

# BEING Ecological

**“Bringing a community together through open space education”**



COSA Conference, 2017



**Ecology** - The study of the interactions of organisms with their environment and with each other.

Lafayette Colorado is in East Boulder County

Approximately 27,000 residents, 20k Caucasian, 5K Hispanic

Fun Facts: Emerald Ash Borer has arrived

Lafayette has a ban on Neonicotinoids



# Lafayette Open Space Education and Outreach Plan — Adopted by Open Space Advisory committee

- Public Component
- Schools
- Media Component
- Intra-governmental
- Private Sector

- Can Open Space programs help transform the communities they are a part of into healthy ecological systems?
- Premise – as the caretakers of community lands, open space programs:
  - are the holders of information and insights of how human beings relate to that land
  - can convene the community in an “ecological manner” because open spaces are among the few places in a community that are most commonly held and commonly used.

- Inform citizens and students of the open space resources and amenities available to them.
- Generate support for open space protection, acquisition and maintenance.



Cornell Laboratory of Ornithology

- 
- A misty landscape with three birds flying over a body of water and tall reeds. The scene is hazy, with a soft, golden light filtering through the fog. The birds are in flight, their wings spread, against a backdrop of tall, thin reeds in the foreground and a dense line of trees in the distance. The overall mood is serene and natural.
- Encourage a conservation ethic that produces respect for open space and the natural world.
  - Foster appreciation for local flora, fauna, and natural landscapes.

# Different ways of doing this . . .

## What are your community identities?

**Birders**



**History Buffs**



**Youth**

**MANY  
MORE!**





# Lafayette Open Space



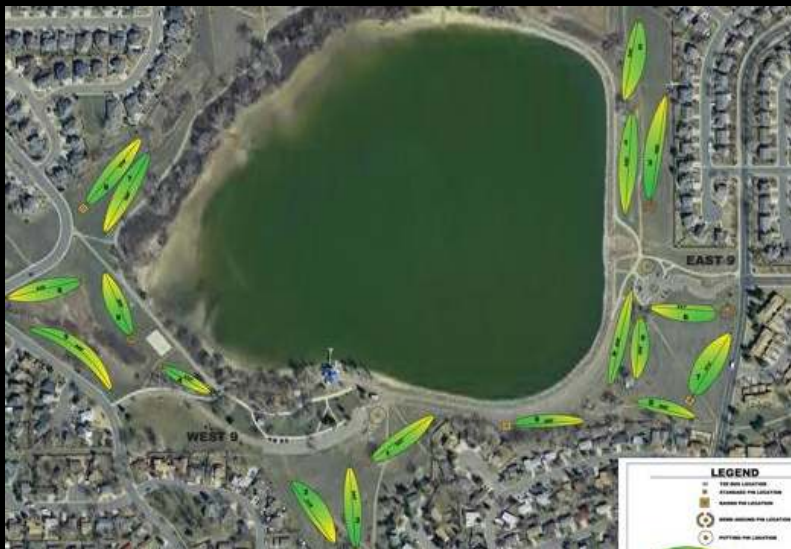
# Lafayette Parks



Boat rentals



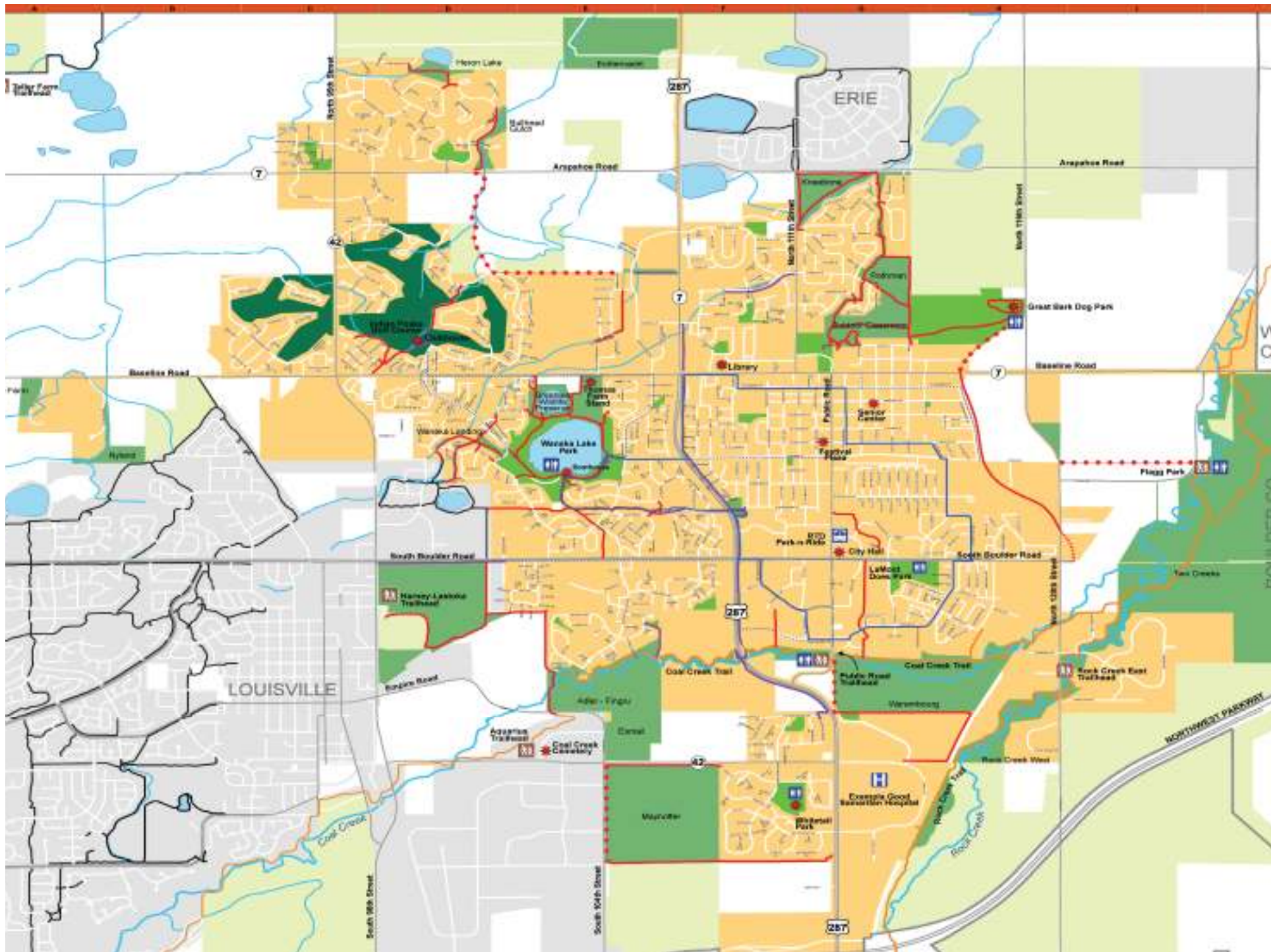
Playgrounds



Frisbee Golf



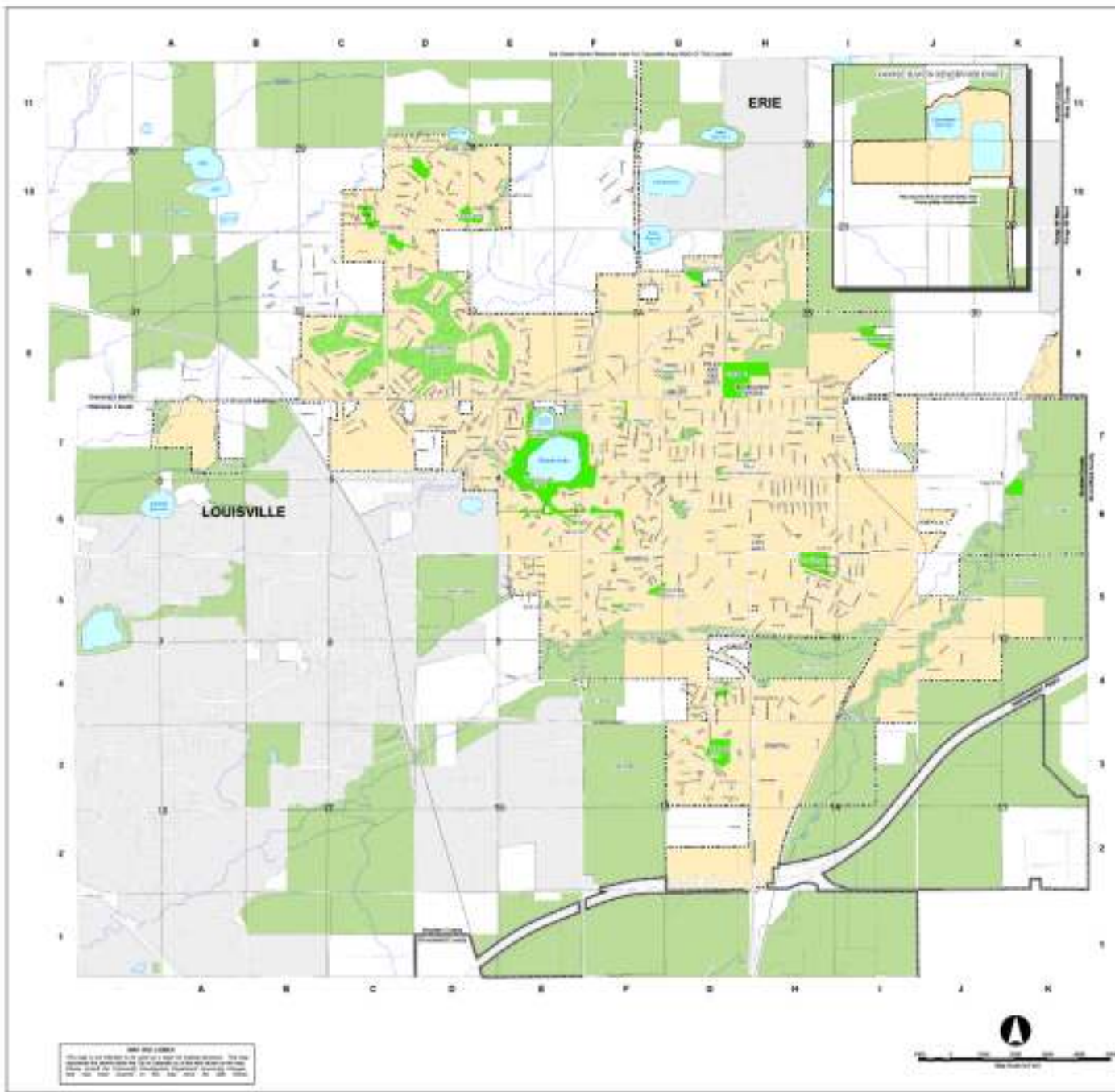
Picnicking



City of **Lafayette**  
 City of Lafayette, Colorado  
**STREET MAP**  
 March 2012

Street Index

1st	10th	11th
2nd	11th	12th
3rd	12th	13th
4th	13th	14th
5th	14th	15th
6th	15th	16th
7th	16th	17th
8th	17th	18th
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85th	94th	95th
86th	95th	96th
87th	96th	97th
88th	97th	98th
89th	98th	99th
90th	99th	100th



© 2012 City of Lafayette  
 This map is a reference tool and not a guarantee. The map is provided as a service to the public and is not intended to be used for legal purposes. For more information, please contact the City of Lafayette at 970-488-1000.





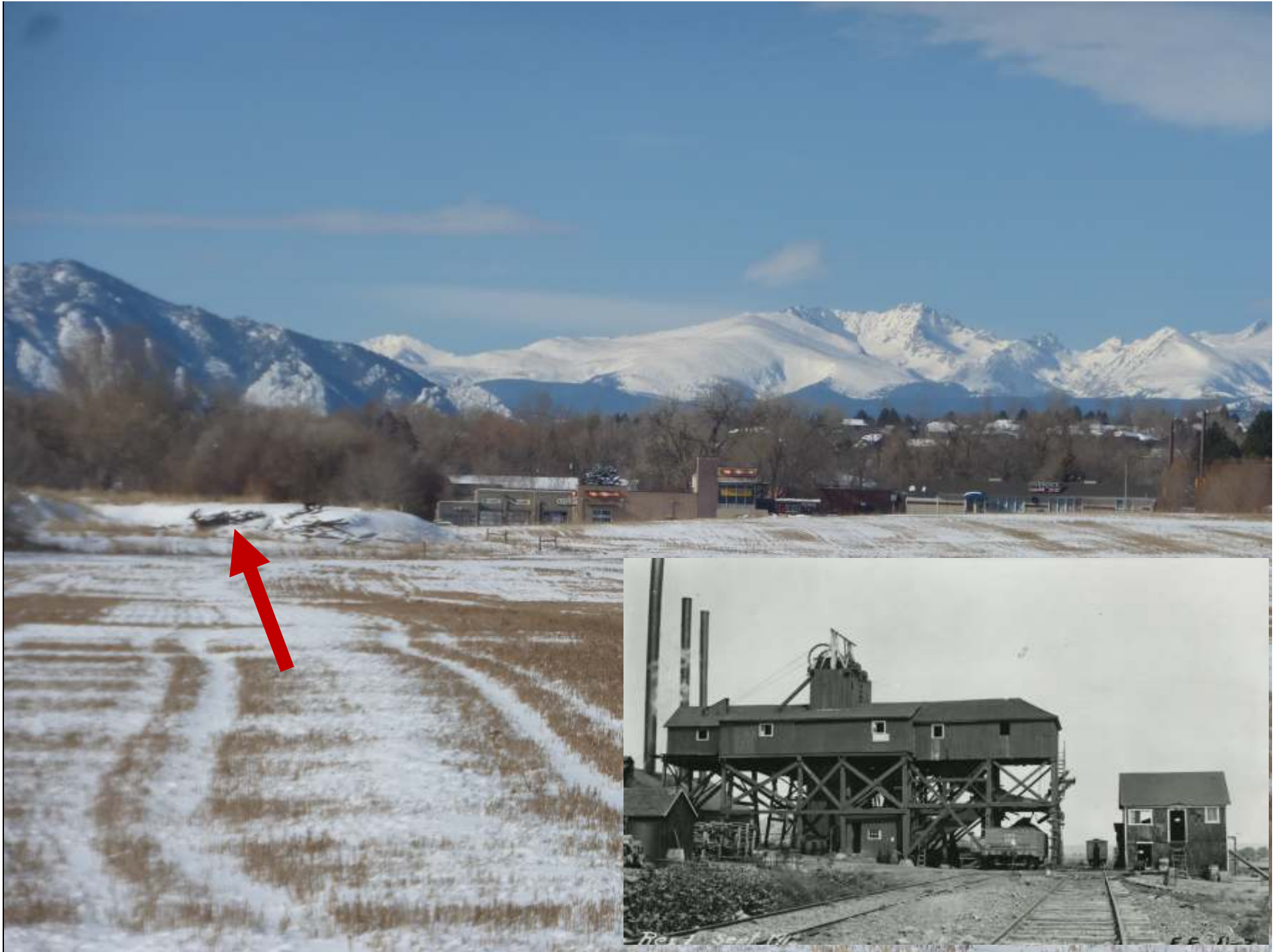
**A story of land and people**



**Swamps, 66 million years ago  
From “Ancient Denvers”**







# Waneka Lake power plant





*Edolph in Wagon*

*Thomas house  
in background*

**Waneka Lake, Thomas Farm on far right shore  
CIRCA 1890s**



**CIRCA 1890 Lafayette Colorado**



Thomas Farm is a community gathering place



**A 9 kW solar array helps  
supplement energy use at the barn**

# Centaurus High School Engineering Dept. Fieldtrip

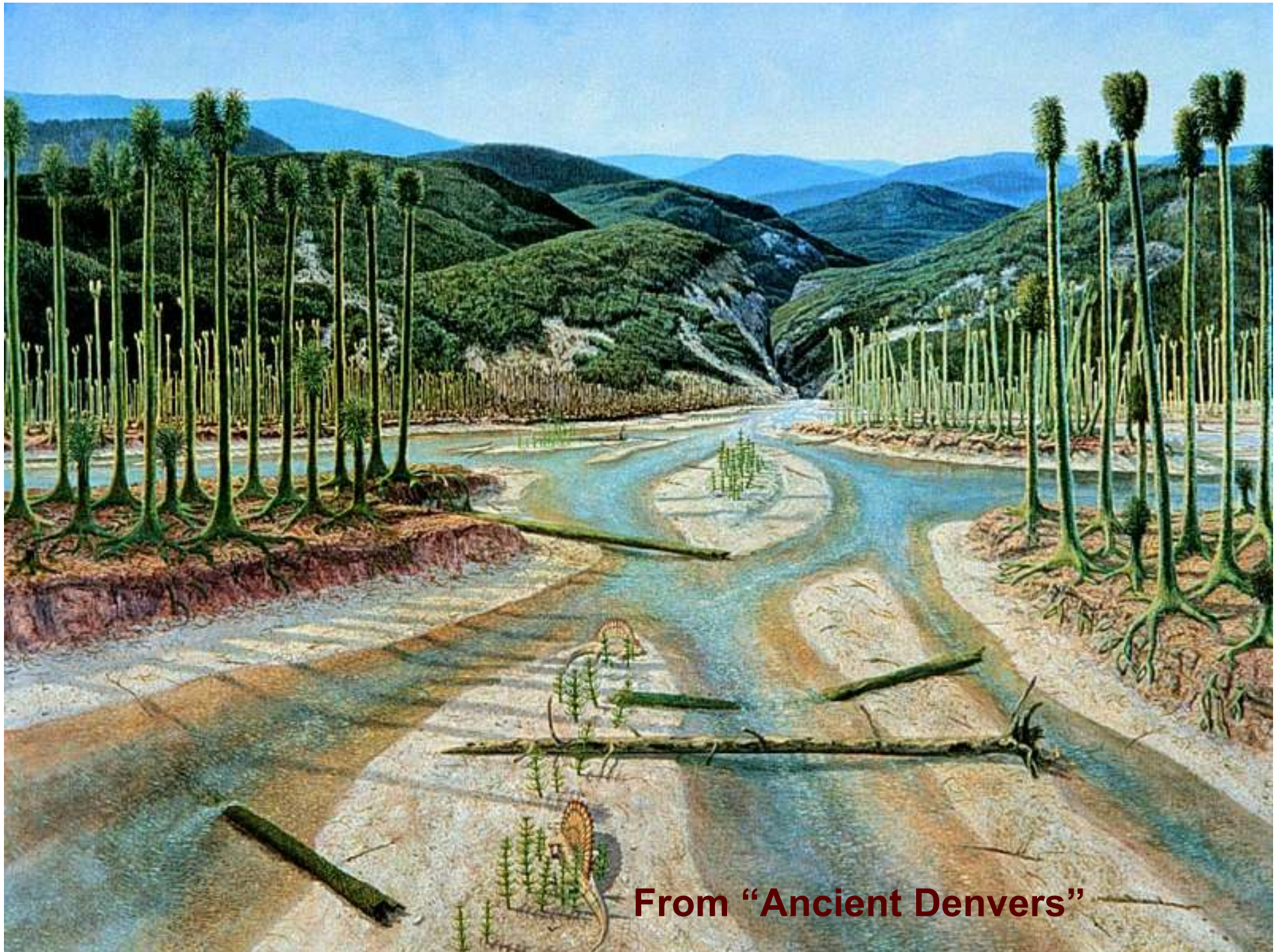




**“I Have a Dream”  
students visit  
Thomas Farm**



... Or ...

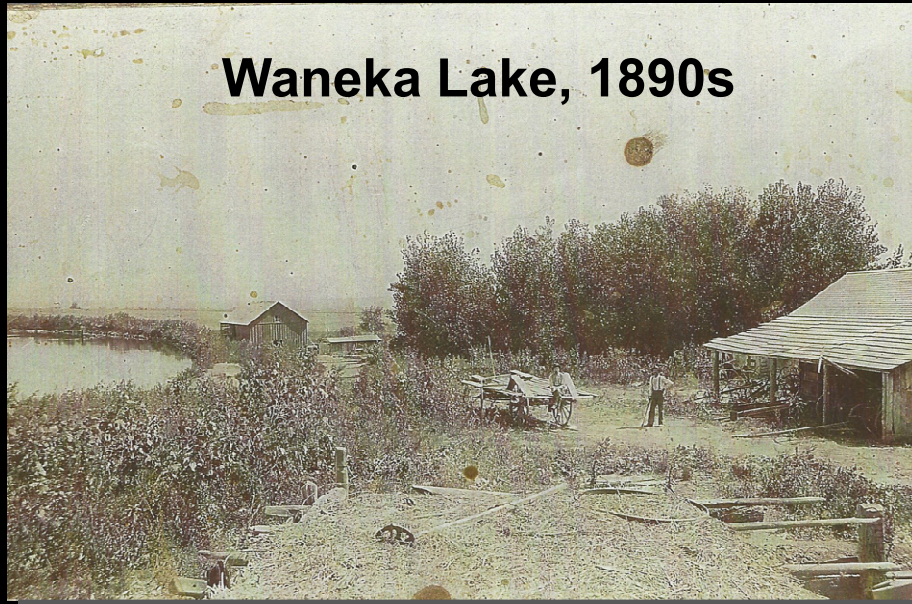


**From "Ancient Denvers"**



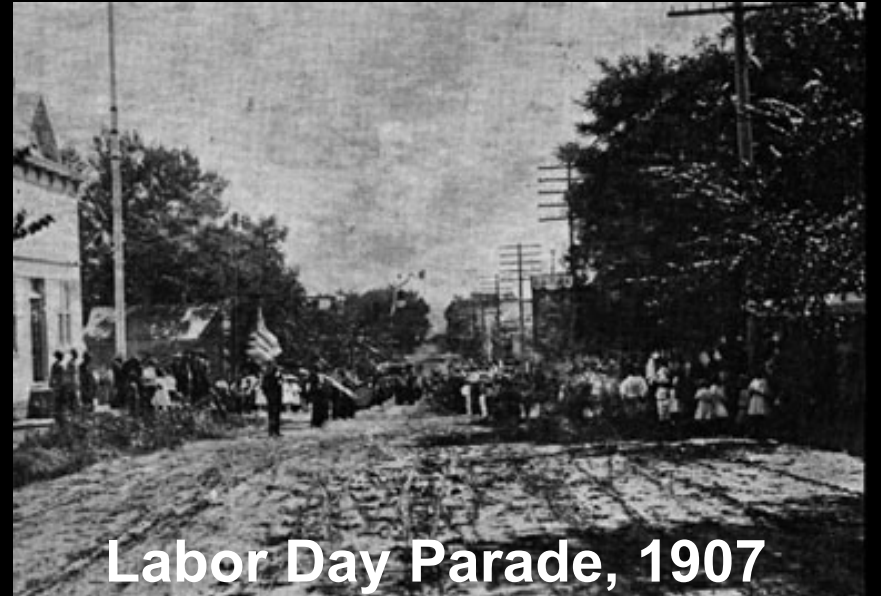






**Waneka Lake, 1890s**

Courtesy of Chuck Waneka



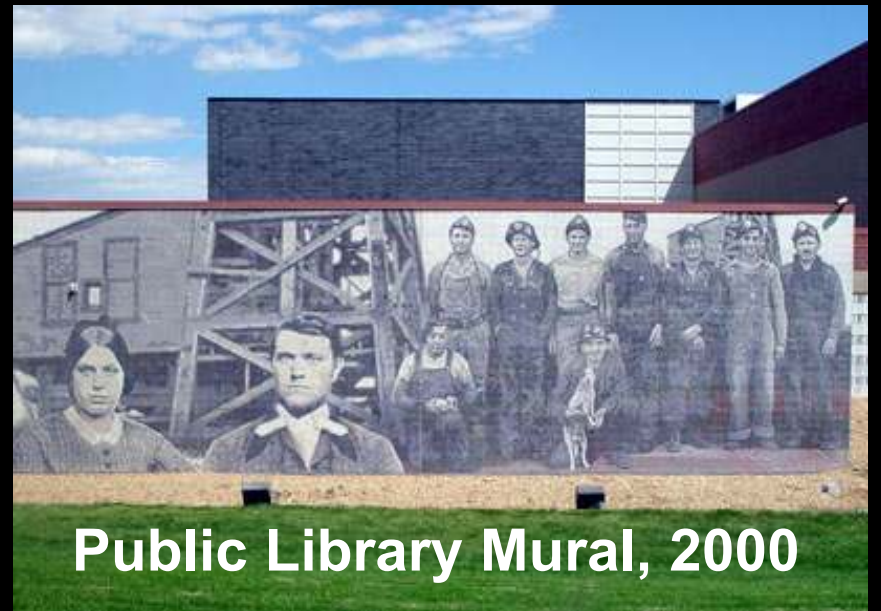
**Labor Day Parade, 1907**

From City of Lafayette Website



**High School, 1925**

From City of Lafayette Website



**Public Library Mural, 2000**

From City of Lafayette Website

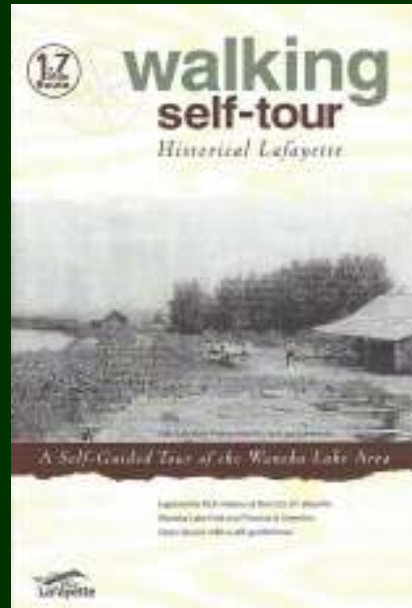
# Observation deck at Greenlee Wildlife Preserve



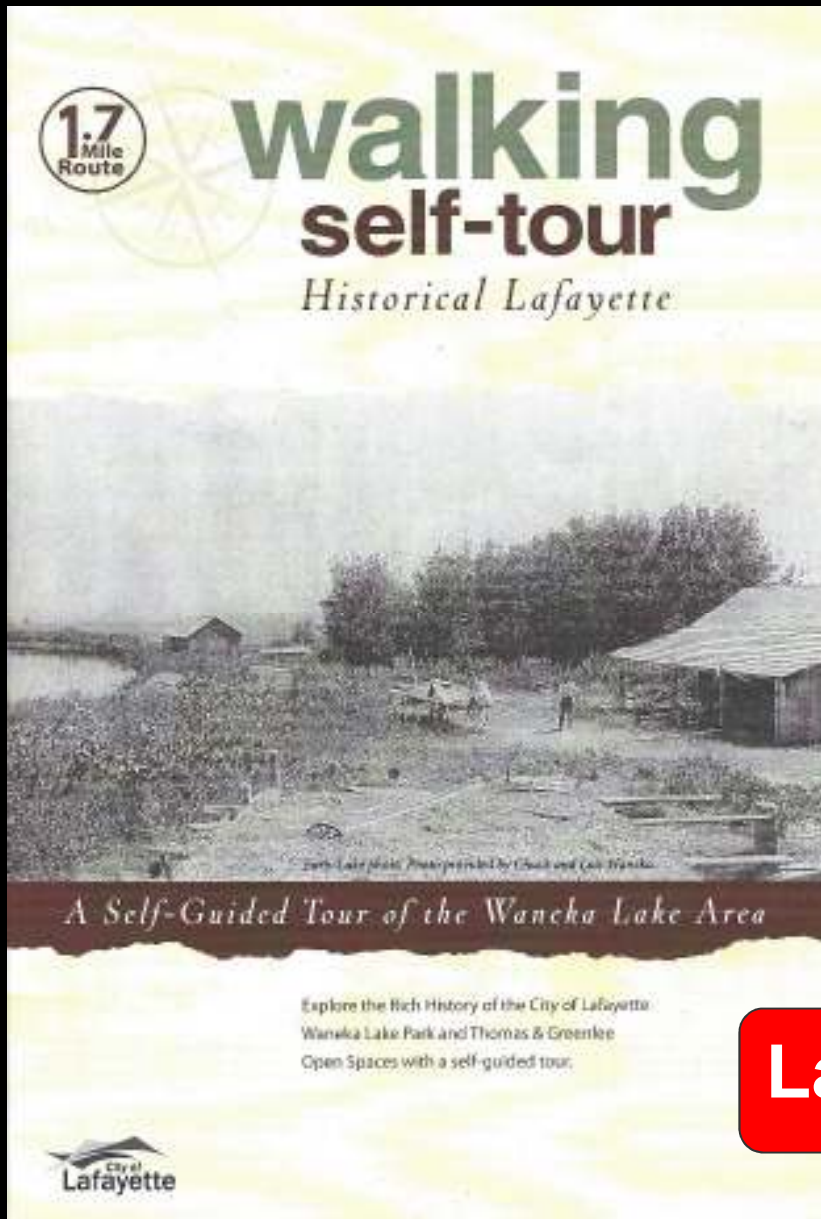








**Bringing the story of  
land and people  
alive**



## A self-guiding pamphlet

For a walk around  
Waneka Lake,  
Greenlee Wildlife Preserve  
Thomas Open Space

Lafayette Historical Society

2

## STOP 2

### Energy

**Substation**—if you look past the cinder block building to the south (away from the lake), you will see an **electrical substation**. It is located just beyond a field full of the cinders from the power plant, like the ones you saw at the boathouse.

Substations are a critical part of the energy delivery system. They transform very high voltage electricity from a power plant to lower voltages used in homes and businesses. The substation near Waneka Lake is owned and operated by XCEL energy and distributes electricity to much of Lafayette. Our closest electrical generation plant is Valmont Power Plant, but a growing number of solar electric arrays including city-owned systems in Lafayette deliver electricity to our community.



Substation with "cinders" (by-products of coal burning) in foreground. Photo provided by Martin Ogle.



#### LEARN A PLANT

Grasses—the most common grass in this area is a non-native pasture grass called smooth brome grass.

# Energy

### STOP 3

#### Granary

In its relatively elevated position, it seems strange that a lake can occur here. Thanks to ditches and pumped water, Lafayette citizens can enjoy great scenery, fishing, boating and other benefits that Waneka Lake provides. The Goodhue ditch flows into Waneka Lake on the southwest side, just west of the playground. Water also comes from the Davidson Ditch on the north side of the lake, and is pumped in through a pipe from Lafayette's Goose Haven Reservoir complex.

The concrete structure with railings that you passed on the way to this stop was the housing for Waneka Lake's "lower valve" which controlled flow into the irrigation ditch that begins below the dam at this point.

Turn to the East and look below the dam to see an old wooden building in a grove of trees. This is a **granary** that was originally built in the Waneka Lake area in the late 1870s. When this land was purchased by the power company in the early 1900s, the Wanekas moved this building to their farm (see photo on the next page) near what is now "Sprouts" on South Boulder Road. After Waneka Lake was developed as a park, the granary was moved back to this land and was placed on the Lafayette Register of Historic Properties in 2001. (Visit building before getting back on self-guided path if you wish). **Proceed on path to the Northwest.**



**DID YOU KNOW?**  
Milkweed attracts monarch butterflies



#### LEARN A PLANT

Plants growing along rocks by lake:  
Showy Milkweed (notice see pods growing on or on last year's plants).  
Tees growing near granary:  
peach-leaved willows with narrow, slightly curled leaves.



Granary storage facility. Photo provided by the City of Lafayette.



Gas Waneka farm, mid-1900s. Photo provided by Chuck and Lois Waneka.



# Granary



*The panoramic view from Waneka Lake today.*



*This was a coal-fired power plant that used coal from a variety of sources including the "Wheat Mine" on the west side of the lake. Photo provided by Chuck and Lois Waneka.*



## *A Story of People and Land*

### **Introduction**

Waneka Lake Park and the contiguous Greenlee Wildlife Preserve and Thomas Open Space have an amazing story to tell! This land has provided the food, water, energy and shelter that people have needed to live through the ages. In turn, human activities (including those of today's residents) have made this place what it is today.



Very little is known about the Indian history in this immediate location. Perhaps the earliest people visited the natural spring, the source of water for the original pond in this area. This pond was used for irrigation and ice-harvesting. It was owned by a string of early settlers that included Adolf Waneka and his son Henry, as well as Mary Miller, the founder of Lafayette.



*Adolf and Anna Waneka c. 1870. Photo provided by Chuck and Lois Waneka, City of Lafayette.*

One colorful figure in Lafayette's history draws the stories of Waneka Lake, Thomas Open Space and Greenlee Wildlife Preserve together through familial ties: Adolf and Anna Waneka's daughter, Anna. Because she was married to W.J. Thomas for many years (and had 9 children with him!), she is found in historical accounts most often as Anna Thomas or Anna Waneka Thomas. But, after the death of W.J. Thomas, she married Frank Greenley (Greenlee) and that family's story became more closely identified with this area.

The lake and land were purchased in 1906 by the Northern Colorado Power Company. The lake was enlarged and an electric power station (one of the earliest in the Western U.S.) was built. According to an article in the Denver Times, the powerplant was "the largest between Chicago and Ogden."



# **People and Land**

5

The City of Lafayette offers an incredible art scene and the newest work will be located right on Thomas Open Space to honor the unique location the city holds along the 40th parallel latitude line.

## 40° North



**DID YOU KNOW?**  
Thomas Open Space falls on the 40th parallel latitude line. Look for the sculpture by Geoffrey Newton Metalworks, featuring a compass.



*The illustrated design plan for Lafayette's new public artwork by Geoffrey Newton Metalworks*

# Surveying our Future







## STOP 5

### Thomas Open Space Farm

Thomas Open Space Farm is a Lafayette open space property. Set aside as agricultural land in 2002, it reflects a community value of preserving local agriculture. According to the Denver Post, Colorado lost 1.26 million acres of agricultural land between 1997 and 2002. This was mostly due to large acreage residential developments.



Thomas Open Space. Photo by Martin Ogle.

The City of Lafayette has partnered with a local organic farmer that operates the farm and sells a wide variety of organic vegetable crops at the on-site barn. The property is funded by the POST (Parks, Open Space and Trails) fund—0.25% of all purchases made in Lafayette.



Solar panels. Photo by Martin Ogle.

Notice the array of solar panels located south of the barn at Thomas Open Space. This 9 kilowatt system was installed in 2012 to supplement energy use at the barn and is part of Lafayette's contribution to the electric grid as discussed at stop #2. These solar panels remind us that ultimately, almost all energy we use comes from the sun. Agriculture, which fuels our bodies, derives its energy from the sun. All fossil fuels which came from plants that grew millions of years ago derived their energy initially from the sun.

#### LEARN A PLANT

Crops! Crops grown here include: kale, tomatoes, chard, mixed greens, beets, spinach, peppers, cucumbers, carrots and others.

From Thomas Open Space follow the trail back up to the main Waneka Lake path and proceed about 300-400 yards to turnoff for Greenlee Wildlife Preserve on right.

# Thomas Open Space

## 2

### STOP 2

#### Energy

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Substation with "cinders" (by-products of coal burning) in foreground. Photo provided by Martin Ogle.



#### LEARN A PLANT

Grasses—the most common grass in this area is a non-native pasture grass called smooth brome grass.

# Energy



# Beauprez Barn Tour

**Lafayette Historical  
Society**

**Local families**





**Another way we're bringing the story of land and people alive . . . and involving more partners.**



## Red-Winged Blackbird



Adult Male

Red-Winged Blackbirds are common in the cattail wetlands next to the Outdoor Classroom. The colorful wing patches are important for the males in defending their nesting territories. One of the most abundant birds in North America, the Redwing's characteristic song is heard in wetlands across the country each spring.

The song begins with several liquid notes and ends with two or three. During the spring and summer, can you see males defending their territories? In the fall and winter, Red Wing Blackbirds are seen foraging in concentrated flocks and are commonly seen here at the Outdoor Classroom.



Adult Female







**Coal Mines Beneath Us!**

From the 1850s to the 1930s, and as late as the 1950s, coal mining was a dominant industry in Fayetteville. A wide belt of mines extended between Marshall Mesa and western Weld County. Remnants of the Simpson Mine (1880-1927), still exist about 200-250 feet below this display.




Inside Black Diamond Mine, phosphate nodules 200 feet below ground were the primary source of phosphate for the fertilizer industry.



About 65 million years ago, when the last dinosaurs roamed the Earth, what is now Fayetteville was extensively covered by bogs, swamps, and shallow water. Much of the vegetation in the swamps did not rot and was eventually compacted to coal.

How do you know there are coal mines beneath Fayetteville?

**Lafayette**





**Local woodworker  
Local media**

# Pioneer students working to school Lafayette on open space

*By Joe Rubino, Camera Staff Writer*

Boulder Camera, May 10, 2014





**Schools**  
**(as partner, not just recipient of education)**



# Families





### Land and People: A Living System

Land is a natural resource that provides the foundation for our lives. It is the source of our food, shelter, and energy. Land is also a source of recreation and beauty. We must use land wisely to ensure that it remains a source of life for generations to come.



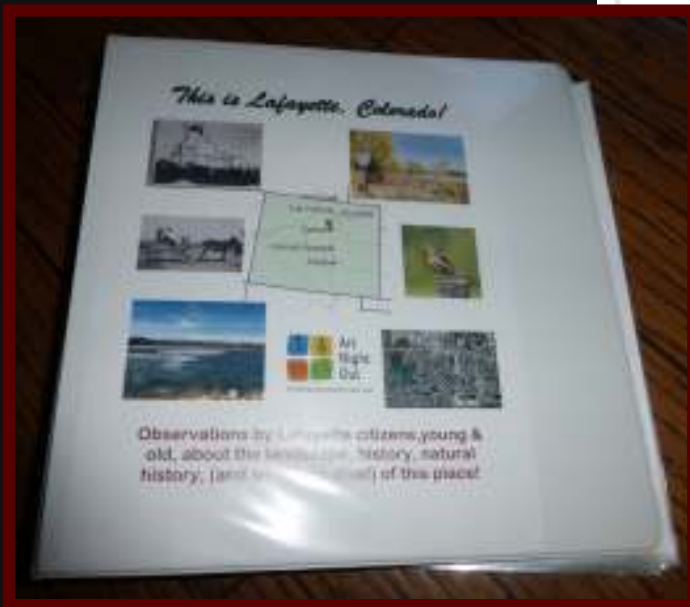
Land is a finite resource. We must use it wisely to ensure that it remains a source of life for generations to come. We must protect our land from pollution and degradation. We must also use land in a way that is sustainable and equitable for all people.

Land is a source of life. It provides the foundation for our lives. It is the source of our food, shelter, and energy. Land is also a source of recreation and beauty. We must use land wisely to ensure that it remains a source of life for generations to come.



Latipote

# The “Lafayette Observation Journal Station” At Lafayette Public Library

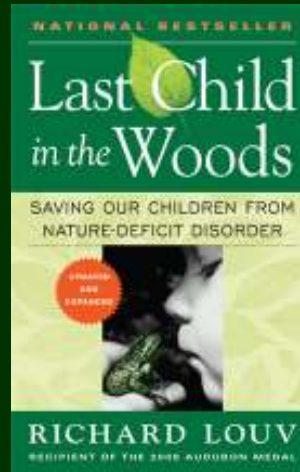


Library

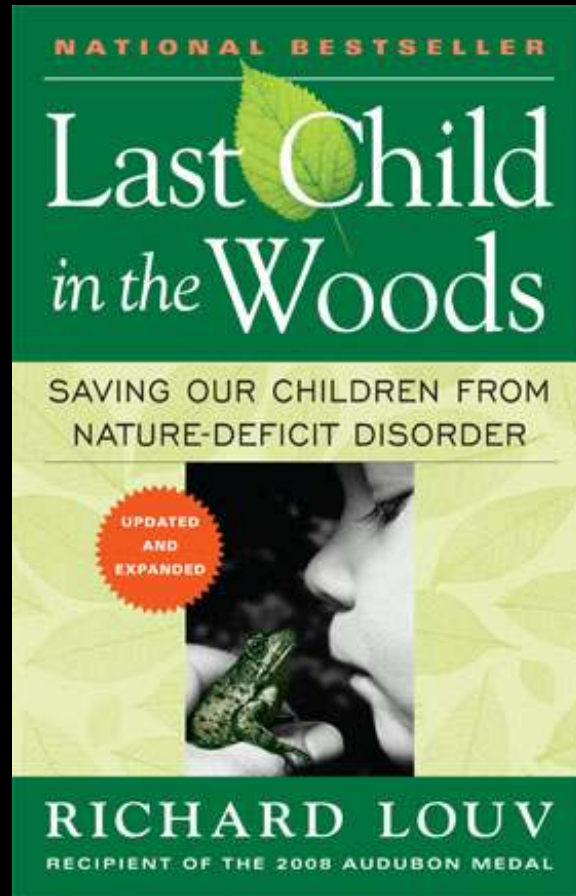
# Breakout question

Can and/or should  
Open Space agencies  
be community catalysts  
by bringing people together?





**Expanding the story of land  
and people even more.**



# Inviting students to learn about ecology outdoors in open space





**Ryan Elementary School field trips on Coal Creek**





**September 7 Plant & Bird Walk along Coal Creek**

**Steve Jones**





**“Lafayette Birds!” at Greenlee Wildlife Preserve**

# Celebrating Migratory Birds



**Wild Wings**  
**Boulder Co. Audubon Soc.**  
**Thorne Nature Experience**  
**Laf. Youth Advisory Committee**  
**Environment for the Americas**  
**JAX Outdoor Gear**  
**Empowerment Cntr. of E. County**  
**Lafayette Historical Society**  
**American Birding Association**  
**Broomfield Open Space**  
**Broomfield Bird Club**  
**Lafayette Rec Center**  
**Parent Engagement Network**





**“Art community”**

# Nature Kids Jovenes De La Naturaleza

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## LAFAYETTE

GRANT PROPOSAL for  
GOCO INSPIRE INITIATIVE

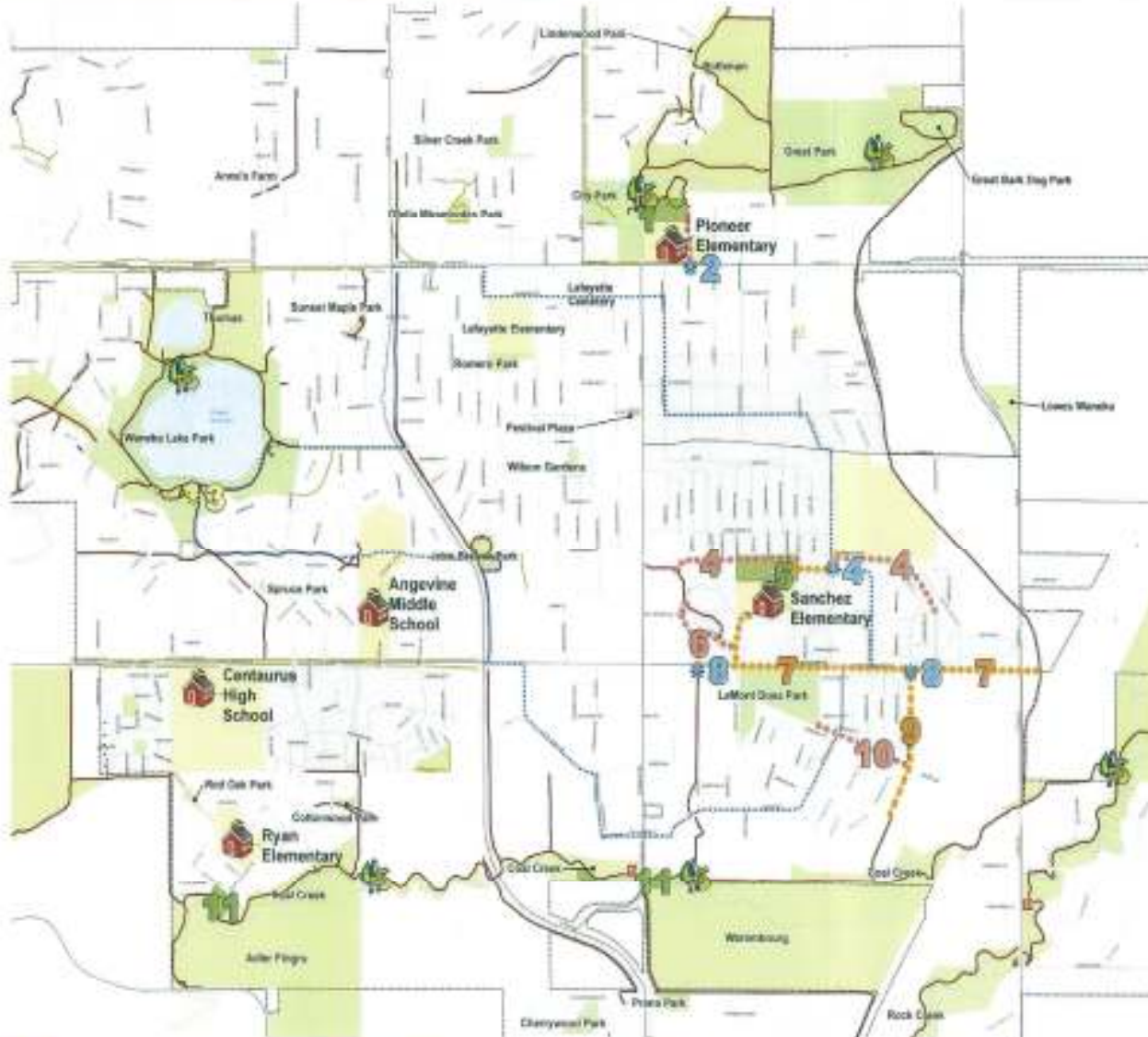
Presented by:



**GoCo  
Partners (26)**

# Community Priorities - Overview Map

Nature Kids  
 Avvenire De La Naturaleza  
 LAFAYETTE



## Legend

- Community Proposed Park Enhancement
- Community Proposed Pedestrian Crossing
- Community Proposed Sidewalk Widening and/or Bike Lane
- Community Proposed Trail
- Community Proposed Park
- NK/N Participating School
- High Quality Nature Area
- Target Neighborhood
- Park
- Open Space
- School
- Rural Preservation IGA (2012)
- Other Lafayette Public Lands
- Walk and Wheel Loop
- City Trail
- Planned City Trail
- City Sidewalk
- Other Trail
- Stream
- Lake or Reservoir
- Wetland
- City Limits



# Sanchez Elementary Connector Trail Sketch Plan

More Kids  
Joveres Do La Naturaleza  
LAFAYETTE





**SANCHEZ ELEMENTARY SCHOOL - CONCEPT PLAN**

July 2016



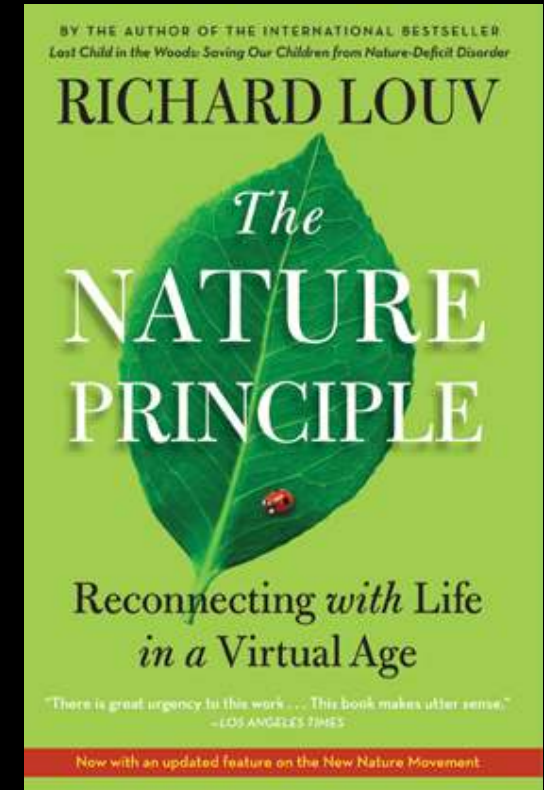




**. . . but also . . .**



**“21<sup>st</sup> Century Story  
Connecting  
environmental  
literacy  
with ALL careers**





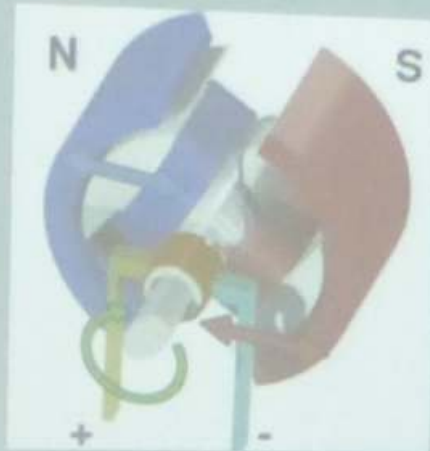
**Spellbinders**



# Odds Bodkin



# Electric Generator



**Centaurus High School  
Engineering Dept.**



# Lafayette's annual Peach Festival





**Lafayette Energy Sustainability  
Advisory Committee**

# Restoration Projects can be fun and educational



# Boulder County Youth Corps

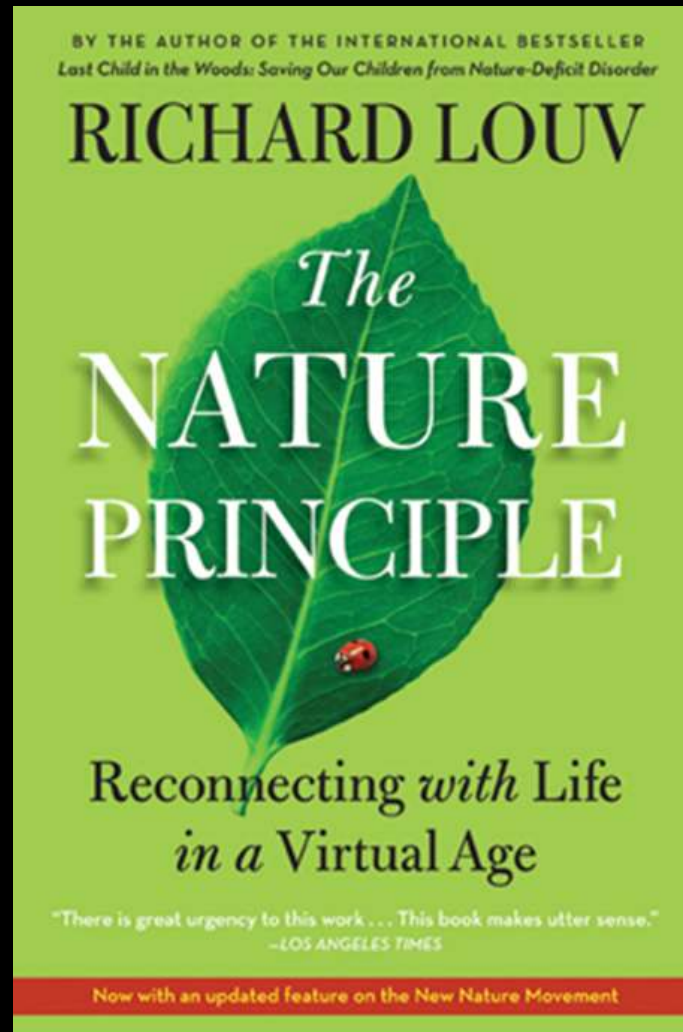


# Lafayette Youth Advisory Committee





# *“Making a Living and a Life;”*



***“Making a Living and a Life;  
A New View of “Environmental Careers”***

A program for middle school and  
high school students and parents.

Wednesday, Nov. 8, 7 p.m., E. Simpson Coffee Co.



**Local businesses**

## Breakout question

How can Open Space agencies provide inspiration, information and opportunity for involving young people in sustainability?

(And, how does / can this involve many parts of the community?)



Some final thoughts  
on “being ecological” by blending  
the story of land and people  
through Open Space.



**Janine Benyus**

**Biomimicry**  
**The conscious**  
**emulation**  
**of nature's genius**





**Eastgate Centre in Zimbabwe  
Mimics the self-cooling  
mounds of African termites!”**

# Western Harvester Ant





AMERICAN MUSEUM  
OF NATURAL HISTORY

Anna

Environmental Engineering of  
*Pogonomyrmex* Harvester Ant Mounds



Age: 16  
Grade: 11  
State: New Mexico

“Quartz rocks increases the temperature in the mound by an average of 2.5°F . . .

“The quartz rocks also increase the time that moisture is retained, by approximately 66 percent.

“. . . it is clear that trapping moisture is an important feature of the quartz mound design, enabling the ant to maintain a viable moisture level in their habitats in this desert environment.”



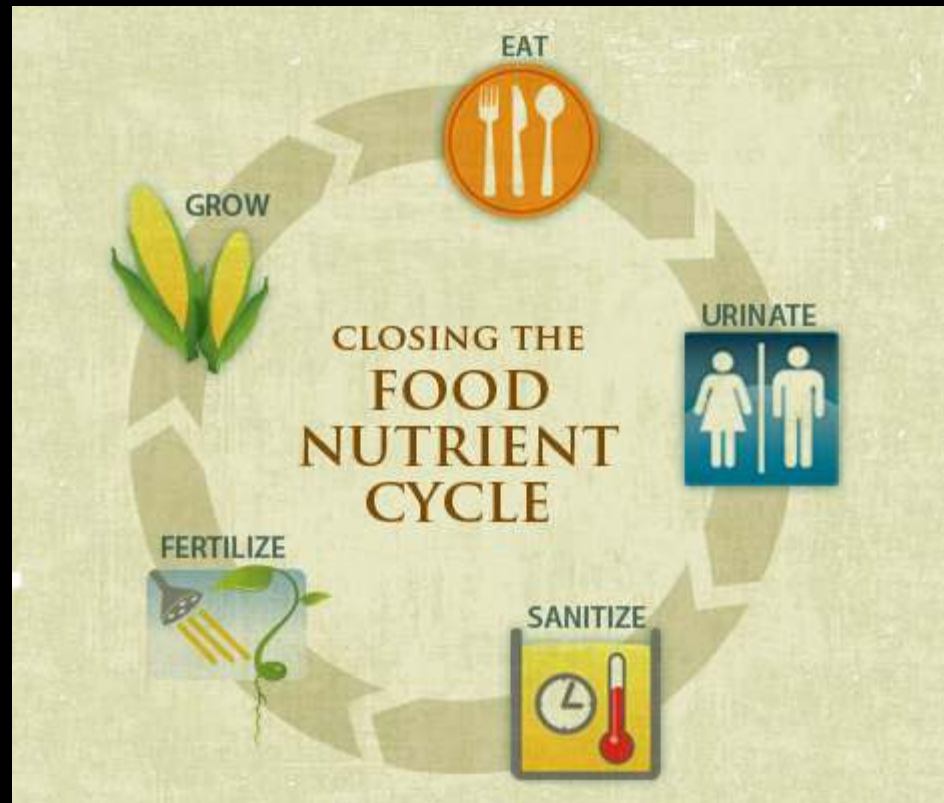


## Pioneer Sod House, Wheat Ridge, Colorado on the National Register of Historic Places

<https://www.youtube.com/watch?v=38HAKHvWdI4>

# The Golden Hoof





**Rich Earth Institute, Brattleboro, Vermont**

# Public urinals in Amsterdam









# Lafayette Open Space



**787 N. 95th St.  
Lafayette, CO 80026**

**303-661-1306**