Dad Clark Channel Stabilization

Project Location

Northridge Park
Sand Creek Park
Sand Creek Elementary
Dad Clark Channel Stabilization
Project Team

- Project Owner – Highlands Ranch Metro District
- Project Manager – Forrest Dykstra - FDykstra@HighlandsRanch.org
- Project Partner/Contracting Agency – Mile High Flood District (formerly Urban Drainage and Flood Control District)
- Design Engineer – Muller Engineering
- Contractor – Naranjo Civil
- Total Project Cost - $1,845,000
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Project Schedule

• December 2019 – Mobilization and begin prep work

• January -April 2020- Channel work including grading and rock placement

• April- June 2020 - Restoration and revegetation efforts
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Upstream drainage area is over 1,600 acres.

Drains to McLellan Reservoir – HR water supply.
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• Storm runoff and base flows from homes and development has caused significant bank erosion resulting in 10’-15’ vertical banks

• Severe channel degradation increases sediment load in downstream areas and impacts vegetation
Bank erosion results in tree loss which:

- impacts channel flow capacity
- redirects flows and causes more bank erosion
- Increases debris in storm flows which impacts trail crossings etc
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Channel degradation results in outlet structures failing. Storm sewer outfall is 8’ above channel bottom and undermined.
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Increased flows have widened channel and resulted in vertical banks which degrade riparian habitat and increase sediment load in runoff.
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Proposed Improvements

• Construct stable low flow channel and connect overbanks with higher flows.

• Remove vertical banks and re-establish vegetation.

• These techniques have been used successfully in other areas in Highlands Ranch and the Denver Metro area.

• Trails will remain open during construction. Please stay out of work zones.
• Vegetation will be impacted but the improvements are designed to retain as much vegetation and trees as possible.
• Project includes planting 60 new trees, over 340 shrubs, and more than 6,500 wetland plugs.
• Additional plantings may occur in subsequent years to assist revegetation efforts.
• Weed management will also be done to assist in revegetation efforts.
• Willows will also be planted to restore riparian areas.
This is an example of a similar project. The design was done to save the existing trees and construct the channel to incorporate them into the improvements.

This project is in a tributary of Dad Clark Gulch. The flows are less than on the proposed project but the improvements will be similar.
This is an example of the Metro District’s objectives with this project. This drainageway is similar in size and flows, and had similar objectives: restore and protect the channel and minimize the impact. The design worked to save the existing trees and incorporate them into the improvements.

This project is in Marcy Gulch north of Marcy Park. Photo on right was taken less than 3 years after project completion.
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For comments or questions please contact Forrest Dykstra
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