

# AURORA WATER CAPITAL PROJECTS UPDATE

JUNE 2019

## 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.   | Stormwater  | The draft LOMR has been submitted to the Urban Drainage and Flood Control District (UDFCD) for review on behalf of the Federal Emergency Management Agency (FEMA). FEMA has requested additional information that is being assembled.   |
| 2.  | I    | Fitzsimons-Peoria Stormwater Outfall Project  | This Fitzsimons-Peoria Outfall Project will provide a cost effective solution to manage and convey stormwater in this area.   | North on Peoria Street, from Quari Court to an existing outfall at Sand Creek.   | Stormwater  | Work Packages 2 and 3 will be given Council reconsideration on July 8. The tunnel shaft is complete and installation of the East Colfax lateral has begun. Tunneling is expected to begin in mid-July.  |
| 3.  | 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 East 22nd Avenue to Dallas Street.   | Waste Water | Construction on Lima Street and 19th Avenue continues. The first tunnel work at Peoria Street and 14th Avenue has begun.  |
| 4.  | 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 | Restoration to park areas where installation was done is underway. Substantial completion for the project will be issued in early July. <b>This project will be removed from the spreadsheet next month.</b>  |
| 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       | Factory Acceptance Testing (FAT) of the automation panel was completed in June. Site installation of the panel along with field testing will be done in July. Water is being supplied to the client currently.  |
| 6.  | II   | 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       | Construction on Havana Street, between 3rd and 6th avenues, is underway. The contractor has mobilized two crews to expedite the work and minimize impacts to businesses on this arterial.   |
| 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.   | Stormwater  | A purchase request form has been routed to the Purchasing Department. The project should go out for bid in July.  |
| 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.  | Stormwater  | Phase 2 water line relocation is ongoing as is work on pond excavation. The contractor began work on the pond forebay mid-month as well as Phase 2 of the stormwater infrastructure. Overall the project is approximately 35 percent complete.  |
| 9.  | III  | Toll Gate Creek Confluence Channel Improvements Project   | The Toll Gate Creek Stream Confluence Improvements Project is located at the intersection of East 1st Avenue and Chambers Road. The project includes stream restoration, grade control, flood control earthwork and the revegetation of 10,700 feet of open channel along East and West Toll Gate Creeks and immediately downstream of their confluence with Toll Gate Creek. | Toll Gate Creek is located near East 1st Avenue and Chambers Road.   | Stormwater  | Work Package 2 was approved on June 3 and the floodplain permit was issued by Public Works the week of June 10. Upcoming activities include mobilization and initial erosion control installation. Channel construction activities will begin after erosion control measures are installed and inspected. |
| 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       | A request for Statement of Qualifications (SOQ) for construction, and also for possible integration, was issued in May. The project should bid in July and be awarded in August. Final completion is expected in June 2020.   |

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| 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                                 | A change order for Air Scour Piping Modification/Filter Media Replacement for Filters 3 and 8 was reviewed by City Council for approval on June 3 and the Period of Reconsideration expires on June 24. Work is expected to begin in July and be completed by the end of 2019.                       |
| 12. | 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                                 | Construction is underway. The estimated project completion date is May 2020.   |
| 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 is complete and equipment installation will continue through 2019. Construction will be finished later this year.  |
| 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 Stormwater 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.                              | Stormwater                            | A single bid was received on May 22nd (the previous bid opening received no bids from contractors). The bid was higher than the engineer's estimate so staff will meet with the contractor to discuss the bid and potentially negotiate a lower cost before a decision is made to award the project. |
| 15. | 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                                 | Excavation continues and the first process piping to be installed will occur in late May. Production of excavation efforts is slower than anticipated. Substantial completion is scheduled for May 1, 2020.  |
| 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                             | The System Acceptance Testing (SAT) was started on June 3. Several defective parts were found during the testing and these items have been ordered by the contractor for replacement. SAT testing will resume once the new parts have been installed, which is expected to occur in August.          |
| 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, Stormwater, Reuse | Final installation and System Acceptance Testing (SAT) of the five remaining UPS units will re-start in late summer when staffing resources are available to wrap up the project.  |
| 18. | All | Quincy Reservoir Improvements: Outlet Tower Trash Rack Replacement                                   | Replacement of the four existing trash racks at the reservoir outlet tower.  | Quincy Reservoir.  | Water                                 | The contractor has begun demolition of the existing trash racks at Gates 1, 2 and 4. Demolition of the trash rack at Gate 3 will begin after the other demolition work is complete and the Griswold plant has switched to one of the other gates for treatment.                                      |
| 19. | 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                                 | Testing and installation of equipment is underway. Substantial completion was achieved in late April. Final completion was achieved in June.   |
| 20. | 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                                 | Park County is requesting new sanitary leach fields for each facility. We applied for the permit and it has been issued. The foundation for the first building is nearly complete. The rough framing is underway.  |

## AURORA WATER CAPITAL PROJECTS UPDATE

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### 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   |
|-----|--------|--|---|---|-------------|--|
| 21. | 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.  | Stormwater  | The project is being rescoped to look at improving a longer reach of the creek.  |
| 22. | 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 | The project will be given Council reconsideration on July 8.   |
| 23. | 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.  | Stormwater  | Design plans are under Amanda review.  |
| 24. | II     | First Creek Lift Station   | The First Creek Lift Station services the First, Second and Third Creek Drainage Basins. The station is under sized for the area and the project will increase the station's firm capacity. Site work will include upsizing the pumps, generator and power.   | The approximate location of the First Creek Lift Station is near Piccadilly Road and Green Valley Ranch Boulevard, just east of Piccadilly Road.  | Waste Water | Design continues. The engineer has submitted their 30 percent plans and has conducted a design workshop.   |
| 25. | II, VI | Stormwater 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.   | Stormwater  | The project has advertised and bids will be opened and the contract will be awarded in July.   |
| 26. | 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 90 percent design review was completed with Operations on May 10. The contractor is proceeding with design to final completion.  |
| 27. | 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.  | Stormwater  | The hydraulic model showed less than anticipated flood reduction for the he proposed pond improvements so staff are reconsidering alternatives to maximize benefit. A decision on a new direction is expected in early July. |
| 28. | 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       | Design continues. The engineer has submitted their 50 percent plans and a design workshop was held this month.   |
| 29. | V      | 2020 Water System Improvement Project                            | With the help of Operations, areas where frequent water breaks have occurred and replacement needs are required have been identified.   | One project area will be located within Chambers Ridge, a multi-family complex near Chambers Road and Evans Avenue. Another project site will be within the Seven Hills sub-division near East Villanova Place and South Flanders Street. | Water       | The design contract has been awarded and design work will begin in July.   |
| 30. | V      | Hutchinson Pond Sediment Removal Project - Phase II              | Improvements to the intake structure and aeration system will be made.  | Hutchinson Pond.  | Stormwater  | Construction of the intake structure has been postponed to fall, at the end of the irrigation season, when pond dewatering will not have any impact on the maintenance of the adjacent open space.                           |

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| 31. | 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 | Design has reached and is now moving toward a status of 90 percent completion.   |
| 32. | 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 has been advertised.   |
| 33. | VI  | Gun Club Raw Water Expansion Project  | This project stems from a request from Heritage Eagle Bend Metro District to help supply water to the community golf course. Aurora Water offered to develop a non-potable water feed already benefitting Saddle Rock Golf Course. The expansion project entails upgrading the Gun Club Pump Station raw water system. Heritage Eagle Bend has contracted to complete project design and Aurora Water will assume responsibility for the construction.   | The Gun Club Pump Station is located just south of East Quincy Avenue and Gun Club Road. The pipeline that will fee Heritage Eagle Bend will tie into the existing 12" raw water line at Saddle Rock Golf Course, proceed to and follow the Piney Creek Drainage Way where it will cross under E-470 and then head south to an existing Heritage Eagle Bend pipeline, where the connection will be made. | Water | The Purchase Requisition and Authorization to Bid is routing for signatures. Advertisement for Bid will follow. Real Property is finalizing the E-470 agreement and easement needs with a property owner and utilities located just south of Arapahoe Road.  |
| 34. | 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 project is moving forward with reservoir sizing analysis. Staff is working with the BLM to obtain access to federal lands for geotech work. As part of the National Environmental Policy Act (NEPA) process, staff is beginning to assess potential alternative sites.   |
| 35. | All | North Campus Horizontal Wells Pilot Project                                   | This project will serve to obtain the required hydrogeological data on the Ocker property, to hire a consulting firm 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 using the Davis easement. 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 | Aquifer testing as been completed. The consultant is currently developing the groundwater model and is on target to wrap up work in mid-July.  |
| 36. | All | North Campus Well Field Maintenance and Rehabilitation Project                | 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 is being phased over three years. Five wells were addressed in 2017, six in 2018 and the remainder in 2019.  | The Prairie Waters north campus well field is located on the west bank of the South Platte River, between Brighton and Ft. Lupton.   | Water | An invitation to be for maintenance and rehabilitation work was advertised in mid-June. Bids are anticipated in mid-July.  |
| 37. | All | Sand Creek Water Reuse Facility and UPS Conversion Project                    | This work will replace the Programming Login Controllers (PLCs) and Supervisory Control and Data Acquisition (SCADA) network that automates the facility's process controls.   | The Sand Creek Water Reuse Facility is located at 11405 East 30th Avenue.  | Water | A request for proposal was advertised in April and four respondents submitted proposals. Short listed respondents were interviewed in mid-June with an announcement of the most qualified respondent identified by the end of the month. A formal negotiation of scope and fees will begin in early July. The project is expected to be complete in June 2021. |

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|-----|-----|--|---|--|-------|--|
| 38. | All | Rampart Appurtenance Rehabilitation Project - Phase VI | This project includes the rehabilitation of critical appurtenances of the Rampart raw water pipeline during the 2019-2020 shut-down.  | Work will occur on various appurtenances such as butterfly valves and vaults; manways; air relief valves and vaults; and blow-off vaults on the 54" conduit.                           | Water | This project continues to push toward 90 percent completion.   |
| 39. | All | Gilcrest Site Demolition Project                       | This project addresses the demolition and off-site disposal of six structures at the city's Gilcrest Reservoir. The structures are being demolished because they serve no current or future use, they are in the footprint of future mining operations and they are an unattractive nuisance. | Gilcrest Reservoir is a future augmentation surface storage complex located on the east bank of the South Platte River, approximately five miles west/southwest of Gilcrest, Colorado. | Water | An invitation to bid for demolition work was advertised in mid-June. Bids are anticipated in mid-July. |

### 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   |
|-----|------|--|---|--|-------------|--|
| 40. | 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       | The consultant is drafting 10 percent design with a capital investment plan. Submission of the final study report is expected in early July.   |
| 41. | 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       | The Building Department will be reviewing and approving the new electrical and HVAC. Public Works completed their first review and their comments were addressed and resubmitted for approval. The second round of reviews by Public Works is underway.                  |
| 42. | 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       | All principle elements of the North Campus Master Plan Project have been completed and provided to the City. The consultant currently is finishing all remaining work elements have been completed. <b>This project will be removed from the spreadsheet next month.</b> |
| 43. | 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       | An invitation to bid for the implementation of the first phase of recommended improvements was advertised in mid-June. Bids are anticipated in mid-July.   |
| 44. | 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 | The final alignment for the interceptor has been identified. The contractor is now developing a capital improvement plan for the recommended route.  |
| 45. | All  | Rampart Tunnel #2 Inspection                                       | The tunnel is periodically drained to inspect conditions and sediment transport.  | The work is located at Rampart Reservoir.  | Water       | The consultant is mobilizing and identifying teams for tunnel entry and inspection. Inspection to occur in October.  |
| 46. | All  | Wemlinger Water Purification Facility (WPF) Chemical Feed Study    | This study will examine the raw water characteristics, the site layout and the ways in which the chemical addition can be modified to maximize safety and reliability, and potentially reduce chemical costs.   | The study will be conducted at the WPF on East Quincy Av   | Water       | A Request for Proposal (RFP) has been issued by Purchasing. The consultant selection process will occur in June, with a planned award in early August.   |