

ANCA Attracting Pollinators

Background

These days, there is a lot of talk around inclusion and equity. When we hear the words, we have associations giving them meaning. We may associate race, color, sex, age, national origin, religion, sexual orientation, gender identity and expression, status as a veteran, and basis of disability or any other federal, state, or local protected class. We may stray into under-served, displaced, marginalized, disenfranchised, or enslaved. I will advance the need to include the coming generations in our concept of inclusivity. I believe doing so sets our focus on what could work rather than what is broken.

One of the buzzwords we also hear a lot of is sustainable. The standard definition for sustainable comes from The **Brundtland** Report, also commonly known as Our Common Future, a publication released by the World Commission on Environment and Development (WCED) in 1987, and it states:

“development that meets the needs of the present without compromising the ability of future generations to meet their own needs,”

The host for this action, Martin Acres, is a fantastically convenient and surprisingly affordable Boulder neighborhood. With easy access to U.S. 36, a major RTD bus route and lots of bike paths, living here means you get anywhere you want to go with little hassle. The neighborhood started out as a Boulder suburb in the 1950s. With the completion of the Denver-Boulder Turnpike, the population of the area started growing. What first began as a neighborhood of small family housing quickly turned into a college rental hotbed. These days, you'll find a nice mix of student rentals with more and more families coming back to call this neighborhood home.

The neighborhood is home to Creekside Elementary School. Creekside Elementary School is a neighborhood school that serves south Boulder and an international population. The Creekside community is comprised of students from over 45 countries which gives students the opportunity to experience various cultures on a daily basis. It is represented by a cross-section of socioeconomic and ethnic groups. As a neighborhood school, Creekside provides services that build community while providing opportunities for all students to achieve success. Special programs in our school include literacy support, English language development, special education services, PBIS (Positive Behavior Support), and gifted and talented (G&T). Services for students learning English follow the co-teaching approach in which English language resource teachers co-teach with the general education teacher in the regular classroom.

In the summer of 2014, CU-Boulder installed the University's first landscape designed for and dedicated to pollinators on a nearby campus. The landscape consists of barberry, currant, monarda, spirea, rudbeckia, yarrow, gooseberry, catmint, and lavender, which should tolerate and beautify the roadside conditions. The first phase was installed along Broadway and the bike path from 18th St to the Regent bus stop. In 2015, the second phase of the campus pollinator sanctuary landscape was established at the east entrance of the main campus, located on the north side of the new campus recycling building

and west of the 28th St underpass. In summer 2018, students transformed a Boulder city parking lot near the Boulder Dushanbe Teahouse into a bee haven. In 2019, a group of CU environmental design students wrapped up their summer research, the design-build studio led by Lecturer Danielle Bilot. Since mid-May, students learned about bees, plants, and landscape planning to turn a campus parking lot into a native bee habitat.

University of Colorado Pollinator Garden (<https://youtu.be/b8cZ2qfk9bA>)

Accounting for and acting on behalf of coming generations is somewhat a lost art that many voices attempt to remind us of. Here are some of the ones I have heard:

Oren Lyon:

The Iroquois Confederacy, which helped inspire our form of Democracy, held the present in the service of future generations. Imagine a world inspired by the experience, as well as future aspirations. What if our decisions today were informed by consideration of the effects on coming generations? Chief Oren Lyons of the Haudenosaunee Nation reminds us of this responsibility.

Our societies are based upon great democratic principles of the authority of the people and equal responsibilities for the men and the women. This was a great way of life across this Great Turtle Island and freedom with respect was everywhere. Our leaders were instructed to be men of vision and to make every decision on behalf of the seventh generation to come; to have compassion and love for those generations yet unborn. We were instructed to give thanks for All That Sustains Us.

*Haudenosaunee Faithkeeper, Chief Oren Lyons
addressing delegates to the United Nations Organization
opened "The Year of the Indigenous Peoples" (1993)
in the United Nations General Assembly Auditorium,
United Nations Plaza, New York City, December 10, 1992.*

https://ratical.org/many_worlds/6Nations/OLatUNin92.html

Joanna Macy

Nuclear activist Joanna Macy has shared with us a fathomless appreciation for Deep Time. She asks us to consider speaking with our descendants 200 years down the line and act now as if their lives depend on us. It turns out they do rely on us.

Future generations, if there is a livable world for them, will look back at the epochal transition we are making to a life-sustaining society. And they may well call this the time of the Great Turning.

Joanna Macy

Future Generations (<https://player.vimeo.com/video/107848642>)

Roman Krznaric

Author Roman Krznaric shares examples of ways of becoming good ancestors -- or, as he calls them, "Time Rebels" -- and to join a movement redefining lifespans, pursuing intergenerational justice, and practicing deep love for the planet. But, unfortunately, given a choice between a marshmallow now or two later results in somewhat predictable results. Roman then offers us the Acorn mind-frame that thinks generations down the line.

The Marshmallow and the Acorn (<https://www.youtube.com/watch?v=5QHqVF4aN6o>)

Attracting the next generation

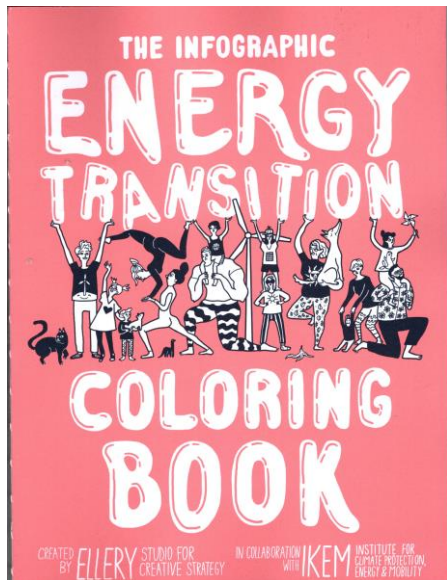
Intergenerational equity represents a widely recognized principle of international environmental law providing for the preservation of natural resources and the environment for the benefit of future generations. It has roots in the 1972 Stockholm Declaration and forms a core tenet of sustainable development frameworks. The UNFCCC embeds intragenerational equity within the international climate change regime as a founding principle. Article 3 frames the concept in terms of the need to "protect the climate system for the benefit of present and future generations of humankind," reinforced by the inclusion of sustainable development as a further core principle within the UNFCCC framework. The continuing relevance of intergenerational equity as a guiding principle shaping climate action is reaffirmed by the Paris Agreement preamble.

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

It was hoped to include children's programming in the Martin Acres ANCA workshop. Being a family-friendly neighborhood, we have the children of parents who are actively engaging in healing the climate but may not arrange child care. For parents that are too over-scheduled, we have an opportunity for the next generation to urge on their recalcitrant parents. Acknowledging that the young can alter our present course seemed like a winning strategy. Just ask Greta Thunberg.

Knowing some of the families in the neighborhood, I put out invitations that the upcoming workshop would include programming for children. What we found out was that we had scheduled our workshop for the first weekend of spring break. So we moved the workshop two weeks later. Several of the core organizing team had children, and I tried to get them interested. Several of the presenters had children and wanted to get them interested. I found out that with children, they need to know that other children will be involved. Through the parents I had, I learned a bit about programming that would be interesting. Since we were in COVID, the kids were used to using virtual meetings. As post-COVID life reopens, involving children programming will be much easier done outside.

So the key elements are providing activities that involve children of different ages. For example, I have a coloring book that has activities as well as black and white drawings. I planned to use this by emailing printable sheets. The book suggests activities that are also perfect for encouraging creative Imagineering in children of all ages.



I also am aware that this neighborhood was once a farm. Martin Acres is a nod to Martin's Farm, which operated up to the 1950s. By discovering the Boulder Apple Tree Project, which is inventorying the legacy heirloom apple trees left from an apple orchard past, I intended to share with the children some of our agricultural and agronomic histories with a focus on pollinators. This offering would take the children through tribal settlement, western settlement, water rights, apple growing, beekeeping, pollinating trees, honey production, suburbanization, and caring for pollinators.

I hoped that we also might attract the local elementary school to do this historical appreciation and future provision of a bee-friendly garden. One of the parents I had contacted had a fifth-grader in the local school, and she was active with their Parent-Teacher Association. She was aware that the two fifth grades were interested in a legacy project. She put me in touch with the school principal, the school groundskeeper, the fifth-grade teachers, and the parent supervising the school vegetable garden.

When society is reopened, having an outdoor program for the children will undoubtedly make things easier. All of this plus exploring nature becomes possible. Also, we can bring in food and beverages, which always are a hit!

Outline of a 4-hour workshop with Children

We found that the Boulder Neighborhoods felt a four-hour workshop is stretching people's attention spans. So my quest was to design a four-hour program for children of multiple ages. My plan for working with them was:

1. Introductions forming a circle.

2. Agreements on how we will conduct our conversations
3. Discussion of what is climate change and what are their concerns
4. A coloring break using the supplied drawings.
5. A food break (pizza if we are in-person)
6. A presentation of a sense of place and our place in it (using the following section)
7. A circle conversation on what a better world would look like
8. A bio break, playtime if in-person
9. A conversation on the one thing that can be done to move toward that better world
10. Activity planting Nasturtium seeds to take home. Instructions for care and planting.
11. Circle with reflection on our time together.

Planting a Pollinator Garden

A Sense of Place

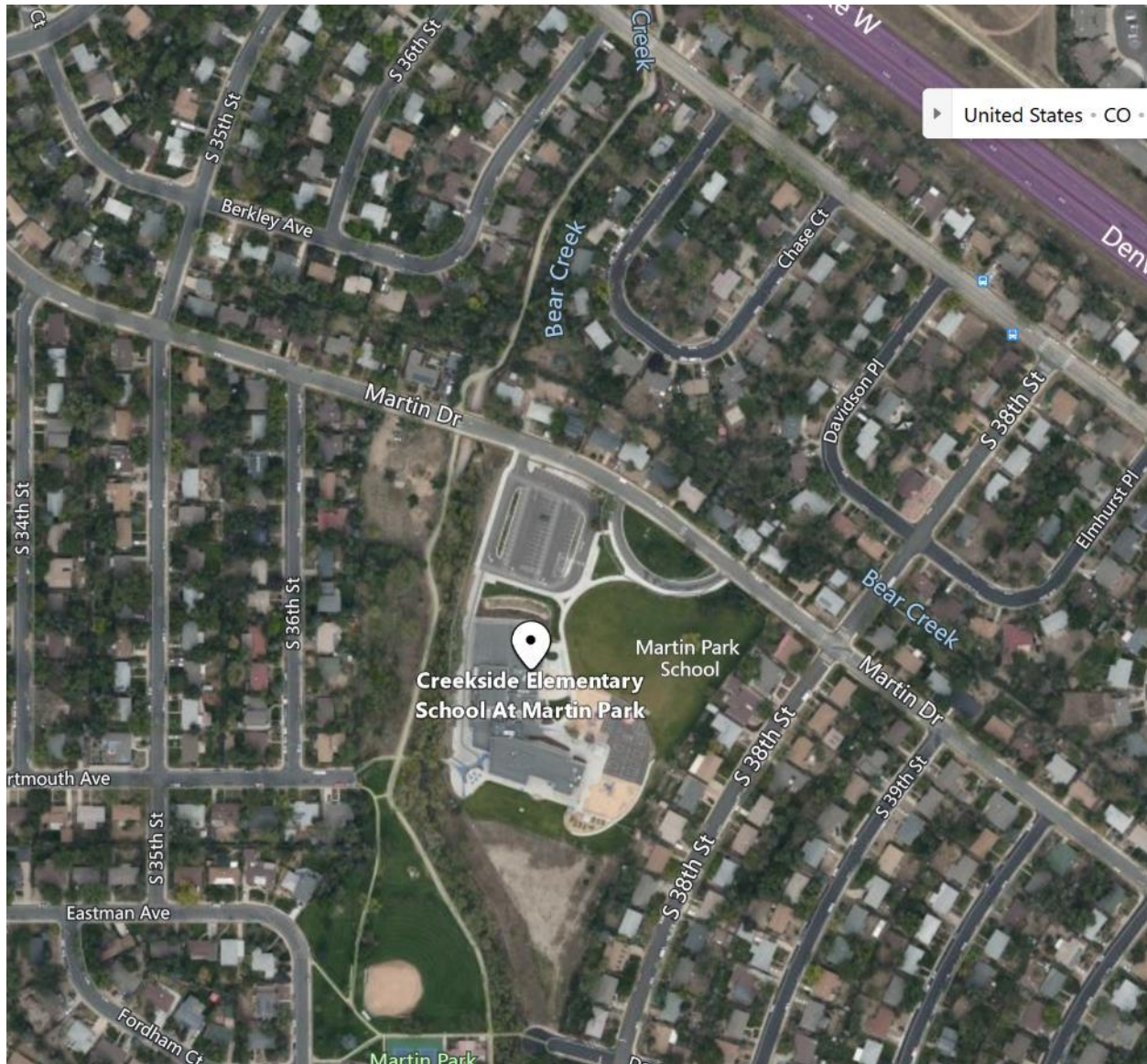


Figure 1- Creekside Aerial View

Creekside Elementary is in a prime location next to Bear Creek. There is also a creek running in the springtime from runoff from Table Mesa. When the land was a farm, this had to be prime irrigated land. I wanted to give the 5th graders a sense of history and the place from which they had spent so much time. The fifth grade graduate to middle school, and they try to leave a legacy for coming grades. I was lucky enough to turn pollinator gardens into the Creekside Class of 2021 legacy project.

A Boulder Apple Tree Project in Boulder honors our orchard past by identifying and labeling trees left standing from that time. The fact that Boulder has a fruit past, that bees are the primary pollinators of these trees, and modern lifestyles are currently challenging bees formed the skeleton for a presentation on why pollinators need our help. In addition, there are legacy apple trees identified in the neighborhood surrounding the school grounds.

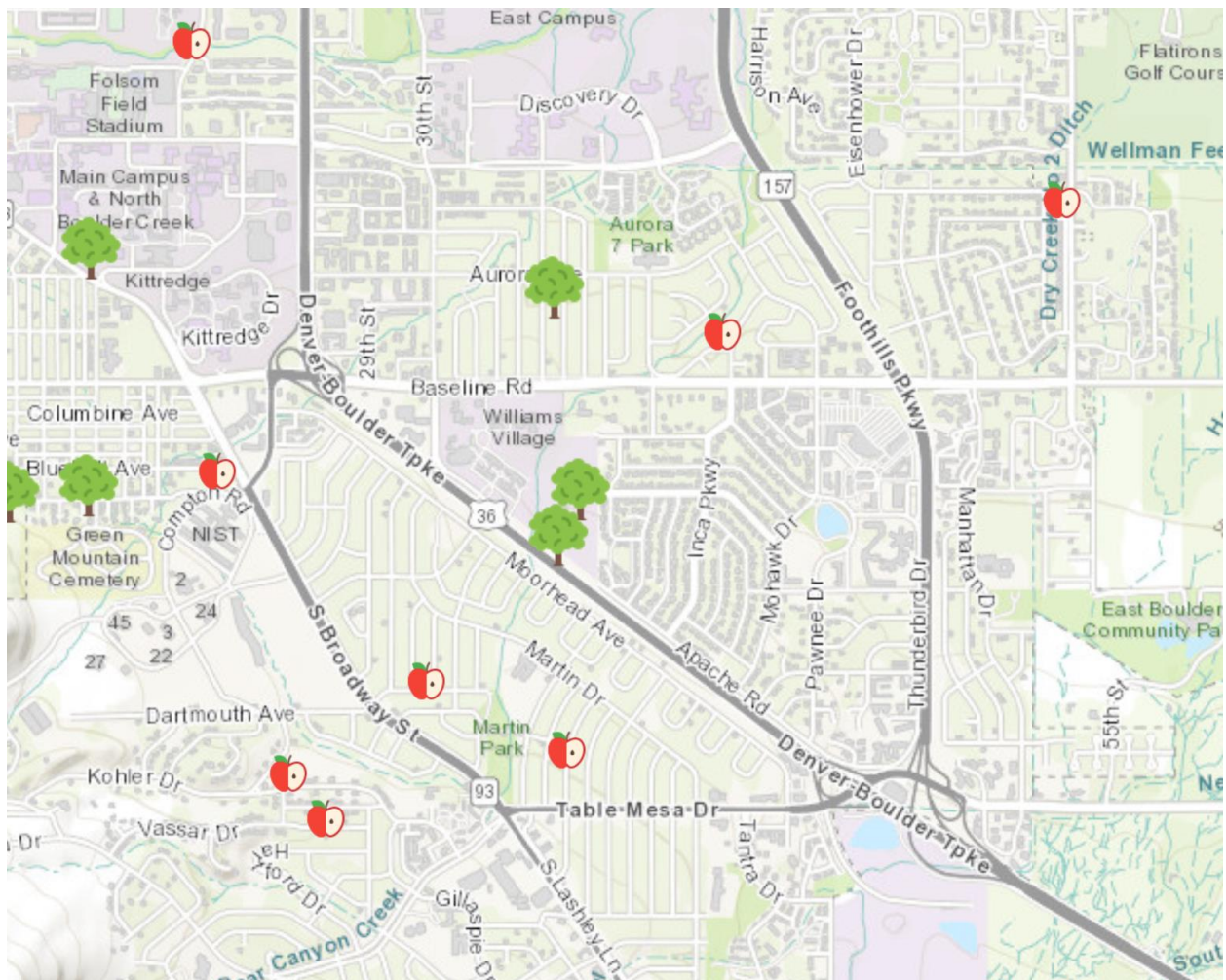


Figure 2 - Apple Inventory near Creekside (Boulder Apple Tree Project)

I knew the area was once renowned for its apple crop, both dessert and cider apples. I decided to take places the children might know and share the past with them. Here is a picture of the iconic Chautauqua property when it was devoted to apple orchards.



Figure 3 - Chautauqua as Apple Orchard

And here is a picture of the family nature of working orchards. This picture is clearly from the northern end of town.



Figure 4 - Working the original orchards

And where you have fruit trees, you require bee pollinators. It would help if you also had a year with little snow or frost at blossom time. So discussing climate was brought in. I shared that not only was Boulder known for its apples and cider; it was also known for the quality of its honey.



Figure 5 - Orchards need bees, and bees make honey

And to impress upon the children the bounty they enjoy because nature has provided bees, I shared a picture of a produce section at Whole Foods when bees are pollinating, and the same produce stand when bees are not pollinating.



Figure 6 - Produce with bee pollination, and on the right, without

Planting the gardens

Pre-preparation

Working with the 5th Grade Parent Teachers allowed us to mobilize the parents for two-bed preparation work details the week before the planting. These were in the early evening and involved weeding and amending the soil with compost. In addition, we had arranged for a local arborist to drop off a load of chip mulch, which was used to top-dress the beds in preparation for planting.

Day One



Figure 7 - Fifth Grade Day one



Figure 8 - We got local Chip Mulch



Figure 9 - Hands in the dirt



Figure 10 - Success Day one!

Day Two



Figure 11 - Gathering to review place



Figure 12 - Dove right into planting

Summary

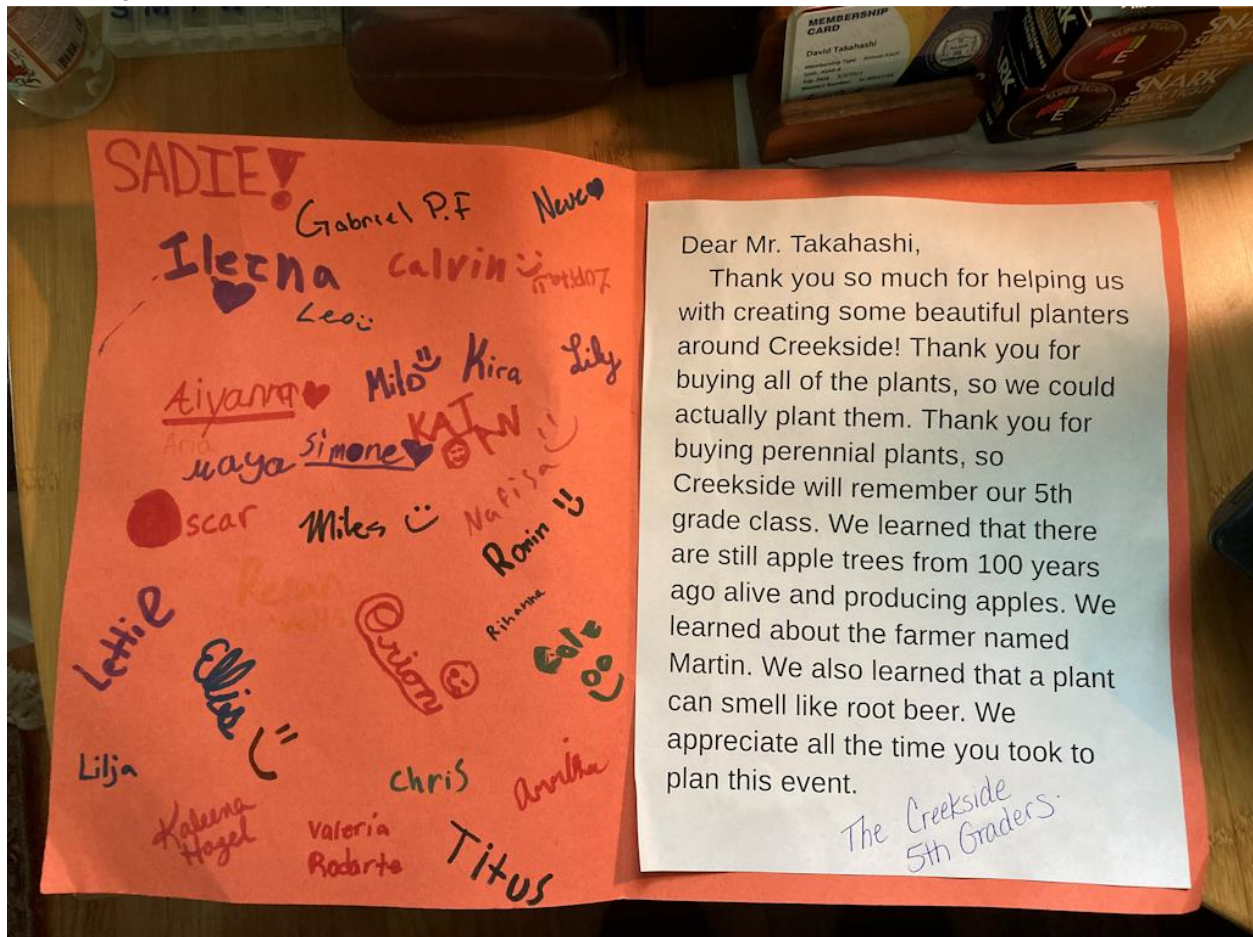
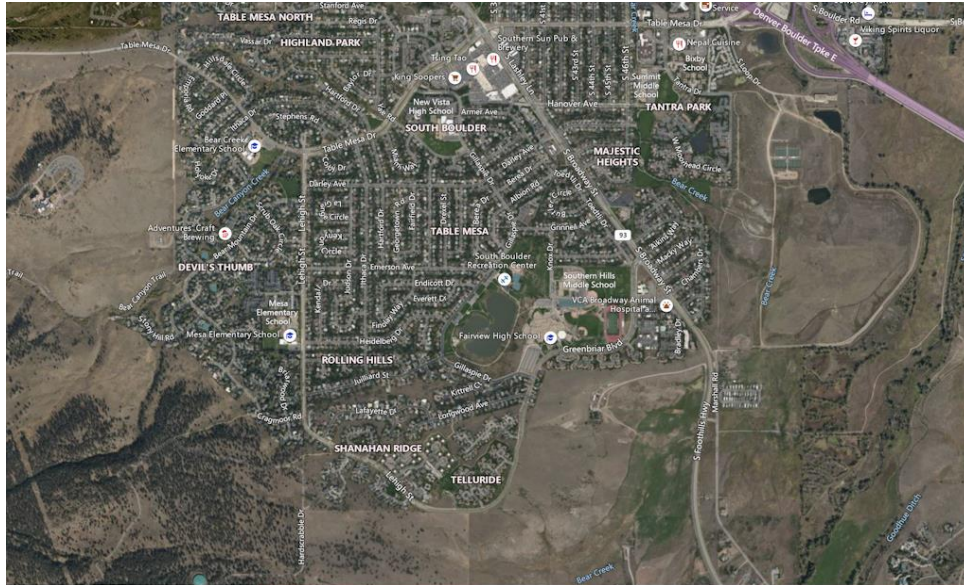


Figure 13 - Thank you card from Fifth Grades

The work ahead

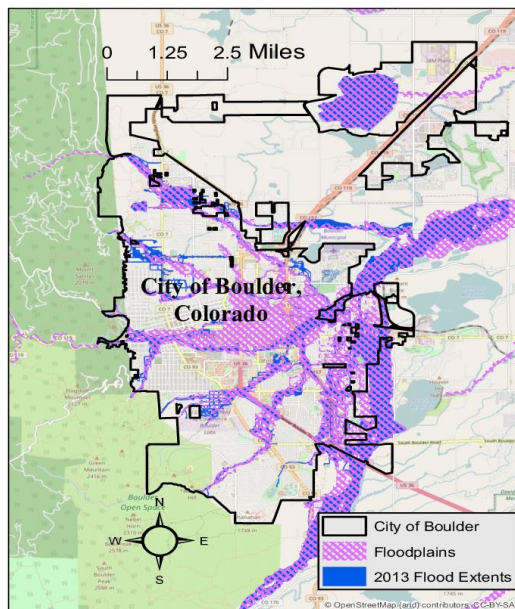
Bear Creek, hydrology, and CU-South

Another project offered through the ANCA workshop involved education around the CU-South development proposal before City Council. It turns out that Bear Creek winds its way through the hydrology of CU South and invites outdoor activities around water for children of all ages. This additional explanation would expose the interdependence of water, land, sky, and people and provide a rich outdoor educational experience for future workshops. Here is a partial map of Bear Creek's course (Bear Creek's course in blue):



Flooding and Flood Plains

While we investigate the water flowing into the neighborhood, which provided for farming, we can naturally stray into the flooding in 2013 and flood zones that precipitated the floods. This field trip also is an outdoor activity that would be a rich experience of place, history, and planning for future flood disruptions.



Heatwave awareness:

Climate is traveling northward. By 2100, our climate will resemble what Albuquerque, New Mexico experiences today: even hotter and drier. An investigation of what happens in a heatwave as systems begin to breakdown leading to cascading results is an invitation to think about:

- How we might alleviate the urban heat island effect.
- How we might consider cooling stations in the neighborhood to provide relief.
- How to prepare for a time when it may be necessary to sleep outside at night.
- How to manage necessities if electricity is disrupted.
- What to do if streets become unusable.
- What to do if water service is interrupted through broken mains, and how to prepare your household.

Acknowledging the fragile interdependence of water, earth, sky, and people

There are many possible avenues for next-generation participation. We hope to exercise some of them in the coming years.