in the project record supports the reasoning in the draft decision notice.

Implementation
The objection reviewing officer responded in writing to all objections in December 2018. This project may be implemented as described above immediately upon signing this decision notice. Implementation of closures to recreational sport shooting will be as described in previous sections of this decision notice and in compliance with all applicable Federal law.

For Further Information
For additional information concerning this decision or the Forest Service objection process, contact Sarah Beck, Forest Planner and Forest Environmental Coordinator, 2150 Centre Ave Building E, Fort Collins, CO 80521, or email: sarah.e.beck@usda.gov.

Monte Williams, Forest Supervisor
Arapaho and Roosevelt National Forests and Pawnee National Grassland

6-13-2019
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