BOULDER COUNTY PARKS & OPEN SPACE

Fall **2022**



IMAGES

The mission of the Boulder County Parks & Open Space Department is to conserve natural, cultural, and agricultural resources and provide public uses that reflect sound resource management and community values.

PHOTOGRAPHS & ILLUSTRATIONS

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Volume 44, number 3



Healthy Soil Is the Foundation

by Cassandra Schnarr

Soil health, regenerative agriculture, and sustainable. These buzzwords pop up everywhere—in agricultural circles, in news reports, and on social media, but the terms are rarely defined for the reader.

So, what do these words mean? More importantly, what do they mean for the 25,000 acres managed by the Boulder County Parks & Open Space (BCPOS) agricultural program?

The Boulder County Office of Sustainability, Climate Action, and Resilience defines sustainability as "the use, development and protection of resources in a way that enables Boulder County residents to meet their needs and maintain a high quality of life, without compromising the ability of future residents to do the same." For BCPOS agricultural properties, that means conserving the natural resources upon which the production of food, fiber, and fuel depend. We also place a special focus on using water in an efficient and effective manner, as well as preserving and enhancing the soil. Our guiding document for how to implement sustainability on BCPOS agricultural properties is the Cropland Policy, which was developed in 2011 by an advisory group.

"Regenerative agriculture" has attracted wide attention over the last few years. Unlike organic production, no accreditation system or certifying body exists to attest that a farm's operations adhere to independently established standards. In fact, there isn't even an agreed-upon definition of "regenerative." The internet is filled with assorted authorities and producers offering a variety of definitions from "farming to limit soil disturbance" to "farming to maximize carbon sequestration." Any commonality seems to be the emphasis on practices seen as beneficial to the soil or the environment. One common example is the application of compost; another is the use of cover crops (crops grown not to produce a direct product but to protect or enhance the soil and the field as a system).

Soil health takes a wider view, looking at how the soil functions as a system rather than employing individual practices in isolation. Soil health is the ability of a soil to perform ecosystem services, such as cycling nutrients, filtering and storing water, providing a physical medium for the growth of plants, and a habitat for organisms. A healthy soil maximizes those services within the constraints of the soil's physical properties, location, climate, and management system.

SOIL HEALTH PRINCIPLES

There are five soil health principles that set the stage for optimal functioning. Although there might be minor differences in word choice among soil health advocates, the concepts underlying the principles are consistent:

- 1. Maintain soil surface cover.
- 2. Maximize plant diversity.
- 3. Minimize soil disturbance.
- 4. Maintain continuous growing plant life.
- 5. Incorporate livestock.

BCPOS agricultural properties host a diversity of crops and cropping systems. The implementation of the soil health principles into an operation can take on many different forms based on the type of agricultural operation and the property features. For example:

Soil Surface Cover: Soil surface cover physically protects the soil from wind and water erosion and minimizes water lost to evaporation. Surface cover can be achieved through the use of perennial grasses in pastures, using harvest equipment designed to maximize crop residues left in the field or reducing tillage practices that bury residues.

Plant Diversity: Plant diversity can be achieved through crop rotations (planting different crops in subsequent growing seasons), intercropping (growing a different crop or cover crop in the space between crop rows), or planting a variety of grasses in a pasture.

Soil Disturbance: Tillage has a tremendous impact on soil functioning, disrupting soil structure, increasing the loss of organic matter and moisture, and heightening the risk of erosion. Minimizing tillage by moving to no-till production or reducing the number of tillage events, the amount of land disturbed by tillage, or shifting to less-invasive tillage methods and equipment, such as vertical tillage, can all reduce soil disturbance. Minimizing the amount of equipment used in other field operations also helps to protect the soil.

Continuous Plant Life: The area around plant roots (called the rhizosphere) is a lively hub of microbial activity. Plants push sugars and other compounds out through their roots, attracting microbes and influencing nutrient cycling. The more months of the year a living plant is in the ground, the more active the underground community can be and the more ecosystem services the soil can perform.

Livestock Integration: Usually the hardest principle to implement because of infrastructure and water access constraints, incorporating livestock can yield huge benefits that make the costs and difficulties worthwhile. Direct grazing can reduce weed pressure, influence plant diversity, and mitigate fire risk as well as reduce the pollution and carbon emissions produced by equipment used in harvest and transportation.

The soil health principles allow us to move beyond buzzwords and trendy social media posts. A soil health perspective emphasizes the integrated systems of microbial activity, plant life cycles, livestock, climate, and active agricultural management that lead to truly sustainable production. BCPOS Agricultural and Water Division staff will be working in 2022 to develop a soil health program to collaborate with our tenant producers in their sustainability efforts and to ensure Boulder County has thriving agricultural lands for generations to come.





Incorporating soil health principles ensures that Boulder County agricultural lands will thrive for years to come.

Partnering to Protect Open Spaces

by Elizabeth Northrup

Boulder County protects approximately 106,000 acres of open space, making the county a unique place in which to live and enjoy the outdoors. You may be surprised to learn that 40,000 acres of that open space are conserved, thanks to 850 private landowners who made the decision to protect their land with conservation easements. That totals an astonishing 40 percent of the department's open space.

A conservation easement is a legally binding agreement between a landowner and a qualified organization that restricts how a property can be used and developed. This agreement "runs with the land," which means that when the property transfers to a new owner, those restrictions also transfer. Conservation easements are written to protect the important conservation values of each property, such as productive agricultural land, scenic viewsheds, and valuable wildlife habitats. Boulder County holds the conservation easement in trust for the public, but the landowner privately owns and manages the property. The public typically does not have access to the property because it remains in private ownership.

When Boulder County accepts a conservation easement over a private property, it also accepts the responsibility to steward it, now and into the future, to ensure that the terms of the agreement are upheld. This is a forever job. Each year, conservation easement program staff take the roads less traveled to visit some of those properties, meet with landowners, and assess each property's current condition.

A DAY IN THE LIFE OF CONSERVATION EASEMENT PROGRAM MONITORS

So, what exactly do we do when on a stewardship monitoring visit? First, we let the landowner know we're planning a visit; some landowners request to join us. We prepare for the visit by reviewing previous years' monitoring reports, correspondence, and the conservation easement. Like snowflakes, no two conservation easements are the same, so it's important that we learn the nuances of each one.

During the visit, we look for a variety of things, including native and invasive plants, signs of wildlife, and any new buildings or activities. We often walk the property with the landowners, hearing about their successes and challenges, discussing changes, and assessing future plans to ensure they remain in compliance with the terms of the easement. We cover as much ground as we can, documenting our observations along the way. Back in the office, we review our observations and follow up with landowners as needed. If a landowner needs help with controlling invasive weeds, forest management, or guidance on grazing, we can connect them with helpful resources. We rely on the support of many agencies to help landowners manage their land, including CSU Extension Services, the Natural Resources Conservation Service, and Parks & Open Space staff. The final task after a monitoring visit is to write a stewardship monitoring report. These reports are an important tool for tracking property conditions over time.

ENDURING PARTNERSHIPS

These relationships with internal and external partners, together with good stewardship practices and dedicated landowners, help properties maintain their conservation values over the years. Our responsibility to steward Boulder County's conservation easement properties is not only a responsibility, but a privilege. We can't thank these landowners enough for all that they do to care for their property and for partnering with Boulder County. Our community would look very different were it not for their dedication to conserving their resources.



The author, overlooking a conservation easement along with the property owner.

Some owners like to accompany staff on their visits so together they can walk the property, noting wildlife, plants, and to discuss any changes and use of the property.

What Do Visitors Think of Our Parks?

by Michelle Marotti

Every five years since 1990, Boulder County Parks & Open Space (BCPOS) staff and volunteers have hit the trails and asked visitors to fill out a survey about county parks. If you completed a survey last year, we really appreciate your taking the time to participate.

This county-wide survey, offered on county-owned open space properties, is used to collect information about long-term trends regarding visitors and open space management. The goal is to better understand who visits our parks, what activities they enjoy, and their satisfaction with the park experience. We want to learn how we can improve parks for you, the visitor.

A little ground squirrel

invites visitors, like

those in the photo

below, to complete

a survey to help us improve our parks.

Initially planned for 2020, the study was delayed a year because of the pandemic and took place during the spring and summer of 2021. Trained staff and volunteers collected 2,261 surveys at 15 park properties. Surveys for regional and neighborhood trails are being completed separately and are being collected this year.

KEY FINDINGS

Visitors to parks tended to visit either with family (44%) or by themselves (33%). If it was not their first time visiting a park (31%), they generally visited the trails frequently (44% visited monthly, weekly, or more than once a week). Visitors were most often from Boulder County (76%) and likely lived in Boulder (24%) or Longmont (20%). The most common age range for visitors was 25 to 44 (39%) or 45 to 64 (36%).

Most park visitors traveled to the

park by car (89%). The trailheads with the greatest percentage of respondents reporting driving include Ron Stewart Preserve at Rabbit Mountain (99%) and Mud Lake (99%). Trailheads with the greatest percentage of visitors that reported biking, hiking/walking, or running to the park are close to urban development, including Carolyn Holmberg Preserve at Rock Creek Farm (58%) and Coalton Trailhead (37%).

Visitors were primarily hiking (55%) or biking (21%), which is consistent with previous surveys. Overwhelmingly, open space visitors did not experience conflict with others (95%), and three out of four visitors did not feel crowded at the trailhead or on the trail. On a scale of 1 (poor) to 10 (excellent), visitors rated BCPOS parks an average of nine, which is a slight increase from the 2015 rating of 8.7. The top three highest-rated parks were Bald Mountain Scenic Area (9.6), Anne U. White Trail (9.6), and Caribou Ranch (9.4). The three lowest-rated parks were Legion Park (8.2), Walden Ponds Wildlife Habitat (8.6), and Lagerman Agricultural Preserve (8.6).

Regarding social preferences, visitors reported they support multi-use trails (63%), and a smaller majority also support designating trails for a single activity (54%). Visitors were less likely

to support requiring specific days for various activities (41%).

In reference to the park they were visiting, 69% of visitors described the number of trail miles as being about right. Forty-seven percent of visitors reported that they prefer trails that are wide enough for two people side-byside, and 29% of visitors preferred trails wide enough for three people side-by-side.

In the report you can find individual park summaries with data highlights and the most common visitor suggestions for improvements for that specific park.

FUTURE MANAGEMENT

These Five Year Visitor studies complement other annual research and are one of many tools we use to better understand our visitors. The information and opinions we gather are used, in conjunction with the other visitor studies and tools, to better manage the land and address community desires. The report provides a snapshot of who our visitors are

at various properties, which is used to help update management plans. The information can also be used to help us better understand the values of our communities, determine where more education or enforcement is wanted, and respond to community desires for specific amenities, trails, and types of management.

The next time you are on a trail and see someone handing out surveys, we hope you will take the time to stop and fill it out. The input you provide can impact the decisions that managers make for the future of your open space!

Read the entire "Five Year Visitor Study" on the Research on Open Space webpage. boco.org/VisitorStudy2021.





Bats: A New Home on the Prairie?

by Noelle Nicholson

The black footed prairie dog is famous not only for kissing its family members hello, but also for digging a mansion of underground dwellings. Their burrows can have more than 70 rooms, including a nursery, toilet, and a listening post, among others. They not only have a back door, but also, for good reason, an escape route. There are a lot of species in the neighborhood eying the prairie dogs' real estate. As soon as they abandon their burrows, rabbits, badgers, birds, weasels, snakes, burrowing owls, black-footed ferrets, salamanders, insects, and even foxes might move in. And now, thanks to the work of biologist, Rick Adams, we might need to add bats to the list.

BATS AND BURROWS

It turns out that prairie dog colonies are major hubs of bat activity. There's a reason for this: prairie dogs aren't just diggers of grand dwellings below the ground, they're also master landscapers on the surface, which is partly why they've been dubbed ecosystem engineers.

In order to create secure sight lines to their burrows, they clip down any vegetation taller than about six inches, which changes the temperature and moisture content of the soil. Clipping down the vegetation also makes the plants more nutritious and digestible by eliminating the nutrient decline associated with aging. Deer, bison, and pronghorn are thought to preferentially graze on this high-protein grass. Besides mowing the lawn, prairie dogs are big DIY renovators, often excavating new elements of their burrows, thus disturbing large quantities of soil. Insects can't get enough of this dirt extravaganza, which attracts—you guessed it—bats.

At least that's what Adams and his team surmise. While analyzing the data from sonar surveys of bat activity at Hall Ranch Open Space and areas near Lyons, Adams found air-foraging species like big brown and hoary bats, but also, unexpectedly, forest-foraging species, like the fringed myotis and the small-footed myotis. Since the forest-foraging species rarely venture from the edge of the forest because of predators or competitors, it stands to reason that something good had their eye-or sonar, as it were. It's even possible, because the small-footed myotis' pattern of activity at dawn and dusk, that they're using the prairie dogs' burrows as a nap joint, otherwise known to biologists as a

day roost. This behavior hasn't been proven yet, but it's something thermal-imaging technology could confirm in the future.

GUANO IS GOLD

Bats have a bad street rep, but they're just as important as prairie dogs. Caveroosting bats are considered a keystone species-an organism that's the glue holding a habitat together. But instead of landscaping or burrowing, all they need to do to be critically important to their ecosystem is eat and poop. Every night, bats across the United States eat thousands of tons of mosquitoes, which turn into guano, and guano is gold-not just fertilizer in our gardens. Guano drives the ecosystems of caves and mines, feeding micro-organisms and invertebrates, which in turn feed fish, salamanders, frogs, and other, larger animals. If that's not enough to turn you into a bat lover, if you're sort who likes a delicious, but well-priced ear of corn on the 4th of July, thank a bat. Bats eat enough pests to save the U.S. corn industry more than \$1 billion per year in crop damage and pesticide costs. No big deal, just another day at the mine.



Scientists were surprised to find that bats, along with several other species, use abandoned prairie dog burrows, which are "major hubs of bat activity," according to Rick Adams, a biologist.

Brown Bats



Fall 2022

Welcome!

Pull Out and Save

Hello Everyone! I'm a corn plant in a corn garden and I'll be your corn guide for this Nature Detectives pullout! What's a corn garden? A block of corn plants all growing together in someone's backyard or an empty lot or at a community center. All corn plants like to grow up together-the more the better!

How Does Corn Grow Up?

When the soil warms up in the spring, the gardeners take handfuls of corn seeds and plant them in the ground.

What are corn seeds? You have seen them many times-the kernels from corn cobs! Not cooked, of course. Dried in fall and winter on the cob, then shelled and planted in spring.

Embryo-the plant in miniature

Each corn kernel seed is a sac full of nourishing goodness for the mini corn plant-to-be, called the *embryo*. Our mother corn plants have made sure to put some of their own *microbes* in and on our seed coats to help us grow and be healthy.



Tassels, Corn Flowers and Pollen

After a few days or weeks the first leaves of the baby corn plant in the tiny embryo unfurl, green and shining in the morning sun. A growing corn plant can unfurl a new leaf every few days! The leaves reach out to the sun and make food from its light. After a couple of weeks or months, depending on the kind of corn, many leaves rustle in the breeze.

It is then the tiny corn flowers flower along the *tassels,* the pollen-bearing parts at the top of the corn plant and side shoots. Hanging like acrobats from the corn flowers is the bright *pollen,* ready to drop onto a corn *silk* and fertilize it to make new baby corn seeds, kernels.

Corn Silks and Pollination

Sometimes the pollen lands on the silk of the same plant it grew on, sometimes the wind blows it to the silk of a different plant.

The silks are actually hollow tubes. One end grows out the top of the corn husk to meet the pollen grains and welcome a couple of their pollen tubes down each silky tube into the *ovule (which means "little egg*" and contains the *embryo sac.*)

The other end of each silk is in an ovule, one silk per ovule. Once the ovule is pollinated, it can start to grow up into a juicy corn kernel to be eaten or planted as a seed.



The Milky Stage, Dough Stage, and Thin Black Line Stage

A number of weeks later, the corn ovules have mostly turned into corn kernels. If you *shuck* a *husk* at this stage and bite into the kernels on the cob, sweet corn milk will burst into your mouth. It is white and looks milky, so this is called the Milk Stage. Some Indigenous corn-growing people hold special festivals and ceremonies to celebrate this stage.

A number of weeks later, more starch has built up inside the corn kernel, which thickens the milk, turning it more doughy; so this is called the Dough Stage.

A number of weeks later, the corn plant has grown up! How do you know it is mature? Look carefully and you will see a thin black line at the bottom of many corn kernels (you test a few to tell if the rest are ready, too). This means: done! Ready to eat or cook or dry for planting!



So many Recipes from All Over the World

There are so many different ways to eat corn, so many different recipes from all over the world. Almost every part of the corn plant can be eaten! It has nourished many people in many places for many centuries.

Corn came originally from a wild plant in what is now called Mexico; people developed it for agriculture–to make it easier to grow and harvest– perhaps 7-10,000 years ago. Corn spread to the rest of the Americas over a thousand years ago and to Europe, Asia, Africa around five hundred years ago; it is found on every continent but Antarctica and many people believe it is a native plant in their area, it has been there so long. In many regions it is called "maize."

Types of Corn We Eat

Different types of corn taste different and grow differently. A modern popular type is *sweet* corn. The type most grown in the U.S. is called *dent* corn because each kernel has a little dent in it, easy to see. Dent corn is mostly grown in warmer climates. Of course we all know *popcorn*; hot steam builds up inside until the kernel bursts, turning inside out!

The last two types are *flint* corn, which grows well where it's colder, and *flour* corn. What's the difference? The flint corn kernel is hard like flint, flour corn is soft, like flour. Popcorn is hard like flint and you can cook with it the same way. *Dent* corn is between flint/popcorn and flour corn in hardness. Harder corn kernels are "cornier" tasting, but softer corns are easier to make cakes and puddings with.

The Rainbow Colors of Corn

Corn is yellow, yes, but have you seen corn that is white, red, orange, green, blue, purple or all those colors mixed together in random swirls and patterns? The different colors make dishes look and sometimes even taste different. Corn is the most interesting, diversified, and colorful member of the Grass Family (*Poaceae*)!



Activity: Watch Corn Grow Up!

You can do a corn-growing experiment as an adventure.

First, start with corn kernel seeds. You can either buy them or save some from a cob you didn't eat this fall. Make sure it's raw! Cooked kernels won't grow.

Shuck it and place it in a safe place with good air circulation to dry over the winter.

If you are saving a cob, best to save the whole cob and shell it in the spring, planting however many kernels you have space for.

Plant when the soil is 60 degrees Fahrenheit. You can stick a kitchen thermometer in the soil to take its temperature. (Clean it well afterwards.) Watch the weather report to make sure snow is not in the forecast!

To plant, first try to find some place with a little soil for growing. A backyard with some grass removed is a good start.

Make a hole for each kernel. If you have lots of seed, plant them a few inches apart and thin the plants that are not doing well.

Water the soil so it is moist and keep it moist throughout the growing season. Corn needs water.

If you are growing corn seed you bought, you can expect it to come up all looking the same. If you are growing corn seed you saved, there will be many different-looking ears and kernels.

You can also plant in pots, one kernel per 24" pot. You may need to put a fence up around your corn garden; all kinds of animals love little corn sprouts!

If your seeds come up, watch them go through the life cycle this article describes. Have fun! Tell gardener friends about your experiment and ask them your questions as your corn grows!



What's With All the Weeds?

by Ellen Harris

If you've been to Heil Valley Ranch since it reopened to the public in June, you've probably noticed the profusion of weeds, especially thistles and mullein. Although mullein, thistles, and other invasive weed species were present before the Cal-Wood Fire in October 2020, they are especially prevalent on the post-fire landscape.

With closer attention, you may find that these weeds grow most densely in patches, often surrounded by bare, burnt ground. These patches are typically where trees used to grow, providing plenty of fuel to burn hot and kill any plants and most seeds on the ground pre-fire. Around these patches, you may find areas of grass, native wildflowers, and shrubs that were burned less severely and have recovered well.

Why do thistle and mullein survive in the severely burnt areas when the native plants don't? For mullein, two factors contribute. One is a game of sheer numbers; mullein produce tall stalks with many flowers that produce thousands of seeds, which can remain viable in the soil for a century. Even in severely burned areas, some of those seeds will survive. Secondly, mullein seeds germinate in response to light. With the shade of the trees gone, more seeds have received the signal to start growing. Thistle, on the other hand, produces many seeds that can travel far and wide, and do well in recently disturbed areas. We have native thistles too—make sure you know the difference before you start to bad mouth every spiky plant you see!

WILDFLOWERS ALSO APPEAR

Although mullein and thistle currently dominate the severely burned areas of Heil Valley Ranch, less severely burned areas have seen an increase in native wildflowers. Many of our native species actually rely on fire as part of their life cycle, and even the ones that don't may still benefit from having more sunlight and resources available to them in the absence of trees and built-up dead plants from previous years. "For now, treatment of these weeds will be delayed as we wait for more of our native plants to get established. This will help provide better competition with invasive plants," said Invasive Plants Supervisor Joe Swanson. Although the weeds may be annoying for the time being, patience is an important part of recovery.

After the 2003 Overland Fire, Heil Valley Ranch's resident ranger, Kevin Grady, observed that mullein and thistle populations exploded but gradually decreased over the course of five to 10 years, and more native species returned. Grady also emphasized that visitors should "stay on trail, and... clean off seeds from clothing, backpacks and bikes after visiting Heil... to keep weeds from spreading to other open space areas." Besides mullein and thistles, Heil Valley Ranch has other invasive species, including the only Colorado population of the List A (highly invasive) species rush skeletonweed. According to weeds specialist, Shursteen Sharpe, "If you see this plant, please do not take it with you and report any sightings through our webpage: boco.org/weeds. A great way to distinguish this plant from look-alike plants is by the latex sap it produces when broken and the red/brown hairs that can be found 10 inches from the base of the plant, and no other hairs are present."

DISCOURAGING WEEDS, ENCOURAGING NATIVE PLANTS

Besides preventing the spread of invasive plants, we can also help the native plants along in some areas. After the fire, dead trees close to the trails were cut for the safety of visitors. These trees were then ground into mulch and lifted via helicopter to some of the worst affected areas of the fire. The mulch will help to prevent erosion and build soil, and in some areas, native seed mixes have been scattered along with the mulch.

While the Cal-Wood Fire has drastically changed Heil Valley Ranch, plants continue to grow, compete, and thrive—sometimes, whether we want them to or not!



DISCOVER BOULDER COUNTY Calendar of Events

ALTONA SCHOOL OPEN HOUSE

Sunday, Sept. 4, 11 a.m-2 p.m.

Altona Schoolhouse at Heil Valley Ranch Open Space (Park at the Corral Trailhead at Heil Valley Ranch and walk approximately 10 minutes on Schoolhouse Loop to the Altona School.)

Drop by anytime between 11 a.m. and 2 p.m. to go inside the historic schoolhouse where students studied and played from 1880 to the World War II era. Volunteers will be on hand to share the school's history with visitors. If time allows, you can take part in a game or spelling bee.



ASTRONOMY: SIZE AND DISTANCE MATTER

Friday, Sept. 16, 07:15-9:30 p.m. Near Lyons. Location provided when registering. The earth may seem big, but it is a tiny dot in space. Experience how size and distance vary greatly through demonstrations at a brief program, followed by sky gazing with telescopes provided by the Longmont Astronomical Society. Register at boco.org/discover.

YOGA ON THE FARM

Friday, Sept. 16, 9-10 a.m. Friday, Oct. 14, 9-10 a.m. Agricultural Heritage Center, 8348 Ute Highway 66, Longmont



Join Andrea Van Sambeek (Certified Yoga Instructor) for a gentle yoga class and take in the views from your mat. Pause, breathe, and revitalize in this idyllic setting. After connecting with breath and movement, stay to explore all the Agricultural Heritage Center has to offer. Please bring your own yoga mat. Ages 12 and up are welcome. Register at boco.org/discover.

THE YIP ABOUT PRAIRIE DOGS

Wednesday, Sept. 21, 6-7:30 p.m.

Longmont Public Library, 409 Fourth Ave., Longmont

These fascinating creatures are more than cute little rodents who chew up the grass. This entertaining, lively presentation by volunteer naturalists delves into the ecology, social structure, life cycle, behavior, and language of this keystone species. Register for this program on the Longmont Public Library website.



FUN ON THE FARM

Agricultural Heritage Center 8348 Ute Highway 66, Longmont

Bring your kids ages 3-6 to the farm to learn about animals, plants, and agricultural life. Programs include a short story time, hands-on activities, and a take-home craft. Afterwards, explore the farm. Children must be accompanied by an adult.

Cowapalooza: Learn all about cows, see cows up close, and make butter!

Friday, Sept. 9, 9:45–10:30 a.m.

Horsin' Around: Learn all about horses and see real horses up close! Friday, Oct. 21, 9:45–10:30 a.m.

FALL COLORS HIKE

Thursday, Sept. 22, 10 a.m.-noon,

Near Nederland. Location provided when registering.

Join volunteer naturalists on a nature hike around at 10,000 ft. to observe the beginning of fall. Learn how animals and plants begin to prepare for the change in temperature, daylight, and moisture. Register at boco.org/discover.

NATURE JOURNALING

Saturday, Sept. 25, 11 a.m.-12:30 p.m.

Near Boulder. Location provided when registering.

Discover techniques to help you better observe nature and record it for yourself. Participants are encouraged to bring their own sketchbook and art supplies—other supplies will be provided. No art experience necessary! Register at boco.org/discover.

RATTLESNAKE HIKE

Thursday, Sept. 29, 5-7 p.m.

Near Lyons. Location provided when registering.

Enjoy a moderate two-mile hike to learn about this fascinating reptile found in the plains and foothills. Volunteer naturalists will share information about the prairie rattlesnake and how to be safe in rattlesnake country. Register at boco.org/discover.



Junior & Senior Fishing Derby

Saturday, Oct. 15, 9 a.m.-noon

Wally Toevs Pond at Walden Ponds Wildlife Habitat off of 75th St. between Jay Rd. and Valmont Rd., Boulder

The annual Junior & Senior Fishing Derby returns this year! Create your fishing dream team of one senior and one junior angler, then come enjoy a beautiful fall morning fishing for prizes and fun. Participants need one senior (65 or older) and one junior (15 or younger) to fish together as a team. Prizes will be awarded to the team that catches the heaviest trout, has the largest age difference, and is first to catch the limit.

- Drop by anytime between 9 a.m. and noon.
- The pond is stocked with rainbow trout. Artificial and live bait are permitted.
- Bring your own fishing gear and lawn chairs for seating.
- Seniors must have a valid Colorado fishing license.
- A wheelchair-accessible pier is available.

For more information contact Michelle Marotti at 303-678-6219 or mmarotti@bouldercounty.org.

CAL-WOOD FIRE - BURN SCAR ECOLOGY HIKE SERIES

Saturday, Sept. 10, 9-11 a.m. Friday, Sept. 30, 9-11 a.m. Sunday, Oct. 16, 1-3 p.m. Wednesday, Oct. 26, 1-3 p.m. Near Boulder. Location provided when registering.

Take a hike with volunteer naturalists through the burn scar from the 2020 Cal-Wood Fire. This two-mile moderate hike will lead participants through the landscape, providing opportunities to see the changes two years after Boulder County's largest wildfire.

Learn about the impact of the fire on the local flora and fauna, the work that led to reopening Heil Valley Ranch, and future mitigation for Boulder County Parks & Open Space forests.

Space limited. Register at boco.org/discover.

BLACK BEARS IN OUR BACKYARDS

Saturday, Oct. 8, 10 a.m.-noon

Near Boulder. Location provided when registering.

Black bears are busy gorging on berries and other food in preparation for their long winter sleep. Join volunteer naturalists on a moderate one-mile hike to learn about the natural history of our local bruin and how people and bears can share our wild places. Register at boco.org/ discover.



ASTRONOMY: MOON MYSTERIES

Friday, Oct. 14, 6:15-8:30 p.m.

Near Lyons. Location provided when registering.

As the moon shines brightly, discover how moon phases work and hear stories about our natural satellite at a brief program, followed by sky gazing with telescopes provided by the Longmont Astronomical Society. Register at boco.org/discover.



WHOOO ARE THE OWLS? OWLS OF BOULDER COUNTY

Wednesday, Oct. 19, 6-7:30 p.m.

Near Longmont. Location provided when registering.

Over half of the owls recorded in the United States have been seen in Boulder County, and most of those owls nest here. Join volunteer naturalists for an indoor slide program to explore these fascinating creatures. Register at boco.org/discover.

THE MYSTERY OF BIRD MIGRATION

Saturday, Oct. 29, 2-3:30 p.m.

Superior Community Center, 1500 Coalton Rd. Superior

Learn why birds make seasonal journeys, how they know when and where to go, how they find their way, and what brings them back year after year. Join volunteer naturalists to explore these fascinating mysteries surrounding the world of bird migration. Register for this program on the Louisville Public Library website.

Calendar of Events

ONLINE PROGRAM: MOUNTAIN LIVING GIVES YOU ONE SHORTER LEG

Wednesday, Nov. 2, 6:30-7:30 p.m., Zoom

Meet the Betasso family and learn about their history and ranch on Sugarloaf. In 1976, Ernie Betasso sold the ranch to Boulder County for open space. Please register by Oct. 30 so we can email the Zoom link to you the day before the program. Register at boco.org/discover.

WILD TURKEYS!!!

Wednesday, Nov. 9, 10:30 a.m.-noon

Near North Boulder. Location provided when registering.

Did you know that wild turkeys can be found all over the Front Range, including Heil Valley Ranch? Come learn all about wild turkeys at this program which includes hands-on crafts and play. Suitable for families and kids of all ages. Register at boco.org/discover.



HIKES FOR SENIORS

Join park naturalists for a moderate hike to learn about the unique geology, history, plants, and wildlife of these beautiful properties.

Registration required at boco.org/discover.

Fire and Its Effects

Wednesday, Sept. 14, 9-11 a.m.

Near Boulder. Location provided when registering.

Explore fire ecology and the effects of the fire on the property with naturalists.

Wonders of Migration

Friday, Oct. 21, 9-11 a.m.

Near Lafayette. Location provided when registering.

Enjoy a slow-paced, easy walk to learn about wetland birds, birds of prey, other wildlife, and agricultural history.

Autumn in Boulder County

Friday, Nov. 30, 9-11 a.m.

Near Boulder. Location provided when registering.

Join us for an easy walk with naturalists, and observe the changes on the landscape as wildlife and plant life prepare for winter on the prairie.

MINING PROGRAMS

GOLD PANNING

Saturday, Sept. 10, noon-2 p.m. Sunday, Oct. 9, noon-2 p.m.

Nederland Mining Museum, 200 N. Bridge St., Nederland

Try your hand at gold panning! This activity led to the settlement of Boulder County as people sought their fortunes. Do you have what it takes to travel back in time and search for gold? Programs are open to kids ages 5 and older. Registration required. Register at boco.org/ discover.

HARD ROCK MINING VAN TOUR

Thursday, Sept. 15, 9:30 a.m.-12:30 p.m. and 4–7 p.m. Nederland Mining Museum, 200 N. Bridge St., Nederland Tap into the towns, tools, and characters of our hard rock mining heritage by visiting mining sites of years gone by. Tours are open to ages 10 and older with accompanying adult. Some walking required. Register at boco.org/discover.

CARDINAL MILL OPEN HOUSES

Thursday, Sept. 22, 9-11:30 a.m.; 11 a.m.-1:30 p.m.; 2-4:30 p.m. Thursday, Sept. 29, 9-11:30 a.m.; 11 a.m.-1:30 p.m.; 2-4:30 p.m. Nederland Mining Museum, 200 N. Bridge Street, Nederland

Meet at the Nederland Mining Museum to learn about Boulder County's mining history and then hop in a van to visit the newly opened Cardinal Mill site. It is a standing reminder of the many mining operations that once existed here. Register at boco.org/discover.

BIRDS OF PREY SLIDE PROGRAM

Tuesday, Nov. 15, 6:30-8 p.m.

Lafayette Public Library, 775 W. Baseline Rd., Lafayette

Learn to recognize birds of prey in the skies above Boulder County. Tips will be shared on how to distinguish among different raptors by identifying field marks, behavior, location, and time of year. Register at boco.org/discover.

BIRDS OF PREY DRIVING TOUR

Saturday, Nov. 19, 9 a.m.-noon

Near Longmont. Location provided when registering.

Join volunteer naturalists for a driving tour of some of the best areas to view birds of prey. We will drive in search of raptors, learn about habitat, and work on identification skills. Bring binoculars and a bird field guide if available. Suitable for ages 10 and above with accompanying adult. Register at boco.org/discover.

ALL PROGRAMS:

All ages welcome unless otherwise noted. NO PETS, PLEASE! Be prepared for cool to warm temperatures. Bring water and dress in layers. For information about these programs or to arrange a private program, please call 303-678-6214.

Play Ball! Annual Vintage Baseball Game

Sunday, Sept. 25, noon-3 p.m.



Walker Ranch Homestead, 7701 Flagstaff Rd., approximately seven miles west of Boulder

Drop by anytime between noon and 3 p.m. to enjoy an oldfashioned baseball game in the picturesque and historic setting



of Walker Ranch Homestead. The Walker Ranchers, local recruits, will play a team from the Colorado Vintage Base Ball Association.

The game will be played using 19th century rules. Those watching the game are cranks, rooters, or bugs; players are ballists. A hurler pitches the ball to the behind, or catcher. No gloves or helmets are worn, and a cloth ball and cloth bases are used. Listen for the players' nicknames and a bell ringing as players reach home plate.

Costumed volunteers will also share games and chores of the past for visitors to enjoy.

If you like, bring a picnic and blanket—there are no tables at the homestead.



Ron Stewart Preserve 2022-2023 Closure Days

Ron Stewart Preserve at Rabbit Mountain will be closed Monday through Wednesday from Sept. 19 through Jan. 29 for elk management through limited hunting.

If hunters are successful early in the week, the park will be reopened the following day.

The park is open Thursday through Sunday and on the following days:

Nov. 21-23 OPEN (Thanksgiving week)

Dec. 26-28 OPEN (Christmas week)

Jan. 16 OPEN (Martin Luther King Jr. Day)

For more information, please visit boco.org/elk.

Be a Volunteer Naturalist!

If you enjoy nature and sharing your knowledge with others, apply to be a volunteer naturalist.

Volunteer naturalists lead nature hikes, present interpretive programs, and provide hands-on experiences to people of all ages. We highly encourage people interested in sharing nature with school groups, both on trails and in the classroom, to apply.

Volunteers are provided with a 10-week immersive training that covers local wildlife, plants, ecology, and geology. You will also learn interpretive techniques to connect with audiences of all ages.

TRAINING INFORMATION: Training classes take place on Fridays, Jan. 6 through March 10, 2023, from 8:30 a.m. to 4 p.m., in Longmont.

Application deadline is Oct. 31, 2022, or until all positions are filled.

Please contact Carlos Lerma at clerma@bouldercounty.org for information and an application.

Wanted! Volunteers for National Public Lands Day

On Sept. 24, Boulder County Parks & Open Space will host a variety of volunteer events to celebrate National Public Lands Day, a nation-wide event for people to volunteer in the outdoors. This year's theme is "Giving back together."

Projects include trail maintenance, weed pull, and native seed collection.

National Public Lands Day was started by the National Environmental Education Foundation in 1994. We hope to have all those who attend an event share what being outside means to them. We'll then share these words on our social media platforms. Enjoy this opportunity to give back to your local open space.

To learn more about different projects, times, and to register, visit boco.org/BCPOSvolunteer.





Parks & Open Space 5201 St. Vrain Road, Longmont, CO 80503 www.BoulderCountyOpenSpace.org



- A Hall Ranch
- B Ron Stewart Preserve at Rabbit Mountain
- C Heil Valley Ranch
- D Coalton Trailhead
- E Pella Crossing

- F Boulder County Fairgrounds
- G Lagerman Reservoir
- H Twin Lakes
 - I Bald Mountain Scenic Area
 - J Walden Ponds Wildlife Habitat
 - K Betasso Preserve

- L Legion Park
- M Caribou Ranch
- N Mud Lake
- O Walker Ranch
- P Flagg ParkQ Carolyn Holmberg Preserve
- at Rock Creek Farm
- R Anne U. White
- S Dodd Lake
- T Harney Lastoka
- 1 Agricultural Heritage Center
- 2 James F. Bailey Assay Office Museum
- 3 Nederland Mining Museum