

AURORA WATER CAPITAL PROJECTS UPDATE

NOVEMBER 2018

PROJECTS UNDER CONSTRUCTION

Listed by Ward(s) in which construction is occurring. "All" indicates the project benefits the entire system specified and work may be occurring outside the city limits.

	WARD	PROJECT NAME	DESCRIPTION	LOCATION	SYSTEM(S)	STATUS
1.	I	Lower Westerly Creek Flood Control Improvements at Montview Boulevard	The Westerly Creek Flood Control Improvements project will replace two existing box culverts and construct a 60' clear-span bridge, while improving approximately 2,500 linear feet of channel upstream and downstream of Montview Boulevard.	The focus of the project is at Montview Boulevard, between Chester and Beeler Streets.	Storm Water	Denver has completed their review and comments are being incorporated into the LOMR package. Urban Drainage, Denver and Aurora are setting a meeting with FEMA to determine how to regulate the flood plain based on two-dimensional modeling. Denver, Urban Drainage and Aurora met on August 22 to finalize the flood plain delineation which will be acceptable to all parties. An amendment, negotiated to incorporate Denver's concerns about the flood plain delineation, is being routed for approval.
2.	I	Sewer Improvements for Lima Street Alley and Paris Street Alley at Montview Boulevard	This project will address maintenance issues that have cause nuisance sanitary sewer backups.	This work is along Lima and Paris, from Colfax to Montview and down Montview to Dallas Street.	Waste Water	The project is moving through the City Council approval process. Construction is expected to begin in January 2019 and continue through October 2020.
3.	II	Sand Creek Interceptor Cured-in-Place Pipeline (CIPP) Rehabilitation Project - Airport Boulevard to Chambers Road	Potential environmental impacts associated with sanitary sewer upgrades will be reviewed in this study.	The project will be focused in the area between Chambers and Airport roads.	Waste Water	The project is out for bid.
4.	II	Storm Sewer Repair at Tower Road and East 19th Avenue	An existing 18" storm sewer corrugated metal pipe (CMP) that crosses under Tower Road has collapsed. The project consists of furnishing all labor, materials, equipment, tools and supplies to remove the failed CMP pipe and replace it with a new 18" reinforced concrete pipe.	This on-call project is located in Tower Road, between East 19th Avenue and Montview Boulevard.	Storm Water	Construction has been completed and this project will be removed from the spreadsheet next month.
5.	II	Flow Control Vault at East 6th Avenue and Powhaton	This is an on-call project to construct control vaults that will supply reusable raw water.	The project is located at East 6th Avenue and Powhaton.	Water	The contractor is in the process of constructing a pre-cast vault which will be completed and ready for installation in December.
6.	II	Sand Creek Water Reclamation Facility - Biological Nutrient Removal (BNR) Rehabilitation Project	This project includes replacing four submersible mixers, providing a spare mixer, replacing a 24" plug valve, a 12" ball check valve, and 35 feet of 12" pipe.	This project will be located at the Sand Creek Water Reclamation Facility.	Waste Water	The project is under construction and will be completed by December 31.
7.	III	Westerly Creek Tunnels Rehabilitation Project	This project will design measures to repair the corroding steel reinforcement in the existing concrete box culverts where Westerly Creek crosses under East Exposition and East Kentucky avenues.	The work will be located at East Exposition and East Kentucky avenues.	Storm Water	Project design has been completed and bid documents are prepared. Construction is expected to begin in spring 2019.
8.	III	Easterly Creek Improvements - First Avenue and Kenton Street Detention Pond	This project will design and construct a regional detention pond in the Easterly Creek Basin. Once completed, the pond will substantially reduce flood flows downstream.	First Avenue and Kenton Street.	Storm Water	Staff attended the regularly scheduled Highland Park East neighborhood meeting on October 4, to share information about the project with the community. The contractor mobilized after Thanksgiving and is currently completing pre-construction activities.
9.	V	Cherry Creek Well Field and Controls Rehabilitation	This project includes final design, bid and construction phase engineering support services for the second phase of the Cherry Creek Well Field Rehabilitation Project. The control system at CCWF will be rehabilitated and improved to allow for reduced maintenance and delivery of raw water to the Storm Soccer Club.	Arapahoe Road, west of South Chambers Way.	Water	Punchlist walk-throughs will begin in December.

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10.	V	Griswold Water Purification Facility PLC Replacement and Network Improvements	This project will replace the Programmable Logic Controllers (PLC) that automate the process control at the treatment facility, as well as upgrade security and wireless coverage for Operations.	The work is located at the Griswold Water Purification Facility.	Water	Process workshops have been scheduled for December. The equipment list has been developed. Network and architectural improvements are advancing in design.
11.	V	Griswold Air Scour Improvements	Griswold Water Purification Facility.	The work will increase the efficiency and safety of air scour piping in four of the gravity filters at Griswold.	Water	New air piping is installed and repair to filter five is complete. Plans for disinfection of filter 5 are underway. Construction will be completed in late 2018.
12.	V	Buckley and Hampden Inlet Replacement	An existing drainage inlet is undersized, which causes the grate to clog with debris and promote localized flooding. The project will replace the existing combination inlet with a 10' Type R inlet.	The work is located on South Buckley Road, just north of the East Hampden Avenue intersection.	Storm Water	An on-call contractor has been chosen to perform the work. Inlet construction will begin after utility issues are resolved.
13.	VI	Lift/Pump Station Miscellaneous Improvements - Work Package No. 3 (Aurora Pump Station Improvements)	This project includes general electrical and mechanical improvements to the Aurora Reservoir Pump Station. Improvements will be delivered using the Construction Manager/General Contractor (CM/GC) delivery method.	The Aurora Reservoir Pump Station is located on the north side of the Aurora Reservoir.	Water	Construction of the building superstructure continues. Construction to be complete late 2019.
14.	VI	Trickle Channel at Blow-off Valve 25VW001	A potable water blow-off valve has been rendered inoperable because of drainage discharge from a storm sewer outlet pipe. The trickle channel will route storm water around the blow-off so it will be accessible for operation.	The project is located in an easement near East Plymouth Drive and South Elk Court.	Storm Water	The project will re-bid in January 2019.
15.	VI	Lift/Pump Station Miscellaneous Improvements Project - Murphy Creek Lift Station Odor Control Upgrades	The lift station's existing odor control system (a soil bio filter) has reached the end of its useful life and is no longer meeting odor reduction objectives. Options for replacing or improving the soil bio filter were evaluated. Based on airflow, anticipated odorant loading and cost effectiveness, a carbon adsorption system has been identified as the preferred replacement option. This project entails the procurement and installation of a carbon adsorption system, and all lift station improvements necessary to accommodate the new system.	The Murphy Creek Lift Station is located on South Harvest Road, south of East Quincy Avenue.	Waste Water	Construction of subsurface electrical and mechanical improvements began in late November, upon the delivery of the carbon adsorption system. Above grade improvements will continue through December. Substantial and final completion are scheduled for December and January respectively.
16.	All	Aurora Reservoir Outlet Tower Hydraulic System Repairs	This project will replace the existing hydraulic system on the outlet tower that has reached the end of its service life. Additionally, the project will rehabilitate other components on the tower that are in need of repair/replacement and address items from the annual SEO report.	Construction is at the Aurora Reservoir Outlet Tower.	Treatment	Fabrication on the Gate 5 yoke is delayed by a couple of weeks as divers had to verify some critical dimensions under water at the tower. It is anticipated that final testing will be pushed into January.
17.	All	System Wide Uninterruptible Power Supply (UPS) Project	There are approximately 60 water and waste water facilities that need UPS replacements. This project will design those replacements.	Work will occur at approximately 60 locations throughout the city.	Water, Waste Water, Storm Water, Reuse	Six UPS units had to be sent back to the manufacturer for repairs. Once these units are received, final installations will be scheduled.
18.	All	North Campus Well Field Maintenance and Rehabilitation	This project entails the mechanical cleaning of 17 groundwater production wells located at the Prairie Waters north campus well field. The project also includes the rehabilitation and/or replacement of excessively corroded and worn groundwater production equipment in the wells. Well cleaning and rehabilitation will be phased over the next three years. Five wells were addressed in 2017, six will be addressed in 2018 and the remainder will be addressed in 2019.	The Prairie Waters north campus well field is located on the west bank of the South Platte River, midway between Brighton and Ft. Lupton.	Water	Field operations begin on November 16, however recently imposed tariffs continue to delay production and delivery of the required submersible motors and pumps. Delivery of this equipment is expected to be fragmented extending through February 2019. Contractual substantial and final completion should occur in February and March respectively. These milestones are anticipated to slip approximately one month due to the recently identified production and delivery delays.

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19.	All	Storm Sewer CMP Rehabilitation - Task 4	Corrugated metal pipe (CMP) is commonly used in stormwater culverts. All CMP lines that were identified as being in poor condition have been packaged together and videos are being reviewed to determine adequate rehabilitation. The lines included in this project require some excavation in the right-of-way.	The work is occurring at nine various locations throughout the city.	Storm Water	Construction is in progress and all work should be completed by early January 2019.
20.	All	Spinney Mountain Reservoir Dam Outlet Works Phase II - Painting	The project consists of furnishing all labor, materials, equipment, tools and supplies to sand blast and recoat the interior and exterior of a 96" diameter section of outlet pipe and the exterior of a 16" diameter bypass section. There will also be spot prep and painting required inside the 425', 96" diameter south conduit from the intake to the outlet.	Spinney Mountain Reservoir is located near Hartsel, Colorado.	Water	The project is substantially complete. It will be removed from the spreadsheet next month.
21.	All	Spinney Mountain V-Ditch and Drainage Project	An existing concrete V-Ditch drainage channel needs repairs at the north downstream groin area. There is also a seep area that boils water adjacent to the channel that needs to be collected in an underground drain system. The State Engineer's Office has identified this as an area of concern and action is required in order to maintain stability at this location.	The project is located at Spinney Mountain Reservoir near Hartsel, Colorado.	Water	The project is substantially complete. The final walk-through was held November 30. This project will be removed from the spreadsheet next month.
22.	All	Aurora Reservoir Instrumentation Improvements Project	This project will replace aging and defective geotechnical instrumentation and equipment that is used to monitor the water level and seepage rates in various areas of the reservoir's dam.	Aurora Reservoir.	Water	The contractor mobilized on November 26. Currently, stormwater BMPs are being set up at the site and the contractor's workers are receiving their safety training from staff at the Binney Water Purification Facility.
23.	All	Wastewater Interceptor Inspection Project	Approximately 50,000 feet of concrete and clay pipe interceptor, 24" and greater, will be inspected under this project.	Work will occur at multiple locations throughout the city.	Waste Water	Inspections are slated to begin December 3 and take approximately five weeks to complete.

PROJECTS UNDER DESIGN

Listed by Ward(s) in which construction is occurring. "All" indicates the project benefits the entire system specified and work may be occurring outside the city limits.

	WARD	PROJECT NAME	DESCRIPTION	LOCATION	SYSTEM(S)	STATUS
24.	I	Fitzsimons-Peoria Storm Water Outfall Study	This study will examine the Fitzsimons-Peoria Outfall system and propose new alternatives for a cost effective solution to manage/convey for managing Storm Water in this area.	North Peoria Street from Sixth Avenue northward to an existing outfall at Sand Creek.	Storm Water	The Guaranteed Maximum Price (GMP) was delivered on November 20. On November 12, Work Packages #2 and #3 were submitted for the initial engineering review. Work Packages #4 and #6 are at 60 percent design. Public meetings were held November 13 and 14. A third meeting for businesses will be held In January Staff will hold a second meeting with life safety personnel on December 6.
25.	I	Stanley Marketplace Water Quality Pond	This project will realize the construction of a water quality pond west of the newly redeveloped Stanley Marketplace. The pond will be located west of the new parking lot.	Northwest of East 23rd Avenue and Dallas Street.	Storm Water	A consultant has been selected for the project and staff are negotiating scope, fee and schedule. Staff is pursuing coordination with other city departments to ensure the best possible product.
26.	II	First Creek Interceptor	This is an interceptor connecting the ProLogis lift station and the First Creek Lift Station, to eliminate the ProLogis lift station.	Approximate location of the First Creek Lift Station is off Piccadilly Road and East Copperleaf Boulevard. The ProLogis Lift Station is located on Smith Road.	Waste Water	Project stakeholders have agreed on a construction corridor for the project and the amendment for the design has been approved. Alignment adjustments are being made and we anticipate submittal to CDPHE by mid-August. Easement requests have been sent to affected land owners. We anticipate this project to bid in the first quarter of 2019.
27.	II	Buckley East Tollgate Creek	This project will develop stream improvements identified in Major Drainage Plan (MDP) to 30 % design. This effort will support an Intergovernmental Agreement (IGA) for the land swap between the City of Aurora and Buckley Air Force Base.	This project is located in the vicinity of Buckley Air Force Base for East Tollgate Creek.	Storm Water	The project team is currently working to determine cultural resources through the State Historic Preservation Office. Cultural resource determinations and Air Force procedures are proceeding slowly. Additional design data being collected includes soil samples for geotechnical determination. Final design was targeted for September 5 but Air Force procedural delays have pushed back the schedule. Staff is currently pursuing an Amanda submittal in early December.

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28.	II, VI	Storm Water Corrugated Metal Pipe (CMP) Rehabilitation - Task 5	The project involves the rehabilitation of nearly 1,700 feet of storm sewer pipelines ranging in diameter from 84" to 132", utilizing the Centrifugally Cast Concrete (CCCP) method.	Rehabilitation will occur at four locations in Ward II and one location in Ward VI.	Storm Water	The design report has been submitted for review and approval.
29.	II, VI	Sand Creek Water Reclamation Facility - Generator Relocation	A design engineer will be retained to prepare design drawings for the relocation of an existing generator that is no longer needed at the Wemlinger Water Purification Facility.	Work will occur at the Wemlinger Water Purification Facility and the Sand Creek Water Reclamation Facility.	Water Waste Water	Staff are working to assess the viability of project design this year.
30.	III, V	2018-2019 Waterline System Improvement Project	With the help of the Operations Team, Engineering Services has identified a priority site on Havana Street, between East 1st and East 6th avenues. Work at this location has been elevated due to planned improvements at the old Fan Fare site and the need to improve water pressures.	The priority location is on Havana Street, between East 1st and East 6th avenues. The balance of the work will be located between East 1st to East 3rd avenues and Dayton to Havana streets.	Water	Final touches on plans have been completed and were submitted to Public Works for review and approval on November 26. Easement acquisition is being addressed through Real Property and soil mitigation issues are being investigated through the State of Colorado, Division of Oil and Public Safety. Plans review by the City and County of Denver is in process for the Dayton Street and East 1st Avenue intersection.
31.	III, V	Havana Street 30" Water Line Renewal Project	This project follows the condition assessment that was completed in 2017 and will determine the best rehabilitation method and design for the water line renewal within Havana Street.	The project is located on Havana Street between 1st Avenue and 6th Avenue.	Water	The 30" pipeline renewal alternatives analysis meeting was held November 26 and the team picked a PVC slip lining alternative. The engineer will begin design work per the chosen alternative.
32.	IV	Westerly Creek/Canterbury Improvements Project (Canterbury Pond)	A Major Drainage way Plan (MDP) was completed for Westerly Creek in 2015. Recommendations in the MDP included a detention pond in Canterbury Park and additional channel improvements to help alleviate potential flooding along Westerly Creek. The project will include a hydrologic and hydraulic model and a Conditional Letter of Map Revision (CLOMR) to verify improvements are functioning as needed.	Westerly Creek, between Florida and Mississippi avenues.	Storm Water	Project design alternatives have been prepared and are being reviewed by staff. Aurora Water and PROS staff made a joint presentation to the Village East HOA to discuss goals and solicit project input from the community.
33.	V	Smoky Hill Pump Station Improvements	This project will evaluate the existing pump station conditions and propose cost effective improvements to address maintenance issues of the aging infrastructure.	The Smoky Hill Pump Station is located at 16801 E. Smoky Hill Road.	Water	Site remediation plans and bid documents are complete. Construction is expected to begin in January. The engineer is finalizing the Zone 5 hydraulic evaluation and the condition assessment for the Smoky Hill Pump Station. The design of pump station improvements will begin in early 2019.
34.	V	Zone 4/3 Pressure Relief Valve Project	This project will enable Operations to move water from Zone 4 into Zone 3, maximizing the distribution of the Binney Water Purification Facility water during drought conditions.	Griswold Water Purification Facility, at 14201 East Hampden Avenue.	Water	Initial results of modeling show limited functionality on the installation of this valve. A meeting with Operations and the distribution model manager to evaluate options for moving water into Zone 3 elsewhere in the system.
35.	V	Hutchinson Pond Sediment Removal Project - Phase II	Improvements to the intake structure and aeration system will be made.	Hutchinson Pond.	Storm Water	Final design is complete and the Statement of Qualifications (SOQ) are being reviewed. The project will advertise for bid in December/January.
36.	VI	Gun Club Pump Station Preliminary Design	This project will determine the overall performance of the existing pump station. Those items in need of rehabilitation and/or replacement will be identified to help improve or increase the service life of the station to meet the future needs of the service area. A preliminary design will be provided with prioritized recommendations and cost estimates.	The Gun Club Pump Station is located just south of East Quincy Avenue and Gun Club Road.	Water	Preliminary design work is in progress. Waiting for the report. The next step is to submit the Addendum for full design work.
37.	VI	Wemlinger Water Purification Facility CT Chamber	This project will design and construct a chlorine contact basin at the Wemlinger Water Purification Facility, which will better enable the facility to meet all regulatory requirements at full rated capacity.	The work is located at the Wemlinger Water Purification Facility on East Quincy Avenue.	Water	Received approval letter from the Colorado Department of Health and Environment (CDPHE) in late November. Minor site plan amendment revisions will be completed in early December then the project will be ready to bid.
38.	VI	Wemlinger Water Purification Facility PLC and UPS Conversions	This project will replace the Programmable Logic Controllers (PLC) that automate the process control at the treatment facility, as well as upgrade security, wireless coverage and electrical reliability.	Wemlinger Water Purification Facility at 18301 East Quincy Avenue.	Water	Bids are under review and the status of the project is pending.

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39.	VI	Binney Water Purification Facility UV/AOP Clean-in-Place Improvements Project	The purpose of this project is to develop an effective and economical method of cleaning the ultraviolet (UV) lamps.	The project is located at the Binney Water Purification Facility.	Water	Design and permitting are complete and contractors have been pre-qualified. The project will advertise in December.
40.	All	Spinney Mountain Caretaker Facilities	The existing caretaker facilities are modular and are 40+ years old. They must be replaced.	The project is located at Spinney Mountain Reservoir near Hartsel, Colorado.	Water	There is no change in the status of the project in November, as plan reviews and approvals are still in progress. The general contractor is working with the architect to secure the drawings for the facilities. It could take up to five weeks to acquire the drawings then they will be passed to Park County building department for approval. Park County could take two months to review and approve the drawings. Because these reviews will not be completed before December/January, excavation of the basement will may be delayed due to frozen ground, and that will likely push the excavation date into March or April.
41.	All	Wild Horse Reservoir	This project involves the development of new storage reservoir for the Homestake pipeline.	Wild Horse Reservoir will be located just south of Hartsel, Colorado, off Highway 9. County Road 53 borders the south property line.	Water	The purpose and need statements are nearly complete. Staff continues to evaluate potential reservoir sizes and permitting needs.
42.	All	North Campus Horizontal Wells Pilot Project	This project will serve to obtain the required hydrogeological data to assist with the development of a side-by-side comparison of two types of horizontal wells and to install a portion of the permanent infrastructure that will provide access to the east side of the South Platte River. The permanent infrastructure will include a South Platte River crossing and piping to connect to the existing raw water supply system. Once the required site data is obtained, the project will advance to designing a plan for a pilot project that will compare two types of horizontal wells, a Ranney collector well and a channel well. The goal of the pilot project will be to develop a cost-per-gallon-produced water rate that includes: 1) impacts to treatment costs based on the quality of water obtained, 2) required permitting, 3) infrastructure design/installation, 4) operation and maintenance and 5) to keep in service the most productive technology.	North Campus and Ocker property located near Highways 8 and 85.	Water	A draft Phase I Environmental Assessment is complete. Staff prepared an Request for Proposal (RFP) and it was released at the end of September. Proposals were submitted on October 22 and staff is currently evaluating the proposals. Interviews with consultants are expected to occur in December.
43.	All	Rampart Appurtenance Rehabilitation - Phase V	This project includes the rehabilitation of critical appurtenances of the Rampart raw water pipeline during the 2018-2019 winter shut-down.	Work will occur at Rampart Reservoir and Quincy Avenue, from Smoky Hill to the Wemlinger WPF.	Water	The project team has decided to move forward with work at two sites, including the abandonment/disconnection at the Roxborough Treatment Plant and the intertie at the Foothills Treatment Plant. The engineer has the package ready and staff will expedite getting a contractor on board so the work can be completed by May 2019.

STUDIES AND ASSESSMENTS

Listed by Ward(s) in which construction is occurring. "All" indicates the project benefits the entire system specified and work may be occurring outside the city limits.

	WARD	PROJECT NAME	DESCRIPTION	LOCATION	SYSTEM(S)	STATUS
44.	V	Griswold Chemical Feed	This study will examine the overall treatment process and the ways in which the chemical addition can be modified to improve safety and reliability, and potentially reduce chemical costs.	Griswold Water Purification Facility on Hampden Avenue.	Water	Data gap analysis and Zeta Potential evaluation were completed. The contractor has initiated the next phase of the study to evaluate background water source information, including monitoring plan and data quality.
45.	VI	Quincy Reservoir Intertie and Aeration System Improvements Project	An assessment of existing development, evaluation of alternatives, conceptual and preliminary activities for three Aurora Water systems at Quincy Reservoir, including reservoir water quality, the intertie and tower trash racks.	Quincy Reservoir marks the location of this project.	Water	Final drawings are scheduled to be completed by the end of 2018. A 90 percent review of the drawings will be done on December 11, with any changes to be completed by the end of the year. Drawings will go through the permitting for construction approval. A left turn lane will be added from East Quincy Avenue, to accommodate traffic entering the dog park.

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46.	All	North Campus Master Plan (NCMP)	This project entails the development of a North Campus Master Plan (NCMP). The NCMP will represent a comprehensive overview of the city's North Campus water source, storage, treatment and delivery systems. The plan will also support the capital planning necessary to maintain current conditions and meet future expansion needs.	The North Campus is located in both Adams and Weld counties, along the South Platte River, in general proximity to Fort Lupton and Brighton.	Water	Project activities began in late August with the collection of background/baseline water quality samples, consultant briefings and tours. Workshops with staff on various aspects of the NCMP began in September and remain ongoing. Two of five reports associated with this project were finalized in September and a third was distributed for city review and comment. Gap analysis and capital improvement planning activities are scheduled for November and December respectively. Project completion is expected in March 2019.
47.	All	North Campus Electrical and Communication System Improvements	Ongoing expansion of the North Campus necessitates modification to and expansion of existing electrical and communication systems. Under this project, alternatives for modifying and expanding these systems will be identified and evaluated. The project will also evaluate options for addressing obsolescence and improving the reliability of electrical systems at select North Campus facilities.	The North Campus is located in both Adams and Weld counties, along the South Platte River, in general proximity to Fort Lupton and Brighton.	Water	The design engineer has begun their evaluation of the existing communications/electrical system. Design of proposed improvements is scheduled to be complete in February 2019.
48.	All	Sand Creek Parallel Interceptor	This is a study to determine the feasibility of paralleling the Sand Creek Interceptor from the Sand Creek Waste Water Reclamation Facility to a location near the intersection of 13th Avenue and Tower Road. Three projects from the 2017 Waste Water Master Plan - SC7, SC8 and SC12 - will be covered. The study will optimize the recommendations with respect to developing a capital improvement plan to deliver the projects.	Sand Creek Waste Water Reclamation Facility at 13th Avenue and Tower Road and the North Sand Creek Interceptor near North Peoria Street.	Waste Water	A second workshop, using a paired comparison analysis, was held in November to further reduce the alternative route selection to less than five. The contractor will hold two additional workshops to select the final route and develop a probable construction cost.