

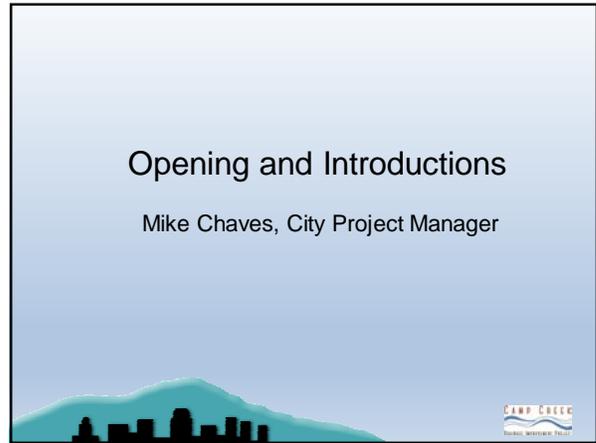


CAMP CREEK
DRAINAGE IMPROVEMENT PROJECT

Community Workshop #1

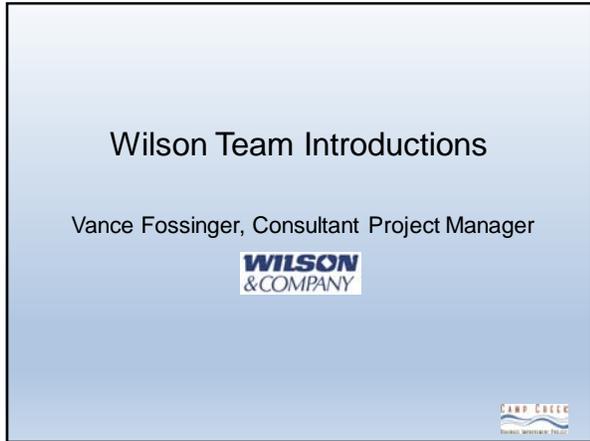
Opening and Introductions

Mike Chaves, City Project Manager



Wilson Team Introductions

Vance Fossinger, Consultant Project Manager


Vance Fossinger, PE
Project Manager
Hydraulics & Hydrology
Expert

Bob McGregor, PE
Hydraulic & Hydraulics
Expert

Dan Krueger, PE
Deputy Project Manager
Roadway Expert

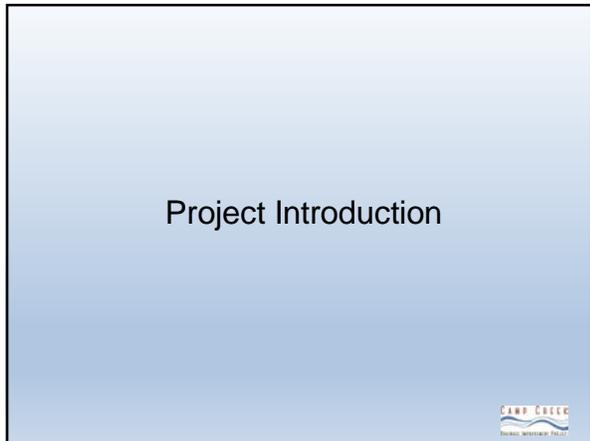
Priscilla Marbaker, PLA
Parks and Aesthetics
Planning and Design Expert

Susan Watkins
Public Involvement Expert

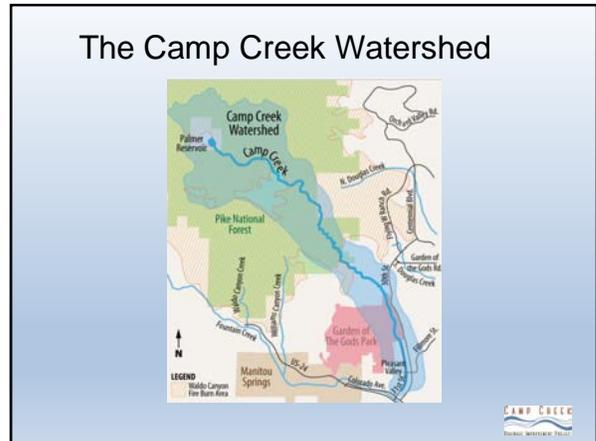
Tweed Kezzish
Public Involvement Expert

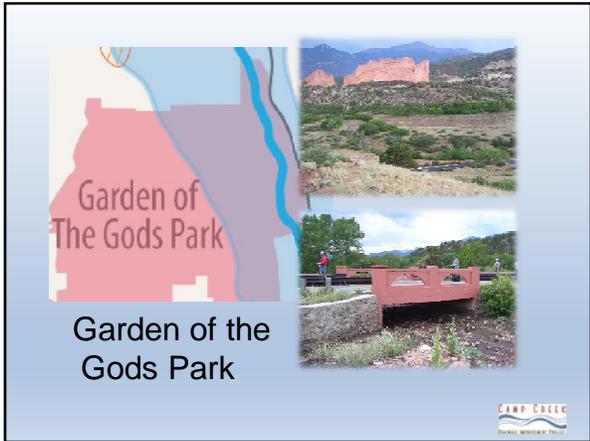
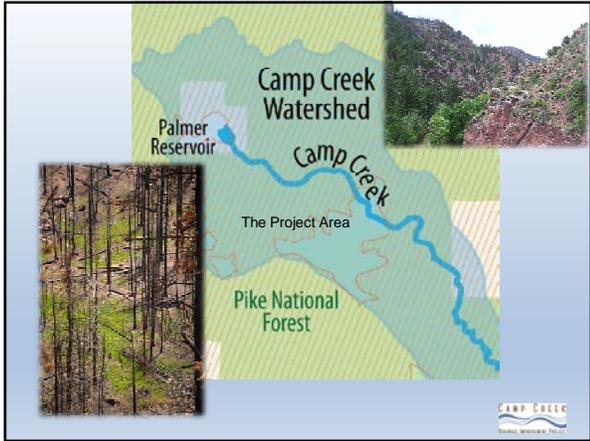


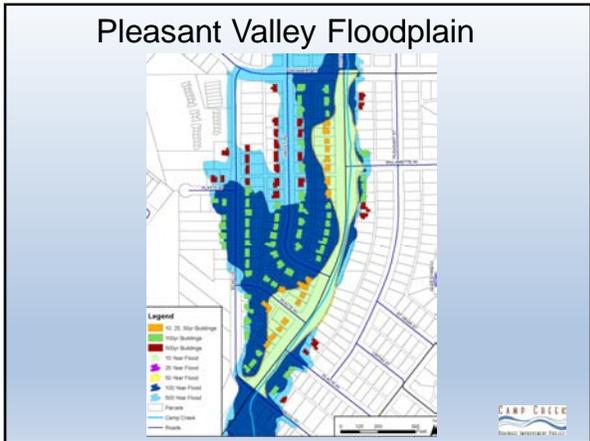
Project Introduction



The Camp Creek Watershed



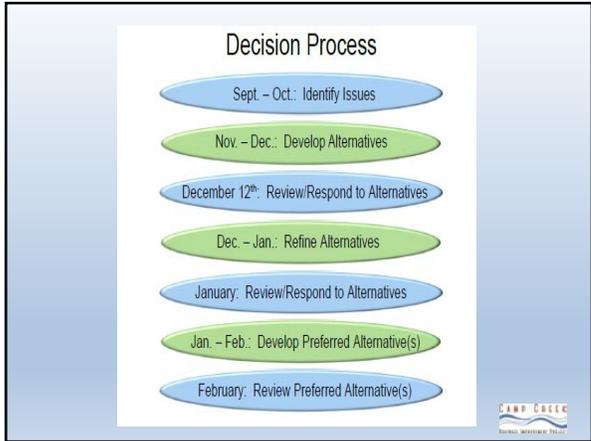


- ### Project Phases
1. Study the watershed
 2. Develop and design solutions
 3. Construct solutions

- ### Study the Watershed
- Identification of community values
 - Identification of physical characteristics and problems

- ### Planning Phase Purpose
- Thoughtfully plan short and long-term solutions that:
- Protect the corridor from flooding and erosion
 - Improve public safety
 - Are technically sound
 - Are responsive to community needs and values
 - Are sensitive to special characteristics of Garden of the Gods Park and Rock Ledge Ranch Historic Site

- ### Project Givens
- Proposed solutions must conform to all relevant public property deed restrictions and to all applicable federal and state laws and regulations.
 - Solutions must recognize existing agreements and master plans.
 - Drainage, bridge and road improvements in the corridor must be addressed as part of an integrated solution.
 - Solutions will strive to honor values expressed by the community regarding impacted neighborhoods, Garden of the Gods, and Rock Ledge Ranch Historic Site.
 - The City of Colorado Springs will do its best to leverage federal, state and local funding for this project.
 - The City encourages everyone interested in this serious problem to participate in the public involvement process for developing solutions.
 - The City of Colorado Springs will make the final decision regarding short- and long-term solutions and phased implementation.



Meeting Agenda

- ❖ Presentation of Information
- ❖ Presentation of Preliminary Issues
- ❖ Small Group Work and Report-Out
 - Delete any issues?
 - Add any issues?
 - Evaluation criteria
- ❖ Wrap-Up/Next Steps



Presentation of Information



Problem Definition and Solution Development Approach

- Part 1: What we know
- Part 2: What we think we know
- Part 3: What we still need to analyze
- Part 4: Funding
- Part 5: Development of solutions



Part 1: What we know

- FEMA's estimated channel flow rates
- Channel capacity
- Flood insurance maps
- Safety issues
- Camp Creek changes
- Sediment
- Channel and bridges
- Adjacent projects
- Recreational trails
- Garden of the Gods and Rock Ledge Historic Site



September 12-15, 2013 Storm In Camp Creek Watershed

- Three U.S. Geological Survey rain gauges in the watershed
- Measured 4-day rainfall varied between 5.9" and 8.0" at the gauges
- These 4-day rainfall depths indicate a return frequency of 50 to 200 years
- While the rainfall depths were large, the rate that it fell (intensity) was not that high



September 12-15, 2013 Storm In Camp Creek Watershed

- The highest rates of rainfall over short time periods indicate storm return frequencies of 1 to 5 years
- Highest Camp Creek stream gauge readings:
 - **Lower Queens Canyon:** 316 Cubic Feet Per Second
 - **Gateway Road:** 286 Cubic Feet Per Second
- **The flow rate was relatively small when compared to the FEMA-defined 100-year flow rate of 4,600 Cubic Feet Per Second**



Channel Flow

- The pre-fire FEMA flow rate for a 100 year storm is 4600 Cubic Feet Per Second
- 31st Street channel carries about half of the FEMA flow rate
- Existing bridges pass about 20% of flow
- Gateway Road will be overtopped by water
- Speed of water along 31st Street is very fast



Projected Area of Flooding



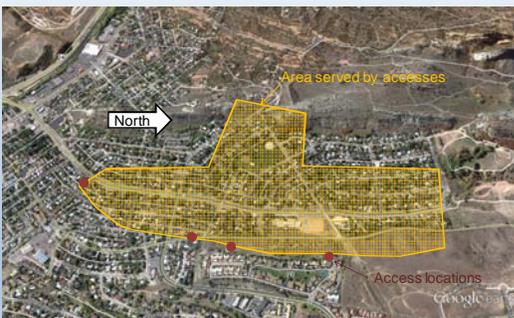
Safety Issue



Safety Issue



Safety Issue



Safety Issue



Safety Issue



Safety and Condition Issue



Camp Creek Changes

- Natural changes
- Waldo Canyon fire



Camp Creek GoG 07-03-2013

Camp Creek where it moves out of Glen Eyrie into Garden of the Gods Park.



Camp Creek GoG 09-17-2013

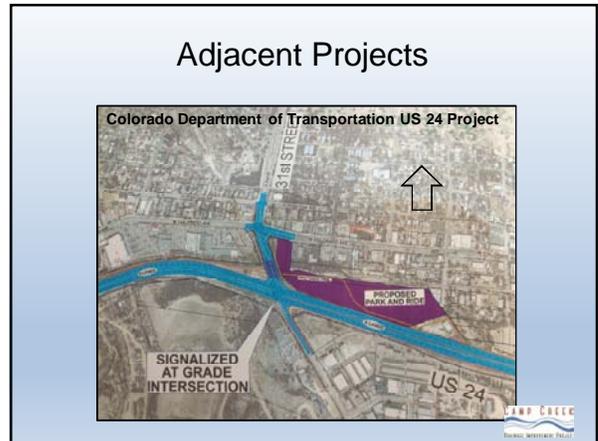
Camp Creek where it moves out of Glen Eyrie into Garden of the Gods Park. A significant amount of sediment is deposited on the top of this flood plain.



Camp Creek GoG 07-03-2013

Camp Creek between Garden of the Gods Park and 30th Street. Note the trails. (Photo inverted to show comparison on next slide)





Recreational Trails

- No existing trail between Garden of the Gods and Fountain Creek
- There are master planned connections on 31st Street and Ridge Road
- Opportunity to re-evaluate with project




Garden of the Gods

- Rated "Second Best City Park in North America" and "Third Best Park n the World"
- National Natural Landscape designation
- Garden of Gods Master Plan
- Everyone loves the Park!




Rock Ledge Ranch Historic Site

- Brings history to life
- On the National Register of Historic Places
- Venue for numerous special events
- American Indian area




Part 2: What we think we know

- Quantity of water may be over-estimated
- Camp Creek basin not hit very hard by 2013 storms
- Increased channel degradation likely
- Waldo Canyon Fire has created a new "normal".
 - Increased runoff
 - Additional sediment
 - More debris (logs)



Channel Degradation Near Rock Ledge Ranch




More Debris




Part 3: What we still need to analyze

- Hydrology (how much water)
- Channel hydraulics (how deep and fast the water flows)
- Quantity of sediment
- Environmental issues
- Safety issues
- Community issues
- Others



Part 4: Project Funding

- Funding needs may be as high as \$50 million
- Current City funding is identified for planning and first-action projects
- Future funding
 - City funding is limited – solutions for drainage funding are being worked on
 - City funding is being leveraged through grants



Grants

- The City has been very successful in pursuing and securing grants from the Natural Resources Conservation Service to assist with watershed protection in areas impacted by the Waldo Canyon fire.

Examples include:

- Funding for debris nets and watershed stabilization in partnership with the Navigators.
- Funding for a portion of the current study
- An application for a FEMA grant has recently been submitted for a Camp Creek project.



Current FEMA Grant Application

- The grant could bring over \$4 million of FEMA funding to the Camp Creek project.
- The application was developed for a capacity enhancement project for the 31st Street channel between Fontanero and Echo Lane/Bijou Street.
- If the project is funded it is expected to be designed to be consistent with the concepts developed in the current study in consideration of community values and input.



Part 5: Development of Solutions

- Extremely intertwined for this project
- Technically feasible
- Must consider community values
- Must be responsible



Alternative Screening Criteria

- Customized screening criteria is necessary
- Combination of community, environmental and technical types of criteria
- We will confirm criteria at next Community Meeting on December 12th

**WE REQUEST YOUR HELP
WITH THIS TONIGHT!**



Screening Criteria Example

Purchase or rental of your home:

- Location
- Number of bedrooms
- Size of yard
- Kitchen
- Garage
- Landscaping
- Old or new
- Safe place for kids to play
- Schools



Preliminary Issues List

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Natural Feel
<input type="checkbox"/> Community Process	<input type="checkbox"/> Neighborhood Character
<input type="checkbox"/> Construction	<input type="checkbox"/> Rock Ledge Ranch
<input type="checkbox"/> Cultural History/Resources	<input type="checkbox"/> Safety
<input type="checkbox"/> Design	<input type="checkbox"/> Tourism Economy
<input type="checkbox"/> Flooding/Drainage	<input type="checkbox"/> Trails
<input type="checkbox"/> Funding	<input type="checkbox"/> Traffic/Streets/Bridges
<input type="checkbox"/> Garden of the Gods	<input type="checkbox"/> Views
<input type="checkbox"/> History of the Area	



Small Group Instructions

Task #1: Review and discuss Preliminary Issues List in your group

Task #2: Discuss and decide as a group if any issues should be removed and why. List on your group form.

Task #3: Discuss and decide as a group if any issues are missing that should be added. List on the group form.

Task #4: Discuss and develop your list of criteria to use to evaluate alternatives.

Task #5: Choose a member of your group to report out



Small Group Work



Report out of Small Groups





CAMP CREEK
DRAINAGE IMPROVEMENT PROJECT

Wrap-Up and Next Steps

Thanks for coming tonight!

