



OFFICE OF THE CITY AUDITOR
COLORADO SPRINGS, COLORADO

12-14 2011 SDS Monitoring Report

August 2012



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Purpose

The Office of the City Auditor (OCA) provides continuous monitoring of the Southern Delivery System (SDS). The audit period for this report was 2011. The OCA intends to provide an annual report on the project until completion.

Highlights

We conclude that overall the project appears to be well managed and is meeting its schedule. Further, it appears the project may be completed below budget.

We identified four new observations and have listed our recommendations for each in the attached report. In addition, this report includes a follow-up on the eleven recommendations made in the 2010 SDS report. The follow-up found that six recommendations had been implemented and five were in progress.

The financial impact of SDS on the rate payers was reviewed as part of the water rate case, heard by City Council in July 2012.

As of December 31, 2011:

- Project to date spending was \$205,117,271. Spending in 2011 totaled \$86,256,025.

(Continued on page 2)

Management Response

Colorado Springs Utilities agrees with the recommendations. See report for complete details.

Recommendations

New recommendations:

1. Colorado Springs Utilities should reexamine their bonding policies and compliance with those policies. One possible remedy could be an increase in the trigger amount for imposing an adjustment to a bond rider.
2. Colorado Springs Utilities should retain the Project Engineer's pipe inspection lists as proof that the appropriate materials were manufactured and stored for the project.
3. For Administrative Settlements the Recommendation of Settlement Form be completed as soon as possible once a settlement has been reached.
4. The SDS Land Team should complete the proper documentation for all legal settlements, including the

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(Highlights continued from page 1)

- Escalated total project cost at completion was \$941,000,000 which represents an anticipated savings of \$45,000,000 from earlier estimates.
- 4.7 miles of pipe had been installed and six separate work packages were under construction.
- Ninety-five easements were acquired during 2011.
- Thirty-nine properties had been approved for acquisition via the eminent domain process; however, only two properties required condemnation valuation trials.

(Recommendations continued from page 1)

Recommendation of Settlement form, and retain this information in the land files.

Follow up recommendations from the 2010 report. Please see report for full details.

1. Share best practices—Implemented
2. Key Performance Indicators—In Progress
3. Conflicts of interest—In Progress
4. Contract Concerns—Implemented
5. Audit Clause—In Progress
6. Bond Reimbursement—Implemented
7. Bond Interest—Implemented
8. Real Estate involvement with IGA's—Implemented
9. Site Schema — In Progress
10. User inventory errors—In Progress
11. Individual User Access—Implemented



OFFICE OF THE CITY AUDITOR PUBLIC REPORT

Date: August 23, 2012

To: President Hente, President Pro Tem Martin, Members of City Council

Re: 12-14 2011 SDS Monitoring Report

We conducted an audit of the major water construction project for Colorado Springs Utilities known as the Southern Delivery System (SDS). The purpose of this audit is to provide real time monitoring of SDS. Regular meetings are held to update management on the progress of the audit and to share concerns. Because of this continuous monitoring arrangement, recommendations have been made to management and changes have been implemented in advance of the issuance of this report.

The audit included activities during 2011. The key objectives were:

- Monitoring the project for compliance with applicable laws, regulations and governmental agreements.
- Document and review project controls for effectiveness, efficiency and fraud prevention.
- Review the selection process for contractors.
- Review financial records for compliance, accuracy and completeness.
- Monitor and review land acquisition for compliance with standards and laws.
- Document and monitor project management and governance activities for effectiveness, efficiency and accuracy.

We conclude that overall the project appears to be well managed and is meeting its schedule. Further, it appears the project may be completed below budget. We identified four new observations and have listed our recommendations for each in the attached report. In addition, this report includes a follow-up on the eleven recommendations made in the 2010 SDS report. The follow-up found that six recommendations had been implemented and five were in progress.

As always, feel free to contact me if you have any questions.

Sincerely,

Denny Nester, MBA, CPA, CIA, CGFM, CFE, CGAP
City Auditor

cc: Steve Bach, Mayor
Jerry Forte, Chief Executive Officer, Colorado Springs Utilities
Bill Cherrier, Chief Financial Officer
Gary Bostrom, Chief Water Services Officer
Carl Cruz, Chief Customer and Corporate Services Officer
Ken Burgess, Deputy City Attorney-Utilities Division
John Fredell, General Manager, Southern Delivery System
Dave Maier, Manager, Enterprise Risk Management



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INTRODUCTION

PURPOSE

The Southern Delivery System (SDS) is a multiyear construction project of Colorado Springs Utilities designed to bring water from the Pueblo Reservoir to Colorado Springs. The Office of the City Auditor (OCA) has been engaged to provide continuous monitoring of the project.

The OCA provides real time feedback to the SDS team on all issues identified. Because of this relationship, some issues have been identified and corrected prior to the issuance of this report. Colorado Springs Utilities is an enterprise of the City of Colorado Springs. The OCA reports to the Colorado Springs City Council and provides independent audit, attestation and consultation services to the City Council regarding the City and the City's enterprises.

SCOPE

The audit period for this report was the calendar year 2011. The first SDS monitoring report was issued in November 2011 and covered the period of 2002 – 2010. It is referred to as the 2010 SDS report. This report will be referred to as the 2011 SDS report. The intent of the OCA is to provide an annual report on the project until it is completed.

The focus of this multiyear audit will change as the project progresses. During 2011 the main activities involved Land Acquisition, the Eminent Domain process, Contracting and Pipeline Construction. The auditor's risk assessment and consideration of fraud is being updated periodically as the project moves forward.

The key objectives of the audit are:

- Monitoring of the project for compliance with applicable laws, regulations and governmental agreements.
- Document and review project controls, including budget, financing and schedule controls, for effectiveness, efficiency and fraud prevention.
- Review the selection process for contractors to ensure a fair and competitive process is followed.
- Review financial records for compliance with Colorado Springs Utilities procedures as well as for accuracy and completeness.
- Monitor and review land acquisition for compliance with standards and laws.
- Document and monitor project management and governance activities for effectiveness, efficiency and accuracy.

Each annual report will also include a follow-up section on any previous recommendations.



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The financial impact of SDS on the rate payers was reviewed as part of the water rate case, heard by City Council in July 2012.

BACKGROUND

SDS was first conceived as part of the 1996 Colorado Springs Water Resources Plan, which identified the need for a raw water delivery line that could utilize existing Colorado Springs water rights.

Included in the first phase of the project is a connection to the Pueblo Dam, a water treatment plant, three pump stations and approximately 50 miles of buried pipeline. Phase 1 is expected to be operational in 2016, however some Phase 1 expenses will continue for mitigation efforts through 2021.

The communities of Fountain, Security and Pueblo West have joined with Colorado Springs Utilities as partners in an Intergovernmental Agreement to construct the SDS. The governing board created by this agreement is known as the Construction Coordination Team (CCT). Colorado Springs Utilities serves as the head of the CCT and as the Project Manager. All budget and spending figures in this report refer to total project spending, including the partner's share. Colorado Springs Utilities share is approximately 95 percent of total SDS cost.

As of December 31, 2010, total project spending was \$118,861,246. Spending in 2011 totaled \$86,256,025, bringing project to date spending to \$205,117,271. Project spending is reported regularly to the CCT. Spending and other information is made available to the public via the SDSwater.org web site when the monthly management report is posted. We agreed the accuracy of these reports and found no discrepancies when compared to the financial system.

The budget adopted in June 2009 for Phase 1 of SDS was \$880,000,000, stated in 2009 dollars. Because SDS is a long term project, the effects of inflation and price escalations for labor and materials must be taken into account. The Construction Cost Index (CCI) developed by the Engineering News-Record is used by the project management team to forecast total project spending through completion of Phase 1 and mitigation efforts through 2021. The forecast takes into account projected changes from the budget for each work package and the impact of price escalation over time based on the CCI. As of December 31, 2011, the forecasted, escalated total project cost was \$941,000,000. This represents an anticipated savings of \$45,000,000 from the escalated budget total of \$986,000,000. The projected savings are a combination of historically low inflation rates, continued refinement of the design and lower than expected costs on specific contracts.

Based on this forecast, it is likely that spending for Phase 1 will be lower than anticipated. The impact of SDS on water rates was evaluated during the 2012 water rate case. The SDS team also analyzed the impact on project cost if the schedule was accelerated to put the project in-service prior to 2016. Management has since determined that the project schedule will not be accelerated.



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One of the last major issues to be resolved prior to beginning construction was to reach agreement with the Bureau of Reclamation (the Bureau) regarding contracts for storage and conveyance of water in the Pueblo Reservoir. An extensive public negotiation process was completed in August 2010 to determine the cost of these contracts. Execution of the final contracts was delayed until May 2011 because of issues related to the terms of the contracts. Once these issues were resolved, permission to proceed with construction of the connection to the Pueblo Dam was granted and construction activity in Pueblo County began.

As of December 31, 2011, 4.7 miles of pipe had been installed and six separate work packages were under construction. A work package is defined as a separate segment of the pipeline or a separately identifiable project such as construction of a pump station. Contracting activity during 2011 included the awarding of the contracts for the Water Treatment Plant and the Raw Water Pump Stations. The OCA observed and reviewed the Request for Proposal (RFP) process for these contracts. We found the process fostered fair and competitive bidding.

To be successful with a project of this scope, effective program management is necessary. Modifications were made by the SDS team in October 2011 to the organizational structure of the integrated program management team. The result was greater emphasis and responsibility for successful completion of both work package specific and program-wide activities by the work package project managers than was in place previously. A standard reporting and review structure was put into place which has made the internal reporting process more efficient. Several changes in management were implemented, which better aligned responsibilities and helped to relieve bottlenecks in decision making.

The Program Management Plan and Construction Delivery Plan were reviewed by the auditors. During our review of construction work packages, we noted two issues concerning bond requirements and pipe inspection logs, which are described in the Observations section of this report.

Land Acquisition was an area of focus for the SDS team in 2011. One requirement of the Pueblo County 1041 permit is that all land required for a given work package must be acquired prior to commencing work on that work package. A total of 95 easements were acquired during 2011. Each acquisition was audited to determine if the process followed the guidelines of The City of Colorado Springs Procedure Manual for the Acquisition and Disposition of Real Property Interests and if the price paid was supported. One issue was noted regarding completion of required documentation and is detailed in the Observations section of this report. The price paid was found to be supported for all acquisitions.

As of December 31, 2011, thirty-nine properties had been approved for acquisition via the eminent domain process. Since that time, only two properties have required a trial to determine the valuation. Currently eight more are awaiting further legal action or negotiations are continuing. The SDS land team was successful in settling all of the remaining acquisitions without trials. Each parcel was reviewed as it was being considered for the eminent domain process and all settlements were reviewed as part of this audit. In our opinion the negotiations were fair and were completed according to the applicable



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standards and regulations. The amounts paid were reasonable. An issue was identified concerning the process for completing required documentation and is described in the Observations section of this report.



FOLLOW-UP FROM 2010 SDS MONITORING REPORT

The previous SDS report included eleven recommendations. The recommendations and the status of each are shown here:

1. *Establish a protocol for the SDS team to share lessons learned and best practices with Colorado Springs Utilities.*

The SDS team is sharing lessons learned and best practices with other organizations within Colorado Springs Utilities. For example, some project management tools have been adopted by the Electric department; the Land Acquisition process has been adopted by the Water department and interaction with the IT department has been beneficial during the planning for a major enterprise-wide application rollout.

Status: Implemented

2. *Ensure the schedule for establishing and reviewing the Key Performance Indicators is maintained. Evaluate the effectiveness of using these performance measures in the contract.*

Achieving the milestones in the Key Performance Indicator schedule continued to be an issue in 2011. Several changes were made to the process to alleviate the problem and get back on schedule. It appears the schedule is being maintained in 2012. The contract is in the renewal process and the performance measures are currently being evaluated.

Status: In Progress. The SDS team reports that since this item was tested, additional improvements have been implemented. The auditors have not had the opportunity to validate these improvements and plan to reexamine this issue during the 4th Quarter 2012.

3. *The contracting process should be modified to help reveal potential conflicts of interest, particularly when an Agency relationship exists.*

Procurement and Contracting Services (PCS) is working on a major revision to their primary procurement standard. The revision will include steps to help identify conflicts of interest.

Status: In Progress. Implementation is expected in August 2012.

4. *Concerning Contracts:*

- a. *Enforce periodic reviews of all contracts.*
- b. *Ensure contract scope is well defined.*
- c. *Consider limiting either the total dollar amount that a contract could increase over time without being re-solicited, or limiting the total time that a given contract could be renewed or re-justified.*
- d. *Decisions to renew/amend a contract, rather than re-soliciting the work, should be thoroughly documented, including a cost analysis*

The auditee partially agreed with this recommendation. The Procurement Manager's response to the finding indicates that these steps are being completed appropriately for Non-SDS contracts. Our scope did not include a review of Non-SDS contracts; therefore, this recommendation will be tested



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as part of the next full system review of Procurement. The auditor's review of SDS contracts and the procurement process showed that this recommendation had been implemented for SDS.

Status: Implemented for SDS.

5. Colorado Springs Utilities should consider adopting audit clause language that is more detailed and specific to a particular contract than the current standard clause.

Contract language changes are in progress. The audit clause will be modified for use in various types of contracts.

Status: In Progress. Full implementation expected in August 2012.

6. The Treasury Department should determine the exact amount of the over reimbursement and correct the balances in the bond acquisition fund accounts. Modify the internal report and processes to prevent future occurrences.

Status: Implemented prior to the issuance of the 2010 SDS report.

7. The Accounting Department should review the accounts and journal entries for the SDS bonds and make any necessary adjusting entries to the financial statements regarding interest.

Status: Implemented prior to the issuance of the 2010 SDS report.

8. Future permits and intergovernmental agreements to be executed by Colorado Springs Utilities should be evaluated by the City of Colorado Springs Real Estate Services Office whenever there is a need to address real property concerns.

Multiple steps have been taken to implement this recommendation. The SDS land team has been reorganized and City Real Estate Services employees are now co-located with the SDS team to improve communication and efficiency. Regularly scheduled meetings are held to inform the Real Estate Services Manager on SDS land acquisition strategy and status.

Status: Implemented

9. A site schema document should be used for more efficient review of access by process owners.

Colorado Springs Utilities agreed with this recommendation however the site schema had not been maintained when it was tested by the auditor. Following discussions with the SDS team, we anticipate this recommendation will be implemented later this year.

Status: In Progress. The SDS team reports that since this item was tested, additional improvements have been implemented. The auditors have not had the opportunity to validate these improvements and plan to reexamine this issue during the 4th Quarter 2012.

10. The errors identified in the user inventory should be corrected and the master list should be accurate, particularly concerning terminated employees.

When tested, this recommendation was found to be partially implemented. Several process improvements had been made, most notably the creation of a form to request changes in access. The user groups were not being maintained as expected and further improvements are expected.



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Status: In Progress. The SDS team reports that since this item was tested, additional improvements have been implemented. The auditors have not had the opportunity to validate these improvements and plan to reexamine this issue during the 4th Quarter 2012.

11. Remove the identified individual user accesses and incorporate these users into appropriate existing groups.

Individual user access has been eliminated and all users are now managed at the group level.

Status: Implemented

CONCLUSION

Overall, the SDS project appears to be well managed and is on target to meet its schedule. It appears likely that the project will be completed below budget. Four new observations and recommendations for improvement follow.

Of the 11 previous recommendations, 6 have been implemented and 5 are in progress.



OBSERVATIONS, RECOMMENDATIONS AND RESPONSES

BOND RIDERS ON BONDED CONTRACTS NOT OBTAINED TO COVER INCREASES IN CONTRACT VALUE

Bonds do not appear to be increased when change orders increase the schedule of values.

Per Utilities Standard Bonding and Insurance Requirements (QBD 09339): "Bond Riders are required on bonded contracts to maintain the bonds at the current value of the contract (as required by the contract General Conditions). However, bond riders for contract increases in an aggregate amount of \$5,000 or less may be waived due to administrative costs to obtain the rider, but will be obtained prior to authorizing changes exceeding \$5,000 from the last contract price that was 100% bonded."

Our review showed no evidence in the contract database's bonding records that this was occurring. Due to the large number of contracts and contract changes for SDS, this may be an impractical requirement. A review of the bond language and contract language showed that the need for incremental increases in bond amounts was not required by the bond surety. For the contracts reviewed, the increase in contract value was relatively small compared to the total value of the original contract. Because the bonds in effect covered the original contract value, the amount at risk was limited to the amount of any contract amendments or change orders.

AUDITOR'S RECOMMENDATION

Colorado Springs Utilities should reexamine their bonding policies and compliance with those policies. One possible remedy could be an increase in the trigger amount for imposing an adjustment to a bond rider.

COLORADO SPRINGS UTILITIES RESPONSE

Colorado Springs Utilities agrees with this recommendation. Procurement and Contract Services personnel are reviewing applicable bonding policies and current practices to identify potential compliance issues. Furthermore, legal research has been requested to determine state law requirements. Bonding policy revisions will be made as necessary once information is available from the legal research being conducted. Any new procedural requirements will be communicated as appropriate to ensure future compliance. Expected completion date is September 30, 2012.



PIPE INSPECTION REPORTS WERE NOT RETAINED

Each section of SDS pipe is individually numbered and stored at the manufacturing site until it is delivered to the work site. Payment is made based on pipe stored. An SDS Project Engineer inspects each section at the manufacturing location to verify the product is correct and to determine how much pipe has been manufactured but not delivered.

The Project Engineer does not retain the field inspection checklist indicating which sections he inspected. Instead, an email is sent to confirm that the quantity shown on the Pay Application is correct and should be paid.

AUDITOR'S RECOMMENDATION

Colorado Springs Utilities should retain the Project Engineer's pipe inspection lists as proof that the appropriate materials were manufactured and stored for the project.

COLORADO SPRINGS UTILITIES RESPONSE

Colorado Springs Utilities agrees with this recommendation. The Project Engineer's pipe inspection lists will now be retained as proof that the appropriate materials were manufactured and stored for the project.



DOCUMENTATION OF ADMINISTRATIVE SETTLEMENTS WAS NOT COMPLETE

Administrative Settlements are used in the land acquisition process to compensate the property owner for damages and costs to cure when it is determined that there is an impact to the property beyond the monetary value of the easement acquired. For example, replacing a septic system or a special fence that was within the boundaries of the project could be an administrative settlement.

Adequate documentation in the land acquisition file to support these settlements is required. In the example above, this documentation may include bids from several contractors to relocate and rebuild the affected septic system and fence. The Recommendation of Settlement form provides a way to properly document these amounts. The form should be completed and included as part of the land acquisition file to document the settlement amounts paid and it should be completed in a timely manner.

The Recommendation of Settlement form and supporting documentation was missing from the majority of SDS acquisition files that included an administrative settlement.

The amounts of the administrative settlements were all found to be supported, but the documentation of these amounts was not filed appropriately in the easement files. This created the risk that the reasoning for an administrative settlement would be lost.

AUDITOR'S RECOMMENDATION

The Recommendation of Settlement Form should be completed as soon as possible once a settlement has been reached. The supporting documents should be retained in the land acquisition file. Those acquisitions which have been completed and are lacking the appropriate form and documentation should be corrected.

COLORADO SPRINGS UTILITIES RESPONSE

Colorado Springs Utilities agrees with this recommendation. The Recommendation of Settlement Form is a useful internal form for summarizing the type of settlement, proposed settlement amount, supporting data, justification and concurrence by key personnel regarding the recommendation for settlement. Parcel files are being reviewed to ensure the Recommendation of Settlement Forms and supporting documents are included. Where needed, these forms are being completed, approved and placed in the files. Upon verification that the parcel files contain the appropriate documents, they are transferred to the Real Estate Services Office for long-term storage. Corrective action was completed in the 2nd Quarter 2012.



DOCUMENTATION OF LEGAL SETTLEMENTS WAS NOT COMPLETE

When approval is given by City Council to acquire a property using the eminent domain process, settlement may be reached in a variety of ways. Some acquisitions were acquired after receiving permission to condemn, but before the case was filed with the court. These settlements are similar to the Administrative settlements and documentation of the amounts paid and justification for those amounts should be retained.

Other acquisitions were settled after filing with the court but before going to trial. In these cases, amounts were deposited with the court and legal documents were filed. When a settlement was reached, a Rule and Order document was filed by the court to indicate the matter had been settled. Proper documentation of these actions should also be retained in the land files.

The Recommendation of Settlement form is the appropriate document to record these actions and is designed to accommodate both legal and administrative settlements.

The Recommendation of Settlement form was not being used for parcels that had entered the eminent domain process. Some documentation regarding the Rule and Order or final settlement amounts was not being filed appropriately by the SDS land team. The appropriate support for the legal settlements was located and the amounts were determined to be supported.

AUDITOR'S RECOMMENDATION

The SDS Land Team should complete the proper documentation for all legal settlements, including the Recommendation of Settlement form, and retain this information in the land files.

COLORADO SPRINGS UTILITIES RESPONSE

Colorado Springs Utilities agrees with this recommendation. Parcel files are being reviewed to ensure they contain proper documentation for legal settlements, including the Recommendation of Settlement Form, where needed. Upon verification that the parcel files contain the appropriate documents, they are transferred to the Real Estate Services Office for long-term storage. Corrective action was completed in the 2nd Quarter 2012.

CITY COUNCIL'S OFFICE OF THE CITY AUDITOR

COLORADO SPRINGS, COLORADO

About our Office

The mission of the Office of the City Auditor is to provide City Council with an independent, objective and comprehensive auditing program for operations of the City. Our auditing program includes:

- Evaluating the adequacy of financial controls, records and operations
- Evaluating the effectiveness and efficiency of organizational operations
- Providing Council, management and employees objective analysis, appraisals, and recommendations for improving systems and activities

The Office of the City Auditor is responsible for auditing the systems used by the City of Colorado Springs and its enterprises, including Colorado Springs Utilities and Memorial Health System. We perform a variety of audits for these entities, including financial audits, performance audits, contract audits, construction audits, and information system audits. We also perform follow-up on a periodic basis to monitor and ensure management actions have been effectively implemented.

Authorization and Organizational Placement

Our audits are conducted under the authority of Chapter 1, Article 2, Part 7 of the Colorado Springs City Code, and more specifically parts 703, 705 and 706 of the Code. The Office of the City Auditor is structured in a manner to provide organizational independence from the entities it audits. This independence is accomplished by the City Auditor being appointed by and reporting directly to the City Council.

Audit Standards

The audit was conducted in a manner that meets or exceeds the International Standards for the Professional Practice of Internal Auditing, a part of the Professional Practices Framework promulgated by the Institute of Internal Auditors, with the exception of the requirements under standards 1312 and 1321 to obtain an external quality assurance review once every five years. We do not believe this non-compliance impacted the quality of our audit. The audit included interviews with appropriate personnel and included such tests of records and other supporting documentation as deemed necessary in the circumstances. We reviewed the internal control structure and compliance tests were performed. Sufficient competent evidential matter was gathered to support our conclusions.