

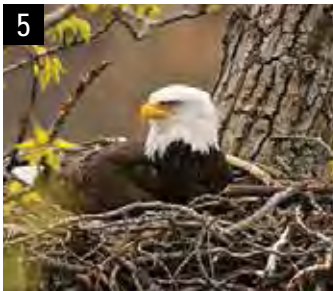
2013

Larimer County

Natural Resources

STATE OF THE RESOURCE





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Adult Mayfly (cover photo):
The presence of this adult Mayfly combined with other
native aquatic insects suggests the streams of
Red Mountain Open Space are in great condition.

Adult Mayfly cover photo courtesy of: David Rees

Natural disturbances are crucial to a healthy natural environment. They create new habitat, promote new growth and reallocate energy on a tremendous scale. Without fire, aspen groves would not sprinkle the mountain side. Without floods, cottonwoods could not reproduce. The year 2013 further tested the resilience of our natural systems and put to use the adaptive approach we take to resource management at Larimer County Natural Resources. The intense September rains and subsequent high river flows tested our restoration work along the Poudre River and the outbreak of dalmatian toadflax following the High Park Fire created opportunities for us to partner on a larger landscape scale, adapting our efforts to address these challenges.

We completed many projects with community partners including rebuilding sections of trails and removing invasive trees from a former oxbow along the Poudre River at Lions Open Space. We also worked closely with researchers to learn more about the plants and wildlife on your park and open space properties. Entomologists from CSU documented the biodiversity significance of aquatic insects at Red Mountain Open Space and genetic researchers may have recorded an altered form of columbine at Hermit Park Open Space.

In this years' State of the Resource report you'll find more info on all of these projects plus others that defined 2013. I hope you enjoy the read!



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Bald Eagle photo courtesy of: Ron Niebrugge

Weevil photo courtesy of: LCNR Staff

Buckthorn Volunteers photo courtesy of: Nick Anderson

New Bald Eagle Nest Found



The eagle has landed, but unlike the first trip to the moon, this eagle has decided to take up residence. A new bald eagle nest was located near the shores of Fossil Creek Reservoir. Bald eagle nests are rare in Larimer County, with only a few located along the Poudre River. Although the pair was not successful in rearing chicks this year, nest monitoring will continue and with an ample supply of fish, prairie dogs and waterfowl nearby, they're likely to succeed in the future. This nest is a great example of Larimer County partnering with other agencies to protect excellent habitat, such as the riparian habitat found at Fossil Creek Reservoir Regional Open Space, and wildlife responding in kind.

Weevilmania Lives!



Although this phenomenon won't result in the hysteria and high pitch screaming that characterized Beatlemania of the 1960s, *Mecinus janthinus* weevils are touring Larimer County and have many rabid fans. *M. janthinus* are slender, black insects (about the 1/2 size of a lady bug) that exhibit monophagy, or feeding solely on a single plant species. Dalmatian toadflax, a noxious weed, is the weevil's only food source and often occurs in steep, disturbed terrain such as Hewlett Gulch and the mountainous areas affected by the High Park Fire. Over 5,000 *M. janthinus* were released in areas burned by the 2012 fires and these insects are overwintering and waiting to emerge in the spring and gorge on dalmatian toadflax tissue. *M. janthinus* are part of an integrated pest management approach to weed control; and when it comes to dalmatian toadflax, these weevils won't "Let it Be."

Heard About Buckthorn?



Buckthorn may not be the best known shrub on the block, but it makes a memorable first impression. A native to Europe, buckthorn was first brought to the US in the 1800s as an ornamental shrub. It produces a prodigious amount of seed, spreads easily and escapes yards. This runaway shrub forms dense thickets and chokes out native vegetation. Oh, and did we mention...it's thorny! A crew of over 30 volunteers from Larimer County Natural Resources, the Lions Club, Daughters of the American Revolution and Colorado Forest Service removed over 200 buckthorn plants from Lions Open Space during Make a Difference Week in October. We've just scratched the surface too, so you'll be hearing more about buckthorn management in the future.

Mutants Inhabit Hermit Park

A population of mutants inhabits Hermit Park Open Space and Natural Resource staff are thrilled to have them. Columbine comes in many forms and one variety is a striking mutant version of the Colorado state flower *Aquilegia coerulea*. The mutant columbine variety *daileyae* eschews the characteristic nectar spurs with an additional set of sepals, or whorls, at the base of the flower. The reason *Aquilegia coerulea v. daileyae* is not well known, in addition to not receiving the marketing blitz that other mutants such as the 'Teenage Mutant Ninja Turtles' receive, is that *Aquilegia coerulea v. daileyae* is very uncommon. This plant has only been observed in Larimer and Jefferson counties and nowhere else on earth...or any other planet for that matter.



Aquilegia Coerulea



Aquilegia Coerulea v. Daileyae

Tenacious Volunteers

The September floods certainly were fierce, but Larimer County volunteers are tenacious. The target of their drive was the Nomad Trail at Horsetooth Mountain Open Space. The Nomad Trail was closed for over a month due to an 80-foot section of deep mud. In addition to the mud, some visitors ignored the closure and walked around the trail, disturbing additional vegetation and causing resource damage. The solution: good trail design and fantastic volunteers. Over 15 Larimer County volunteers assisted our trails staff in building a log turnpike and drainage structure, allowing water to flow under, instead of across the trail. The flood has passed but the improved section of trail is lasting. We'll take tenacity over ferocity any time!





Columbine photos courtesy of: Scott Hodges

Volunteers photo courtesy of: Pam Mayhew

Sand Creek – A Stream for the Ages

Sand Creek, a small headwater stream at Red Mountain Open Space, has an uncharacteristically high diversity of aquatic insects. A recent study found 53 species of aquatic benthic (bottom dwelling) insects inhabit the upper portion of this stream, compared to 30-35 species in similar Front Range streams. Front Range streams have been significantly altered over the last 150 years due to mining, irrigation and ranching activities. Upper Sand Creek was spared these impacts and is largely intact. Like remnants of the Overland Trail and abandoned sections of the Union Pacific Railroad, Sand Creek is a rarity and a vestige of the past. It's also a symbol of a healthy environment and a tribute to good land management.



Amid Floods and Fire, Land and Landowners Prevail

Between May 2012 and September 2013 the forests and rivers of Larimer County experienced tremendous changes due to the High Park Fire and flooding in the Poudre and Big Thompson watersheds. Thousands of acres were affected, including properties protected with conservation easements held by Larimer County.

All 42 conservation easements Larimer County holds were monitored in 2013 and no violations were observed. However, impacts from the flood and fires were evident on many properties.

The eased property that experienced the most impact from floods and fires is the Fonken Conservation Easement, located near Poudre Park. In May 2012 the Hewlett Gulch Fire came within a mile of the Fonken property. Less than a month later, the High Park Fire roared through and burned more than 95% of the property destroying the family's 1967 cabin. The floods followed.

Crown fires like the High Park Fire often leave steep hillsides bare of vegetation and exposed to runoff and debris flows. The first flood on the Fonken property occurred in July, washing away part of the road. September brought a flood that downed trees, redirected the stream channel and finished off the road. With their cabin gone, the forest burned and the road impassable, Dr. and Mrs. Fonken could have walked away and left behind a place that's an integral part of their family.



Photo courtesy of: Pam Mayhew

Dr. Fonken

Instead, Dr. Fonken, a retired Fort Collins ophthalmologist, and his wife Elaine continued to do what they've always done, adapt with nature. Dr. Fonken has deep respect for the natural world and the forces of nature. He's a model land steward and has spent decades creating defensible space around the cabin, removing beetle killed trees and seeding and mulching steep, bare slopes. Like the land he owns, he's resilient. Another fire or flood will eventually come and similar to the land he loves, he and his family will adapt and persevere.

Conservation easements are voluntary, legally binding agreements with landowners that limit development and protect resource values such as wildlife habitat, rare plants and scenic views.

Larimer County Natural Resources receives funding for the acquisition and management of County Open Spaces and Parks from the 1995 citizen initiated “Help Preserve Open Spaces Sales Tax.”

2013 STATE OF THE RESOURCE REPORT

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