



Colorado Springs Utilities

*It's how we're all connected*

December 20, 2012

Ms. Joan Armstrong  
Director of Planning and Development  
Pueblo County  
229 W. 12th Street  
Pueblo, CO 81003



**Subject: South Raw Water Pipeline 3 (S3) Construction Restoration, Southern Delivery System (SDS), 1041 Permit No. 2008-002**

Dear Ms. Armstrong,

On October 10, 2012, Pueblo County staff requested information pertaining to post-construction grading and revegetation for Southern Delivery System (SDS) South Pipeline 3 (S3). County staff also provided two documents: *SDS Cross Sections (Walker Ranch)* (prepared by Cardinal Points Surveying, Inc., October 9, 2012) and *Southern Delivery System S-3 – Revegetation Review September 25th, and 29th, 2012* (prepared by Total Terrain, Inc., October 1, 2012). Those documents were prepared for Walker Ranches and submitted to the County.

Pipeline construction for S3 commenced in January, 2012 and concluded in July, 2012. Final grading was completed in July, 2012 and initial revegetation work (i.e., irrigation system installation, seeding, and mulching) was completed in October, 2012. This letter and its attachments provide the grading and revegetation information requested by the County and contain a recitation of facts pertinent to the two documents prepared for Walker Ranches.

#### **Evaluation of Pre- and Post-construction Grading**

The construction area for S3 covered 140.8 acres, including the 3.2-acre crossing of Steele Hollow. The Steele Hollow crossing was constructed in accordance with a channel design permitted by the U.S. Army Corps of Engineers (Individual Permit No. SPA-2005-0013-SCO and Nationwide Permit 13) and was not intended to be restored to pre-construction contours. Of the remaining 137.6 acres affected by S3 construction, 126.1 acres (92 percent) have been regraded to within one-half foot of the pre-construction elevation and 133 acres (97 percent) have been regraded to within one foot of the pre-construction elevation (Table 1). Differences between one and two feet occur on approximately 3.1 acres (2 percent) and differences greater than two feet occur on 1.6 acres (1 percent). Locations with differences of two feet or greater are principally north of Walker Ranches and Antelope Road within undulating terrain. Absolute differences in pre- and post-construction elevations are depicted on a map in Attachment A.

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✓

**Table 1. Summary of Pre-construction and Post-construction Surface Elevation Differences for S3 (excluding Steele Hollow).**

<b>Absolute Elevation Difference</b>	<b>Acres</b>	<b>Percentage of Total</b>
Within 0.5 feet	126.1	92%
Between 0.5 and 1 feet	6.9	5%
Between 1 and 2 feet	3.1	2%
Greater than 2 feet	1.6	1%

Pre-construction elevations determined photogrammetrically from aerial photographs.

Post-construction elevations determined by high accuracy LiDAR with ground check points.

The elevation differences tend to be positive (i.e., a higher post-construction elevation). However, some settlement of the disturbed soil is anticipated. A geotechnical review of site soils and the amount of compaction achieved during pipeline construction estimated that future soil settlement is likely in the range of one to four inches. That review also concluded that soil expansion is unlikely due to soil characteristics. With the expected settlement, differences between pre- and post-construction elevations may be reduced further.

The areas identified below represent the vast majority of the 4.7 acres with a post-construction elevation differing by more than one foot from pre-construction conditions.

- **Pipeline Appurtenances.** Several above-ground appurtenances such as air-vac valves and blowoff structures were constructed in accordance with the project's design. The areas immediately surrounding these appurtenances is generally graded to direct drainage away from the appurtenance and, in the case of pipeline blowoffs, to direct flow from future pipeline releases to a natural drainage channel.
- **Two-track Access Road.** A two-track access road was established parallel to much of the pipeline alignment. Soil compaction along the road has produced a detectable depression relative to the immediately surrounding area.
- **Drainages Reestablishment.** Prior to pipeline construction, drainages traversing the construction area were primarily incised channels with vertical banks. Those channels have been restored with gradually sloped banks, which are expected to be more stable. Although the restored channels reestablished drainage paths across the 150-foot wide construction area, the channels do not follow alignments that are identical to the pre-construction alignments. The channel shape and alignment differences result in detectable elevation changes but do not adversely affect the function of the drainages or cause adverse impacts as a consequence of drainage patterns.
- **Transverse Slopes.** Areas where, prior to construction, the ground sloped across the construction area and had abrupt changes in elevation (e.g., small escarpments). Those areas were regraded to simulate the preconstruction condition; however, the pre- and post-construction elevations are not identical. Any effects on drainage are expected to be minor and highly localized.



Pre- and post-construction survey data coupled with interpretive information about S3 design and construction features indicate that the contours and drainage paths for disturbed areas have been reestablished in accordance with the Condition C-9(1) of the 1041 Permit (No. 2008-002). Nonetheless, Colorado Springs Utilities remains committed to working with landowners to address their preferences for post-construction restoration. Accordingly, and with Pueblo County's concurrence, we will offer to make some minor grade adjustments at locations selected with concerned landowners.

#### **Review of Cardinal Points Surveying, Inc. Cross-sections**

On October 2, 2012, Cardinal Points Surveying, Inc. collected cross-sectional surveys at 19 locations along the S3 alignment within Walker Ranch. Pre-construction grade was represented by a straight line between survey points measured after construction and at the outer edges of the construction area. Post-construction grade was determined by survey of about two to five points between the outer edges of the construction area for each cross-section.

Cardinal Points' data were compared to co-located (by pipeline station number) SDS pre-construction and post-construction survey data described above. Figures of those comparisons are provided in Attachment B. Cardinal Points' pre-construction cross-sections were inconsistent with the SDS pre-construction survey except where the construction area approximated a plane. Elevation variation across the construction area was, as would be expected based on the Cardinal Points' survey approach and timing, absent from their data. Consequently, the Cardinal Points pre-construction cross-sections are unsuitable for evaluating post-construction grading. Cardinal Points' post-construction cross-sections were similar, though with less resolution, to cross-sections prepared using the SDS post-construction data.

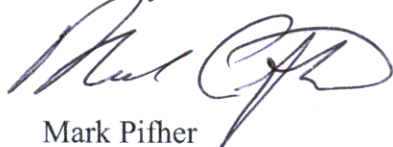
#### **Revegetation and Erosion Control**

In its October 1, 2012 letter, Total Terrain, Inc. offered an opinion on revegetation and erosion control work along the S3 alignment within Walker Ranch. That letter described Total Terrain's critique of site conditions observed on September 25 and 29, 2012. Initial revegetation work on S3 was in progress at the time of Total Terrain's site visits. Two groups of restoration ecologists have since evaluated the site independently.

The Colorado Natural Heritage Program (CNHP) conducted a site visit on October 10, 2012, and reported its findings in memoranda dated October 22, 2012 and a supplemental memorandum dated November 1, 2012 (Attachment C). Redente Ecological Consultants, Inc. (REC) conducted a site visit on October 31, 2012, and reported its findings in a memorandum dated December 15, 2012 (Attachment D). Both groups provided favorable opinions with regard to site conditions and the quality of the revegetation and erosion control work, with no significant deficiencies identified. CNHP and REC both noted that the northernmost part of S3, north of Walker Ranches and Antelope Road, could benefit from additional mulch application. REC also noted that some additional earthwork should be completed at Steele Hollow to address localized soil erosion beneath erosion control blankets at the edges of the construction easement. Colorado Springs Utilities remains committed to successfully revegetating the SDS pipeline alignment and will continue to monitor and maintain work performed so as to meet all permit requirements.

Grades and drainage paths within the S3 construction area have been reestablished in accordance with 1041 Permit requirements and in a manner consistent with common construction practices. In addition, initial revegetation work has been completed in an effective manner. Colorado Springs Utilities remains committed to addressing reasonable landowner preferences for post-construction grading and to successfully revegetating the construction area. Please contact me at 719.668.8693 with any questions regarding this information.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Mark Pifher', with a stylized flourish at the end.

Mark Pifher  
SDS Permitting and Compliance Manager

Attachments

- A – Map Comparing Pre- and Post-Construction Ground Elevations for S3
- B – Walker Ranches Cross-sections
- C – Colorado Natural Heritage Program Memoranda
- D – Redente Ecological Consultants Memorandum

cc: David Benbow, Pueblo County Engineering  
Brian Whitehead, SDS Project Manager (S3)

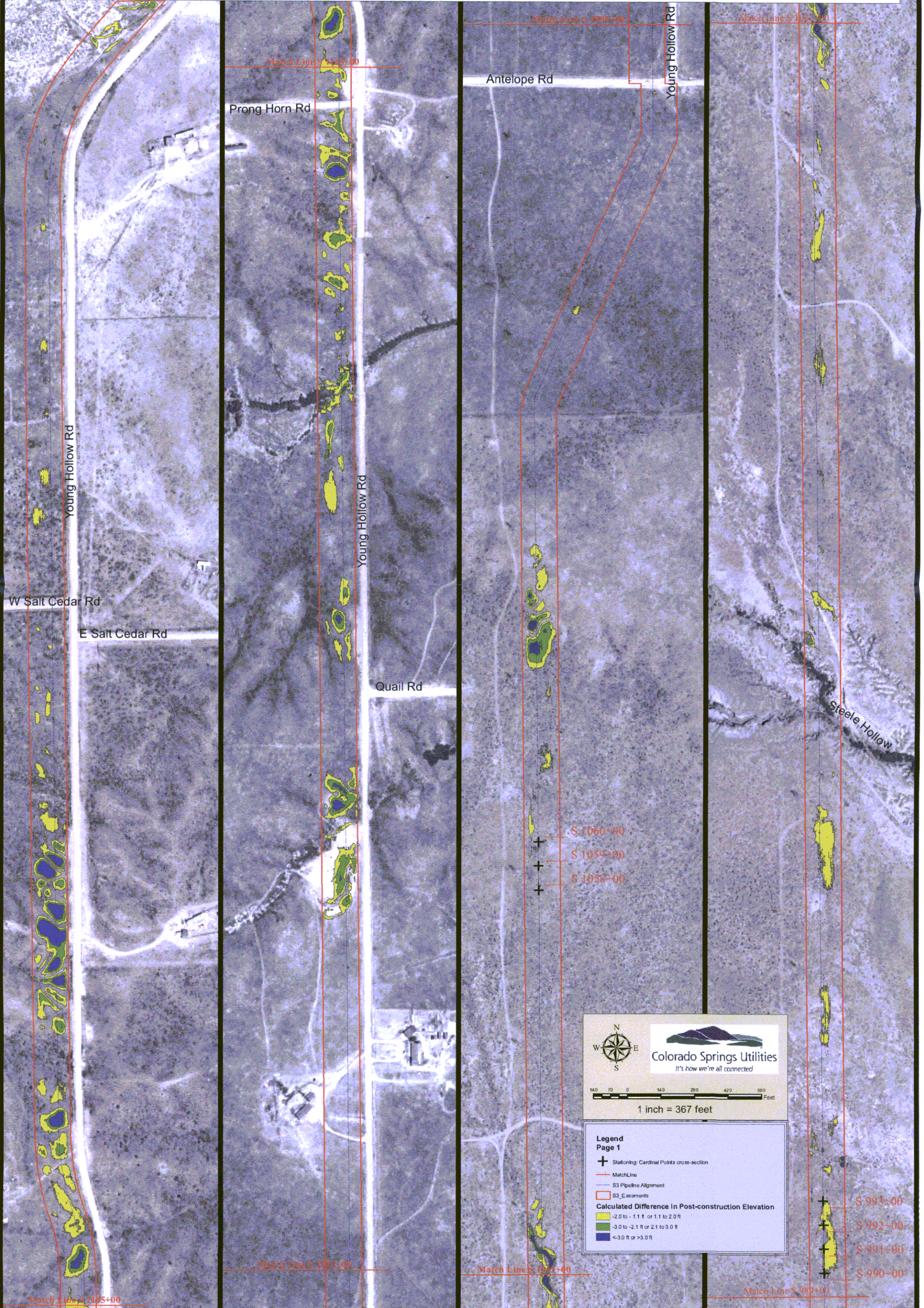


**Attachment A**

**Map Comparing Pre- and Post-Construction Ground Elevations for S3**

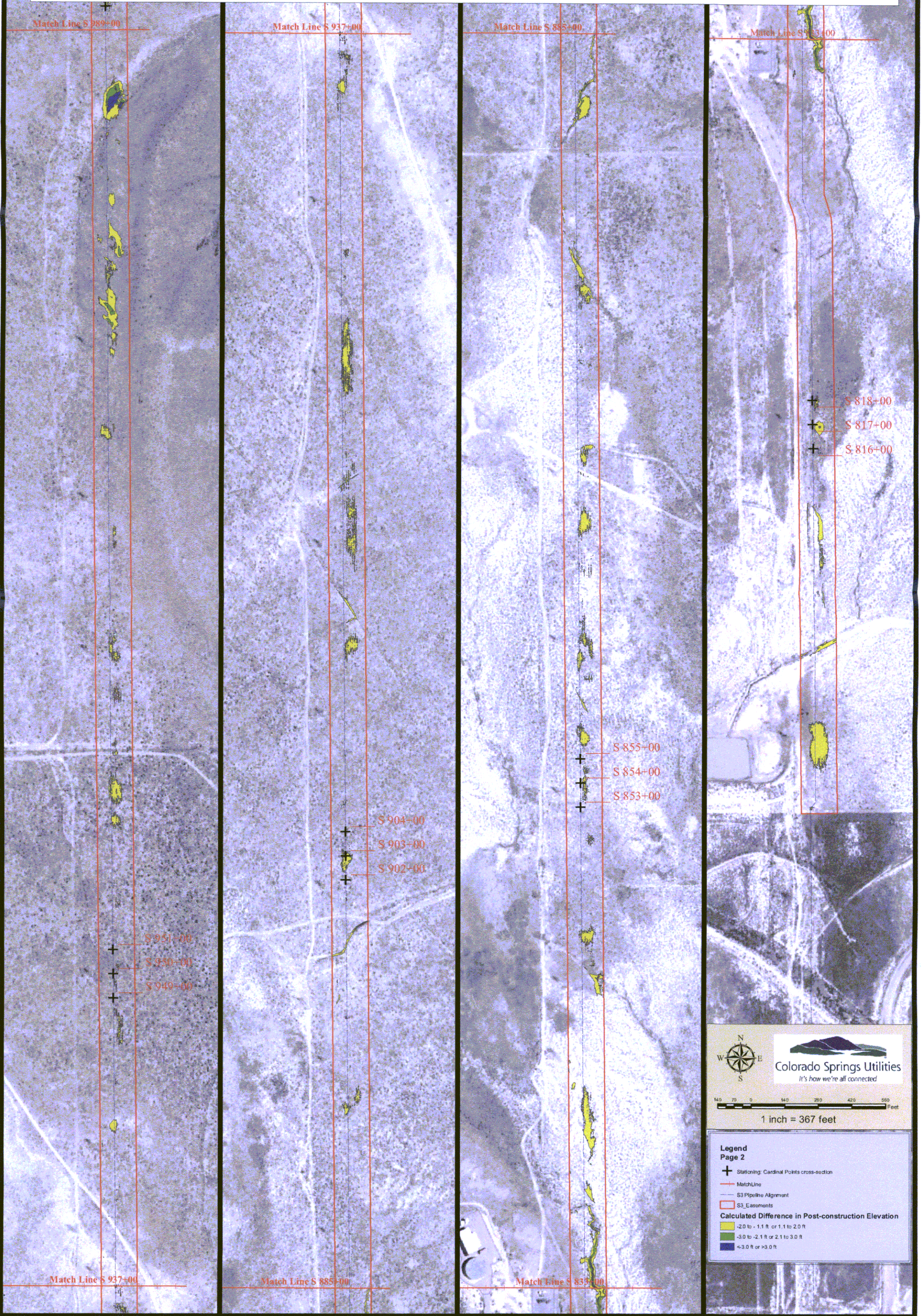


SDS South Pipeline 3 Variance between Pre-construction and Post-construction Surface Elevations



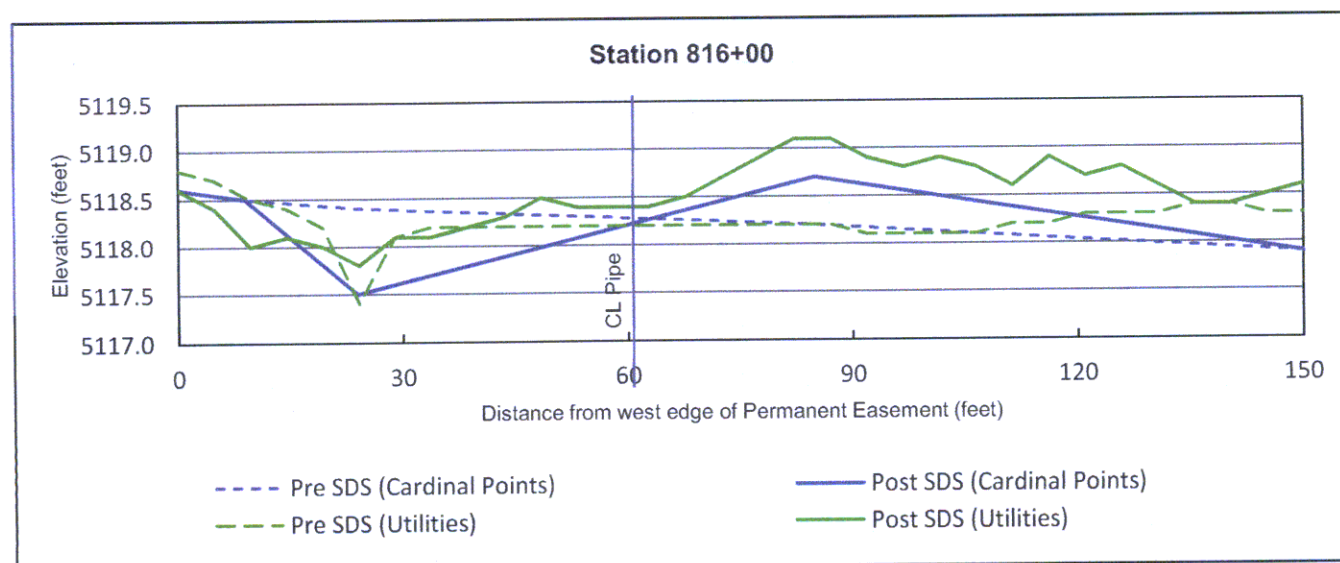
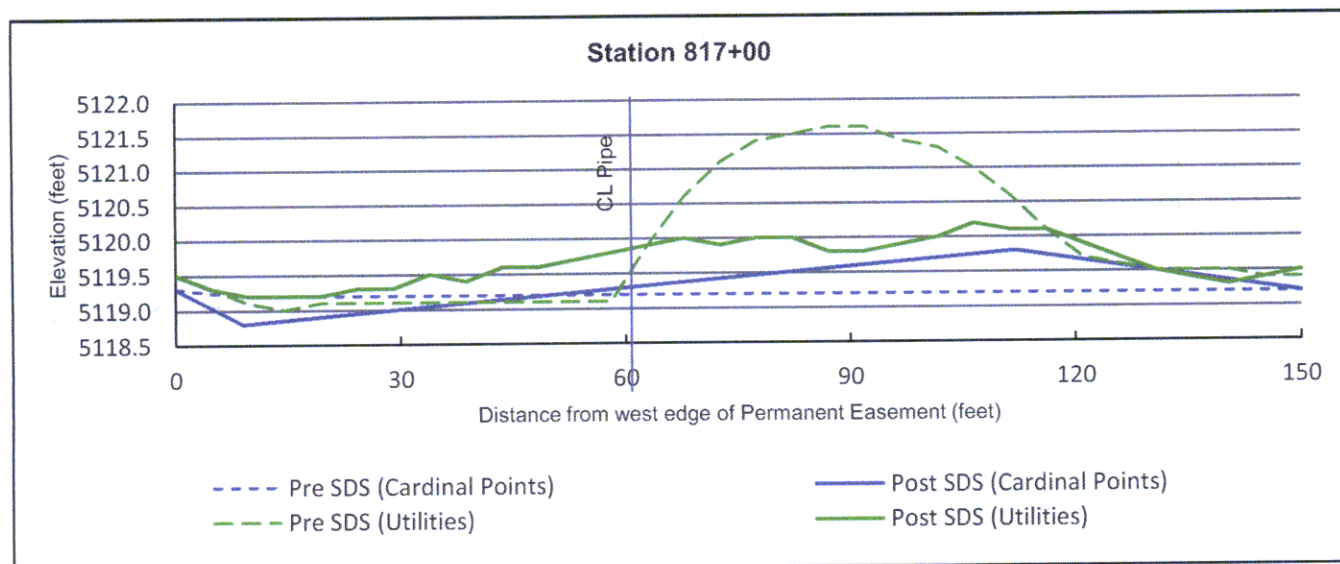
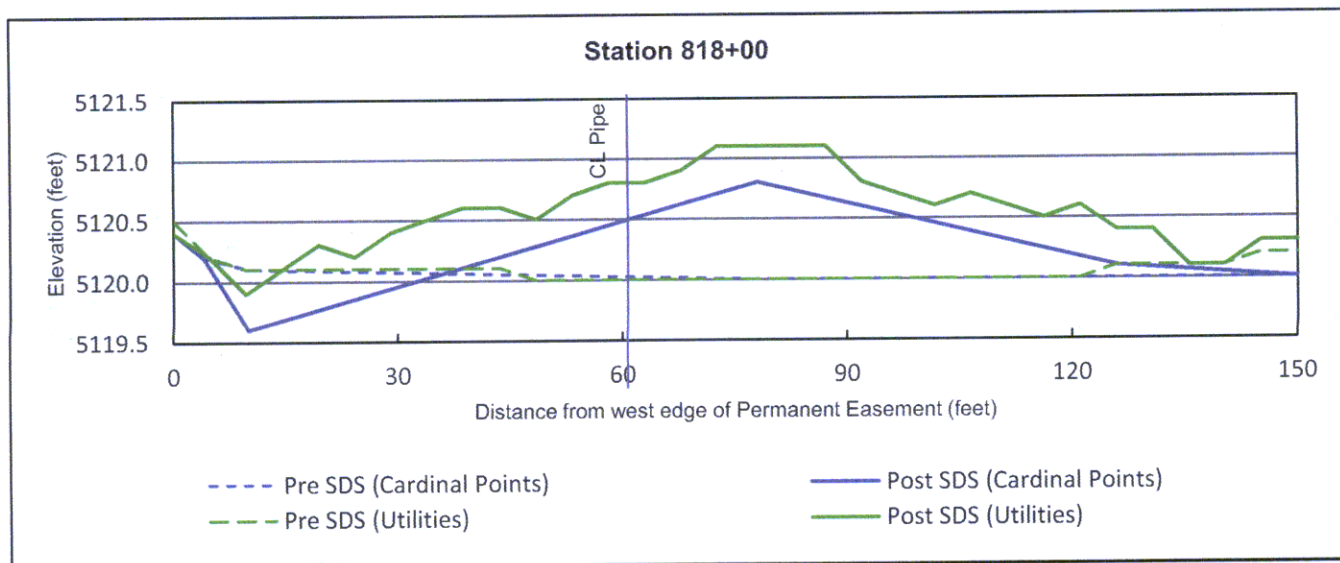


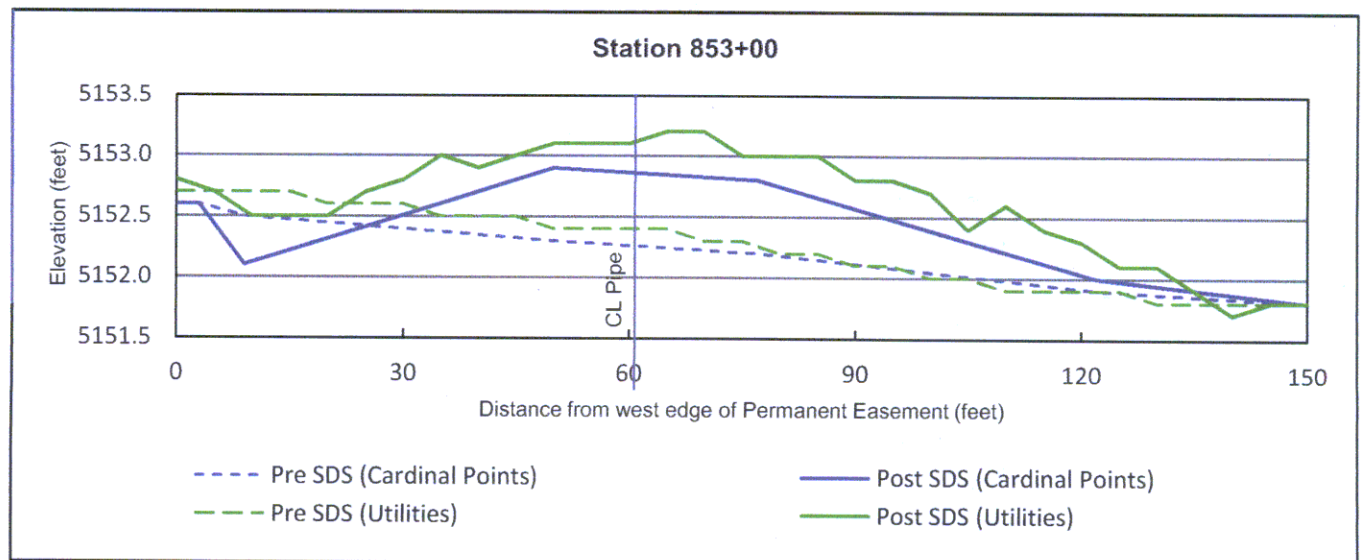
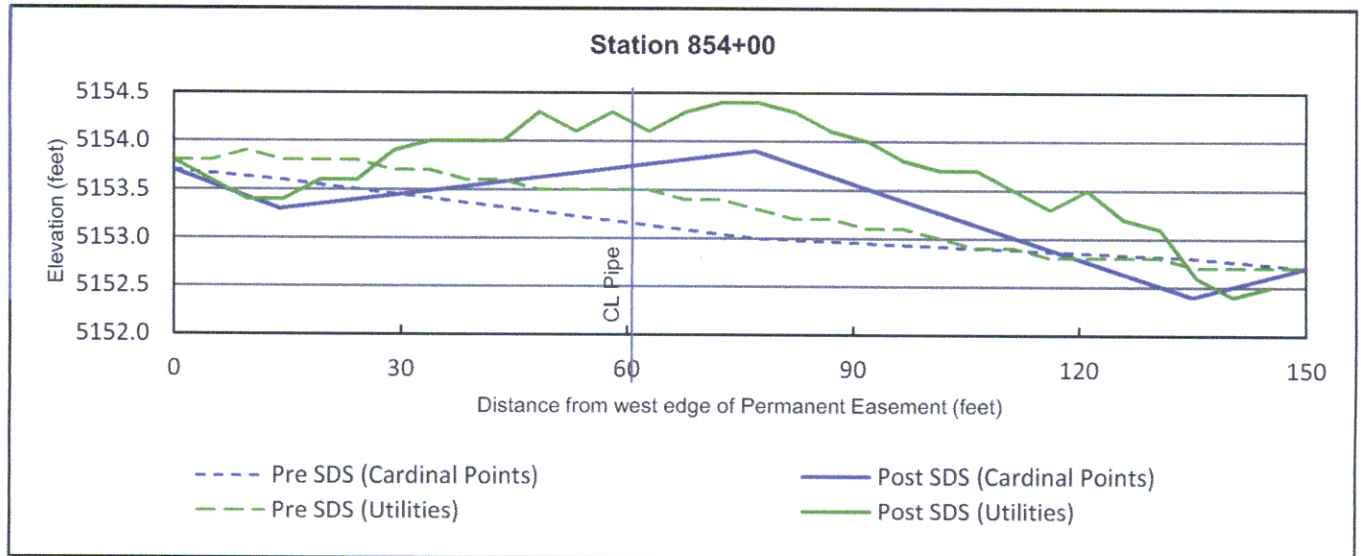
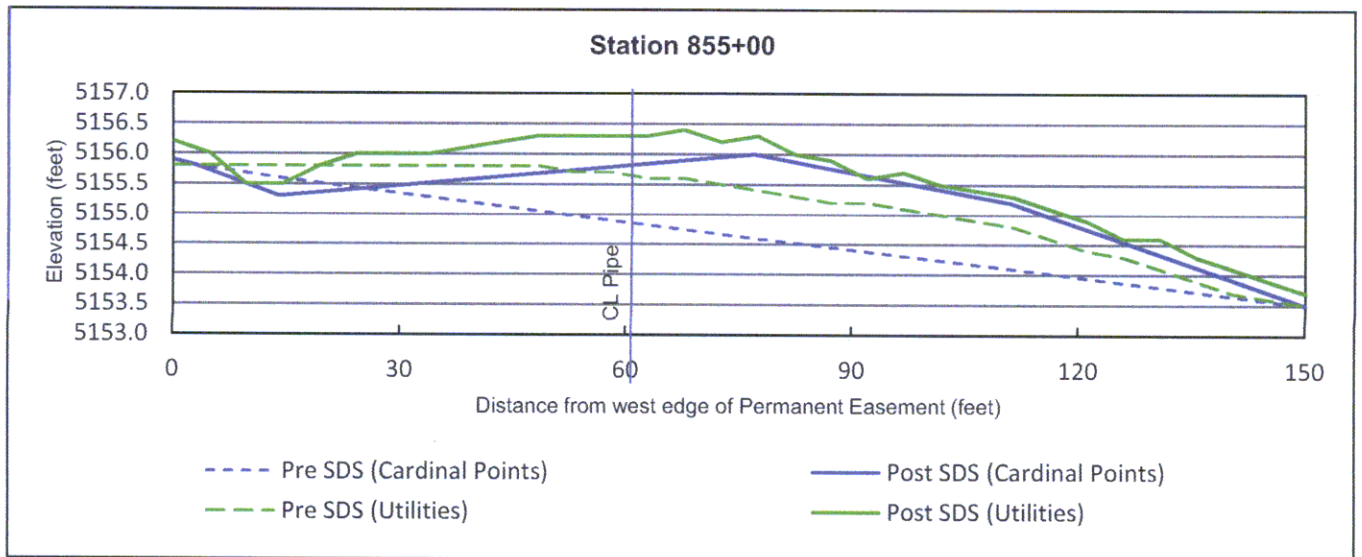
SDS South Pipeline 3 Variance between Pre-construction and Post-construction Surface Elevations



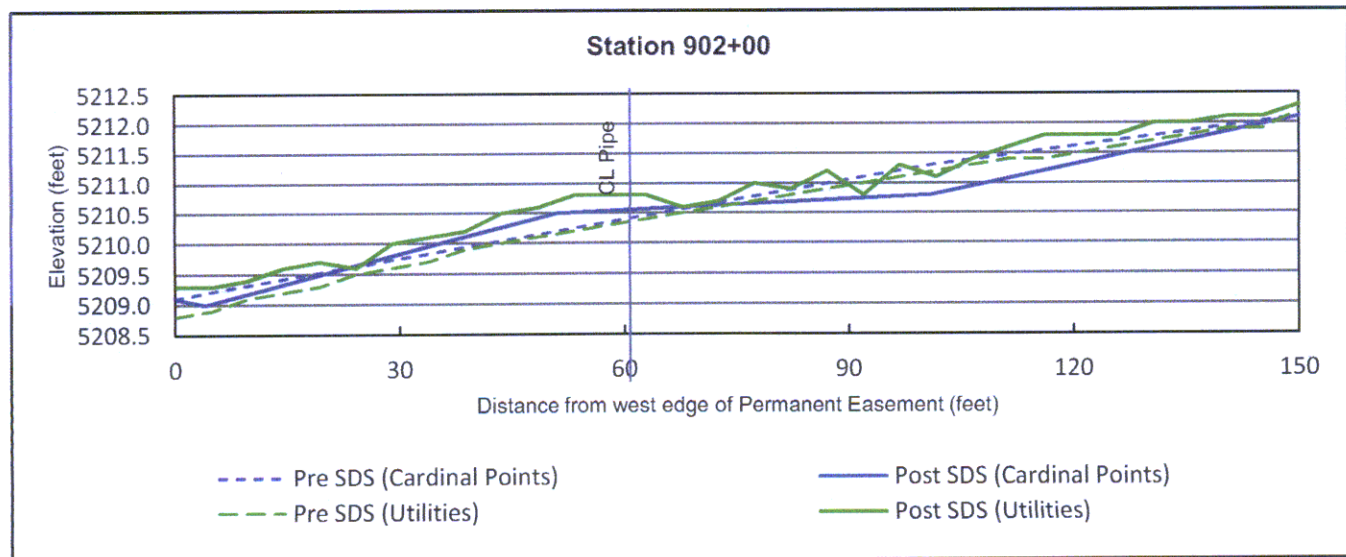
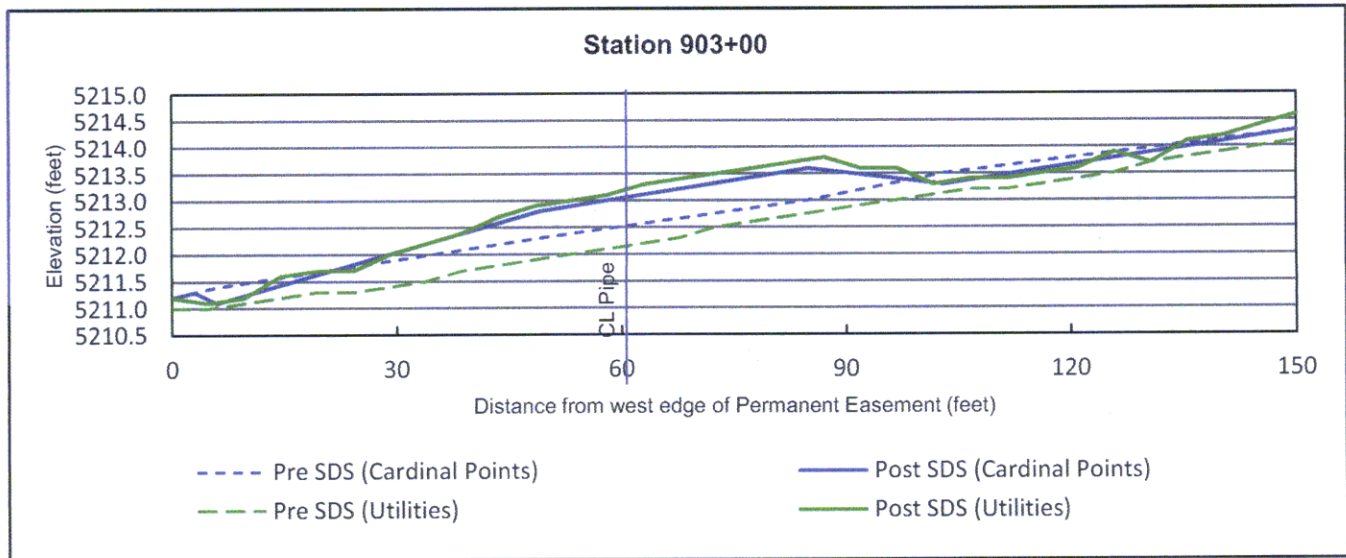
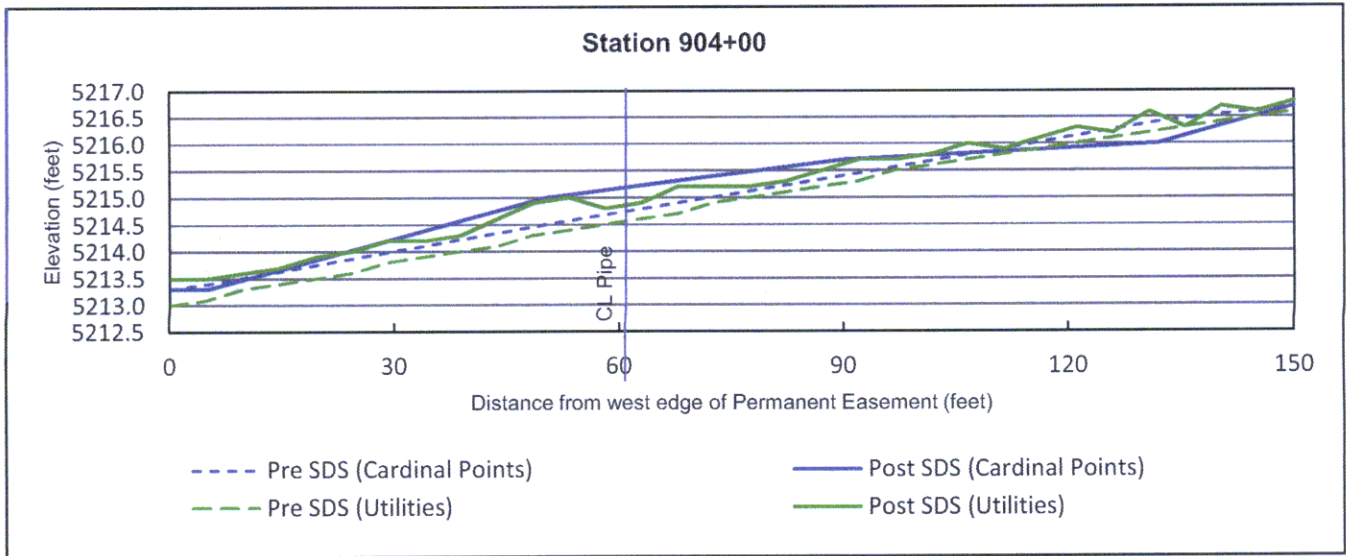


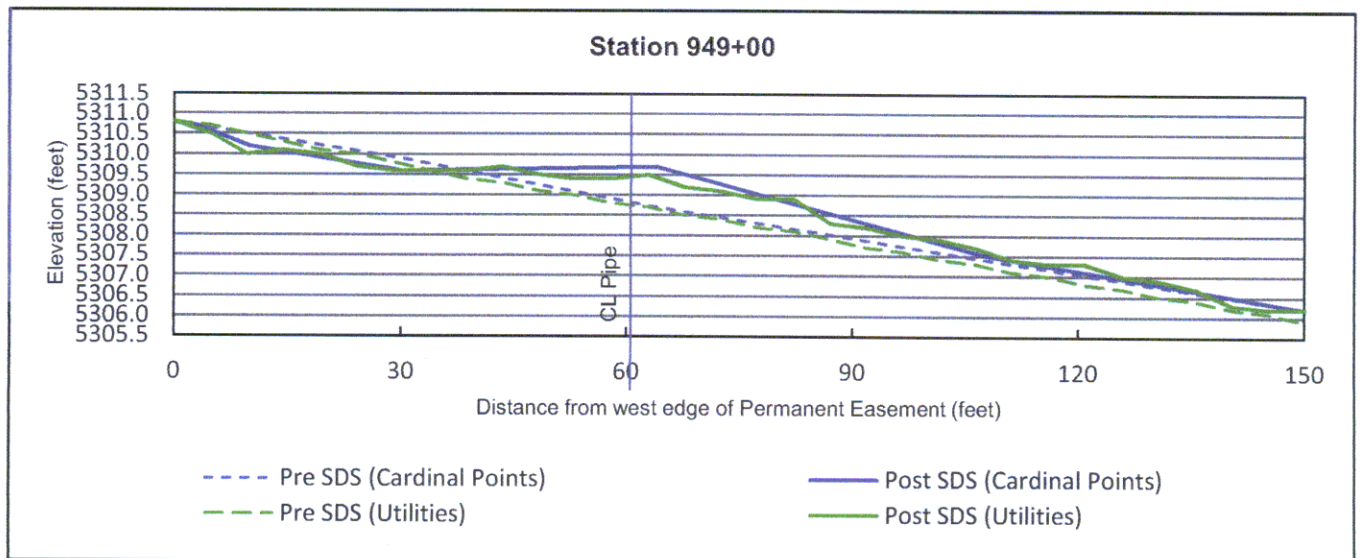
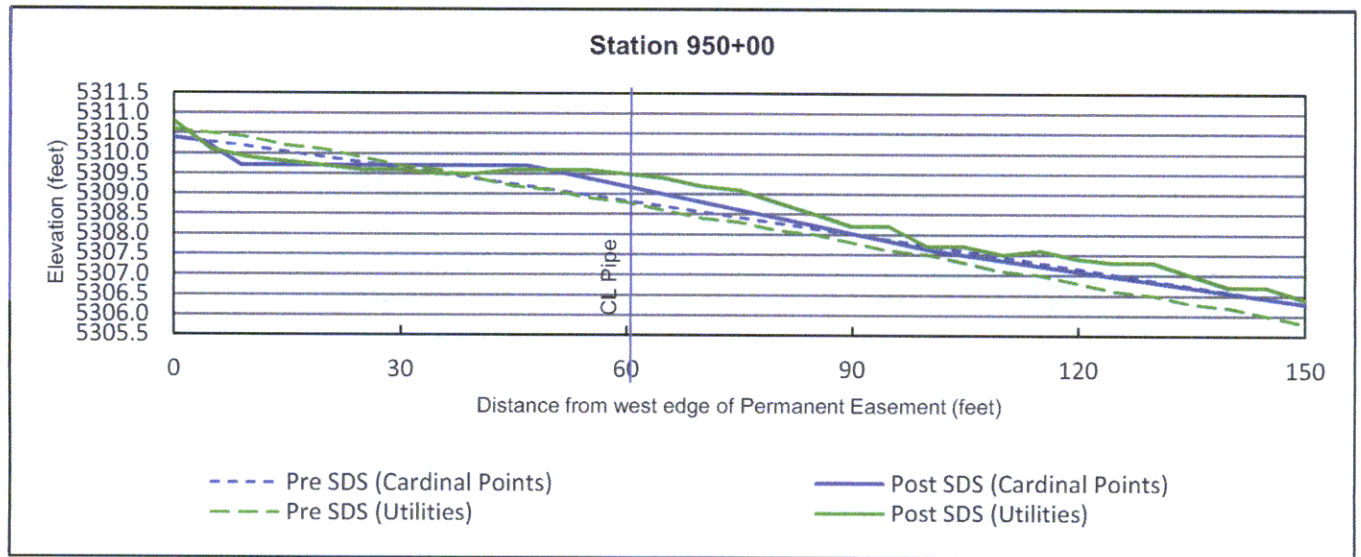
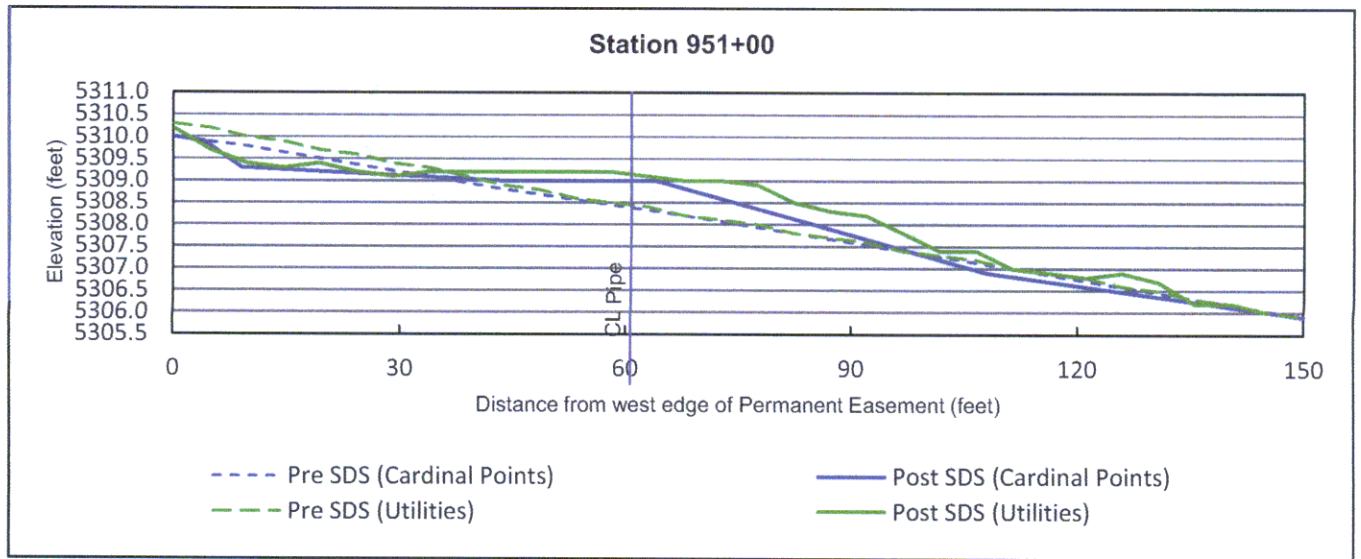
**Attachment B**  
**Walker Ranches Cross-sections**

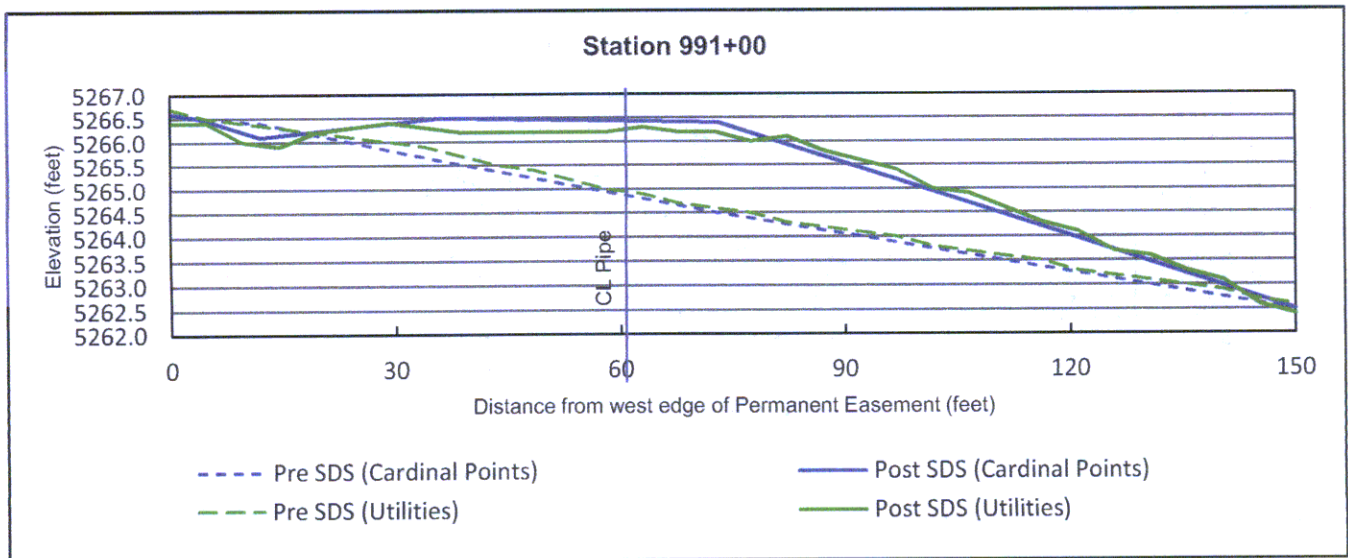
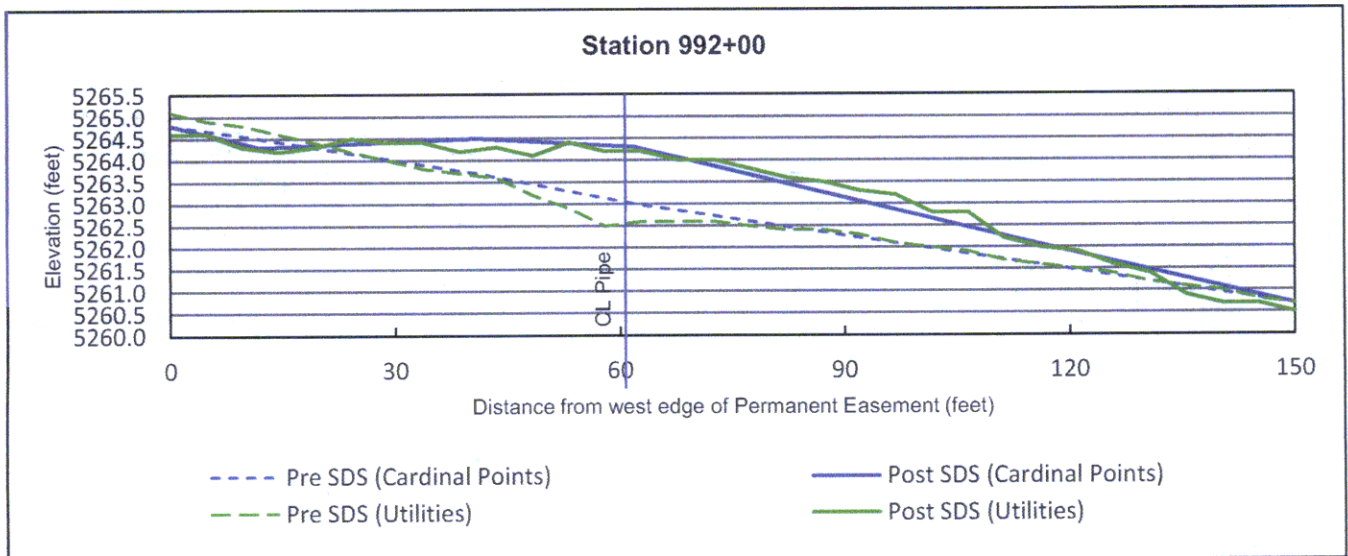
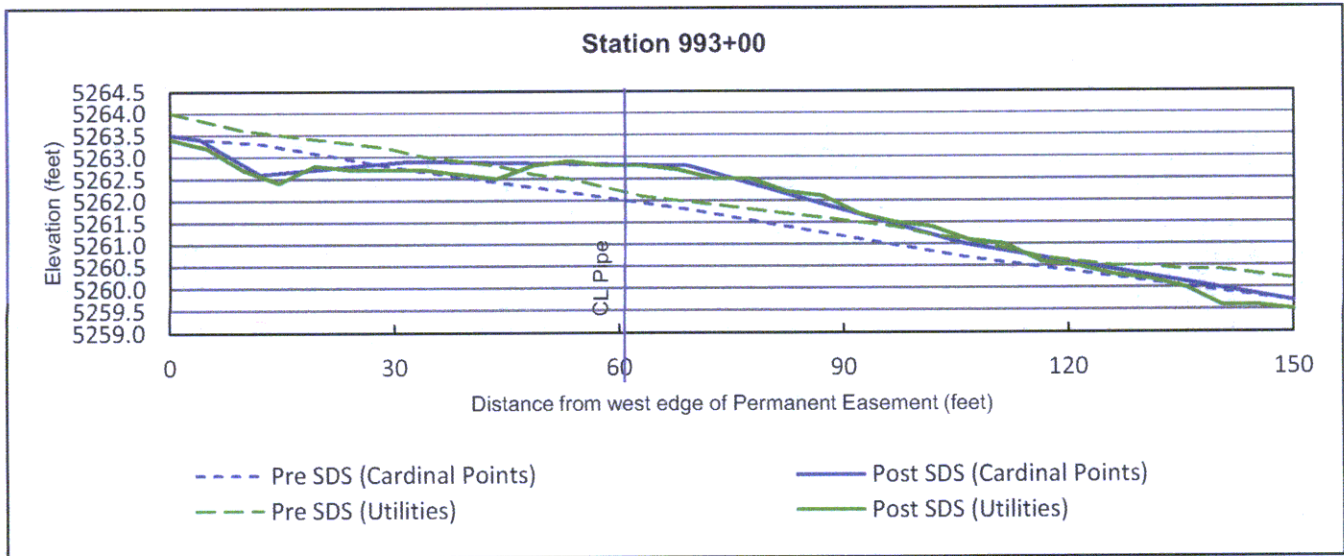




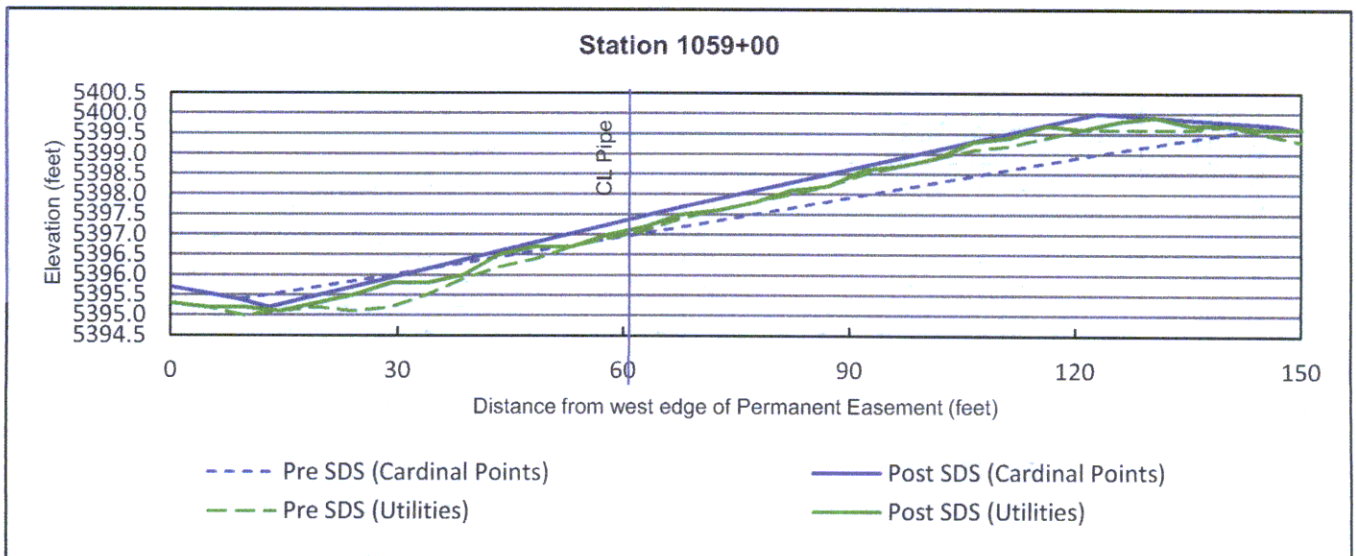
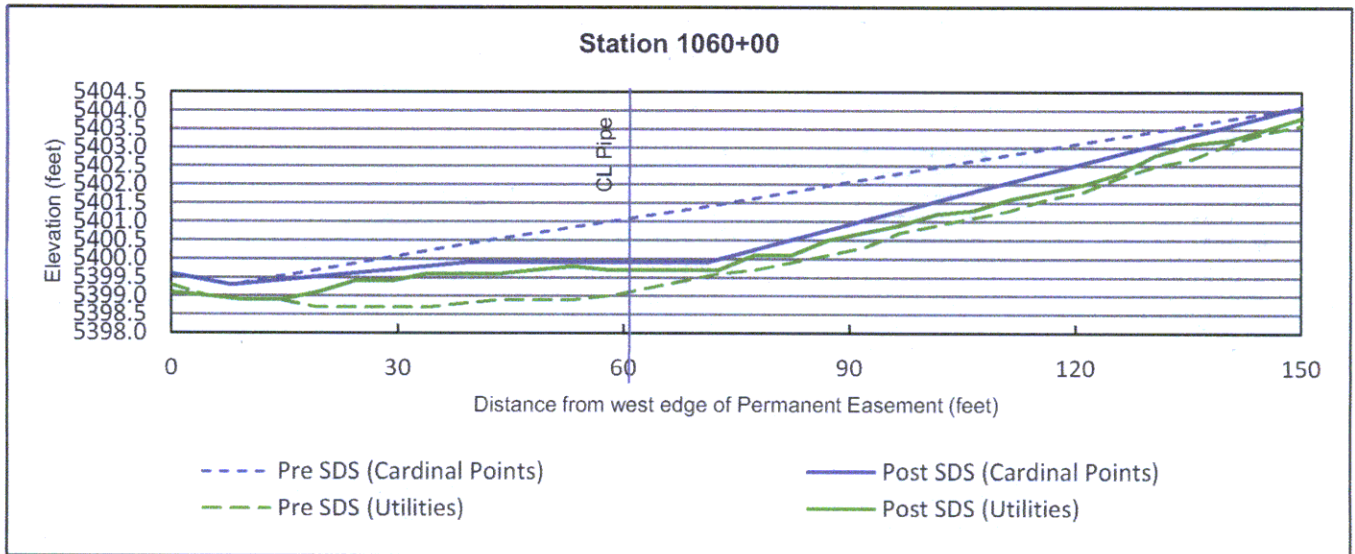
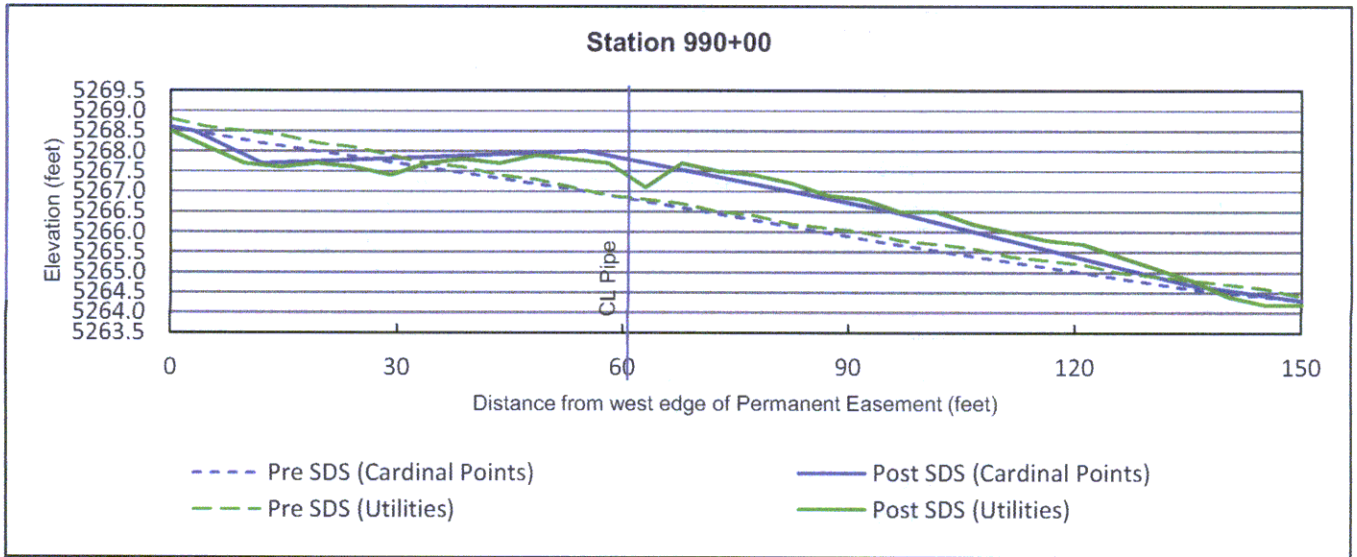




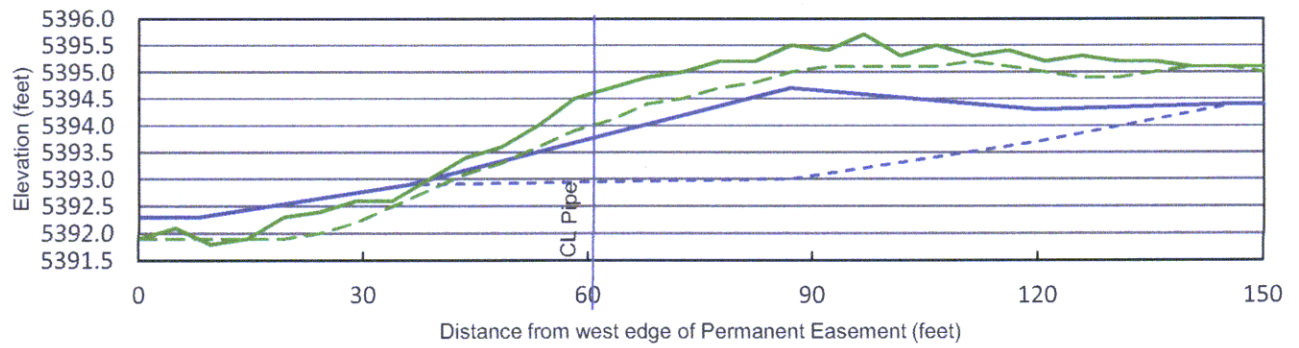








### Station 1058+00



--- Pre SDS (Cardinal Points)

— Post SDS (Cardinal Points)

--- Pre SDS (Utilities)

— Post SDS (Utilities)

**Attachment C**  
**Colorado Natural Heritage Program Memoranda**





Colorado Natural Heritage Program  
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# Memo

**To:** Alec Hart, MWH

**From:** Joe Stevens, Colorado Natural Heritage Program  
David Buckner, ESCO Associates, Inc. (Sub consultant to Colorado Natural Heritage Program)

**CC:** Allison Mosser, Colorado Springs Utilities  
Renee Rondeau, Colorado Natural Heritage Program

**Date:** October 22, 2012

**Re:** Review of Revegetation Progress along Southern Delivery System S2 and S3 Pipeline Alignments

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A review of the progress of revegetation activities along the S2 and S3 segments of the Southern Delivery System pipeline project was conducted on the morning of October 10, 2012. Present during the on-site visit were Joe Stevens (CNHP), Keith Schulz (CNHP), David Buckner (ESCO Associates, Inc.), and Alec Hart (MWH). The review began at the northern end of the S3 segment and followed the alignment south to the beginning of the S2 segment. The findings and opinions of CNHP are summarized herein.

The revegetation work appears to be mostly complete, with some areas showing positive early results, and other areas showing the need for some additional attention. It appears that the revegetation specifications were applied as prescribed and that any observed deficiencies appear to be localized and remediable. These two segments are largely poised to show successful results during the next growing season. The following points highlight the accomplishments and areas for additional work observed during our site visit.

**Germination in irrigated areas** – The portion of S3 north of Antelope Road received irrigation late in the season and this has produced germination of what appear to be primarily wheatgrass species, but also warm season grasses including blue grama and buffalo grass. The rows in which the seeds were planted have become visible along the route due to the presence of these seedlings. Some of these areas have also germinated a moderately dense cover of tumble pigweed (*Amaranthus albus*) with lesser amounts of red root pigweed (*A. retroflexus*).

Although not desirable as a significant component of the final vegetation composition, these species are viewed as relatively benign and may be beneficial in the interim as a nurse crop. Virtually all revegetation efforts are accompanied in the first years by development of annual plants such as these. There is not a strong need for active control of these species at this time. Areas that have not received any irrigation are not yet showing any seedling establishment, but otherwise appear similar in their preparation. Although germination in un-irrigated areas has been delayed, it is expected that irrigation in the spring will facilitate germination and seedling establishment over the summer.



Germination on northern portion of S3 north of Antelope Road.

**Mulch Cover** – The northern portion of the S3 segment, north of Antelope Road, showed insufficient cover of mulch. This is an area that was irrigated and the high exposure of the soil surface with seedlings might result in seedling mortality during dry windy periods of winter. From the standpoint of adherence to the specifications at this time, the surface is presently possessed of only an estimated 200 to 400 lbs./ac. Although mulch may have been applied at the specified rate (3000 lbs./ac) originally, much of it has apparently blown off. Additional hydromulch/tackifier should be applied in accordance with the specifications as soon as possible. This is particularly important to protect the initial germination that has occurred in this area from the abrasive and desiccating effects of winter winds. Additional hydromulch/tackifier will also be important to minimize soil erosion by wind and water. Although these areas were mulched when originally planted in early summer, it is advisable



that supplemental hydromulch/tackifier cover be applied prior to the onset of winter. Additional hydromulch/tackifier should be applied to any other areas where the existing mulch cover appears to be insufficient or not in accord with the specifications.

The remaining areas of S3 appeared acceptable with regard to planting technique and irrigation system installation. The revegetation specifications on S2 appeared to have been applied as prescribed and are expected to begin growth in the spring after water is applied.



Mulch conditions on northern portion of S3 north of Antelope Road

**Erosion Control** – We observed erosion control measures at Steele Hollow and other areas along the alignment. The intensive measures employed at Steele Hollow appeared intact, well placed, and effective. Large amounts of sediment in the bottom of the Steele Hollow channel were transported from offsite by large surface water flows and deposited over the placed erosion control mats. This is completely consistent with the dynamics of this drainage. We also observed placement of erosion control measures at other areas such as on moderate slopes and in minor drainage ways. Periodic observation over the winter months, particularly in conjunction with large weather events, would be beneficial to ensure that erosion control measures remain in good functioning condition and are employed wherever necessary.





Effective erosion control and seedling germination at Steele Hollow

**Two-track Access Road** – The two track access road has not been revegetated and is still used by the revegetation contractor and others for access along all portions of the S3 alignment. It is understood that the road is to be obliterated after inspections in the area are completed, and as such will require work to ensure it is effectively re vegetated. If revegetation of the road is planned, it will require scarification to loosen compacted surfaces, followed by seeding and mulching in accordance with the revegetation specifications used in other areas.





Example of two-track access road on the Walker Ranch (S3).

**Noxious Weed Issues** – We did not observe any issues with noxious weeds during our visit. It is likely that noxious weeds will appear at points within the alignment because their seed is present in the on-site soils and delivered naturally from adjacent off-site sources.

**Conclusions** - The revegetation review visit conducted October 10, 2012 on the S2 and S3 segments of the Southern Delivery System Pipeline showed that revegetation practices in accordance with the specifications have been applied to the full length of both segments. Small areas showed the need for additional attention before the winter season begins. In some areas, particularly where irrigation water was applied, regrowth of planted native species is evident. Areas where irrigation has not been applied have not germinated and are expected to begin growth in the spring after water is applied.

Some areas of the pipeline appear to have lost the mulch cover that was initially applied and will need to have a supplemental treatment of additional hydromulch and this treatment should be re-treated with tackifier to ensure it remains in place over the winter.

We did not note any problems with noxious weeds or erosion control measures.

If the two-track access road is slated for revegetation, it will require mechanical treatment, seeding, and mulching in accordance with the revegetation specifications applied elsewhere.





Colorado Natural Heritage Program

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# Memo

**To:** Alec Hart, MWH  
**From:** Joe Stevens, Colorado Natural Heritage Program  
David Buckner, ESCO Associates, Inc. (Sub consultant to CNHP)  
**CC:** Allison Mosser  
**Date:** 11/1/2012  
**Re:** Outcome of Follow-up Conference Call to Discuss Memo Concerning the Review of Revegetation Progress along SDS Segments S2 and S3

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A conference call between representatives of MWH (Alec Hart, Kevin Binkley), Colorado Natural Heritage Program (Joe Stevens), and WSRI (Marvin Brown, Colby Reid) was completed on the morning of 11/1/2012 to discuss the memo dated 10/22/2012 and titled *Review of Revegetation Progress along Southern Delivery System S2 and S3 Pipeline Alignments*. The primary objective of the call was to allow CNHP and WSRI discuss the recommendations presented in the memo and agree upon appropriate and necessary next steps, if any.

The primary topic of discussion concerned the observation that mulch cover on the northern portions of segment S3 appeared to be less than recommended. The main concern for ensuring adequate mulch cover is to protect new seedlings from desiccation and abrasion by wind, although erosion control is also a factor.

In discussing this issue, WSRI indicated that in their professional opinion the established seedlings are mature enough in their development that the risk of desiccation and wind abrasion is insufficient to warrant the expense and potential for disturbance that applying additional mulch would entail. CNHP concurs that the lack of mulch on those areas does not represent an imminent threat to the revegetation effort there, but rather is an observed deviation from the specification and worthy of evaluation by the contractor. In the absence of conditions that represent an imminent threat to the success of the revegetation or otherwise are a failure to comply with other permit requirements, the opinion of CNHP is that WSRI is accountable via the cover performance standard and should be entrusted to determine the actions

necessary to ensure the success of the revegetation effort, particularly at this early stage in the revegetation timeline.

The discussion did not address the issue of the potential for erosion of the surface by winds and water. If the regular inspections required over the winter months indicate that wind and/or water erosion is evident and problematic it may be necessary to re-evaluate and determine what actions are appropriate to reduce it to acceptable levels.

It was agreed by the parties on the call that the other issues discussed in the memo were either resolved or did not require any actions.

**Attachment D**  
**Redente Ecological Consultants Memorandum**



## Memorandum

**TO:** Bill Van Derveer, MWH Americas, Inc.

**FROM:** Ed Redente, Ph.D.

**SUBJECT:** Responses to Total Terrain's Site Review of S-3 Revegetation and Erosion Control, Dated October 1, 2012

**DATE:** 15 December 2012

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### Introduction

I have reviewed the observations that Total Terrain documented following their site review of revegetation efforts along the portion of the Southern Delivery System pipeline alignment that crosses property belonging to Walker Ranches. Total Terrain conducted their site review on September 25 and 29, 2012 and reported their findings in a letter to Walker Ranches on October 1, 2012. My response to Total Terrain's site review is based on the following: 1) 30 years of experience in both teaching and research in both reclamation and restoration ecology at Colorado State University; 2) the design, implementation and monitoring of reclamation projects throughout the western U.S. over the last 40 years; 3) a review of Total Terrain's documented observations; and 4) my own site review of revegetation activities in areas addressed by Total Terrain.

### Reclamation Issues and Responses

The issues presented below were identified in Total Terrain's letter to Walker Ranches dated October 1, 2012. Following each issue is my response based on my site review on October 31, 2012.

Irrigation at Steele Hollow

*Comment #1*—The irrigation system is not properly designed and therefore unable to control the application of water in an effective manner.

*Response to Comment #1*—I did not have the opportunity to observe the operation of the irrigation system questioned by Total Terrain. However, the system is properly designed and installed and I did not observe any negative impacts such as erosion features associated with the application of irrigation water. In addition, specific issues identified by Total Terrain such as the lack of control over water application and sprinkler heads not functioning properly are easily corrected through sprinkler head adjustments and these issues are not evidence of a system that is poorly designed and unable to function effectively.

Irrigation at S-3

*Comment #1*—The irrigation system at Steele Hollow does not meet industry standards because the location of sprinkler heads does not meet minimum “head to head” spacing; in other words there is not 100% overlap in water application between all sprinkler heads.

*Response to Comment #1*—It is important to note that there is no industry standard for designing an irrigation system associated with large scale reclamation projects such as the SDS pipeline alignment. There are commonly followed standards for designing irrigation systems for intensively managed residential and commercial landscape projects where turf establishment and long-term sustainability are the goals of irrigation. In such examples the concept of head to head spacing is the standard design practice. However, reclamation along the pipeline alignment is designed to establish native plants at a level of cover similar to pre-construction conditions and head to head sprinkler spacing is not a necessary requirement for success nor considered to be an industry standard.

*Comment #2*—The lateral irrigation lines and sprinkler heads are not buried and therefore it is difficult to accurately apply water.

*Response to Comment #2*—The main irrigation line has been buried but the lateral lines and sprinkler heads attached to the lateral lines are above ground because the irrigation system is designed to apply water over a limited number of years as opposed to a system that will remain in place permanently. The goal of reclamation is to



establish a self-sustaining native plant community that does not require long-term supplemental water; therefore the irrigation system is temporary and not permanent. In addition, aboveground irrigation systems are common on these types of projects and aboveground installation does not result in inaccurate water application. Irrigation water can be successfully applied with either an underground or aboveground system and based on the system design along the pipeline alignment, there is no evidence that water will be applied in an inaccurate manner.

*Comment #3*—The installation of the irrigation system does not replicate other irrigation systems that are successful. The system design requires that one area must be flooded to get water to flow to other areas. In addition, many areas will not receive irrigation water at all and overspray will cause mud holes on the access road. Therefore the entire system needs to be redesigned and installed to meet industry standards.

*Response to Comment #3*—There is no basis for the comments from Total Terrain that the irrigation system will not be successful because it does not replicate other systems, that the system must flood one area to provide water to flow to other areas, or that the potential creation of muddy areas is a design flaw in the system. My observations indicate that the system is properly designed and will be successful in aiding in plant establishment to meet the goals of reclamation. In addition, the system does not have a water flow component to move water from one location to another and the creation of some muddy areas may occur where there are low lying areas, but this can be easily managed by restricted vehicle activity in areas where muddy conditions occur. It is not expected that muddy conditions will continue once water is being used by actively growing plants.

#### Revegetation Findings at Steele Hollow

*Comment #1*—In Steele Hollow there are several wash outs, the erosion control blanket is covered with silt and is being undermined by water. In addition, wooden stakes are falling out of the erosion control blanket and several banks are being cut into or silted over.

*Response to Comment #1*—My observations indicate that there are issues at Steele Hollow with respect to erosion occurring in some isolated areas as a result of water from areas off-site and on-site undermining the soil beneath the erosion control blanket. There are a few areas where adequate contact between the erosion control blanket and the underlying soil was not achieved during the installation and this has resulted in soil erosion. Some additional earth work at Steele Hollow is needed to address potential erosion issues and those areas that have experienced erosion under the erosion control blankets should be

repaired as soon as possible. I observed wooden stakes that were sitting on top of the erosion control blanket in a few locations but it appeared that these were left over from the installation process as opposed to stakes that had worked their way out of the ground.

#### Revegetation Findings at S-3

*Comment #1*—There is no grass growth to help control erosion or provide a permanent stand of grass through the winter. In addition, crimping of hay mulch is not keeping the mulch in place and the mulch application is therefore spotty and of reduced value in assisting in plant establishment.

*Response to Comment #1*—Grass growth has not occurred in areas that were not irrigated this growing season and therefore the lack of plant growth is expected and not unusual for this stage in the reclamation process. To believe that there should be a permanent stand of grass this early in the reclamation process is an unrealistic conclusion. There are some areas where ground cover from hay mulch is uneven and may be the result of high winds in these areas. These areas do not have any plant growth or very limited plant growth at this time and some additional mulch would be helpful. However, I agree with the conclusion made by the Colorado Natural Heritage Program (CNHP) in their 1 November 2012 memo to MWH that the lack of mulch on these areas does not represent an imminent threat to the revegetation effort.

*Comment #2*—There are areas where topsoil is leaving the site because of low mulch cover or lack of vegetation.

*Response to Comment #2*—I did not observe any signs of soil loss in areas where mulch cover was low or where plant cover was lacking. If any soil loss has occurred, the amount is minor and the application of additional mulch would again be helpful as noted above, but the current condition does not represent a threat to revegetation success.

#### Presence of Subsoil and Erosion Logs at S-3

*Comment #1*—Subsoil is present in several areas where revegetation has occurred.

*Response to Comment #1*—There are a number of locations along the alignment where the surface soil is poorly developed and has the appearance of subsoil. Total Terrain does not present any evidence that subsoil was placed on the surface and based on the methods used for replacing soil prior to revegetation, it appears to be highly unlikely that subsoil was not properly buried.

*Comment #2*—Erosion logs should be buried into the soil to prevent undermining and to maintain erosion log function.

*Response to Comment #2*—Straw logs are not typically buried during installation. The photograph that was provided with Total Terrain's site review comments shows an area where a straw log crosses a small depression and installation did not achieve adequate soil contact. In my inspection of straw logs I did not observe any similar situations and therefore conclude that the example cited is atypical and does not represent an overall flaw in the installation of these erosion control structures.

#### Crown on Right of Way at S-3

*Comment #1*—The current finished grade does not keep the undisturbed historic existing water movements in place and the impact of this change in drainage pattern is unpredictable.

*Response to Comment #1*—My observations of re-established drainages indicate that appropriate grades have been reestablished and the movement of water either onto the alignment from the adjacent landscape or off the alignment will mimic the conditions that existed prior to alignment construction. I understand that relief contours are being verified using LIDAR (Light Detection and Ranging) technology.

#### Summary

In summary, the project has followed the specifications that were established to guide the reclamation process. Regrading, soil preparation, seeding, mulching, use of best management practices for erosion control, and design and implementation of an irrigation system have been conducted in a manner appropriate for achieving reclamation success. There are two minor issues that should be addressed and these include further grading and repair of erosion features in Steele Hollow and additional mulch in areas where hay mulch has blown away. The addition of new mulch is not necessary at this time, but should be considered if erosion becomes problematic over the winter months. Other than these two items, I did not observe any other reclamation issues that need further attention.