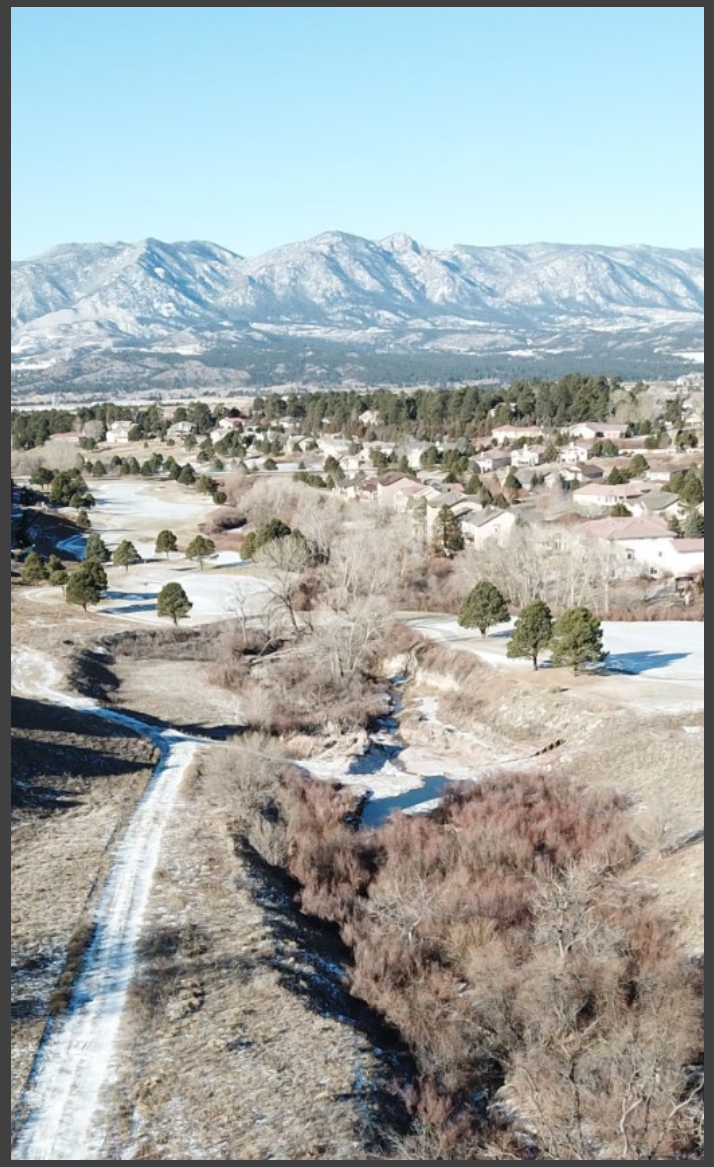
Pine Creek Channel Restoration

Public Meeting

January 9th, 2019

Agenda

- Project Purpose
- Project Overview
- Project Schedule
- Hybrid Design Approach
  - Natural Channel Design
  - Flood Mitigation
- Open House Discussion



Project Purpose

Project Overview

Pine Creek Channel Restoration Schedule

Fall 2017 – December 2018	• Pond 2 Design
July 2018 – December 2018	• Reach 1 Design
January 2019-June 2019	• Construction Reach 1 and Pond 2
Fall 2018 – July 2019	• Reach 2 and Pond 1 Design
Fall 2019 – Spring 2020	• Construction Reach 2 and Pond 1

Natural Channel Design

To establish physical, chemical, and biological functions of the river system that are self-regulating and emulate the natural stable form within the constraints imposed by the larger landscape conditions. It is important to restore all components of a stream system that are required to make it sustainable, rather than just focusing on what is visible. – Natural Channel Design Definition (Wildland Hydrology)

Natural Channel Design: Assessment

- Assessments are the foundation for design
  - Pre-impairment
  - Project reach
  - Reference reaches
- Quantify the degree of impairment
  - Biology
  - Ecology
  - Geomorphology
  - Hydrology
- Formulate a basis of design based on scientific methods

Natural Channel Design: Approach

- Identify opportunities & constraints
  - Reconnect channel to floodplain & existing vegetation
  - Culvert & bridge crossings
  - No Adverse Impact to existing floodplain
- Apply assessment data to formulate channel design
- Verify channel design with hydraulic and sediment transport modeling
- Design structural elements
- Revegetate the wetland, riparian, and upland zones with ecotypic (native) plant species

Design Approach: Flood Mitigation

- Hydraulic Modeling to confirm design approach.
- Sediment Transport Modeling to confirm design approach
- Floodplain Modeling to confirm no increased flood risks.

Design Approach: Flood Mitigation

- Boulder Walls to protect sensitive locations
- Buried Drop Structures to protect long-term stability
- Buried Riffle Structures to protect Riffle-Pool pattern

Open House Discussion

- Questions? Contact Any Member of the Project Team
- Please Look At
  - Drone Imagery
  - Structure Photographs
  - Design Plans

Thank You!

Questions?