



OFFICE OF THE CITY AUDITOR
COLORADO SPRINGS, COLORADO

11-22
Southern
Delivery System
Monitoring Report

November 2011

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OFFICE OF THE CITY AUDITOR

COLORADO SPRINGS, COLORADO

EXECUTIVE SUMMARY

Southern Delivery System Monitoring Report

November 2011

Purpose The purpose of this audit is to provide on-going monitoring of the Southern Delivery System (SDS) construction project. Because of this arrangement, recommendations have been made to management and changes have been implemented in advance of the issuance of this report. The period for this report is from the inception of the project in 2002 through December 2010.

Highlights

We concluded that overall the program was meeting its goals and was working within the constraints placed upon it. The financial impact of SDS on water rates was incorporated into the review of water rate increases in 2010 and is therefore not addressed in the report. The report includes an extensive background section developed through the study of historical SDS documents.

The analysis and recommendation section is arranged by topic and includes the following eleven key observations:

Governance—No observations were noted which required a recommendation .

Program Management

- The SDS team has been directed to share any best practices and lessons learned with the rest of the enterprise, but no formal process has been established for sharing information.
- Finalization of the Key Performance Indicators and resulting At Risk Fee for Program Management services was not completed according to schedule.

Procurement

- Conflict of Interest statements are not required in contracts
- Significant contracts and contract amendments had been properly approved over the life of the project, however, documentation to justify contract modifications was sometimes difficult to obtain.
- The audit clause in standard contracts could be improved.

(Continued on page 2)

Management Response

Management was generally in agreement with our audit recommendations. Detailed responses can be found in the audit report.

Recommendations

1. Establish a protocol for the SDS team to share lessons learned and best practices with Colorado Springs Utilities.
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.
3. The contracting process should be modified to help reveal potential conflicts of interest, particularly when an Agency relationship exists.
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.

(Continued on page 2)

Southern Delivery System Monitoring Report Executive Summary

November 2011

(Highlights continued from page 1)

Financial Analysis

- Bond interest expense was over reimbursed. The net correction was \$14,418,219.71 made in December 2009.
- Bond interest expense and interest earnings were not properly capitalized. Assets on the financial statements were overstated by \$1,861,827 and understated by \$258,518 as a result. The overstatement was corrected in 2010.

Land Acquisition

- The City of Colorado Springs Real Estate Services office was not included in drafting of agreements involving real estate, such as intergovernmental agreements or permits, when these agreements fall outside the scope of *The City of Colorado Springs Procedure Manual for the Acquisition and Disposition of Real Property Interests*.

Computer Applications

- A user access review was conducted on one computer application used by the SDS team. Only a limited site schema was available.
- The user inventory listing was not properly maintained. It included only about 50% of all users and included two terminated employees.
- Site access was allowed for 35 users on an individual basis rather than through group permissions.

Commendable practices were noted in our analysis of Governance, Program Management and Procurement.

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.
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.
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.
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.
9. A site schema document should be used for more efficient review of access by process owners.
10. The errors identified in the user inventory should be corrected and the master list should be accurate, particularly concerning terminated employees.
11. Remove the identified individual user accesses and incorporate these users into appropriate existing groups.



OFFICE OF THE CITY AUDITOR PUBLIC REPORT

Date: November 30, 2011

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

Re: 11-22 2010 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 many changes have been implemented in advance of the issuance of this report.

The audit included activities from 2002 through 2010. 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 concluded that overall the program was meeting its goals and was working within the constraints placed upon it. We identified eleven main observations and have listed our recommendations for each. They are listed in the attached report.

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
Debbie Griffin, Lead Analyst, Enterprise Risk Management

Introduction 1

 Purpose, Scope and Methodology..... 1

 Disclosures 2

Project Background 2

Observations and Analysis 4

 Governance and Oversight..... 5

 Program Management 8

 Procurement and Contract Administration..... 11

 Financial..... 17

 Land Acquisition 20

 Computer Applications Review 23

INTRODUCTION

The Southern Delivery System (SDS) is a multi-year project intended to bring water from Pueblo Reservoir to Colorado Springs. SDS will be built in two phases, the first of which consists of multiple work packages, including a connection to the Pueblo Dam, Raw Water Pipeline, Pump Stations, Finished Water Pipeline and a Water Treatment Plant. The second phase is out of scope for this audit and will begin at a later date. The current approved in-service date for Phase I is April 2016 and the program budget, in 2009 dollars, is \$880,000,000.

Most of the work to date has been in the areas of project planning, permitting, engineering, design and land acquisition. Construction began on the first segment of finished water pipeline in 2010.

Colorado Springs Utilities is an enterprise of the City of Colorado Springs. The Office of the City Auditor (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.

PURPOSE, SCOPE AND METHODOLOGY

The purpose of this audit is to provide real time monitoring of a major water construction project for Colorado Springs Utilities known as 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 period for this report is from the inception of the project in 2002 through December 2010. The greatest emphasis was placed on activities from 2007 through 2010. Information from 2002 through 2007 was studied and included in the report to give a complete picture of the project and to provide the necessary historical perspective to the readers of this report. Because the project is planned to continue until April of 2016, it is anticipated that future reports will be issued periodically until completion.

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.

The financial impact of SDS on water rates was incorporated into the review of water rate increases in 2010 and is therefore not addressed in this report. This will be re-evaluated as part of the next water rate case review, anticipated to be in 2012.

DISCLOSURES

Beginning in 2008 and continuing through 2011, staff from the OCA provided consulting services to the SDS project team that focused on project implementation. We recognize that this involvement in a consulting role may create a perceived risk to our independence and objectivity in regard to those areas. The OCA has taken steps to ensure that the auditors involved in the consulting work are not asked to evaluate the same work they had performed in a consulting capacity.

PROJECT 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. The Water Resources Plan was approved by City Council and recognized the advantages of constructing a major water delivery system from Pueblo Reservoir to Colorado Springs.

Included in the first phase of the project is a connection to the Pueblo dam, one water treatment plant, three pump stations and 62 miles of buried pipeline. Phase one is expected to be operational in 2016. The budget for Phase 1 is \$880,000,000 in 2009 dollars. Accounting for escalation following standard industry practices, the estimate at completion is \$994,000,000. As of December 31, 2010, total project spending was \$118,861,246.

On May 14, 2001, the Regional Water Infrastructure Authority (RWIA) was created with the adoption of an Intergovernmental Agreement (IGA) between Colorado Springs Utilities and the City of Fountain. The purpose of the RWIA was to “finance and operate projects for water, wastewater and stormwater projects that have regional features in which other local entities might want to participate.” The Security Water District joined the RWIA later in 2001. On November 1, 2001, an IGA specific to the SDS was signed by the RWIA.

On July 31, 2003, the RWIA IGA was replaced by an IGA for the Construction of The Southern Delivery System. On February 4, 2008, Pueblo West was added to the SDS IGA. This continues to be the agreement under which SDS is being constructed.

The Construction Coordination Team (CCT) was formed as part of the SDS IGA. The CCT is made up of representatives from each member entity and meets monthly to review progress on SDS and to make decisions. Program costs are divided among the members based on their percentage of participation. Colorado Springs Utilities pays 95.29% of the common costs. Daily management of SDS resides with Colorado Springs Utilities. The IGA specifies that the procurement policies of Colorado Springs Utilities will govern the project.

The Colorado Springs City Council also serves as the Utilities Board for Colorado Springs Utilities. All SDS funding decisions and rate impacts, among other decisions, require the approval of the Colorado Springs

City Council. Likewise, each CCT member must seek approval for their portion of the program costs from their governing bodies.

As part of SDS, long term contracts are needed for the storage, conveyance and exchange of water in the Pueblo reservoir, which was built as a component of the federal Fryingpan–Arkansas (Fry-Ark) project. The Department of the Interior, Bureau of Reclamation (Reclamation) operates the Pueblo Reservoir and served as the lead agency for the Environmental Impact Statement (EIS) that was required for SDS under the National Environmental Policy Act (NEPA). Additional oversight is provided by the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service. Preparation of the EIS and compliance with the NEPA process began in 2003 and was completed March 20, 2009 when Reclamation issued the Record of Decision (ROD).

Seven alternative projects for conveying water to Colorado Springs were considered in the NEPA process. The Final EIS describes the environmental effects of the alternatives in detail. The ROD concluded that “The Participants' Proposed Action would result in similar or fewer environmental effects when compared to the other alternatives. Additionally, this alternative would have the lowest total project cost and lowest energy use requirements, resulting in the lowest greenhouse gas emissions, of any Action Alternative.” And “Because it will cause the least damage to the biological and physical environment, Reclamation has determined that the Participants’ Proposed Action is the environmentally preferred alternative.” The alternative known as the Proposed Action is the project that is being constructed today.¹

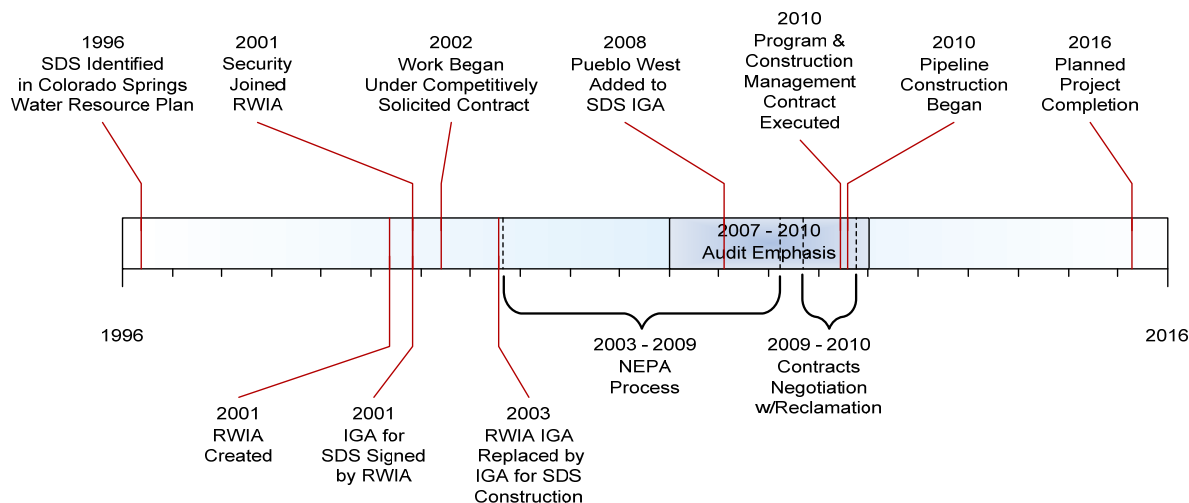
In addition to the federal government involvement, SDS crosses land owned by Pueblo County, the City of Pueblo, Pueblo West Metro District, El Paso County, the State of Colorado and the State Land Board. Each of these governmental entities has their own unique permitting process and has provided input into SDS. In Pueblo County for example, a comprehensive 1041 land use permit was required that provides detailed requirements for completing the project in this County.

Negotiations with Reclamation on long term storage and conveyance contracts for SDS began in 2009 and were completed in 2011. This was the last major federal regulatory hurdle that SDS needed to clear to move forward.

Negotiating and completing the requirements for the various permits and agreements has consumed a considerable portion (24.36% or \$28.9 million) of the project expenditures through 2010 and was the primary reason for the postponement of in-service from 2006 to 2016.

¹ More information regarding the various permits and the Environmental Impact Statement can be found at www.SDSWater.org.

SDS Key Milestones



Work on SDS began with the award of a competitively solicited contract, dated June 5, 2002, for engineering services. As the project began moving from planning to implementation, program and construction management support services were solicited through a competitive process and awarded in June 2010. An integrated Program Management Office (PMO) was established with employees from Colorado Springs Utilities and the program management firm working alongside each other. Because of the scope of SDS, management determined that it should be viewed and managed as a Program consisting of multiple projects.

The first construction activity began in August, 2010 when ground was broken on a segment of the finished water pipeline. Because of the delay in finalizing the Reclamation contracts, no other construction activity began until 2011. Raw water pipeline design and construction contractors were pre-qualified during 2010 to expedite the contracting process.

OBSERVATIONS AND ANALYSIS

The remainder of this report is grouped into the following segments. Each area contains its own background, observations and recommendations.

1. Governance and Oversight
2. Program Management
3. Procurement Activities
4. Financial
5. Land Acquisition
6. Computer Applications

GOVERNANCE AND OVERSIGHT

Governance includes all those individuals and organizations charged with granting authority to or providing oversight of, the SDS project.

For purposes of this report, the work performed by the staff of the OCA is considered part of the governance process. The OCA has provided audit and consulting services regarding SDS to Colorado Springs City Council and Colorado Springs Utilities since 2005. The OCA has assigned two full time equivalent staff members to SDS. In addition to their professional credentials, these auditors have received training in construction, performance and fraud auditing.

This document is the first public report issued on SDS from the OCA. The goal of this effort is to provide continuous monitoring of the project, thereby limiting risks and costs. To achieve this, the auditors have been included in meetings and allowed full access to the SDS team, their records and systems. Colorado Springs Utilities and the SDS team have invited the participation of the OCA staff and have been receptive to our recommendations. By working with the SDS team, the issues that were identified have been quickly resolved.

The auditors reviewed relevant documentation, reports, agreements, resolutions and meeting minutes to analyze governance activities. Auditors observed meetings to document governance and decision making. Because of the long duration of this program, multiple auditors have been involved over many years. The OCA began preliminary reviews of SDS in 2005, reviewed early land acquisition activity in 2006, and began a detailed audit in 2007. In 2008, the OCA and Colorado Springs Utilities entered into a consulting agreement to provide services to the SDS team concerning project implementation. The OCA has taken appropriate steps to ensure there is no conflict of interest or impairment of auditor objectivity as a result of these consulting engagements.

SDS is a multi-jurisdictional program between Colorado Springs Utilities, Security, Fountain and Pueblo West. The Construction Coordination Team (CCT) is made up of representatives from each partner and is responsible for overall program governance. The CCT has authority and responsibility to approve contracts, approve expenditures and keep the partners informed of the project's progress.

The CCT is responsible for directing the Program Manager to prepare an annual budget. Monthly presentations are held between the CCT and the SDS Program Management team to review project status, including schedule and cost performance. Issues which require input from the CCT are discussed during these meetings.

The Colorado Springs City Council must approve an annual budget and other actions related to SDS, including rate requests, funding plans and land acquisitions. Likewise, the governing bodies of each partner entity must review and approve certain aspects of the program and ensure adequate appropriations are available.

All program costs are paid by Colorado Springs Utilities and each partner receives a monthly invoice for their share of expenses. Per the IGA, Colorado Springs Utilities has responsibility for program management.

Governance is shared by all the outside agencies with oversight responsibilities. Applying for and receiving the necessary permits indicates that required processes are being followed. Internally, governance is further defined in the Program Management section of this report.

OBSERVATIONS

Our review showed that SDS has undergone extensive scrutiny from a variety of sources. The proper approvals were requested and received for budget and funding requests. Extensive effort was expended in successfully meeting the permitting requirements.

The tone at the top from the SDS management team and Colorado Springs Utilities management has been clearly stated and communicated. The Mission Statement and Critical Success Factors for SDS were developed by the SDS team. These objectives were incorporated into the program management service contract, which clearly sets the expectations of management.

SDS Program Mission Statement

While keeping our commitments to project stakeholders, we effectively leverage our talent and experience to safely place the Southern Delivery System in full and efficient operation by April, 2016. We always manage the program to deliver best value to our customers within the approved budget. We will intentionally transfer experience gained to optimize the enterprise's capital program management and conduct our core business.

Critical Success Factors

1. We shall develop and implement a comprehensive plan.
2. We shall clearly communicate and keep our commitments to all stakeholders.
3. We shall have program controls systems to effectively adhere to scope, schedule, cost, and quality requirements.
4. We shall have a high performing, collaborative team that is well led, dedicated, appropriately resourced, and decisive.
5. We will build and commission best value assets that integrate with existing infrastructure and leverage our core operating talent.
6. We shall assure that all key decisions are in the best interest of our customers, defensible, and well documented.
7. We shall identify, evaluate, and manage risk.
8. We shall plan and implement the program so no one gets hurt.

An atmosphere of professionalism pervades the SDS Program. Communications with SDS project staff have been clear and timely regarding controls and acceptance of recommendations for improvements.

At this time, we have no recommendations concerning SDS program governance.

COMMENDABLE PRACTICE

Due to the nature of this project, our office has dedicated resources in a continuous monitoring environment for the length of the SDS project. Colorado Springs Utilities has developed an open and

cooperative rapport with the OCA staff. We commend the SDS team for their reception and responsiveness to our involvement. SDS staff demonstrated a high regard for internal controls and cooperation with our office to identify and correct risks and issues as they arose.

PROGRAM MANAGEMENT

Colorado Springs Utilities assumed the program management role when the 2002 IGA was signed. From the project inception until late 2007, Colorado Springs Utilities staff assigned to the project was minimal. Most of the work during this time was performed by outside vendors.

In 2007 Colorado Springs Utilities identified a need to dedicate full-time staff to more effectively execute the program and the current management team was established. Additional staff was dedicated to SDS by Colorado Springs Utilities in 2008 and 2009. The structure improved again in 2010 when a firm was selected to provide project management support services and an integrated Project Management Office (PMO) was established to support SDS.

The SDS PMO operates separately from the Colorado Springs Utilities Enterprise Project Office (EPO) due to the size of SDS. Analysis of program management for this report considered only activities of the SDS PMO. The SDS team has been directed to evaluate and share best practices and lessons learned in program management with the rest of the organization, but no formal process has been established to accomplish this task.

The management structure in place for SDS has been a collaborative effort between Colorado Springs Utilities and several key vendors. From 2002 through 2010, CH2M Hill was the primary SDS contractor, providing engineering services, project management, permitting and land acquisition support. Due to the requirements of the federal, state and local governments, the planning and design portion of the project took much longer than originally planned. Certain key components of the project had to be modified, added or deleted as a result of the permit related requirements. This was the major cause of the expansion of scope, time and budget for the CH2M Hill contract and the overall project budget.

In 2009, with the ROD complete, a new project schedule and budget were approved. With the project ready to move from design to construction, an extensive analysis was performed to evaluate the contract types that were appropriate for a project of this type and scope. The decision was made to competitively bid project management support services as a separate contract from engineering services. A thoughtful, lengthy process ensued to prepare a Request for Proposal (RFP), evaluate responses and interview the finalists. MWH Americas, Inc (MWH) was awarded the contract effective June, 2010. The MWH contract includes an at-risk fee amount that is determined following quarterly reviews of Key Performance Indicators (KPIs). The KPIs were established to ensure MWH's efforts and program execution objectives were consistent.

OBSERVATIONS

In evaluating Program Management, we attempted to answer several questions:

DID THE PROGRAM MANAGER SATISFY THE REQUIREMENTS OF THE SDS IGA?

To answer this question, we examined the description of Project Management services described in the SDS IGA. We compared the listed services to activities conducted since the change in management occurred in 2007. Of the 57 discrete services listed, eight could not be tested because they involve

management of the close out or operational phases of the project that have not yet occurred. Three others were not tested because they were considered minor requirements. Of the remaining 46 items, the auditors were able to find evidence that the requirements had been met.

When evaluating contract administration performance, the auditors identified an issue with processing of Payment Applications for a vendor. This issue was related to the first construction activity for SDS. The issue was resolved and an improved Payment Application form and process has since been implemented.

COMMENDABLE PRACTICE

The implementation of the integrated PMO for SDS along with the improved capabilities and processes surrounding project delivery, project controls and project administration is a commendable practice. The new controls in place have helped to move the project forward while maintaining quality objectives. The new tools introduced in 2009 and 2010 to monitor and control the project schedule, costs and standard operating procedures, represent notable improvements over those that were in use previously. These tools and processes have helped the SDS program management team meet its goals of complying with the requirements of the SDS IGA.

RECOMMENDATION

We recommend that the SDS team establish a protocol to begin sharing their lessons learned and best practices with the appropriate groups within Colorado Springs Utilities. This should be an ongoing effort that would allow Colorado Springs Utilities to evaluate, adapt and adopt the SDS practices and tools as appropriate.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. The SDS Program Mission Statement and Critical Success Factors reflect a significant commitment to take full advantage of the experience gained and lessons learned from implementing SDS. Our integrated team is already collaborating with departments across the organization and demonstrating how efforts supporting SDS are conducted pursuant to the program management protocols established in 2010. A more formal, recurring interaction has been established with other groups within Utilities to review lessons learned on a regular basis.

WAS THE PROGRAM MANAGEMENT STRUCTURE ADEQUATE FOR THE SDS PROJECT?

The structure appeared to be adequate; however, heavy reliance was placed on vendors during the early years to provide services, including project management. While this helped keep the headcount at Colorado Springs Utilities low, it also meant that vendors provided most of the information concerning the project, including producing status reports for the CCT and City Council. This limited the ability of Colorado Springs Utilities management to independently verify the information.

With the changes in staffing beginning in 2007 and the change to an integrated PMO in 2010, the structure has been greatly improved. Project schedule and budgets are now controlled internally by the

Project Controls team of the PMO. Processes for administration of payments and retention of documents have been improved and consistently applied. A dedicated Colorado Springs Utilities employee serving as a financial controller has been instrumental in improving financial reporting for SDS.

No recommendations are being made concerning the Program Management structure at this time.

DID PROGRAM MANAGEMENT MEASURE CONTRACTOR PERFORMANCE?

Yes, our review showed that SDS management did evaluate contractor performance based on the established KPIs. However, the finalization and evaluation of the MWH at-risk fee by SDS management was not completed on schedule in 2010. Including an at-risk fee as part of the compensation of MWH is intended to help motivate the vendor to achieve superior performance. The KPIs are expected to vary over time, but will reflect short-term and long-term alignment with the SDS Mission Statement and Critical Success Factors. At the end of each three month evaluation period, the At-Risk Fee Evaluation Board is tasked with evaluating data and preparing a recommendation of the earned at-risk fee.

RECOMMENDATION

We recommend that Colorado Springs Utilities ensure that the schedule for establishing and reviewing the MWH KPIs is maintained in 2011. Evaluate the effectiveness of these performance measures when considering the terms for renewing or extending this contract.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. Key Performance Indicators (KPIs) are established for each review period to drive successful project execution. The SDS Management Team strives to establish appropriate KPIs, provide timely and actionable feedback, and complete evaluations, ensuring that any at-risk fee earned is appropriately made available.

The effectiveness and protocol surrounding KPIs will be evaluated in 2012 as part of the review process for renewal or extension of the MWH Program Management Support Services Agreement. The period of performance for this agreement currently extends to June 2012.

PROCUREMENT AND CONTRACT ADMINISTRATION

According to the SDS IGA, the project is subject to the procurement policies of Colorado Springs Utilities. Signatory authority, including execution of contracts, is specifically assigned to the Project Manager. Prior to 2008, the Procurement and Contract Services (PCS) department was not directly involved in the preparation or administration of SDS related contracts. These responsibilities were handled by members of the SDS team working in conjunction with the CCT, with additional governance provided by the Colorado Springs City Council.

Beginning in 2008, and coinciding with changes in the SDS management team, PCS took a more active role in SDS. During 2008 and 2009, PCS involvement included reviews of existing contracts and helping to evaluate the possible approaches to contract management for the remainder of the program. The OCA staff was also involved, on a consulting basis, to assist in this contract management analysis effort.

Since 2008, significant steps have been taken to align existing contracts with PCS guidelines and to strengthen controls related to contracting. Given the large number of contracts to be executed and the span of these contracts, additional PCS staff was dedicated to the project beginning in 2010. This change to dedicated staff has made a notable improvement in the consistency, timeliness and quality of SDS related contract documents. Specific improvements were made to standardize contract documents and processes.

With the implementation of the integrated Program Management Office (PMO) in 2010, responsibilities for Project Controls, which include schedule, budget and document controls, were better defined by the SDS team. A close working relationship has been formed between the SDS Project Controls team and the PCS staff to facilitate coordination of these functions. The result has been a significant improvement in the alignment of the project schedule with the PCS schedule, improved flow of communication, and increased accuracy of information.

COMMENDABLE PRACTICES

Efforts to include the Colorado Springs Utilities operations staff during design reviews and the RFP evaluation processes should result in seamless transition of the facilities from construction to operations. By involving the future end users at this early stage, the final product will be better and more acceptable than if it were developed without their input. We encourage PCS to continue this procedure for all Colorado Springs Utilities procurement activities where appropriate.

Further, Procurement's dedicated SDS staff has demonstrated their ability to maintain their independence and objectivity while continuing to support the goals of the program.

OBSERVATIONS

Three separate observations regarding procurement activities have been noted. The observations are:

1. Conflict of interest statements are not required in contracts.
2. Analysis of vendor contracts and supporting documentation showed that some documentation was difficult to obtain, however, improvements have been seen in the contracting process.
3. The audit clause in standard contracts could be improved.

CONFLICT OF INTEREST STATEMENTS ARE NOT REQUIRED IN CONTRACTS

Conflicts of interest should be avoided in procurement activities. If a conflict exists, it should be disclosed to make management aware of the situation. A conscious decision can then be made to handle the conflict in an appropriate manner. Conflicts can exist not only between contracting agents and a vendor, but between any combination of Colorado Springs Utilities' employees, contractors, vendors or external parties that have a financial relationship with Colorado Springs Utilities.

The standard contracts do not include a conflict of interest disclosure clause. The process for reviewing contracts includes a step that the contracting agent must verify that there are no prohibited conflicts of interest per the procurement regulations. There are policies in place concerning Colorado Springs Utilities employees, but the same policies do not extend to vendors. The specific regulation mentioned in the contract review process (Section 4.2.3 of the Procurement Regulations, #00075), only addresses adherence to the Personnel Policies and Business Code of Ethics, employee owned businesses and restrictions on the scope of vendor contracts.

As a result, conflicts of interest may not be disclosed because the requirement to reveal problems is restricted to the specific situations listed above. If a conflict is not disclosed, there is an increased opportunity for fraud and compensating controls that may be available would not be utilized. The Colorado Springs Utilities Business Ethics Policy states that "it is the employee's duty to disclose promptly any circumstances that might constitute a conflict of interest or appear to be a conflict of interest." This statement, when followed, protects Colorado Springs Utilities from conflicts with their employees, including those in PCS. A similar statement is not required from vendors.

These potential conflicts could be most damaging when an Agency relationship is created with a vendor.

An agency relationship is defined as "a consensual fiduciary relationship between two persons where the agent has the power to bind the principal by his actions, and the principal has the right to control the actions of the agent."² Our review showed that there were professional services contracts for SDS where an agency relationship had been created.

² Agency definition from <http://definitions.uslegal.com/a/agency-relationship/>

RECOMMENDATION

We recommend the contracting process be modified to help reveal potential conflicts of interest. When a professional services contract creates an Agency relationship, the vendor should be required to reveal existing conflicts.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. Procurement and Contract Services will modify its processes accordingly to ensure that potential conflicts of interest are identified. If an agency relationship is created, Colorado Springs Utilities will require the individual(s) to sign a no conflict of interest statement. Implementation shall be on or before January 1, 2012.

ANALYSIS OF VENDOR CONTRACTS AND SUPPORTING DOCUMENTATION SHOWED THAT SOME DOCUMENTATION WAS DIFFICULT TO OBTAIN, HOWEVER, IMPROVEMENTS HAVE BEEN SEEN IN THE CONTRACTING PROCESS

Because of the reliance placed on vendors for project management services, we performed a detailed analysis of these contracts.

An Engineering Services Agreement, which covered comprehensive project management services for all facets of the project prior to program implementation, was originally an RWIA document competitively solicited in 2002. When the RWIA was dissolved, the contract was assigned to Colorado Springs Utilities. This contract was written to allow task orders to be added as needed during the project. By design, the definition of engineering services was very broad because of the complexity and extent of the scope of work to address planning, permitting, design, engineering, and land acquisition. The initial contract amount included only a small portion of the anticipated costs to deliver the required engineering services. The contract was originally executed with three task orders, and the contract specified that with advance authorization the engineer would provide additional services resulting from significant changes in the scope.

The base contract did not include an expiration date or cost, because these details were associated with each task order. Each task order was treated as a separate contract in that it could have different terms (Not to Exceed, Guaranteed Maximum Price) and be amended to change the scope, cost or time.

At the time, it was determined that the task order contract type would provide the project with the flexibility needed to respond to changes in the requirements as the regulatory and design phases progressed.

We noted that during the eight years from 2002 through 2010, the primary engineering services contract was modified by adding 25 task orders. These task orders were further amended a total of 92 times. Our review showed that each new task order and amendment had been properly executed and approved per the Colorado Springs Utilities procurement policies. All increases in contract value were within the overall project budget in effect at the time.

We noted that procurement policies were followed and acknowledge that the contract was intended to be broad and scope defined through the addition of task orders. However, this procurement practice may have increased risk during the project term in that all appropriate contracting alternatives would not have been considered for the various project scopes.

It is important to note that improvements have been made to contracting policies and procedures in recent years. For example, we observed that the selection process for program management support services was well executed and resulted in a detailed statement of work that was broken into two segments. The first segment was a 90 day mobilization phase that was fixed price. The second segment is fixed fee plus an at-risk fee and has a 2 year term, with possibility of extension. The contract language is specific regarding the scope of Program Management services and the relationship between the Program Manager and other contractors. This language and Colorado Springs Utilities procurement policies are designed to prevent possible conflicts of interest as they serve as Program Manager. We recognize Colorado Springs Utilities efforts to implement a robust contract scope and selection process.

We also noted SDS management was successful in adding quantity and early payment discount terms to the Engineering Services contract in 2008. These discounts have reduced the cost of the Engineering Services contract by approximately \$1.8 million as of 12/31/2010. The contract was also modified to include adherence to the Colorado Springs Utilities travel policy and to eliminate mark ups on sub contractors.

Colorado Springs Utilities has improved the control environment by requiring more complete documentation for sole source justifications and limiting the term of sole source contracts to 2 years, plus possible renewal options. We believe that this will reduce the risk that appropriate contracting alternatives would not be considered.

Over the life of the above noted engineering services contract, significant changes were made in the documentation required for the task orders and amendments. The PCS Contracts Database sometimes lacked sufficient supporting documentation for the early task orders and amendments to demonstrate that the proposed price, scope or time modifications had been thoroughly vetted. Other documentation, such as meeting minutes and email correspondence, had to be reviewed to ascertain that the review process was adequate.

With the change in Colorado Springs Utilities' management after 2007, and the involvement of PCS beginning in 2008, a noticeable change took place in the quality of the documentation provided to support contract modifications. The more recent modifications contain a more detailed explanation of the changes, including an analysis of the impact of any changes in cost.

Evidence that alternatives to the proposed amendments, including competition, were considered, continued to be an area where the documentation was difficult to obtain for verification because this information was not always stored in the Contracts Database. Because the Contracts Database is to be replaced in 2012, we do not have specific recommendations for this application at this time.

RECOMMENDATION

We have several recommendations related to this observation.

1. Enforce periodic reviews of all contracts and re-justification of sole sourced contracts, especially when there is a possibility that the contract may grow in scope and size.
2. Ensure contract scope is well defined, thus increasing the likelihood that changes in the scope would be clear and would trigger an evaluation of the need to re-solicit rather than amend.
3. 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.
4. Decisions to renew/amend a contract, rather than re-soliciting the work, should be thoroughly documented, including a cost analysis.

MANAGEMENT RESPONSE

1. Colorado Springs Utilities agrees with the recommendation. The Procurement and Contract Services' policy includes requirements to conduct reviews at the time of a contract renewal and requires periodic re-justification for sole-sourcing. Current policy documentation will be updated in November 2011 to reflect the requirement of a two-year review. We are also managing the SDS work scope to maximize opportunity for local contractors and creating competition as much as practical.

2. Colorado Springs Utilities partially agrees with the recommendation. Colorado Springs Utilities recognizes the importance of well-defined statements of work as well as accurate and complete commercial terms in contracting. The accuracy and completeness of all technical documents, including the statement of work is the responsibility of the designated project managers/engineers. The accuracy and completeness of the commercial terms and conditions, and the incorporation of technical documents into the contract documents are the responsibility of the Procurement and Contract Services' contracting agents. There are a number of reasons why a contract may be amended rather than re-solicited; Colorado Springs Utilities evaluates the circumstances surrounding each contract to determine whether it is more advantageous to amend or re-solicit at a specific point.

3. Colorado Springs Utilities partially agrees with the recommendation. However, establishing an arbitrary dollar amount or a time period threshold for contract terms may not be appropriate. Contract terms and subsequent extensions, if any, are based on sound business decisions that are made contemporaneously and should be well documented. Additionally, the current Purchase Requisition process and management authorization limits ensure that decisions that affect the contract price also have the proper management approval.

4. Colorado Springs Utilities agrees with the recommendation. Changes including renewals and amendment of contracts must be well documented. The Purchase Requisition process ensures that price impacting decisions are approved at the appropriate management level. A cost analysis is conducted when it is deemed beneficial and the supporting documentation is included in the

recommendation. Other non-price decisions are documented as required and maintained in the Procurement and Contract Services files.

THE AUDIT CLAUSE IN STANDARD CONTRACTS COULD BE IMPROVED

The standard contract templates include a brief audit clause, which is included when a contract is executed. This clause is sufficient for many contracts, but was not detailed enough to cover a major construction project such as SDS. The auditors suggested an enhanced audit clause which was incorporated into the MWH Americas, Inc. contract for program management support services in 2010. Additional suggestions were made by the auditors and incorporated by PCS to customize the audit clause for the Water Treatment Plant design/build contract.

These enhanced versions of audit language have not yet been standardized in the contract templates.

RECOMMENDATION

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

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. Colorado Springs Utilities would welcome the Office of the City Auditor's recommendations for suggested best practice audit clause language to be utilized by Colorado Springs Utilities. The recommended audit clause language will be reviewed by the Manager of Procurement and Contract Services for incorporation into Colorado Springs Utilities contract language as appropriate. Implementation expected 60 days after receipt of revised audit clause language.

FINANCIAL

SDS is primarily funded by 40 year revenue bonds. Most of the SDS bonds have been tax exempt issues. In 2009 and 2010, taxable Build America Bonds (BABs) were used for SDS. As part of the budget cycle, an analysis is performed at least annually to determine the amount needed from cash funds or bond funds for SDS and all other Colorado Springs Utilities capital needs. The impact on rates is analyzed and if needed, a rate case is brought before the City Council. The staff of the OCA reviews all rate cases prior to them being presented to City Council. Likewise, City Council must approve the sale of revenue bonds. Revenue bonds for SDS are specific to this project, meaning the funds may only be used for SDS, according to the bond covenants.

Once sold, the bond proceeds are recorded as restricted cash and are held in a separate account for each series. For SDS, a portion of the estimated interest to be paid prior to the in-service date has been set aside in a separate restricted cash account. These funds are referred to as Capitalized Interest. Project expenses are incurred and paid using unrestricted cash, which is then reimbursed from the appropriate restricted cash account.

All bond proceeds and reserve funds are held in interest bearing accounts until they are needed for reimbursement or to pay the interest due on the bonds. The interest earned on these accounts is used to offset some of the expense of borrowing money. For the tax exempt bonds, the interest earned is netted against the interest expense. For the BABs, the interest earned is entered as Miscellaneous Revenue.

OBSERVATIONS

Two separate observations were found regarding bond funding for SDS.

1. Bond interest expense was reimbursed from both the Acquisition Fund Proceeds account and the Capitalized Interest account.
2. Bond interest expense and interest earnings were not properly capitalized

BOND INTEREST EXPENSE WAS REIMBURSED FROM BOTH THE ACQUISITION FUND PROCEEDS ACCOUNT AND THE CAPITALIZED INTEREST ACCOUNT

During the multi-year water rate case review in 2009, staff from the OCA discovered a discrepancy between the total amount that was reimbursed from restricted cash and the total amount of expenses for SDS. An internally generated report was used to determine the reimbursement to the Unrestricted Cash account each month for capital expenditures. For SDS, the extract from the accounting system used to determine the reimbursement amount included the interest expense for the period. Interest expense should have been excluded from this report because it is paid using a separate source of funds, the Capitalized Interest Fund.

This caused a net over-reimbursement from bond funds to unrestricted cash. This was a balance sheet accounting error between cash accounts that was corrected when it was brought to the attention of the Treasury and Finance section in December 2009. The impact to Unrestricted Cash is shown below.

Bond Series	Under/(Over) Funded Interest
2004C	(1,759,267.56)
2005C	(3,740,399.79)
2008C	(8,918,552.36)
Net Total	\$ (14,418,219.71)

As a result, the acquisition fund balance was depleted earlier than anticipated, potentially causing subsequent debt to be issued sooner than was necessary. This was a timing issue detected early enough that it that did not result in the need to issue more debt for the project as a whole.

RECOMMENDATION

We recommend that the Treasury Department 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 this from happening in the future.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. Treasury and Finance determined the exact amount of the over reimbursement and corrected the balances in the unrestricted cash and restricted cash accounts on December 30, 2009. Bond counsel indicated in a memo dated December 30, 2009 to Treasury and Finance personnel, that the “allocations were reasonable and represent the optimal solution to the problems presented.” Process improvements to the capital expenditure reimbursement process were identified and implemented beginning January 2010. Specifically, the Treasury and Finance Manager transferred the capital expenditure reimbursement process function from debt management personnel to cash management personnel. This served to separate the bond issuance process from the restricted cash management process, resulting in a strengthening of internal controls and an alignment of functions within cash management, the area that manages the accounting for bond funded interest.

BOND INTEREST EXPENSE AND INTEREST EARNINGS WERE NOT PROPERLY CAPITALIZED

The financing of SDS is achieved through issuance of bonds specifically and solely for SDS. All interest expense and interest earnings should be recorded in a balance sheet account (CWIP -Construction Work in Progress) rather than an income statement account. The auditors found that in some cases the entries were made to income statement accounts rather than balance sheet accounts.

This observation includes several related issues. Each issue had a different impact on the financial statements and had to be analyzed and corrected separately. The net effect of these issues is shown below:

Description	Net effect on the Financial Statements
Interest earned for bond series 2003B, 2004C, 2005C, and 2008C was only partially capitalized	\$ 1,861,826.66 assets were overstated
Interest Expense for bond series 2008C in December 2008 was expensed, not capitalized	\$ 258,515.70 assets were understated

RECOMMENDATION

We recommend that the Accounting Department review the accounts and journal entries for the SDS bonds and make any necessary adjusting entries to the financial statements.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. Historically, issuance of bonds specific to a single project is uncommon for Colorado Springs Utilities. Excluding SDS, capitalization of interest is applied to qualifying projects based upon the Federal Energy Regulatory Commission’s Allowance for Funds Used during Construction methodology. As a result of the OCA audit finding, the Accounting Department reanalyzed Generally Accepted Accounting Principles (GAAP) to verify the appropriate accounting treatment for capitalized interest of both tax exempt bonds and taxable Build America Bonds (BABs). As of October 31, 2011, all adjusting journal entries have been recorded to correct SDS CWIP capital interest in compliance with GAAP.

LAND ACQUISITION

Acquiring land for SDS has been one of the primary tasks in the pre-construction phase. Land Acquisition activities have occurred since 2008 and should be completed in 2012 (some early purchases were made in 2003 and 2004). Land acquisition activities include fee simple purchases of parcels (when necessary), acquisition of easement and granting rights of way. There are approximately 300 parcels to be acquired for this project. The status of land acquisition activities as of 12/31/2010 is shown below.

Land Acquisition Status as of 12/31/2010	Parcel Count
Complete/Closed	81
Approved for Eminent Domain	5
Awaiting closing, have signed agreements	58
Remaining to be acquired (approximate)	156

As of 12/31/2010, \$15.9 million has been spent on land activities representing 13.4% of project spending. The current budget for land acquisition is \$30.5 million; therefore 52.5% of the acquisitions budget has been expended to date.

	Budget	Spent through 12/31/2010	% of budget spent
Land Acquisition	\$30,500,000	\$15,900,000	52.5%

All land is titled in the name of the City of Colorado Springs. The City of Colorado Springs Real Estate Services Office has ultimate authority and responsibility for land transactions.

Land acquisitions are governed by *The City of Colorado Springs Procedure Manual for the Acquisition and Disposition of Real Property Interests* (Manual) as well as state and federal laws. The Manual was adopted in 2007 for use in acquiring real property interests for the City and its enterprises. A focus group from the City, Memorial Hospital, and Colorado Springs Utilities was assembled to review internal real estate processes and formulate usable guidelines. The Manual has been instrumental in ensuring the SDS acquisitions have been handled appropriately. For SDS, the 1041 permit with Pueblo County also specifies enhanced parameters pertaining to property owners and land related transactions.

The Manual was not created to cover every possible real estate acquisition scenario, as certain types of transactions fall out of the scope of the Manual. Certain steps in the acquisition of rights of way from government agencies are not defined by the Manual. For example, when acquiring rights to cross a government owned parcel, the rules of the agency owning the property take precedence. Such transactions may result in access being granted via a permit or intergovernmental agreement rather than a normal easement or right of way agreement. In addition, the Pueblo County 1041 permit includes language that addresses specific rules for acquiring and operating on land in Pueblo County.

The 1041 permit and several other governmental permits affecting land transactions were drafted and executed without review from the City Real Estate Services Office personnel.

The OCA has audited all SDS land transactions for:

- adherence to the processes and procedures outlined in the Manual
- adherence to applicable laws and conditions of the Pueblo County 1041 permit
- review of support for valuation of property and subsequent purchase price

To achieve this, staff from the OCA has been involved by observing meetings and reviewing files since 2009.

OBSERVATIONS

In evaluating Land Acquisition, we attempted to answer several questions:

WERE THE PROCESSES OUTLINED IN THE MANUAL FOLLOWED?

Yes. Our review showed that the processes described in the Manual were followed. Minor issues, such as the consistent use of approved forms and consistent calculation methods, were promptly addressed as they were found during the OCA review. The Manual states that approval for acquisitions must come from the City Council if the acquisition amount exceeds \$50,000. Since 2008, the SDS team has requested and received approval from the Colorado Springs City Council for each SDS land transaction even though most SDS acquisitions were below the \$50,000 threshold. This was done intentionally to increase transparency in these transactions.

In reviewing the various permits and intergovernmental agreements related to land acquisition, it was noted that there are no policies in place which require a review by the City of Colorado Springs Real Estate Services Office if an agreement is executed outside the normal Manual parameters. This could potentially result in Colorado Springs Utilities entering into an agreement on behalf of the City of Colorado Springs Real Estate Services Office without their direct input or knowledge.

RECOMMENDATION

We recommend that future permits and intergovernmental agreements to be executed by Colorado Springs Utilities be evaluated by the City of Colorado Springs Real Estate Services Office whenever there is a need to address real property concerns. Colorado Springs Utilities project managers and task leads should actively seek input from the City of Colorado Springs Real Estate Services office when any real estate issue arises.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. The land acquisition effort for SDS is unprecedented in Colorado Springs Utilities and the Manual does not address all possible land acquisition circumstances. The terms in the 1041 permit highlight that land acquisition should be approached fairly and consistently, and that eminent domain should be used only when necessary.

Conditions in the permit regarding requirements for completing appraisals rely on existing state regulations and better clarity may have been achieved with additional review.

With respect to land transactions involving other government agencies, we will include Real Estate Services to a greater degree. Additional review is welcome although other government agencies typically have greater authority than The City of Colorado Springs in land matters and will give consideration to comments and suggested changes as a courtesy but have no obligation to deviate from their standard land acquisition processes.

DID COLORADO SPRINGS UTILITIES FOLLOW THE APPLICABLE LAWS AND THE CONDITIONS OF THE PUEBLO COUNTY 1041 PERMIT?

Yes. Our review showed that applicable laws concerning relocation and acquisitions were being followed. The OCA provided detailed reviews of all parcels entering eminent domain proceedings and found no irregularities.

The auditors noted that achieving alignment between the terms of Pueblo County 1041 permit, the City Real Estate Manual and applicable Colorado laws has, at times, been complicated for the parties involved. SDS management has taken appropriate steps to communicate with the City Council, the Pueblo County Commissioners and the property owners in an attempt to resolve outstanding issues as they arise.

At this time, we have no related recommendations.

WAS THE PRICE PAID FOR LAND ADEQUATELY SUPPORTED?

Yes. The appraisals or value findings were reviewed for each parcel and compared to the offer letters and final closing documents. Our review showed that adequate documentation existed to support the acquisition prices paid.

It was noted that there were delays between reaching agreements with property owners and the closing dates for the acquisitions to be complete. These delays were primarily due to circumstances beyond the control of the SDS land team, including the recent problems with lenders concerning mortgage document processing. For all acquisitions approved to close in 2009 and 2010, the average time from City Council resolution to closing was 88 days. There were 6 parcels that required more than 200 days to close. As construction deadlines approached, the land team was successful in getting more parcels closed in a timely fashion. This area will continue to require close monitoring to avoid delays in the schedule.

The budget for land acquisition appeared to be on track given that roughly 50% of the parcels have been acquired and roughly 50% of the budget had been spent as of 12/31/2010.

At this time, we have no related recommendations.

COMPUTER APPLICATIONS REVIEW

Two computer applications utilized by the SDS team have undergone a limited review and were also the subject of the OCA consulting activity in 2009 and 2010. These two Microsoft SharePoint applications were both developed, hosted and administered by outside vendors and are not currently part of the internal Colorado Springs Utilities computer system. These applications will be referred to as the 1) SDS Pre-Construction SharePoint Site and 2) SDS Construction SharePoint Site.

SharePoint is a web-based application used for document management and collaboration by the SDS team. It is highly configurable and allows for development of separate sites and sub-sites to meet the specific needs of an organization. Colorado Springs Utilities is currently involved in an effort to implement SharePoint organization wide. This organization wide SharePoint solution will be referred to as the Utilities Enterprise SharePoint System. These observations may be useful to the Information Technology Services Department as they complete their planning for the expanded version of SharePoint.

For this audit, the SDS Pre-Construction SharePoint Site was utilized primarily by the permitting and land acquisition teams. It was reviewed for its usefulness to the team, the accuracy of the workflow and document management process, and to recommend possible system improvements.

This application was very useful to helping the team, including outside contractors, track tasks and manage documents. There were, however, issues noted with this system, including a lack of reporting capabilities, difficulty in locating documents and dead ends in the work flow. Some of these issues were addressed in 2009 and 2010. The system was replaced in 2011 and limited functionality was integrated with the current SDS Construction SharePoint Site.

In 2010, with the change in Program Management, there was also a change in the use of SharePoint. The new system, identified in this audit as the SDS Construction SharePoint Site, expanded and improved on the capabilities of the previous system. A User Access review of this second SharePoint system was conducted by the OCA's Information Systems (IS) audit staff as part of this audit.

Additional systems reviews are planned for 2011 and 2012 and will be the subject of a future report.

OBSERVATIONS

SharePoint User Access was the primary focus of the IS audit work conducted on the SDS Construction SharePoint Site. Three issues were identified and presented to the SDS team in 2011:

- Site Schema
- User Inventory Listing
- Use of User Groups

SITE SCHEMA

SharePoint can be configured with multiple parent, child (or sub) sites, document libraries and lists. The permission to access these elements can be 'orphaned' from the parent sites, increasing the complexity of administering user access permission. A site schema allows an administrator to maintain some control over identifying where individual permissions are assigned, and monitor the permission levels for those user groups to ensure appropriate permissions, particularly to confidential sites.

In reviewing the site permission access, only a limited site schema was available. No document could be provided that showed permission information based on site setup.

RECOMMENDATIONS

We recommend that the SDS Construction SharePoint Site Administrator use a site schema document for inventorying of orphaned permission objects, and inventory site permissions at grouping levels for more efficient review of access by process owners.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. A site schema document was prepared by the Office of the City Auditor for use during the audit. Since that time, the SDS team has adopted the document and has agreed to maintain it as part of the future system documentation. Colorado Springs Utilities' Collaboration Services Program has identified a similar Site Map (schema) as a component of its planned SharePoint Services documentation. When the SDS SharePoint site is migrated to the Utilities on-premise SharePoint 2010 infrastructure in 2012, the SDS site schema will be reviewed and incorporated into the Utilities SharePoint Site Map document.

USER INVENTORY LISTING

All users should have approval documentation and should be inventoried as an active user on the master listing of users. Our review found that individual users' access to the SDS Construction SharePoint Site was not properly maintained in a master access inventory listing. The users that are employees of the Program Management firm were granted access on a blanket basis and their permissions were not tracked in the same detail as other users. Only these other users (approximately 50% of the user population) were tracked in a master inventory list. Also, several discrepancies were found between the master list and the actual user list, including two employees no longer supporting the project that still had access to the site and three users who were not on the master list but who had access to SharePoint.

RECOMMENDATIONS

We recommend that the SDS Construction SharePoint Site Administrator correct the errors identified and, going forward, ensure the master list is accurate, particularly when terminating access.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the recommendation. Colorado Springs Utilities took prompt action to correct the discrepancies associated with the master inventory list and the actual user list. A new-user request process has since been implemented and includes a monthly review process to add new users and identify and remove inactive users from the user inventory list in order to ensure accuracy regarding changes in employment status.

Migration of the SDS SharePoint site to the Utilities on-premise Share Point 2010 infrastructure site is currently scheduled for 2012. Once the site is migrated it will be capable of leveraging existing identity and role management processes as well as identifying current employment status for users from Colorado Springs Utilities and authorized Contractors.

SITE ACCESS

Locations within SharePoint are setup with a parent-child configuration (site-sub site). All sites, document libraries and lists generally inherit the "Parent" permissions, unless otherwise assigned. Access to all sites is set up using a group process. Rather than maintaining individual access levels for each site, users are assigned to "user groups", which automatically allow the user access to all objects within that assigned group. This setup allows for single point deletion of an individual user, and a more controlled permission assignment for each site object.

All sites were inventoried with the assistance of the SharePoint process owner, and 64 orphaned objects were identified. Although the majority of the sites reflected standard use of the group permissions methodology, there were 35 users with individual user access to various objects. There were also five user groups reflected with access to objects, with no user group definitions within the master inventory of the user groups.

RECOMMENDATIONS

We recommend that the SDS Construction SharePoint Site Administrator adhere to the current procedure of assigning individual users to groups. Identify the reason for user groups reflected on site access but absent from the master listing of user groups for remediation. Remove the individual user accesses identified, incorporating those users into appropriate groups already assigned to the sites identified in the review.

MANAGEMENT RESPONSE

Colorado Springs Utilities agrees with the finding. Colorado Springs Utilities' site content managers were requesting individual access to specific sites which resulted in administrative maintenance delays. Processes have since been defined to restrict individual user requests to certain content. Additionally, the Utilities' Collaboration Services Program is in the process of defining a set of SharePoint Governance practices for its new on-premise infrastructure that will be strengthened by the use of group management and audit processes already in place within Colorado Springs Utilities. The SharePoint administrators have since corrected all user-specific access definitions in the system.

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, Memorial Health System, and Colorado Springs Airport. 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

This audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing*, a part of the Professional Practices Framework promulgated by the Institute of Internal Auditors. 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.