



Nature Play Design Guidelines

2019 COSA Conference Presentation



Cassie Kaslon

**Managing Principal
Valerian**

Stacey Stickler

**Associate Principal
Valerian**

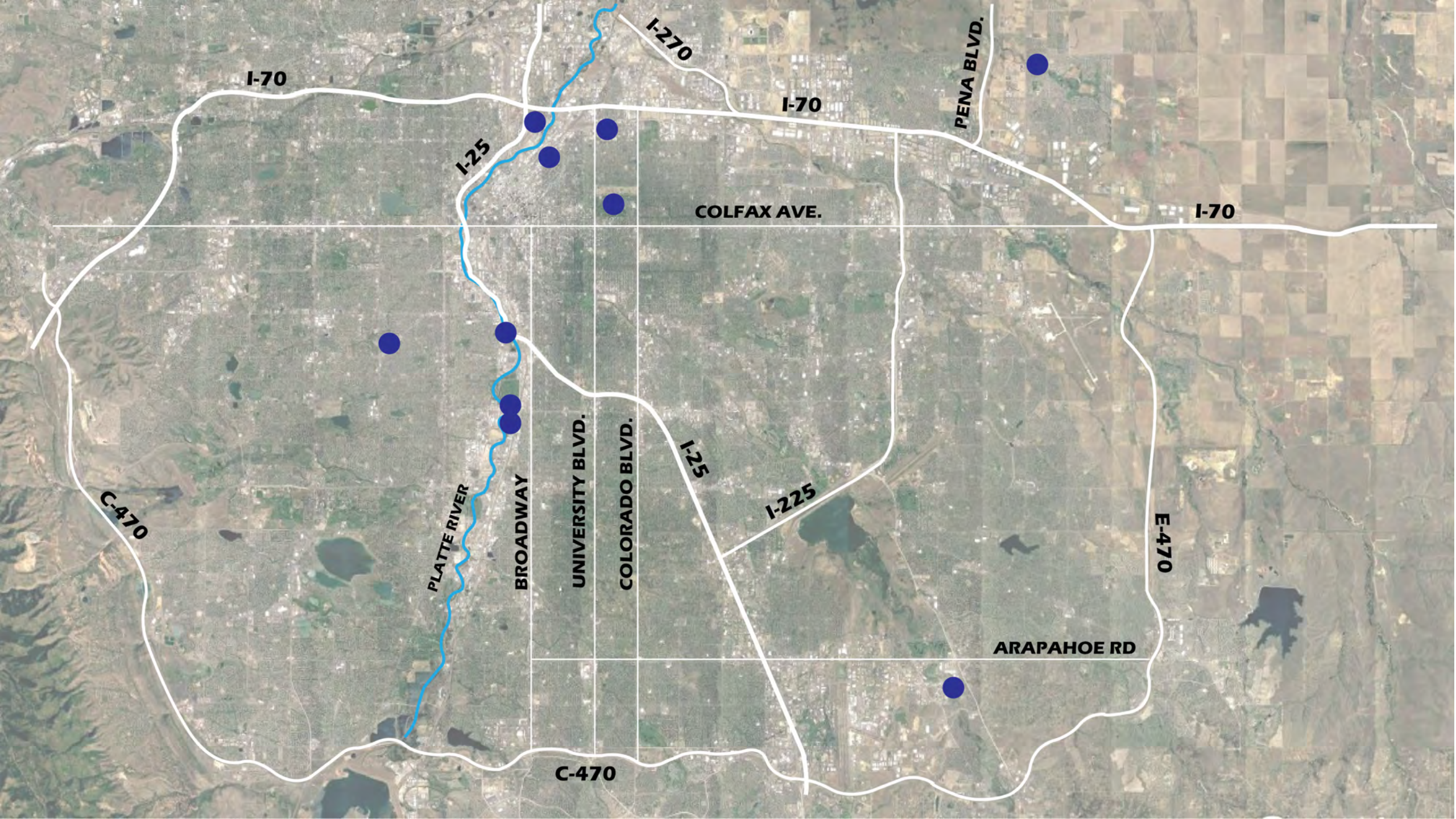


VALERIAN



Presentation Outline

- A. Why Nature Play Design Guidelines?**
- B. Nature Play Design Guidelines Overview**
- C. Case Studies**
- D. Conclusion & Questions**



I-70

I-270

I-70

PENA BLVD.

I-25

COLFAX AVE.

I-70

C-470

PLATTE RIVER

BROADWAY

UNIVERSITY BLVD.

COLORADO BLVD.

I-25

I-225

E-470

ARAPAHOE RD

C-470

I-70



GLOBEVILLE LANDING PARK

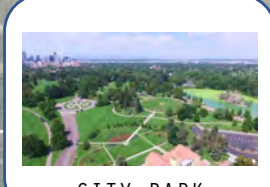


39TH AVE GREENWAY

PENA BLVD.



ST. CHARLES PARK



CITY PARK

AVE.



WESTWOOD PARK



JOHNSON HABITAT PARK



FIRST CREEK PARK



GRANT FRONTIER PARK



PASQUINEL'S LANDING

I-225

C-470

PLA

BROADWAY

UNIV

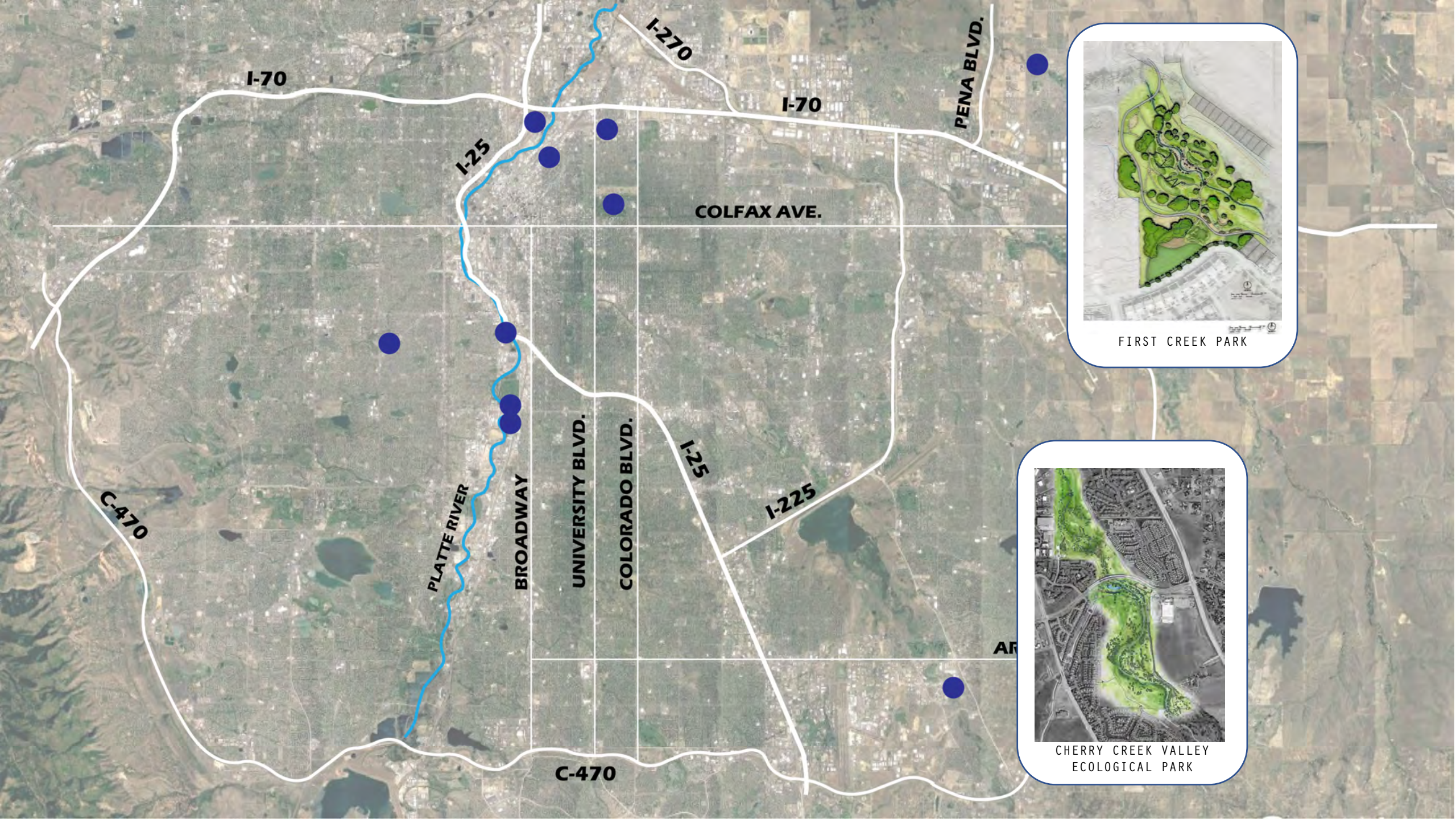
COLO

AR

C-470



CHERRY CREEK VALLEY ECOLOGICAL PARK



FIRST CREEK PARK



CHERRY CREEK VALLEY
ECOLOGICAL PARK

NATURE PLAY IN THE BUILT ENVIRONMENT

DESIGN STANDARDS AND GUIDELINES



PREPARED FOR:



DENVER
PARKS & RECREATION



A photograph of two young boys standing in a shallow stream with green grass and reeds. One boy is looking at something in his hands while the other looks on. A large black circle with a white border is overlaid on the left side of the image.

**Design
Guidelines**



DENVER
PARKS & RECREATION

MHFD

MILE HIGH FLOOD DISTRICT



VALERIAN

LANDSCAPE ARCHITECTURE | PLANNING | IRRIGATION

JACOBS[®]

bienenstock
natural playgrounds



What's in the Guidelines

- **Nature Play Benefits**
- **Site Selection**
- **Public Engagement**
- **Inclusion in Nature Play**
- **Design Development**
- **Construction Document Guidelines**
- **Project Construction Period**
- **Post Occupancy**
- **Case Studies**

- **Over 70 pages of riveting information!**



Why Nature Play Matters

Recent findings from GOCO indicate that 80% of Denver Public School students have never been to the Rocky Mountains

Denver Office of Children's Affairs estimates that 54% of Denver's children live in families at or below poverty level

Benefits include:

- **Environmental Stewardship**
- **Socio Economic**
- **Developmental/Health**
- **Economic**



Nature Play Benefits

Environmental Stewardship

- **Early exposure to nature by children is one of the most powerful experiences to influence their desire to work, play and protect natural areas as adults**
- **Natural play areas adjacent to waterways, rivers or creeks provide an amenity that engages with a natural water source that can stimulate creative and environmental awareness**



Nature Play Benefits

Socio-Economic

- **Equity measures include equal access to high quality, well designed, nature rich parks within walking distance of the communities they serve**
- **Underserved communities have much to gain from contact with nature and tend to receive lower quality, less nature rich greenspace and lack access to transportation to Denver Mountain Parks, National or State parks**

Nature Play Benefits

Developmental/Health

- Research has shown that spending time outdoors in natural areas can improve children's social skills, attention spans and academic performance, and reduce bullying
- Nature play includes gross motor, fine motor, proprioceptive and vestibular movement along with sensory rich dramatic, creative and cognitive engagement
- Studies indicate that direct contact with soil improves the health and diversity of gut flora, which is linked mental health and autoimmune disorders



Kids:
Have fun.
Play at your
own risk

The image shows a circular wooden sign with white text mounted on a wooden post. The sign is positioned in a playground area with a netted structure and a colorful flower-shaped play structure in the background. Two children are visible in the distance.



Nature Play Benefits

Economic

- **Trees and boulders that are primary materials can be accessed from within Forestry or internal city resources such as road or Urban Drainage projects**
- **Funding can be shared by multiple entities through partnerships with organizations that typically connect children and communities to nature**



**Site
Selection**



What Makes a Good Site

- **Proximity to waterways/floodplains**
- **Existing mature vegetation**
 - **Shade trees – preserved and utilized**
 - **If removed, vegetation can be repurposed into seating and climbing features**
- **Weed management strategies**



What Makes a Good Site

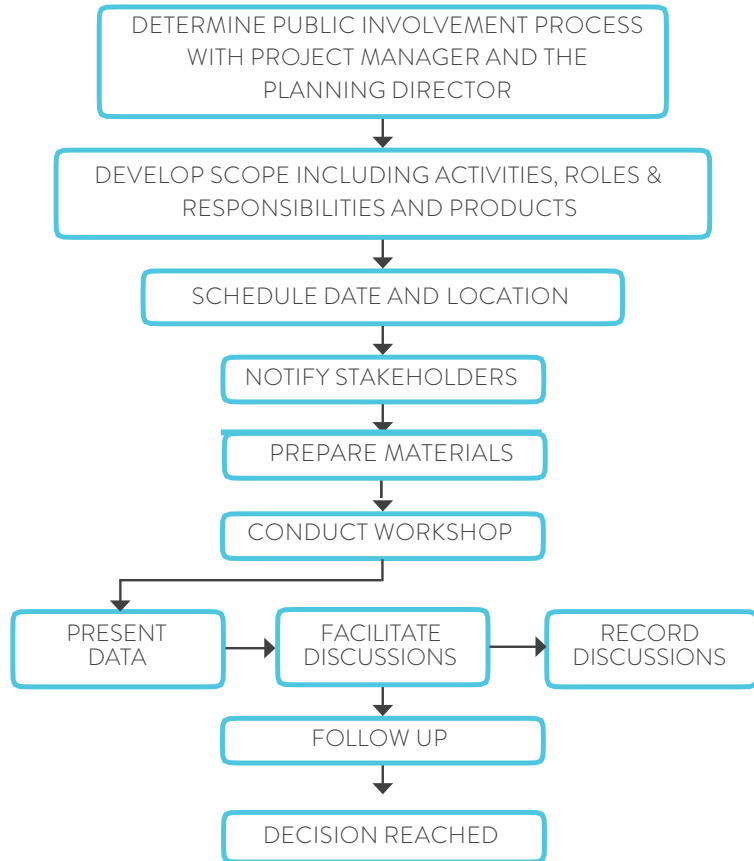
- **Existing landforms – hills and slopes should be preserved or developed**
 - **Embankment slides, caves, or climbing areas**
- **Accessible to multi-modal systems**
- **Proximity to regional trails**



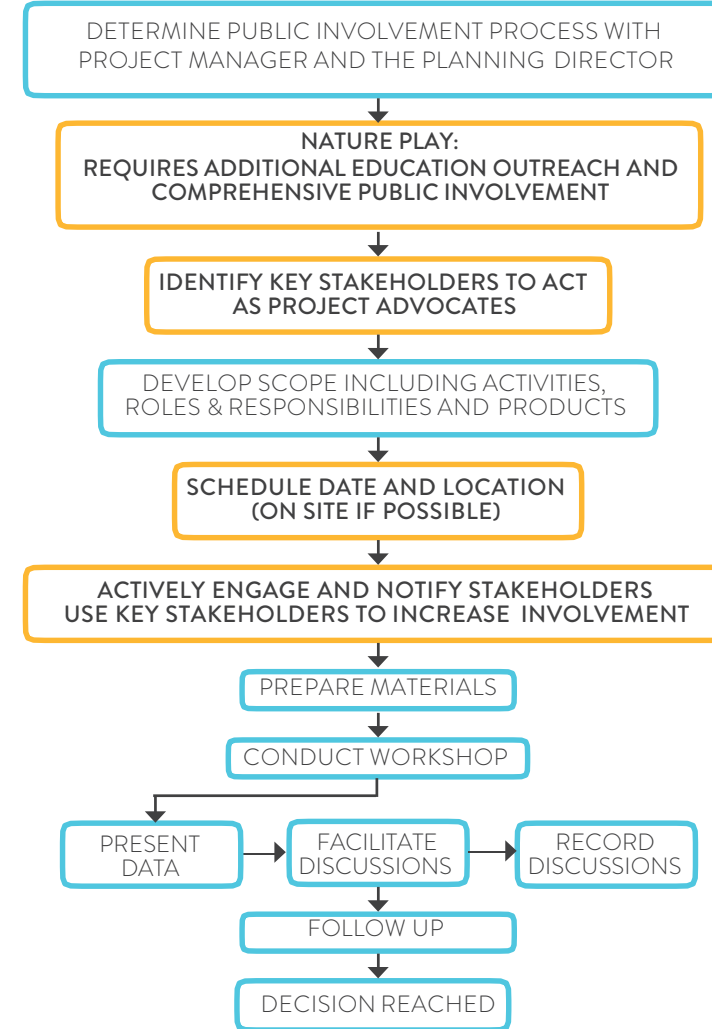
**Public
Engagement**



TRADITIONAL PUBLIC MEETING PROCESS



NATURE PLAY PUBLIC MEETING PROCESS



Community Involvement

Conduct the meeting outdoors at the site



Community Involvement

Create interest nodes for individuals to express their thoughts freely



-  Park Activity Station
Estación de Parque del actividades
-  The Tree of St. Charles
El Arbol de St. Charles
-  Parking Garage Station
El Estación de Estacionamiento
-  Headband Workshop
Taller de Diadema
-  St. Charles Wishing Well
El Pozo de los Deseos
-  Guided Tours of the Building
Visitas Guiadas del Edificio



Community Involvement

**Gather community input through creative measures.
Include hands on and collaborative activities: asset mapping,
community commitment boards, sandbox charettes**



Youth Leadership

Establish a group of youth that will serve as the voice of the community





**Hidden
Elements of
Play**





Enhance the Existing

View the site from the eyes of the future user... children

Connect the element of fun into the existing site features

- **Landforms**
- **Vegetation**
- **Waterways**

Use The Trail System



Use Subtle Prompts



Use Landforms



Use Vegetation



Don't Forget the Shade



Include All 5 Senses



Repurposing Material





**Floodplain
Interface**



Connecting with Water

- Do you want to encourage contact with water?



Connecting with Water

- Do you want to encourage contact with water?
 - Is it clean?



Connecting with Water

- **Do you want to encourage contact with water?**
 - **Is it clean?**
 - **Is it stable?**



Connecting with Water

- **Do you want to encourage contact with water?**
 - **Is it clean?**
 - **Is it stable?**
 - **Do you really want to do this?**



What You Won't See in a Floodplain

- **Large Play Structures**
- **Play Features That Require Fall Zones and Safety Surfacing**



What You Won't See in a Floodplain

- **Large Play Structures**
- **Play Features That Require Fall Zones and Safety Surfacing**



But You May See This!

- **Water**
- **Boulders**
- **Logs**
- **Plants**
- **Animals**
- **Dirt!**

Connecting with Water



Connecting with Water





**Resilience
and
Maintenance**



Making it Last

- **Work with maintenance staff to develop a maintenance plan**
- **Develop a planting plan to withstand heavy use appropriate to the site**
- **Follow through after construction and make necessary changes**
- **Educate users on how to use the space**



Change Will Happen

Human Caused



Nature Caused



How to Deal With Change?

1. Know and expect change to happen
2. Identify what changes you can be okay with
3. Let change happen – the users will know, better than we will, how to use nature for play





What Can and Can't Change

Things that CAN'T change

- **Safety**
- **Volume of the floodplain**
- **Locations of structures that cross waterways**

Things that CAN change

- **Vegetation (within reason)**
- **Alignments of secondary/tertiary trails**
- **Locations and appearance of nature play areas**



**Kids:
Have fun.
Play at your
own risk**

Educate Others

- **Engage the community in the discussion of the area**
- **Use signage to educate users on how the area may change over time – and that's OK**



**More than
A Fad**





First Creek Park

Project Size: 6 acres

Year Completed: Summer 2019

Location: Denver, Green Valley Ranch

Budget: \$1.3 Million

First Creek Park

Ownership:



Construction Team:



Design Team:



First Creek Park: Existing Conditions



First Creek Park: Community Engagement





First Creek Park: Master Plan

- **Preserve existing trees**
- **Provide access to the creek**
- **Activities for wide range of ages**
- **Flowers!**

First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



First Creek Park



Cherry Creek Valley Ecological Park

Project Size: **75 acres**

Year Completed: **Fall 2013**

Location: **Arapahoe County, Colorado**

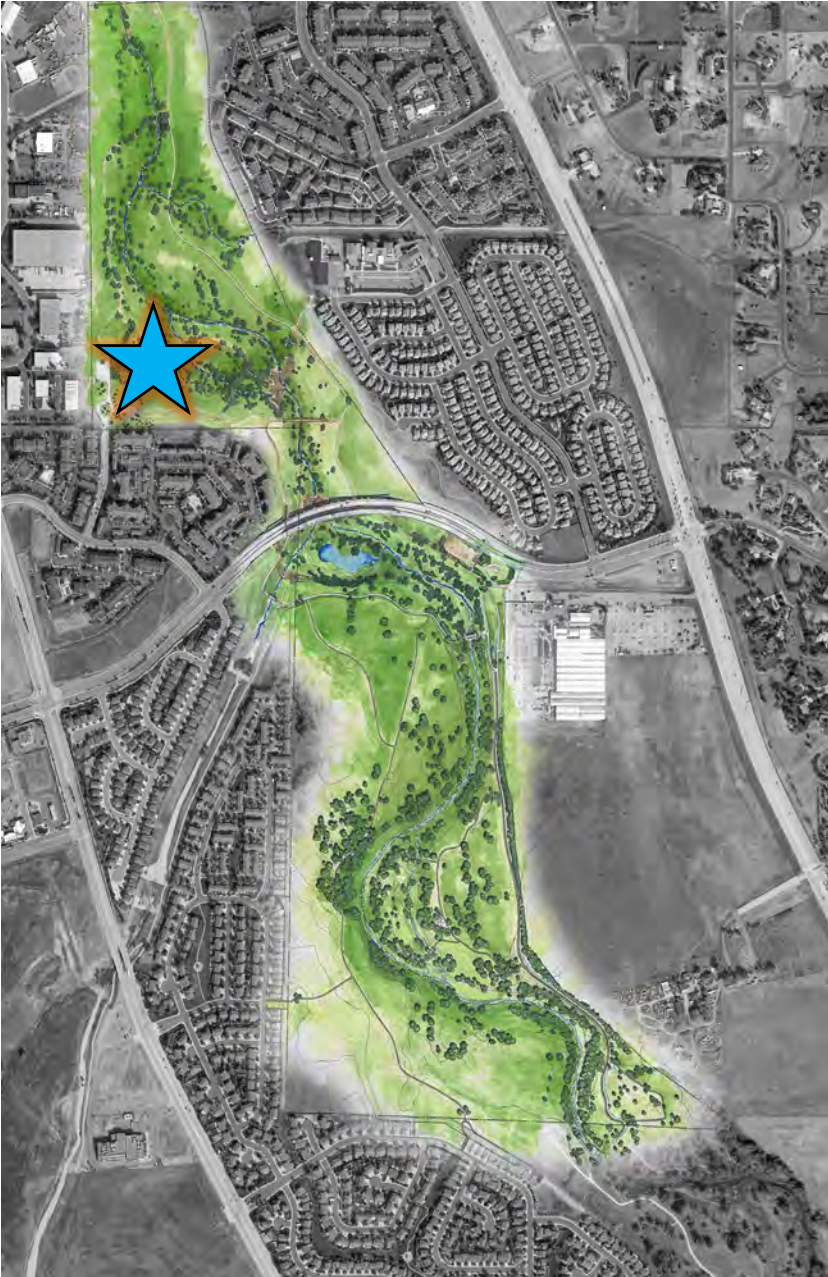
Budget: **\$3.6 Million**

Creekside Quest Children's Garden

Project Size: **1 acre**

Year Completed: **Spring 2015**

Budget: **\$ 100,000**



Cherry Creek Valley Ecological Park

Ownership:



ARAPAHOE COUNTY
OPEN SPACES

Partners:



MILE HIGH FLOOD DISTRICT

Construction Team:



Design Team:



VALERIAN

LANDSCAPE ARCHITECTURE | PLANNING | IRRIGATION



MULLER
ENGINEERING COMPANY



WESTERN STATES
RECLAMATION, INC.

Cherry Creek Valley Ecological Park

Existing Conditions



Cherry Creek Valley Ecological Park

Existing Conditions



Cherry Creek Valley Ecological Park



Cherry Creek Valley Ecological Park



Cherry Creek Valley Ecological Park



Creekside Quest Children's Garden



Creekside Quest Children's Garden



Creekside Quest Children's Garden



Creekside Quest Children's Garden



Creekside Quest Children's Garden



NATURE PLAY IN THE BUILT ENVIRONMENT

DESIGN STANDARDS AND GUIDELINES




PREPARED FOR:



DENVER
PARKS & RECREATION





Come visit us at our Expo Booth!

Please visit the following for additional resources:

www.valerianllc.com

<https://udfcd.org/>

<https://www.denvergov.org>

www.thegreenwayfoundation.org

www.goco.org

www.naturalplaygrounds.ca