

# Southern Delivery System

## Revegetation Completion

Post-Construction (Sept. 2015)



Pre-Construction (Jan. 2012)



**Pueblo County 1041 Permit  
Condition 22, and Mitigation  
Appendices Appendix C-9**

Photo Reference: South 1 Segment,  
Birchwood Dr., Pueblo West

# Agenda

- Background and Overview
- Expert Evaluations
- Revegetation Status
- Public Involvement and Communication
- Request Finding of Compliance and Revegetation Bond Release

# Background

- 1041 Permit Requirement:
  - 90% of Pre-disturbance Cover (Abundance and Diversity) within 2 Years
  - Requirement for the Entire Easement Area within Pueblo County
  - Posted Bonds
  - Methodology Defined by Experts and County Staff

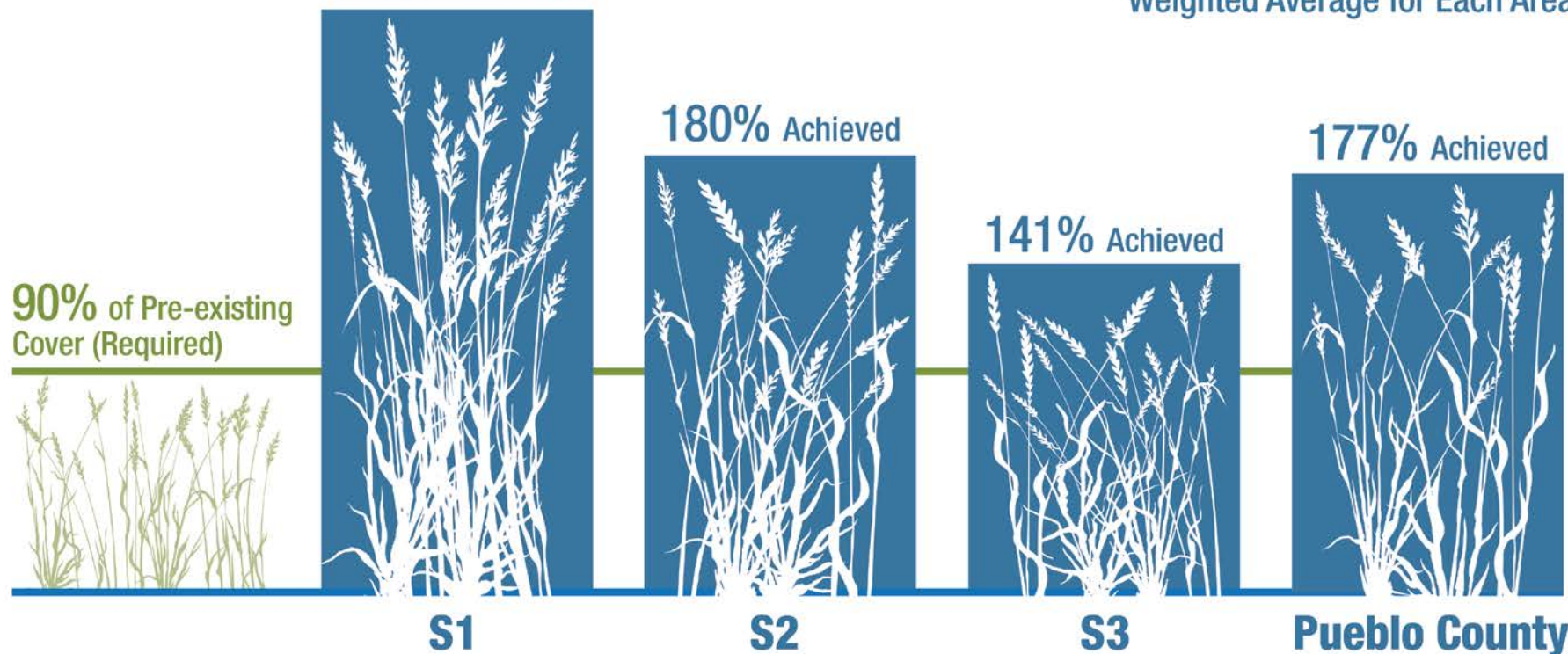
- Independent Subject Matter Experts (SMEs)
  - Joe Stevens (Colorado Natural Heritage Program - CNHP)
  - David Buckner, Ph.D. (ESCO Associates)
  - Ed Redente, Ph.D. (Redente Ecological Consultants)
  - Warren Keammerer, Ph.D. (Keammerer Ecological Consultants)



## SDS Revegetation Performance Standard Results

244% Achieved

Pueblo County Performance Standard  
Weighted Average for Each Area



# Methodology

- Pre-Construction Evaluations
  - Baseline Sampling
  - Photographs and Videos
- Post-Construction and Revegetation Evaluations
  - Following Agreed to Sampling Methodology
  - Photographs and Videos
- Noxious Weed Control
  - Met 1041 Condition for Eradication of Identified List A and B Species
  - Controlled Spread of Identified List C Species

# Evaluations

- Sampling Coordinated with Pueblo County and SMEs
  - Various Soil Types (A-F)
  - Randomly Located 50-Meter Transects
  - Evaluation of Species Diversity
  - Evaluation of Percent Cover
  - Role of Opportunistic Plants
  - Variability in Plant Cover is Natural



# Evaluations

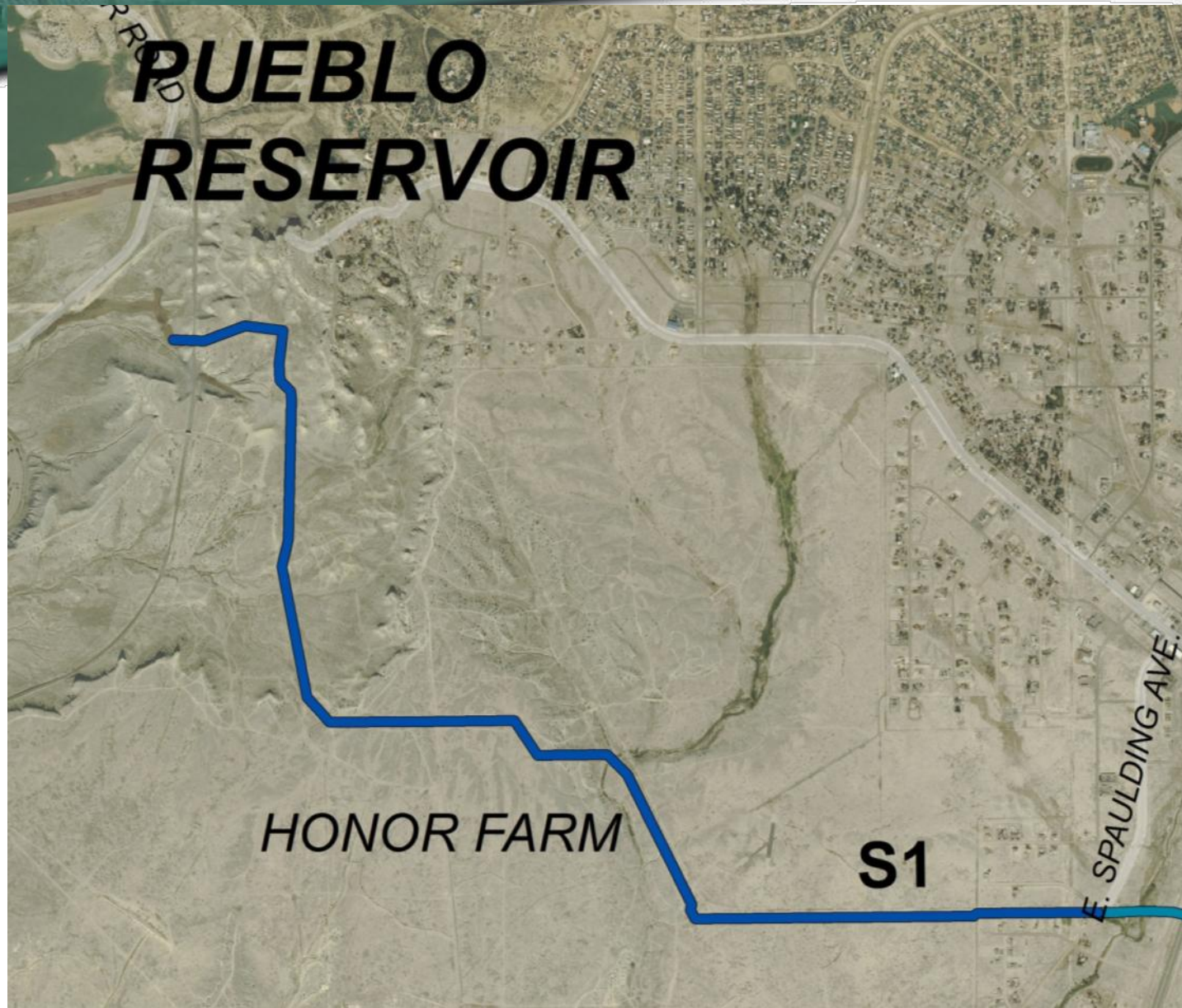
- Conducted Evaluations along Easement in Segments to Quantify and Document Cover by Acceptable Species
- Segments were Planted with Native Seed Mixes and had Initial Irrigation Water Applied
- Met the Overall 90 % Revegetation Cover Requirement in 2014
- Continued to Monitor and Evaluate through 2015



# South 1



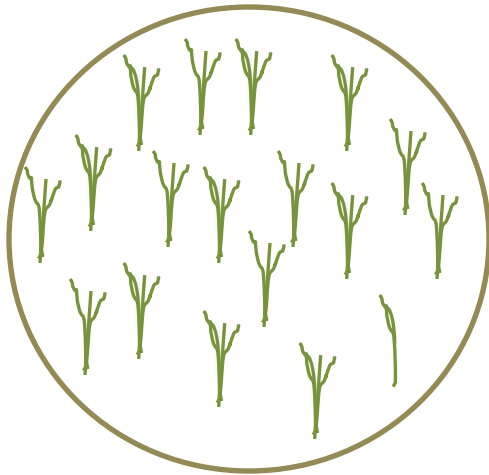
Colorado Springs Utilities  
*It's how we're all connected*



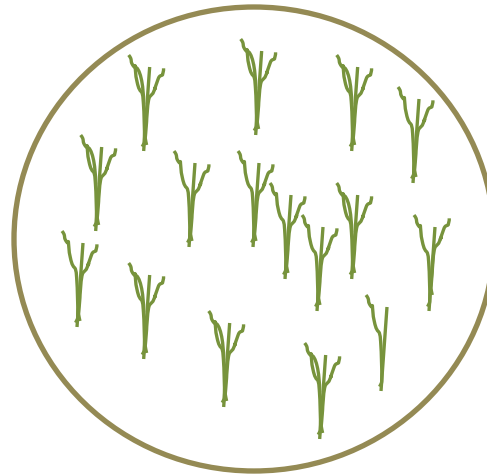
# Current Status – South 1

- Construction Completed in 2013
- Re-graded and Planted by May 2013
- Assessment was Completed in Late August - Early September 2014
- Post-construction Vegetation Cover Exceeded Revegetation Performance Standards
- Percent Revegetation Cover within the S1 Work Segment is 38.5% (15.8% Required)

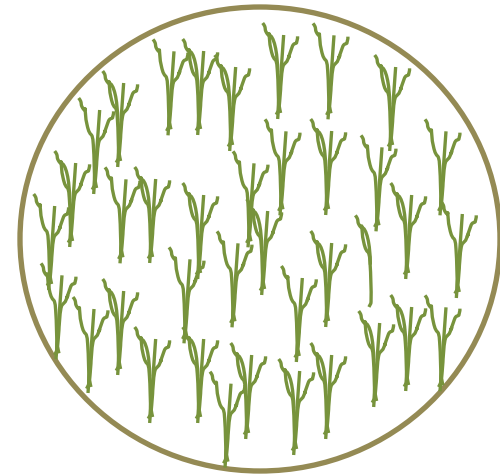
# S1 Revegetation Cover



Pre-  
Construction  
Vegetation  
Cover  
17.5%



Revegetation  
Requirement  
15.8%



Actual  
Revegetation  
Cover  
38.5%



# South 1, Honor Farm

Post-Construction (Sept. 2015)



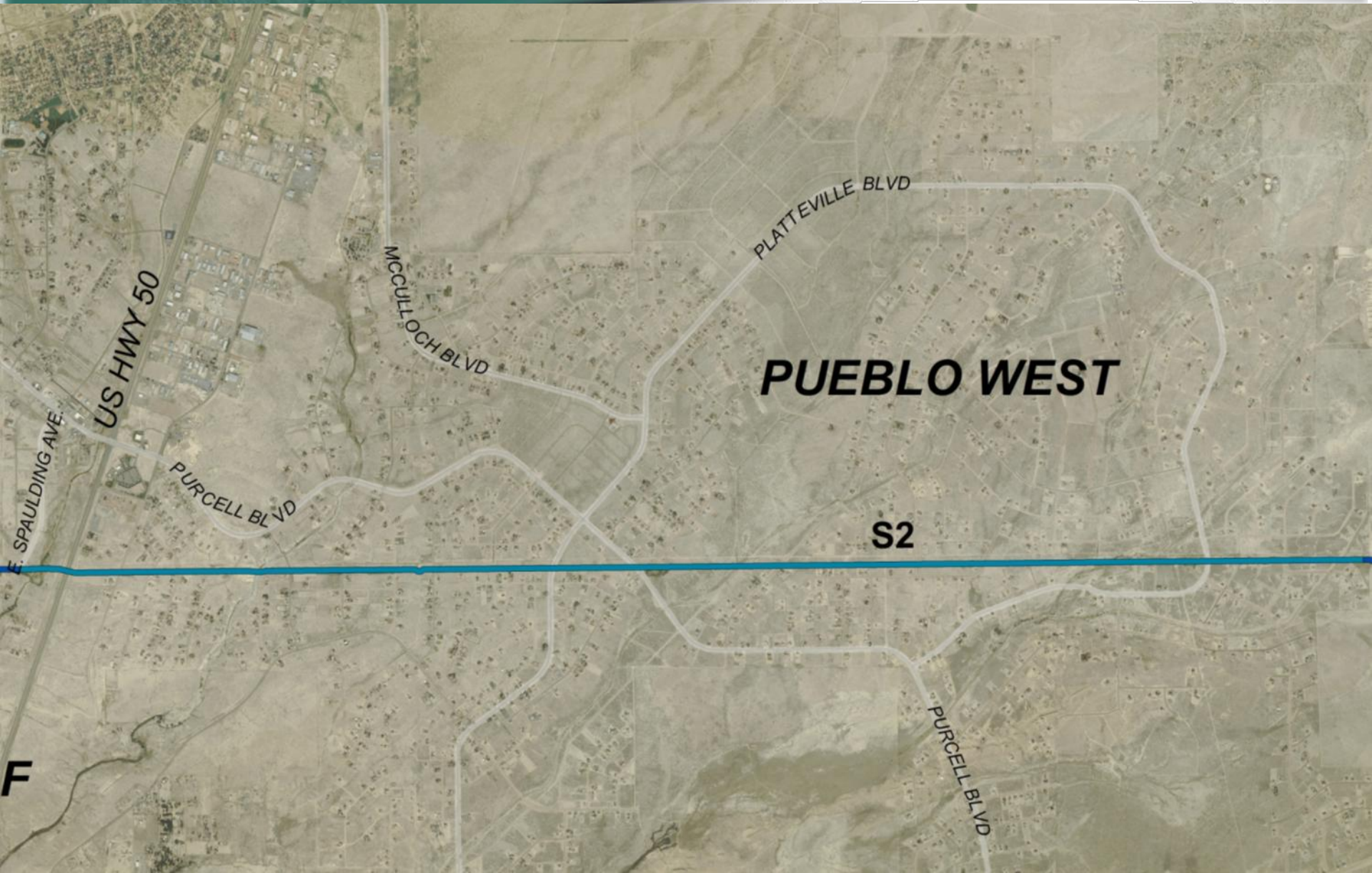
Pre-Construction (Jan. 2012)



"There's a lot more grass growing out there than there was when you all came with the pipeline. It looks just great!"  
-- Mr. Nolen, Birchwood Drive



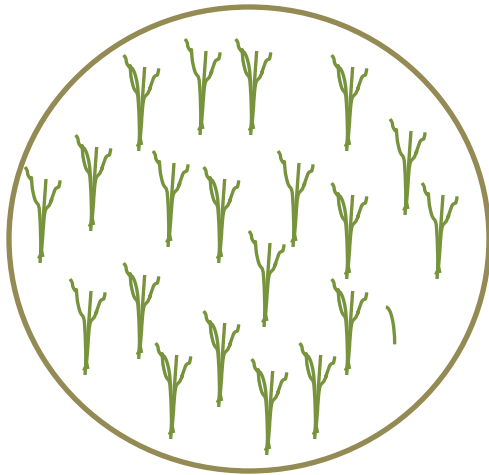
# South 2



# Current Status – South 2

- Construction Completed in 2012
- Re-graded and Planted by August, 2012
- Assessment was Completed in Late August - Early September 2014
- Post-construction Vegetation Cover Exceeded the Revegetation Performance Standards
- Percent Revegetation Cover within the S2 Work Segment is 32.9% (18.3% Required)

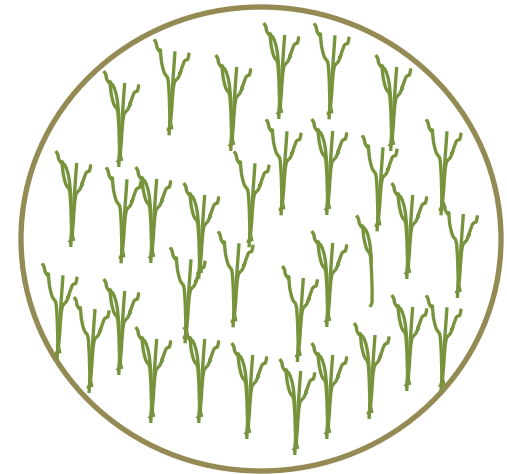
# S2 Revegetation Cover



Pre-  
Construction  
Vegetation  
Cover  
20.3%



Revegetation  
Requirement  
18.3%



Actual  
Revegetation  
Cover  
32.9%



# South 2, E. Sequoya Drive

Post-Construction (Sept. 2015)

"You guys did great on new grass. Thanks."  
-- Mrs. Arnot, Kirkwood Drive



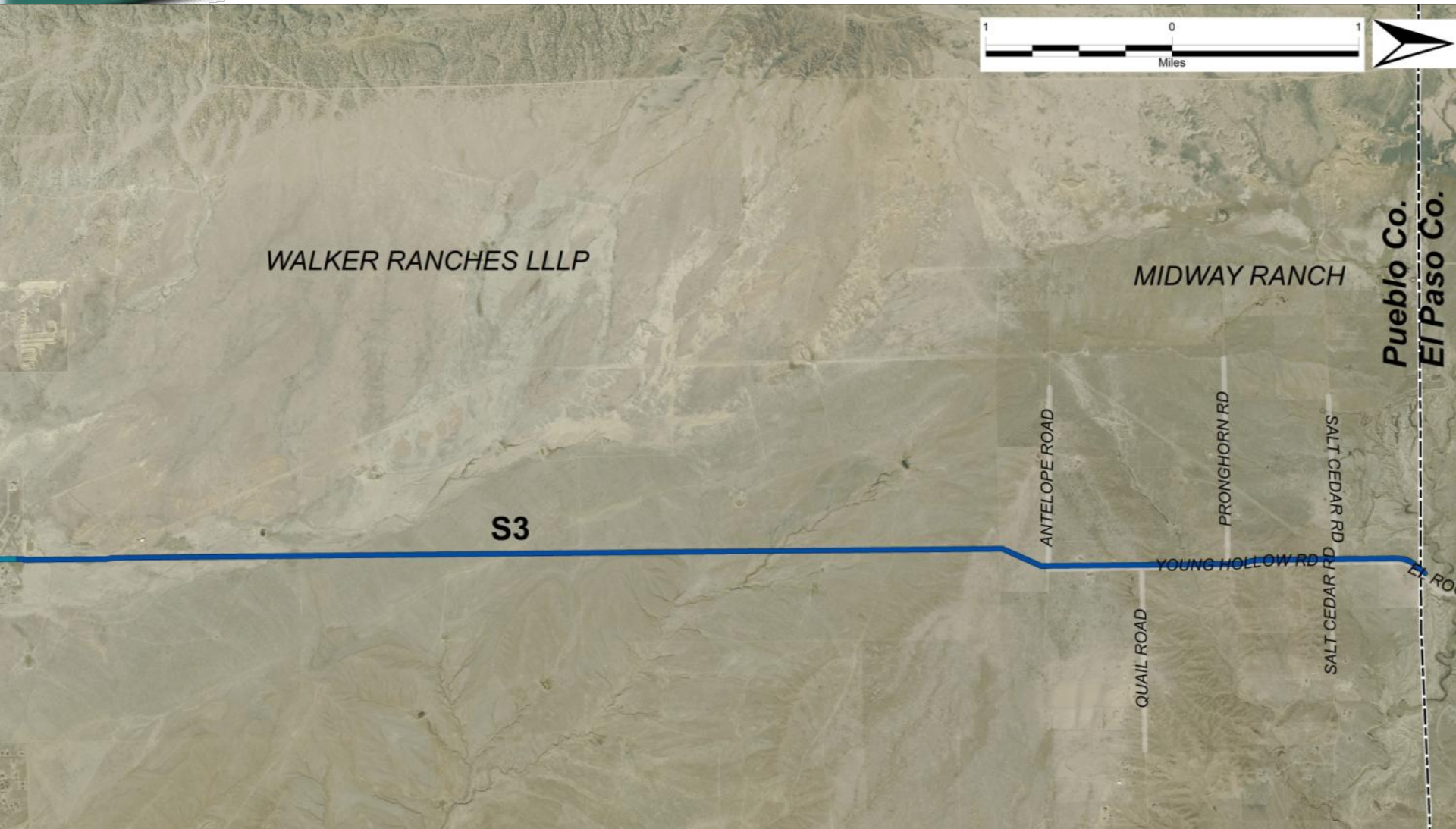
Pre-Construction (Sept. 2011)  
**505010006**



"Grass is coming along really well out there. We really appreciate it."  
-- Mr. Tillman, Canvas Drive



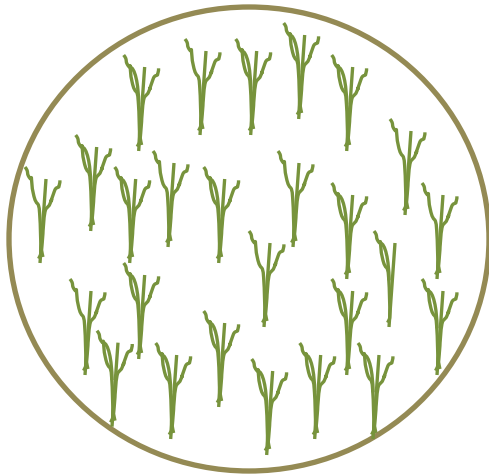
# South 3



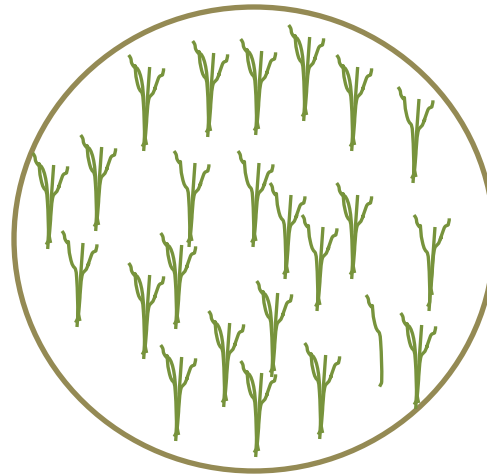
# Current Status – South 3

- Construction Completed in 2012
- Re-graded and Planted by September, 2012
- Assessments Completed in Late August - Early September 2014 and August 2015
- Post-construction Vegetation Cover Exceeded the Revegetation Performance Standards
- Percent Revegetation Cover within the S3 Work Segment is 32.5% (23.1% Required)

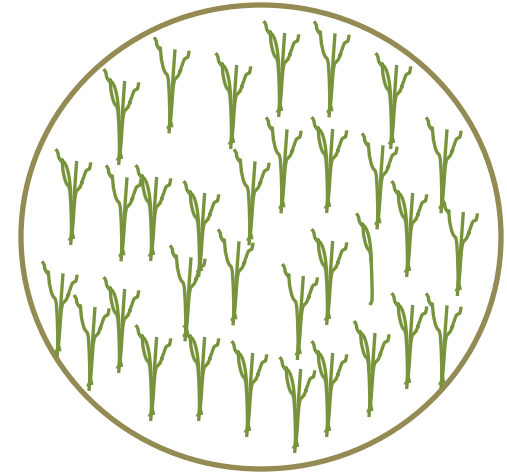
# S3 Revegetation Cover



Pre-  
Construction  
Vegetation  
Cover  
25.6%



Revegetation  
Requirement  
23.1%



Actual  
Revegetation  
Cover  
32.5%

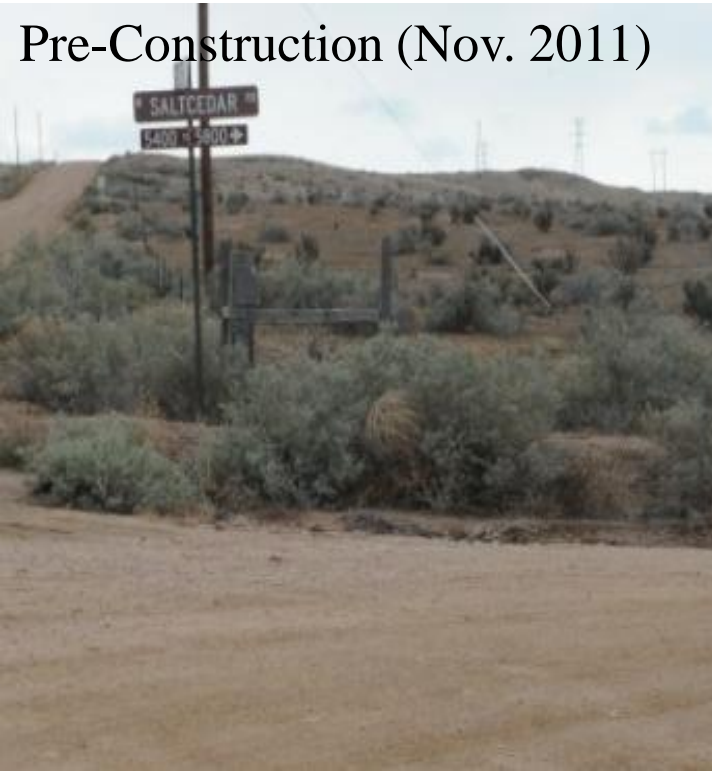


# South 3, Salt Cedar Drive

Post-Construction (Sept. 2015)



Pre-Construction (Nov. 2011)



"My horses love the grass and we appreciate it."  
-- Miguel Galaviz Acosta,  
Midway

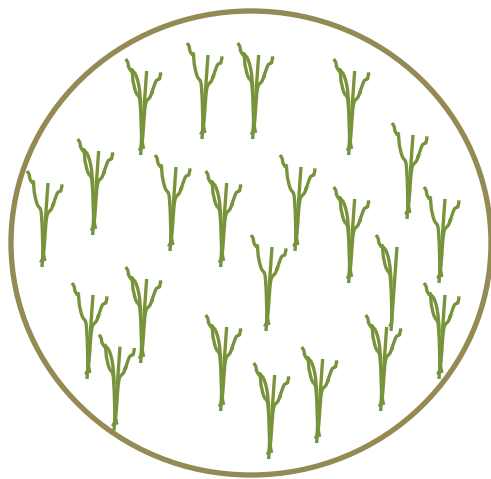


- 1041 Permit Requirement for Revegetation
  - Relates to Entire Easement Area in Pueblo County
  - The Achieved Percent Revegetation Cover within Pueblo County is 34.9% (19.7% Required)
- Results in Each Segment and in Pueblo County as a Whole are Consistently Well Above the Revegetation Performance Standard

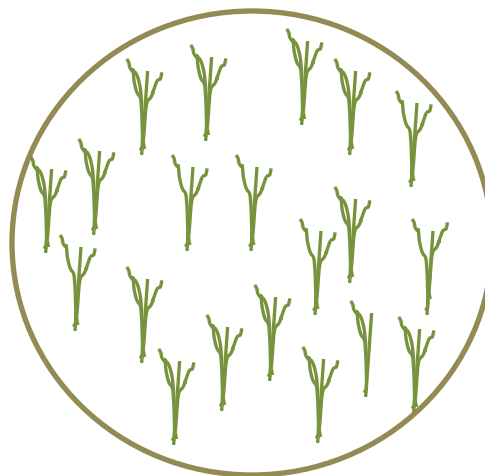
# Countywide Revegetation Cover



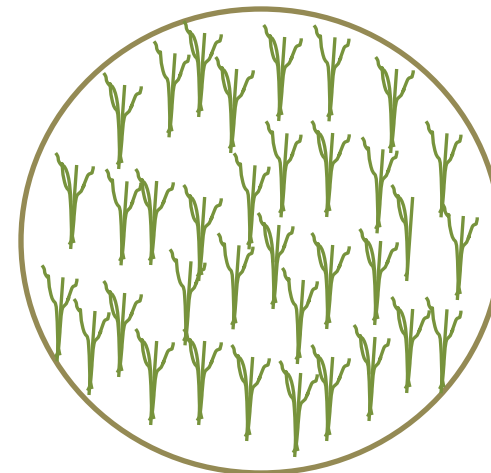
Colorado Springs Utilities  
*It's how we're all connected*



Pre-  
Construction  
vegetation  
Cover  
21.8%



Revegetation  
Requirement  
19.7%



Actual  
Revegetation  
Cover  
34.9%

# Areas of Potential Concern

- S3 - Group B Soils
  - Less than 1-acre at north county line tie-in area
  - Re-worked areas on Walker Ranches
- S3 - Group C Soils
  - 2015 results compared to 2014 results
- Walker Ranches (S3)
  - August 2015 Transect Results

# Public Involvement

- Proactive and Personal
- 24/7 Hotline
- On-site Support During Construction
  - Issues Prevented/Resolved Rapidly
- Consistent Contact
  - Spring and Fall Mailings, Newsletters and Care Guides



## WHAT TO EXPECT DURING REVEGETATION

### RESTORING NATIVE PLANTS IN THE SDS CONSTRUCTION AREA

Construction of the Southern Delivery System (SDS) is entering a new phase. Major activities associated with pipeline installation are concluding in your area. Crews are now beginning work to restore native plants in the areas affected by construction. During these revegetation activities, the SDS team and contractors want to keep you informed and involved in the process.





# Public Involvement

- Facilitated Access Agreements
- Monitored Resident Satisfaction
- Arranged for Maintenance (Mowing and Cleanup)
- Letters Sent in Spring 2015 to Ask About Needs
- Calls made to Residents Along Easement



# South 2 Segment, E. Ivanhoe Dr.



Colorado Springs Utilities  
*It's how we're all connected*

Post-Construction (Sept. 2015)



Station 453 +50 - E - 9-30-11 11:33 AM

Pre-Construction (Sept. 2011)





# Summary

- Sampling Followed Agreed Upon Protocol
- Pre-construction Sampling:
  - Excluded Sparsely Vegetated Areas, Raising the Standard
- Post-construction Sampling:
  - Conducted Randomly
  - Demonstrates Revegetation Success
    - Species Diversity on Alignment
    - On Each Soil Type



# Summary

- Far Exceeded the 90% Pre-Existing Cover Requirement
- Easements and Individual Properties “as good, or better” than Prior to Construction
- Request Finding of Compliance and Revegetation Bond Release on All Segments

Post-Construction (Sept. 2015)

