Monthly Progress Report

March 2018

Contact Information

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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.

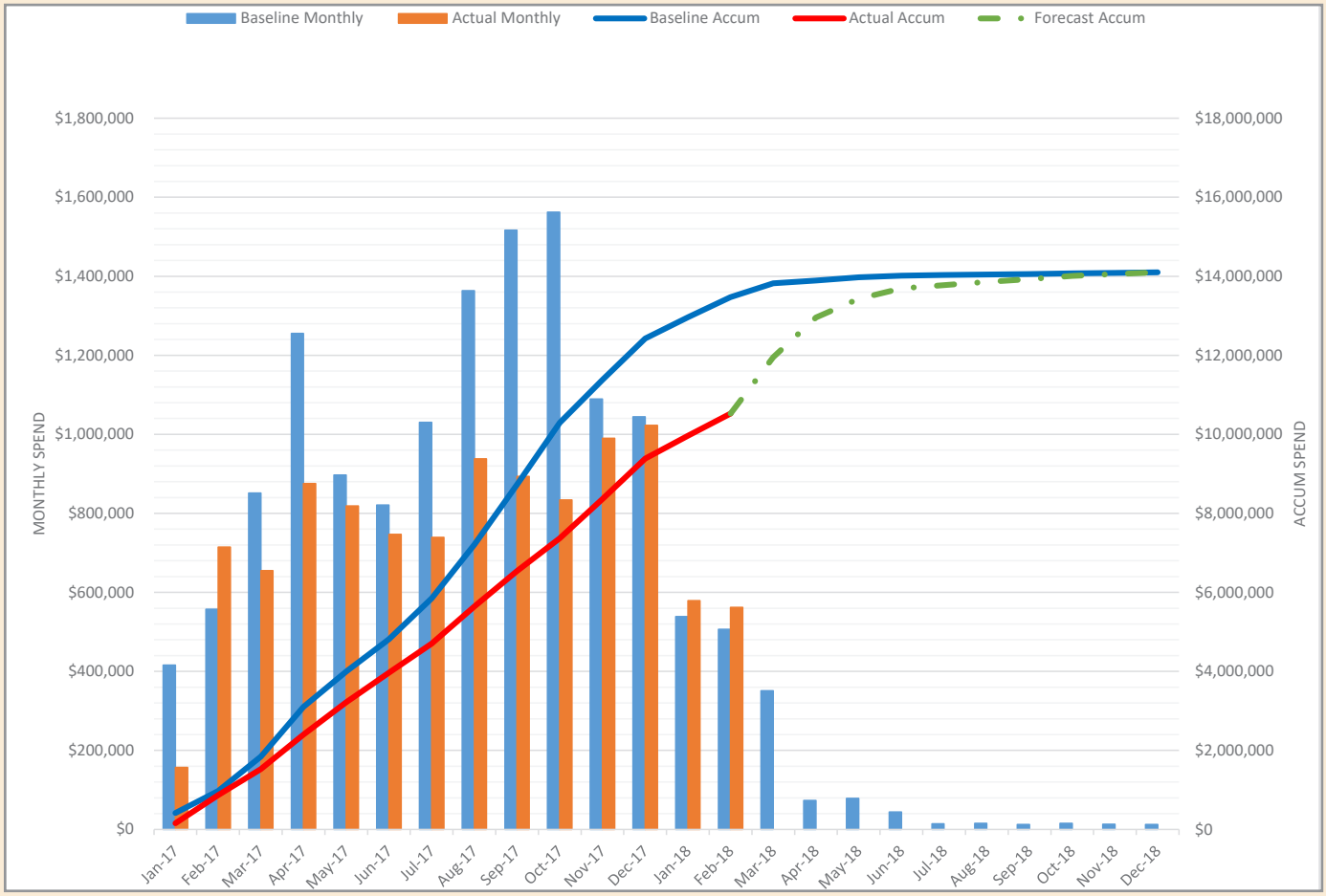
Distribution

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.


KAW LAKE WATER SUPPLY
REGIONAL
TREATMENT
TRANSMISSION
STORAGE
CITY OF Enid
OKLAHOMA

Program Finance - Phase 2

Kaw Lake Water Supply Program CashFlow



Summary

As of February 26, the accumulate spent is 75% and the planned spend is 96%. 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 late spring 2018, resulting in a shift of the projected cash flow.

Program Schedule - Phase 2

Kaw Lake Water Supply Program - February 2018

Summary

As of February 26, the schedule has an overall progress of 86% with a planned progress of 95%. The shift in the target progress shown above is a product of the implemented recovery plan. The recovery plan allowed 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 late spring 2018.

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

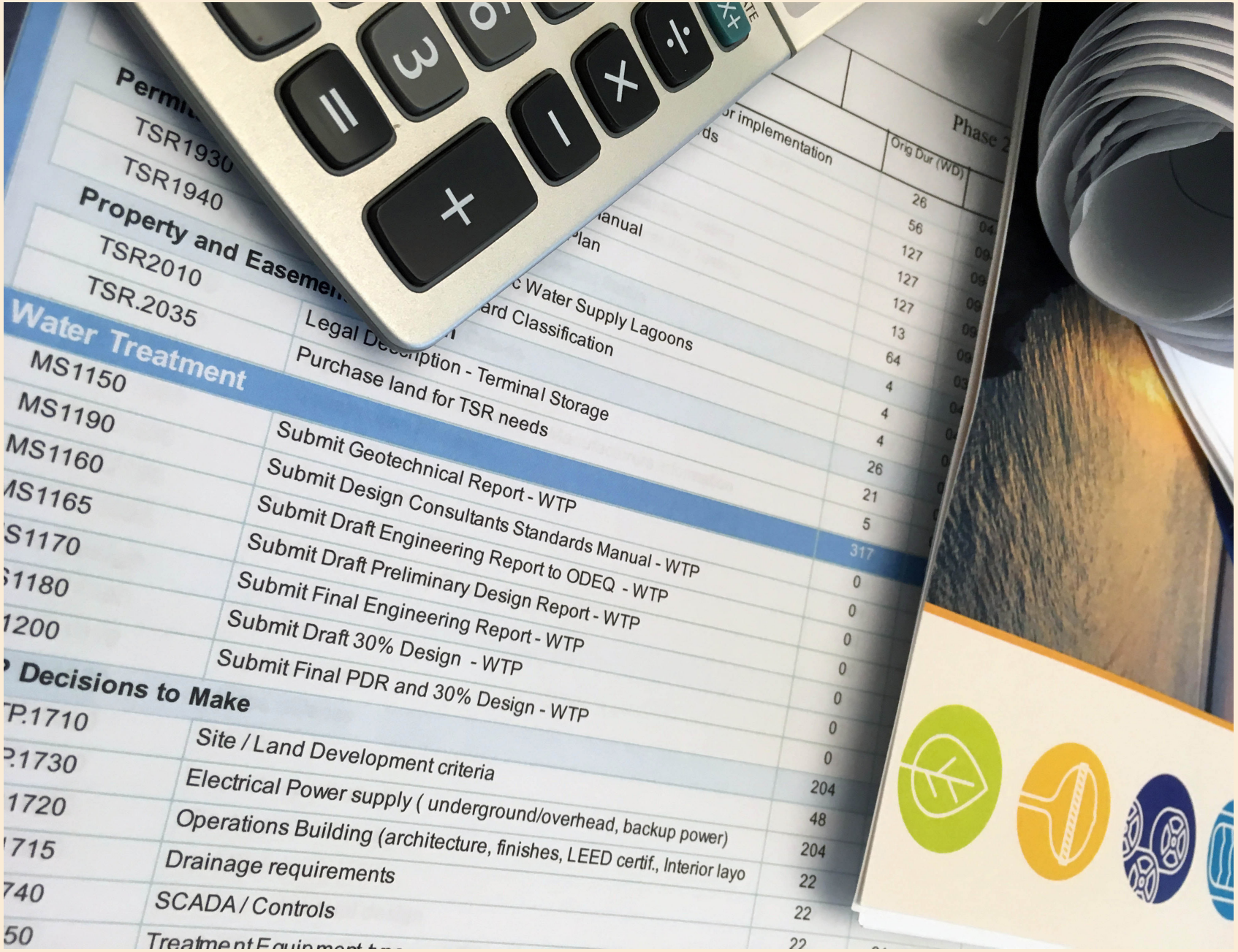
The program phasing planning and value engineering began an effort to provide alternatives to meet the City's anticipated program budget. Teams developed and evaluated alternative technical options to achieve the program goals within the available budget. Alternatives for cost reduction have been presented to the City for consideration. Alternatives included phasing options such as phasing the maximum design flow of the program, and value engineering options such as using in-situ material to backfill the pipeline during construction where possible. The system-wide effects of the proposed alternatives were presented and considered with the City. A final proposal for the phasing and value engineering recommendations is in progress. Program risks associated with the potential reductions have been identified and the teams are integrating mitigations where possible. The Technical Review Committee within Garver is currently evaluating the phasing alternatives developed by the Program Team (Garver and City PM staff) and will provide written recommendations. Development of the Design Consultant Standards Manual has been delayed until after phasing decisions have been finalized. This is to ensure the manual will reflect the final design intent. Development of the Program Strategy Manual continues with organizational planning to optimize the program oversight. Planning for easement acquisition continues with detailed parcel analysis in preparation for final design.

Completed

- Interface identification is complete for full build-out plans
- Schedule and cost updates of the Master Project Schedule

Future Activities

- Technical Review Committee Phasing Recommendation
- 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 budgets, work flows, special contract provisions and standardizations for program work


Phase 2
Orig Dur (WD)
TSR1930
TSR1940
TSR2010
TSR.2035
Water Treatment
MS1150
MS1190
MS1160
MS1165
S1170
S1180
1200
Decisions to Make
P.1710
:1730
1720
715
740
50
Water Supply Lagoons
Legal Description - Terminal Storage
Purchase land for TSR needs
Submit Geotechnical Report - WTP
Submit Design Consultants Standards Manual - WTP
Submit Draft Engineering Report to ODEQ - WTP
Submit Draft Preliminary Design Report - WTP
Submit Final Engineering Report - WTP
Submit Draft 30% Design - WTP
Submit Final PDR and 30% Design - WTP
Site / Land Development criteria
Electrical Power supply (underground/overhead, backup power)
Operations Building (architecture, finishes, LEED certif., Interior layo
Drainage requirements
SCADA / Controls

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 focused on developing value engineering and phasing plan concepts for the Intake and Intermediate Booster Pump Station. Items and quantities were tabulated to generate approximate cost savings and/or deferred cost.

Completed

- Reviewed and addressed City comments pertaining to the draft 30% design drawings of the Intake and Intermediate Booster Pump Station
- Received final Intake Subsurface Investigation Report
- Developed phasing plan and value engineering concepts and approximate costs for the Intake and Intermediate Booster Pump Station

Future Activities

- Finalize updates to Intake and Intermediate Booster Pump Station Preliminary Design Report
- Finalize updates to Transient Analysis (Surge) Model, and Technical Memo
- Submit final Preliminary Design Report
- Submit final 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Prepare Design Consultant Standards Manual

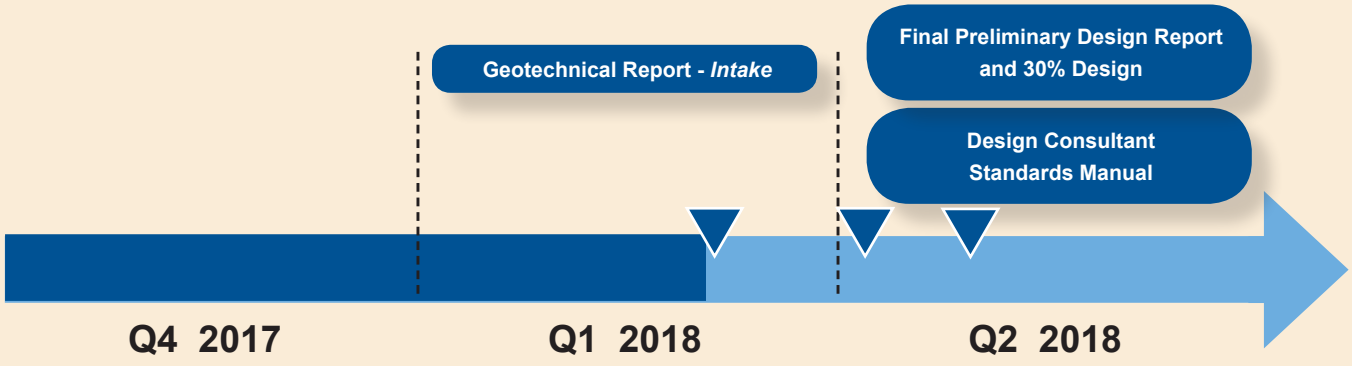
Above and Right: 3D rendering of intake pump station and underwater piping at Kaw Lake

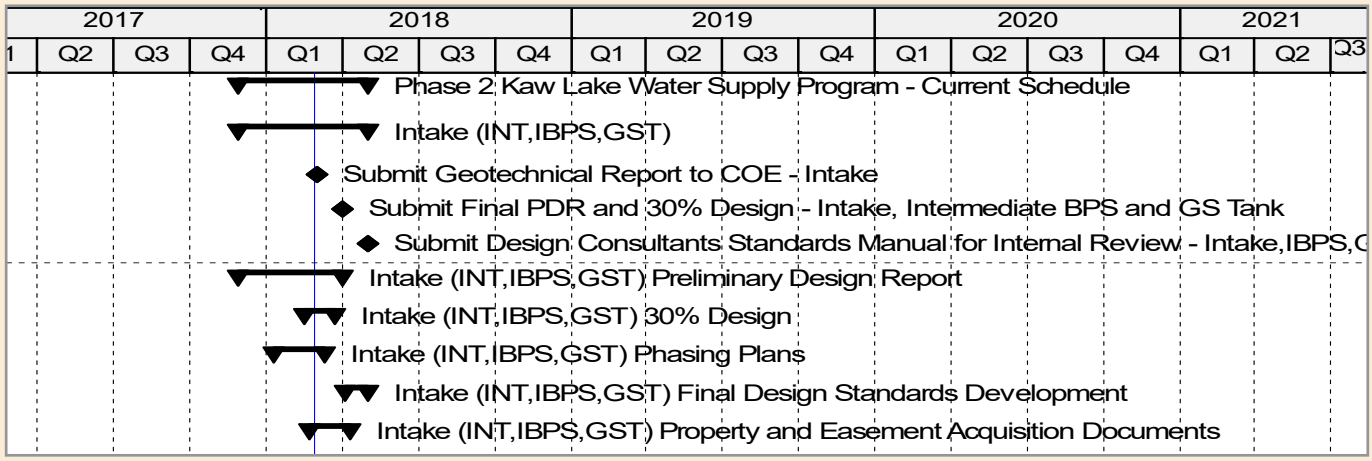
Intake and Pump Stations

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		109	30-Apr-18
Intake (INT,IBPS,GST)		109	30-Apr-18
MS1010	Submit Geotechnical Report to COE - Intake	0	01-Mar-18
MS1050	Submit Final PDR and 30% Design - Intake, Intermediate BPS and GS Tank	0	02-Apr-18*
MS1040	Submit Design Consultants Standards Manual for Internal Review - Intake,IBPS,GS Tank	0	30-Apr-18*
Intake (INT,IBPS,GST) Preliminary Design Report		88	02-Apr-18
Intake (INT,IBPS,GST) 30% Design		27	23-Mar-18
Intake (INT,IBPS,GST) Phasing Plans		44	09-Mar-18
Intake (INT,IBPS,GST) Final Design Standards Development		20	30-Apr-18
Intake (INT,IBPS,GST) Property and Easement Acquisition Documents		35	10-Apr-18


Geotechnical Report - *Intake*
Final Preliminary Design Report and 30% Design
Design Consultant Standards Manual
Q4 2017
Q1 2018
Q2 2018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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Intake (INT,IBPS,GST)
Submit Geotechnical Report to COE - Intake
Submit Final PDR and 30% Design - Intake, Intermediate BPS and GS Tank
Submit Design Consultants Standards Manual for Internal Review - Intake,IBPS,
Intake (INT,IBPS,GST) Preliminary Design Report
Intake (INT,IBPS,GST) 30% Design
Intake (INT,IBPS,GST) Phasing Plans
Intake (INT,IBPS,GST) Final Design Standards Development
Intake (INT,IBPS,GST) Property and Easement Acquisition Documents

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 plans.

Project Update

The team is continuing to prepare updates to the mapbook and parcel tracking information to provide information to City staff on a weekly basis. 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. Revisions to the draft Preliminary Design Report is ongoing. The supplemental geotechnical analysis is ongoing with the information obtained to date, identifying gaps based on the data collected and making assumptions where appropriate. Property surveys for Garfield County have been received and design updates are being made to the 30% design. The 30% opinion of probable construction cost and design drawings was submitted in early January 2018 and City comments were received in mid-February. Progress continues to be made on the phasing plan for the pipeline.

Completed

- Ongoing updates to the web mapping tool and map book for the entire pipeline alignment
- Initial discussions on the phasing plan options
- Reviewed and addressed City comments pertaining to the draft 30% design drawings and the pipeline

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 final 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Submit final Preliminary Design Report
- Submit final 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Continue to develop the phasing plan for the Pipeline
- Prepare Design Consultant Standards Manual
- Submit Pipeline Geotechnical Report for Quality Control Review

Above: Installing 60-inch casing

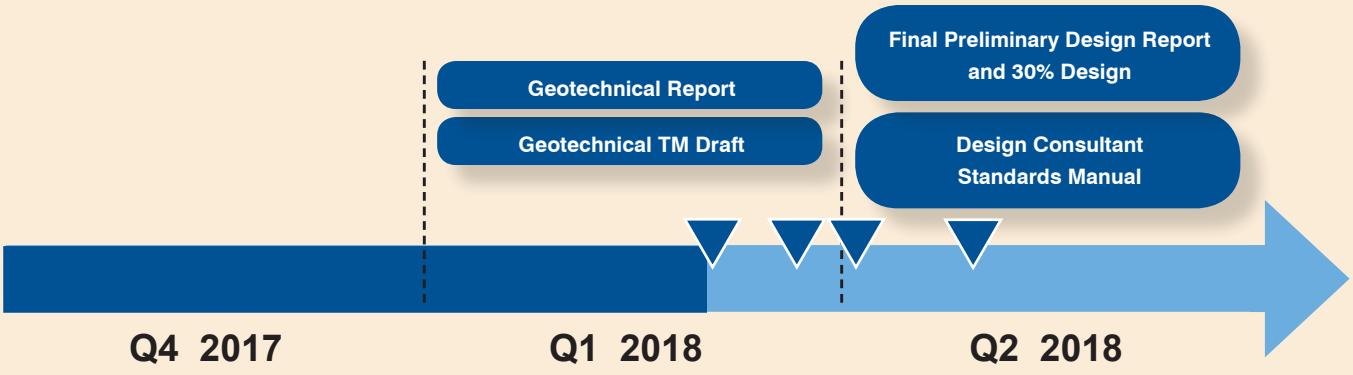
Right: Installing 48-inch pipe by bore and jack

Pipeline

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		168	28-Jun-18
Pipeline (PIP)		168	28-Jun-18
MS1060	Submit Geotechnical Report to COE - PIP	0	01-Mar-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 for Internal Review - PIP	0	30-Apr-18*
Pipeline (PIP) Decisions to Make (COE)		10	30-Mar-18
PMx.COED.TRCD.GT.00	City of Enid Review of Geotechnical TM Draft - PIP	10	30-Mar-18
Pipeline (PIP) Geotechnical Investigation		131	02-Apr-18
Pipeline (PIP) Preliminary Design Report (PDR)		65	30-Mar-18
Pipeline (PIP) 30% Design		28	26-Mar-18
Pipeline (PIP) Phasing Plan		46	09-Mar-18
Pipeline (PIP) Final Design Standards Development		20	30-Apr-18
Pipeline (PIP) Property and Easement Aquisition Documents		146	28-Jun-18


Final Preliminary Design Report and 30% Design
Geotechnical Report
Geotechnical TM Draft
Design Consultant Standards Manual
Q4 2017
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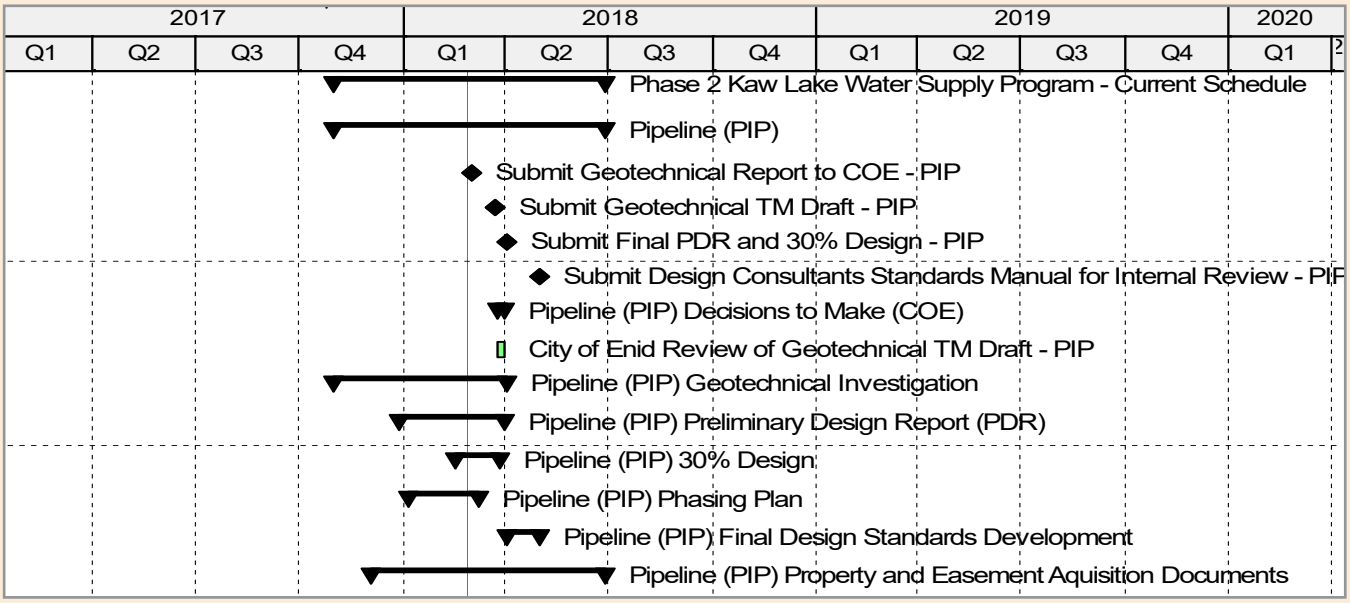
Q2 2018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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Pipeline (PIP)
Submit Geotechnical Report to COE - PIP
Submit Geotechnical TM Draft - PIP
Submit Final PDR and 30% Design - PIP
Submit Design Consultants Standards Manual for Internal Review - PIP
Pipeline (PIP) Decisions to Make (COE)
City of Enid Review of Geotechnical TM Draft - PIP
Pipeline (PIP) Geotechnical Investigation
Pipeline (PIP) Preliminary Design Report (PDR)
Pipeline (PIP) 30% Design
Pipeline (PIP) Phasing Plan
Pipeline (PIP) Final Design Standards Development
Pipeline (PIP) Property and Easement Aquisition Documents

Terminal Storage

Scope of Services

The scope of services includes surveying, geotechnical, preliminary (30% complete) design 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 phasing plan nears completion.

The civil site design has been completed, including preliminary grading, road locations, and stormwater design. The City's review comments along with the final design and criteria are being captured and organized into the 30% Preliminary Design Report.

Work is nearing completion on the phasing plan and value engineering for the Terminal Storage Reservoirs as well as identifying risks as part of the risk analysis. In addition, design standards, criteria, and standards details are in the process of being identified for incorporation into the Design Consultant Standards Manual.

Completed

- Identified numerous cost saving measures for the Terminal Storage Reservoirs to be considered as part of the phasing plan
- Recommended phasing plan strategy for the Terminal Storage Reservoirs
- Reviewed and addressed City comments pertaining to the draft 30% design drawings of Equalization and Emergency Terminal Storage Reservoirs

Future Activities

- Submit final Preliminary Design Report
- Submit final 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Complete phasing plan for the Terminal Storage Reservoirs
- Prepare Design Consultant Standards Manual

Above: Rendering of equalization terminal storage reservoir at water treatment plant

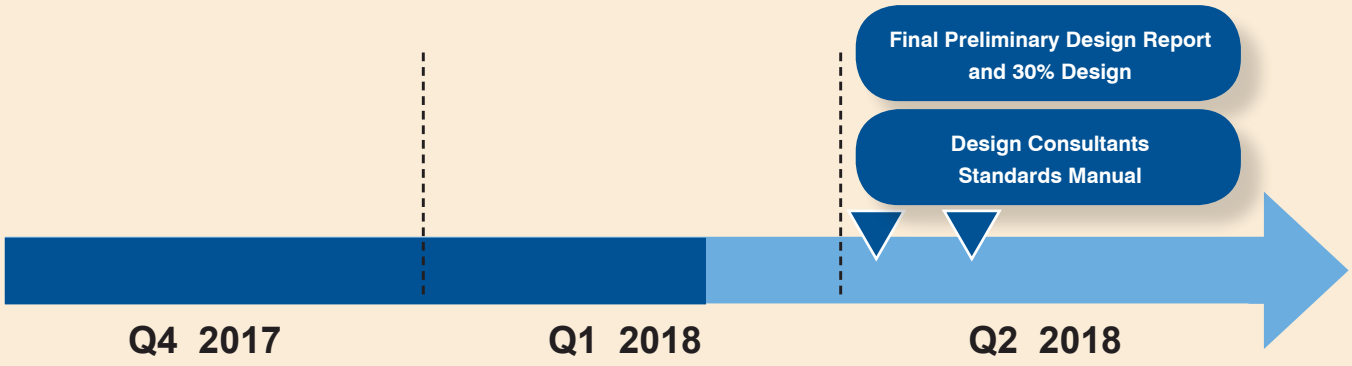
Right: Example terminal storage reservoir under construction

Terminal Storage

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		147	30-Apr-18
Terminal Storage Reservoirs (TSR)		147	30-Apr-18
MS1140	Submit Final PDR and 30% Design - TSR	0	02-Apr-18*
MS1120	Submit Design Consultants Standards Manual for Internal Review - TSR	0	30-Apr-18*
TSR Preliminary Design Report		126	30-Mar-18
TSR 30% Design		21	16-Mar-18
TSR Phasing Plans		46	09-Mar-18
TSR Final Design Standards Development		20	30-Apr-18


Final Preliminary Design Report and 30% Design
Design Consultants Standards Manual
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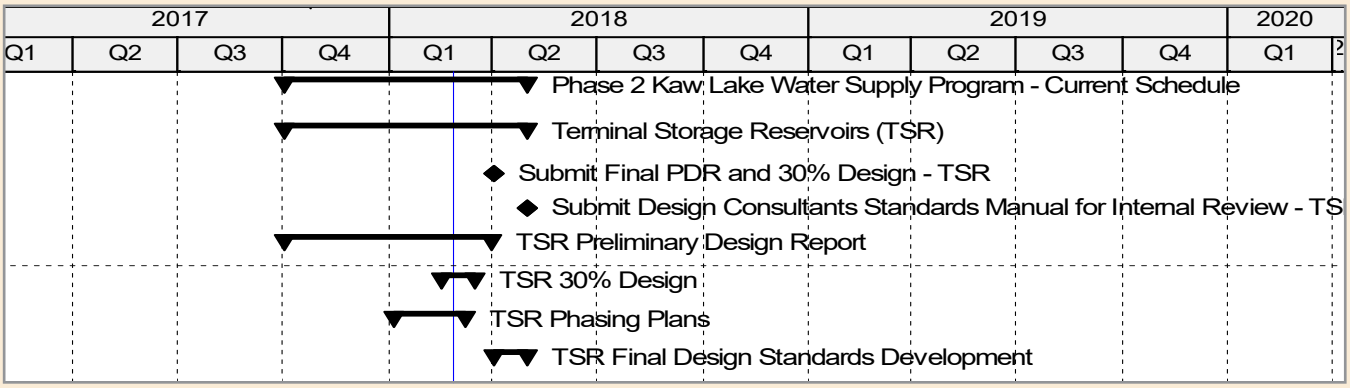
Q2 2018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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Terminal Storage Reservoirs (TSR)
Submit Final PDR and 30% Design - TSR
Submit Design Consultants Standards Manual for Internal Review - TS
TSR Preliminary Design Report
TSR 30% Design
TSR Phasing Plans
TSR Final Design Standards Development

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

The team has developed a cost analysis of phasing and other cost-saving alternatives for incorporation into the draft phasing plan. The City's comments on the Engineering Report are being addressed and preparation of the submittal to the Oklahoma Department of Environmental Quality has begun. The team is updating the Design Information Memoranda to capture the latest revisions to 30% design and combining memoranda into the Final Preliminary Design Report. Coordination continues with the laboratory for treatability testing.

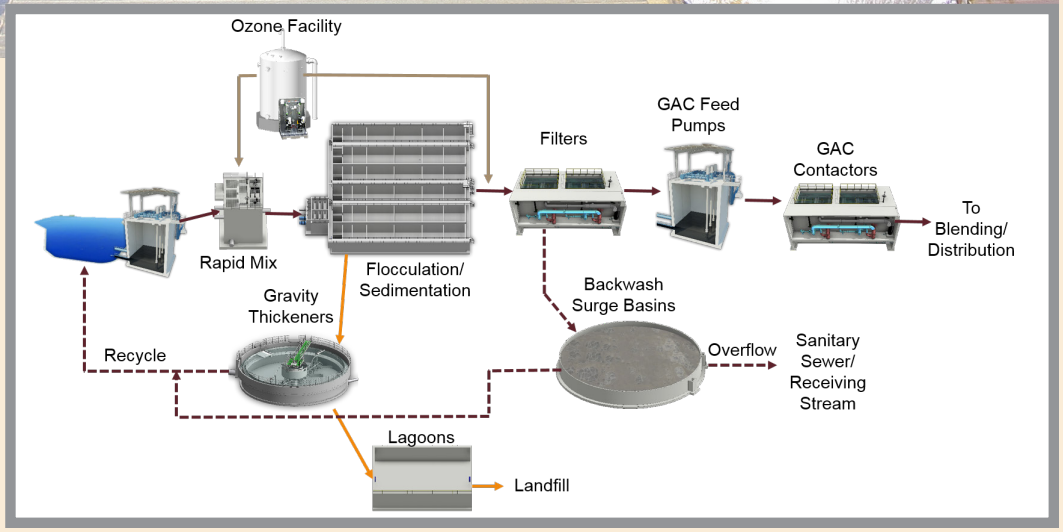
Completed

- Identified numerous cost saving measures for the Water Treatment Plant to be considered as part of the phasing plan
- Recommended phasing plan strategy for the Water Treatment Plant
- Reviewed and addressed City comments pertaining to the draft 30% design drawings of the Water Treatment Plant

Future Activities

- Continue the treatability analysis and reporting
- Submit Engineering Report to the Oklahoma Department of Environmental Quality
- Submit final Preliminary Design Report
- Submit final 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Complete phasing plan for the Water Treatment Plant
- Prepare Design Consultant Standards Manual

Above: Water treatment plant sedimentation basin



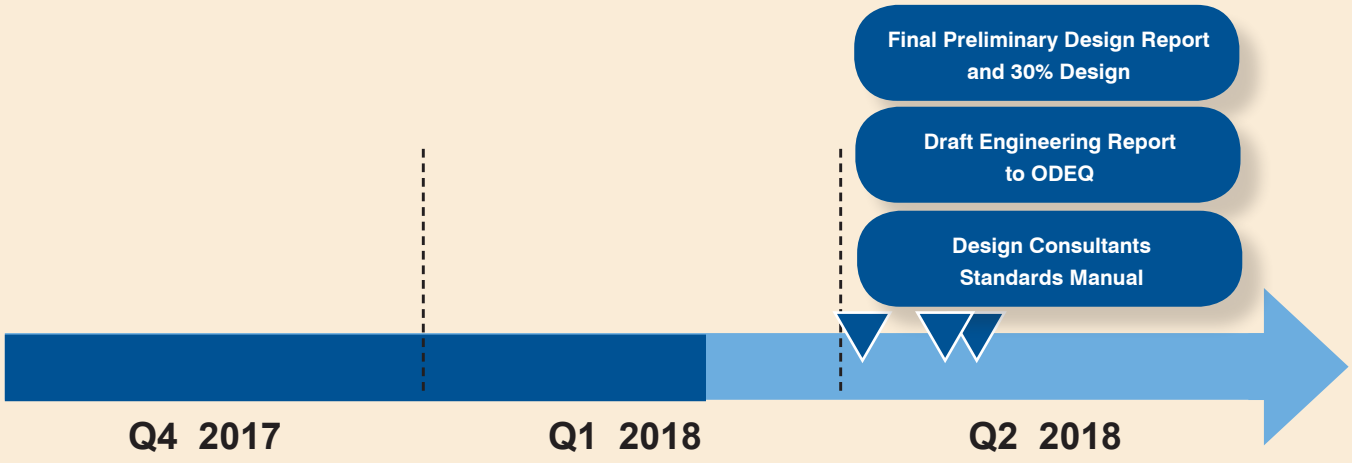
Right: Process flow diagram for selected alternative

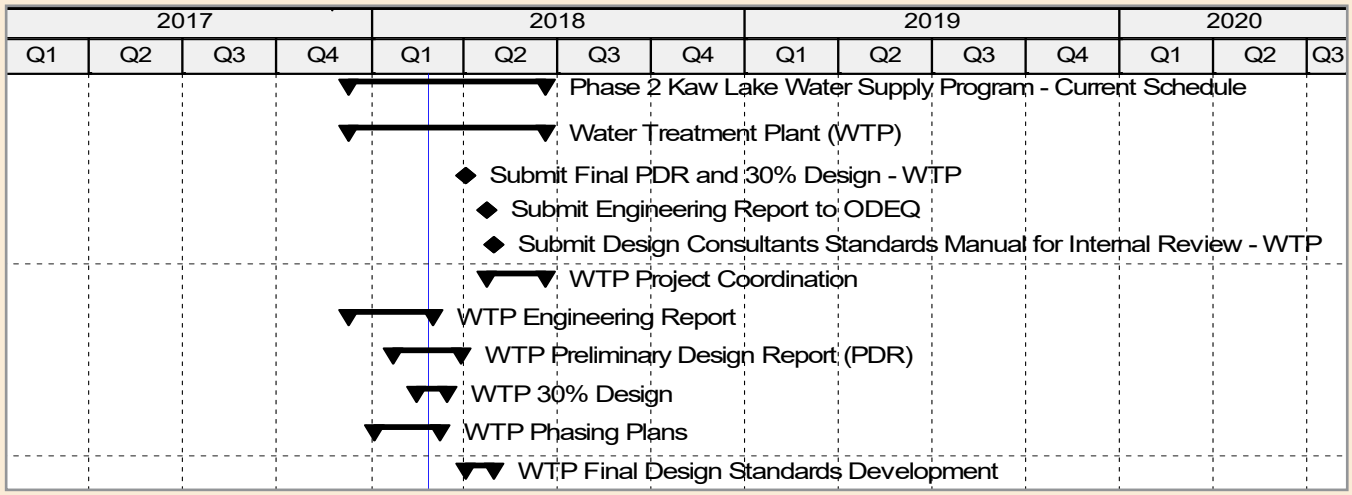
Water Treatment Plant

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		135	19-Jun-18
Water Treatment Plant (WTP)		135	19-Jun-18
MS1200	Submit Final PDR and 30% Design - WTP	0	02-Apr-18*
MS1160	Submit Engineering Report to ODEQ	0	23-Apr-18
MS1190	Submit Design Consultants Standards Manual for Internal Review - WTP	0	30-Apr-18*
WTP Project Coordination		41	19-Jun-18
WTP Engineering Report		22	02-Mar-18
WTP Preliminary Design Report (PDR)		49	30-Mar-18
WTP 30% Design		22	16-Mar-18
WTP Phasing Plans		46	09-Mar-18
WTP Final Design Standards Development		20	30-Apr-18


Final Preliminary Design Report and 30% Design
Draft Engineering Report to ODEQ
Design Consultants Standards Manual
Q4 2017
Q1 2018
Q2 2018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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Water Treatment Plant (WTP)
Submit Final PDR and 30% Design - WTP
Submit Engineering Report to ODEQ
Submit Design Consultants Standards Manual for Internal Review - WTP
WTP Project Coordination
WTP Engineering Report
WTP Preliminary Design Report (PDR)
WTP 30% Design
WTP Phasing Plans
WTP Final Design Standards Development

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

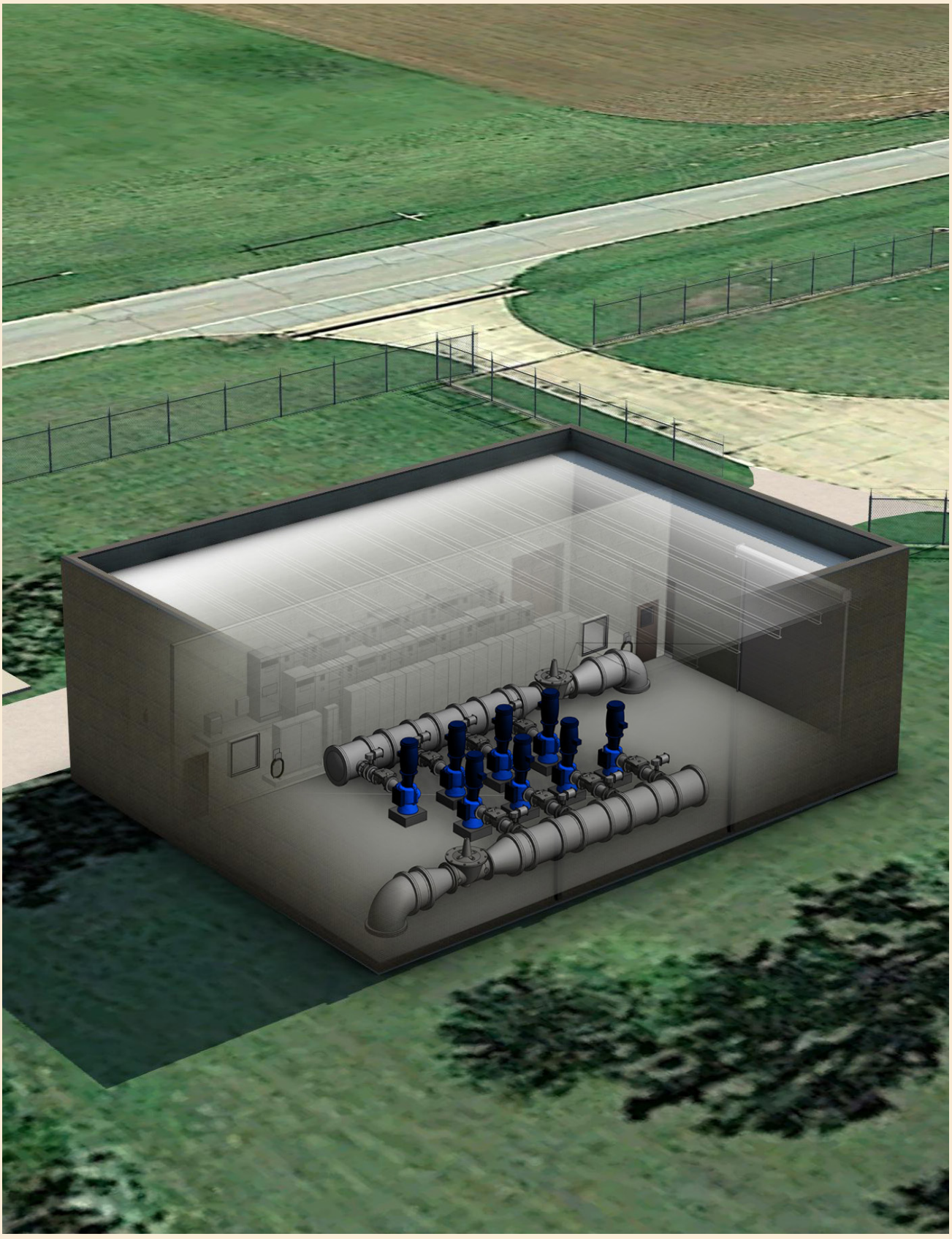
The preliminary design work for the transmission main, high-service pump station, blended storage tank, and site civil was completed, and the drawings were submitted for City review. The field work for geotechnical investigations along the transmission main was completed, and work continues on compilation of the geotechnical report and processing property survey information along the transmission main corridor. Extensive work has begun on developing concepts for phased implementation of the distribution integration improvements.

Completed

- Reviewed and addressed City staff comments on draft 30% design drawings
- Reviewed and started addressing City staff comments on preliminary design report
- Conducted evaluation of alternatives for Distribution Interface Phasing Plan

Future Activities

- Submit final Preliminary Design Report
- Complete property surveys along transmission main corridor
- Submit the East Pressure Plane Transmission Main Subsurface Investigation Report to City staff for review
- 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
- Submit final 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Complete phasing plan for the Distribution Interface
- Prepare Design Consultant Standards Manual



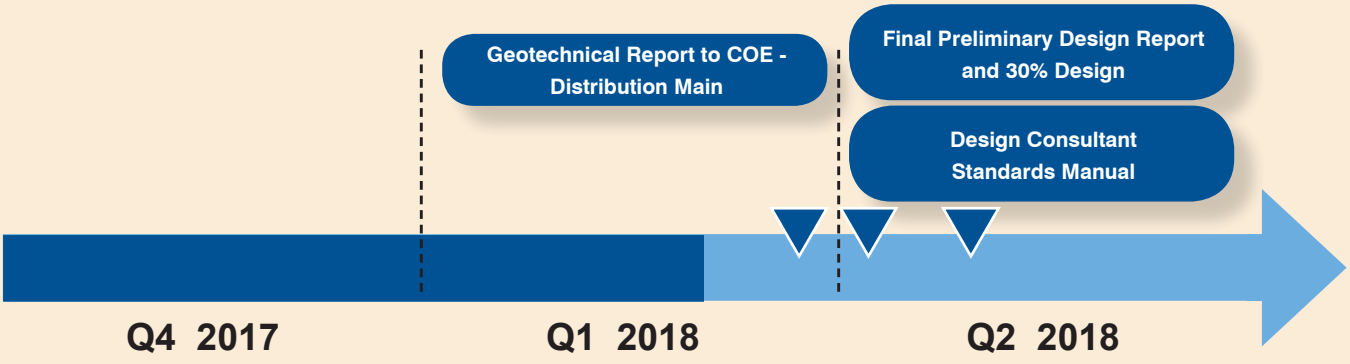
Above: Conceptual layout of high-service (distribution) pump station

Distribution

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		289	30-Apr-18
Distribution System (DIS)		289	30-Apr-18
MS1215	Submit Geotechnical Report to COE - Distribution Main - DIS	0	23-Mar-18
MS1250	Submit Final PDR and 30% Design - DIS	0	02-Apr-18*
MS1240	Submit Design Consultants Standards Manual for Internal Review - DIS	0	30-Apr-18*
DIS Project Coordination		20	09-Mar-18
DIS Preliminary Design Report (PDR)		57	30-Mar-18
DIS 30% Design		10	16-Mar-18
DIS Phasing Plans		46	09-Mar-18
DIS Final Design Standards Development		20	30-Apr-18
DIS Property and Easement Acquisition Documents		72	16-Apr-18


Geotechnical Report to COE - Distribution Main
Final Preliminary Design Report and 30% Design
Design Consultant Standards Manual
Q4 2017
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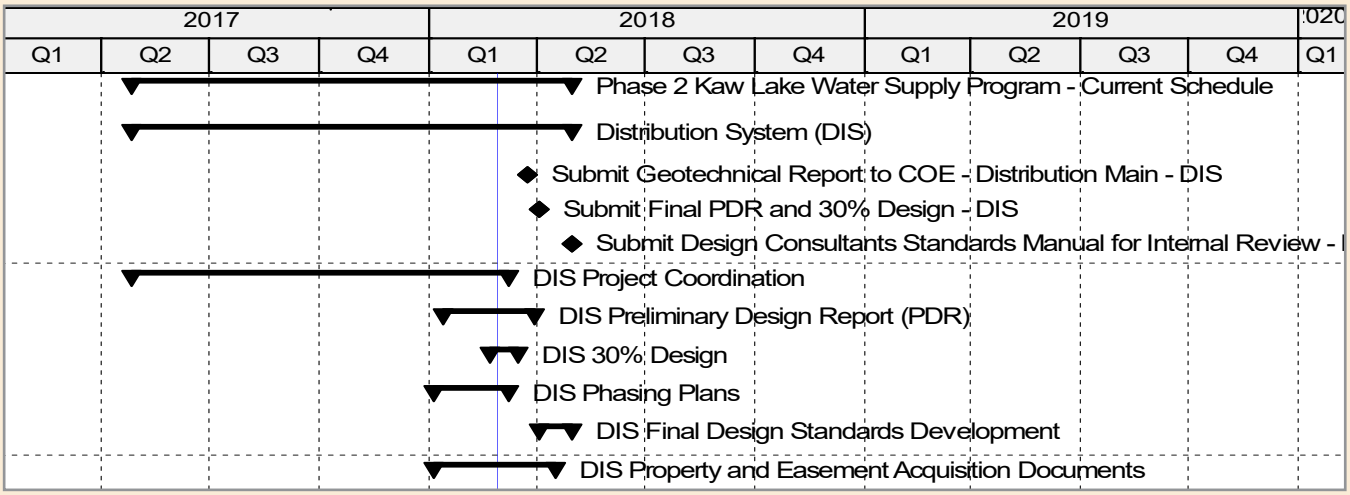
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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Distribution System (DIS)
Submit Geotechnical Report to COE - Distribution Main - DIS
Submit Final PDR and 30% Design - DIS
Submit Design Consultants Standards Manual for Internal Review -
DIS Project Coordination
DIS Preliminary Design Report (PDR)
DIS 30% Design
DIS Phasing Plans
DIS Final Design Standards Development
DIS Property and Easement Acquisition Documents

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, including tribal properties. Remaining properties to be surveyed include twelve parcels where access has been denied. Cultural resources studies for the pipeline are approximately 75% complete. No survey in Osage County has been performed. The U.S. Army Corps of Engineers and Oklahoma State Archeologist have approved methods for the archeological deep testing (trenching).

Discussions with the U.S. Army Corps of Engineers have 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 75% of the total cultural resources field work along the pipeline, including all of Garfield and Noble Counties
- Completed biological and cultural field work at Emergency Terminal Storage Reservoir site and Intermediate Booster Pump Station site – no findings
- Completed approximately 80% of Wetland and Threatened and Endangered Species Reports
- Completed approximately 90% of the Hazardous Materials Report

Future Activities

- Complete cultural resources survey on the Pipeline - holding on Osage County until go-ahead received from the City
- Complete cultural resources and biological studies for private property where access has been denied, anticipated completion pending right-of-entry
- Request approval for archeological trenching work and notify all affected owners and request remission to perform the trenching
- Complete Biological, Hazardous Materials, and Cultural Resources Reports
- Additional community meeting with Ponca Tribe as requested
- Preparation of the Draft Environmental Assessment

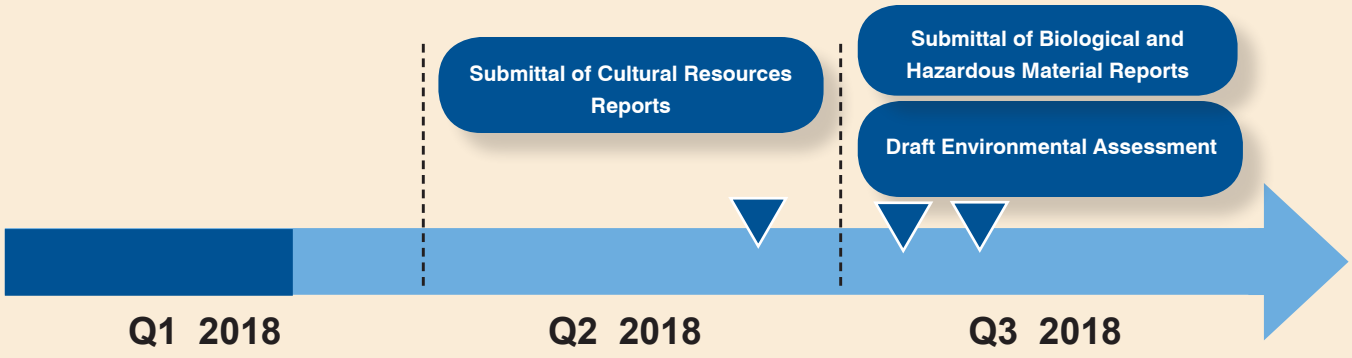
Above: Kaw Lake shoreline

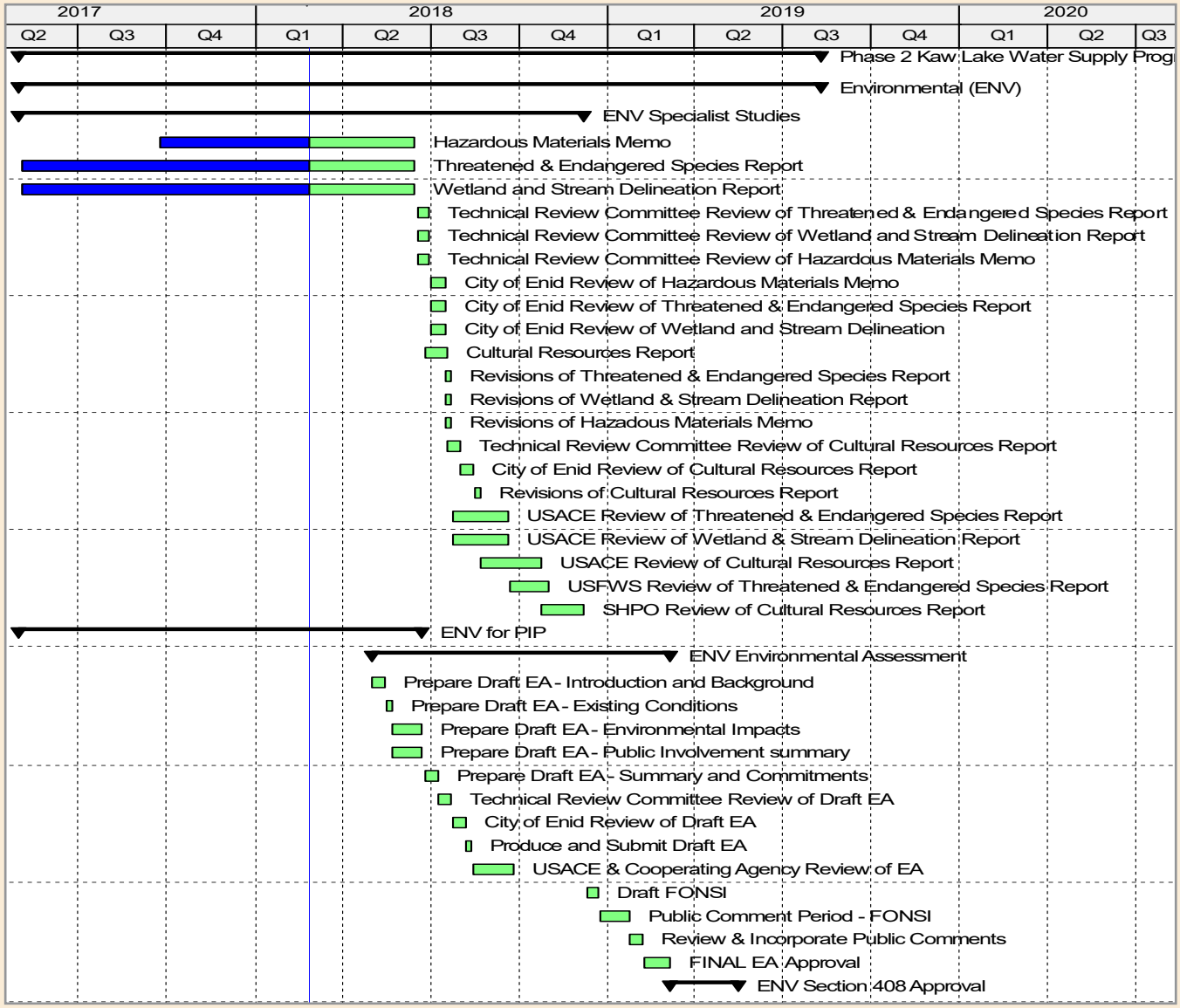
Environmental

Project Milestones

Project Schedule

ivity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		579	09-Aug-19
Environmental (ENV)		579	09-Aug-19
ENV Specialist Studies		408	07-Dec-18
ENV.1950D	Hazardous Materials Memo	47	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.1950B.1.1	Technical Review Committee Review of Threatened & Endangered Species Rep	10	29-Jun-18
ENV.1950A.1.1	Technical Review Committee Review of Wetland and Stream Delineation Report	10	29-Jun-18
ENV.1950D.1.1	Technical Review Committee Review of Hazardous Materials Memo	10	29-Jun-18
ENV.1950D.1	City of Enid Review of Hazardous Materials Memo	10	16-Jul-18
ENV.1950B.1	City of Enid Review of Threatened & Endangered Species Report	10	16-Jul-18
ENV.1950A.1	City of Enid Review of Wetland and Stream Delineation	10	16-Jul-18
ENV.1950C	Cultural Resources Report	17	18-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.1950C.1.1	Technical Review Committee Review of Cultural Resources Report	10	01-Aug-18
ENV.1950C.1	City of Enid Review of Cultural Resources Report	10	15-Aug-18
ENV.1950C.2	Revisions of Cultural Resources Report	5	22-Aug-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-Oct-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	07-Dec-18
ENV for PIP		292	22-Jun-18
ENV Environmental Assessment		214	06-Mar-19
ENV.1120	Prepare Draft EA - Introduction and Background	10	15-May-18
ENV.1123	Prepare Draft EA - Existing Conditions	5	22-May-18
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	Technical Review Committee Review of Draft EA	10	23-Jul-18
ENV.1124B	City of Enid 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	21-Dec-18
ENV.1130	Public Comment Period - FONSI	21	23-Jan-19
ENV.1140	Review & Incorporate Public Comments	10	06-Feb-19
ENV.1150	FINAL EA Approval	20	06-Mar-19
ENV Section 408 Approval		50	15-May-19


Submittal of Cultural Resources Reports
Submittal of Biological and Hazardous Material Reports
Draft Environmental Assessment
Q1 2018
Q2 2018
Q3 2018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Phase 2 Kaw Lake Water Supply Prog
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