# **Monthly Progress Report**

September 2017



















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### **Program Overview**

### **Program Overview**

#### Summary

The City of Enid, Oklahoma (City) has historically enjoyed an adequate supply of water resources to support consumers in Enid and its wholesale customers. However, the City's annual water demand has begun to exceed the annual yield of the existing groundwater supply, which has resulted in depletion of the aquifer system. To address this supply gap, the City initiated a Water Master Plan (by others) that recommended developing a new surface water supply from Kaw Lake to supplement the existing groundwater supply.

#### **Key Components**

#### **Intake and Intermediate Booster Pump Stations**

The intake and intermediate booster pump station will provide the means to pump water from Kaw Lake to Enid. This will include an intake structure on Kaw Lake and an intake pumping station. An intermediate pump station will be located about two-thirds of the way to Enid along the pipeline and will provide additional pressure necessary to convey the design flow to the treatment plant site.

#### **Pipeline**

The pipeline will convey the raw water from the proposed Kaw Lake intake structure to the proposed water treatment plant along a 70-mile direct corridor.

#### **Terminal Storage Reservoirs**

Terminal storage is employed to provide a constant supply of raw water to the new water treatment plant, and it can also be utilized to minimize costs associated with conveyance of raw water. As such, the main components of the terminal storage assessed for the current project were emergency storage and equalization storage. For this program, the City desires to separate the volume dedicated for equalization storage from the volume for emergency storage. Therefore, the terminal storage is divided into two components:

- Equalization (TSR EQ) storage used on a routine basis to meet peak demands
- Emergency (TSR EM) storage used only when raw water conveyance is not in service

#### **Water Treatment Plant**

A new surface water treatment plant will be needed to meet the water quality objectives necessary to provide safe drinking water as well as to meet the aesthetic desires such as taste and odor. These objectives can be met by a combination of conventional treatment to produce safe drinking with the addition of polishing to reduce objectionable tastes and odors.

#### Distribution

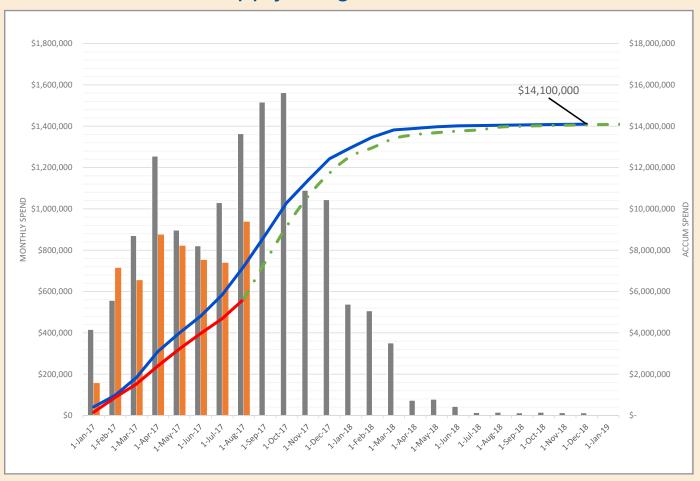
Distribution system improvements are necessary to blend the existing groundwater with the treated surface water and to connect the blended water into the existing City of Enid water distribution network.





## **Program Finance - Phase 2**

### Kaw Lake Water Supply Program CashFlow

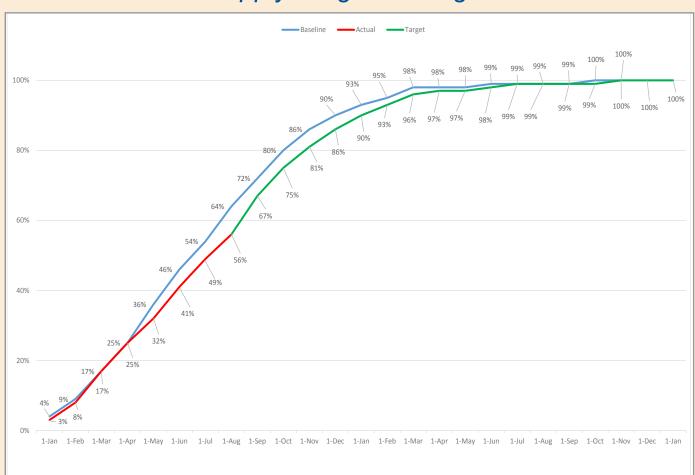


#### **Summary**

As of August 31, the accumulate spent is 40 percent and the planned spend is 51 percent. It is anticipated that cost will catch up when the schedule is recovered on geotechnical investigations.

## **Program Schedule - Phase 2**

### Kaw Lake Water Supply Program - August 2017



#### **Summary**

As of August 31, the schedule has an overall progress of 56 percent with a planned progress of 64 percent. The current issues causing delay in the schedule are access to private property, geotechincal investigations, and site selection for intermediate booster pump station.





### **Program Administration**

### **Program Administration**

### **Scope of Services**

Garver is providing project administration and controls initiation through Phase 2, including reporting on the various aspects of the program management, scheduling and budget status updates, coordination of regulatory and funding agencies, as well as stakeholders and public meetings. Primary deliverables include a Design Consultants Standards Manual and updating the Program Strategy Manual. In addition, the Garver Technical Review Committee is providing review and oversight of the deliverables produced by the Infrastructure Teams.



### **Project Update**

The Program Management Team continues to work on developing most of the items in the scope of services. Program strategy development continues with analysis of Program Management Information Systems. The Program's projected requirements and priorities are being used to evaluate the Program Management Information Systems products available. Project risk management activities are underway per the risk management process. Delays in access to private property, geotechnical investigations, and site selection for intermediate booster pump station continue to cause schedule delays. The Program schedule was revised to reflect the reorganized program activities to support the recovery schedule. Additional tasks were added for clarity of progress, and the sequence of activities was adjusted to allow development of infrastructure outside of the intermediate booster pump station.



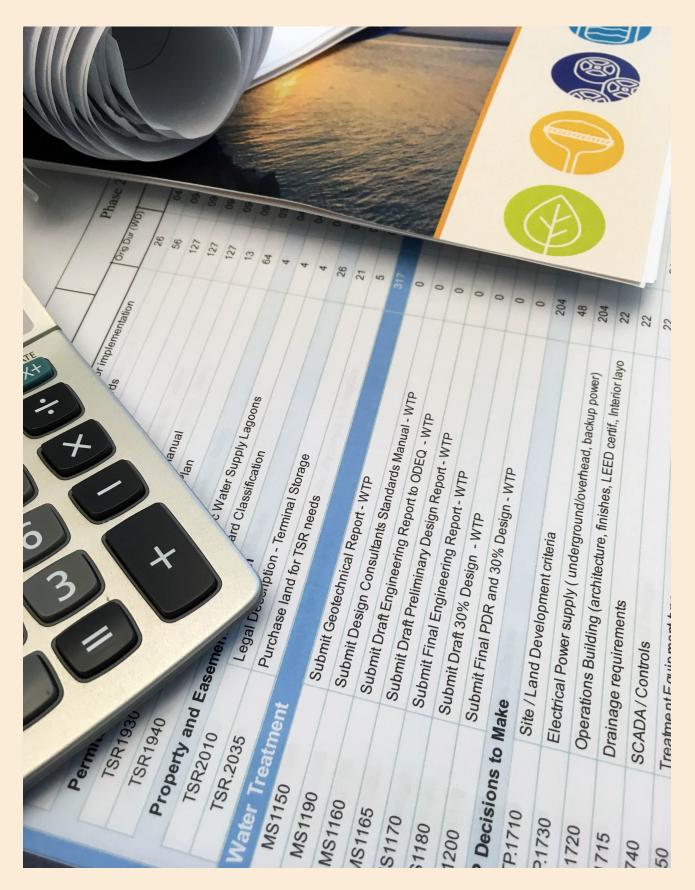
### Completed

- Organization and planning activity on the Program Strategy Manual
- Prioritized Program Management Information System Requirements and collected information for assessment
- Revised schedule and cost updating of the Master Project Schedule
- Four technical reviews of Technical Memos in support of Draft Preliminary Design Reviews for intake, terminal storage reservoir, and the water treatment plant
- City review and approval of CAD Standards Manual
- Conducted Quality Control and Backchecking workshop with infrastructure leads and Technical Review Committee members
- Ongoing risk management
- City procurement of Engineers Joint Contract Documents Committee rights for contracting baseline documents



### **Future Activities**

- Update Program Strategy Manual
- Schedule Program Management Information System demonstrations for the City staff
- Continue technical reviews of Draft Preliminary Design Reports for individual project disciplines
- Develop Program-specific contracting documents based on Engineers Joint Contract Documents Committee
- Develop Public Outreach and Communication Plan for Phase 3







## **Intake and Pump Stations**

## **Intake and Pump Stations**

#### **Scope of Services**

The scope of services includes surveying, geotechnical investigations, preliminary (30 percent complete) design, investigation of property acquisition and development of design consultant standards for a new raw water intake and pumping station located on Kaw Lake at Intake Site No. 2 and an intermediate booster pump station as identified in Phase 1 of the project.

The intake is expected to include a shaft and micro tunnel with vertical turbine pumps in a parallel configuration with a design capacity to meet the targets identified during Phase 1 of the Program. The intermediate booster pump station is expected to consist of parallel horizontal split case pumps housed in an at-grade structure. The intermediate booster pump station is also expected to include approximately 5 million gallons of stored raw water within two ground storage tanks.



### **Project Update**

The team continues to focus on development of the preliminary design for the intake pump station. The preliminary design phase submittal will include design drawings and represent approximately 30 percent of final design documents.



### Completed

- Continued to coordinate with U.S. Army Corps of Engineers and geotechnical consultant for land and marine borings at intake site. The rightof-entry has been granted by the Corps and the marine borings was scheduled to begin on September 5, 2017, following by the land borings.
- Addressed comments from the Technical Review Committee on Draft Transient Analysis Technical Memo
- Revised 3D model layout of the intake pump station plan based on City comments
- Created conceptual geotechnical boring plan for possible intermediate booster pump station site
- Drafted a list of anticipated technical specifications



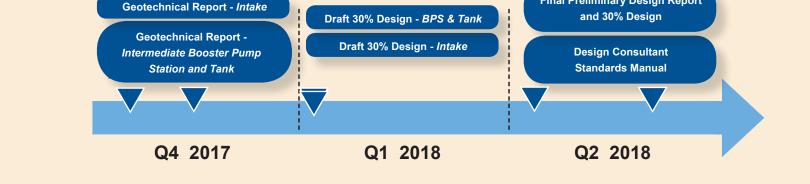
### **Future Activities**

- Continue coordination with the Corps and perform geotechnical borings at intake
- Submit draft Transient Analysis Technical Memo to the City
- Continue to develop preliminary (30 percent) design drawings
- Perform survey and geotechnical borings at intermediate booster pump station subsequent to selection of a site location





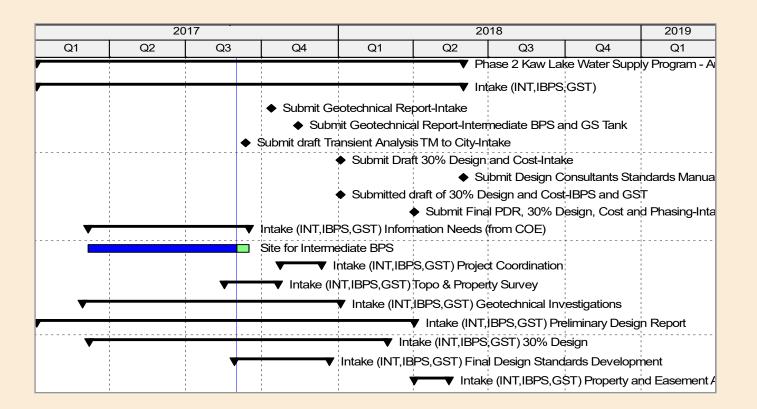




**Final Preliminary Design Report** 

## **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw	/ Lake Water Supply Program - August 2017 Update	359	01-Jun-18
Intake (INT,IE	BPS,GST)	359	01-Jun-18
MS1010	Submit Geotechnical Report-Intake	0	12-Oct-17
MS1020	Submit Geotechnical Report-Intermediate BPS and GS Tank	0	14-Nov-17*
MS1032	Submit draft Transient Analysis TM to City-Intake	0	11-Sep-17
MS1035	Submit Draft 30% Design and Cost-Intake	0	04-Jan-18*
MS1040	Submit Design Consultants Standards Manual-Intake, IBPS, GS Tank	0	01-Jun-18*
MS1045	Submitted draft of 30% Design and Cost-IBPS and GST	0	04-Jan-18*
MS1050	Submit Final PDR, 30% Design, Cost and Phasing-Intake, Intermediate BPS and	0	02-Apr-18*
Intake (INT,IBI	PS,GST) Information Needs (from COE)	21	15-Sep-17
PIP.1840	Site for Intermediate BPS	21	15-Sep-17
Intake (INT,IBI	PS,GST) Project Coordination	35	12-Dec-17
Intake (INT,IBI	PS,GST) Topo & Property Survey	28	20-Oct-17
Intake (INT,IBI	PS,GST) Geotechnical Investigations	216	04-Jan-18
Intake (INT,IBI	PS,GST) Preliminary Design Report	317	02-Apr-18
Intake (INT,IBI	PS,GST) 30% Design	250	01-Mar-18
Intake (INT,IBI	PS,GST) Final Design Standards Development	77	21-Dec-17
Intake (INT,IBI	PS,GST) Property and Easement Acquisition	30	14-May-18





### **Pipeline**

### **Scope of Services**

The scope of services includes surveying, geotechnical, alignment analysis, preliminary (30 percent complete) design, investigation of future property acquisition and development of design consultant standards for a new raw water pipeline from Kaw Lake at Intake Site No. 2 to a new water treatment plant as identified in Phase 1 of the project.

The pipeline will consist of approximately 70 miles of pipe along the direct corridor with a design capacity to meet the targets identified during Phase 1 of the Program. This task generally consists of providing final pipeline alignment selection within the Direct Corridor and preparation of aerial background plans.



### **Project Update**

The team continued developing a preferred alignment utilizing the previously approved evaluation methodology. A workshop is anticipated with City staff to review the preferred alignment in more detail. The team is continuously updating the web mapping site to allow the City and team members to see alternatives being considered, as well as adding the ability to track parcel access. The Pipeline Team is heavily involved in coordinating with other project teams on proposed layouts, connections, and various other design criteria, as well as coordinating and reviewing geotechnical field investigations. Soil samples have been sent to a separate testing lab for additional analysis to be used to determine the viability of in-situ material for backfill. The team continued development of pipeline design criteria for the Preliminary Design Report. A review of pipeline materials was provided at the August progress meeting. Most of the geotechnical borings in public right-of-way have been complete. The remaining geotechnical investigations are at risk of falling behind schedule due to difficulties in gaining access to private properties; however, additional resources will be enlisted for this effort in order to maintain target completion dates associated with the pipeline. The team is preparing alternate boring locations to aid in gaining access to the remaining bore locations.



#### Completed

- Coordinated geotechnical investigation needs along the alignment
- Updated the web mapping tool for the entire pipeline alignment
- Began performing alignment alternative analysis



### Future Activities

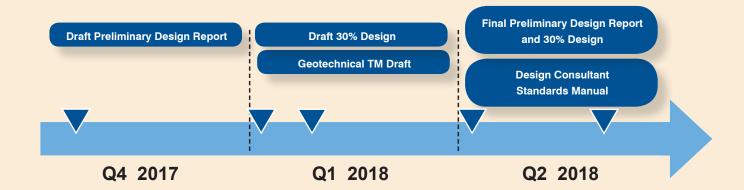
- · Continue alignment alternative analysis
- Prepare for preferred alignment review workshop
- Continue Preliminary Design Report development
- Develop preliminary 30 percent design drawings
- Continue coordination of geotechnical investigation needs along alignment
- Continue evaluation of equipment and material types
- Further coordination of crossings with utility companies, city, county, and state agencies
- Continue field reviews along proposed alignment (as necessary)
- Develop criteria for the Design Consultant Standards Manual





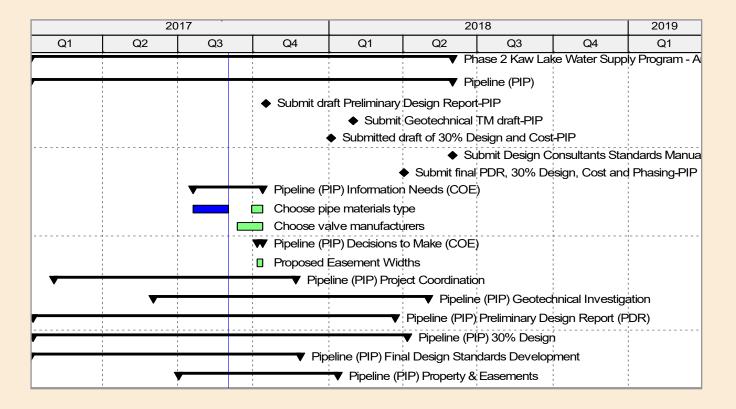






## **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Ka	w Lake Water Supply Program - August 2017 Update	360	01-Jun-18
Pipeline (Pl	P)	360	01-Jun-18
MS1070	Submit draft Preliminary Design Report-PIP	0	17-Oct-17*
MS1075	Submit Geotechnical TM draft-PIP	0	30-Jan-18*
MS1080	Submitted draft of 30% Design and Cost-PIP	0	04-Jan-18*
MS1085	Submit Design Consultants Standards Manual-PIP	0	01-Jun-18*
MS1090	Submit final PDR, 30% Design, Cost and Phasing-PIP	0	02-Apr-18*
Pipeline (PIP	) Information Needs (COE)	60	12-Oct-17
PIP.1280	Choose pipe materials type	60	12-Oct-17*
PIP.1300	Choose valve manufacturers	23	12-Oct-17*
Pipeline (PIP	) Decisions to Make (COE)	5	12-Oct-17
PIP.1850	Proposed Easement Widths	5	12-Oct-17*
Pipeline (PIP	) Project Coordination	208	22-Nov-17
Pipeline (PIP	) Geotechnical Investigation	212	02-May-18
Pipeline (PIP	) Preliminary Design Report (PDR)	309	23-Mar-18
Pipeline (PIP	) 30% Design	119	06-Apr-18
Pipeline (PIP	) Final Design Standards Development	229	27-Nov-17
Pipeline (PIP	) Property & Easements	134	12-Jan-18







### **Terminal Storage**

#### **Scope of Services**

The scope of services includes surveying, geotechnical, preliminary (30 percent complete) design, investigation of property acquisition and development of design consultant standards for a new raw water terminal storage in two separate locations: one for emergency storage and one for equalization storage as identified in Phase 1 of the project.



### **Project Update**

Conceptual layouts of the equalization storage basin continues to evolve as new concepts are explored. The most recent configuration utilizes three equally sized basins to allow for flexibility and phasing. The Terminal Storage Team continues to coordinate with the water treatment plant and Distribution Team on the conceptual site design, storm water drainage, process flow, and drying beds.

Civil site design has commenced, including preliminary grading, road locations, and stormwater design.

The drainage swale west of the terminal storage flowing north to south will be relocated, moving the swale discharge point approximately 500 feet to the west.

While the general area of the emergency storage basin has been established, the final location has not been determined. The Terminal Storage Reservoir Team will continue to coordinate with the City to determine a final location of the emergency storage reservoir. Upon selection of site, survey and geotechnical activities will be performed.

Geotechnical investigation and soil testing on the equalization site has been completed.



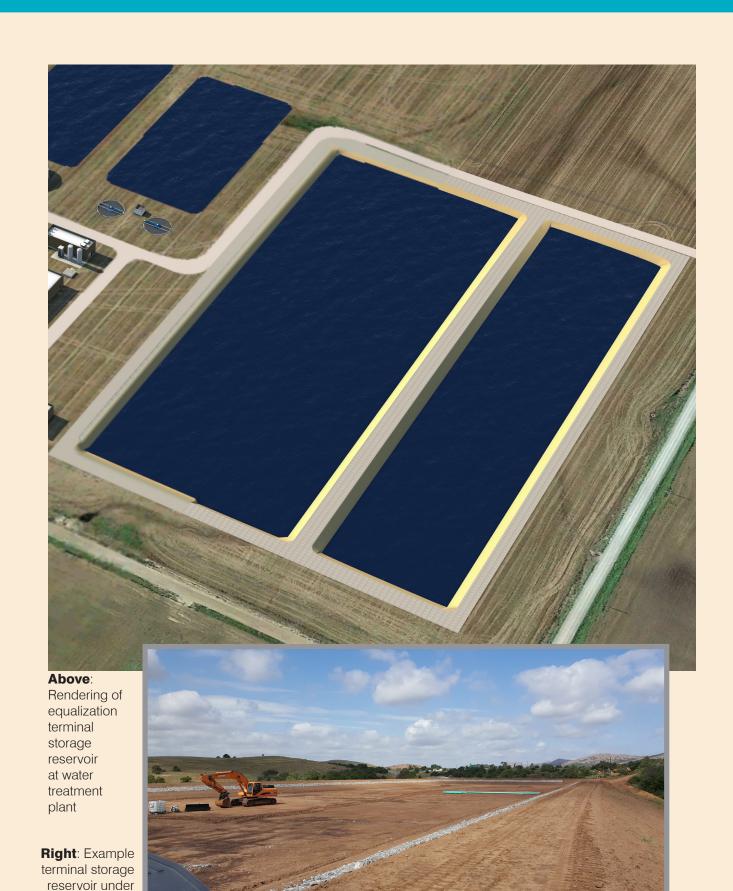
### Completed

- · Determined design flows
- Determined potential permit requirement for mid-level berm construction
- Determined final location of equalization terminal storage
- Provided assistance in determining the preferred final location of emergency terminal storage
- Determined Oklahoma Department of Environmental Quality permit requirements for the terminal storage reservoirs
- Completed preliminary site layouts with grading and site access for the equalization basin
- Received City comments on the Draft Preliminary Design Report
- Completed geotechnical report for the terminal storage reservoir equalization basins



#### **Future Activities**

- Perform field survey and geotechnical investigations of the emergency terminal storage reservoir
- Develop potential configurations for the emergency terminal storage reservoir
- Process and pipeline layout for site
- Complete multiple technical memoranda pertaining to the design criteria associated with the following:
  - Pumping energy evaluation
  - Reservoir liners
  - Erosion control
  - Algae management
  - Stormwater handling





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construction

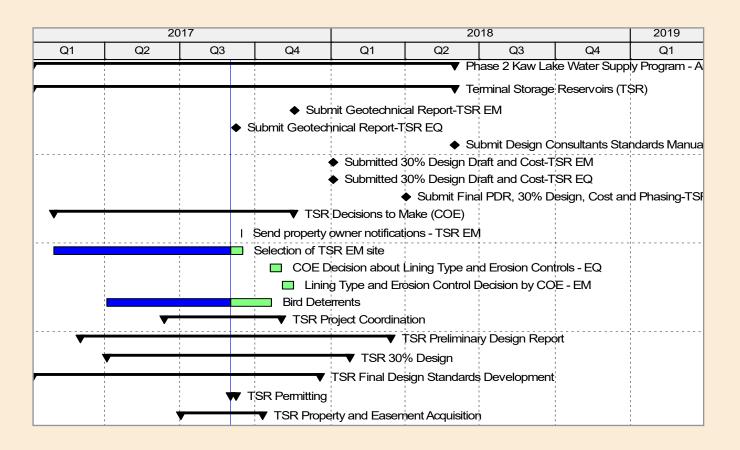






# **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw	v Lake Water Supply Program - August 2017 Update	360	01-Jun-18
Terminal Sto	orage Reservoirs (TSR)	360	01-Jun-18
MS1110	Submit Geotechnical Report-TSR EM	0	17-Nov-17*
MS1112	Submit Geotechnical Report-TSR EQ	0	07-Sep-17
MS1120	Submit Design Consultants Standards Manual-TSR	0	01-Jun-18*
MS1130	Submitted 30% Design Draft and Cost-TSR EM	0	04-Jan-18*
MS1132	Submitted 30% Design Draft and Cost-TSR EQ	0	04-Jan-18*
MS1140	Submit Final PDR, 30% Design, Cost and Phasing-TSR	0	02-Apr-18*
TSR Decision	s to Make (COE)	272	16-Nov-17
ENV.1065	Send property owner notifications - TSR EM	0	15-Sep-17*
TSR.2020	Selection of TSR EM site	194	15-Sep-17*
TSR.2030	COE Decision about Lining Type and Erosion Controls - EQ	10	02-Nov-17*
TSR.2032	Lining Type and Erosion Control Decision by COE - EM	10	16-Nov-17*
TSR.2046	Bird Deterrents	142	20-Oct-17
TSR Project C	Coordination	102	02-Nov-17
TSR Prelimina	ary Design Report	262	14-Mar-18
TSR 30% Des	ign	171	24-Jan-18
TSR Final Des	sign Standards Development	244	18-Dec-17
TSR Permittin	ng	4	07-Sep-17
TSR Property	and Easement Acquisition	69	09-Oct-17





### **Water Treatment Plant**

### **Scope of Services**

The scope of services includes surveying, geotechnical, preliminary (30 percent complete) design, investigation of property acquisition, and development of design consultant standards for a new Enid water treatment plant located adjacent to the City's current water treatment plant No. 2.

The planned capital improvements include construction of a new conventional water treatment plant with ozone and granular activated carbon facilities to meet capacity and treatment goals identified during Phase 1 of the Program.



### **Project Update**

Presented detailed technical discussion to address City comments related to chemical storage and feed systems. Presented design updates for the administration, operations and maintenance facilities, site layout, terminal storage reservoir operation schemes, and treatability study at the August project progress meeting and water treatment plant workshop. Provided draft versions of site electrical concepts and SCADA system for review by the City in August. Developing a draft of building mechanical concepts for review in September. Continuing work on preliminary process and instrumentation diagrams and facility layouts. Developing process site layouts, access routes, pipeline and electrical distribution corridors, and site drainage/storm water retention concepts.



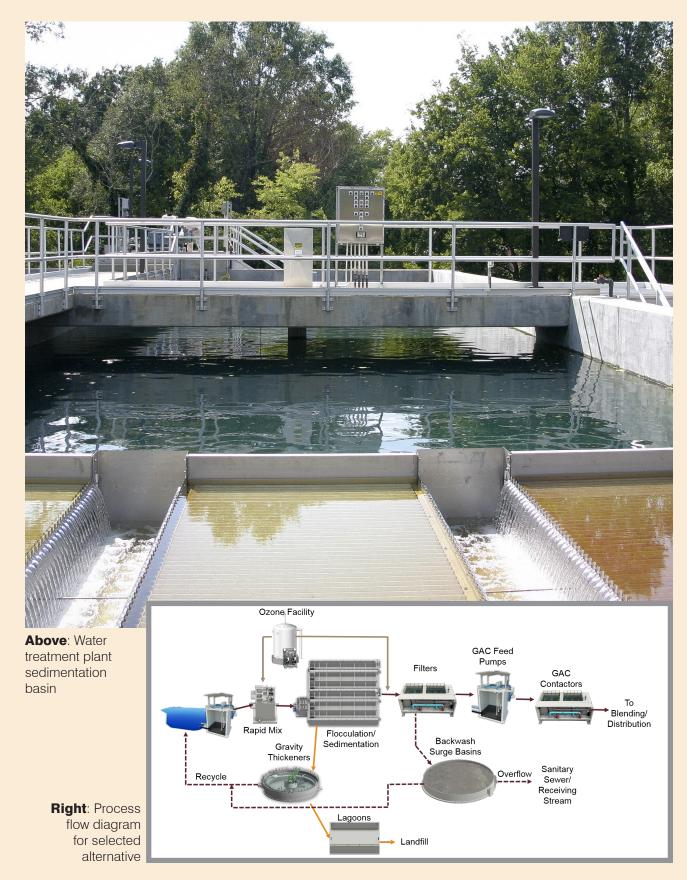
### Completed

- Draft Design Information Memoranda:
  - Electrical concepts
  - SCADA system
- Updated preliminary process layouts and draft site layout
- Updated preliminary operations and maintenance facility layouts
- Coordinating first round of granular activated carbon column testing



### **Future Activities**

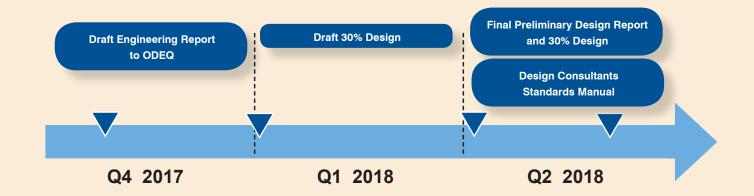
- Water treatment plant workshop with focus on process layouts, overall site layout and access, site civil concepts, operations and maintenance facilities layout
- Develop Draft Pre-Design Report deliverables for building mechanical concepts
- Continue development of layouts for operations and maintenance support facilities
- Continue development of site layouts
- Develop outline of specifications and standard details for Design Consultant Standards Manual
- Review final geotechnical report
- Develop draft engineering report





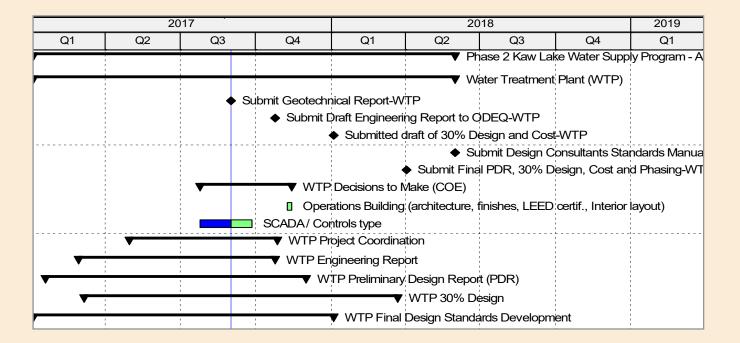






# **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kav	v Lake Water Supply Program - August 2017 Update	360	01-Jun-18
Water Treatn	nent Plant (WTP)	360	01-Jun-18
MS1150	Submit Geotechnical Report-WTP	0	01-Sep-17
MS1160	Submit Draft Engineering Report to ODEQ-WTP	0	25-Oct-17*
MS1180	Submitted draft of 30% Design and Cost-WTP	0	04-Jan-18*
MS1190	Submit Design Consultants Standards Manual-WTP	0	01-Jun-18*
MS1200	Submit Final PDR, 30% Design, Cost and Phasing-WTP	0	02-Apr-18*
WTP Decision	ns to Make (COE)	80	14-Nov-17
WTP.1720	Operations Building (architecture, finishes, LEED certif., Interior layout)	5	14-Nov-17*
WTP.1740	SCADA/ Controls type	22	26-Sep-17
WTP Project	Coordination	127	27-Oct-17
WTP Enginee	WTP Engineering Report		25-Oct-17
WTP Preliminary Design Report (PDR)		223	01-Dec-17
WTP 30% Design		268	23-Mar-18
WTP Final De	sign Standards Development	254	03-Jan-18





### **Distribution**

#### **Scope of Services**

Generally, the scope of services includes surveying, geotechnical, preliminary (30 percent complete) design, investigation of property acquisition, and development of design consultant standards for new distribution infrastructure (pumping, storage, and piping) as identified in Phase 1 of the project.

The pumping improvements will include the construction of a new high service pump station adjacent to the water treatment plant capable of conveying flow to both pressure planes and the decommissioning of the existing high service pump stations. The storage improvements will consist of adding a new 8 million gallon ground storage tank adjacent to the new high service pump station. The piping improvements will include the piping necessary to blend the groundwater supply with the treated surface water prior to the high service pump station, as well as the piping necessary to convey water to the east pressure plane.



#### **Project Update**

Submitted technical memoranda on the transmission main alignment and system optimization for City review. Determination of infrastructure sizing and transmission main alignment allows design to proceed for all distribution interface items. Preliminary 30 percent design work continues on design criteria, high-service pump station and storage site layout, operational control and electrical, transmission main design, and geotechnical investigations.



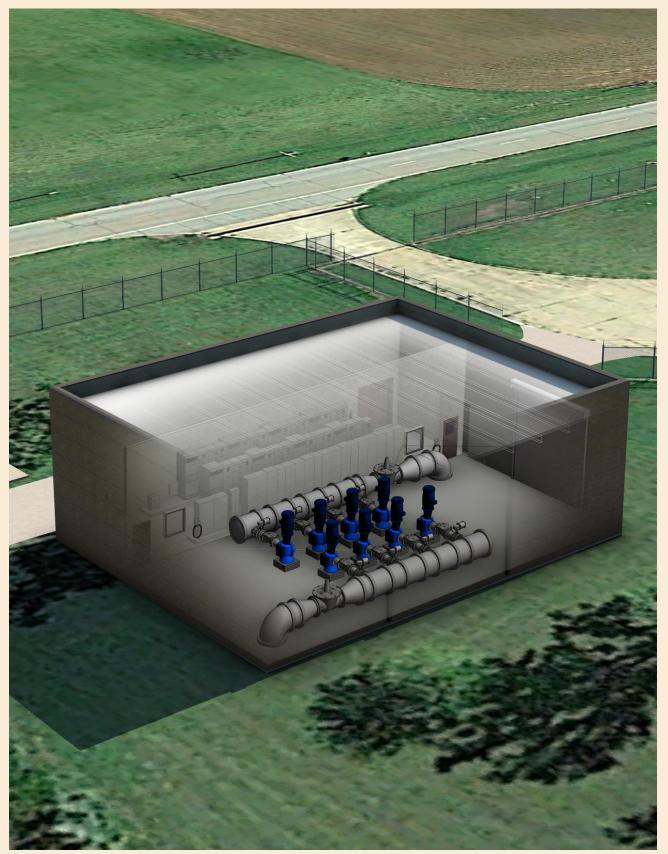
### Completed

- Completed draft of transmission main alignment technical memorandum and submitted for City review
- Completed draft of system optimization technical memorandum and submitted for City review
- Identified potential geotechnical boring locations along transmission main alignment and submitted for City review
- Completed initial transmission main pipe material evaluation and presented results to City
- Completed groundwater conveyance infrastructure model calibration and initial evaluations to define impacts of directing Ames booster pump station flows to the new water treatment plant
- Completed initial computational fluid dynamics model for blended water storage tank



### **Future Activities**

- Complete site layout in conjunction with Water Treatment Plant Team
- Complete electrical one-line diagram
- Continue Preliminary Design Report draft development of design criteria and design concepts
- Develop construction sequencing
- Continue hydraulic modeling
- Complete computational fluid dynamics modeling to evaluate mixing in blended water storage tank
- Continue property surveys along transmission main corridor
- Finalize geotechnical boring locations along transmission main alignment and conduct geotechnical investigations
- Develop plan and profile sheets for transmission main

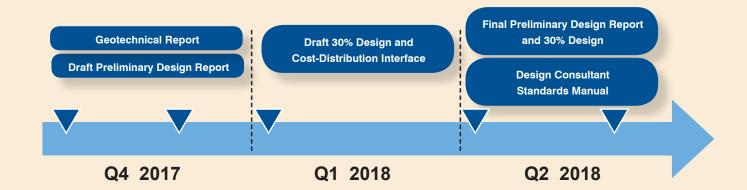


**Above**: Conceptual layout of high-service (distribution) pump station



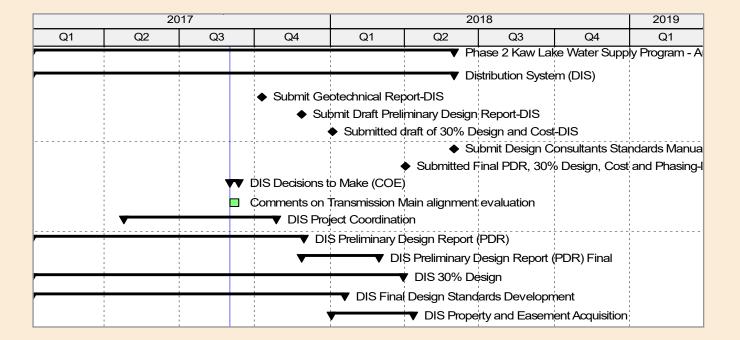






## **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Ka	w Lake Water Supply Program - August 2017 Update	360	01-Jun-18
Distribution	System (DIS)	360	01-Jun-18
MS1210	Submit Geotechnical Report-DIS	0	10-Oct-17
MS1220	Submit Draft Preliminary Design Report-DIS	0	27-Nov-17*
MS1230	Submitted draft of 30% Design and Cost-DIS	0	04-Jan-18*
MS1240	Submit Design Consultants Standards Manual-DIS	0	01-Jun-18*
MS1250	Submitted Final PDR, 30% Design, Cost and Phasing-DIS	0	02-Apr-18*
DIS Decision	DIS Decisions to Make (COE)		12-Sep-17
DIS.2165	Comments on Transmission Main alignment evaluation	7	12-Sep-17
DIS Project C	Coordination	149	27-Oct-17
DIS Prelimina	ary Design Report (PDR)	232	30-Nov-17
DIS Prelimina	DIS Preliminary Design Report (PDR) Final		01-Mar-18
DIS 30% Design		316	30-Mar-18
DIS Final Design Standards Development		265	18-Jan-18
DIS Property	and Easement Acquisition	72	12-Apr-18







### **Environmental**

#### **Scope of Services**

This scope of work includes activities to support document preparation as required of the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) in accordance with the procedures set forth in Council on Environmental Quality Regulations Implementing the Procedural Provision of NEPA (40 CFR 1500-1508) and in the U.S. Army Corps of Engineers (USACE) Procedures for Implementing NEPA (33 CFR 230). The U.S. Army Corps of Engineers, Tulsa District, will serve as the lead federal agency for the project.

It is anticipated that the NEPA Class of Action for this Program will be an Environmental Assessment and will analyze the impacts of a No Build and one Build Alternative (Proposed Action) for each of the project's infrastructure components [intake, pipeline, terminal storage reservoir (emergency and equalization), treatment plant, and distribution system].



### **Project Update**

Biological and cultural field studies are complete for the intake, water treatment plant, and distribution. Biological field studies for the pipeline are approximately 88 percent complete. Remaining properties to be surveyed are on hold pending tribal property access. Cultural resources survey is on hold pending approval of proposed methodology by the U.S. Army Corps of Engineers and State Archaeologist. The U.S. Army Corps of Engineers sent the methodology to the State Archaeologist and other consulting parties for review on July 21, 2017 with a request for a 15-day review. Comments from the State Archaeologist were received on August 25, 2017. A response to these comments has been sent to the U.S. Army Corps of Engineers for approval.

U.S. Army Corps of Engineers consultation with the State Historic Preservation Officer, State Archaeologist, and tribes on the cultural resources survey for the intake site is complete. Right-of-entry for geotechnical



#### Completed

- Intake, water treatment plant, and distribution biological and cultural resource studies
- Approximately 88 percent of the biological field work along the pipeline corridor
- Submittal of requested data to the team for areas of concern
- Approximately 40 percent complete with wetland and threatened and endangered species reports



#### **Future Activities**

- Complete biological studies for remainder of pipeline as alignments are refined and access to tribal property is obtained
- Begin cultural resources field work when methodology is resolved
- Additional community meeting with Ponca Tribe as requested
- Complete field studies at emergency terminal storage reservoir site once location is finalized
- Continue work on wetland and threatened and endangered species reports



**Above**: Kaw Lake shoreline



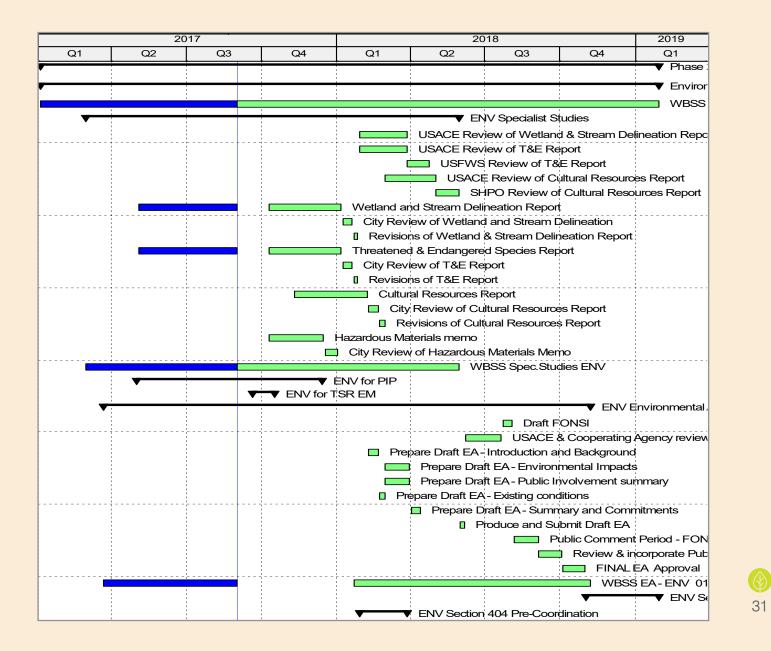




## **Project Schedule**

tivity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw	Lake Water Supply Program - August 2017 Update	526	29-Jan-19
Environmenta	al (ENV)	526	29-Jan-19
ENV.WBSS4	WBSS Coord./Meetings - ENV (010)	526	29-Jan-19
ENV Specialist Studies		319	30-May-18
ENV.1100A	USACE Review of Wetland & Stream Delineation Report	42	27-Mar-18
ENV.1100B	USACE Review of T&E Report	42	27-Mar-18
ENV.1100B.1	USFWS Review of T&E Report	20	24-Apr-18
ENV.1100C	USACE Review of Cultural Resources Report	44	01-May-18
ENV.1100C.1	SHPO Review of Cultural Resources Report	20	30-May-18
ENV.1950A	Wetland and Stream Delineation Report	60	05-Jan-18
ENV.1950A.1	City Review of Wetland and Stream Delineation	10	19-Jan-18
ENV.1950A.2	Revisions of Wetland & Stream Delineation Report	5	26-Jan-18
ENV.1950B	Threatened & Endangered Species Report	60	05-Jan-18
ENV.1950B.1	City Review of T&E Report	10	19-Jan-18
ENV.1950B.2	Revisions of T&E Report	5	26-Jan-18
ENV.1950C	Cultural Resources Report	60	07-Feb-18
ENV.1950C.1	City Review of Cultural Resources Report	10	21-Feb-18
ENV.1950C.2	Revisions of Cultural Resources Report	5	28-Feb-18
ENV.1950D	Hazardous Materials memo	47	15-Dec-17
ENV.1950D.1	City Review of Hazardous Materials Memo	10	02-Jan-18
ENV.WBSS1	WBSS Spec.Studies ENV	319	30-May-18
ENV for PIP		158	13-Dec-17
ENV for TSR EM		19	16-Oct-17
	ental Assessment	204	06-Nov-18
ENV.1080	Draft FONSI	10	03-Aug-18
ENV.1110	USACE & Cooperating Agency review of EA	31	20-Jul-18
ENV.1120	Prepare Draft EA-Introduction and Background	10	21-Feb-18
ENV.1121	Prepare Draft EA - Environmental Impacts	22	30-Mar-18
ENV.1122	Prepare Draft EA - Public Involvement summary	22	30-Mar-18
ENV.1123	Prepare Draft EA - Existing conditions	5	28-Feb-18
ENV.1124	Prepare Draft EA - Summary and Commitments	10	13-Apr-18
ENV.1125	Produce and Submit Draft EA	5	06-Jun-18
ENV.1130	Public Comment Period - FONSI	21	04-Sep-18
ENV.1140	Review & incorporate Public Comments	21	03-Oct-18
ENV.1150	FINAL EA Approval	20	31-Oct-18
ENV.WBSS2	WBSS EA - ENV 015 & 060 (800 Env. Team)	204	06-Nov-18
ENV Section 408 Approval		60	29-Jan-19
<b>ENV Section 40</b>	04 Pre-Coordination	42	27-Mar-18







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