

November 4, 2024

Turkey Tracks Shooting Range – A dangerous Location (A research paper) The proposed plan - A solution or a problem?

Since I had already written comments during the comment period I thought I was done commenting on how hazardous the Turkey Tracks location is for target shooting. However, due to the Turkey Tracks 5 wildfire last September and the Highland Lakes fire in October I felt the need to investigate this site in more detail. After much research I found some alarming flaws with both the proposed layout and the Environmental Assessment study. I believe we are currently in the objection phase of the Integrated Management Project so I'm hoping this research paper (with references) will be considered.

I originally set out to research only the wildfire hazard aspect of the Turkey Tracks location. In the process of my research I learned several alarming aspects which I will attempt to present in this paper. I will start out with some history of Integrated Target shooting in our area and end with an alarming flaw concerning the planned layout as it pertains to noise and stray bullets in nearby communities.

HAZARDOUS LOCATION

My research into wildfires led me to a couple of USDA and USFS documents of interest. One document had a map titled: "High-Risk Firesheds" (USDA, January 2022), (see Figure A). This map clearly showed Turkey Tracks well within a High risk fireshed. Of note, only about one-eighth of Colorado National Forest lands are contained in a high risk fireshed. A second USDA document had a map titled: Target Shooting and wildland fires (USFS, January 2021), (see Figure B). This map shows human caused wildfires in Colorado. The map specifically points out the wildfires caused by target shooting. Knowing the USFS has attributed 56 wildfires to Turkey Tracks from 2014 to 2023, one can safely conclude that more than half the shooting caused wildfires were at Turkey Tracks. Of note in the dialog accompanying this map: "In the first seven months of 2020, the Forest responded to five fires at one popular target shooting location, the Turkey Track area in Douglas County." Turkey Tracks is clearly seen in the map as the large red cluster blob near the center.

Of all the proposed designated sites, Turkey Tracks has the highest structure density within 3 miles, some structures being as close as ½ mile. (USDA IMTS Structure Density), (see Figure C). The estimate of the number of homes within these 3 miles is around 220, of which about 148 are occupied full time (DougCo and Teller County Assessor).

SHOOTING RANGE HISTORICAL NEWS STORIES

Several years before Turkey Tracks became popular another shooting range near Colorado Springs was actively being used, the Rampart Range Shooting Range. According to a Gazette news report (R. Scott Rappold, Gazette, 2009), stated the site "is used by 40,000 people a year. It was established in 1990 and has been plagued in recent years by trash, drinking, heavy use and safety issues". "The Forest Service considered closing the range in 2007, but officials instead opted for physical improvements, including new berms and backstops to prevent bullets from winding up in water below the range". The site was closed down in 2009 due to a fatal shooting accident. To date the site has not been reopened partly due to: "Other measures - a permit system and supervision of the range - were too costly, said District Ranger Brent Botts". Of note in this article: "El Paso County Sheriff Terry Maketa... acknowledged the growing problems of safety and trash there".

The first searchable news account regarding Turkey Tracks was in April 2017 (CBS News, 2017). The news article wrote about the seventh wildfire that year at Turkey Tracks. It was at 40

acres and 25 percent contained. A later news article (KKTV June 2017) briefly discussed Turkey Tracks 8 Fire (8th in 2017). An article in 2018 (KOAA News 5, 2018) briefly covered Turkey Tracks 8 fire (8th in 2018).

The next two discovered articles were written by the same author in March 2021 and September 2022 (Seth Boster, Gazette, 2021, 2022), initially reporting on a recently extinguished fire at Turkey Tracks in 2021. Much information and local concerns were gleaned from these articles. Along with disclosure of “dozens of shooter-caused blazes in single summers,” mention of the 5 fires in the first seven months of 2020 was made, as well as the subject wildfire of Mar. 2021. Several quotes from locals concerning the never ending noise, “Said Gary Bieske, who lives about 1 1/2 miles from the area and runs a cabin resort: “We're supposed to be out in the middle of nowhere, and sometimes all we can hear is guns going off.” The local fire Chief was concerned about Health and Safety mentioning several medical calls as well as stray bullets. Several other folks were also concerned about close calls with stray bullets landing near residents and in nearby lakes and ponds. Others mentioned fear of a funnel effect when the forest is closed to dispersed shooting. And last but not least, mention of the trash and lack of supervision and enforcement. “Enforcement is needed, the chief said. “I've always found if you don't supervise an area, you get what you deserve.” A unified threat of legal action against the USFS by several residents was disclosed in the second article. One former resident solved the problems her way, she moved! Of note, there has been about a 50% area resident turnover in the past 5 years. Whereas I have no evidence to support a Turkey Tracks cause, when one considers the multitude of growing hazards and that the several 2 to 4 decade full time residents have recently left, it can't be dismissed.

2023 was the year of the big group cleanup at Turkey Tracks (Douglas County Sheriff, 2023). The cleanup effort was done to address safety concerns of local residents. Deputies joined up with dozens of community members to tackle the mess left by shooters. The crews removed 26 tons of litter, cans, bottles, spent shell casings, live ammunition, old targets, propane tanks, etc, etc. For reference 26 tons of trash corresponds to about eight 30 cubic yard construction dumpsters. Of note, not specially mentioned in the Sheriff's news report, many of the bottle and cans had contained alcoholic beverages. Also of note, cigarette and joint butts were numerous.

Jumping forward to the fire of Sept. of this year (Turkey Tracks 5 Wildfire), with only a year of trash accumulation the “large amounts of trash and live ammunition” enhanced the fire and made extinguishing efforts by ground crews very difficult and dangerous (Dani Whitaker, KOAA News 5, 2024)(Sadie Buggle, KRDO News, 2024). Air support was heavily relied on. These articles made special mention of a report by the USFS stating the Turkey Track 5 Fire is in an area known to historically have five to ten fires per year due to target shooting. Of note, the Turkey Tracks 5 fire occurred on days with low wind. Fire moved slow allowing fire blocks to be effective, and air support was possible. The Highland Lakes Fire (Oct 2024) had high winds the first 2 days and heavily relied on ground crews. Of special note (not mentioned in the Environmental Assessment report): High winds are very common at Turkey Tracks, 35 to 40% of the time.

Just three weeks ago the entire Pike Forest and Turkey Tracks was temporarily shut down to recreational shooting due to higher than normal fire danger. (USDA, USFS Oct 2024). The emergency order cited a 2013 USFS study showing ignition by rifle bullets. Also in this order Turkey Tracks is attributed to most or all of the shooting caused fires in the Pike National Forest and the dangerous conditions for firefighters. Also noted is the need for supervision at Turkey Tracks: “proximity to urban areas with large populations... creates significant challenges for fire prevention and visitor compliance efforts”. An interesting realization comes from this shooting

restriction, Turkey Tracks is allowed to exist even with the written realization that the justification of closing the range to recreational shooting now, applies all the time at Turkey Tracks. The fifth fire, this year, in Sept being a recent show of cause.

ENVIRONMENTAL ASSESSMENT – HEAVY METALS CONTAMINATION

Being a former environmental chemist (specializing in heavy metals in soils) I could write pages on this topic, but will attempt to highlight only. Soils at Turkey Tracks are a mix of Sphinx and Boyette-Frenchcreek Complex series (USDA, 1992 and California Soil Resource Lab). Both soil series are slightly acid ranging in pH of 6.0 to 6.8. Turkey Tracks is part of the Trout Creek watershed which eventually drains into the South Platte River. A good estimate of the number of rounds shot at Turkey Tracks over the years is in excess of 10 million (about 60 tons of lead).

The acidic nature of the soil immediately indicates the ability of lead to solubilize and migrate through the soil, eventually entering the groundwater and plants. Testing of local plant ROOTS versus stems and leaves may show lead uptake in the foliage (95% of lead uptake accumulates in roots). Surface runoff of lead will be more difficult to access due to the large area affected and rapid runoff. Possibly an accumulative drainage path can be ascertained and tested accordingly. Since gunpowder contains significant sulfur and saltpeter (potassium nitrate), testing deeper soil layers and groundwater for nitrate may be prudent. The sulfur will contribute to the soil acidity. Most primers contain lead as well as barium and antimony, which are toxic metals (barium, like lead, is one of the EPA RCRA 8 metals). Primer particles along with dust and fumes are a major source of lead contamination (Virginia Dept. of Health) and much more mobile in the environment. Concentrations of lead at shooting ranges varies due to use intensity. One publication, citing several publications placed the levels from 55 to 80,000 mg/kg (PPM) (Enviro Wiki, 2022). Several other metals were cited in this paper: Antimony, Copper, Nickel, Zinc, Chromium, Tungsten, Mercury, and Arsenic

As per the USFS IMTS publication (USDA, USFS, Nov. 2023) a CERCLA Phase I is to be conducted at Turkey Tracks. In an attempt UPDATE this assessment: a Phase I primarily assesses the likelihood that a site is contaminated through visual observations, historical use reviews and regulatory records, while a Phase II assesses whether contamination is in fact present. It would be safe to say the historic site use was/is subject to environmental contamination thereby one can save on the cost of the Phase I and proceed to a Phase II site study. Due to the wide area of lead projectiles it will be a large area, one mandating monitor wells to check for migration of lead into the groundwater.

NOISE

Wrapping up the topic of Environmental Concerns one must consider the constant shooting noise. At 2.5 miles away the shooting noise is still very loud. One wonders what the residents in Trout Creek Subdivision must be enduring. Usage has increased to the point where it's constant, non-stop. From day break to well after dark sometimes. Due the frequency of calls, DougCo Sheriff is unavailable in the evenings. Teller County Sheriff claims they will respond, but the question is begged, why should residents have to report incidents multiple times per week? Never mind after most have retired for the day.

NATIONAL FOREST SERVICE'S PLAN for TURKEY TRACKS SHOOTING RANGE.

The USFS has proposed some modifications in an attempt to make Turkey Tracks a safe and acceptable shooting range for an anticipated 50,000 users (about triple current use). After attending the meeting in Divide last August I had doubts the plan would work just based on comments concerning no workable plan for supervision and enforcement. Upon visiting the site in person it was noted that much mitigation had already been completed. The dead trees have

been removed from the immediate area and evidence of the prescribed burn a couple of years ago is visible. However, the dense native grasses and flowers were 1.5 to 3 ft tall and mostly brown. Not promising for preventing a future wildfire. Compounding the presence of tall dead grasses are the surrounding dead trees. Although not in the immediate shooting area, certainly reachable during the early stages of a wildfire in the grasses.

And now for a HUGE concern. One that should bring the Turkey Tracks range layout back to the drawing board. Studying the planned layout maps I found a serious flaw. The Hunting Simulation Range positions are in a very bad and dangerous place. All planned positions (15 positions) are all on top of the primary mountain ridge backdrop, 400 feet above the main shooting area. About 1878 feet (626 yds) northwest is the secondary (and final) backdrop, less than 100 feet taller than the primary backdrop (see Figure 1). A simple math calculation indicates a shooter only need to elevate their gun less than 5 percent above the horizontal to fire rounds into the nearby neighborhoods and Highway 67, 0.5 miles to 1.3 miles away (see Figure 2). With some of the proposed targets nearly level with the shooter, the probability of this occurring often is extremely likely. Even now, with a 400 ft tall backdrop behind the current makeshift target areas several bullets have been found in the surrounding populated areas (unknown how many hundreds of bullets are in the over 1000 acres of surrounding private residential and agricultural land, never to be found). Shooters would not be able to see beyond the second ridge so they would not even know a stray round was heading to populated areas. Figures 3 and 4 are different angles of 3D imagery for Turkey Tracks and surrounding areas.

Another overlooked aspect of the raised shooting gallery is greatly increased noise advancing to the surrounding populated residential areas. Currently the 400 ft mountain ridge offers some noise reduction. Most of the noise heard in Westcreek is due to the "amphitheater" amplifying effects of two long canyons (Canyon Effect and Megaphone Effect). Shooting into these canyons effectively directs and amplifies noise levels of small caliber rounds to noise levels resembling a howitzer (Faster Capital, updated June 28, 2024).

FINAL DISCUSSION

What started out to be a report on the wildfire danger of the Turkey Tracks Shooting Range ended up with one questioning whether the dangers of stray bullets are as much or more of a concern especially after the proposed changes are made. Most of the fire mitigation and landscaping changes have already been made. Whereas wildfires have been reduced about 40%, they still occur frequently. Local grasses and native plants grow back every year mandating annual fire mitigation. The last fire, Turkey Tracks Fire 5, showed the compounding effects tons of trash and live rounds have on ground fire-fighting efforts. Fortunately air support was possible due to low winds at the time. However, high winds are a very common weather condition at Turkey Tracks. Frequent noon to sundown 30 to 45 mph sustained winds with 60 mph gusts are normal from late winter through the end of Spring. Multiple record wildfires have shown the uselessness of fire breaks in strong winds, never mind no possible air support. Turkey Tracks is located in one of the US National Forest's designated most dangerous wildfire areas of Colorado. One has to ask the question, why with over 85% of Colorado's National Forests not in a designated High-risk Firehatched area, would Turkey Tracks even be considered? Add to this the close proximity of high-density residential neighborhoods and only a few miles away (often downwind) a much larger population center. Of note, Turkey Tracks is the only proposed site with nearby high structure density.

Adding to the extreme wildfire danger are the stray bullets in nearby populated neighborhoods. The proposed galleries plan is just as flawed as the Environmental Assessment plan. Instead of eliminating this danger, the "plan" is greatly enhancing it. With an expected three times growth

to an estimated 50,000 shooters per year this is a very alarming realization. Assuming 100 bullets per shooter that's 5 million bullets per year fired. The "plan" includes banishing sites where reports of "close calls" have mounted along with trash and obliterated trees — sites such as those along Gold Camp and Rampart Range roads. (Seth Boster, Gazette, 2021). It took a shooter being shot and killed at the Rampart Range to shut it down despite the high levels of trash. Turkey Tracks has innocent people and property at danger of being shot. Unlike Rampart Range, Turkey Tracks has a documented history of MANY wildfires and is close to residential communities. Lack of no supervision plan is the reason for the Rampart Range site still being shut down. For the record, there is no plan for supervision at Turkey Tracks!

Bottom line, the Turkey Tracks shooting range is TOO DANGEROUS to be considered an "unofficial" shooting range, never mind a full time integrated shooting range. As much as one might want to ignore the evidence to achieve a goal, the history and evidence cannot be ignored. Justifying an expenditure of hundreds of thousands of dollars, maybe even into the millions, just to have it shut down after someone is killed or communities wiped out by fire cannot, nor should it be justified. As per the "plan" Turkey Tracks has more than the necessary criteria to be banished and therefore permanently shut down.

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USDA Forest Service, October 10, 2024. Justification for Emergency Fire Order Containing a Recreational Shooting Prohibition Pikes Peak, South Platte, South Park Ranger Districts, Pike National Forest

USDA Integrated Management of Target Shooting, Proposed Designated Sites and Structure Density pdf

Virginia Department of Health. Lead Exposure Associated with Firing Ranges

Whitaker, Dani, KOAA News 5. September 25, 2024. New details released about Turkey Tracks 5 Fire near Woodland Park

Figure A

NATIONAL STRATEGY TO REDUCE WILDFIRE RISK

This implementation plan builds on a national strategy for confronting the wildfire crisis facing the Nation. The strategy calls for an unprecedented paradigm shift in land management to increase fuels and forest health treatments across jurisdictions to match the actual scale of wildfire risk to people, communities, and natural resources, especially in the Western United States.

Over a period of 10 years, the proposed strategy calls for:

- (1) Treating up to an additional 20 million acres on the National Forest System in the West, over and above current treatment levels;
- (2) Treating up to an additional 30 million acres on other Federal, State, Tribal, and private lands in the West; and
- (3) Developing a plan for long-term maintenance beyond the 10 years.

In recent years, at the Forest Service, we have treated 2-3 million acres per year for fuels and forest health across the Nation. Treatments typically involve thinning fuels and removing vegetation to reduce heavy fuel loads that can increase the risk of extreme wildfire events and using a risk-based approach to restore healthy fire to fire-adapted ecosystems. We will work with partners using a science-based approach to determine where to prioritize treatments and identify the appropriate tools, including prescribed fire and mechanical thinning to reduce hazardous fuels, change fire behavior, accomplish restoration objectives, and create healthier and more fire-resilient forests. These treatments work in concert with community, infrastructure, watershed, and other investments to protect values at risk

Under the 10-year strategy, we will fully sustain—and slightly increase—current treatment levels in the South, Midwest, and Northeast. But most additional investments will be in the West, where the wildfire risk to homes and communities is highest.

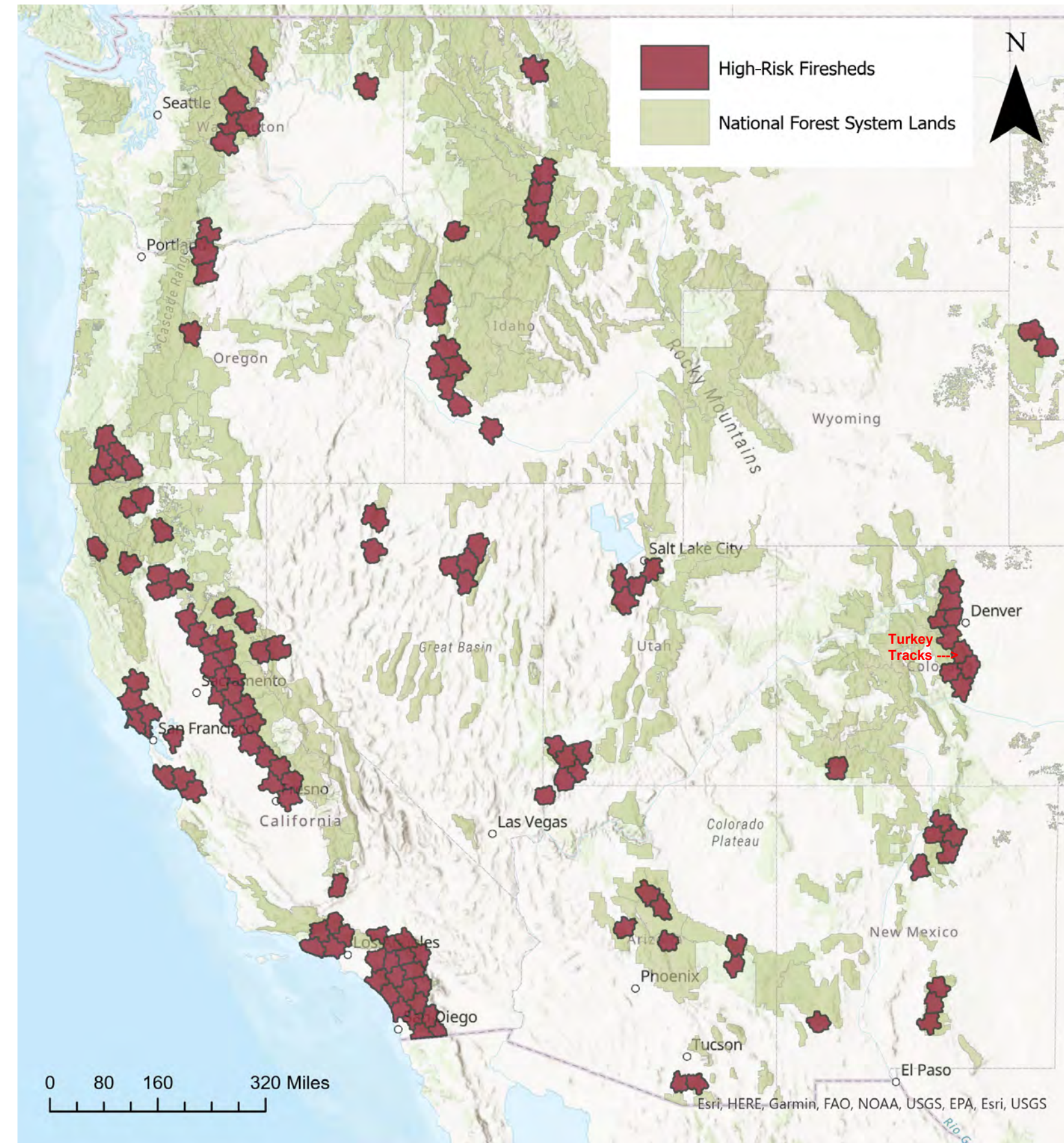
The map on the following page shows the firesheds with the highest risk of community exposure to wildfire from ignitions on all lands. It shows that a small number of firesheds present the largest risk to communities, based on historic fire behavior: in fact, less than 10 percent of fire-prone forests in the West account for roughly 80 percent of the fire risk to communities. Using this map, we can engage with Tribes, States, local communities, private landowners, and other partners to identify shared priorities for hazardous fuels treatments within these firesheds so that we can meaningfully reduce risk to communities. We can also work together to identify priorities for treatments in additional firesheds based on other values at risk and maintain prior investments in fuels and forest health.

We are currently working to develop additional information about risks to water, carbon, and wildlife, including old-growth forests, as well as risks to socially disadvantaged and underserved communities. Work with partners to identify risks to critical infrastructure, social, cultural, and economic values, and the incorporation of Indigenous and traditional ecological knowledge will be important to inform shared priorities and project design.

Building on the 10-year strategy, this implementation plan outlines a blueprint for developing and carrying out this work through partnerships and collaboration. The Forest Service, the U.S. Department of the Interior, other Federal agencies, Tribes, States, local communities, landowners, and other partners have an unprecedented opportunity for investment in this work through the Bipartisan Infrastructure Law. Those investments help to provide the resources needed to implement this plan at scale and truly change the trajectory of risk to people, communities, and natural resources at this pivotal time.

HIGH-RISK FIRESHEDS

Community exposure is a central factor in the strategy to confront the wildfire crisis. Other factors include Tribal and State plans, watersheds, equity, climate forecasts, and partner priorities.





Turkey Tracks big red cluster spot in center

Target shooting and wildland fires

Wildfires on National Forest System lands are tracked in a database. The cause of each fire is noted when available. This map shows the locations of human-caused (meaning not lightning) wildfire ignitions that have occurred since 2000. Wildland fires due to target shooting activities are categorized as “miscellaneous” (not a unique category), and are shown in red on the map. Local firefighters (Forest Service and county) have noted an increase in the number of fires caused by target shooting activities.

Fires can start even when all regulations related to target shooting are followed. The increasing numbers of people target shooting in dry conditions has resulted in a need for frequent fire suppression activities. In the first seven months of 2020, the Forest responded to five fires at one popular target shooting location, the Turkey Track area in Douglas County.

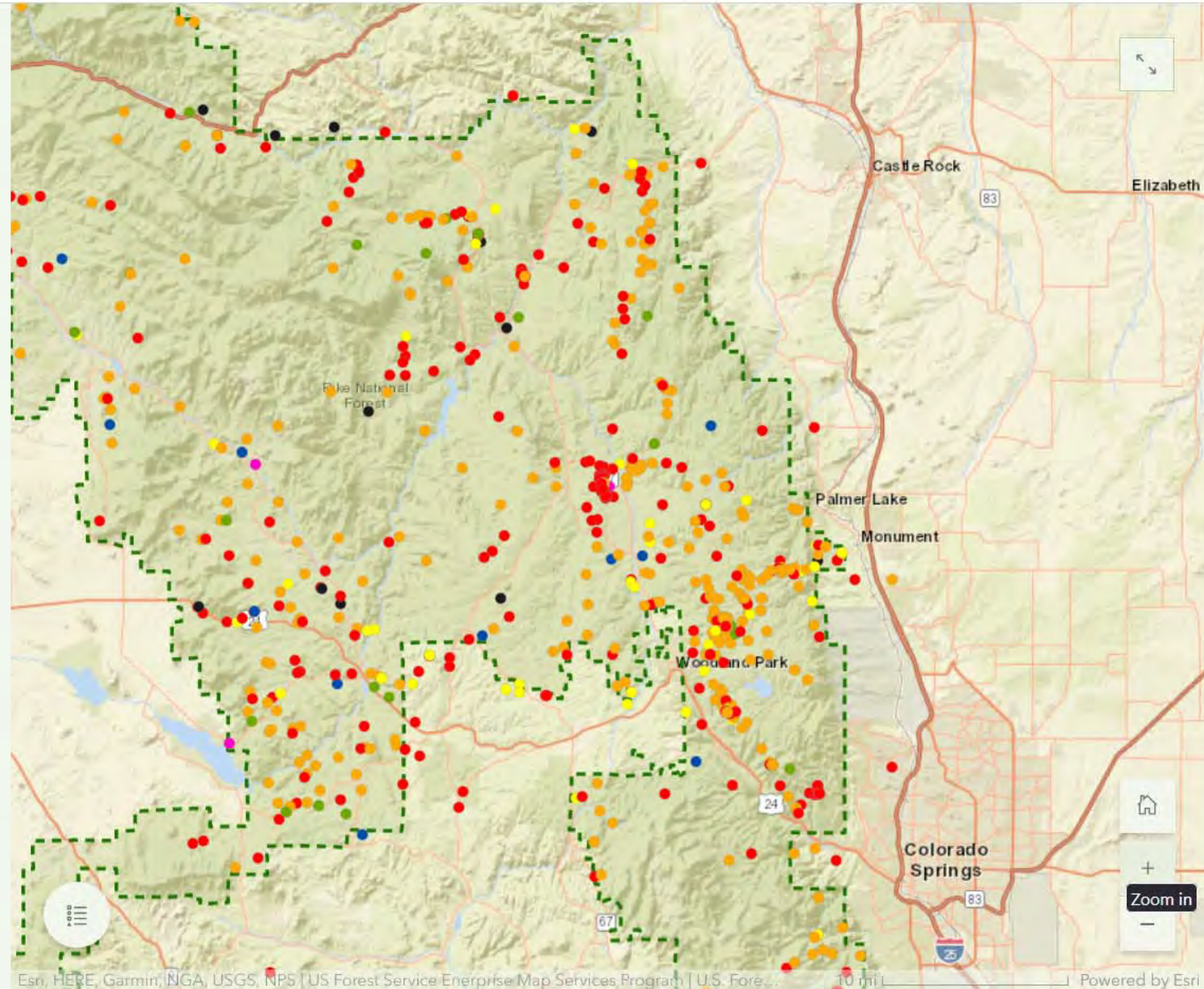
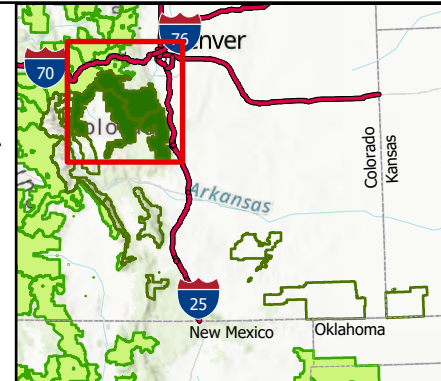


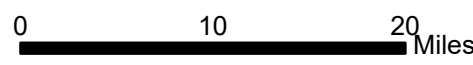
Figure C



Integrated Management of Target Shooting



- Pike National Forest
- PSICC Ranger Districts
- Surrounding Forests
- Wilderness
- Proposed Designated Sites
- High Structure Density
- Less Structure Density



- ### Surface Management Agency
- National Park Service
 - Other Federal
 - Private
 - State
 - State, County, City; Areas
 - US Fish and Wildlife Service
 - USDA FOREST SERVICE
 - Bureau of Land Management
 - Bureau of Reclamation
 - Indian Reservation
 - Military Reservation

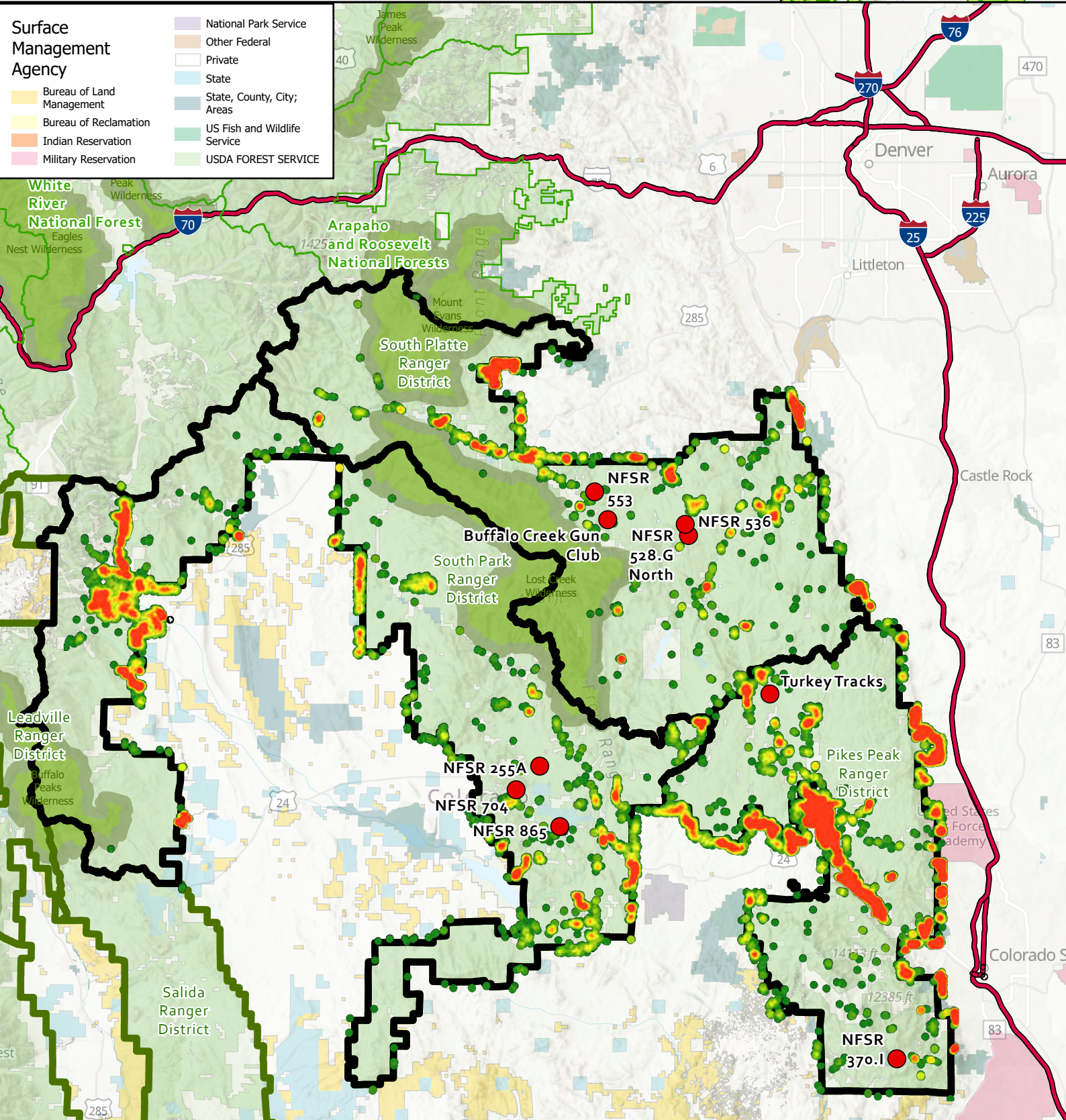


Figure 1

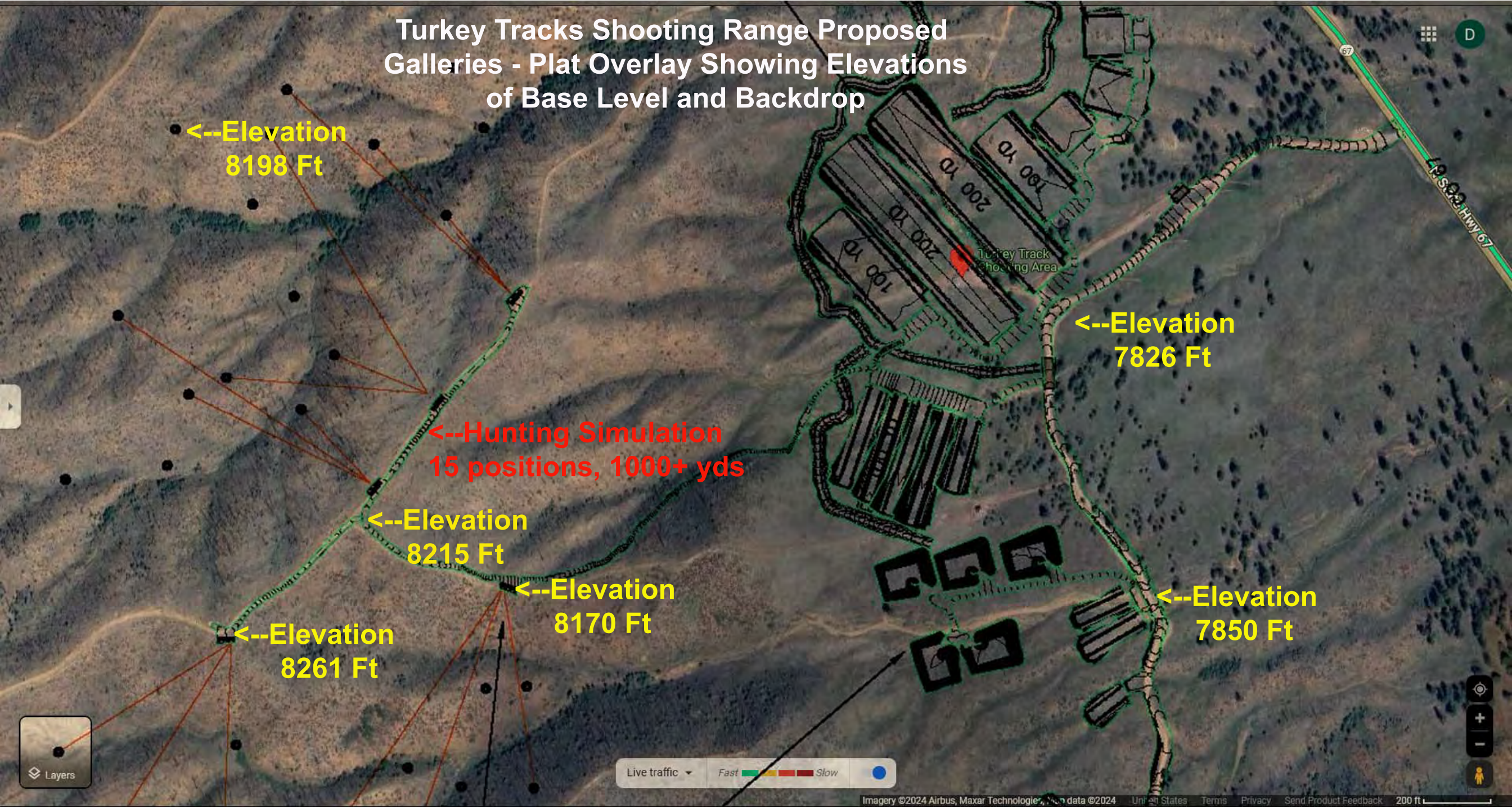
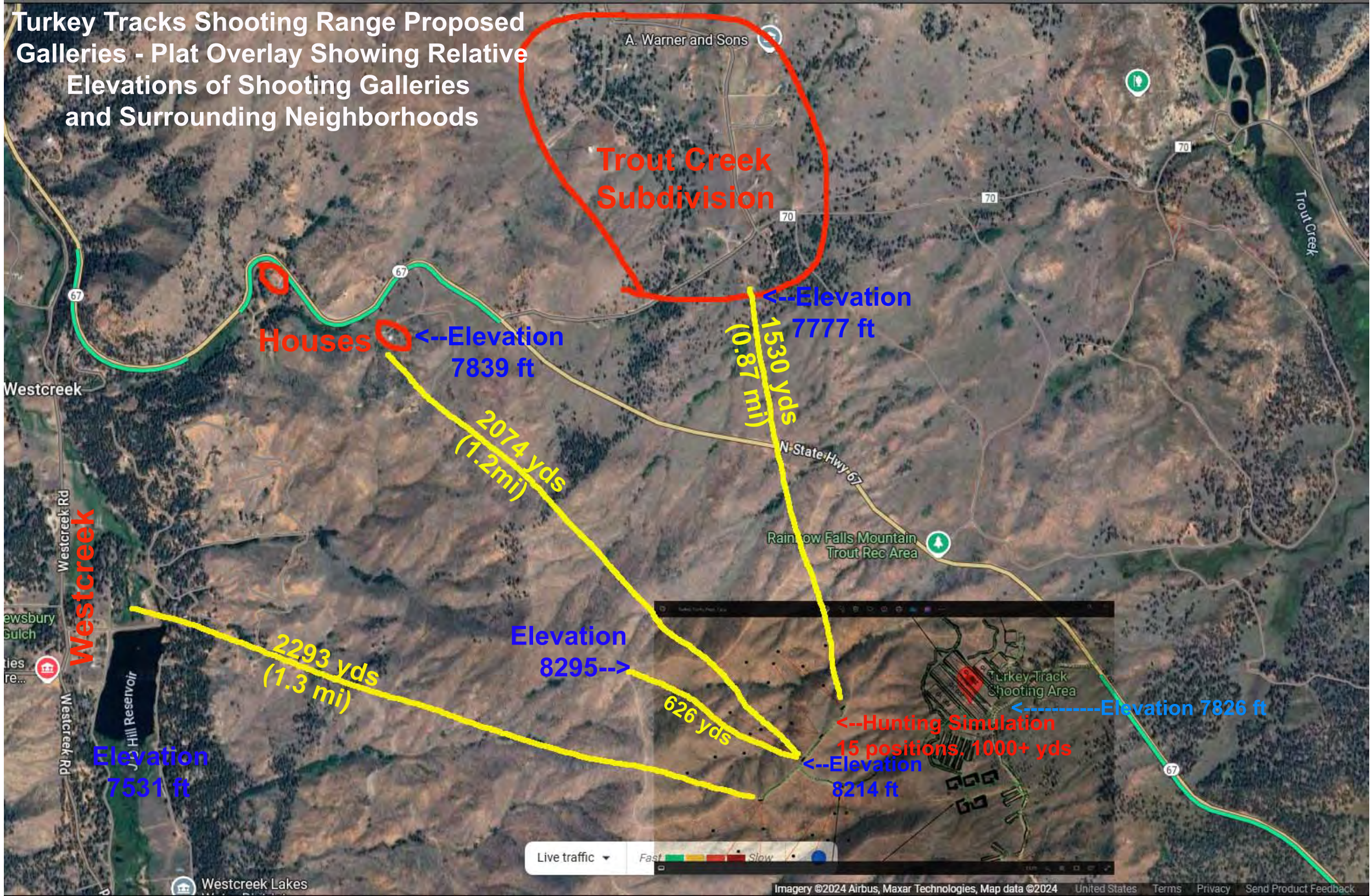


Figure 2

Turkey Tracks Shooting Range Proposed Galleries - Plat Overlay Showing Relative Elevations of Shooting Galleries and Surrounding Neighborhoods





Turkey Tracks Shooting Range Proposed Shooting Galleries Against Mountain Backdrop

<--Elevation 8377

<--Elevation 8238

<--Elevation 8215 ft

Amphitheater Canyon

Amphitheater Canyon

Hunting Simulation 15 positions, 1000+ yds

Long Range
Precision Rifle

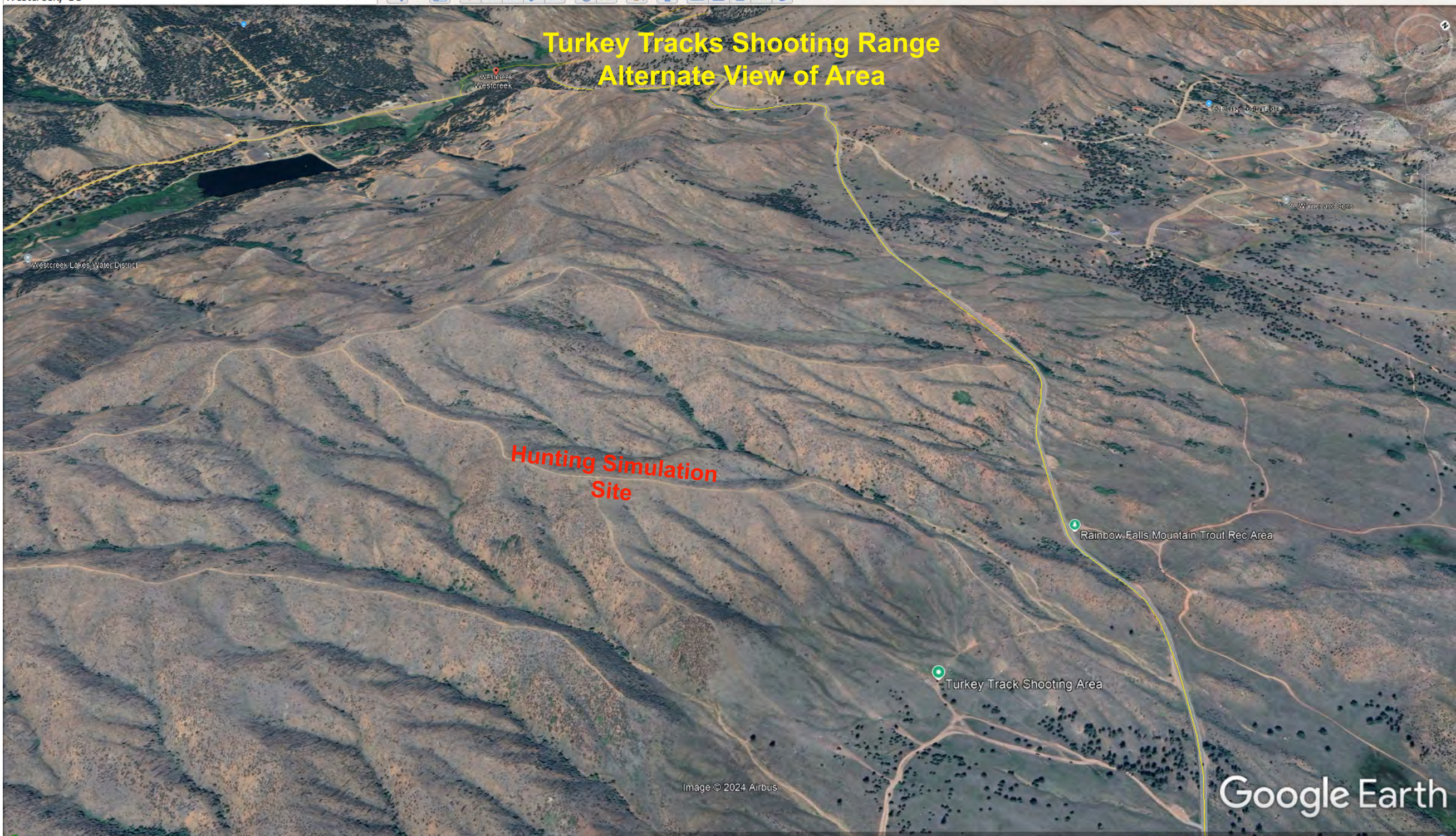
<--Elevation 7942 ft

<--Elevation 7826 ft

Turkey Track Shooting Area



Turkey Tracks Shooting Range Alternate View of Area



Hunting Simulation Site

Rainbow Falls Mountain Trout Rec Area

Turkey Track Shooting Area