

SOUTHERN DELIVERY SYSTEM

MONTHLY REPORT



The Southern Delivery System (SDS) is a regional project to bring water from the Arkansas River to Colorado Springs, the City of Fountain, the Security Water District, and the Pueblo West Metropolitan District. Phase 1 of this multi-phase project includes all of the components necessary to begin delivering water to the partner communities by 2016. This report summarizes accomplishments from the start of construction to February 2015, plans for March 2015, and key performance details for Phase 1.

Water Treatment Plant & Finished Water Pump Station

Accomplishments: Decommissioned the west tower crane, completed masonry work on all structures, continued installation of heating, ventilation, and air conditioning (HVAC), progressed erection of structural steel roof decking in the administrative and maintenance areas of the finished water pump station building, and continued installation of small diameter yard piping; 78 percent of construction is complete through February at the water treatment plant.

Upcoming: Continue installation of electrical transformers, switches, and cables and testing electrical equipment; progress erection of structural roof decking in the filter and ozone area; complete installation of the large diameter piping and valves in the filter area; and continue installation of mechanical equipment and piping in the chemical area.



Installation of structural steel



Aerial of the water treatment plant

Raw Water Pump Stations

Accomplishments: Began excavation of the discharge valve vault (regulates flow of water) and set the last surge tank at Juniper Pump Station; completed installation of structural steel and continued welding the connection of North Pipeline 1A to Williams Creek Pump Station; and finished setting the overhead bridge crane and continued installing structural steel at Bradley Pump Station; nearly 75 percent of construction is complete through February for all three raw water pump stations. **Upcoming:** Begin roofing over electrical room and finish excavation of the discharge valve vault at Juniper Pump Station; install brick veneer outside pump station building and begin insulation and drywall in the electrical room at Williams Creek Pump Station; and complete final inspection of structural steel and continue welding and grouting 66-inch diameter piping at Bradley Pump Station.



Setting bridge crane at Bradley Pump Station

South Pipeline 4A Central



Launch shaft



Grouting operations

Accomplishments: Completed backfill of tunnel grout (construction material used to fill voids), began welding the grout ports, began preparations for backfilling the shafts, continued installing cathodic (corrosion) protection, and continued coordinating revegetation activities east of the tunneling retrieval shaft. Nearly 95 percent of construction is complete through February for this challenging portion of construction on the SDS Program. **Upcoming:** Complete welding the grout ports, continue backfill activities, progress grouting welded joints in the pipe, finish grout inspections, and hold final pipe ceremony at the site.

SPOTLIGHT

Cranes Removed: Final Stretch for Water Treatment Plant Construction

Signs of progress are on the horizon at the SDS Water Treatment Plant construction site -- located near Marksheffel Road and Highway 94 in eastern Colorado Springs.

As buildings at the plant have gone up, the giant cranes at the site have come down. In February, crews disassembled the last of two massive cranes at the site, marking a milestone for construction as the buildings have taken shape and the plant is now nearly 80 percent complete. The cranes towered almost 150 feet tall and had been a prominent landmark on the skyline for more than a year. [View time-lapse video.](#)



The entire site is located in Federal Aviation Administration (FAA) air space due to its proximity to the runway at Peterson Air Force Base. Additional permits and close coordination with the FAA were essential, adding to the complexity of the project. In fact, construction workers have become quite accustomed to frequent flyovers by a variety of military aircraft taking off and landing at the base.

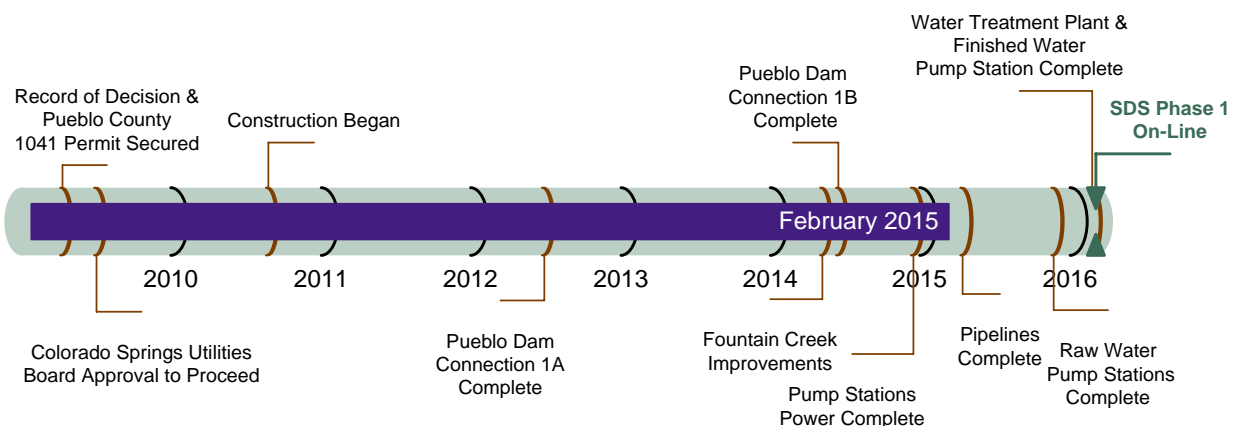
Work will continue this spring and summer to complete the treatment facilities and install equipment. Testing is scheduled for late 2015 to ready the plant for water delivery to customers in early 2016.



Schedule Summary

The timeline below summarizes the schedule for completing Phase 1 of the SDS. Colorado Springs Utilities anticipates completing Phase 1 as planned, with full operation beginning by 2016.

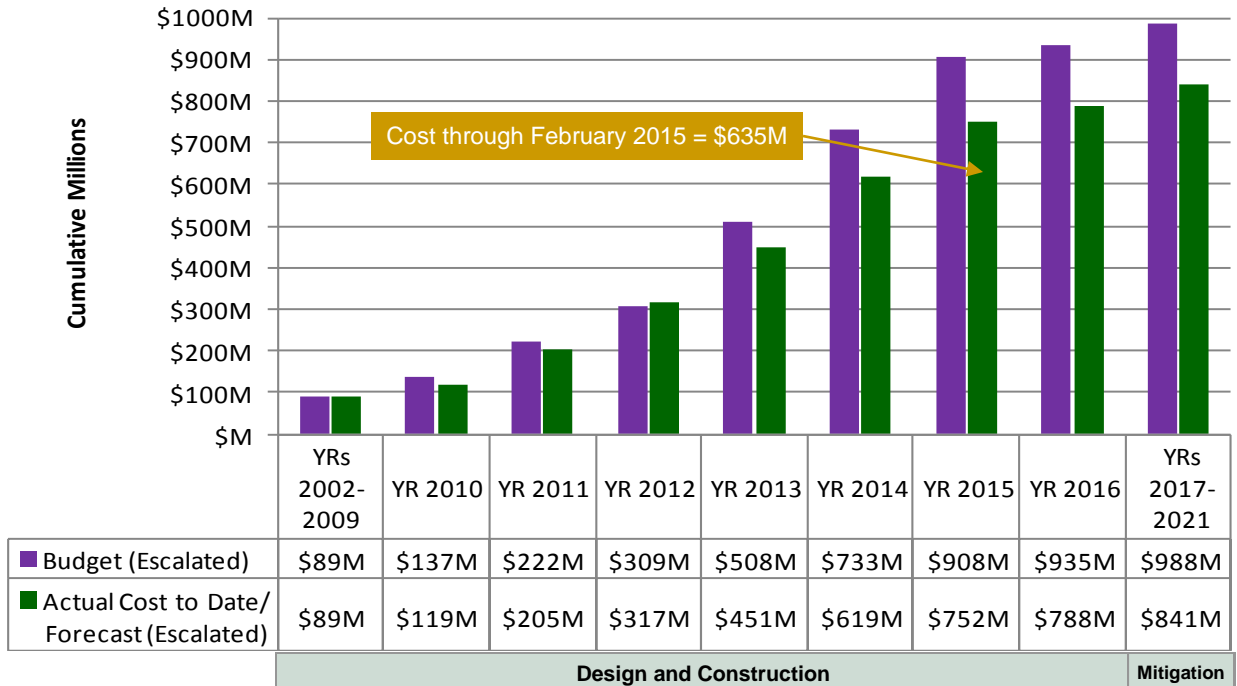
Figure 1 – Schedule Progress for Major SDS Phase 1 Projects



Cost Summary

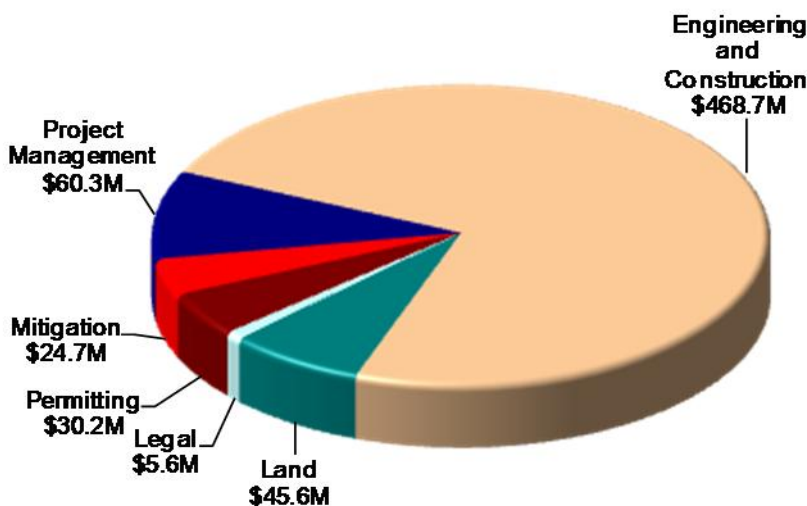
Figure 2 shows the budget for Phase 1, actual costs through February 2015, and forecasted costs for Phase 1. **Figure 3** shows the distribution of the actual costs. Key financial details are summarized below. The budget used to measure progress was established by the Colorado Springs Utilities Board in July 2009 and is \$880 million in April 2009 dollars. Accounting for actual and currently projected escalation in the cost of labor, materials, and equipment, the same 2009 budget equates to \$988 million after all direct project costs (including mitigation) are paid through 2021.

Figure 2 – Phase 1 Budget Progress – Actual Costs through February 2015



Design and construction \$ values include actual and projected cost escalation as measured by Engineering News-Record’s national Construction Cost Index. Monetary mitigation payment \$ values (2017 through 2021) include cost escalation as measured by the U.S. Bureau of Labor Statistics Producer Price Index for finished goods. Periodic index forecasts by IHS Global Insight applied.

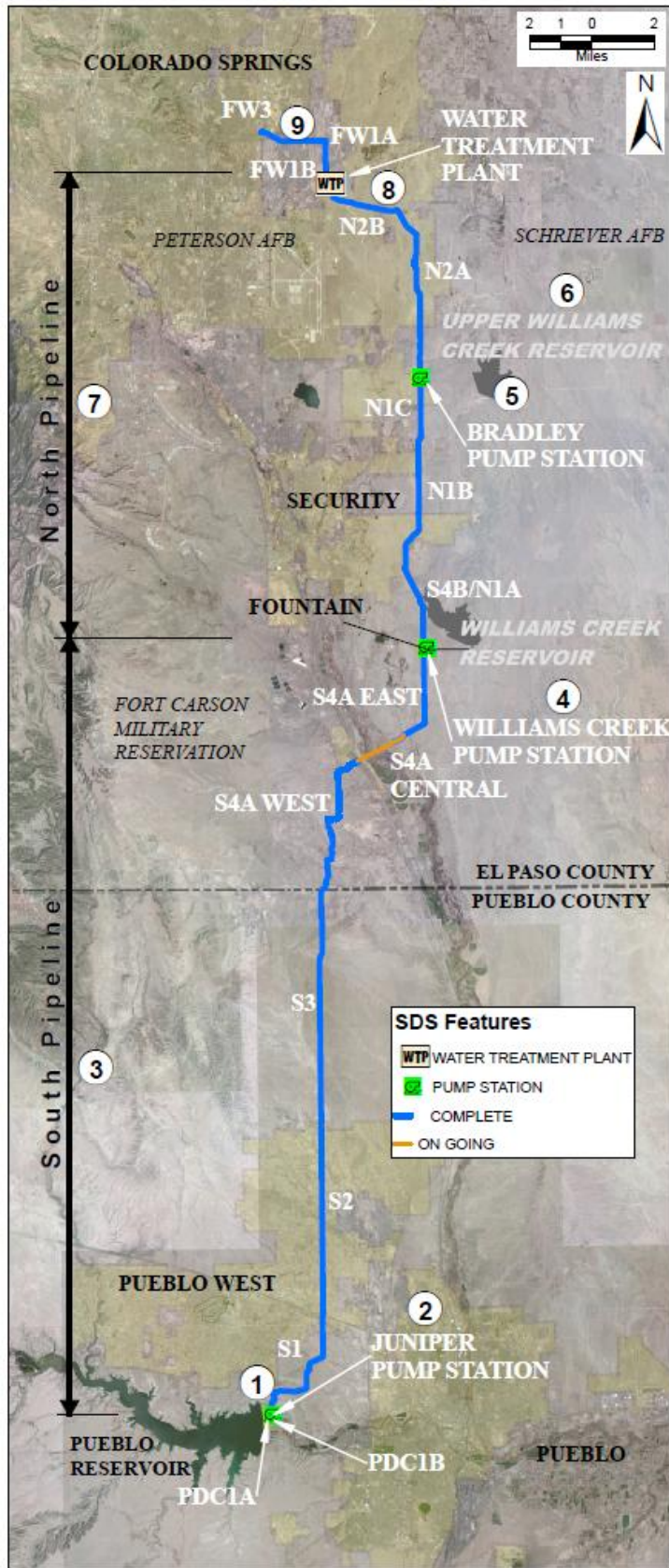
Figure 3 – Distribution of Phase 1 Direct Costs through February 2015 (\$635M Total)



Key Financial Details

- The budget for Phase 1 is \$988 million, including actual and projected escalation, while the current cost forecast is \$841 million. The project is currently forecasting completion approximately \$147 million below budget. These anticipated savings are accounted for in current water rates and plans for bond issuance.
- Cumulative actual costs to date are \$635 million, with a majority expended on engineering and construction, permitting, land, and management activities.
- Forecasted costs for 2015 are \$133 million with a cumulative expenditure of \$752 million by the end of 2015.

Figure 4 – Phase 1 Projects Status Map



Visit www.SDSwater.org for additional information.

9 Finished Water Pipeline (FW)

Complete: FW1A, FW1B (Garney Construction)

Ongoing: Garney Construction is finalizing closeout of FW3 – a 2.2-mile pipeline from FW1A into the existing Colorado Springs Utilities water distribution system near Constitution Ave. and Powers Blvd.

Focus: Completing administrative closeout activities

8 SDS Water Treatment Plant (WTP) and Finished Water Pump Station (FWPS)

Ongoing: McCarthy Building Companies, Inc. is constructing the WTP and FWPS located at Marksheffel Rd. and U.S. Highway 24.

Focus: Completing masonry work, installing mechanical and electrical equipment, and erecting structural roof decking

7 North Pipeline (N)

Complete: S4B/N1A/N1B (HCP Constructors), N1C/N2A (Layne Heavy Civil, Inc.)

Ongoing: Garney Construction is finalizing closeout of N2B – a 3.2-mile pipeline connecting N2A to the WTP.

Focus: Completing construction closeout activities

6 Upper Williams Creek Reservoir (UWCR)

Ongoing: UWCR is a 30,500 acre-foot raw water storage reservoir that will be developed as part of a future SDS phase and will be located near Bradley Pump Station.

Focus: Acquiring remaining land parcels

5 Bradley Pump Station (BPS)

Ongoing: Archer Western Construction, LLC is constructing BPS located in the city of Colorado Springs approximately ¼ mile south of Bradley Rd. and 1.5 miles east of Marksheffel Rd.

Focus: Installing transformers, setting the overhead bridge crane, and erecting structural steel

4 Williams Creek Pump Station (WCPS)

Ongoing: Archer Western Construction, LLC is constructing WCPS located in El Paso County 6 miles south of Squirrel Creek Rd. and 5 miles east of Interstate 25.

Focus: Installing roof decking at pump station building and placing rebar at discharge valve vault lid

3 South Pipeline (S)

Complete: S1 (HCP Constructors), S2 (Garney Construction), S3 (Layne Heavy Civil, Inc.), S4A East/West (Garney Construction)

Ongoing: Garney Construction is constructing S4A Central – a 1.4-mile pipeline that tunnels under Interstate 25, two railroads, and Fountain Creek and extends from west of Interstate 25 to east Hanover Rd.

Focus: Performing grouting and backfill activities

2 Juniper Pump Station (JPS)

Ongoing: Archer Western Construction, LLC is constructing JPS located in Lake Pueblo State Park near the base of Pueblo Dam.

Focus: Setting equipment in the strainer vault and excavating the discharge valve vault

1 Pueblo Dam Connection (PDC)

Complete: PDC1A (ASI Constructors)

Ongoing: Garney Construction is finalizing closeout of PDC1B – a 0.3-mile pipeline that connects the new outlet works (PDC1A) at Pueblo Dam to JPS and the Pueblo West Pump Station.

Focus: Completing administrative closeout activities