

IMAGES

NEWS



PROPERTIES



NATURE



HISTORY



EVENTS



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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Otter, *Chris Petrizzo*

Owl, *Colorado Parks and Wildlife*

Skunk, *Ann Cooper*

Osprey, *Nik Brockman*

City Plot and Hotel, *Courtesy of Longmont Museum*

Bridge at Heil Valley Ranch, *Bevin Carithers*

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NATURE DETECTIVES

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Volume 43, number 2

Parks & Open Space Gets Strategic

by Ernst Streng

For the past 45 years, Boulder County Parks & Open Space has been acquiring and managing open space properties and resources and providing a variety of programs and services to the public. To date, we have protected nearly 105,000 acres of land and water. As a result of these acquisitions and the support of the residents of Boulder County, we have constructed and maintained a wide variety of recreational facilities, developed an active agricultural program, protected and restored important habitat, safeguarded many cultural resources, offered numerous public education programs, and hosted a variety of volunteer and partnership opportunities.

In addition, the Boulder County Fairgrounds, CSU Extension, and Youth Corps are also integral parts of our department and the community. To keep this work all running, the department also has a number of staff who provide essential services and leadership in public engagement and information, business and administration, planning and design, GIS and technology, vehicle and equipment upkeep, and the overall management and stewardship of the organization.

Because of our success as a department, we know there is always a lot we can and, at times, must do, for the resources we steward, the programs we lead, and the services we provide to the public. With our dedicated and knowledgeable staff, supportive and engaged county residents, and a variety of funding sources, we have the ingredients to continue to accomplish extraordinary things for the land, water, species, and people we serve.

However, there are always limits to staff capacity and financial resources, and the department wants to ensure that we apply our limited resources effectively to lead us to our desired outcomes. In fact, any organization with the scope and size of Parks & Open Space would benefit from having clear direction of what it is trying to achieve, how it plans to achieve it, and a system in place to help prioritize its work to meet the greatest needs.

Therefore, starting in 2019, the department began to create an internal strategic plan to prioritize and make progress on the most vital projects, programs, and services. The strategic planning effort also sought to help staff find more and better ways to collaborate with each other and the community, improve overall operations, and get the “biggest bang for our buck” in all that we do.



“With our dedicated and knowledgeable staff, supportive and engaged county residents, and a variety of funding sources, we have the ingredients to continue to accomplish extraordinary things for the land, water, species, and people we serve.”

The strategic plan process started with assessing the current state of affairs for each of our 25 work groups, including what is and isn't working, and the strengths, weaknesses, opportunities, and constraints to our work. Then each work group identified the desired future condition and goals for the resources it stewards, programs it leads, and/or services it provides. By having a clearer picture of the current state of affairs and clarifying each work group's desired future condition and goals, staff has been able to better strategize and prioritize what projects, programs, and service to work on.

In addition, at the department-level, we developed 13 operating principles, which provide staff with the overall values of the department, and four major themes that the whole department plans to focus on over the coming years.

THE FOUR STRATEGIC THEMES

Community: Continue to seek innovative ways to build support for, and trust in, the department; connect people with the land, water, and cultures of Boulder County; and inspire stewardship of our shared resources.

Stewardship: Manage and maintain the properties, resources, and amenities that the county has invested in to keep them in good or better condition for current and future generations.

Cultural Responsiveness and Inclusion: Ensure all programs, amenities, and services are welcoming, inclusive, and culturally responsive to all, particularly those in our community that have been traditionally underserved and marginalized.

Resilience: Plan for, mitigate, and respond with agility to environmental, social, economic, and climate change.

To date, the strategic plan has created:

- a consistent process for work groups to identify and communicate what it is they are trying to achieve, how they plan to achieve it, and short-term objectives to set their work plans.
- more collaboration across the department, including the creation of four core groups (Land & Water, Public Amenities & Infrastructure, Community, and Organizational Stewardship) that bring together multiple work groups that are working together towards shared targets and projects.
- an opportunity to discover and create better ways of doing business as a department, such as necessary training and professional development, better communication and coordination, and finding ways to be more intentional and proactive in our work.
- links between work group strategic plans and budget and staff requests.

It has taken a lot of time and effort for the department to develop its strategic plan, and we will continually assess and adjust our priorities and strategies as we continue to achieve great things for the resources we steward and the public we serve into the future.

Management Plan: Carolyn Holmberg Preserve at Rock Creek Farm

by Marni Ratzel

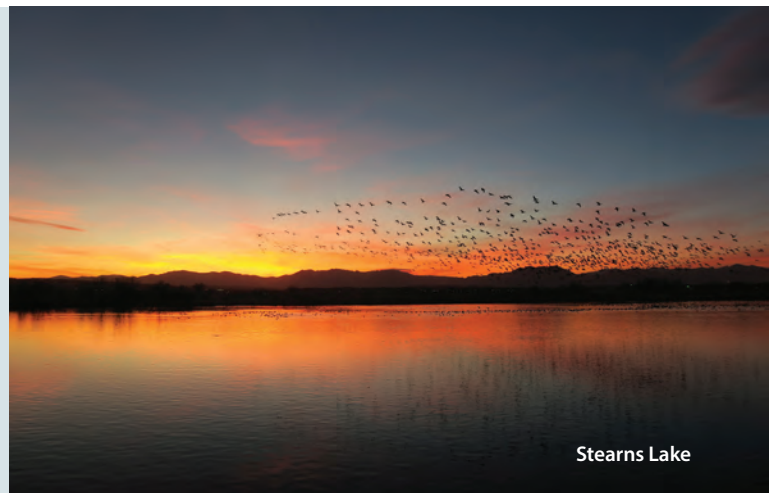
Vision: Carolyn Holmberg Preserve at Rock Creek Farm is a working landscape of farming, ranching, irrigation features, and reservoirs, intertwined with critical wildlife, wetland, riparian, and grassland habitats, that preserves its distinct history and provides regional trail connectivity and recreational amenities for current and future generations.

The Board of County Commissioners approved an updated management plan for the Carolyn Holmberg Preserve at Rock Creek Farm (CHP/RCF) open space in January 2021. The plan provides direction to staff on management of the property, which involves the wide variety of resource activities that reflect the department's mission to conserve natural, cultural, and agricultural resources and provide public uses that reflect sound resource management and community values.

CHP/RCF is located along US Highway 287 and Dillon Road and encompasses 1,124 acres. Beginning in 1980, Boulder County purchased CHP/RCF to provide an open space buffer between surrounding communities and preserve the property's cultural resources and agriculturally significant lands. Boulder County Parks & Open Space (BCPOS) leases much of the property to an agricultural operator who raises irrigated and dryland crops, as well as livestock, on agricultural lands of national and local significance. Other portions of the property are leased to the Birds of Prey Foundation rehabilitation center.

CHP/RCF is one of the most visited parks in the entire BCPOS system. The Rock Creek regional trail and Stearns Lake attract visitors who primarily enjoy biking, hiking, and fishing activities. Today, the open space sees over 75,000 visits annually.

The approved management plan emphasizes the area's multiple resource values and uses, provides for continued agricultural production, protects the most sensitive natural, cultural, and historic resources, allows for appropriate visitor uses, and utilizes an adaptive management approach. Key components of management are as follows:



Stearns Lake

Improving Prairie Dog, Burrowing Owl, and Agricultural Management

Prairie dog management designations will be unchanged, except for a 40-acre burrowing owl preserve located in the north part of the property. It will be designated to support active agricultural operations. Prairie dogs and grassland restoration will be emphasized in the southern and western part of the property to more effectively manage areas where burrowing owls have nested in recent years. Cultivated agriculture operations will be removed from this area to create more contiguous acres and reduce habitat fragmentation.

Restoring Grassland and Riparian Health

The health and ecosystem function of grasslands will be improved through refined management of prairie dogs and livestock grazing. A priority within riparian corridors is preserving wildlife habitat and plant communities. Grazing in riparian areas will be planned and executed to improve and maintain wildlife habitat and native plant communities.

Recreation Management for Wildlife and Visitors

Several species of raptors utilize CHP/RCF for nesting, roosting, and hunting, including bald eagles and burrowing owls. Seasonal closure of the regional trail limit disturbance to breeding activities. The updated plan includes trail improvements to provide alternate routes and a safe regional trail connection during these closures.

Cultural and Paleontological Resources

CHP/RCF is rich in cultural and paleontological resources. Although known sites that need protection exist, a survey of the entire property has never been done. Additional surveys, an analysis of paleontological resource potential, and procedures to protect resources from impacts due to the property's use are recommended and will guide future actions for preserving these resources.

An outcome of the CHP/RCF management plan is a list of implementation activities. These action items will be initiated as funding becomes available. The time frames outlined coincide with the POS Improvement Program, a rolling five-year program currently addressing fiscal years 2021 – 2026. Please visit boco.org/CHPplan to learn more and read the updated plan.

River Otters Swim Home

by Deborah H. Price

Although survival is the main focus for many species of wildlife, some animals enjoy being playful, and probably none of them beats out the mischievous spirit of the river otter. Otters can be seen sliding down snowbanks, pestering ducks and anglers, or even lying on their back waving a paw in an energetic hello. This fast and sleek member of the weasel family is fun to watch as it slithers through water, or inchworms across the land. Otters can also catch fish and eat them at lightning speed.

The North American river otter is found across the continent in riparian areas, similar to environments where beavers set up shop. They can inhabit the same space—beavers are herbivores, while otters are carnivores. The beavers may be happily munching on tree branches and plants, while otters benefit from the fish buffet that accumulates in ponds created by beavers. Otters will sometimes take refuge in abandoned beaver lodges and have even been known to occupy portions of a lodge while beavers still live there.

STAGING A COMEBACK

River otters have made a comeback in Boulder County over the last few years. Eric Odell, Species Conservation Program Manager with Colorado Parks and Wildlife, says that river otters were extirpated in Colorado in the early 1900s, because of overharvesting, habitat modification, and lack of regulations. The agency began reintroducing otters to Colorado in the mid-1970s, mostly focusing on west slope rivers.

In 2013, river otter sightings began showing up in Boulder County. “We are not doing active management to reintroduce otters to any additional part of the state—they seem to be expanding on their own,” said Odell. “The only otters reintroduced to the Platte drainage (which Boulder is part of) were a handful of otters upstream of Denver. The otters here are either descendants from those animals or dispersers from populations reintroduced into the upper Colorado.”

SIGHTINGS IN BOULDER COUNTY

Some of the sightings locally have been reported on iNaturalist.org. This website is a storehouse for photos of plants and wildlife across the world. Several photos of river otters in the Brainard Lake area were posted on this site within the last year. Otters have also been spotted at Heil Valley Ranch Open Space, Pella Crossing, and in other areas along the St. Vrain stream corridor.



An otter looks up from its nap on a log in Brainard Lake.

River otters are often a sign of a healthy waterway since they are highly sensitive to pollution. “Otters may be an indicator of a healthy creek that has fish enough to feed them, space for them to exist, and other otters to breed with,” said Dave Hoerath, a wildlife biologist with Parks & Open Space. They are also top predators, helping to control prey populations, including fish, crayfish, and frogs. An otter’s webbed toes help with swimming, and sharp claws help grasp fish and other food. A third eyelid—or nictitating membrane—protects its eyes underwater like a pair of goggles.

River otters are sometimes confused with mink (commonly seen in many Boulder County riparian areas) but are much larger. Otters are three- to four- and-a-half feet in length, have a very thick, powerful tail, and weigh anywhere from 11 to 30 pounds. To identify them from water-sharing beavers, look at their tails. A flat, wide tail is a sure indication of a beaver, while the otter’s tail is round and thick.

Besides the benefits to the ecosystem provided by river otters and the general excitement of having them back in their former habitat, otters are just fun to watch. Welcome back to Boulder County, *Lontra canadensis*!



REPORT YOUR OTTER SIGHTINGS!

Colorado Parks and Wildlife appreciates reports of river otter sightings. Go to <https://cpw.state.co.us/learn/pages/RiverOtterObservationForm.aspx>. If you can safely snap a photo, that’s even better!

The Night Shift

by Ann Cooper

A new world begins after we leave our parks before dusk. (Boulder County Parks & Open Space parks are closed sunset to sunrise). The night shift takes over. A wild party? No! The animals are merely doing what nocturnal animals do. Some hunt for prey. Others forage for food in the dark when they're less visible to predators. Many seek mates, maintain their homes, or simply move undetected from point A to point B.

We are not in this loop. Most humans are diurnal (daytime) mammals. If we venture out at night, we might glimpse the alt-world of nocturnal creatures going about their business of survival. More likely, if we visit parks by day, we might see strands of fur caught on a fence or thicket, meal leftovers, footprints in the pond-side mud, maybe an owl feather or a faint whiff of skunk—clues of night life.

New camera technology enables us to monitor nighttime activity unobtrusively, and night cams continually expand knowledge of species and their patterns. By day, most wild mammals avoid us in our city parks, urban centers, and hiking trails. By night, they readily amble along people-trails that they'd normally avoid or venture into dimly lit human habitats, such as alleys or suburban gardens.

Animals who use “our” wild areas after we leave may be crepuscular (active at dusk), entirely nocturnal, daybreak early birds (or beasts), or a mix. Their lifestyles may subtly change to suit real-time conditions; it's about survival. Recent research shows several daytime animals are being forced into night mode from fear of humans. Among them are deer and coyotes. Other animals may be active by day in rural landscapes but change their timing in dense human settings.

WHO ARE THESE ANIMALS WHO ROAM WHILE WE SLEEP?

Owls may prowl, gliding over meadows, woods, and wetlands on softly fringed, silent wings, listening for rustles of small, tasty mice in the leaf litter. Great-horned owl males and females, our most common species, may duet with mournful vocalizations, “Who cooks for you.” By day they roost (rest) safely, hard to spot with their superb camouflage.

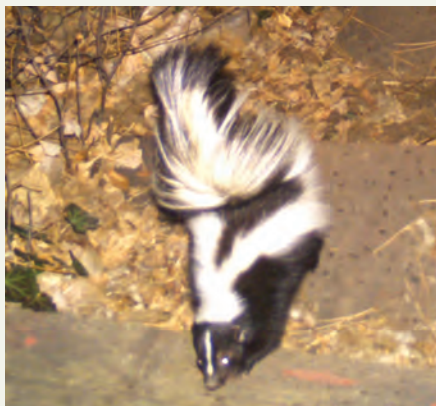
Bats in Boulder County are insect eaters. In summer months they begin their nightly forays at ponds, grabbing a fly-by drink. They eat next, pursuing moths, mosquitos, and other insects. They are swift and adept, with highly effective echolocating abilities that allow them to pinpoint and snatch prey in midair. The echolocation sounds are higher pitched than most adult humans can hear. (Kids may hear them.)

Moths are prized food items for these aerial mammals. The bats feast on plump moth bodies and discard scaly wings. Look for a scattering of these wings beneath an eating roost. Some nocturnal moths evolved to counteract these bat attacks. They eavesdrop on bat sonar and drop to the ground when they hear it to avoid being dinner. Or they jam the bat sonar with their own emitted sounds. Dangerous or not, life in the dark gains moths safety from bird predation. And they're free to feed on—and pollinate—many night-blooming plants.

Beavers, often active in evening and early morning in genuinely wild places, seem to be mostly nocturnal in our area. They fell trees for bark to eat and fix their lodges or bank dens when we're not around. They leave tree-stump clues—and prove the need for netting around trees in county wetland areas.

Skunks advertise their presence and potential stink with their black and white warning colors that seem to glow in the dark. They eat insects, small rodents, worms, and turtle eggs. Look for cone-shaped (nose-shaped?) holes in the ground where they've been hunting.

These species are representatives of animals from the dark side. There are many more . . .



Skunks and owls—two creatures that keep busy at night.

TRAIL CAMERA

Check out this citizen science project to see trail cameras in action: <https://www.zooniverse.org/projects/bouldercounty/critter-snap>

NATURE DETECTIVES

Summer 2021



TOADS HAVE WARTS...AND THAT'S GOOD!

Warts on *your* skin are not good. Warts can occur when a virus sneaks into human skin through a cut. A medicine gets rid of the virus and then it's good-bye ugly wart. Toad warts look slightly like human warts, but toad warts and people warts are not one bit the same.

Toad warts are natural bumps on a toad's back. Toads have larger lumps behind their eyes. The bumps and lumps are glands. The glands produce a whitish goo that is a foul-tasting and smelly poison. The poison is a toad's ultimate defense in a predator attack. It is toxic enough to kill small animals, if they swallow enough of it. The toxin can cause skin and eye irritation in humans. Some people used to think toad warts were contagious. Touching a toad can't cause human warts, but licking a toad might make you sick!

Toads have other defenses too. Their camouflage green/gray/brown colors blend perfectly into their surroundings. They can puff up with air to look bigger, and maybe less appetizing. Pick one up, and it might pee on your hand.

Toads Travel, Frogs Swim

Toads and frogs are **amphibians** with some similarities and quite a few differences. Amphibians spend all or part of their life in water. Frogs have moist, smooth skin that loses moisture easily. A toad's dry, bumpy skin doesn't lose water as easily as frog skin. Frogs are always in water or very near it, otherwise they quickly dehydrate and die. Toads start their life in water, but spend most of their adult life on land. Adult toads only go back to the water for a short time, once a year, during mating season.



Frog

Frogs have teeth; toads do not. Frogs are slender, and their long back legs allow them to leap far.

Toads are squat with legs more suited for hopping and for walking over longer distances.



Toad

Turn the page to read more about Boulder County toads....

Where Are The Toads?

Toads can be hard to find. During cold weather they shelter in deep burrows underground. During hot weather they are mostly active at night. They may be found hopping around on warm mornings or evenings, and they like mild, rainy days in summer.

Their camouflage colors make them hard to spot until they move. They are fond of hiding under rocks, logs, and leaves or digging themselves into the cool dirt during the heat of a sunny day.

Toadlets Hopping Here, Hopping There, and There!

Unlike adult toads, young toads (toadlets) are active day and night. Look for them in June or July when large numbers emerge from local ponds and other shallow waters. The toadlets easiest to find are Woodhouse's toads, Boulder County's most common toad. Their habitats range from the plains to the foothills, in places with soft, crumbly soil for burrowing. They often inhabit river valleys, but these toads also live on farmland and even in the suburbs.

In late April to May, adult Woodhouse's toads emerge from their winter burrows and head for the shallow water where they started as a tiny egg. Their sense of smell guides the toads back home. They crowd together in marshes, ponds, lakes, slow-flowing streams, and in large puddles formed by spring runoff or heavy rain. Male Woodhouse's toads inflate a bag on their throats with air to make repeated *w-a-a-a-a* calls, sounding somewhat like bleating sheep. They pair with females attracted to their funny calls.



Metamorphosis – Changing from Egg to Tadpole to Toad



Toad eggs

The female toads lay strings of thousands of dark eggs surrounded by protective jelly. The egg strings lay tangled among water plants for a few days until they hatch into tadpoles, tiny larvae with gills for breathing. In shallow water, eggs and tadpoles are safe from the biggest predatory fish. Some eggs and tadpoles do fall prey to large water insects, garter snakes, and ducks. The surviving tadpoles nibble tiny critters and plant bits, and grow quickly in the warm water.



Tadpoles

Tadpole gills start to disappear, replaced by lungs for breathing on land. Four legs develop under their outer skin. When the legs get big enough they simply pop through the skin. Their tadpole tail shrinks, and they crawl from the water in June or July as cute toadlets.

Woodhouse's toadlets are tiny, only a half-inch long from front to back. They eat any little spider, insect or worm they can swallow. They double in size in a month. As the toads grow, they shed their non-growing skin, and swallow it as they shed. New, bigger skin is under the old. Females grow to be biggest, up to about five inches in size.

Toads can live for 20 years or more.

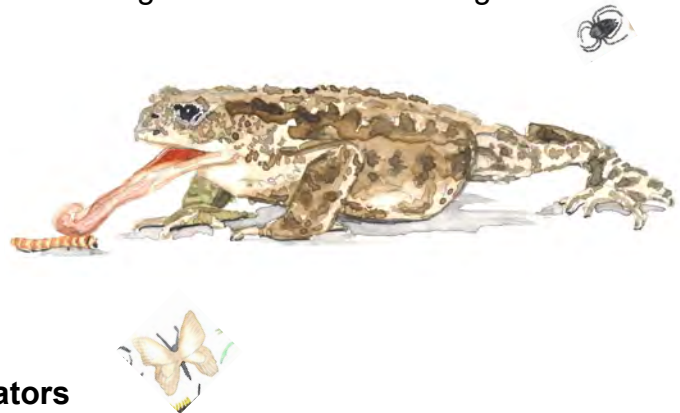
Woodhouse's Toads Eat a Bellyful



The toads can go for a long time without eating, but when they do eat, they can pack a lot of food in their belly. Ants, beetles, and caterpillars are eaten the most. They also eat moths, spiders, mites, centipedes, crickets, grasshoppers, slugs, maggots, and flies. Every catch is swallowed whole. Their bellies can hold 20 or more bugs of various sizes.

Toads sometimes hunt where lights attract insects at night.

Toads identify prey with their keen sense of smell and good vision, although they can't see colors. Their tongue is a speedy catching tool. Unlike our tongue, the toad's tongue is attached at the front of the mouth. The toad flips the unattached back of the tongue forward, and in an instant, unsuspecting prey is captured on the sticky tip of the toad's tongue.



Poison-oozing Warts Do Not Stop All Predators

Garter snakes and bull snakes aren't sickened by the poison. Skunks, raccoons and other predators eat parts of toads, but they avoid the toxic skin and head.

Other Hazards Toads Face

People make life tough for toads. Buildings and roads have replaced much of the land previously inhabited by toads. Pollutants in our soil, air, and water are harmful because a toad's skin easily absorbs toxins in the environment. Pesticides reduce their available food. Climate change causes multiple problems for their existence. And, toads traveling at night and moving across roads are squished in large numbers by cars and trucks.



Three Other Toads...Hidden or Gone?

Mountain (Boreal) toads seem to have disappeared from our mountain forests and are considered endangered in Colorado. The soft call of male mountain toads is a little chirp, which makes them nearly impossible to locate by sound.

Great Plains toads are found on grassland areas in other counties, but are no longer seen outside Louisville where they once lived. Their loud, jackhammer-like breeding call lets you know when they are around.

Spadefoot toads are numerous in some farmland areas on the county's east side, but the little toads are tricky to find. Pale-colored spadefoot toads spend the whole school year dozing in deep burrows under the ground! To keep from drying out in the summer sun, they tunnel into dirt. They use hard spade-like areas on their back feet as tools to dig backwards. The trick is to find the two-inch toads at their breeding sites on flooded ground after big summer rain storms. The males make a quick, snoring call any time during summer.

Toad Skin Absorbs Water and Oxygen

Toads can absorb moisture and oxygen through their skin even when they are underground. That's especially useful because they spend so much time tunneled under soil to escape the drying heat of the sun. To avoid the hottest summer days and freezing winter cold, they also shelter in deep burrows made by other animals such as rodents.

Our skin doesn't absorb water as easily, but what happens to your fingers when you spend too much time in the bathtub?

Hunting for Toadlets

A warm, slightly rainy day in late spring or early summer is a perfect toadlet hunting day. Any open space with ponds nearby is a great location where toads may be spotted by patient or lucky nature detectives.

Toads can readily sense vibrations on the ground, such as the vibrations caused by human footsteps. Toads can hold very still when they don't want to be seen. Their camouflage colors make them hard to see until they stir. On a toad hunt, it helps to walk quietly, stop often, and scan for slight movements that give away the toad's hiding place.



Tongue Gymnastics

Frogs and toads are lucky because their tongue is attached at the front of their mouth, instead of at the back like ours. Stick your tongue out as far as you can and use a ruler to measure how far it extends beyond your lips. Then imagine how much farther it would reach if it was attached right behind your front lower teeth! That would be a great bug zapper!

Sherlock Fox says:

If you gently pick up a toad for a closer look, wash your hands before putting your hands near your face. Remember, the toxin in toad warts can cause your eyes and skin to feel very irritated. Toad skin also carries bacteria. You can easily wash off bacteria with soap and water. Better for those bacteria to disappear down the drain rather than end up in your mouth with your next snack! Hand sanitizer works when water isn't available.



And, be sure to put the toad back carefully, right where you found it.

A Planned Community of “Industry, Temperance and Morality”

by Robin Ecklund

In 1870, a group of wealthy Chicago businessmen envisioned a planned agricultural settlement in the Colorado Territory. Inspired by Horace Greeley’s utopian Union Colony, the men called their project the Chicago-Colorado Colony. The motto of “industry, temperance and morality” was promoted to encourage like-minded investors. William Byers led members of the committee on a tour of the Colorado Front Range looking for a potential town site. The committee was impressed with land at the confluence of St. Vrain River and Lefthand Creek and its potential for agriculture.

Though the Colony founders did envision a community of high moral standards, with residents working for the common good, their motives were not entirely altruistic. The Denver Pacific Railroad wanted to expand service from Denver to Cheyenne. Land adjacent to the railroad could be sold to pay for construction of the railroad and for profit. Chicago-Colorado Colony member Col. Cyrus Pratt was also in charge of the real estate subsidiary of the Denver Pacific. The Colony purchased 23,000 acres from the National Land Company and an additional 37,000 acres from the federal government and other landowners for the project.

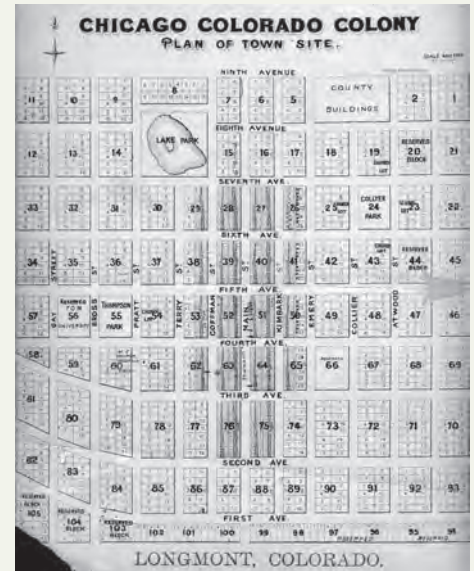
PROMISES OF COLORADO

In order to interest people in relocating, William Byers and his associates advertised that the Chicago-Colorado Colony would provide “bountiful harvests and instant prosperity” in both the “Chicago Tribune” and “Rocky Mountain News.” The Colony also claimed that Colorado’s dry climate could cure many illnesses. It’s no wonder memberships sold quickly! The townsite was planned with designated areas for residential and commercial lots, farms, schools, public parks and a library. In 1870, \$150 bought a 40-acre farm, an additional \$50 bought a lot in town. Wealthy philanthropists, like Elizabeth Thompson donated memberships to some families unable to pay for their own. Mrs. Thompson also financed the park that bears her name and provided money for the state’s first public library. Major investors named streets and parks after themselves. You may recognize the names of Pratt, Terry, Gay, Collyer, Thompson, and Bross on street signs around town.

Once memberships had been purchased and plans for the new community were complete, Colony member Seth Terry and 250



The Imperial Hotel at 301 Main Street was planned by the Chicago-Colony Group. Right, the plan for the town.



prospective residents (many immigrants from the Midwest) began the long journey to their new home. They traveled by train to Erie. From Erie, they rode in wagons to the nearby community of Burlington. They arrived at the settlement in March of 1871 with lumber and building materials and began to create their new town. The town was named Longmont because of the magnificent views of Long’s Peak. The work began. Residents worked together to build homes, farm buildings and shops, and, most importantly, the irrigation ditches needed not only for the spring planting, but for drinking water and use in the home. Many small ditches connected water to town and to farmers’ fields.

Not everyone in the community agreed with the motto of “industry, temperance and morality,” especially the part about temperance! Originally, the plan stated that anyone who used alcohol must forfeit his land and return the land to the Colony. However, by 1873, there were several saloons in town. Disagreements between those for and those against allowing alcohol persisted for many years.

Prosperity came quickly. By 1872, Longmont had its first flour mill. The Highland Ditch Company was formed in 1873. Farms provided crops that included wheat, fruits, sugar beets, and pumpkins, as well as cattle for meat and dairy. In 1889, the Empson Vegetable Cannery was built. Longmont was rapidly becoming an important agricultural community along the Front Range.

The founding fathers of the Chicago-Colorado Colony would be pleased and proud were they to see the vibrant, prosperous city of Longmont today. Job well done!

RESEARCH ON OPEN SPACE

The Boulder County Parks & Open Space Department offers grants for research on county open space lands each year. All proposals are reviewed by a team of resource specialists, and awarded research projects are monitored during their activities on open space. The following is a summary of a 2020 study conducted by Maggie Anderson, Dr. Sarah Spaulding and Dr. Diane McKnight at the University of Colorado. Their project focused on Ecological Status of Lagerman Reservoir.

Introduction:

Lagerman Reservoir is located in the plains in eastern Boulder County and is an important recreational area for the local and regional community. For the past several years, Lagerman Reservoir has experienced hydrologic change, as less water has entered the reservoir from Dry Creek and ditch inflows. The reduction in inflow has led to a series of ecological changes. Specifically, since water was no longer released through the outflow (spillway), evaporation has the effect of making the water more chemically concentrated. As a result, the increased concentration of salts, and potentially nutrients, is responsible for the reservoir experiencing decrease in lake level, periodic algal blooms, low dissolved oxygen, and death of fish. All of these changes impact the condition of the site and the public who visit. Furthermore, the shallow, western shore of Lagerman Reservoir has long been valued as a productive habitat for nesting shore and fishing birds. Changes in water level are intimately tied to the amount and quality of habitat for feeding and nesting. Consequently, there is a need to determine the ecological condition and to evaluate potential actions to restore aquatic life.

The urgency of determining potential toxicity of present algal species cannot be overstated. The reservoir is a popular destination for fishing, kayaking, paddle boarding, and bird watching. Dogs may also be put at risk when they drink or swim in the water.

Throughout the world, the presence of blue-green algae (cyanobacteria) has been increasing as climatic and environmental changes have led to favorable conditions for these algal species. Causes of algal blooms may include warmer temperatures, excess nutrients from agricultural runoff, increased salinity or changes in rainfall. As algae dominates an ecosystem, harmful algal blooms (HABs) may form, potentially leading to a release of toxins in the water. These toxins can lead to respiratory or skin irritation, abdominal pain, vomiting, and even death in animals. Once the algae assimilate available nutrients, they die. As the algal biomass undergoes decomposition by bacteria, dissolved oxygen is consumed. Oxygen is an essential requirement for fish, zooplankton, and aquatic insects. When these organisms are not able to survive, the aquatic ecosystem becomes extremely degraded.

While the frequency of cyanobacterial monitoring is increasing, it is not widespread enough to be completed on all water bodies. Of the sites in Colorado, seven have indicated toxic levels of algae and four have been in the metro-Denver area (Colorado DPHE, 2020). To help out with the large task of monitoring sites for algal blooms, the EPA has created the Cyanobacteria Assessment Network Mobile Application (CyAN app). This application uses satellite imagery in coordination with NASA, NOAA, and USGS to indicate phycocyanin (the pigment of blue-green algae) concentrations for over 2,000 lakes and reservoirs in the United States. Lagerman Reservoir is included in the CyAN network, and thus the satellite data is an additional resource for monitoring blooms.

If you want to read the full report, or other funded research, visit the department's website at www.bouldercounty.org/open-space/education/research/

Calendar of Events

FISH HAWKS OF BOULDER COUNTY

Tues., June 8, 10:30 a.m.-noon

Near Longmont. Location provided when registered.

Join volunteer naturalists for this drop-in program to observe and learn about a remarkable bird of prey. An osprey pair has nested at this site for several years, and we may see adults and young looking for food and trying out new wings. Bring a bird field guide and binoculars if you have them. Register at www.bouldercountyopenspace.org/register.



FOOTHILLS WILDFLOWER HIKE

Mon., June 14, 10 a.m.-noon

Near Boulder. Location provided when registered.

Join volunteer naturalists for a wildflower hike in the foothills west of Boulder! We will hike about 1.5-miles through forest and meadows in search of spring wildflowers, while enjoying beautiful views of the snowy high country. Register at www.bouldercountyopenspace.org/register.

BEARS IN OUR BACKYARD

Wed., June 16, 5:30-6:30 p.m.

Near Louisville. Location provided when registered.

As summer approaches, black bears are busy raising cubs and searching for food to get through summer and begin preparing for their winter sleep. Join volunteer naturalists for this presentation to learn about our local bruin and how people and bears can share our wild places. Register at www.bouldercountyopenspace.org/register.

CELEBRATE SUMMER HIKE

Mon., June 21, 10 a.m.-noon

Near Nederland. Location provided when registered.

Join volunteer naturalists to celebrate the coming of summer to the high country! On this easy 1.5 mile hike, we will explore the natural history of the area including wildflowers, wildlife, and forest ecology. We will also talk about summer weather patterns and safety in the mountains. Register at www.bouldercountyopenspace.org/register.

HIGH COUNTRY NATURE HIKE

Tues., July 13, 9 a.m.-noon

Near Nederland. Location provided when registered.

Escape the summer heat and explore the beautiful forests, meadows, and wetlands high in our backyard! Join volunteer naturalists to learn about the geology, wildflowers, wildlife, and colorful history of this diverse landscape. Register at www.bouldercountyopenspace.org/register.

ALL ABOUT BEAVERS

Sat., July 24; 10:30 a.m.-noon

Near Longmont. Location provided when registered.

The beaver is one of nature's most accomplished engineers. Although beavers are most active at night, we'll see signs of their hard work along St. Vrain Creek. Join Boulder County volunteer naturalists to learn all about these furry, water-loving mammals.

Register with the City of Longmont by July 23 at 303-774-4700, Code: 306108, or register online at: <https://rec.ci.longmont.co.us/wbwsc/webtrac.wsc/search.html?keyword=306108>.



A trail camera picture of a beaver keeping busy at night.

LIONS & ABERT'S & BEARS HIKE

Wed., Aug. 4, 10 a.m.-noon

Near Boulder. Location provided when registered.

Join volunteer naturalists for an easy, one-mile hike to learn about some of the critters that live in the foothills of the Front Range. We will also learn how mountain lions, black bears, and Abert's squirrels find what they need to survive and thrive. Register at www.bouldercountyopenspace.org/register.

COBBLES OF TIME – HIGH COUNTRY GEOLOGY

Wed., Aug. 18, 9 a.m.-1 p.m.

Near Nederland. Location provided when registered.

Join volunteer naturalist, Roger Myers, and others on this 4.5-mile moderate hike to learn about Glacial Lake Devlin, its catastrophic demise, and the dramatic landscape it left behind. Register at www.bouldercountyopenspace.org/register.

Calendar Notes

We will be adding programs throughout the summer as COVID protocols change for different types of gatherings and attendance requirements.

Keep checking www.BoulderCountyOpenSpace.org/events for the latest program offerings.



Summer Night Hikes

Join volunteer naturalists to hike about one mile round-trip on an easy trail. By starlight, listen for night sounds, and learn about nocturnal habits of the critters that live here. Bring water, closed-toe hiking shoes and a flashlight.

Space is limited, meeting locations provided to those registered.

Register at www.bouldercountyopenspace.org/register.

FOOTHILLS NIGHT HIKE

Wed., July 7, 8:30-10:30 p.m.

Near Boulder. Location provided when registered.

HIGH COUNTRY NIGHT HIKE

Tues., Aug. 10, 8-10 p.m.

Near Nederland. Location provided when registered.

Hikes for Seniors

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

Registration required at www.bouldercountyopenspace.org/register.

WETLAND HIKE FOR SENIORS

Wed., June 30, 10 a.m.-noon

Near Boulder. Location provided when registered.
(Walden Ponds)

MONTANE FOREST HIKE FOR SENIORS

Thurs., July 29, 10 a.m.-noon

Near Nederland. Location provided when registered.

HIGH COUNTRY HIKE FOR SENIORS

Fri., Aug. 27, 10 a.m.-noon

Near Nederland. Location provided when registered.



Catfish Nights



June 10 & July 15

7:30 - 11 p.m.

Stearns Lake at Carolyn Holmberg Preserve (access trailhead from Dillon Road on South 104th Street)

Bring your family and friends and enjoy summer night fishing at the lake! Anglers must have a current Colorado fishing license. (Kids under 16 don't need a license.)

- Open to shore fishing only
- Artificial and live bait permitted
- Registration required at www.BoulderCountyOpenSpace.org/register

For more information, please call 303-678-6204.

Event will not be canceled due to weather

Astronomy Programs

ASTRONOMY: SEASONAL SKIES

Thurs., June 10, 8:15-10:15 p.m.

Near Lyons. Location provided when registered.

Enjoy the opportunity to see the night sky in a dark location. Discover why we see different constellations at different times of the year, and how seasons affect our view from Earth. Short program followed by sky viewing and constellation identification. All ages are welcome. Register at www.bouldercountyopenspace.org/register.

ASTRONOMY: SIZE MATTERS

Fri., July 9, 8:15-10:15 p.m.

Near Lyons. Location provided when registered.

Enjoy the opportunity to see the night sky in a dark location. Learn about the vast distances and size differences of objects in space. Short program followed by sky viewing and constellation identification. Register at www.bouldercountyopenspace.org/register.

ALL PROGRAMS:

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

Calling All En Plein Air Artists

2021 Outdoor Creations – A Boulder County Juried Art Exhibit

Boulder County Parks & Open Space announces its fifth juried en plein air exhibit featuring county public lands. Artists are encouraged to visit county-owned open space to create work or submit up to four pieces from their portfolio, which feature county public lands. An entry fee of \$30 is required for consideration and exhibit. Entry fees will be used for cash prizes. All profits will be donated to the Boulder County Parks & Open Space Foundation (www.PreserveBoulderCounty.org).

Deadline for submissions is Wednesday, Aug. 25.

Exhibit to be held at The Great Frame Up Longmont, from Friday, Nov. 12, through Thursday, Dec. 30. For more information please visit www.BoulderCountyOpenSpace.org/paintout or contact Karen Imbierowicz at kimbierowicz@bouldercounty.org or 720-352-7316.



Painting by Jason Emery

Heil Valley Ranch Fire Recovery Plans

After last fall's Cal-Wood Fire burned more than 4,000 acres of Heil Valley Ranch Open Space, Boulder County staff have been hard at work putting together a recovery plan. The fire consumed many trees, in some places burning so hot that soil was scorched and is now "hydrophobic," meaning it repels water—which can lead to flash flooding. And, of course, many hazards remain in the form of lost infrastructure and dead trees. The county has already started work to combat these problems.

The southern trailhead will remain closed through September 30, 2021, though the Picture Rock Trailhead is still open. If you want to learn more about the recovery plan, visit www.BoulderCounty.org



The bridge from the parking lot to the Lichen Loop trail was destroyed in the fire.

Boulder Area Trails App



Want to explore new trails this summer? The Boulder Area Trails app provides access to all trail information in and around Boulder County.

The Boulder Area Trails app features include:

- One app for all area trails: Provides a single source for all designated public recreation trails and trailheads in and around Boulder and Broomfield counties. Includes 295 trailheads and 1,440 miles of trail.
- Real-time trail closures: Trail closures are posted as soon as they are announced by each participating agency.
- Offline maps: The app will continue to work even when there is no cellular service.
- Set favorites: Save favorite trails and trailheads for easy access.

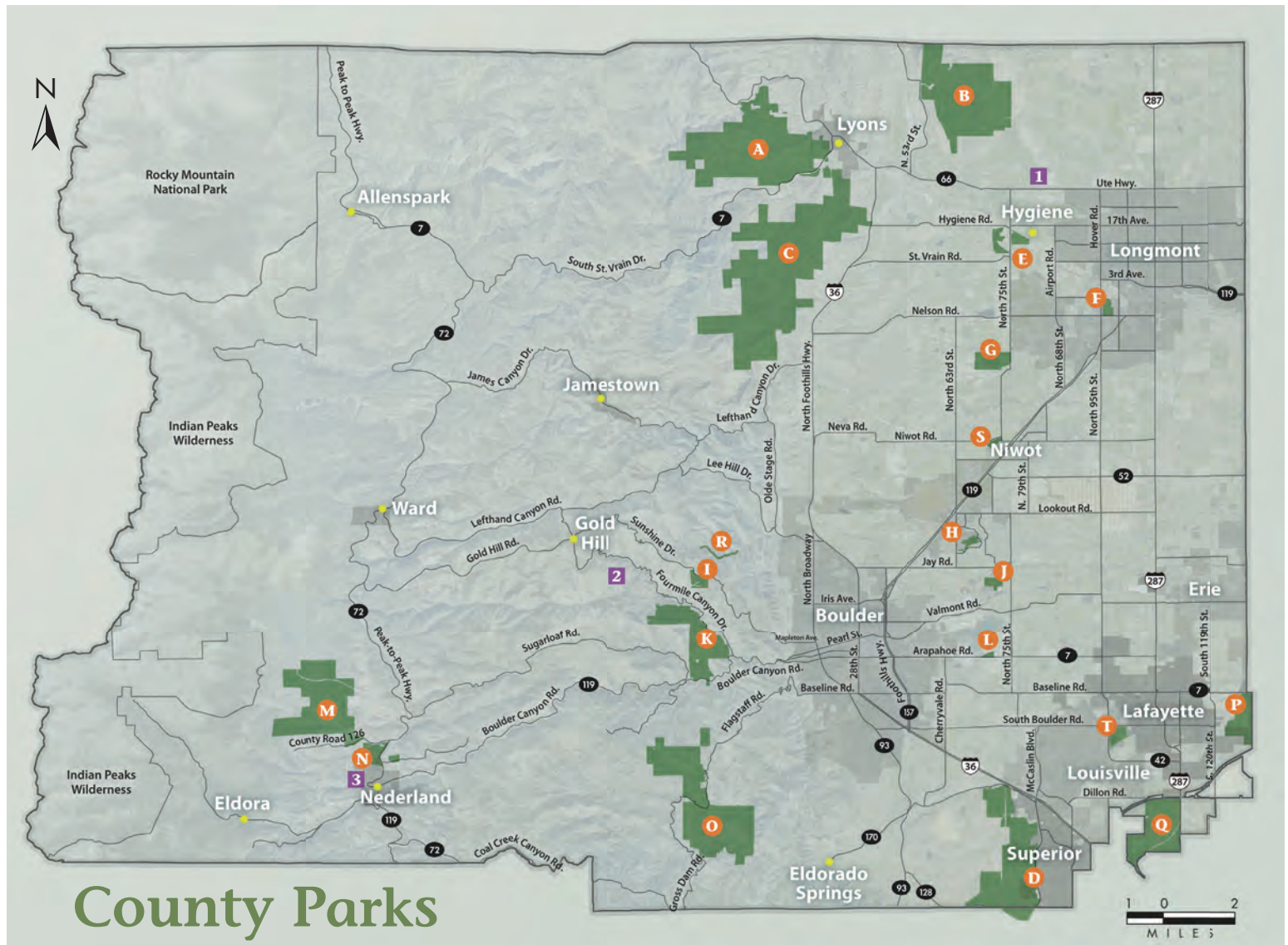
Download from trailsapp.org today to start your local summer adventures!



Parks & Open Space

5201 St. Vrain Road, Longmont, CO 80503

www.BoulderCountyOpenSpace.org



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| A Hall Ranch | F Boulder County Fairgrounds | L Legion Park | R Anne U. White |
| B Ron Stewart Preserve at Rabbit Mountain | G Lagerman Reservoir | M Caribou Ranch | S Dodd Lake |
| C Heil Valley Ranch (Portions closed due to fire recovery.) | H Twin Lakes | N Mud Lake | T Harney Lastoka |
| D Coalton Trailhead | I Bald Mountain Scenic Area | O Walker Ranch | 1 Agricultural Heritage Center |
| E Pella Crossing | J Walden Ponds Wildlife Habitat | P Flagg Park | 2 James F. Bailey Assay Office Museum |
| | K Betasso Preserve | Q Carolyn Holmberg Preserve at Rock Creek Farm | 3 Nederland Mining Museum |