

# exposures

A PUBLICATION OF ASLA COLORADO

2014 PARKS & OPEN  
SPACE EDITION  
VOLUME 5 | ISSUE 3



## Dominion Bridge Preserve the Greenbelt Program



ASLA  
COLORADO

BE CONNECTED. BE INFORMED. BE BETTER.  
VISIT US ONLINE AT [WWW.ASLACOLORADO.ORG](http://WWW.ASLACOLORADO.ORG)

# Preserve the Greenbelt Elementary Education Program

Training The Next Generation Of Tree Stewards

By Carol E. Lyons

The Institute for Environmental Solutions (IES), in partnership with the City of Wheat Ridge, implemented Preserve the Greenbelt Elementary Education Program, an education and urban reforestation program during the 2013-2014 school year. The program incorporated scientific analysis, riparian landscape planning, hands-on education, and volunteer involvement to improve the Wheat Ridge Greenbelt.

The Wheat Ridge Greenbelt, a 300-acre woodland open space bordering Clear Creek, is a cherished area to the people of Wheat Ridge and surrounding communities. In recent years, the Greenbelt has experienced ecological decline due to drought, extreme weather, and limited municipal resources. IES identified a unique opportunity to build on a previous IES restoration project, the Wheat Ridge Revive the Greenbelt! Program. In 2012-2013, IES, in collaboration with the City of Wheat Ridge, planned and implemented a pilot riparian restoration program to reverse the decline of Greenbelt trees. Over 200 volunteers planted more than 200 trees along Clear Creek in April 2013. Thanks to careful planting design (Kevin Lyles, [Confluent Design](#)), tree selection, planting, and maintenance, over 75% of these trees are flourishing in spite of the September 2013 and May 2014 floods.

## IES WHEAT RIDGE PRESERVE THE GREENBELT ELEMENTARY EDUCATION PROGRAM

Based on the successful 2013 IES tree project, two local educators contacted IES about engaging elementary school students in learning about the local ecosystem, and in planting and caring for trees in the Greenbelt. With grant support from Xcel Energy, IES designed the Wheat Ridge Preserve the Greenbelt Elementary Program to teach 4th graders at Kullerstrand Elementary and 3rd graders at Mountain Phoenix Community School how to become Greenbelt Tree Stewards.



*ABOVE: Mountain Phoenix Community School 3rd graders draw water from the Clear Creek for their new saplings. The students were introduced to proper tree planting and care, and assisted by volunteers.*

# “ALL OF THE GREENBELT SHOULD BE FILLED WITH TREES”

Diego, 4th Grade

The initial stage of the project focused on information gathering from stakeholders, the IES steering committee, and local forestry and ecology experts. IES worked closely with Wheat Ridge Forestry and Open Space Supervisor, Margaret Paget, on site selection, tree selection, and project organization. Project plans considered the riparian system’s limitations for replanting and the Colorado Natural Heritage Program’s Biological Inventory. IES identified five critical aspects of the project:

- Stakeholder involvement
- Optimal site selection
- Optimal species selection
- Correct planting
- Maintenance of the saplings for three years.

Working closely with the teachers, IES planned and implemented three workshops in each of three classrooms and a half-day field trip for the two schools. In the Web of Life workshop, each student adopted an organism (plant or animal) that lives in the Greenbelt then connected a string to other students portraying related organisms, literally mapping a “web of life”. In the second workshop, students represented the parts of a tree and its environment, such as roots, branches, trunks, air, water, sunlight and nutrients. Each student then related parts of the tree and the resources needed for its survival, learning about balance and resource scarcity in ecological communities. Margaret Paget brought in samples of the saplings that the students would plant and gave an overview of planting and the ecology of the Greenbelt.

Sixty Mountain Phoenix Community School 3rd graders walked with teachers and parent volunteers from school to the Greenbelt south of 43rd Avenue at Moore Street on April 18 to put their new knowledge of the ecosystem to work. On April 23, thirty 4th graders from Kullerstrand Elementary School found their planting site south of West Lake near Youngfield. The students participated in three hour-long activities: planting two saplings, arts and crafts, and a nature walk led by Margaret Paget. IES Institute Associate Brian Kelly demonstrated proper planting techniques. Each student was encouraged to name their saplings, providing the opportunity to connect to their trees as they grow. The nature walk through a portion of the Greenbelt gave students a better understanding of the open space. In the arts and crafts activities, the children expressed their vision of the park, and created a souvenir to take home. Kids and volunteers all received custom t-shirts with their school logo and the title, Greenbelt Tree Steward. The third classroom workshop was designed to teach the children how to care for the newly planted trees so that they grow and thrive. Students played a board game depicting events that could help or harm urban trees.



ABOVE: Kullerstrand Elementary 4th graders enjoyed their educational nature walk with Margaret Paget, Wheat Ridge’s Forestry and Open Space Supervisor. Students were encouraged to ask questions about their surroundings to better understand the Wheat Ridge Greenbelt ecosystem.



## COMMUNITY INVOLVEMENT AND PROJECT OUTCOMES

The Jefferson County Schools elementary science curriculum emphasizes learning that relates to the real world. The 4th grade curriculum focuses on living systems, living things, organisms and ecosystems. By connecting the ecological web of life in the Wheat Ridge Greenbelt to actually planting and caring for trees – a critical backbone of the ecosystem – science and the environment come alive. The majority of 4th graders at Kullerstrand Elementary, a school with over 77% of its students receiving free or reduced-cost lunch, had never visited the Greenbelt, although their school borders the open space. Some of the students were astonished that access to this public space is free. Now each of them has a personal investment and motivation to visit, learn about, and care for the resource. Based on the positive and enthusiastic feedback from students, teachers, administrators, and parents, IES has decided to work on developing an ongoing Greenbelt-based environmental education program for Kullerstrand 4th graders.

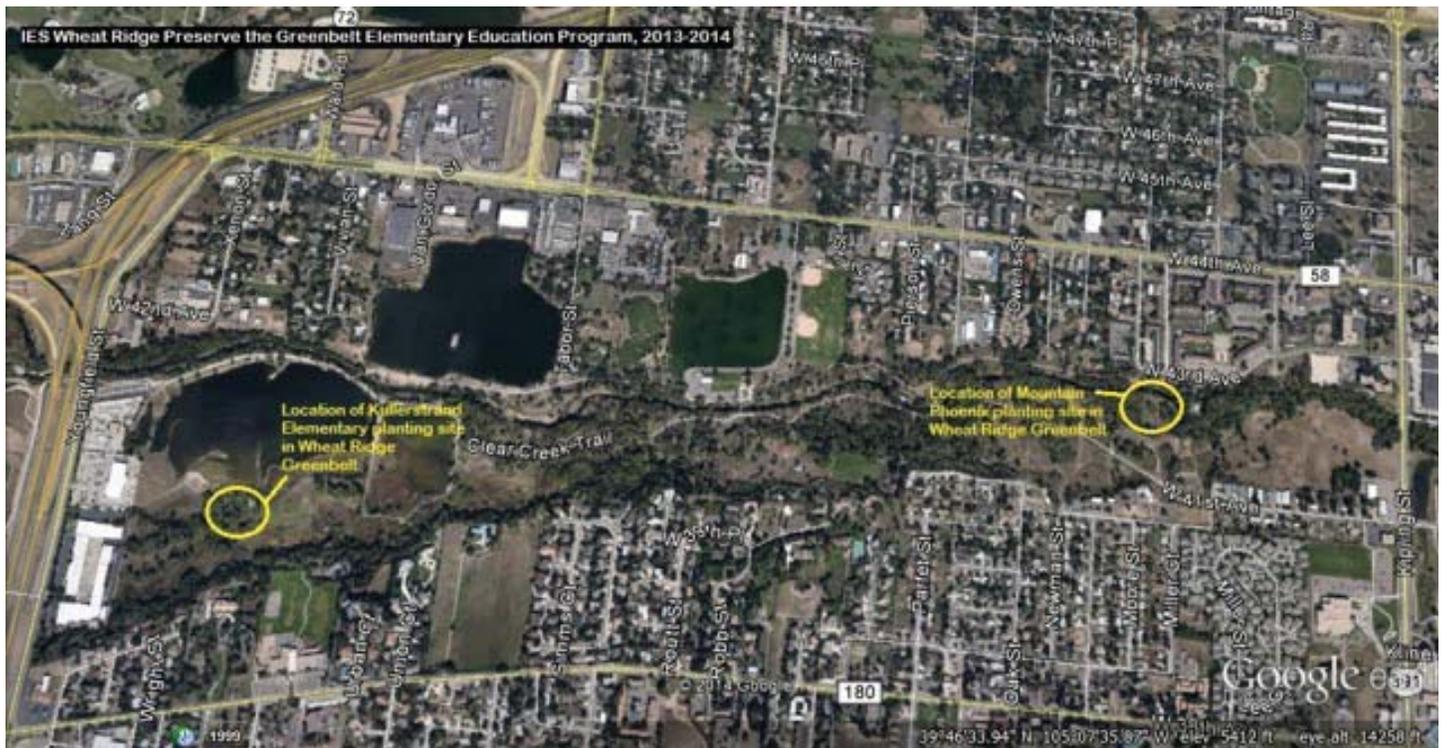
Mountain Phoenix Community School students are more familiar with the Greenbelt, and all have visited the area on school outings. Planting trees to restore damaged areas added a significant new dimension to the students' experience. As with the Kullerstrand students, Mountain Phoenix students will now have a personal connection, making the Greenbelt an important part of their world.

In the first two months after planting in April, over 90% of the saplings are leafing out and thriving. This indicates that the students did a proper job of planting, and the species and sites selected were appropriate. IES Wheat Ridge Tree Stewards, staff members, and parent volunteers continue to care for the new plants. IES has made special collaborative arrangements for the City of Wheat Ridge to deliver a constant water supply for volunteer stewards use.

**“THERE WEREN'T A LOT OF TREES BUT NOW THERE ARE A LOT OF TREES”**

Sergio, 4th Grade

*BELOW: Tree planting sites were selected to provide improved tree canopy in areas most in need while optimizing survival of newly planted trees.*





## THE IES TREE PROJECT

The mission of the IES Tree Project is to improve Colorado cities using tree science. Through collaborative, multi-disciplinary partnerships and programs, IES restores natural systems and urban green infrastructure; educates children and adults to become environmental stewards; rehabilitates, improves and maintains critical urban natural resources; and improves community health and economies.

IES connects people with their environment. In 2010-2011, IES collaborated with Mitchell Elementary School and the City of Golden on Trees for Healthy Kids and Community to plant 40 trees to improve the school environment – reduce air pollution and noise from the adjacent highway, control storm water, and mitigate wind. After three years, City of Golden Forester, Dave High, describes the project as “a big success” with the majority of trees thriving. IES partnered with the City and County of Broomfield on Trees for a Healthy Community and Economy in 2011-2012, developing and implementing a plan to protect the environment while improving the local economy in Broomfield’s civic center.

Based on experience through these projects, IES has determined that the following five factors go into successful tree planting and survival.

1. Thorough collaboration with the full range of interested stakeholders
2. Careful planning of the education and planting program
3. Careful selection of the planting sites and plant species to optimize survival
4. Good instruction and proper planting
5. Plan and implement appropriate maintenance

We look forward to building on this experience, and continuing to train the next generation of tree stewards. IES welcomes comments, questions, and volunteers. Please contact us at [Solutions@i4es.org](mailto:Solutions@i4es.org) or [www.i4es.org](http://www.i4es.org).