

The bond issues for the Southern Delivery System are 2003B, 2004C and 2005C. The first year the *Southern Delivery System Engineering Report*, City of Colorado Springs, Colorado, Utilities System Subordinate Lien Improvement, Revenue Bonds, Series 2003B, dated October 29, 2003 was issued (attached). Subsequent bond issues included the following official statement referring to the Engineering study.

Engineer's Report on Feasibility of the Southern Delivery System. Due to the size of the SDS, it constitutes a Capital Addition under the Bond Ordinance. A Capital Addition is defined in the Bond Ordinance as a project with an estimated net book value in excess of 15% of the net utilities plant (without regard to the project) for the most recent fiscal year. The Bond Ordinance requires that the Utilities have a comprehensive engineer's report prepared for any Capital Addition.

In 2003, the Utilities engaged CH2M Hill to prepare the engineer's report relating to the SOS in order to ensure compliance with the additional bonds test contained in the Bond Ordinance. The primary conclusions of CH2M Hill, based upon the assumptions contained in its report, were as follows:

1. The SDS is a necessary water supply project that includes new water treatment and transmission facilities to meet projected future water supply demands within the City's water system service area.
2. The SDS is needed by the spring of 2009 to meet projected water demands (though the Utilities has recently determined that SDS will not be needed until 2012). The schedule to provide a functional system within this time frame appears reasonable.
3. The estimated cost of providing the required water supply using the SDS is reasonable in comparison with the projected costs for furnishing this same supply from other available sources.
4. CH2M Hill has reviewed the financial forecasts of the Utilities. With the critical assumptions that adequate debt service coverage will be maintained through forecasted annual rate increases, which have not yet been approved by the City Council, and that projected costs and expenses will be as forecast by the Utilities, CH2M Hill certified in 2003 that average annual debt service coverage will not be less than 130 percent for the 3 years (2010 to 2012) following commercial operability of the SDS in 2009.

CH2M HILL will be required to reaffirm its conclusions from 2003 in connection with all bonds issued to finance SOS, including the 2005C Bonds.

Southern Delivery System Engineering Report

**City of Colorado Springs, Colorado
Utilities System Subordinate Lien Improvement
Revenue Bonds
Series 2003B**

Prepared for
Colorado Springs Utilities

Prepared by



October 29, 2003

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Acronyms and Abbreviations

2003B Bonds	City of Colorado Springs, Colorado, Utilities System Subordinate Lien Improvement Revenue Bonds, Series 2003B
ac-ft/yr	acre-feet per year
CF&I	Colorado Fuel and Iron Corporation
CIP	Capital Improvements Plan
City	City of Colorado Springs, Colorado
DSM	Demand Side Management
EIS	environmental impact statement
FCCR	fixed cost coverage ratio
Fountain	City of Fountain
FVA	Fountain Valley Authority
FY	fiscal year
hp	horsepower
kV	kilovolt
mgd	million gallons per day
NEPA	National Environmental Policy Act
PSOP	Preferred Storage Options Plan
Reclamation	United States Bureau of Reclamation
Security	Security Water District
Springs Utilities	Colorado Springs Utilities
the System	water, wastewater, electric, gas, and street light services
WTP	Water Treatment Plant

Introduction

Authorization and Report Organization

Colorado Springs Utilities (Springs Utilities) retained CH2M HILL to prepare this Engineering Report as a condition to the issuance of the City of Colorado Springs, Colorado (City), Utilities System Subordinate Lien Improvement Revenue Bonds, Series 2003B (2003B Bonds). The proceeds of the 2003B Bonds will be applied to finance the initial cost of the capital addition known as the Southern Delivery System.

This Engineering Report is divided into the following sections:

- **Section 1 – Introduction.** Includes introductory and document organization information, plus reference information, report requirements, and key assumptions.
- **Section 2 – Colorado Springs Utilities.** Includes a description of the organization and structure of Springs Utilities. The five utility services, water, wastewater, electric, gas, and street light, are briefly introduced; and the Springs Utilities’ 10-year Capital Improvements Plan (CIP) is summarized.
- **Section 3 – Springs Utilities Raw Water Delivery Systems.** Includes a description of the existing raw water delivery systems, their respective yield, and the ability of existing infrastructure to deliver this yield to the Springs Utilities’ water system service area. Also included is an assessment of projected demands relative to estimated delivery capacity to determine the anticipated date a new water supply system is needed.
- **Section 4 – Implementation of a New Water Delivery System.** Demonstrates the feasibility of the Southern Delivery System relative to other alternative water delivery projects. Describes the proposed capital improvements that are required for the overall Southern Delivery System program, and specifically those that will be funded by the 2003B Bonds. Also provides estimated cost and schedule information for the Southern Delivery System Capital Addition.
- **Section 5 – Financial Analysis.** Discusses the forecast of projected revenues, associated rate requirements, and projected rate increases, which are expected to finance the ongoing CIPs, of which the Southern Delivery System is a part. A debt service coverage ratio forecast is also presented.
- **Section 6 – Study References.** Provides a list of documents CH2M HILL reviewed to prepare this Engineering Report.

Requirement for Study and Relationship of CH2M HILL

The City's Bond Ordinances require that "If the additional Parity Bonds are to be issued to finance a Capital Addition, the City shall have complied with the conditions set forth in subsections A and B above and, in addition, the City shall have obtained:

- (a) from an Independent Engineer a comprehensive engineering report for the Capital Addition to be financed ("Engineering Report"), which report shall (i) contain (1) detailed estimates of the cost of acquiring and constructing the Capital Addition, (2) the estimated date the acquisition and construction of the Capital Addition will be completed and commercially operative, and (3) a detailed analysis of the impact of the Capital Addition on the financial operations of the System during the construction thereof and for at least three Fiscal Years after the date the Capital Addition is estimated to become commercially operative, and (ii) conclude that (1) the Capital Addition is necessary and will substantially increase the capacity, or is needed to replace existing facilities, or constitutes new transmission facilities to meet current and projected demands for the service or product to be provided thereby, and (2) the estimated cost of providing the service or product from the Capital Addition will be reasonable in comparison with projected costs for furnishing such service or product from other reasonably available sources; and
- (b) a certificate of an Independent Engineer to the effect that, based on the Engineering Report prepared for the Capital Addition, the projected Net Pledged Revenues for each of the three Fiscal Years subsequent to the date the Capital Addition is estimated to become commercially operative (as estimated in the Engineering Report) will be not less than 130 percent of the Average Annual Principal and Interest Requirements of the Outstanding Bonds, any Outstanding First Lien Bonds, any Outstanding Parity Bonds and the Parity Bonds proposed to be issued, and all Parity Bonds estimated to be issued, if any, during the period from the date the first series of Parity Bonds for the Capital Addition is to be delivered through the third Fiscal Year subsequent to the date the Capital Addition is estimated to become commercially operative, for all Capital Improvements and for all Capital Additions then in progress or then being initiated."

CH2M HILL was retained as the Independent Engineer to prepare this Engineering Report summarizing the feasibility, implementation, and projected near- and long-term financial impacts of acquiring and constructing the Southern Delivery System as a Capital Addition for Springs Utilities. CH2M HILL has served as a consultant to Springs Utilities for many years. During that time, CH2M HILL has helped evaluate alternative water delivery projects, conducted other studies related to Springs Utilities' operations, and provided design and construction services.

Forward-looking Statements

This Engineering Report contains statements which, to the extent they are not recitations of historical fact, constitute "forward-looking statements." In this respect, the words "estimate," "project," "anticipate," "expect," "intend," "believe," "forecast," and similar expressions are intended to identify forward-looking statements. The achievement of certain

results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by such forward-looking statements.

Assumptions and Limitations

CH2M HILL made certain assumptions about future Southern Delivery System conditions. Although these assumptions are reasonable for the purposes of this Engineering Report, actual conditions may differ from those assumed. To the extent that future conditions differ from those assumed, results will vary from those forecast. Given the forward-looking nature of some of the information and the need to rely on information provided by others, CH2M HILL also has established certain limitations regarding the information presented in this Engineering Report. Key assumptions and limitations are summarized below, others are noted in specific portions of this Engineering Report. Specifically, Section 5.0, Financial Analyses, includes listings of a variety of assumptions used as part of the financial evaluations presented in this Engineering Report.

- The subject of this Engineering Report is the first proposed construction phase of the Southern Delivery System. The overall Southern Delivery System is assumed to include a main delivery system plus several phased additional portions. The initial delivery system is known as Phase 1 and is assumed to include a diversion from the Arkansas River system, which is expected to include a connection to the outlet piping system from Pueblo Dam, three raw water pump stations, about 45 miles of 66-inch-diameter raw water pipeline, a new 50-million-gallons-per-day (mgd) water treatment plant (WTP), about 16 miles of finished water pipelines, and a variety of appurtenant facilities required to allow these features to operate together as a system (Phase 1). Later phases are planned to include the Jimmy Camp Creek Reservoir; the Williams Creek Reservoir; WTP expansions to 100, 150, and 180 mgd; and elements of the Preferred Storage Options Plan (PSOP). The PSOP includes the re-operation of Pueblo Reservoir to store non-Fryingpan-Arkansas project water, and the enlargement of the Pueblo Dam and reservoir system. Phase 1 is the Capital Addition referred to in this Engineering Report and is the project for which the initial costs will be funded by 2003B Bonds. Phase 1 is expected to cost \$490 million (in third quarter 2002 dollars). Of this, Springs Utilities' share of the cost is expected to be about \$406 million. The remainder are assumed to be provided by the City of Fountain (Fountain) and Security Water District (Security).
- The following is the assumed schedule for each phase of the Southern Delivery System to be commercially operational:

Southern Delivery System – Phase 1	2009
Re-operation of Pueblo Dam (PSOP) ^{see note}	before 2009
Jimmy Camp Creek Reservoir	2012
Enlarging Pueblo Dam/Reservoir (PSOP) ^{see note}	2012
Southern Delivery WTP Expansion to 100 mgd	2017

Williams Creek Exchange Reservoir	2025
Southern Delivery WTP Expansion to 150 mgd	2025
Southern Delivery WTP Expansion to 180 mgd	2033

Note: Re-operation and enlargement of Pueblo Reservoir were assumed to be commercially available as shown; however, neither project is critical to the ability of the Southern Delivery System to provide the required water yield until after 2024.

- Implementation of all of the phases of the Southern Delivery System are required to take advantage of the full design capacity and associated water rights available to Springs Utilities, Fountain, and Security. It is assumed that all phases will be implemented as they are needed. The anticipated implementation schedule is based on the best demand projections available to CH2M HILL at the time this Engineering Report was prepared.
- The project is currently being implemented as a partnership among Springs Utilities, Fountain, and Security. Table 2-1 shows the pro rata participation share in the various project elements. The Intergovernmental Agreement permits one or more of the partners to elect not to participate in the Southern Delivery System. This decision must be made not later than December 31, 2003, or 90 days following the Southern Delivery System Project Manager's determination of the best technical alternative for delivery of raw water into the pipeline, whichever is later. For the purposes of this Engineering Report, it is assumed that none of the three current partners will elect not to participate in the Southern Delivery System.
- The re-operation of Pueblo Reservoir and the raising of Pueblo Dam are both key projects that support the eventual development of the full yield of the Southern Delivery System. These projects will be implemented by the Southeastern Colorado Water Conservancy District as part of the PSOP. The portion of these projects being sponsored (paid for) by Springs Utilities are considered a part of the future phases of the Southern Delivery System. These projects require congressional approval at the federal level. Legislative bills to obtain this approval were not pending in Congress at the time this Engineering Report was prepared. However, this situation was being actively considered by a large number of people from the many water agencies that have a stake in the PSOP. It is expected that the required legislation will be introduced in the House of Representatives by the end of 2003. Given the often uncertain timing of congressional actions, Springs Utilities evaluated the impact that the PSOP projects could have on the ability to use the Southern Delivery System. That evaluation showed that the earliest time the additional capacity provide by the PSOP projects would be needed to meet demands was 2024. Therefore, for the purposes of this Engineering Report, it is assumed that the applicable legislation will be sponsored, approved by Congress, and signed by the President in advance of the time the PSOP is needed for Springs Utilities to meet demands that cannot otherwise be met using the Southern Delivery System.
- As noted in the Official Statement for 2003B Bonds, the County of Pueblo has adopted regulations pursuant to C.R.S. § 24-65.1-402 (1041 Regulations), which establish guidelines for site selection and construction of major new domestic water and sewage treatment systems, among other activities. The Southern Delivery System is a major new domestic water system as defined by the statute and the Pueblo County Code

§17.164.010(A)(1). The City, on behalf of Springs Utilities, will be required to apply for a permit from the County of Pueblo pursuant to its 1041 Regulations. Representatives from Springs Utilities and the County of Pueblo have begun discussing this permitting process. As with any such process, there is always the potential that the County of Pueblo can cause significant costs or delays, or that the permit may be denied. For the purposes of this Engineering Report, it was assumed that Springs Utilities and the County of Pueblo would reach mutual agreement on issues related to the Southern Delivery System, and that the 1041 permitting process would neither delay the implementation of Phase 1 of the Southern Delivery System, nor significantly increase the costs estimated for the work.

- The City of Pueblo has been vocal in its opposition to the Southern Delivery System because of its perceived negative impact on instream flows in the Arkansas River through Pueblo. Springs Utilities and the City of Pueblo have conducted several meetings and workshops concerning this subject, and recent actions suggest that a resolution to this issue might be negotiated to the mutual benefit of both entities. However, at the time this Engineering Report was prepared, no formal agreement had been reached, and the risk of project opposition by the City of Pueblo remains a possibility. For the purposes of this Engineering Report, it was assumed that Springs Utilities and the City of Pueblo would reach mutual agreement on issues related to the Southern Delivery System, and that such agreement would neither delay the implementation of Phase 1 of the Southern Delivery System, nor significantly increase the costs estimated for the work.
- The main water supply for the Southern Delivery System is planned for diversion into the system using the outlet works and associated piping at Pueblo Dam. These features were not originally designed to account for flows delivered to Springs Utilities. Thus, some physical modifications and institutional arrangements regarding the dam outlet works and piping will be required. Physical modifications are expected to be accomplished by coordinating design efforts through the United States Bureau of Reclamation (Reclamation), which owns and operates the dam and outlet works. Institutional arrangements will be needed to guarantee capacity protection for all existing users. Given the required changes and need for cooperative agreement among multiple agencies, some risk of delay is evident. However, this issue is being actively coordinated with Reclamation, and progress toward a mutually agreeable solution has been made. Accordingly, for the purposes of this Engineering Report, it was assumed that Springs Utilities, Reclamation, and other users would reach mutual agreement on issues related to supplying water for the Southern Delivery System through Pueblo Dam, and that the agreement would neither delay the implementation of Phase 1 of the Southern Delivery System, nor significantly increase the costs estimated for the work.
- Springs Utilities has projected water demands using a combination of per capita demand and population growth projections. Springs Utilities developed this information using extensive analyses, and CH2M HILL was not directly involved. The projected population growth and demands appear to be reasonable in light of similar work done in the mid-1990s in support of the 1996 Springs Utilities Water Resources Plan. CH2M HILL also notes that these population projections have proven reasonably

accurate to date. Accordingly, CH2M HILL has assumed that the growth of water demands and customer base as projected by Springs Utilities.

- CH2M HILL has prepared initial capital and operating cost estimates for construction of the Southern Delivery System through 2012. However, as is customary for this type of assignment for a large utility, CH2M HILL has not performed a comprehensive audit or examination of Springs Utilities at either the combined or service level, nor have we examined or audited the operations of its majority-owned component units and joint ventures.

Colorado Springs Utilities

City of Colorado Springs

The City is a home rule municipal corporation with a current population of approximately 361,000 located in the south-central Front Range of Colorado. The City was organized and exists under the laws of the State of Colorado and, in particular, under the provisions of the Constitution of the State and the City's home rule charter.

Nature of Springs Utilities

Springs Utilities was created by the home rule charter of the City. It is organized into several operating divisions responsible for various functions associated with the delivery of electric, water, wastewater, gas, and street light services (collectively, the System).

The System's service area includes some or all of the City, Manitou Springs, and many of the suburban residential areas. The military installations of Fort Carson, Peterson Air Force Base, and the U.S. Air Force Academy receive water, electricity, and gas from the System. Peterson Air Force Base also receives wastewater treatment service from the System.

Services

Springs Utilities provides residential, commercial, industrial, and some wholesale services in five main service sectors including water, wastewater, electric, gas, and street lighting. These services are summarized below. More detailed information regarding the key characteristics of these systems is included in the Official Statement for Series 2003B Subordinate Lien Revenue Bonds.

Water System

The Water System serves an estimated 386,700 persons. This represents the City's population, people living in the Ute Pass communities west of the City, military bases, and other areas outside the City limits. The City owns potable and nonpotable water resources that, if fully developed, will provide a firm yield in a dry year of about 181,400 acre-feet. Presently developed potable water supply sources consist of surface-water and groundwater resources that are capable of providing a firm yield of 140,100 acre-feet per year (ac-ft/yr) (about 125 mgd). However, that yield is not fully available to Springs Utilities because the existing system of pipelines, pump stations, and other facilities does not have the capacity to convey source water to the service area. Springs Utilities staff estimate that about 100,600 ac-ft/yr (90 mgd) can be effectively conveyed into the service area from these sources. By 2004, system improvements that are currently being implemented should increase that conveyance capacity to about 117,500 ac-ft/yr (104.9 mgd). Water System staff believe this capacity will be sufficient until about 2009.

The Water System's total rated water treatment capacity is 219 mgd from five treatment plants (excluding the Fountain Valley Authority [FVA] capacity available to the City), and its treated water storage capacity is 102,922,000 gallons. The FVA's WTP provides an additional potential 13 mgd to the Water System's treatment capacity, although pumping capacity limits deliveries from this plant to 11 mgd. Therefore, the Water System can deliver up to 230 mgd. Maximum peak water use in a single day was 182,405,000 gallons in July 2001. Water System staff believe its treatment capacity will be sufficient beyond 2010.

The Water System has raw water storage capacity of approximately 188,451 acre-feet in 24 reservoirs. All but four of the raw water storage reservoirs are connected to the Water System's treatment plants by pipelines. Under existing contractual arrangements, Springs Utilities' participation in the FVA provides approximately 57,100 acre-feet of additional raw water storage capacity for Fryingpan-Arkansas water. The Water System also has covered treated water storage capacity of approximately 103 million gallons.

The Water System has approximately 1,738 miles of water main that have been constructed since 1954. The system is subject to leakage losses of approximately 2 percent.

Springs Utilities believes its capacity to deliver raw water from remote watersheds to local storage, including currently planned capacity improvements to the existing system, will be adequate until approximately 2009. Various alternatives are being considered to fully develop the City's water resources entitlements and to satisfy the City's post-2009 needs for additional delivery of raw water. Springs Utilities staff believe it will have sufficient water supply entitlements to meet the growing needs of the area served by the Water System through the year 2040. The loss of entitlement, delays in the development of additional facilities, or growth of population in excess of projections could result in interim water delivery shortages.

Drought Conditions in the Region

Colorado, along with most of the western United States, is currently experiencing prolonged drought conditions. As a result of this, the water levels in Springs Utilities water storage reservoirs are below normal while water demand has remained high, although lower than demand during 2002. To decrease water demand, the City Council approved mandatory water restrictions for all water customers, increased the summer rate for general service users, and implemented inclining block rates for residential users in 2002. Outside watering restrictions are still in effect for 2003.

Reuse of Imported Water Return Flows

The City has the right (and in some cases, the obligation) to reuse its imported (transmountain) and certain other water return flows as many times as possible. Return flows include those flows discharged directly or indirectly (runoff or subsurface flow) to Fountain Creek and ultimately the Arkansas River. Both direct and exchange reuse are available to Springs Utilities. Direct reuse involves using reclaimed wastewater or similar return flows for beneficial uses such as turf watering. Exchange reuse involves discharging treated wastewater into the Arkansas River via Fountain Creek to replace raw water diverted from the Arkansas River system higher in the watershed. Exchange reuse also includes replacing diversions in local watersheds, augmenting well pumping, and reusing local water.

The amount of water actually available for reuse depends on the amount of reusable water delivered to the system and the consumptive use within the distribution system. Based on present projections, the total return flow available for first reuse is expected to be approximately 57,000 acre-feet annually when all presently known reusable water sources are developed.

Joint Water Authorities

The City is a participant with the FVA and the Aurora-Colorado Springs Joint Water Authority (with the City of Aurora), each of which is a separate political subdivision of Colorado and treated as a component unit of the City for financial reporting purposes.

The FVA constructed a WTP with an 18-mgd capacity approximately 17 miles south of the City. Springs Utilities operates the plant under contract with the FVA. The City is entitled to receive approximately 71 percent of the water treated at the FVA plant. The remaining water is available to the other FVA participants: Fountain, Security, the Stratmoor Hills Water District, and the Widefield Water and Sanitation District. Each of these participants owns and operates a water distribution system.

The Aurora-Colorado Springs Joint Water Authority has constructed a 66-inch-diameter pipeline to connect the Twin Lakes Dam with the Otero Pumping Station intake pipeline. Twin Lakes Dam is located approximately 12 miles south of Leadville, Colorado, and the Otero Pumping Station is located approximately 10 miles north of Buena Vista, Colorado. The pipeline was constructed to increase the capacity of the Otero Pumping Station, decrease pumping costs, and eliminate seasonal operating difficulties. Springs Utilities has a two-thirds participation share in the Aurora-Colorado Springs Joint Water Authority's project.

Wastewater System

The Wastewater System provides services for the City and other areas approved by the City Council on a long-term, contractual basis, including Peterson Air Force Base Field, Manitou Springs, and the Stratmoor Hills Water and Sanitation District. An average of nearly 48,190,000 gallons per day is treated, for a per capita treatment of about 129 gallons per day. As of December 2002, Springs Utilities had approximately 1,500 miles of sewer main.

The Wastewater System operates regional wastewater treatment facilities with a single discharge point. The design capacity is 65 mgd, with a peak capacity of 75 mgd during the summer.

Springs Utilities operates the Las Vegas Street Wastewater Treatment Plant and discharges wastewater to Fountain Creek under the terms of a Colorado Discharge Permit System permit. The permit was issued in 1999, pursuant to the federal Clean Water Act. Under its existing permit, Springs Utilities is required to monitor its wastewater discharge and provide a monthly monitoring report to the U.S. Environmental Protection Agency and the Colorado Department of Public Health and Environment.

In 2000, Springs Utilities completed a Wastewater Infrastructure Strategic Plan, which identified the need for a new regional wastewater treatment facility in the Monument Creek Basin to accommodate new development in the northern portion of the Monument Creek

Basin and northeastern portion of the Sand Creek Basin. The new plant will be known as the "Northern Water Reclamation Facility" and is planned for completion in 2006.

The Wastewater Infrastructure Strategic Plan also identified the need for another new regional wastewater treatment facility to serve the Jimmy Camp Creek Basin. The identified facility is known as the "Regional Water Reclamation Facility." It will be located south of the City and could serve the growth needs for Springs Utilities and other El Paso County wastewater providers. Construction will be triggered by development in the Jimmy Camp Creek Basin. The Regional Water Reclamation Facility is expected to be needed between 2007 and 2010. Studies are being performed to site the Regional Water Reclamation Facility, and land may be acquired in 2004.

Electric System

The Electric System provides retail electric service to metropolitan Colorado Springs and Manitou Springs, and delivers special contract power to Fountain, the U.S. Air Force Academy, Peterson Air Force Base, and Fort Carson. More than 90 percent of the population of El Paso County is directly or indirectly served by the Electric System.

Power supplies for the System, totaling about 600 megawatts (excluding purchased power and power from Front Range Power Company, L.L.C., as described below), include a series of coal-, gas-, and oil-burning generation stations, and a small amount of hydropower. About 75 percent of the locally generated (nonpurchased) power is derived from coal-fired plants. About another 300 megawatts of power supplements the System through contract power purchases from larger western regional power wholesalers and from the new Front Range Power Company, L.L.C. plant.

Springs Utilities is a 50 percent owner in Front Range Power Company, L.L.C., which has constructed a 480-megawatt natural gas-fired combined cycle facility. This additional capacity will help Springs Utilities meet intermediate capacity demands. The Front Range Power Company, L.L.C. station reached final completion on May 23, 2003.

As of December 31, 2002, the Electric System's transmission and distribution system consisted of approximately 2,063 miles of overhead and 1,109 miles of underground line. The overhead network includes about 82 miles of 115-kilovolt (kV) and 117 miles of 230-kV line. The underground network consists of 21 miles of 115-kV line. The Electric System has 9 transmission substations and 45 distribution substations. The transmission system is interconnected with Western Area Power Administration at the Midway Substation south of the Springs Utilities' Nixon Plant, and with Xcel Energy at the Fuller Substation and Kettle Creek Substation in the northeast part of the City.

Springs Utilities is a member of the Rocky Mountain Reserve Group. This group consists of 10 power suppliers operating in Colorado, Wyoming, Nebraska, and South Dakota. The participants pool their reserve capacities and provide mutual assistance during emergencies. Participants must maintain reserve capacity based on their loads and their largest hazard as a ratio of the pool load and the largest generating unit within the pool.

Gas System

The Gas System operates a local distribution system supplying natural gas to approximately 150,000 customers in a 500-square-mile service area. In addition to the City, the service area includes Manitou Springs, the U.S. Air Force Academy, and the northerly portion of Fort Carson. The Gas System purchases gas under contracts with a variety of gas suppliers including nationwide marketing companies, and national and regional production companies. Colorado Interstate Gas transports the natural gas to the Gas System's distribution facilities pursuant to various firm, interruptible, and "no notice" transportation agreements.

A propane-air plant (peak-shaving facility) and contract storage services supplement the purchased gas. The propane-air plant is owned and operated by Springs Utilities and has a capacity of 30,000 million cubic feet per day. Contract storage service includes the Young Storage Field in which the Springs Utilities is a 5 percent owner.

The Gas System's customer base continues to grow at approximately the same rate as the population of the Colorado Springs area. Natural gas continues to be the preferred fuel for space and water heating for residential and commercial customers, and because of this, the saturation of providing gas service to each residence and business is nearly 100 percent.

Street Light System

Effective February 1, 2003, the City Council designated the Street Light System as a separate Springs Utilities system. The City Council authorized Springs Utilities to recover its costs through a street light service charge to be included as a line item on utility bills for customers within the City limits. The service charge is not applicable to customers outside the City limits. Springs Utilities continues to provide street lighting service under tariffs to governmental and quasi-governmental entities beyond City limits.

In August 2003, a lawsuit was filed against the City and Springs Utilities claiming, among other things, that the imposition of the street light service charge by Springs Utilities violates certain provisions of the Colorado Constitution and the Charter. This matter is awaiting determination.

Financial Structure

Combined System

As discussed in the body of the Official Statement, bonds issued by the City, payable from System revenues, do not constitute a debt or an indebtedness of the City, nor do they constitute a multiple fiscal year (FY) direct or indirect financial obligation of the City. System revenue bonds will be paid using only revenues from the operation and use of Springs Utilities' System, after all operation and maintenance expenses of the System are paid. Revenues in excess of operation and maintenance costs are referred to as "Net Pledged Revenues."

This pledge is subordinate to approximately \$291 million of first-lien bonds. The first lien is a closed lien, meaning that no additional senior bonds can be issued. The bond ratings on the first and subordinated liens are not differentiated.

Southern Delivery System Project

Springs Utilities has entered into an Intergovernmental Agreement effective August 1, 2003, with Fountain and Security for the construction of the Southern Delivery System. This agreement specifies the terms and conditions of each entity's participation in the Southern Delivery System. Springs Utilities will act as the lead agency for the Southern Delivery System. Table 2-1 shows the pro-rata shares of the three participants' expected costs of Phase 1 of the Southern Delivery System.

TABLE 2-1
Prorated Distribution of Phase 1 Southern Delivery System Construction Costs

Project Element	Capital Cost Estimate (\$)	Springs Utilities (%)	Fountain (%)	Security (%)	Total (%)	Estimated Costs (\$1,000)			
						Springs Utilities (\$)	Fountain (\$)	Security (\$)	Total (\$)
Common Project Costs	38,293	85.31	13.53	1.16	100.00	32,668	5,181	444	38,293
Raw Water Conveyance	278,927	84.79	13.46	1.75	100.00	236,502	37,544	4,881	278,927
Finished Pipelines									
Common Finished Pipelines	25,574	57.03	38.02	4.95	100.00	14,585	9,723	1,266	25,574
Springs Utilities/ Security Finished Pipelines	8,778	92.00	0.00	8.00	100.00	8,076	-	702	8,778
Springs Utilities Finished Pipelines	5,644	100.00	0.00	0.00	100.00	5,644	-	-	5,644
Fountain Finished Pipelines	6,106	0.00	100.00	0.00	100.00	-	6,106	-	6,106
Security Finished Pipelines	100	0.00	0.00	100.00	100.00	-	-	100	100
Finished Pipelines Total	46,202					28,305	15,829	2,068	46,202
Water Treatment Plant	112,357	84.60	14.66	0.74	100.00	95,054	16,472	831	112,357
JCC Reservoir Land Acquisition	14,625	91.80	8.20	0.00	100.00	13,426	1,199	-	14,625
Total	490,404	82.78	15.54	1.68	100.00	405,954	76,225	8,225	490,404

Refer also to Table 4-2. "Contingencies" and "Other Costs" from Table 4-2 have been distributed to the various project elements in this table.

Capital Improvements

The recent growth rate in the local economy has been fairly high, although growth rates are assumed to moderate over the next decade. Utility infrastructure expenditures will remain high for all service divisions primarily due to capacity additions such as the Southern Delivery System and major infrastructure needs in the water, wastewater, electric, gas, and unregulated sales systems.

Springs Utilities has provided a 10-year CIP for each of its five systems, plus one for capital improvements needed for unregulated services. These CIPs are updated annually and are used for Springs Utilities' financial projections, and sales and revenue forecasts. Currently, Springs Utilities indicates that all known planned improvements in each division of the service area are included in the CIPs, except for the Southern Delivery System. In support of this Engineering Report, a 10-year CIP and associated cash flow were developed for the

Southern Delivery System. Supporting information and financial analyses described in this Engineering Report establish and use the Southern Delivery System cash-flow information in conjunction with all other known capital improvement spending projections to evaluate the financial strength of Springs Utilities with consideration given to all projected capital improvements over the next 10 years.

The accuracy of Springs Utilities' long-range capital expenditure forecasts and the timing of construction of a number of the proposed major capital projects are dependent on future economic conditions, population growth within Springs Utilities' water system service area, and other factors beyond its control, such as environmental regulations.

SECTION 3.0

Springs Utilities Raw Water Delivery System

The Southern Delivery System is proposed as a new water delivery system to supplement Springs Utilities’ existing water supplies. The Southern Delivery System will deliver and treat raw water to potable water quality for customers in the Springs Utilities, Fountain, and Security water system service areas. This section describes Springs Utilities’ existing raw water supply/delivery systems and their limitations relative to meeting anticipated future demands. In this section, the required delivery rate and the estimated time frame when new raw water supplies are needed are also established.

Current Raw Water Supplies

Springs Utilities currently obtains raw water supplies from a variety of sources. These sources include local systems, the Blue River System, the Homestake System, the Twin Lakes System, the Fryingpan-Arkansas Project, the Turquoise Reservoir Colorado Fuel and Iron Corporation (CF&I) Decree, Arkansas River Exchanges, Colorado Canal System, and groundwater.

Table 3-1 presents a summary of the raw water supplies available to Springs Utilities.

TABLE 3-1
Summary of Raw Water Supplies Available to Springs Utilities

Source	Firm Yield		Conveyance System
	ac-ft/yr	mgd	
Local Systems	23,900	21.3	Local
Blue River System	10,200	9.1	Blue
Homestake System	13,800	12.3	Homestake (Otero)
Twin Lakes System	35,000	31.3	Homestake (Otero)
Fryingpan-Arkansas Project	14,200	12.7	FVA
Turquoise Reservoir CF&I Decree	n/a ^a	n/a	Homestake (Otero)
Arkansas River Exchanges (2002)	27,700	24.7	Homestake (Otero)
Colorado Canal System	13,700	12.2	Homestake (Otero)
Total	138,500^b	123.6	

^aFirm yield of Turquoise Reservoir CF&I Decree is less than 100 ac-ft/yr and is not included in official yield summaries.

^b1,600 ac-ft/yr (1.4 mgd) of existing groundwater supply is not included in this table. Up to about 2,800 ac-ft/yr (2.5 mgd) of additional undeveloped (or under development) groundwater supplies are also not listed. No specific conveyance system is associated with groundwater supply deliveries.

Local Systems

As early as the 1890s, residents of Colorado Springs began developing water supply systems on the flanks of Pike's Peak to augment the previously developed supplies from streams in the Fountain Creek Basin that flowed through town. These local systems met the City's needs until the 1950s when the Blue River system was added to the supply. The local system includes nine systems with a firm yield for potable water service of 23,900 ac-ft/yr, as reported by Springs Utilities, Resource Supply Department (2003).

Blue River System

The Blue River System was constructed in the 1950s, and was the first transmountain system operated by Springs Utilities. The project diverts water from the headwaters of the Blue River and its tributaries above the Town of Breckenridge, Colorado. The Blue River is tributary to the Colorado River. Diverted water is conveyed under the Continental Divide to Montgomery Reservoir on the Middle Fork of the South Platte River. At Montgomery Reservoir, Blue River flows are commingled with water diverted from the South Platte River and conveyed to the City via the Blue River pipeline. Because of Montgomery Reservoir's junior water right, a water yield from the South Platte River is only realized occasionally and is, therefore, not part of the firm yield. The firm yield of the Blue River system is 10,200 ac-ft/yr as reported in the Springs Utilities 1996 Water Resources Plan.

Homestake System

The Homestake System includes Phase I and Phase II projects. Only Phase I has been developed. Homestake I (Phase I) diverts water from the headwaters of Homestake Creek and its tributaries. Homestake Creek is a tributary to the Eagle River, which is a tributary to the Colorado River. Diverted water is collected in Homestake Reservoir, and is conveyed into Turquoise Reservoir via the Homestake Tunnel and Lake Fork Creek. Water is conveyed to Colorado Springs via the Homestake Pipeline via the Otero Pump Station (often referred to as the "Otero Conveyance System"). The yield from the Homestake System is shared between Colorado Springs and the City of Aurora. The firm yield for Springs Utilities from Homestake Phase I is 13,800 ac-ft/yr, as reported in the Springs Utilities 1996 Water Resources Plan.

Twin Lakes System

The Twin Lakes System includes diversions from the headwaters of the roaring Fork River and its tributaries, and from Lake Creek, which is a tributary to the Arkansas River. Flows diverted from these sources are collected in Grizzly Reservoir and conveyed under the Continental Divide through Twin Lakes Tunnel No. 1, then into Lake Creek and Twin Lakes Reservoir. Twin Lakes Reservoir is an impoundment on Lake Creek where additional yield is developed by diverting Lake Creek flows. From Twin Lakes Reservoir, flows are conveyed to Colorado Springs via the Homestake Pipeline. The Twin Lakes supply is developed from a system owned and operated by the Twin Lakes Reservoir and Canal Company. Springs Utilities owns about 54.7 percent of the total shares in this company, which results in a commensurate share of the Twin Lakes System's yield. The firm yield for Springs Utilities from the Twin Lakes System is 35,000 ac-ft/yr, as reported in the Springs Utilities 1996 Water Resources Plan.

Fryingpan-Arkansas Project

The Fryingpan-Arkansas Project is a major transmountain diversion project that diverts water from the headwaters of the Fryingpan River into the Arkansas River. The project also includes Pueblo Reservoir. The Fryingpan River is a tributary to the Roaring Fork River, which is a tributary to the Colorado River. The Fryingpan-Arkansas Project is owned and operated by Reclamation. The Southeastern Colorado Water Conservancy District is the legal agency for the Fryingpan-Arkansas Project and holds the water rights. Springs Utilities receives its water from the project through its participation in the FVA. The firm yield for Springs Utilities from the Fryingpan-Arkansas Project is 14,200 ac-ft/yr, as reported in the Springs Utilities 1996 Water Resources Plan.

Arkansas River Exchanges

Colorado water law allows for reusable water (typically water that is nonnative to the basin of use) to be exchanged for water in other parts of the basin. A typical exchange involves diverting water at an upstream location while releasing a corresponding amount downstream to replace it. Many of Springs Utilities' supplies are reusable sources, and the Colorado Springs Arkansas River Exchange Program allows Springs Utilities to exchange its reusable wastewater effluent flowing into Fountain Creek with various diversions in the upper Arkansas River Basin. Part of Springs Utilities' reusable water is discharged into Fountain Creek and ultimately the Arkansas River through wastewater effluent discharges from the Las Vegas Street Wastewater Treatment Plant. Another portion of Springs Utilities' reusable water is discharged to Fountain Creek through irrigation return flows. These flows are the portion of irrigation water that is not used by growing plants and eventually flows either through surface or subsurface runoff to Fountain Creek. As population in the Springs Utilities' water system service area increases, the use of nonnative (reusable) water increases, and the corresponding wastewater and irrigation return flow discharges will also increase. In 2002, it was estimated that firm yield from return flows was about 27,700 ac-ft/yr. By 2040, this firm yield value is predicted to reach about 69,300 ac-ft/yr. The 2002 yield was reported by Springs Utilities staff, and the 2040 yield value is as reported in the Springs Utilities 1996 Water Resources Plan.

Turquoise Reservoir Colorado Fuel and Iron Corporation Decree

Turquoise Reservoir is an impoundment on Lake Fork Creek, a tributary to the Arkansas River. Springs Utilities purchased the Sugarloaf Decree water rights and 17,416 acre-feet of storage space in the reservoir from CF&I. Springs Utilities uses the reservoir to regulate Homestake yield and to store water that is part of the Springs Utilities' Arkansas River Exchange Program. Given the use of this facility for yield management and other water supply issues, the firm yield from this system is only about 100 ac-ft/yr, as reported in the Springs Utilities 1996 Water Resources Plan. Due to the small yield of this source, coupled with the conveyance capacity limitations in the Homestake System, this yield is not generally included in official tallies of the firm yield available to Springs Utilities.

Colorado Canal System

The Colorado Canal System is an irrigation system on the Arkansas River east of Pueblo. It is formed of three mutual irrigation companies partially owned by Springs Utilities (Springs

Utilities owns 57.0, 51.9, and 77.2 percent of the Colorado Canal Company, the Lake Meredith Reservoir Company, and the Lake Henry Reservoir Company, respectively). The yield from this source can only be used by Springs Utilities by exchange upstream at their existing or proposed diversions. The firm yield from the Colorado Canal System is 13,700 ac-ft/yr, as reported in the Springs Utilities 1996 Water Resources Plan.

Groundwater

Springs Utilities owns and operates several wells near Fountain Creek, downstream of Colorado Springs. The wells supply the Nixon Power Plant, Fountain, and ranch irrigation. These supplies are minor and only about 1.4 mgd (1,600 ac-ft/yr). However, Springs Utilities is entitled to approximately 35,000 ac-ft/yr of groundwater from several aquifers in the northern and northeastern parts of the City. These aquifers are considered nonrenewable. Also, only a portion of these groundwater rights are economically feasible to develop. It is estimated that only about 4,000 to 6,000 ac-ft/yr can be reasonably developed. Springs Utilities expects to develop some of these resources to help supplement existing supplies. Springs Utilities considers another 2,800 ac-ft/yr of total groundwater supply to be potentially developable. A total of about 4,000 ac-ft/yr may be developed by the time the Southern Delivery System is operable. The remainder of the potentially developable supply, plus other sources yet to be fully evaluated, may be implemented beyond the current planning horizon, depending on technical feasibility and cost.

Raw Water Conveyance System Limitations

The Springs Utilities 1996 Water Resources Plan included recommendations for improvements to existing raw water conveyance systems and recommendations regarding long-term major regional water supply projects. The 1996 Water Resources Plan concluded that Springs Utilities' firm yield from its various existing supply sources exceeded its ability to convey these flows into the City for treatment and distribution. Accordingly, several improvements to the raw water conveyance systems were considered and recommended for implementation. All of these improvements are scheduled for completion by 2004, and will increase the overall raw water supply conveyance capacity from 90.0 to 104.9 mgd.

As presented in Table 3-2, each of the major raw water supply sources is conveyed to the Springs Utilities' water system service area for treatment and distribution using one of four major raw water conveyance systems. Groundwater is not dependent on a specific conveyance system but is nonetheless available to help meet water demands. These four main conveyance systems include the local systems, the Blue River System, the Homestake (Otero) System, and the FVA System.

Springs Utilities staff recently compiled a breakdown of the capacity expected to be available in these systems for 2004 and beyond. These values are summarized in Table 3-2. Also summarized in Table 3-2 are the total flows assigned to each conveyance system by source (derived from Table 3-1).

TABLE 3-2
Raw Water Conveyance System Capacity (2004 and Beyond)

Conveyance System	Capacity (mgd)	Assigned Flow (mgd)
Local Systems	16.0	21.3
Blue River System	9.0	9.1
Homestake (Otero) System	64.6	80.5
FVA	11.8	12.7
Groundwater	3.5	3.5
Total	104.9	127.8

Review of Table 3-2 shows that a deficit between the conveyance capacity and the available supply remains, even after the feasible system improvements have been made. Studies have shown that further capacity enhancements for the existing conveyance systems are not expected to be cost effective. Therefore, as average-day demands exceed 104.9 mgd, additional raw water supply capacity will be required within the Springs Utilities' water system service area.

Water Demands Relative to New and Existing Water Supplies

Springs Utilities has developed an extensive model that forecasts water demands based on historical use trends, price, economic activity, population growth, weather, and seasonal factors. Springs Utilities uses this model for a variety of purposes including sales and revenue forecasting, and capital planning. The basic input variable to the model is the population projection for the Spring Utilities' water system service area. Population projections were developed according to those presented in the 1996 Water Resources Plan, which were based on projections made by Springs Utilities' electric department in May 1995. To develop these projections, Springs Utilities used information provided by the Demographic Research Institute up to year 2019 and the U.S. Bureau of Economic Analysis after year 2019.

Depending on the intended use for the demand projections, different assumptions can be used as model input. For example, lower demand factors might provide a conservative estimate for sales and revenue projections. Conversely, high-growth factors and their associated higher water use characteristics would be more appropriate for determining when a new capital project should be commercially available and to determine how long it can be expected to meet demands.

Population projections for sizing water supply facilities considered in the 1996 Water Resources Plan were based on a high-growth/-demand scenario that has a 10 to 15 percent probability of being exceeded. This scenario was used to determine that year 2040 average-day demands in Springs Utilities' water system service area would be about 168 mgd and, therefore, a new regional water supply system would need to provide Springs Utilities a firm yield/capacity of 63 mgd. A revised population forecast published by the Pikes Peak Area Council of Governments subsequent to the preparation of the initial forecasts used by Springs Utilities showed higher population growth in the Springs Utilities' water system service area; however, the resulting year 2040 demand projection remained at 63 mgd for a new major water supply system.

After the original and revised demand schedules were developed, Springs Utilities has evaluated a variety of other demand scenarios to aid in refining the timeline for developing the new supply. The alternative demand scenario considered most appropriate by Springs Utilities was the high-growth scenario from the 1996 Water Resources Plan, including the impacts of water restrictions enacted during the 2002 to 2003 drought period and those of Demand Side Management (DSM).

Compulsory water restrictions imposed on customers during 2002 and 2003 were a temporary response to mitigate the effects of the limited water supply during the recent record-setting drought. These restrictions were generally effective in reducing overall demand. However, City management has a goal of protecting their customers from long-term compulsory restrictions on water service. Accordingly, demand projections that include reductions caused by compulsory water use restrictions are only used to illustrate the potential ramifications of inadequate water supply. Also, as water restrictions are lifted, there is typically a lag period before per capita water use returns to prerestriction levels. Given that the restrictions have not been fully lifted, it is expected that this lag in demand might provide a buffer in demand growth over the next few years as the new water supplies are put on line.

The DSM includes a series of water conservation measures and incentives designed to provide permanent reductions in demand. The DSM measures were described in detail in the 1996 Water Resources Plan. These measures were divided into three categories (minimum, moderate, and maximum) based on their expected cost effectiveness. Measures aimed at managing irrigation demands generally were the most cost effective because outdoor water use accounts for about 40 to 45 percent of Springs Utilities' total water use.

The demand projections show that the current conveyance capacity of the Springs Utilities' water supply/delivery systems will be exceeded in 2007 under the high-growth scenario; by 2009 if the DSM impacts are considered along with the high-growth scenario; and in 2013 if the impacts of compulsory restrictions are imposed on the high-growth scenario. Given the potential lag in demand development after restrictions are lifted, plus the expected demand reductions from DSM, Springs Utilities determined that the new major water delivery system should be commercially available by spring 2009. This scenario assumes that population and demand will follow the high-growth scenario, and implementation of DSM measures will have an effect in reducing the overall demand. If either, or both, of these predictions are low, then short-term water use restrictions can be used to maintain demands until the new system is available in 2009. Conversely, if this demand forecast is conservative, the new system might be ready a few years ahead of the demand. This advanced implementation is consistent with the principles adopted in the 1996 Water Resources Plan, which suggested that new major water delivery projects should be planned to be available as much as 5 years in advance of the predicted need.

The total system capacity of 63 mgd to meet year 2040 high-growth demands is expected to be slightly conservative when the impact of DSM is considered. However, DSM is only expected to extend the capacity coverage for a few years. Therefore, the ultimate capacity of the new system was established using the high-growth scenario, and DSM was simply used as an allowance to help extend the period before additional supplies might be needed. Thus, a firm delivery rate of 63 mgd sustained on an average basis throughout the year was established for developing the system design flows.

SECTION 4.0

Implementation of a New Water Delivery System

The actions and analyses supporting the selection of the Southern Delivery System as the most cost-effective long-term major water delivery project proposed are summarized in this section. Also, information specific to the configuration, cost, and implementation schedule for the Southern Delivery System are presented.

Selection of a New Major Water System

A variety of studies have been conducted since the late 1980s regarding alternatives available to Springs Utilities for increasing water supplies to the service area. Prior to the 1996 Water Resources Plan, several studies were conducted that identified a variety of alternatives to increase the area's water supply/delivery capacity. An early version of the Southern Delivery System was included as one of these initial alternatives. Also, several improvements to existing facilities were under consideration for increasing deliveries via the existing systems. The 1996 Water Resources Plan divided the evaluation and implementation recommendations into two categories: projects to maximize existing resources, and projects to develop a major new water delivery system.

Projects for maximizing existing resources are not described in this Engineering Report. However, the cost-effective projects for maximizing existing resources have been implemented, and the impact of these projects was described in Section 3.0.

The 1996 Water Resources Plan included seven new major water delivery system alternatives. These alternatives included three projects in the mountains west of Colorado Springs, two southern projects, and two wastewater reclamation projects. The result of the analysis was a recommendation to proceed with the implementation of one of the southern alternatives. The recommended alternative was the Southern Delivery System with peaking storage at Jimmy Camp Creek Reservoir augmented by Pueblo Reservoir storage and exchange (reusable wastewater) storage at Williams Creek Reservoir. The recommended project was not significantly higher cost than other alternatives, but was superior in noncost evaluations, making it the best overall project.

In November 2001, the configuration and details of the Southern Delivery System were re-evaluated to incorporate information developed after the 1996 Water Resources Plan, to include regional partners (Fountain and Security) in the system, and to update project costs (Black and Veatch, 2001).

In May 2002, a supplemental alternatives analysis was conducted to verify the cost effectiveness of the recommended system (Black and Veatch, 2002). The 2002 alternatives analysis compared five alternatives and one subalternative. These alternatives were all variations of the southern alternative and the wastewater reclamation alternatives from the 1996 Water Resources Plan. The Southern Delivery System was again selected as the preferred alternative because of its comparatively low cost and superior noncost characteristics.

After the May 2002 alternatives analysis, Springs Utilities began active implementation of the Southern Delivery System. More detailed assessments of the project relative to actual site conditions and more detailed hydraulic analyses were conducted. These efforts were used to further refine the estimated project costs and configuration. Because higher estimated costs resulted from these analyses, CH2M HILL, in association with Springs Utilities, performed a final verification of the alternatives analysis in early 2003. This analysis was conducted to test the cost effectiveness of the project a final time before full-scale implementation was initiated. This analysis again resulted in the conclusion that the Southern Delivery System was the most cost-effective long-term alternative.

After more than 15 years of analysis, the Southern Delivery System has been established as the most cost-effective major water delivery project available to meet Springs Utilities' project water supply demands over the next 30 to 40 years. Therefore, CH2M HILL concludes that the estimated cost of providing the required water supply using the Southern Delivery System is reasonable in comparison with projected costs for furnishing this same supply from other available sources.

Description of the Overall Southern Delivery System

The Southern Delivery System is a comprehensive regional water project that will convey water from the Arkansas River at Pueblo, Colorado, to a new WTP in the southeastern portion of Colorado Springs. The Arkansas River water will be treated to potable quality and distributed to end users in the service areas of Springs Utilities, Fountain, and Security. The Southern Delivery System has several major component projects that are needed at various times between initial commercial availability in 2009 and ultimate buildout in the 2030 time frame.

These major component projects include the following:

- **Phase 1 of the Southern Delivery System.** Facilities include connections to the Pueblo Reservoir/outlet works piping systems, the raw water pump stations, and pipelines between the Arkansas River and the new Southern Delivery System WTP; the first 50-mgd phase of the Southern Delivery System WTP; and finished water conveyance systems to deliver treated water into the water distribution systems of Springs Utilities, Fountain, and Security. This portion of the project is currently in the planning and permitting stage and is expected to be commercially available by 2009.
- **Preferred Storage Options Plan.** This plan has two components: re-operation and enlargement. The first plan component is a revised agreement among Reclamation, the Southeastern Colorado Water Conservancy District, and a variety of water entities with storage contracts in Pueblo Reservoir, which will allow the storage of non-Fryingpan-Arkansas Project water in Pueblo Reservoir. Springs Utilities has a 66 percent share of the re-operations storage volume, or 25,000 acre-feet. This arrangement was formalized in a 2003 Memorandum of Understanding between the Southeastern Colorado Water Conservancy District, Springs Utilities, and other participants. Springs Utilities' share of the cost for implementing the re-operation procedures is expected to be about \$7,400,000. This re-operation of Pueblo Reservoir storage space is expected to facilitate Springs Utilities' ability to exchange flows in the Arkansas River and enhance the yield of the Southern Delivery System. Re-operation agreements will require congressional

action. Although the re-operation program is currently being implemented, the time frame for Congressional approval is unclear. All institutional actions are expected to be completed before the Southern Delivery System is operational in 2009.

The second plan component involves enlarging Pueblo Reservoir by 75,000 acre-feet. In addition to Springs Utilities, several other water entities have signed up for some portion of the enlarged storage. Together, these entities have signed up for 69,625 acre-feet and have entered into a Memorandum of Understanding with the Southeastern Colorado Water Conservancy District to cooperatively share in the enlargement cost. Springs Utilities has signed up for 30,000 acre-feet of this enlarged storage volume for a project cost contribution equaling about \$53,000,000 of the total enlargement project cost. Currently, the enlargement project is scheduled for completion no earlier than 2012. As with re-operations, congressional action is required for approval of this plan.

- **Jimmy Camp Creek Storage Reservoir.** This project involves the addition of a storage reservoir at the Southern Delivery System WTP site to facilitate the use of exchange flows and high river flows to meet seasonal and peak distribution system demands. This project is estimated to have a total project cost of about \$73,625,000 and is expected to be operational no earlier than 2012.
- **Southern Delivery System WTP Expansions.** The Southern Delivery System WTP is planned to undergo three expansion phases to provide an ultimate treatment capacity of 180 mgd. Beginning with the Phase 1 capacity of 50 mgd, these expansions are currently planned to add 50-mgd capacity by 2017, an additional 50 mgd by 2025, and 30 mgd more in 2033. However, actual demand patterns will be monitored to determine the real timing of these expansion projects. Detailed cost estimates for the treatment system expansions have not been prepared, but each 50-mgd expansion can be expected to cost about 85 percent of the initial 50-mgd phase (assuming a third quarter 2003 dollar basis; refer to Table 4-2). The 30-mgd expansion can be expected to cost about 50 percent of the initial 50-mgd phase.
- **Williams Creek Exchange Reservoir.** As additional reusable wastewater discharges are made to Fountain Creek in the future, storage will be required to manage the release of these flows with diversions farther up in the Arkansas River watershed. The Williams Creek Exchange Reservoir is planned for this purpose and will allow the Southern Delivery System to achieve its ultimate design diversion rate on an annual average day basis (refer to Section 4.3 for the relationship to Southern Delivery System design flow). This project is expected to be completed no earlier than 2025. No detailed costs have been developed for the Williams Creek Exchange Reservoir project because the exact size has not been selected. However, using information from the Southern Delivery System Cost Estimating Guide, a preliminary value of \$52,500,000 can be established for the total project cost. This cost will need to be refined as more detailed information about the Williams Creek Exchange Reservoir is known.

This Engineering Report is primarily focused on Phase 1 of the Southern Delivery System as described above. This project (Phase 1) is the Capital Addition for which the initial costs will be funded from the 2003B Bonds. Additional Phase 1 and other Southern Delivery System projects will be financed by other bond sales or other funding sources. The costs for re-operation and enlarging Pueblo Reservoir and constructing Jimmy Camp Creek Reservoir

were included in overall Springs Utilities' cash-flow projections for the financial analyses described in this Engineering Report. The projected construction costs for these Southern Delivery System component projects fall within the current water system CIP time frame and within the period of debt coverage limitations required for this bond sale financial analysis. Therefore, acknowledging these costs is required for a complete analysis. The costs for future Southern Delivery System WTP expansions and the Williams Creek Exchange Reservoir are outside the current water system CIP time frame. Accordingly, those costs were not included in the projected cash flow because they would not influence the debt coverage analysis.

Detailed Description of the Southern Delivery System Capital Addition

As introduced above, Phase 1 of the Southern Delivery System is the Capital Addition that is the subject of the sale of 2003B Bonds. This section presents a detailed description of the various components included in Phase 1 of the Southern Delivery System.

The design flow for the Southern Delivery System is composed of the flows for Springs Utilities, Fountain, and Security, plus a 5 percent allowance for down time. As established above, Springs Utilities' designated flow is 63 mgd. Fountain established a flow need of 10 mgd in the 2002 Water System Master Plan (Black and Veatch, 2002). Security has a base flow need of 1.3 mgd. The resulting Southern Delivery System design flow is 78 mgd, as illustrated in Table 4-1.

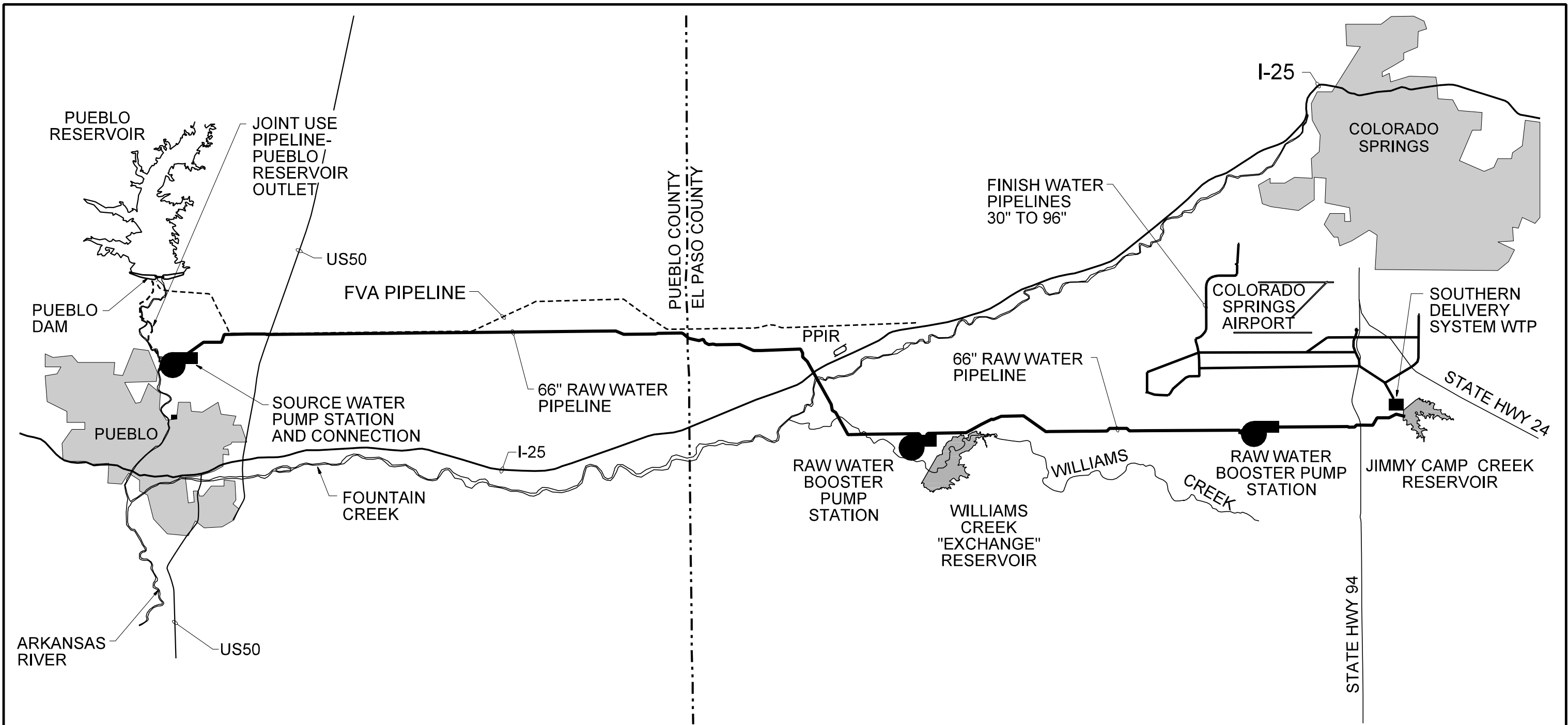
TABLE 4-1
Southern Delivery System Design Flow Summary

User	Designated Flow (mgd)
Springs Utilities	63.0
Fountain	10.0
Security	1.3
5 Percent Downtime Allowance	3.7
Total Southern Delivery System Design Flow	78.0




Figure 4-1 shows a general plan of the Southern Delivery System and its component parts. Phase 1 of the Southern Delivery System includes five major project facility groups, plus common elements related to environmental mitigation and other appurtenant features that are not currently defined in detail. The five facility groups encompass all of the main component parts of the system and include the following:

- Connection Facilities.** Several connection points for the source of project flows are being considered. These options include systems that connect to or through the Pueblo Reservoir Outlet Works. Any system that connects to the Pueblo Reservoir facilities will require physical connection and modifications to the outlet valving at the dam. The addition of Southern Delivery System flows will exceed the velocity rating of the existing valves at full flows. Therefore, new valves and potential modifications to the linings of the outlet piping will be required.

- **Raw Water Pumping Facilities.** Three raw water pump stations are planned for the Southern Delivery System. One pump station will be immediately adjacent to the source water connection point. The remaining two stations will be booster stations located at intermediate points along the pipeline between the water source and the Southern Delivery System WTP. The pump stations will be rated for a 78-mgd design flow using seven pumps (six duty and one standby). Horizontal split-case pumps will be used at the two booster pump stations. Either horizontal split-case or vertical turbine pumps will be used at the source water pump station, depending on the final source connection configuration. Total installed horsepower (hp) for each station is expected to be 21,000 (3,000 hp per pump-motor unit) for the source pump station and 14,000 (2,000 hp per pump-motor unit) for the booster pump stations. The two intermediate booster pump stations will each include a 2-million-gallon forebay to help equalize flows with the upstream (supply) pump station. Surge protection will be accomplished using hydropneumatic surge chambers located at each station. Site development aspects of each site include access roads, an accessible pump station building designed to architecturally blend with the surrounding area, site security fencing, and other appurtenant features. Electrical power will be brought to each site to power the pumps.
- **Raw Water Pipelines.** A 66-inch-diameter raw water pipeline will be used to connect the water source and pump stations to the Southern Delivery System WTP. Mortar-lined and tape-wrapped welded-steel pipe materials similar to other major Springs Utilities pipelines are planned for this system. An extensive pipeline route analysis will be conducted to determine the final alignment. Currently, the pipeline is expected to be about 44 to 45 miles long, depending on the final alignment selected. The pipeline will be equipped with customary appurtenant facilities including air release and vacuum control assemblies, pipeline draining assemblies (blowoffs), isolation valves, and corrosion protection systems. The pipeline will also include a series of special crossings for construction beneath major roadways, railroads, creeks, and other critical locations. Easements will be obtained on all private properties crossed by the pipeline.
- **Southern Delivery System WTP.** The Southern Delivery System WTP will include softening, ozonation, and granular-activated carbon filtration to treat Arkansas River raw water to a quality acceptable to Springs Utilities, Fountain, and Security customers. The initial plant will have a capacity of 50 mgd, expandable to 180 mgd in three additional increments.
- **Finished Water Conveyance Facilities.** Finished water facilities will include a series of pipelines to convey the treated water from the Southern Delivery System WTP into the distribution systems of the three participating water entities. About 16 miles of pipelines ranging from 96 to 30 inches in diameter are currently envisioned. Pipelines will be similar to those provided for raw water deliveries, except a variety of sizes are needed and all finished water pipelines will be designed and constructed with the additional provisions required for potable water systems. Gravity flow is planned from the clearwell of the Southern Delivery System WTP. Although pumping is expected to be required for some Springs Utilities deliveries, this feature is currently assumed to be included in the distribution system improvements Springs Utilities will make to accommodate the water in their system. This new water source was envisioned in the Springs Utilities 1999 Water Distribution Master Plan (Black and Veatch, 1999), and



LEGEND

-  WATER TREATMENT PLANT
-  PUMP STATION
-  PIPELINE

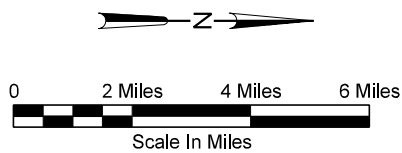


FIGURE 4-1
GENERAL PLAN
SOUTHERN DELIVERY SYSTEM

distribution system improvements needed to accommodate the initial flows were included in the recommended projects, and subsequently programmed into the water system CIP.

Estimated Costs for the Southern Delivery System Capital Addition

A cost estimate was developed in accordance with the Southern Delivery System Cost Estimating Guide (CH2M HILL, 2003). The Cost Estimating Guide includes various methodologies for estimating the cost of component parts of the system, plus a uniform method for determining the total project costs including applicable allowances for the various activities required to implement a project of this magnitude (variable and fixed "Other Costs"). The Cost Estimating Guide was developed using historical costs and proven cost estimating methodologies specific to each cost category. The methodologies used in the Cost Estimating Guide have been used on other similar large projects and have resulted in dependable, slightly conservative cost estimates.

Table 4-2 presents the estimated total project cost for the Southern Delivery System. These costs were developed using the most up-to-date project information. Costs are presented in third quarter 2002 dollars and have not been escalated (they are consistent with an *Engineering News-Record* 20 Cities Construction Cost Index of 6600).

TABLE 4-2
Southern Delivery System Estimated Total Project Costs

Project Component	Cost (\$)
Raw Water Pipelines/Connections	113,265,000
Raw Water Pump Stations	66,850,000
Southern Delivery System WTP (50 mgd)	70,867,000
Finished Water Conveyance	31,282,000
Power System Allowance	1,000,000
System Component Cost Subtotal	283,264,000
Project Contingency (30%)	84,979,000
Estimated Construction Cost	368,243,000
Land Cost	15,101,000
Variable Other Costs (25%)	92,061,000
Fixed Other Costs	15,000,000
Total Project Cost (all Partners)	490,404,000
Total Springs Utilities Cost Share	405,954,000

Note: Refer to Table 2-1 for a detailed breakdown of the cost sharing among project partners.

The estimate is a Class 5 estimate typically used for planning purposes as defined by the Association for the Advancement of Cost Engineering AACE International. This estimate is prepared based on limited information, where little more than proposed facility types, sizes,

locations, and capacities are known. Examples of estimating methods used are cost/capacity curves and factors, scale-up factors, and parametric and modeling techniques.

Any conclusions on project financial or economic feasibility or funding requirements developed using this estimate are prepared for guidance in project evaluation and implementation and use the information available at the time of the estimate. The final costs of the project and resulting feasibility will depend on actual labor and material costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. Therefore, the final project costs will vary from the estimate developed using the information in this document. Because of these factors, project feasibility, benefit/cost ratios, risks, and funding needs must be carefully reviewed, prior to making specific financial decisions or establishing project budgets, to help ensure proper project evaluation and adequate funding.

The costs presented in Table 4-2, plus costs estimated for the Jimmy Camp Creek Reservoir and Pueblo Reservoir Enlargement were distributed on a yearly cash-flow basis for financial analysis and projected debt coverage calculations. Costs were distributed in conformance with the implementation schedule described below. Costs were prorated to Springs Utilities, Fountain, and Security using the percent participation level shown in the August 2003 Intergovernmental Agreement (refer to Table 2-1). Although Jimmy Camp Creek Reservoir and Pueblo Reservoir Enlargement costs are not proposed for funding as part of Phase 1, they were included in the cash flows because they were not otherwise programmed in the water system 10-year CIP, and disclosure and financial analyses require that these values be included. It was assumed that Pueblo Reservoir Enlargement re-operation costs were included in the water system CIP because this is an ongoing effort.

Operations and maintenance costs were also estimated for the Southern Delivery System for 2009 through 2012 for use in the financial analyses. Fixed operations and maintenance costs were prorated to Springs Utilities, Fountain, and Security using the percent participation level shown in the August 2003 Intergovernmental Agreement (refer to Table 2-1). Variable operations costs were assigned by projected flow rate in each year to the respective system partners.

Southern Delivery System Implementation Schedule

Springs Utilities has developed a preliminary implementation schedule in support of having the initial Southern Delivery System project commercially available by spring 2009. This schedule is consistent with meeting projected demands and includes less than 1 year of schedule contingency available to absorb implementation changes/delays.

The schedule includes completion of project planning efforts by about mid-2004, and the start of design activities shortly thereafter.

One key early project activity is to complete and certify the project-level environmental impact statement (EIS) required for National Environmental Policy Act (NEPA) compliance. NEPA compliance is required because the project is dependent on water from Pueblo Reservoir, which is a federal facility, and conveyance through the Pueblo Dam outlet works will be a federal action. The NEPA process was initiated in September 2003 and is expected to extend until mid-2005. Although the current schedule has ample time for EIS preparation

under most situations, project delays involving the EIS could occur. Only costs for environmental, planning, and design-related work will be committed prior to completion of the NEPA process. No primary facility construction funds (design support construction such as pilot plants are excluded from this limitation) will be expended by Springs Utilities until the EIS is completed and a Record of Decision is filed. Accordingly, it is Springs Utilities' intent to obtain all critical permissions for the work prior to spending primary facility construction dollars. This intent has the effect of reducing the cost risk associated with regulatory aspects of project implementation.

Other schedule risks are also currently evident. These include project opposition by the City of Pueblo, and permitting in accordance with 1041 Regulations in the County of Pueblo. Although each of these issues poses a potentially serious schedule risk, Springs Utilities is actively working to negotiate agreements or otherwise acting to resolve each associated issue. Also, ample time appears to be available to achieve the resolution of these issues. Therefore, CH2M HILL has assumed that none of these issues will negatively impact the implementation schedule.

Construction documents are currently envisioned for completion by about mid-2006 for all facilities, and a staggered construction schedule is planned to allow the pipelines, pump stations, and WTP to be completed in succession. A 3-month startup period is planned for both the pump stations and WTP, and commercial availability is scheduled for the beginning of the second quarter 2009.

Financial Analysis

The City Bond Ordinance requires that Springs Utilities maintain an “average debt coverage ratio of at least 130 percent of net pledged revenues.” This section presents an overview of historical operations and evaluates projected financial performance of Springs Utilities for the study period 2004 through 2012. This Engineering Report makes references to data and statements presented in the main body of the Official Statement.

Historical Performance

Historical Operating Performance

Table 5-1 presents the combined summary of operations of Springs Utilities for the past 5 years (1998 through 2002). System operating revenues increased from \$381.0 to \$554.7 million in FY 2001, before dropping to \$485.0 million in FY 2002. This drop in revenues reflects a reduction in the electric and gas cost adjustment factors, and thereby a reduction in the electric and gas rates and revenues. The average annual rate of growth in operating revenues during the 5-year period ending December 31, 2002, was 9.8 percent. Total operating expenses (operations and maintenance), including depreciation, followed a similar pattern as operating revenues, increasing from \$345.5 to \$500.2 million in 2001 before dropping to \$418.7 million in 2002 due to lower power and gas costs that year. Operating income fluctuated from a low of \$25.3 million in FY 2000 to a high of \$66.3 million in FY 2002.

After adding nonoperating revenues and expenses, income before contributions and transfers fluctuated significantly, ranging from a loss of \$(8.3) million in FY 2000, to a high of \$25.7 million in FY 2002. Earnings after payments in lieu of taxes and receipts of contributions in aid of construction fell from \$19.0 million in 1998 to a low of \$1.9 million in 2002, before rising to over \$40.0 million in FY 2001 and 2002. Contributions-in-aid contributed \$47.7 and \$41.4 million in FY 2001 and 2002, respectively toward these earnings before extraordinary items. During this historical period, payments in lieu of taxes to the City rose steadily from \$19.0 million in 1998 to \$27.0 million in 2002.

Historical sales performance of the individual electric, water, wastewater, street lighting, and nonregulated lines of business are discussed in the Official Statement.

Historical Debt and Fixed Cost Coverage

The City Bond Ordinances require that minimum debt service coverage for the issuance of additional debt is 1.3 times average annual debt service. Average annual debt service is defined in detail in the body of the Official Statement. Table 5-2 shows debt service coverage ratios from 1998 through 2002. Between 1998 and 2002, the additional parity debt coverage ratio ranged from 1.93 to 2.91 based on average debt service levels, as specified in the City's Parity Bond Ordinances. The annual debt service coverage ratio ranged from 2.04 to 3.14.

TABLE 5-1

Springs Utilities' Statement of Revenues, Expenses, and Changes in Fund Net Assets

Item	Summary of Operations Year Ended December 31, 2002				
	1998	1999	2000	2001	2002
Operating revenues	\$381,054,362	\$392,900,839	\$451,723,472	\$554,739,651	\$484,976,910
Operating and other expenses:					
Operating expenses:					
Production and treatment	\$63,162,886	\$55,815,465	\$67,784,151	\$70,393,234	\$69,665,956
Purchased power, gas and water for resale	91,499,354	112,767,562	165,056,558	228,247,059	127,869,456
Transmission and distribution	31,903,610	30,505,824	29,165,490	22,754,244	19,335,374
Maintenance	29,859,201	31,886,627	27,179,010	31,685,575	42,157,271
Administration and general	50,307,659	54,639,907	51,232,881	64,438,460	76,185,265
Customer accounting and collection	16,863,927	17,668,532	19,768,284	14,692,965	11,320,746
Franchise taxes	154,685	156,494	170,994	168,350	213,229
Depreciation	61,706,874	58,128,712	66,046,768	67,887,927	71,906,809
Total operating expenses	\$345,458,196	\$361,569,123	\$426,404,136	\$500,267,814	\$418,654,106
Operating income	\$35,596,166	\$31,331,716	\$25,319,336	\$54,471,837	\$66,322,804
Nonoperating revenue and (expense):					
Investment income (loss)	\$10,854,249	\$3,697,864	\$10,428,341	\$10,328,128	\$(1,715,104)
Other revenue	888,544	3,683,410	1,994,328	3,155,694	4,173,581
Other expense	(1,567,263)	(2,438,981)	(1,184,589)	(2,343,879)	(1,266,768)
Interest expense	(36,770,896)	(41,506,121)	(44,859,979)	(41,092,247)	(41,755,184)
Total nonoperating revenue and (expense)	\$(26,595,366)	\$(36,563,828)	\$(33,621,899)	\$(29,952,304)	\$(40,563,475)
Income (loss) before contributions and transfers	\$9,000,800	\$(5,232,112)	\$(8,302,563)	\$24,519,533	\$25,759,329
Contributions in aid of construction	29,047,490	32,362,676	31,453,840	47,752,411	41,370,380
Payments to City in lieu of taxes	(19,005,312)	(19,794,460)	(21,235,037)	(23,056,454)	(26,969,809)
Earnings (loss) before extraordinary items	\$19,042,978	\$7,336,104	\$1,916,240	\$49,215,490	\$40,159,900
Transition adjustment for derivative instruments ^a	-	-	-	22,285,395	-
Changes in net assets	\$19,042,978	\$7,336,104	\$1,916,240	\$71,500,885	\$40,159,900
Total net assets, January 1	\$962,713,001	\$981,755,979	\$989,092,083	\$991,008,323	\$1,062,509,208
Total net assets, December 31	\$981,755,979	\$989,092,083	\$991,008,323	\$1,062,509,208	\$1,102,669,108

^aCumulative effect of an accounting change for adoption of Financial Accounting Standards Board Statement No. 133, "Accounting for Derivative Investments and Hedging Activities."

Note:

For all periods presented, the format of the Summary of Operations has been changed to conform to Governmental Accounting Standards Board Statement No. 34 – "Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments." Additionally, all periods presented have been restated, as applicable, for adoption during the periods presented of various pronouncements of the Governmental Accounting Standards Board that require restatement for purposes of comparability of financial information.

TABLE 5-2
Springs Utilities' Debt Service Coverage Calculation

	1998	1999	2000	2001	2002
Operating Revenue	\$381,054,362	\$392,900,839	\$451,723,472	\$554,739,651	\$484,976,910
Operating Expense ^a	(\$345,458,196)	(\$361,569,123)	(\$426,404,136)	(\$500,267,814)	(\$418,838,575)
Adjustment for Certain Derivative Products ^b	--	--	--	\$36,573,252	(\$13,807,067)
Depreciation ^c	\$61,706,874	\$58,128,712	\$66,046,768	\$67,887,927	\$71,906,808
Operating Revenues Available for Debt Service	\$97,303,040	\$89,460,428	\$91,366,104	\$158,933,016	\$124,238,076
Interest Earnings (excluding interest on bonds)	\$7,294,790	\$6,267,284	\$7,147,185	\$6,079,088	\$4,854,266
Development Fees	\$19,518,225	\$20,480,979	\$19,229,406	\$21,874,217	\$23,539,612
Net Pledged Revenues	\$124,116,055	\$116,208,691	\$117,742,695	\$186,886,321	\$152,631,954
Average Annual Debt Service ^d	\$52,916,465	\$56,788,496	\$60,902,111	\$64,220,873	\$62,060,661
Additional Bonds Coverage Ratio	2.35	2.05	1.93	2.91	2.46
Fiscal Year Debt Service ^e	\$48,866,831	\$54,723,542	\$57,616,059	\$59,488,971	\$57,122,855
Rate Coverage Ratio	2.54	2.12	2.04	3.14	2.67

^aCommunity Focus Fund revenue was included in Operating Revenue; however, some associated expenses were recorded in Nonoperating Expense. To properly match revenues with expenses for debt service coverage calculation, Operating Expense has been increased by \$184,469 in 2002.

^bDebt service coverage calculation excludes the effect of entries made pursuant to Financial Accounting Standards Board Statement No. 133 relating to derivative instruments (primarily commodity swaps). These figures represent non-cash operating expenses similar to depreciation and, accordingly, the amount of these expenses has been added back to operating income for purposes of calculating debt service coverage.

^cAs restated. In 1999, Springs Utilities restated its prior years' depreciation expense to incorporate the year of fixed asset acquisition under Springs Utilities' composite method of computing depreciation. The Springs Utilities' recorded the disposal of certain plant assets that were disposed of in prior years and not removed from its balance sheet.

^dThese figures include Average Annual Principal and Interest Requirements of First Lien Bonds and Subordinate Lien Bonds.

^eThese figures represent the principal and interest due on outstanding First Lien Bonds and Subordinate Lien Bonds for the year shown.

Financial Assumptions Used

The following assumptions were used in the development of the financial analysis:

- The period from 2003 through 2012, which includes the first 3 years (2010 through 2012) of Southern Delivery System operation, is a long forecast horizon. All forecasts carry inherent risk with regard to eventual accuracy, and these risks increase with the forecast time horizon of the projections.
- CH2M HILL has relied on the audited annual reports of Springs Utilities to provide an indication of past financial performance. In addition, Springs Utilities has provided internal forecasts generated for both its combined and service-level operations, including the water system, wastewater system, electric utility, gas utility, streetlighting, and nonregulated operations. As is usual in such assignments with large utilities, CH2M HILL has not performed a comprehensive audit or examination of Springs Utilities at either the combined or service level, nor have we examined or audited the operations of its majority-owned component units and joint ventures.
- CH2M HILL has relied on Springs Utilities' combined and service-level financial and capital spending forecasts through the year 2012. Springs Utilities appears to have an established, well organized, and thorough financial and strategic planning effort. Staff experienced with these tasks prepared these forecasts. Springs Utilities employs a widely accepted methodology of using independent, well known external economic and demographic forecasting consultants to provide certain inputs for Springs Utilities' national and regional economic and demographic forecasts. These inputs aid in the construction of sales forecasts. Springs Utilities' forecast assumes that operating and capital costs escalate at an annual 2.6 percent rate throughout the forecast period to account for inflation.
- CH2M HILL has reviewed the internal forecasts provided by Springs Utilities for the combined operation and each of its primary services: water, wastewater, electric, gas, street lights, and nonregulated sales. The following are key assumptions related to the forecasts prepared by Springs Utilities relative to the conclusions drawn by CH2M HILL regarding this Capital Addition:
 - Rates for regulated utility services are reviewed and approved periodically by the City Council. There are no automatic general rate increases for water, wastewater, electric, or gas services. However, Springs Utilities does have Council authorization to pass through gas cost adjustments in response to changes in gas prices from its suppliers. Springs Utilities also adjusts its charges to electric service and street light customers based on an electric cost adjustment factor, which reflects changes in the average costs of purchased power and unit fuel costs. The gas and electric cost adjustments may be changed as frequently as every 3 months to reflect actual costs of fuel and purchased power. General rate increases must be periodically reviewed and approved by the City Council.
 - Springs Utilities' forecasts anticipate substantial capital spending for System projects other than the Southern Delivery System project. Large amounts are currently planned for expenditure on the wastewater system, the electric utility service, and

gas utility operations during the forecast period from 2004 through 2012. Annual customer rate increases have been assumed. To maintain the debt coverage ratios required by the City Bond Ordinance, these forecast rate increases will be required, under the assumptions of this analysis, to successfully finance these projects and to maintain the long-term financial strength, credit ratings, and viability of Springs Utilities as a whole. These forecast rate increases have not been considered by the City Council.

The City Bond Ordinance requires that Springs Utilities maintain an “average debt coverage ratio of at least 130 percent of net pledged revenues.” The calculation of the “additional bonds” coverage ratio has been interpreted as the annual debt service figure represented by the average of existing annual bond payments and anticipated bond debt service payments over their respective terms.

Fixed Cost Coverage Ratio

The Colorado Springs Utilities Board has established a minimum fixed cost coverage ratio (FCCR) target of 1.6. The FCCR is defined as the ratio produced by dividing annual net revenues and income after payment of annual operations and maintenance expenses (excluding depreciation), excluding annual off-balance sheet debt service and capacity take-or-pay contract obligations by the sum of annual debt service, off-balance sheet debt service, and capacity take-or-pay contract obligations.

The FCCR is calculated by the following formula: (Net pledged revenues + Authority debt service + electric capacity payments) / (debt service + Authority debt service + electric capacity payments.)

Off-balance sheet transactions include take-or-pay contractual obligations associated with the Western Area Power Administration and Front Range Power Company, L.L.C. require Springs Utilities to purchase a specific amount of electric capacity each year. Because these are fixed costs, they are included in the FCCR calculation.

Other off-balance sheet obligations include Springs Utilities pro-rata share of revenue bond and note repayments of the Fountain Valley Authority, Twin Lakes Reservoir and Canal Company, and the Colorado Canal Company. These payments are treated as operating expenses in the Springs Utilities’ income statement. However, the FCCR calculation treats the Springs Utilities’ share of Authority debt payments similar to debt service expense rather than operating expense.

Springs Utilities’ long-term goal is a minimum FCCR of 1.6. Because Springs Utilities has existing and will have future obligations for its investments in other utilities and joint ventures, adherence to the FCCR goal of 1.6 will act as a constraint on its off-balance sheet obligations. Springs Utilities has provided a forecast to 2012 that shows an FCCR that exceeds 1.6 in each forecast year, with an average of 1.77 during the 2004 through 2012 period (see Table 5-11). CH2M HILL has assumed that Springs Utilities will continue to maintain this ratio at 1.6 or higher for the forecast period.

Meter Growth Assumptions

Table 5-3 shows selected meter growth, sales volume, and revenues by utility service line for the years 1999 through 2002. These data from Springs Utilities were extracted from the historical data tables in the main body of the Official Statement. These historical figures can be compared to the customer growth shown in Table 5-4 and revenues shown in Table 5-11.

As of December 31, 2002, Springs Utilities provided service to approximately 189,440 electric meters, 118,473 active metered water accounts, 115,159 active wastewater accounts, and 163,756 gas meters. Street light services were transferred from the City to Springs Utilities on February 1, 2003. Estimates of customer growth are based on projected population growth and historical customer growth patterns. Meter growth projections are established from a detailed analysis of the proposed extension of services to new customers within the service area.

The 2004 through 2012 forecasts for average rates of meter growth, as shown in Table 5-4, for electric, water, wastewater, gas system, and street light accounts are slightly lower than average growth rates during the prior 4-year period from 1999 through 2002, shown in Table 5-3. Projected meter growth averages about 1.8 percent per year for each service. However, these growth rates are higher than the estimated growth of about 1 percent for each utility service between 2002 and 2003. Springs Utilities indicates that they expect a resumption in higher national and regional economic growth, compared to the slow period of 2001 and 2002, to enhance customer growth in the future. The 2004 through 2012 forecasts do not show any significant variation above or below estimated average annual growth rates during the forecast period.

Capital Spending Assumptions

The City's Bond Ordinances require an Engineering Report if a large Capital Addition is planned, such as the Southern Delivery System. However, for the combined Springs Utilities, the Southern Delivery System is one part of a comprehensive, multi-year capital spending program for all utility services. Springs Utilities is currently planning a combined \$3.1 billion capital spending program from 2003 through 2012. For Phase 1 of the Southern Delivery System, total costs of \$490.4 million include Springs Utilities' share of \$406.0 million, which is roughly 83 percent of Southern Delivery System capital spending during the forecast period.

Capital spending plans and priorities are under constant review and revision at Springs Utilities. Table 5-5 shows current projections of major capital spending by utility service lines for the years 2003 through 2012. This table is divided into annual spending by utility service as either normal capital additions, major capital additions, or capacity additions. The Southern Delivery System project is shown in the capacity addition section.

Normal additions are expenditures on assets required to maintain existing operations and service, and they benefit existing customers.

Major additions are expenditures on assets required to extend and enhance the useful life of the system. These projects benefit both existing and future customers in meeting reliability and consumption needs.

TABLE 5-3
Selected Historical Service Statistics

Item	1999	2000	2001	2002	Average Annual Change
Electric System					
Active Electric Meters	175,519	179,596	184,590	189,440	
Growth	2.4%	2.3%	2.8%	2.6%	2.5%
Electric Sales – MWh	3,961,133	4,224,351	4,401,501	4,508,319	
Growth	1.3%	6.6%	4.2%	2.4%	3.6%
Electric Revenues	\$212,098,965	\$237,540,453	\$296,817,411	\$253,096,225	
Growth	2.8%	12.0%	25.0%	-14.7%	6.3%
Water System					
Water Delivered for Sales – CCF	36,091,597	40,574,068	40,172,028	37,218,091	
Growth	-3.3%	12.4%	-1.0%	-7.4%	0.2%
Active Water Meters	108,624	111,544	114,920	118,473	
Growth	3.0%	2.7%	3.0%	3.1%	3.0%
Water Revenues	\$56,166,471	\$63,909,075	\$67,939,743	\$63,868,192	
Growth	-0.6%	13.8%	6.3%	-6.0%	3.4%
Wastewater System					
Wastewater Revenues	\$22,063,404	\$23,639,691	\$25,463,610	\$25,196,179	
Growth	10.2%	7.1%	7.7%	-1.1%	6.0%
Active Wastewater Accounts	105,379	108,293	111,595	115,159	
Growth	3.0%	2.8%	3.0%	3.2%	3.0%
Gas System					
Throughput Volume (Mcf at 14.65 psia)	21,996,172	22,853,590	22,783,151	24,240,357	
Growth	-7.0%	3.9%	-0.3%	6.4%	0.8%
Active Gas Meters	148,114	152,439	158,090	163,756	
Growth	2.9%	2.9%	3.7%	3.6%	3.3%
Gas Revenues	\$95,339,175	\$116,233,157	\$147,891,463	\$131,823,163	
Growth	2.7%	21.9%	27.2%	-10.9%	10.2%
Nonregulated Services					
Net Operating Revenues	7,232,822	10,401,095	16,627,424	10,993,143	
Growth	33.2%	43.8%	59.9%	-33.9%	25.7%
Combined Operating Revenues	\$392,900,837	\$451,723,471	\$554,739,651	\$484,976,902	
Growth	3.1%	15.0%	22.8%	-12.6%	7.1%
Total Meters – Excluding Street Lights	537,636	551,872	569,195	586,828	
	2.8%	2.6%	3.1%	3.1%	2.9%

TABLE 5-4
Springs Utilities' Estimated Meter Growth by Service

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Number of Meters											
Electric	191,107	194,407	197,807	201,307	204,707	208,307	212,007	215,807	219,507	223,307	
Water	119,791	122,351	124,711	127,071	129,331	131,691	133,941	136,191	138,541	140,801	
Wastewater	116,477	118,982	121,287	123,592	125,797	128,102	130,307	132,512	134,817	137,122	
Gas	165,992	170,092	173,892	177,692	181,492	185,392	189,392	193,492	197,592	201,592	
Street Light	172,500	176,100	179,500	182,900	186,100	189,500	192,700	195,900	199,300	202,500	
Meter Growth											
Electric		3,300	3,400	3,500	3,400	3,600	3,700	3,800	3,700	3,800	3,578
Water		2,560	2,360	2,360	2,260	2,360	2,250	2,250	2,350	2,260	2,334
Wastewater		2,505	2,305	2,305	2,205	2,305	2,205	2,205	2,305	2,305	2,294
Gas		4,100	3,800	3,800	3,800	3,900	4,000	4,100	4,100	4,000	3,956
Street Light		3,600	3,400	3,400	3,200	3,400	3,200	3,200	3,400	3,200	3,333
Meter Growth %											
Electric		1.73%	1.75%	1.77%	1.69%	1.76%	1.78%	1.79%	1.71%	1.73%	1.75%
Water		2.14%	1.93%	1.89%	1.78%	1.82%	1.71%	1.68%	1.73%	1.63%	1.81%
Wastewater		2.15%	1.94%	1.90%	1.78%	1.83%	1.72%	1.69%	1.74%	1.71%	1.83%
Gas		2.47%	2.23%	2.19%	2.14%	2.15%	2.16%	2.16%	2.12%	2.02%	2.18%
Street Light		2.09%	1.93%	1.89%	1.75%	1.83%	1.69%	1.66%	1.74%	1.61%	1.80%

TABLE 5-5

Springs Utilities' Forecast Total Capital Expenditures, Including the Southern Delivery System Project^a

	2003 (\$)	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	Total 2003 through 2012 (\$)
Normal Additions											
Electric	19,742,752	20,977,538	17,946,441	18,399,863	17,217,884	19,414,836	17,227,909	18,018,765	21,330,694	17,334,439	187,611,120
Water	10,515,480	8,047,849	8,294,134	8,085,000	8,443,898	7,869,462	8,866,869	8,370,303	9,176,145	7,739,942	85,409,080
Wastewater	5,001,066	3,873,034	4,344,763	4,126,318	4,231,978	4,312,968	4,597,814	4,836,410	5,160,300	5,240,962	45,725,612
Gas	5,304,658	5,600,807	5,582,676	5,777,570	5,485,365	5,608,205	5,690,934	5,730,132	6,164,385	5,779,716	56,724,450
Street Light	245,744	134,773	138,668	110,109	93,499	82,006	86,300	92,614	96,261	92,801	1,172,774
Nonregulated	490,463	139,166	128,912	144,106	141,917	144,210	146,873	149,643	152,430	155,150	1,792,870
Total Normal Additions	41,300,162	38,773,167	36,435,593	36,642,966	35,614,540	37,431,686	36,616,699	37,197,866	42,080,215	36,343,011	378,435,906
Major Capital											
Electric	37,367,959	57,312,215	58,823,874	54,129,903	62,177,669	60,155,826	63,968,482	68,347,088	63,684,576	54,807,570	580,775,161
Water	72,752,689	78,823,729	85,134,654	75,631,797	39,352,420	28,474,372	30,052,369	30,506,047	31,962,759	24,221,324	496,912,161
Wastewater	23,719,942	30,055,017	36,633,306	63,025,758	73,145,388	64,476,985	20,707,128	21,332,178	25,707,127	44,783,321	403,586,150
Gas	8,650,665	12,208,682	13,561,969	11,979,094	12,352,729	14,406,973	12,827,197	10,662,211	12,504,954	11,658,126	120,812,600
Street Light	9,530,661	8,937,589	8,742,500	9,143,664	9,255,797	2,465,121	2,569,012	2,729,406	2,823,146	2,705,421	58,902,318
Nonregulated	7,084,532	958,058	1,351,262	317,208	319,035	1,120,834	326,364	333,095	342,055	343,693	12,496,135
Total Major Capital	159,106,448	188,295,290	204,247,566	214,227,424	196,603,039	171,100,110	130,450,553	133,910,025	137,024,617	138,519,455	1,673,484,526
Capacity Additions											
Electric	2,900,000	24,300,000	48,236,100	126,395,003	54,049,663	6,656,540	3,415,804	1,168,546	1,199,279	36,924,607	305,245,543
Southern Delivery System Initial Projects (Water) ^{b,c}	45,000,000	29,000,231	22,008,714	97,089,415	182,490,840	128,823,202	1,634,402	-	-	-	506,046,805
Southern Delivery System Future Projects (Water)	-	-	-	2,784,628	11,431,457	9,834,263	11,568,476	34,406,681	35,311,577	36,240,271	141,577,354
Wastewater	15,300,000	24,200,000	21,449,670	-	-	-	2,732,643	13,438,284	31,421,115	18,462,304	127,004,016
Gas	-	-	-	-	-	-	-	-	599,640	9,231,152	9,830,791
Street Light	-	-	-	-	-	-	-	-	-	-	-
Nonregulated	-	-	-	-	-	-	-	-	-	-	-
Total Capacity Additions	63,200,000	77,500,231	91,694,484	226,269,046	247,971,961	145,314,005	19,351,325	49,013,512	68,531,611	100,858,334	1,089,704,509

TABLE 5-5

Springs Utilities' Forecast Total Capital Expenditures, Including the Southern Delivery System Project^a

	2003 (\$)	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	Total 2003 through 2012 (\$)
Total											
Electric	60,010,711	102,589,753	125,006,414	198,924,769	133,445,216	86,227,202	84,612,194	87,534,399	86,214,549	109,066,617	1,073,631,824
Water (non- Southern Delivery System)	83,268,169	86,871,578	93,428,789	83,716,797	47,796,318	36,343,834	38,919,238	38,876,350	41,138,903	31,961,266	582,321,241
Southern Delivery System Initial Projects (Water)	45,000,000	29,000,231	22,008,714	97,089,415	182,490,840	128,823,202	1,634,402	-	-	-	506,046,805
Southern Delivery System Future Projects (Water)	-	-	-	2,784,628	11,431,457	9,834,263	11,568,476	34,406,681	35,311,577	36,240,271	141,577,354
Wastewater	44,021,008	58,128,051	62,427,739	67,152,076	77,377,366	68,789,953	28,037,585	39,606,871	62,288,543	68,486,587	576,315,778
Gas	13,955,323	17,809,489	19,144,645	17,756,664	17,838,094	20,015,178	18,518,131	16,392,344	19,268,979	26,668,995	187,367,842
Street Light	9,776,405	9,072,362	8,881,168	9,253,773	9,349,296	2,547,127	2,655,313	2,822,019	2,919,407	2,798,222	60,075,092
Nonregulated	7,574,995	1,097,224	1,480,173	461,314	460,952	1,265,044	473,237	482,738	494,486	498,843	14,289,005
Total	263,606,610	304,568,689	332,377,643	477,139,436	480,189,539	353,845,802	186,418,576	220,121,402	247,636,443	275,720,800	3,141,624,940

^aThis table presents currently estimated capital expenditures of Springs Utilities, including the Southern Delivery System project. The size of the Southern Delivery System project initiates the requirements of the City ordinances relating to an "Additional Investment." Because Springs Utilities is a combined utility, the entire, estimated capital investment program is shown here.

^bIncludes capitalized interest amounts of \$669,375, \$2,475,862, \$3,773,326, \$6,156,075, \$8,590,799, and \$7,774,949 in 2003, 2004, 2005, 2006, 2007, and 2008, respectively.

^cThe \$506 million Southern Delivery System amount does not match the \$406 million current dollar amount shown in Table 2-1 because of the effects capitalized interest costs and assumed annual inflation of 2.6%.

Capacity additions are expenditures on assets acquired to expand and enlarge system capacity. These projects are to benefit future customers. The Southern Delivery System is an example of a capacity addition project.

In addition to the Southern Delivery System, examples of large capital projects that are expected to start in the near future include the following:

- Northern Reclamation Facility – To meet growing wastewater treatment needs, \$67.6 million
- Clean Coal Unit – A potential additional power generation source, \$242.3 million
- Sanitary Sewer Evaluation and Rehabilitation Program – \$130.4 million

The forecast for electric capital expenditures reflects Springs Utilities' projected need for generation capacity within the next 8 to 10 years. This is in response to expected increases in Federal Energy Regulatory Commission reserve requirements, the significant increase in population in the Colorado Springs area, and the anticipated continuation of this growth through 2010. Springs Utilities is reviewing various options to meet these needs. In addition to the Clean Coal Unit, options include the addition of natural-gas-fired peaking units and participation in a proposed coal-fired plant in southern Colorado. Although no decisions have been made on these options, the estimates have been included in the 10-year financial projections.

Capital expenditures for gas service remain stable at about \$12 million per year. However, the financial projections reflect the significant rise in gas prices, which have been incorporated into the calculation of gas customer rates effective October 2003.

Long-term Financing Plans

Springs Utilities' capital spending plan currently calls for expending \$3.1 billion over the 2003 through 2012 period. During this time, Springs Utilities expects to externally finance \$2.0 billion of the spending. Table 5-6 shows the currently planned issuance schedule for future bond issues, which includes estimated underwriting costs.

The starting date for operation of the Southern Delivery System is expected to be during the first half of FY 2009. Capital and operating costs for the Southern Delivery System, as estimated by CH2M HILL, have been added to the capital spending and operating cost assumptions of Springs Utilities.

It is anticipated that the Southern Delivery System will be 100 percent financed externally with nontaxable bonds having a 40-year final maturity.

Springs Utilities plans to capitalize interest costs for Southern Delivery System-related bonds issued from 2003 through 2008 as follows:

- Interest costs in 2003 through 2006 = 100%
- Interest costs in 2007 = 67%
- Interest costs in 2008 = 33%
- Interest costs 2009 through 2012 = 0%

TABLE 5-6
Projected Issues (2003 through 2012) for Total Bonds Issued

Year	General Improvement (million \$)	Initial Southern Delivery System Project (million \$)	Future Southern Delivery System Project (million \$)	Total Bond Issues (million \$)
2003	121.0	45.0	-	166.0
2004	201.8	29.6	-	231.4
2005	250.4	22.4	-	272.8
2006	253.9	99.0	2.8	355.7
2007	172.5	186.1	11.7	370.3
2008	31.3	131.4	10.0	172.7
2009	89.1	1.7	11.8	102.6
2010	49.0	-	35.1	84.1
2011	74.2	-	36.0	110.2
2012	98.0	-	37.0	135.0
Total	\$1,341.2	\$515.2	\$144.4	\$2,000.8

These capitalized costs have been calculated in the operating and debt service projections provided by Springs Utilities. Furthermore, it has been assumed that capitalized interest funding for Southern Delivery System bonds will be bond funded, not funded annually. Debt service forecasts include the anticipated refunding of 1994A and 1996A bonds. Springs Utilities has also assumed an interest rate of 5.2 percent for the 2000A variable rate tax-exempt bonds and 6.25 percent for the 2002C variable rate taxable bonds.

Assumed interest rates for bond issues during the 2003 through 2012 period range from 4.75 percent for bonds issued in FY 2003 to 5.75 percent for bonds issued after FY 2005.

Springs Utilities reports that it has performed a detailed sensitivity analysis of the impact of higher than assumed interest rates for future bond issues. It reports that the analysis found that the Springs Utilities' bond coverage projections were not significantly impacted by changes in interest rates within the range of forecast rates they considered reasonable.

Approximately \$1.1 billion of planned capital outlays is forecast to be funded from net equity.

Impact to Customer Metered Rates

Current customer rates and a discussion of current rate structures for the regulated services of water, wastewater, electric, and gas services are presented in the Official Statement.

Springs Utilities' customers receive one monthly bill for electric, water, wastewater, gas, and street-light services, according to service delivered. The current average monthly residential customer bill for all services is about \$143. Table 5-7 shows the Springs Utilities' forecast of anticipated changes to average customer bills over the 2003 through 2012 period. Water and wastewater have the highest customer rate increases. Electric and gas services show far lower rate increases. On a current dollar basis, the total average customer bills for all services is expected to increase by 72 percent by 2012. Using an assumed average annual rate of 2.6 percent inflation, the cumulative inflation-adjusted increase to average bills by 2012 is expected to be about 36 percent. Operating and capital costs forecasts have been escalated by an assumed annual inflation rate of 2.6 percent.

TABLE 5-7
 Projected Annual Monthly and Annual Average Bills for Colorado Springs Residential Customers

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Average Residential Monthly Bill - Nominal \$										
Electric Services - Nominal \$	\$46.25	\$45.21	\$46.63	\$48.05	\$49.03	\$50.01	\$50.94	\$50.94	\$50.94	\$50.94
Water - Nominal \$	35.63	41.32	47.33	56.74	62.62	72.56	93.80	93.80	93.80	93.80
Wastewater - Nominal \$	14.02	16.50	18.23	21.22	24.37	29.58	32.45	35.22	35.22	35.22
Gas - Nominal \$	45.51	59.73	60.15	60.71	61.71	63.27	64.47	64.47	64.47	64.47
Streetlights - Nominal \$	1.79	1.83	1.84	1.95	2.02	2.07	2.11	2.16	2.16	2.16
Total Average Monthly Bill - Nominal \$	\$143.20	\$164.58	\$174.18	\$188.67	\$199.76	\$217.49	\$243.76	\$246.58	\$246.59	\$246.59
Total Average Annual Bill - Nominal \$	\$1,718.40	\$1,975.00	\$2,090.20	\$2,264.08	\$2,397.07	\$2,609.92	\$2,925.18	\$2,959.01	\$2,959.04	\$2,959.06
Total Monthly Bill - Excluding Streetlights	\$141.41	\$162.76	\$172.34	\$186.72	\$197.74	\$215.42	\$241.65	\$244.42	\$244.42	\$244.42
Average Residential Monthly Bill Change - Nominal \$										
Electric Services - Nominal \$		(\$1.04)	\$1.41	\$1.43	\$0.98	\$0.98	\$0.92	\$0.00	\$0.00	\$0.00
Water - Nominal \$		5.69	6.02	9.40	5.89	9.94	21.23	(0.00)	0.00	0.00
Wastewater - Nominal \$		2.48	1.74	2.99	3.15	5.21	2.88	2.77	-	-
Gas - Nominal \$		14.22	0.42	0.56	1.00	1.56	1.20	-	0.00	(0.00)
Streetlights - Nominal \$		0.04	0.02	0.11	0.07	0.05	0.04	0.05	-	-
Total Average Monthly Change \$		\$21.38	\$9.60	\$14.49	\$11.08	\$17.74	\$26.27	\$2.82	\$0.00	\$0.00
Total Average Annual Change \$		\$256.60	\$115.19	\$173.89	\$132.99	\$212.85	\$315.25	\$33.83	\$0.03	\$0.03
Average Residential Monthly Bill - Annual Change										
Electric Services - %		-2.2%	3.1%	3.1%	2.0%	2.0%	1.8%	0.0%	0.0%	0.0%
Water - %		16.0%	14.6%	19.9%	10.4%	15.9%	29.3%	0.0%	0.0%	0.0%
Wastewater - %		17.7%	10.5%	16.4%	14.8%	21.4%	9.7%	8.5%	0.0%	0.0%
Gas - %		31.2%	0.7%	0.9%	1.6%	2.5%	1.9%	0.0%	0.0%	0.0%

TABLE 5-7
Projected Annual Monthly and Annual Average Bills for Colorado Springs Residential Customers

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Streetlights - %		2.0%	1.0%	5.9%	3.4%	2.5%	2.0%	2.5%	2.5%	0.0%
Total Average Monthly Change - %		14.9%	5.8%	8.3%	5.9%	8.9%	12.1%	1.2%	0.0%	0.0%
Assumed Inflation Rate		2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%
Inflation Adjusted Monthly Total Bill	\$143.20	\$160.37	\$165.37	\$174.54	\$180.05	\$191.02	\$208.61	\$205.61	\$200.34	\$195.21
Inflation Adjusted Average Monthly Bill Change		12.0%	3.1%	5.5%	3.2%	6.1%	9.2%	-1.4%	-2.6%	-2.6%
Cumulative Average Bill Change - %		14.9%	21.6%	31.8%	39.5%	51.9%	70.2%	72.2%	72.2%	72.2%
Inflation Adjusted Average Bill Change - %		12.0%	15.5%	21.9%	25.7%	33.4%	45.7%	43.6%	39.9%	36.3%

An important consideration in developing the Long-term Financing Plan was to evaluate the estimated impact on rates. This is particularly important as it relates to water system rates. The new Southern Delivery System project is expected to significantly increase water rates revenue requirements and thereby Springs Utility's rates over the next decade. Springs Utilities' financial forecast model was used to estimate the impact on projected water system rate increases. A forecast scenario incorporating the Long-term Financing Plan

recommendations was developed and compared to a base-case forecast using 30-year, fixed-rate bonds for all future debt issues. The Long-term Financing Plan scenario produced lower rate increases during the years 2003 through 2007 and higher rate increases during the period 2008 through 2011. The cumulative rate increases between both scenarios are approximately equal. The Long-term Financing Plan scenario produces a preferred outcome because of its graduated rate increases and associated perceived improved customer affordability.

Springs Utilities believes it has some of the lowest customer rates in the Western U.S. The 16-City Survey, conducted in 2003, compares the average combined monthly bills for Springs Utilities' customers with those in other major U.S. cities. Table 5-8 shows these average monthly bills. This table shows that Springs Utilities' combined rates and average billings as of January 2003 are relatively low compared to those of other Western U.S. communities. The estimated 2003 average customer bill shown in Table 5-7 and the one shown in Table 5-8 differ because the figures shown in Table 5-8 reflect the rates that were in effect in January 2003, and the figures in Table 5-7 reflect the average charges to customers over the course of the year, including planned rate increases during the year. Springs Utilities implemented a water rate increase earlier in the year, and it implemented significant electric and gas rate increases in the final quarter of the year.

TABLE 5-8
Residential Average Monthly Bill^a

16-City 2003 Survey^b	Cost (\$)
Salt Lake City	115.83
Denver	122.72
Colorado Springs	130.22
Boise	136.95
Albuquerque	142.38
Las Vegas	149.91
Dallas	152.61
San Antonio	153.39
Austin	157.78
Phoenix	174.39
Sacramento	179.63
Tucson	190.27
Portland	191.97
Los Angeles	193.31
Reno	193.76
San Jose	221.00
San Diego	229.04

^aIncludes electric, water, wastewater, and gas services. Excludes streetlights.

^bSource: Springs Utilities rates are as of January 1, 2003.

Projected Operating Results

Income Statement

Table 5-9 presents Springs Utilities' projected operating results for the combined Springs Utilities System, including projected operating revenues, operating expenses, and changes to net assets through 2012. The cash-flow forecast incorporates the customer growth assumptions shown in Table 5-4 and the increases shown in average monthly customer bills in Table 5-7.

Projections of new customers, water, wastewater, electric, and gas consumption (by customer class), and proposed rate increases were used to forecast utility service revenues for each service line over the planning period. Springs Utilities uses historical trends, internal staff projections, and the services of several outside consultants to forecast future demands and sales revenues.

Weighted average monthly consumption estimates by customer class were developed from customer billing information and are consistent with historical patterns. System operating expenses include incremental costs related to the installation and operation of new capital facilities, including the Southern Delivery System, which are included in combined total expenses.

Total operating revenues, including the five utility services and nonregulated operating revenues are assumed to grow at an average annual rate of 5.9 percent during the 2004 through 2012 forecast period. Total operating expenses, including depreciation, are estimated to grow by an average of 4.1 percent during the forecast period. Springs Utilities indicated that it assumed a 2.6 percent general rate of inflation.

Cash Flow

Springs Utilities prepared a long-term pro-forma cash-flow forecast for this Engineering Report, as shown in Table 5-10. The cash-flow forecast incorporates the customer growth assumptions shown in Table 5-4 and the increases shown by the changes to average monthly customer bills shown in Table 5-7.

Projected debt service includes debt service for both existing and proposed revenue bond issues. Debt service schedules for existing and the 2003B Bonds are shown in the main body of the Official Statement.

In accordance with its large capital expenditure program, Springs Utilities is anticipating annual bond issues to pay for ongoing capital improvements and capital expansion plans for the water system, mainly the Southern Delivery System, the wastewater system, and the electric system. Table 5-6 shows the planned bond issues through 2012.

TABLE 5-9
Springs Utilities' Pro-forma Income Statement

Item	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)
Operating Revenues	635,737,542	678,681,722	723,637,012	763,790,454	802,085,443	881,050,919	931,844,941	\$961,370,576	996,298,754
Less: Interservice Revenues	(20,509,785)	(22,179,069)	(23,100,148)	(21,741,813)	(22,748,161)	(22,877,230)	(24,685,148)	(25,007,327)	(25,998,826)
Net Operating Revenues	615,227,757	656,502,653	700,536,865	742,048,641	779,337,282	858,173,689	907,159,793	936,363,248	970,299,928
Operating Expenses									
Nonlabor Operating Expenses	113,123,887	114,943,330	114,980,799	116,731,964	121,295,993	131,712,959	132,646,114	133,973,620	137,179,892
Interservice Revenues	(20,509,785)	(22,179,069)	(23,100,148)	(21,741,813)	(22,748,161)	(22,877,230)	(24,685,148)	(25,007,327)	(25,998,826)
Fuel Expense	265,413,604	270,098,789	273,671,884	285,275,695	275,497,977	287,363,724	316,939,754	328,106,080	345,036,052
Operating Labor Expense	128,492,196	133,035,155	138,349,127	145,876,752	150,852,942	155,875,814	160,984,188	166,299,050	171,653,127
Depreciation	90,215,641	101,158,177	115,902,662	129,283,664	138,963,634	145,423,998	152,878,850	161,497,647	170,546,599
Franchise Fees	209,005	219,462	230,441	241,969	254,075	266,785	280,132	294,147	308,862
Total Operating Expenses	576,944,547	597,275,843	620,034,765	655,668,230	664,116,460	697,766,050	739,043,890	765,163,217	798,725,706
Operating Income	38,283,210	59,226,810	80,502,100	86,380,411	115,220,822	160,407,639	168,115,904	171,200,032	171,574,222
Other Income and Expenses									
Miscellaneous Income	2,197,652	2,242,117	2,285,088	2,333,187	2,371,392	2,425,635	2,485,424	2,535,868	2,592,252
Interest Earnings	5,893,679	7,872,311	9,758,301	10,229,508	6,381,271	4,677,180	5,464,976	6,397,524	7,300,341
Interest Expense	(61,799,963)	(75,621,860)	(87,416,810)	(105,961,318)	(121,627,003)	(127,398,522)	(129,620,581)	(133,038,575)	(137,619,243)
Net Nonoperating Income and Expenses	(53,708,631)	(65,507,432)	(75,373,421)	(93,398,623)	(112,874,339)	(120,295,707)	(121,670,180)	(124,105,183)	(127,726,650)
Income (Loss) before Contributions and Transfers	(15,425,421)	(6,280,622)	5,128,679	(7,018,212)	2,346,483	40,111,932	46,445,723	47,094,848	43,847,572
Contributions in Aid of Construction	31,412,008	40,763,392	48,414,585	52,403,378	36,240,063	46,471,673	47,029,671	47,382,282	47,614,686
In Lieu of Taxes	(23,819,376)	(24,585,377)	(25,266,477)	(25,759,641)	(26,480,509)	(27,205,668)	(28,011,269)	(28,840,553)	(29,750,080)
Net Change in Assets	(7,832,788)	9,897,393	28,276,787	19,625,525	12,106,036	59,377,937	65,464,125	65,636,578	61,712,177
Net Assets – Beginning of Period	1,129,909,314	1,122,076,526	1,131,973,918	1,160,250,706	1,179,876,230	1,191,982,267	1,251,360,203	1,316,824,329	1,382,460,907
Net Assets – End of Period	1,122,076,526	1,131,973,918	1,160,250,706	1,179,876,230	1,191,982,267	1,251,360,203	1,316,824,329	1,382,460,907	1,444,173,084

TABLE 5-10
Springs Utilities' Pro-forma Cash-flow Forecast

Item	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	FY 2004 through 2012 Totals (\$)
Operating Activities										
Operating Income	38,283,210	59,226,810	80,502,100	86,380,410	115,220,822	160,407,638	168,115,903	171,200,032	171,574,221	1,050,911,146
Depreciation	90,215,641	101,158,177	115,902,662	129,283,664	138,963,634	145,423,998	152,878,850	161,497,647	170,546,599	1,205,870,872
Miscellaneous Revenues	2,197,652	2,242,117	2,285,088	2,333,187	2,371,392	2,425,635	2,485,424	2,535,868	2,592,252	21,468,616
Applied Unrestricted Cash	26,804,887	-	13,551,608	23,067,105	76,853,660	393,431	1,351,249	1,512,657	9,524,498	153,059,095
Applied Restricted Cash	22,294,689	47,747,924	22,794,341	1,092,327	-	-	-	-	-	93,929,281
Total Operating Activities	179,796,080	210,375,028	235,035,799	242,156,694	333,409,508	308,650,702	324,831,427	336,746,203	354,237,570	2,525,239,011
Non-capital Financing										
Payment In Lieu of Taxes, Less Franchise Fees	(23,819,376)	(24,585,377)	(25,266,477)	(25,759,641)	(26,480,509)	(27,205,668)	(28,011,269)	(28,840,553)	(29,750,080)	(239,718,950)
Capital and Related Financing Activities										
Net Bond Proceeds	226,837,873	267,521,018	348,841,779	363,042,126	169,343,079	100,582,722	82,487,895	108,017,627	132,285,544	1,798,959,663
Capital Expenditures	(304,568,689)	(332,377,643)	(477,139,436)	(480,189,539)	(353,845,802)	(186,418,576)	(220,121,402)	(247,636,443)	(275,720,800)	(2,878,018,330)
Contributions in Aid	31,412,008	40,763,392	48,414,585	52,403,378	36,240,063	46,471,673	47,029,671	47,382,282	47,614,686	397,731,738
Debt Service	(85,393,043)	(103,435,410)	(119,055,636)	(141,890,986)	(160,885,483)	(173,918,134)	(180,595,667)	(188,821,328)	(198,089,703)	(1,352,085,391)
Total Capital and Related Financing Activities	(131,711,850)	(127,528,643)	(198,938,708)	(206,635,021)	(309,148,144)	(213,282,315)	(271,199,503)	(281,057,862)	(293,910,274)	(2,033,412,320)
Investing Activities										
Interest Earnings	5,893,679	7,872,311	9,758,301	10,229,508	6,381,271	4,677,180	5,464,976	6,397,524	7,300,341	63,975,092
Net Change to Cash and Cash Equivalents	30,158,533	66,133,319	20,588,916	19,991,540	4,162,126	72,839,899	31,085,631	33,245,312	37,877,557	316,082,832
Beginning Cash and Equivalents	146,479,871	176,638,404	242,771,724	263,360,639	283,352,179	287,514,305	360,354,204	391,439,834	424,685,146	
Ending Cash and Equivalents	176,638,404	242,771,724	263,360,639	283,352,179	287,514,305	360,354,204	391,439,834	424,685,146	462,562,703	

Debt Service Coverage

With regard to large capital additions to the System, the City Bond Ordinance requires:

“a certificate of an Independent Engineer to the effect that, based on the Engineering Report prepared for the Capital Addition, the projected Net Pledged Revenues for each of the three Fiscal Years subsequent to the date the Capital Addition is estimated to become commercially operative (as estimated in the Engineering Report) will be not less than 130 percent of the Average Annual Principal and Interest Requirements of the Outstanding Bonds, any Outstanding First Lien Bonds, any Outstanding Parity Bonds and the Parity Bonds proposed to be issued, and all Parity Bonds estimated to be issued, if any, during the period from the date the first series of Parity Bonds for the Capital Addition is to be delivered through the third Fiscal Year subsequent to the date the Capital Addition is estimated to become commercially operative, for all Capital Improvements and for all Capital Additions then in progress or then being initiated.”

In terms of assumed additional revenues related to a Capital Addition, the Bond Ordinance states:

“In determining whether or not additional Parity Bonds may be issued as aforesaid, consideration shall be given to any probable increase (but not reduction) in the Operation and Maintenance Expenses of the System as estimated by the Director that will result from the expenditure of the funds proposed to be derived from the issuance and sale of the additional securities; but the Director may reduce any such increase in Operation and Maintenance Expenses by the amount of any increase in revenues or any reduction in Operation and Maintenance Expenses resulting from the Capital Improvements or Capital Additions to which such expenditure relates and not otherwise included in the calculations under this Section, if the Director also opines that any such reduction in any such increase in Operation and Maintenance Expenses will not materially and adversely affect the City’s apparent ability to comply with the rate maintenance covenant stated in Section 821 hereof without modification because of any restrictive legislation, regulation or other action under the police power exercised by any governmental body.”

This has been interpreted to mean that increased, or lower, operating and maintenance expenses may be considered in relation to required revenues related to the Capital Addition and the issuance of additional Parity Bonds to finance it. Springs Utilities has interpreted this to mean revenue changes related only to customer growth during the 3-year Engineer’s Certification period may be incorporated into the analysis.

Table 5-11 presents the annual debt service coverage projections for FY 2004 through 2012 and also includes the estimated FCCR. Sufficient debt service coverage relative to the annual debt service coverage ratio is maintained during the forecast period, according to the projections provided by Springs Utilities. In addition, the estimated FCCR exceeds the minimum ratio of 1.6 throughout.

Table 5-12 shows the actual additional bonds calculation under the City Bond Ordinance. This requires using the average debt service and also growth in revenues only permitted by

changes to operating costs, which in this forecast has been assumed to mean the annual change to the number of customers during this 3 year period. Forecasted rate increases prior to this 3 year period have been incorporated into the revenue forecast.

The average debt service has been interpreted to mean the average of the sum of the actual and anticipated annual debt service requirements. The forecast shown in Table 5-12 shows debt coverage in excess of the required 1.3 times net pledged revenues through the forecast period.

The forecast horizon for debt service coverage certification for the first 3 years after the Southern Delivery System begins operations in 2009, from 2010 through 2012, is a lengthy one. Risks invariably increase with forecast time horizons. CH2M HILL has reviewed forecast capital and operating expense requirements for the Southern Delivery System. CH2M HILL has not audited the forecasting process of Springs Utilities for past forecast accuracy. Springs Utilities appears to have a well-established forecasting process and methodology. The following key assumptions are made here with regard to debt service repayment and debt repayment capacity: consolidated System expenses will be approximately as forecast by Springs Utilities, and utility rate and customer bill increases will be approved, implemented, and achieved during the forecast period.

Conclusions

CH2M HILL's projection of the financial performance of the System for the 9-year period 2004 through 2012 is summarized as follows:

- Total operating revenues are projected to increase 58 percent. Operating expenses, including incremental expenses attributed to planned capital expenditures, are projected to increase by 38 percent over the forecast period.
- The Southern Delivery System reflects a priority need of the system for additional water supply. CH2M HILL has not determined the priority of other capital spending anticipated by Springs Utilities during this 9-year period. Expenditures for the Southern Delivery System and other capital improvement projects will be funded through a combination of debt issues and internally generated funds.
- The 9-year capital program will be funded by planned rate increases for water, wastewater, electric, and gas service customers. Successive rate increases will be required. The typical residential bill for water, wastewater, electric, gas, and street light services is projected to increase 69 percent in nominal terms between 2004 and 2012. However, when adjusted for assumed annual inflation of 2.63 percent, the cumulative increase for average customer bills will be about 33 percent. Given scheduled water and wastewater rate increases throughout the forecast period, net revenues will be sufficient to meet projected debt service obligations on the 2003B Bonds planned for this capital expansion.

TABLE 5-11
Springs Utilities' Annual Debt Service and Fixed Cost Coverage Ratio Forecast

Item	2004	2005	2006	2007	2008	2009	2010	2011	2012
Electric Operating Revenues	\$289,725,284	\$314,771,545	\$336,425,122	\$359,478,813	\$366,608,659	\$389,541,595	\$411,037,645	\$431,643,547	\$453,086,373
Water Operating Revenues	\$73,910,371	\$90,667,056	\$105,110,536	\$110,629,919	\$124,948,458	\$164,362,449	\$168,288,351	\$173,672,159	\$178,892,388
Wastewater Operating Revenues	\$33,629,859	\$37,283,317	\$43,408,273	\$51,565,002	\$63,588,012	\$70,745,406	\$77,782,943	\$79,034,299	\$79,895,892
Gas Operating Revenues	\$183,748,107	\$182,752,114	\$184,919,674	\$189,556,436	\$193,673,162	\$201,466,809	\$207,844,282	\$212,151,486	\$220,825,553
Street Light Operating Revenues	\$4,636,120	\$4,765,733	\$5,136,115	\$5,397,652	\$5,624,138	\$5,828,053	\$6,065,219	\$6,162,461	\$6,254,508
Nonregulated Operating Revenues	\$42,910,490	\$41,487,693	\$40,626,839	\$39,776,193	\$40,389,765	\$41,804,161	\$53,463,044	\$51,280,049	\$49,853,297
Miscellaneous Revenues	\$7,177,311	\$6,954,263	\$8,010,454	\$7,386,438	\$7,253,249	\$7,302,445	\$7,363,457	\$7,426,574	\$7,490,744
Interservice Eliminations	\$(20,509,785)	\$(22,179,069)	\$(23,100,148)	\$(21,741,813)	\$(22,748,161)	\$(22,877,230)	\$(24,685,148)	\$(25,007,327)	\$(25,998,826)
Total Operating Revenues	\$615,227,757	\$656,502,653	\$700,536,865	\$742,048,641	\$779,337,282	\$858,173,689	\$907,159,793	\$936,363,248	\$970,299,928
Operating Expense (Labor)	\$128,492,196	\$133,035,155	\$138,349,127	\$145,876,752	\$150,852,942	\$155,875,814	\$160,984,188	\$166,299,050	\$171,653,127
Operating Expense (Non-labor)	\$113,332,892	\$115,162,792	\$115,211,240	\$116,973,933	\$121,550,068	\$131,979,744	\$132,926,246	\$134,267,767	\$137,488,754
Fuel Expense	\$265,413,604	\$270,098,789	\$273,671,884	\$285,275,695	\$275,497,977	\$287,363,724	\$316,939,754	\$328,106,080	\$345,036,052
Interservice Eliminations	\$(20,509,785)	\$(22,179,069)	\$(23,100,148)	\$(21,741,813)	\$(22,748,161)	\$(22,877,230)	\$(24,685,148)	\$(25,007,327)	\$(25,998,826)
Total Operations and Maintenance Expense	\$486,728,906	\$496,117,666	\$504,132,103	\$526,384,566	\$525,152,826	\$552,342,052	\$586,165,040	\$603,665,570	\$628,179,107
Operating Income ^a	\$128,498,851	\$160,384,987	\$196,404,762	\$215,664,075	\$254,184,456	\$305,831,637	\$320,994,754	\$332,697,679	\$342,120,821
Interest Income (Excluding Interest on Bond Proceeds)	\$2,778,840	\$3,405,325	\$4,136,375	\$4,175,141	\$3,416,608	\$3,413,199	\$4,433,877	\$5,047,304	\$5,646,772
Contributions in Aid	\$31,412,008	\$40,763,392	\$48,414,585	\$52,403,378	\$36,240,063	\$46,471,673	\$47,029,671	\$47,382,282	\$47,614,686
Nonoperating Miscellaneous Revenues	\$2,197,652	\$2,242,117	\$2,285,088	\$2,333,187	\$2,371,392	\$2,425,635	\$2,485,424	\$2,535,868	\$2,592,252
Net Pledged Revenues	\$165,096,357	\$207,015,283	\$251,471,251	\$274,817,749	\$296,466,595	\$358,408,930	\$375,223,858	\$387,957,280	\$398,283,392
Authority Debt Service	\$5,065,629	\$5,540,141	\$5,547,777	\$5,547,859	\$5,546,075	\$5,548,938	\$5,550,076	\$5,547,715	\$5,546,256
Electric Capacity Payments	\$26,060,374	\$29,456,376	\$31,694,976	\$34,643,376	\$37,728,276	\$40,944,580	\$44,450,343	\$47,535,243	\$50,319,843
Total Debt Service	\$85,393,043	\$103,435,410	\$119,055,636	\$141,890,986	\$160,885,483	\$173,918,134	\$180,595,667	\$188,821,328	\$198,089,703
Debt Service Coverage	1.93	2.00	2.11	1.94	1.84	2.06	2.08	2.05	2.01
Fixed Cost Coverage^b	1.68	1.75	1.85	1.73	1.66	1.84	1.84	1.82	1.79

^aOperating income excludes depreciation and payments in lieu of taxes.

^bThe internal financial target for Fixed Cost Coverage Ratio is equal to or greater than 1.6.

TABLE 5-12
Colorado Springs Bond Ordinance Additional Bonds Coverage Test

Item	2010	2011	2012
Electric Operating Revenues	\$379,808,239	\$386,320,032	\$393,007,819
Water Operating Revenues	\$129,218,060	\$131,447,740	\$133,592,029
Wastewater Operating Revenues	\$65,777,073	\$66,921,242	\$68,065,411
Gas Operating Revenues	\$202,134,976	\$206,418,117	\$210,596,790
Street Light Operating Revenues	\$5,814,082	\$5,914,990	\$6,009,962
Nonregulated Operating Revenues	\$41,870,737	\$42,630,388	\$43,376,144
Miscellaneous Revenues	\$7,353,457	\$7,426,574	\$7,490,744
Interservice Eliminations	\$(24,685,148)	\$(25,007,327)	\$(25,998,826)
Total Operating Revenues^a	\$807,301,477	\$822,071,756	\$836,140,075
Operating Expense (Labor)	\$160,984,188	\$166,299,050	\$171,653,127
Operating Expense (Nonlabor)	\$132,926,246	\$134,267,767	\$137,488,754
Fuel Expense	\$316,939,754	\$328,106,080	\$345,036,052
Interservice Eliminations	\$(24,685,148)	\$(25,007,327)	\$(25,998,826)
Total Operation and Maintenance Expense	\$586,165,040	\$603,665,570	\$628,179,107
Operating Income ^b	\$221,136,437	\$218,406,186	\$207,960,968
Interest Income ^c	\$4,433,877	\$5,047,304	\$5,646,772
Contributions in Aid	\$47,029,671	\$47,382,282	\$47,614,686
Nonoperating Miscellaneous Revenues	\$2,485,424	\$2,535,868	\$2,592,252
Net Pledged Revenues	\$275,085,410	\$273,371,640	\$263,814,677
Average Annual Debt Service ^d	\$127,603,761	\$132,322,819	\$138,485,366
Average Debt Service Coverage Ratio	2.16	2.07	1.91

^aOperating Revenues include no rate increases (revenue growth is only from customer growth).

^bOperating Income excludes depreciation and payments in lieu of taxes.

^cExcluding interest on bond proceeds.

^dAverage annual debt service per Bond Ordinance calculation definition.

The 9-year capital program will be funded by planned rate increases for water, wastewater, electric, and gas service customers. Successive rate increases will be required. The typical residential bill for water, wastewater, electric, gas, and street light services is projected to increase 69 percent in nominal terms between 2004 and 2012. However, when adjusted for assumed annual inflation of 2.63 percent, the cumulative increase for average customer bills will be about 33 percent. Given scheduled water and wastewater rate increases throughout the forecast period, net revenues will be sufficient to meet projected debt service obligations on the 2003B Bonds planned for this capital expansion.

SECTION 6.0

Study References

To prepare this Engineering Report, CH2M HILL reviewed and relied on information provided by Springs Utilities. Although CH2M HILL has not independently verified this information and offers no assurances regarding it, CH2M HILL believes that the information is valid for the purposes of this Engineering Report.

The following specific sources of information were used to prepare the Engineering Report:

- Interviews and correspondence with Springs Utilities staff
- *Water Resources Plan for Colorado Springs Utilities* (Black and Veatch, 1996)
- *Water Distribution Master Plan, Colorado Springs Utilities* (Black and Veatch, 1999)
- *Preferred Storage Operations Plan, Southeastern Colorado Water Conservancy District* (GEI Consultants, 2000)
- *Southern Delivery System Update, Colorado Springs Utilities* (Black and Veatch, November 2001)
- *Alternatives Analysis, Regional Water Infrastructure Authority* (Black and Veatch, May 2002)
- *Water System Master Plan, City of Fountain* (Black and Veatch, 2002)
- *Southern Delivery System, Cost Estimating Guide* (CH2M HILL, 2003)
- Intergovernmental Agreement among City of Colorado Springs, Colorado and City of Fountain, Colorado and Security Water District for the Construction of the Southern Delivery System, effective August 1, 2003
- Annual financial reports of Springs Utilities for FY 1999 through FY 2002, audited by Grant Thornton, LLP
- Colorado Springs internal planning documents: Colorado Springs Utilities Financial Projections 2004-2012 - Model Run 05-30-03 and Colorado Springs Utilities Sales & Revenue Forecast 2004-2008, Spring 2003
- Revised Colorado Springs Utilities Financial Projections 2004-2013
- Colorado Springs Utilities Sales & Revenue Forecast 2004-2008, Spring 2003
- Colorado Springs Utilities Sales and Load Forecast 2003-2013, Spring 2003
- Spreadsheet Models from Colorado Springs Utilities, including: combined and service-level sales and expenses, condensed operating statement and cash-flow statements, calculations of Bond Ordinance-required average debt service, customer forecasts, average residential bill forecasts, and 16-City Rate Survey conducted in 2003
- Numerous e-mail communications from Springs Utilities staff