

# South St. Vrain Creek Restoration at Hall Ranch Decision Making Process:

## Project Goals



### Parks & Open Space

Provide a conceptual design for the entire South Saint Vrain Creek project area that restores and improves the channel and surrounding floodplain areas to a safe, natural, resilient, functioning, and ecologically rich habitat. Provide a preliminary design for the EWP project reaches. This project will use qualitative research, quantitative data, and community input to inform resilient design that shall utilize natural system principles and onsite materials to expedite recovery from the 2013 floods and set up for better performance in future flood events. Components to meet goals include incorporating natural channel diversity and character, re-establishing floodplain benches for lateral connectivity, reducing longitudinal connectivity constraints, improving flow conveyance and sediment transport to maintain environmental values, promote naturally functioning stream processes, protect public and private infrastructure, improve public safety, repair unstable erosion scars in high-risk areas, and revegetate denuded areas.

## Core Values

### Community

- Communicates with the residents
- Incorporate residents needs in alternative analysis
- Be mindful of impact of property value
- Consider the affects work will have downstream
- Consider recreational opportunities
- Increase aesthetic appeal
- Consider existing water rights
- Minimize impact to cultural and historic features

### Resiliency

- Improve "Creek Conveyance"
- Provide smarter infrastructure solutions
- Improve creek stability
- Reduce risk to critical infrastructure
- Restore natural ecosystem process
- Reconnect the floodplain

### Safety

- Reduce the impacts to private property
- Reduce potential flood risk
- Make public safety top priority

### Environment

- Assess existing environmental conditions
- Reduce sedimentation in general
- Improve wildlife habitat (banking opportunities)
- Increased channel capacity to accommodate future flooding
- Work with natural systems
- Improve fish passage and habitat
- Remove and recycle onsite materials
- Avoid highly-engineered solutions
- Re-establish natural condition of the channel and adjacent stream bank
- Increase revegetation efforts
- Concerned about movement of potential debris both short and long term
- Concerned about ground water and the rise in the creek bed elevation
- Concerned about interim berm condition along creek
- Consider new 100 year hydrologic volumes

### Implementation

- Work with existing project initiatives and ongoing projects
- Find funding for future implementation
- Include fiscally responsible costs
- Continue longterm planning for future projects
- Meet the goals for EWP funding
- Consider elements of the master plan
- Be consistent with land use regulations and management
- Consider phasing

### Schedule

- Prioritize strategies as critical, necessary or desired

## Critical Issues Paraphrased from Stakeholder Comments

## Prioritization Criteria

1. Protect critical public and private infrastructure?
2. Avoids negative impacts to downstream infrastructure, channel and stormwater systems?
3. Improves aesthetics to the creek corridor?
4. Consider recreation where allowed?

5. Benefits larger area of creek corridor?
6. Re-establishes floodplain connectivity?
7. Restores affected areas of the South St. Vrain Creek channel and surrounding areas to stable, resilient and ecologically rich habitats?
8. Reduces future recovery time?
9. Improves conveyance of sediment?

10. Reduce flood risk to the public and residents by providing long term solutions that increase resiliency?

11. Natural ecosystem processes restored?
12. Protects or improves existing habitat and significant ecological resources?
13. Incorporates locally available materials and environmentally friendly processes?
14. Protects and improves water quality and the geomorphology of the creek?

15. Creates infrastructure investments that are reasonable to construct and provides the best value for their life-cycle, function and purpose?
16. Can be supported by current land use regulations or revised land use regulations?
17. Provides funding, partnering and collaboration opportunities by meeting multiple stakeholder objectives?

# South St. Vrain Creek Restoration at Hall Ranch Decision Matrix

ID	Critical Issues	Criteria	Alternatives Evaluation			
			Floodplain Connectivity	Channel Complexity	Revegetation	Infrastructure Protection
<div style="text-align: right;"> <span style="border: 1px solid black; padding: 2px;">Fair</span> <span style="background-color: yellow; border: 1px solid black; padding: 2px;">Better</span> <span style="background-color: green; border: 1px solid black; padding: 2px;">Best</span> </div>						
Prioritization Criteria						
1	Community	Protect critical public and private infrastructure?				
2	Community	Avoids negative impacts to downstream infrastructure, channel and storm water systems?				
3	Community	Improves aesthetics to the creek corridor?				
4	Community	Consider recreation where allowed?				
5	Resiliency	Benefits larger area of creek corridor?				
6	Resiliency	Re-establishes floodplain connectivity?				
7	Resiliency	Restores affected areas of the South St. Vrain Creek channel and surrounding areas to stable, resilient and ecologically rich habitats?				
8	Resiliency	Reduces future recovery time?				
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10	Safety	Reduce flood risk to the public and residents by providing long term solutions that increase resiliency?				
11	Environment	Natural ecosystem processes restored?				
12	Environment	Protects or improves existing habitat and significant ecological resources?				
13	Environment	Incorporates locally available materials and environmentally friendly processes?				
14	Environment	Protects and improves water quality and the geomorphology of the creek?				
15	Implementation	Creates infrastructure investments that are reasonable to construct and provides the best value for their life-cycle, function and purpose?				
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Issue Specific Criteria						
1						
2						
3						
4						
Identification of Preferred Option:						