

# 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 November 2014, plans for December 2014, and key performance details for Phase 1.

### Water Treatment Plant & Finished Water Pump Station

**Accomplishments:** Began installation of large diameter pipe and valves in the main process building, continued finished water pipeline work across Space Village Ave., began installation of 84-inch diameter raw water pipe from the raw water tank to the connection point of North Pipeline 2B, and completed exterior painting and began dome painting at the raw water storage tank.

**Upcoming:** Begin roof construction of the finished water pump station electrical building, commence testing the raw water storage tank, continue erecting structural steel for several buildings, and progress masonry work at the finished water pump station and electrical building.



Construction work across Space Village Ave.



Installation of 84-inch diameter raw water pipe

### Raw Water Pump Stations

**Accomplishments:** Continued erecting structural steel and reinforcing the pump station building at Juniper Pump Station; began installation of interior pipe inside the pump station building and continued installation of 66-inch diameter and 72-inch diameter pipe at Williams Creek Pump Station; and completed installation of the concrete floor in the pump station building and a 48-inch diameter valve in the discharge valve vault (regulates flow of water) at Bradley Pump Station. **Upcoming:** Prepare for delivery of discharge surge tank and complete erection of pump station building's east retaining wall at Juniper Pump Station; prepare for tie in of pump station to North Pipeline 1A and backfill of the surge tank to install 66-inch diameter pipe at Williams Creek Pump Station; and complete concrete placement of the flow meter vault lid (measures flow rate of water) and installation of 36-inch diameter valve in the surge tank at Bradley Pump Station.



Installation of interior pipe at Williams Creek Pump Station

### South Pipeline 4A Central & North Pipeline 2B



Carrier pipe cart to install pipe within South Pipeline 4A Central



Installation of pipe at North Pipeline 2B

**South Pipeline 4A Central Accomplishments:** Completed tunnel excavation and cleanup of tunnel area, finished installation of fiber optic conduit, and received carrier pipe carts that will assist in installation of pipe in the tunnel. **Upcoming:** Begin installation of carrier pipe within the tunnel and progress final grading and revegetation activities at the pipe east of the tunneling retrieval shaft.

**North Pipeline 2B Accomplishments:** Completed 95 percent of total pipe installation, welding, and placing CLSM (controlled low-strength material used for backfill) and finished tunneling underneath U.S. Highway 94. **Upcoming:** Complete pipe installation, commence cleanup of site, and begin preparing for tie-in at tunnel and hydrostatic (pressure) test.

## SPOTLIGHT

### SDS Hosts Pueblo Boys & Girls Club for Career Day

The SDS Juniper Pump Station team hosted about 30 young people (ages 9 to 13) from the Pueblo Boys & Girls Club on November 7 for an afternoon of educational, hands-on activities at the construction site in Lake Pueblo State Park.

"It's great that the SDS team took the time to introduce these kids to this line of work that is out there," said Dave Pate, who sits on the [Pueblo Boys & Girls Club](#) Board of Directors and accompanied the club on the field trip. "This really opened their eyes. A lot of these kids don't know that there are these types of career opportunities right in their backyard."



The visit provided a fun and interactive experience for the youth to learn more about careers in construction and engineering while also showing them how pipelines and pump stations deliver water. A variety of career professionals associated with the SDS project from Archer Western Construction, MWH, and Colorado Parks and Wildlife, led the groups of children as they sat inside construction equipment, constructed a model pipeline and water delivery system, learned about wildlife from a park ranger, practiced surveying, and toured nearby construction work.



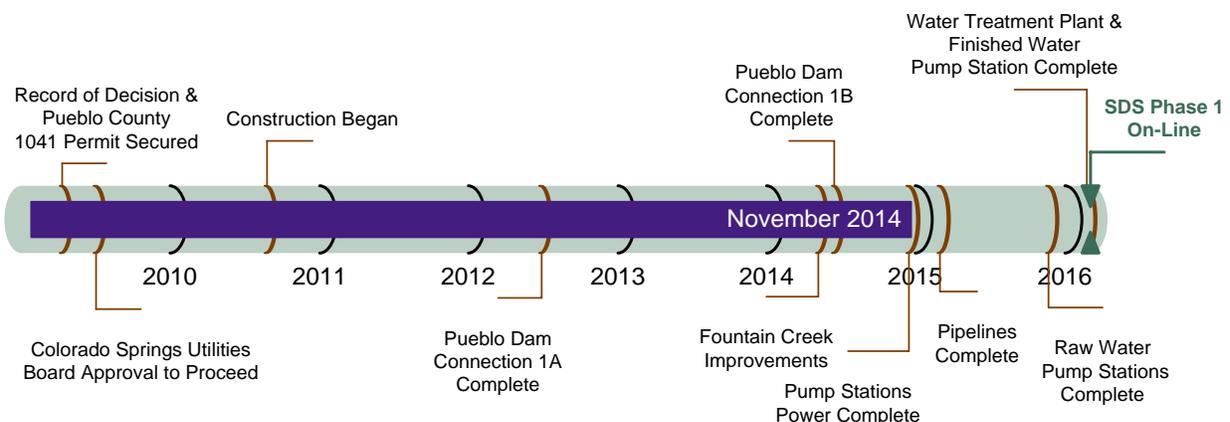
"This was a phenomenal opportunity for our youth to be exposed to a wide variety of careers, especially for our girls who are not always introduced to the vast possibilities available to them in nontraditional [STEM careers](#)," said Becky Medina, Vice President of Operations for the Pueblo Boys & Girls Club.

The Pueblo Boys & Girls Club works with young people from challenging economic, social, and family circumstances to ensure that they have greater access to quality programs and services that will enrich their lives and futures. The field trip to the SDS construction site supports the club's mission to help area youth learn and grow, build skills, develop strong character, and experience new opportunities.

## 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.

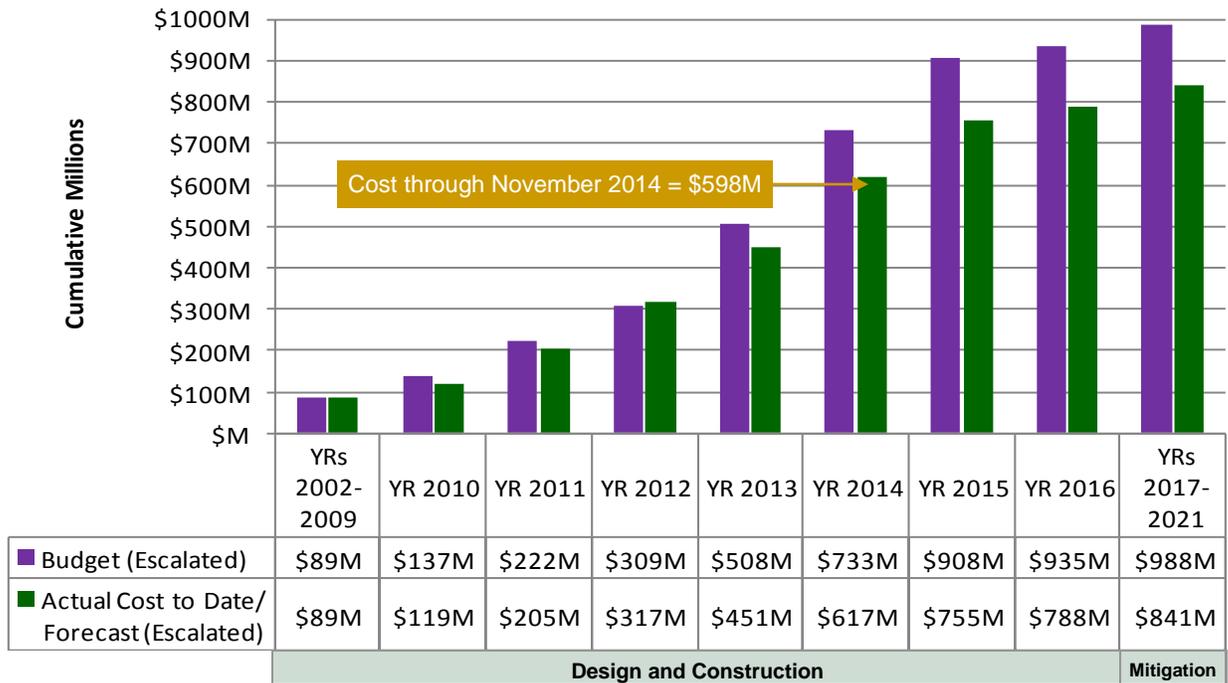
**Figure 1 – Schedule Progress for Major SDS Phase 1 Projects**



## Cost Summary

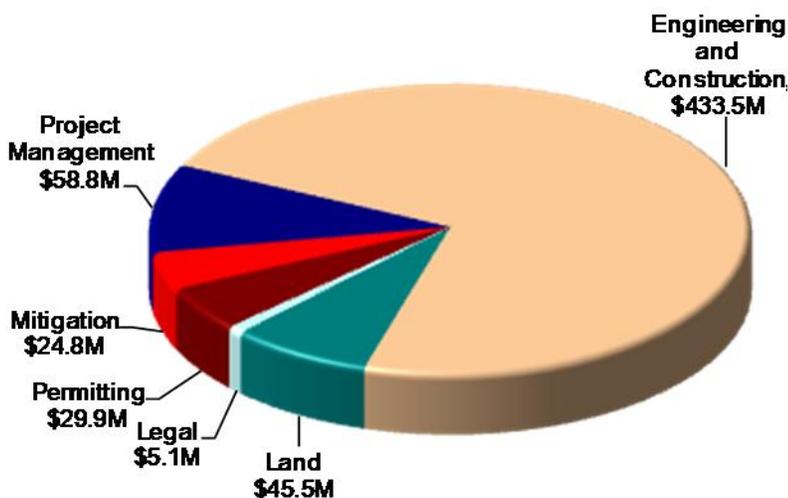
**Figure 2** shows the budget for Phase 1, actual costs through November 2014, and forecasted costs for Phase 1. **Figure 3** shows the distribution of the actual costs. Key financial details are summarized below. The budget used to measure progress was established by the Colorado Springs Utilities Board 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 November 2014**



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.

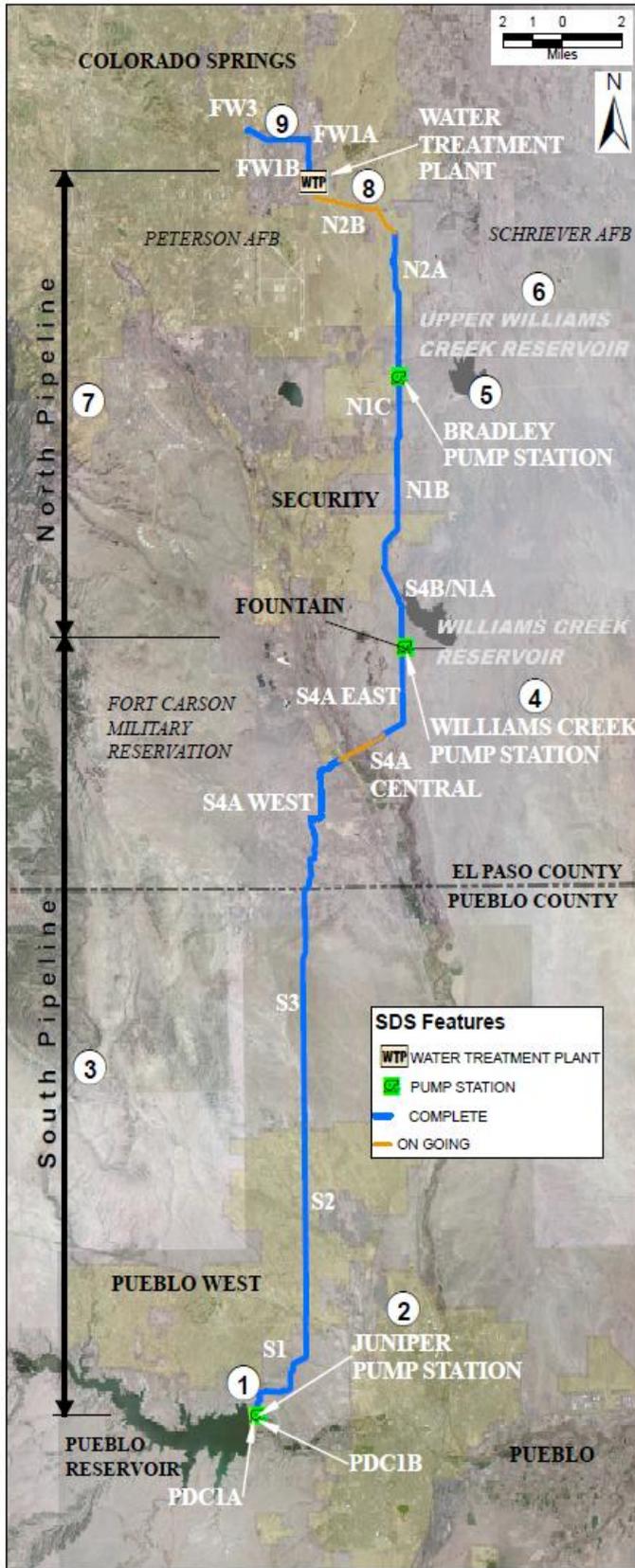
**Figure 3 – Distribution of Phase 1 Direct Costs through November 2014 (\$598M Total)**



### 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 \$598 million, with a majority expended on engineering and construction, permitting, land, and management activities.
- Forecasted costs for 2014 are \$166 million with a cumulative expenditure of \$617 million by the end of 2014.

Figure 4 – Phase 1 Projects Status Map



Visit [www.SDSwater.org](http://www.SDSwater.org) for additional information.

**9 Finished Water Pipeline (FW)**

**Complete:** FW1A, FW1B (Garney Construction)

**Ongoing:** Garney Construction is concluding construction 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:** Progressing masonry work, installation of mechanical and electrical work, and construction at Space Village Ave.

**7 North Pipeline (N)**

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

**Ongoing:** Garney Construction is constructing N2B – a 3.2-mile pipeline connecting N2A to the WTP.

**Focus:** Installing pipe and tunneling underneath U.S. Highway 94

**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 land

**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 78 and 66-inch diameter pipe and progressing backfill of discharge valve vault

**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:** Completing concrete placement of flow meter vault lid and installing 72 and 66-inch diameter pipe

**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:** Completing tunneling, cleanup, installation of fiber optic conduit, and installation of pipe

**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:** Continuing erection of structural steel and electrical work

**1 Pueblo Dam Connection (PDC)**

**Complete:** PDC1A (ASI Constructors)

**Ongoing:** Garney Construction is concluding construction 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