# Monthly Progress Report

January 2018



















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# **Program Overview**

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#### **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.

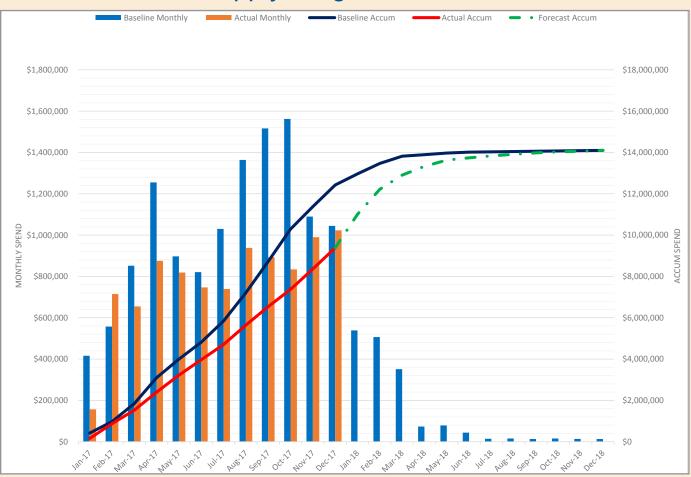






# **Program Finance - Phase 2**

## Kaw Lake Water Supply Program CashFlow



#### **Summary**

As of January  $\overline{2}$ , the accumulate spent is 67% and the planned spend is 88%. A portion of the reduced spending is a result of higher than expected project execution efficiency. Additionally, tasks such as the Design Consultant Standards Manual and the Program Strategy Manual have been deferred to 2018, resulting in a shift of the projected cash flow.

# **Program Schedule - Phase 2**

## Kaw Lake Water Supply Program - December 2017



#### Summary

As of January 2, the schedule has an overall progress of 78% with a planned progress of 90%. The shift in the target progress shown above is a product of the implemented recovery plan. The recovery plan allows for additional resources to be utilized for the completion of the 30% design and updated cost estimate to maintain their original submittal date while deferring less critical activities, such as the Design Consultant Standards Manual and Program Strategy Manual, to 2018.





# **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 items in the scope of services. Program strategy development continues with final selection of the Program Management Information System. Test drives were completed of the final two Program Management Information Systems, to obtain a "hands-on" end-user perspective. Based on the user experience and life-cycle support of the systems, Projectmates was selected as the preferred tool. Procurement and implementation of the system should commence in order to maintain the Program Schedule for Phase 3. Program risk management activities continue and additional risks were identified with mitigations proposed during 30% Design Reviews. Technical and cross discipline reviews were conducted in preparation for submittal of the draft 30% Design and cost estimates to the City. Planning for easement acquisition continues with detailed parcel analysis in preparation for final design. The Design Consultant Standards Manual outline is developing and the Program Strategy for the life cycle is being crafted.



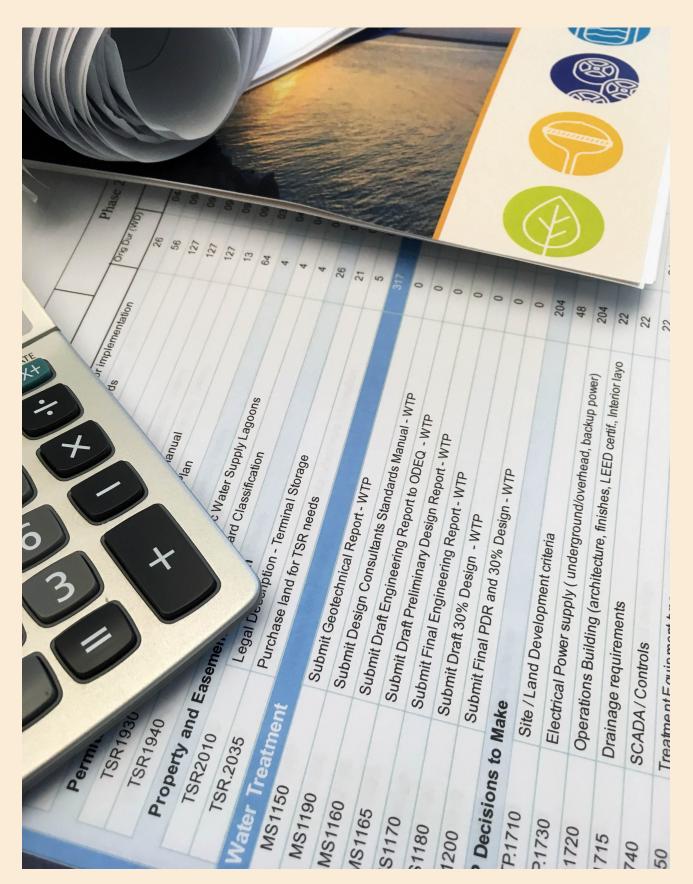
### Completed

- Submitted remaining draft Preliminary Design Reports to City staff for review
- Selected Projectmates as the preferred Program Management Information System for the Kaw Lake Water Supply Program
- Schedule and cost updates of the Master Project Schedule
- Four cross discipline and thirteen technical reviews of draft 30% Design and cost estimates for all Kaw Lake Water Supply system elements
- Intensified risk identification during reviews and ongoing risk management



### **Future Activities**

- Submit draft 30% Design and cost estimates for complete Kaw Lake Water Supply Program
- Develop Phasing Plan to define current and future system configurations that meet City needs within the budget
- Update deliverables in response to City staff feedback
- Develop Program Strategy Manual for Phase 3
- Planning and development of processes and tools for Phase 3 management, such as work flows, special contract provisions and standardizations for program work







# **Intake and Pump Stations**

### **Scope of Services**

The scope of services includes surveying, geotechnical investigations, preliminary (30% 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 microtunnel 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 updated the intake pump station and intermediate booster pump station preliminary design and opinion of probable construction cost based on the internal Technical Review completed in December. The preliminary design phase submittal will include design drawings that represent approximately 30% of final design documents and the associated opinion of probable construction, operational, and maintenance costs.



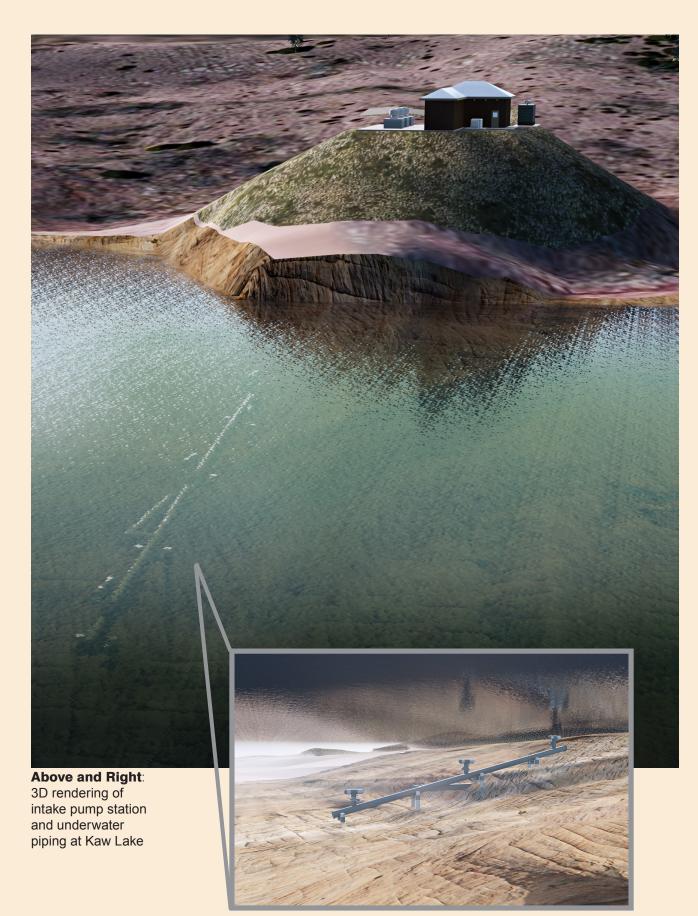
### Completed

- Received Technical Review Committee comments regarding intake pump station
- Refined and revised intake preliminary designs and opinion of probable construction cost based on Technical Review Committee feedback
- Received Technical Review Committee comments regarding intermediate booster pump station
- Refined and revised intermediate booster and pump station preliminary designs and opinion of probable construction cost based on Technical Review Committee feedback
- Received and reviewed draft Intake Geotechnical Investigation Report
- Provided feedback to Envirotech for revisions to the Intake Subsurface Investigation Report



## **Future Activities**

- Submit draft 30% design drawings and 30% opinion of probable construction cost to City staff for review
- Receive and review final Intake Subsurface Investigation Report
- Continue updating Intake and Intermediate Booster Pump Station Preliminary Design Report, including Executive Summary, Implementation Plan, and other technical narratives
- Update transient analysis (surge) model, and revise Transient Analysis Technical Memo
- Begin Intake and Intermediate Booster Pump Station Phasing Plan

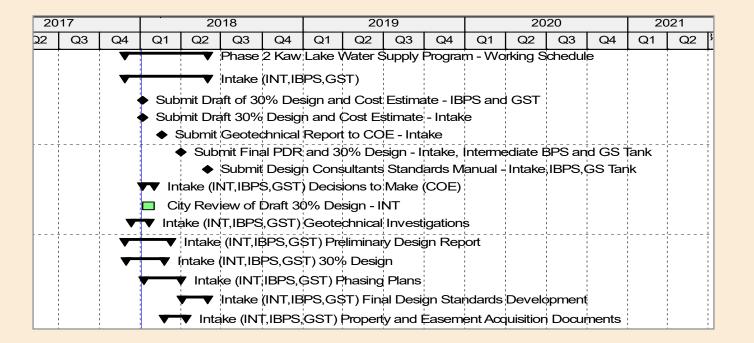






# **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake	Water Supply Program - Working Schedule	132	01-Jun-18
Intake (INT,IBPS,G	ST)	132	01-Jun-18
MS1045	Submit Draft of 30% Design and Cost Estimate - IBPS and GST	0	04-Jan-18*
MS1035	Submit Draft 30% Design and Cost Estimate - Intake	0	04-Jan-18*
MS1010	Submit Geotechnical Report to COE - Intake	0	16-Feb-18
MS1050	Submit Final PDR and 30% Design - Intake, Intermediate BPS and GS Tank	0	02-Apr-18*
MS1040	Submit Design Consultants Standards Manual - Intake, IBPS, GS Tank	0	01-Jun-18*
Intake (INT,IBPS,GS	T) Decisions to Make (COE)	20	01-Feb-18
INT.1266	City Review of Draft 30% Design - INT	20	01-Feb-18
Intake (INT,IBPS,GS	T) Geotechnical Investigations	10	19-Jan-18
Intake (INT,IBPS,GS	T) Preliminary Design Report	73	09-Mar-18
Intake (INT,IBPS,GS	Intake (INT,IBPS,GST) 30% Design		22-Feb-18
Intake (INT,IBPS,GST) Phasing Plans		62	02-Apr-18
Intake (INT,IBPS,GST) Final Design Standards Development		43	01-Jun-18
Intake (INT,IBPS,GST) Property and Easement Acquisition Documents		35	12-Apr-18





# **Pipeline**

## Scope of Services

The scope of services includes surveying, geotechnical, alignment analysis, preliminary (30% 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



## Project Update

The team is preparing updates to the mapbook and parcel tracking information to provide routine updates to City staff. The team is continuously updating the web mapping site to allow the City and team members to see updated alignments, 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. The draft Pipeline Preliminary Design Report was submitted to the City in early December. All geotechnical borings where access was granted and where access was possible within public right-of-way areas have been completed at this point in the program. The supplemental geotechnical analysis will continue to move forward with the information obtained to date, identifying gaps based on the data collected and making assumptions where apporpriate. Geotechnial laboratory testing associated with the supplemental analysis is expected to be ongoing through February 2018 as the data from the most recently completed borings from December 2017 is incorporated into the analysis. The preparation of 30% opinion of probable construction cost and design drawings was completed and ready for internal Technical Review in early December. Revisions are being made based upon review comments received in preparation for an early January 2018 deliverable to the City.



### Completed

- Coordinated remaining geotechnical investigation needs along the alignment
- Ongoing updates to the web mapping tool and map book for the entire pipeline alignment
- Submitted draft Preliminary Design Report for City review
- Completed the draft 30% design drawings for internal technical review



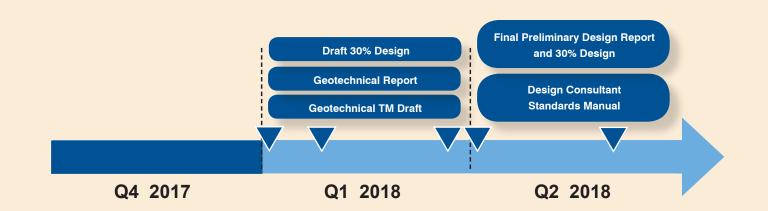
## **Future Activities**

- Continue geotechnical laboratory testing of available and most recent samples collected along alignment
- Continue to perform preliminary geotechnical analysis with available data obtained to date
- Refine and revise draft 30% design drawings and 30% opinion of probable construction cost based upon Technical Review Committee comments
- Submit draft 30% design drawings and 30% opinion of probable construction cost to City staff for review
- · Begin Pipeline Phasing Plan



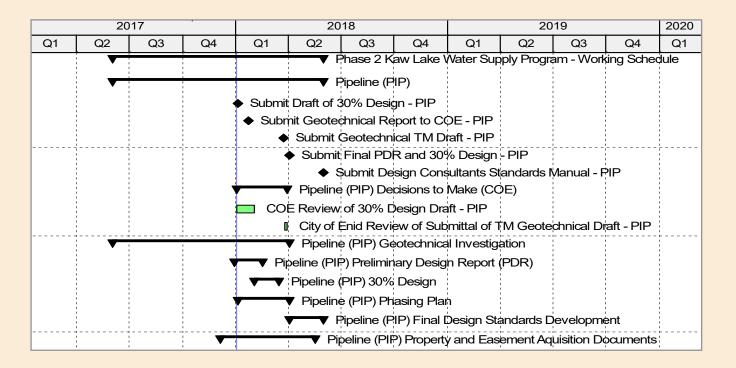






# **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Wa	ater Supply Program - Working Schedule	233	01-Jun-18
Pipeline (PIP)		233	01-Jun-18
MS1080	Submit Draft of 30% Design - PIP	0	04-Jan-18*
MS1060	Submit Geotechnical Report to COE - PIP	0	22-Jan-18
MS1075	Submit Geotechnical TM Draft - PIP	0	23-Mar-18*
MS1090	Submit Final PDR and 30% Design - PIP	0	02-Apr-18*
MS1085	Submit Design Consultants Standards Manual - PIP	0	01-Jun-18*
Pipeline (PIP) Decisions	to Make (COE)	69	30-Mar-18
PIP.COED.30DF.PP.S1	COE Review of 30% Design Draft - PIP	20	01-Feb-18
PMx.COED.TRCD.GT.00	City of Enid Review of Submittal of TM Geotechnical Draft - PIP	10	30-Mar-18
Pipeline (PIP) Geotechnical Investigation		215	02-Apr-18
Pipeline (PIP) Preliminary	Pipeline (PIP) Preliminary Design Report (PDR)		16-Feb-18
Pipeline (PIP) 30% Design		31	16-Mar-18
Pipeline (PIP) Phasing Plan		82	02-Apr-18
Pipeline (PIP) Final Design Standards Development		43	01-Jun-18
Pipeline (PIP) Property and Easement Aquisition Documents		118	18-May-18







# **Terminal Storage**

### **Scope of Services**

The scope of services includes surveying, geotechnical, preliminary (30% 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

The Terminal Storage Team continues to coordinate with the Water Treatment Plant and Distribution Teams as the conceptual site design, storm water drainage, process flow, and drying beds nears completion.

The civil site design has been completed, including preliminary grading, road locations, and stormwater design. Geotechnical investigations and soil testing on the equalization site have been completed.

The location of the emergency storage basin has been established, and site survey, environmental, and geotechnical activities have been completed with final reports pending internal technical review.



### Completed

- Submitted the Subsurface Investigation Reports for the Emergency Terminal Storage Reservoir and Equalization Terminal Storage Reservoir
- Completed drainage engineering report technical memorandum pertaining to the design criteria associated with stormwater handling
- Completed draft 30% design drawings of Equalization and Emergency Terminal Storage Reservoirs
- Completed 30% opinion of probable construction costs



## **Future Activities**

- Submit Drainage Engineering Report to the City staff for review
- Submit draft 30% design drawings and 30% opinion of probable construction cost to City staff for review
- Begin Terminal Storage Reservoir Phasing Plan



**Above**: Rendering of equalization

equalization terminal storage reservoir at water treatment plant

**Right**: Example terminal storage reservoir under construction



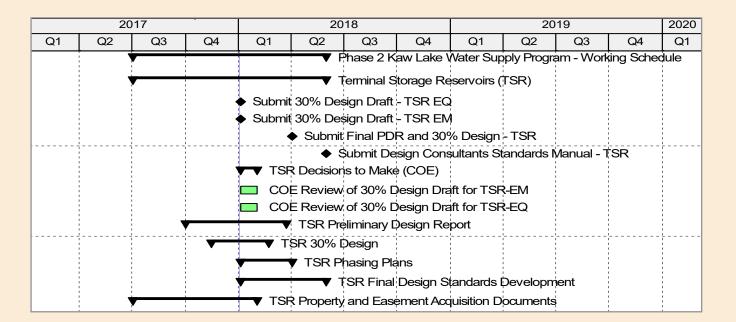




# **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Wa	ater Supply Program - Working Schedule	234	01-Jun-18
Terminal Storage Res	ervoirs (TSR)	234	01-Jun-18
MS1132	Submit 30% Design Draft - TSR EQ	0	04-Jan-18*
MS1130	Submit 30% Design Draft - TSR EM	0	04-Jan-18*
MS1140	Submit Final PDR and 30% Design - TSR	0	02-Apr-18*
MS1120	Submit Design Consultants Standards Manual - TSR	0	01-Jun-18*
TSR Decisions to Make (	COE)	20	01-Feb-18
TSR.COED.30DF.EM.00	COE Review of 30% Design Draft for TSR-EM	20	01-Feb-18
TSR.COED.30DF.EQ.00	COE Review of 30% Design Draft for TSR-EQ	20	01-Feb-18
TSR Preliminary Design I	Report	121	23-Mar-18
TSR 30% Design		69	22-Feb-18
TSR Phasing Plans		62	02-Apr-18
TSR Final Design Standards Development		106	01-Jun-18
TSR Property and Easement Acquisition Documents		21	02-Feb-18







# **Water Treatment Plant**

## **Scope of Services**

The scope of services includes surveying, geotechnical, preliminary (30% 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**

Delivered 30% drawings to City for review. Finalized the 30% cost estimate for delivery to City at January workshop. Final geotechnical reports for the water treatment plant site have been received and completed. Received initial results of the granular activated carbon treatability study. Follow-up results are anticipated and coordination with the laboratory is ongoing.



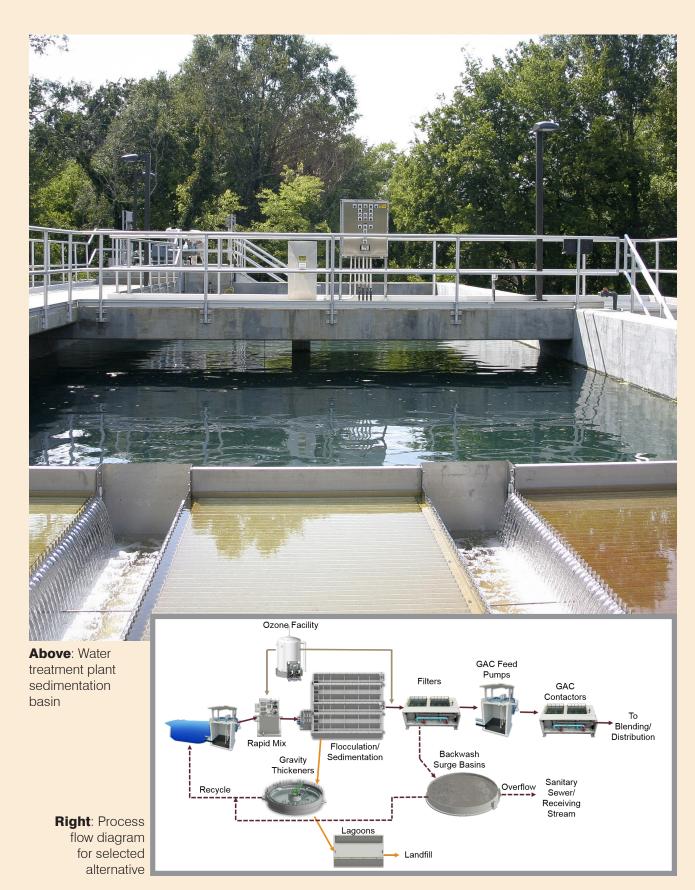
## Completed

- Submitted draft 30% design drawings to City staff for review
- Developed 30% opinion of probable construction cost



## **Future Activities**

- Continue the treatability analysis and reporting
- Engineering Report submission to the Department of Environmental Quality
- Submit 30% opinion of probable construction cost to City staff for review
- Begin the Water Treatment Phasing Plan



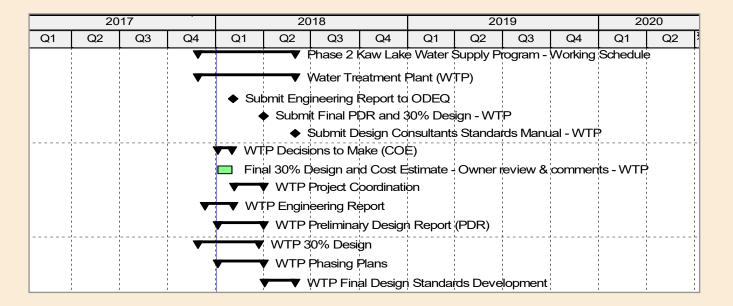






# **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lal	ce Water Supply Program - Working Schedule	132	01-Jun-18
Water Treatment	Plant (WTP)	132	01-Jun-18
MS1160	Submit Engineering Report to ODEQ	0	02-Feb-18
MS1200	Submit Final PDR and 30% Design - WTP	0	02-Apr-18*
MS1190	Submit Design Consultants Standards Manual - WTP	0	01-Jun-18*
WTP Decisions to	WTP Decisions to Make (COE)		01-Feb-18
WTP.1904	Final 30% Design and Cost Estimate - Owner review & comments - WTP	20	01-Feb-18
WTP Project Coord	WTP Project Coordination		02-Apr-18
WTP Engineering Report		22	02-Feb-18
WTP Preliminary D	WTP Preliminary Design Report (PDR)		02-Apr-18
WTP 30% Design		83	23-Mar-18
WTP Phasing Plan	S	62	02-Apr-18
WTP Final Design	Standards Development	43	01-Jun-18



**Draft Engineering Report** to ODEQ

**Final Preliminary Design Report** and 30% Design

**Design Consultants** 



# **Distribution**

### **Scope of Services**

Generally, the scope of services includes surveying, geotechnical, preliminary (30% 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**

The preliminary design work for the transmission main, high-service pump station, blended storage tank, and site civil was completed, and the drawings were submitted for internal technical review. Additionally, the draft Preliminary Design Report was completed and submitted for internal review. The field work for geotechnical investigations along the transmission main was completed, and work continues on compilation of the geotechnical report and processing property survey information along the transmission main corridor.



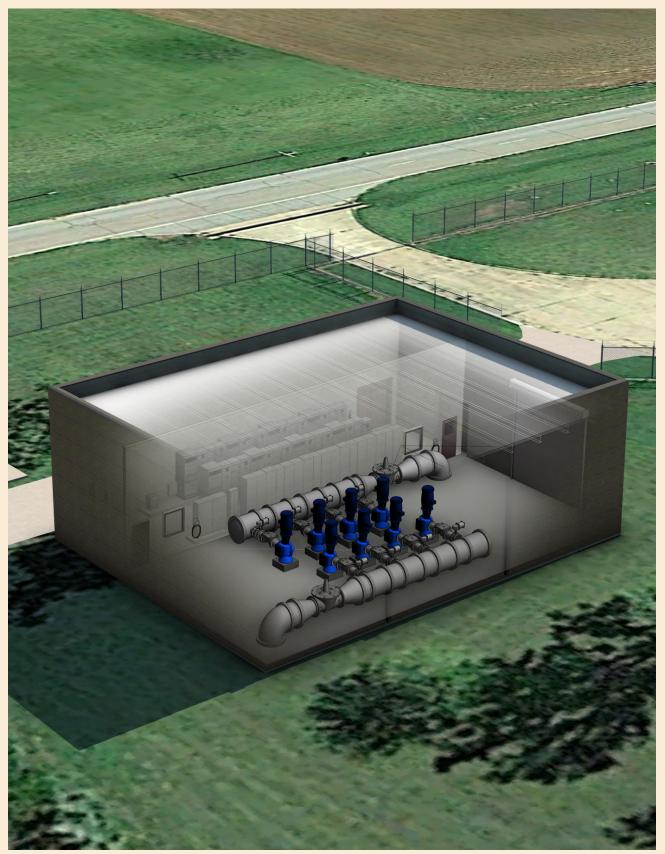
### Completed

- Conducted internal review of draft Preliminary Design Report
- Finalized draft Preliminary Design Report and submitted to City staff for review
- Conducted internal review of draft 30% design drawings
- Completed development of 30% opinion of probable construction cost
- Finalized draft 30% design drawings
- Completed field work for geotechnical investigations along transmission main alignment



## **Future Activities**

- Submit draft 30% design drawings and 30% opinion of probable construction cost to City staff for review
- Revise draft Preliminary Design Report based on City review
- Complete property surveys along transmission main corridor
- Submit the East Pressure Plane Transmission Main Subsurface Investigation Report to City staff for review
- Begin the Distribution Interface Phasing Plan
- Prepare documentation for potential easement and property acquisition along the transmission main, including legal descriptions of the temporary and permanent easement acquisition for each affected property along the transmission main

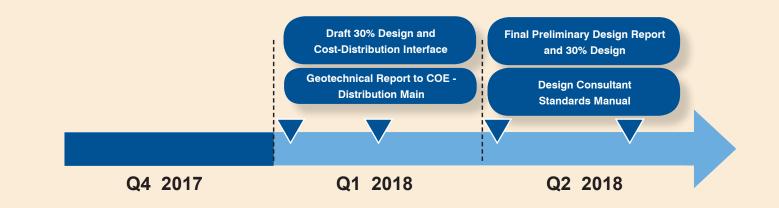


**Above**: Conceptual layout of high-service (distribution) pump station



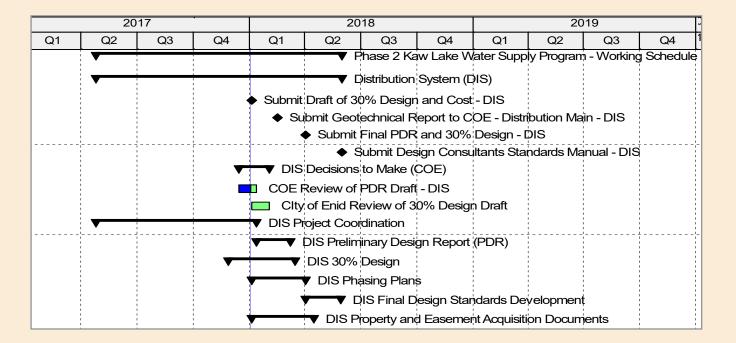






# **Project Schedule**

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake W	ater Supply Program - Working Schedule	312	01-Jun-18
Distribution System (	(DIS)	312	01-Jun-18
MS1230	Submit Draft of 30% Design and Cost - DIS	0	04-Jan-18*
MS1215	Submit Geotechnical Report to COE - Distribution Main - DIS	0	16-Feb-18
MS1250	Submit Final PDR and 30% Design - DIS	0	02-Apr-18*
MS1240	Submit Design Consultants Standards Manual - DIS	0	01-Jun-18*
DIS Decisions to Make	DIS Decisions to Make (COE)		01-Feb-18
DIS.COED.PDRF.xx.R1	COE Review of PDR Draft - DIS	20	11-Jan-18
DIS.COED.30DF.xx.R1	Clty of Enid Review of 30% Design Draft	20	01-Feb-18
DIS Project Coordination		191	12-Jan-18
DIS Preliminary Design	Report (PDR)	57	09-Mar-18
DIS 30% Design		77	15-Mar-18
DIS Phasing Plans		62	02-Apr-18
DIS Final Design Standards Development		40	29-May-18
DIS Property and Easement Acquisition Documents		72	16-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 93% complete. Remaining properties to be surveyed include twelve parcels where access has been denied. Cultural resources studies for the pipeline are approximately 30% complete. The State Archaeologist has indicated approval with the deep testing methods pending some additional information which is in progress.

Discussions with the U.S. Army Corps of Engineers has clarified that the environmental studies and NEPA document must cover all property affected by the program. Therefore, access must be gained to all properties and studies completed before specialist reports and the Environmental Assessment can be completed.

Work on the biological, hazardous materials, and cultural resources reports is ongoing. Shape files of aquatic resources to be updated based on additional field work.



### Completed

- Completed Intake, Water Treatment Plant, and Distribution Biological and Cultural Resource Studies
- Completed approximately 93% of the biological field work along the pipeline, including the tribal parcels
- Completed approximately 30% of the cultural resources field work along the pipeline, from Enid to NS-301 Road in Garfield County
- Completed biological field work at Emergency Terminal Storage Reservoir site – no findings
- Completed approximately 75% of Wetland and Threatened and Endangered Species Reports
- Completed approximately 85% of the Hazardous Materials Report



#### **Future Activities**

- Complete consultation with the U.S. Army Corps of Engineers and State Archeologist on trenching methods and request approval from the City to proceed
- Complete cultural resources and biological studies for private property where access has been denied, anticipated completion pending right-of-entry
- Complete Biological, Hazardous Materials, and Cultural Resources Reports
- Additional community meeting with Ponca Tribe as requested



**Above**: Kaw Lake shoreline







# **Project Schedule**

vity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Wa	ater Supply Program - Working Schedule	557	10-Jul-19
Environmental (ENV)		557	10-Jul-19
ENV Specialist Studies		386	05-Nov-1
ENV.1950D	Hazardous Materials Memo	47	15-Jun-18
ENV.1950C	Cultural Resources Report	17	15-Jun-18
ENV.1950B	Threatened & Endangered Species Report	60	15-Jun-18
ENV.1950A	Wetland and Stream Delineation Report	60	15-Jun-18
ENV.1950C.1.1	Technical Review Committee Review of Cultural Resources Report	10	29-Jun-18
ENV.1950B.1.1	Technical Review Committee Review of Threatened & Endangered Species Re	10	29-Jun-18
ENV.1950A.1.1	Technical Review Committee Review of Wetland and Stream Delineation Repo	10	29-Jun-18
ENV.1950D.1.1	Technical Review Committee Review of Hazardous Materials Memo	10	29-Jun-18
ENV.1950D.1	City Review of Hazardous Materials Memo	10	16-Jul-18
ENV.1950C.1	City Review of Cultural Resources Report	10	16-Jul-18
ENV.1950B.1	City Review of Threatened & Endangered Species Report	10	16-Jul-18
ENV.1950A.1	City Review of Wetland and Stream Delineation	10	16-Jul-18
ENV.1950C.2	Revisions of Cultural Resources Report	5	23-Jul-18
ENV.1950B.2	Revisions of Threatened & Endangered Species Report	5	23-Jul-18
ENV.1950A.2	Revisions of Wetland & Stream Delineation Report	5	23-Jul-18
ENV.1950D.2	Revisions of Hazadous Materials Memo	5	23-Jul-18
ENV.1100B	USACE Review of Threatened & Endangered Species Report	42	20-Sep-18
ENV.1100A	USACE Review of Wetland & Stream Delineation Report	42	20-Sep-18
ENV.1100C	USACE Review of Cultural Resources Report	44	24-Sep-18
ENV.1100B.1	USFWS Review of Threatened & Endangered Species Report	30	01-Nov-18
ENV.1100C.1	SHPO Review of Cultural Resources Report	30	05-Nov-18
ENV for PIP		270	22-May-1
ENV for TSR EM		50	29-Jan-18
ENV Environmental Ass	essment	192	04-Feb-19
ENV.1120	Prepare Draft EA- Introduction and Background	10	15-May-1
ENV.1123	Prepare Draft EA - Existing Conditions	5	22-May-1
ENV.1121	Prepare Draft EA - Environmental Impacts	22	22-Jun-18
ENV.1122	Prepare Draft EA - Public Involvement summary	22	22-Jun-18
ENV.1124	Prepare Draft EA - Summary and Commitments	10	09-Jul-18
ENV.1124A	Draft EA - Technical Review Committee Review	10	23-Jul-18
ENV.1124B	City Review of Draft EA	10	06-Aug-18
ENV.1125	Produce and Submit Draft EA	5	13-Aug-18
ENV.1110	USACE & Cooperating Agency Review of EA	31	26-Sep-18
ENV.1080	Draft FONSI	10	19-Nov-1
ENV.1130	Public Comment Period - FONSI	21	20-Dec-1
ENV.1140	Review & Incorporate Public Comments	10	07-Jan-19
ENV.1150	FINAL EA Approval	20	04-Feb-19
ENV Section 408 Approv	• •	50	15-Apr-19
ENV Section 404 Pre-Coordination		245	10-Jul-19



