Monthly Progress Report

February 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.

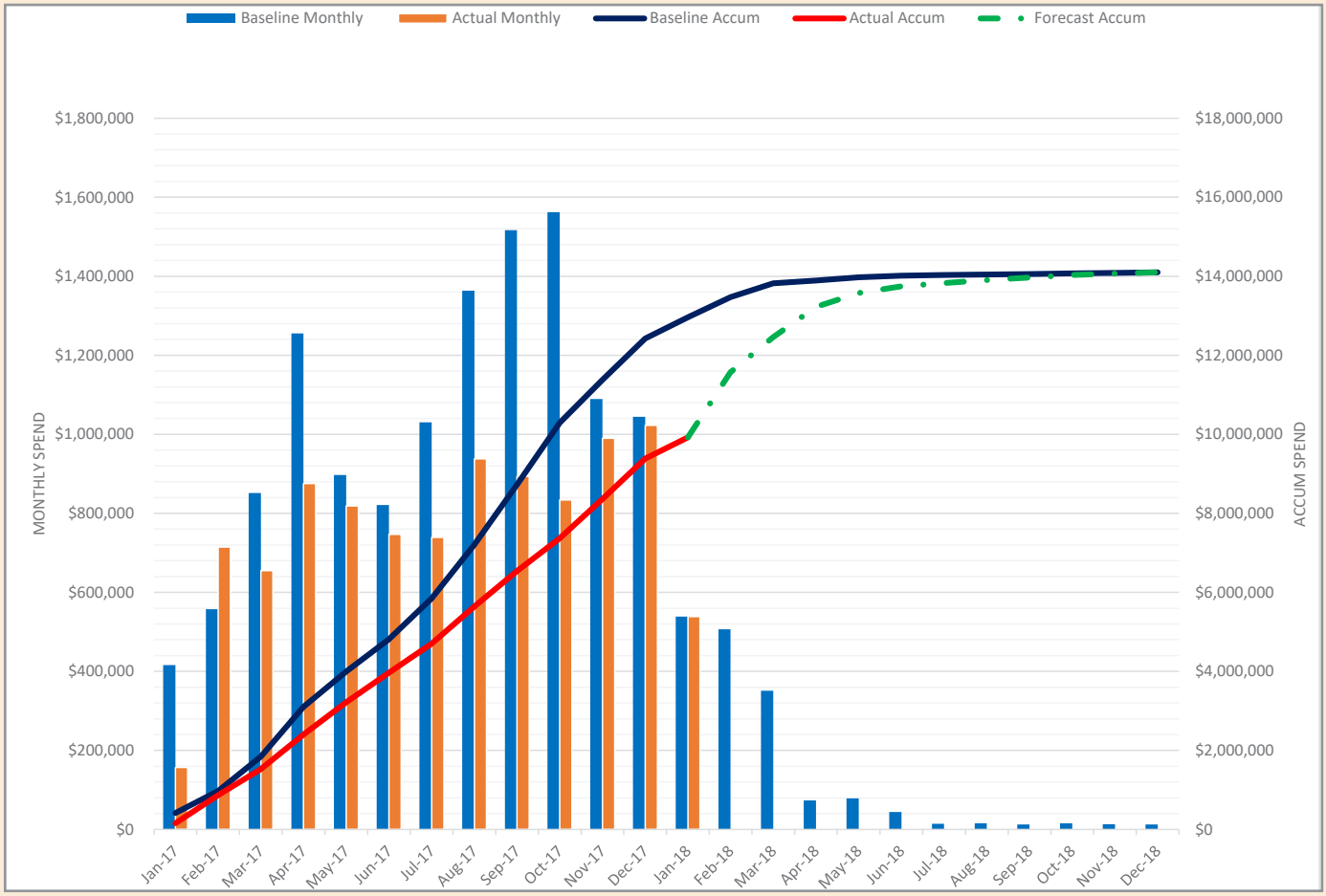
Distribution

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 January 29, the accumulate spent is 70% and the planned spend is 92%. 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 - January 2018

Summary

As of January 29, the schedule has an overall progress of 82% with a planned progress of 93%. 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 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

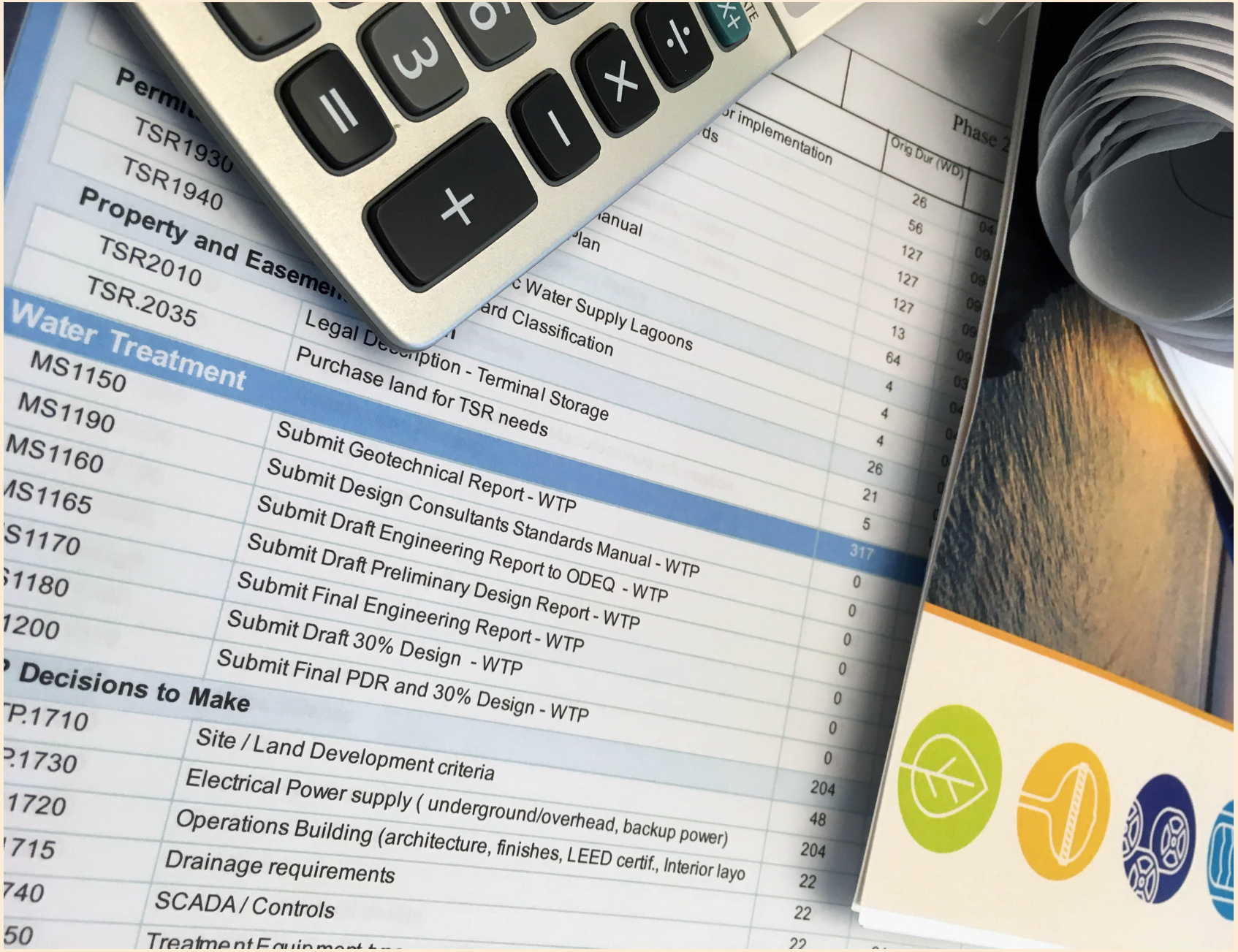
The Draft 30% Design and cost estimates were submitted for the complete Kaw Lake Water Supply Program. Upon feedback from the City on projected available funds, the Draft 30% Design will be evaluated to identify cost reductions via value engineering and phasing alternatives. Teams will develop and evaluate alternative technical options to achieve the program goals within the available budget. Impact analysis will inform the understanding of proposed cost reduction alternatives on the overall system capacity, redundancy, and water quality. Program strategy alternatives will be evaluated to adjust to the anticipated budget for the program. Program risks associated with the potential reductions will be evaluated to further support impact analysis. 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. Development of the Program Strategy Manual has been accelerated to maintain program progress. There is no deliverable schedule change that resulted from the re-ordering of the Manual development. Planning for easement acquisition continues with detailed parcel analysis in preparation for final design.

Completed

- Submitted draft 30% Design and cost estimates for complete Kaw Lake Water Supply Program
- Interface identification began for full build-out plans
- Schedule and cost updates of the Master Project Schedule
- Risk assessment focused on capturing phasing and new program risks

Future Activities

- 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


Phase 2
Orig Dur (WD)
TSR1930
TSR1940
TSR2010
TSR.2035
Water Treatment
MS1150
MS1190
MS1160
MS1165
S1170
S1180
1200
Decisions to Make
P.1710
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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 updated and submitted the intake pump station and intermediate booster pump station preliminary design and opinion of probable construction to the City. The preliminary design phase submittal included design drawings that represent approximately 30% of final design documents and the associated opinion of probable construction, operational, and maintenance costs.

Completed

- Submitted draft 30% design drawings and 30% opinion of probable construction cost to City staff for review
- Received and began review of final Intake Subsurface Investigation Report
- Began Intake and Intermediate Booster Pump Station Phasing Plan

Future Activities

- Continue updating Intake and Intermediate Booster Pump Station Preliminary Design Report
- Update Transient Analysis (Surge) Model, and revise Transient Analysis Technical Memo
- Refine and revise 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Submit final 30% design drawings and 30% opinion of probable construction cost to City staff
- Develop a phasing plan for the Intake and Intermediate Booster Pump Station
- Prepare Design Consultant Standards Manual
- Submit Intake Geotechnical Report to the City for review

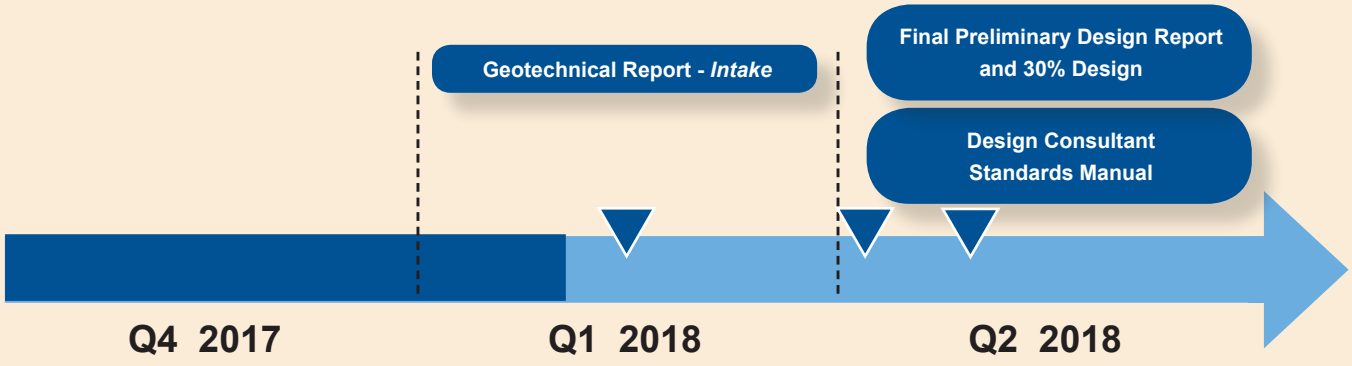
Above and Right: 3D rendering of intake pump station and underwater piping at Kaw Lake

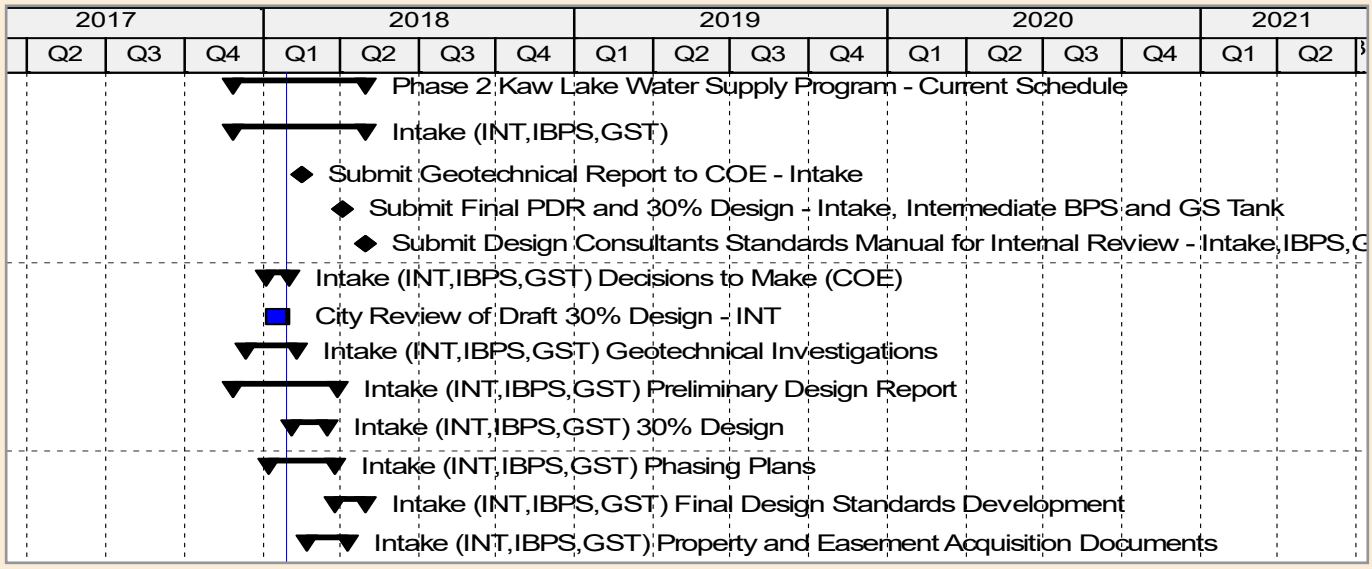
Intake and Pump Stations

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	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 for Internal Review - Intake,IBPS,GS Tank	0	30-Apr-18*
Intake (INT,IBPS,GST) Decisions to Make (COE)		20	01-Feb-18
INT.1266	City Review of Draft 30% Design - INT	20	01-Feb-18
Intake (INT,IBPS,GST) Geotechnical Investigations		10	09-Feb-18
Intake (INT,IBPS,GST) Preliminary Design Report		88	30-Mar-18
Intake (INT,IBPS,GST) 30% Design		31	16-Mar-18
Intake (INT,IBPS,GST) Phasing Plans		55	26-Mar-18
Intake (INT,IBPS,GST) Final Design Standards Development		25	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,G
Intake (INT,IBPS,GST) Decisions to Make (COE)
City Review of Draft 30% Design - INT
Intake (INT,IBPS,GST) Geotechnical Investigations
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. 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. Geotechnical 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. Property surveys have begun. The 30% opinion of probable construction cost and design drawings was submitted in early January 2018 and awaiting comments from the City.

Completed

- Ongoing updates to the web mapping tool and map book for the entire pipeline alignment
- Completed the draft 30% design drawings and 30% opinion of probable construction cost for City 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 final 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Submit final 30% design drawings and 30% opinion of probable construction cost to City staff
- Develop the phasing plan for the Pipeline
- Prepare Design Consultant Standards Manual
- Submit Pipeline Geotechnical Report to the City for review

Above: Installing 60-inch casing

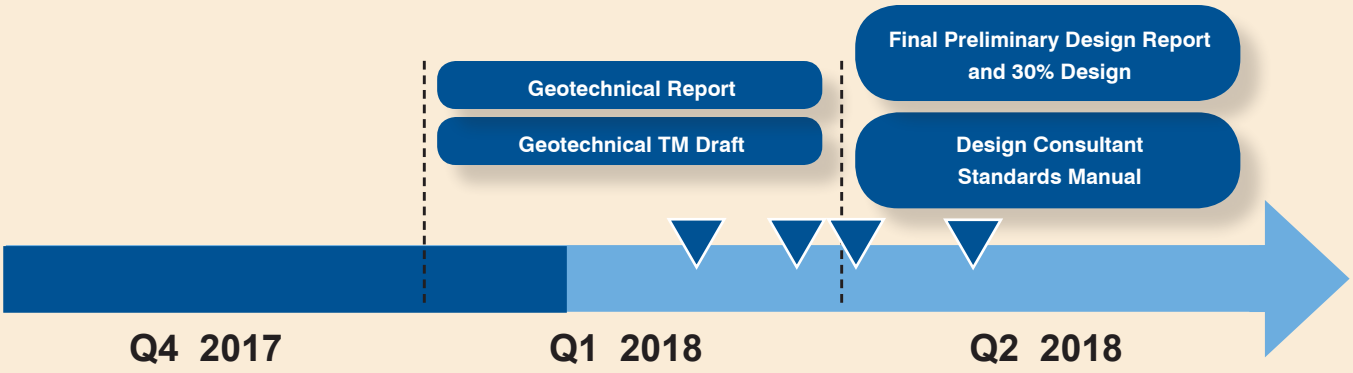
Right: Installing 48-inch pipe by bore and jack

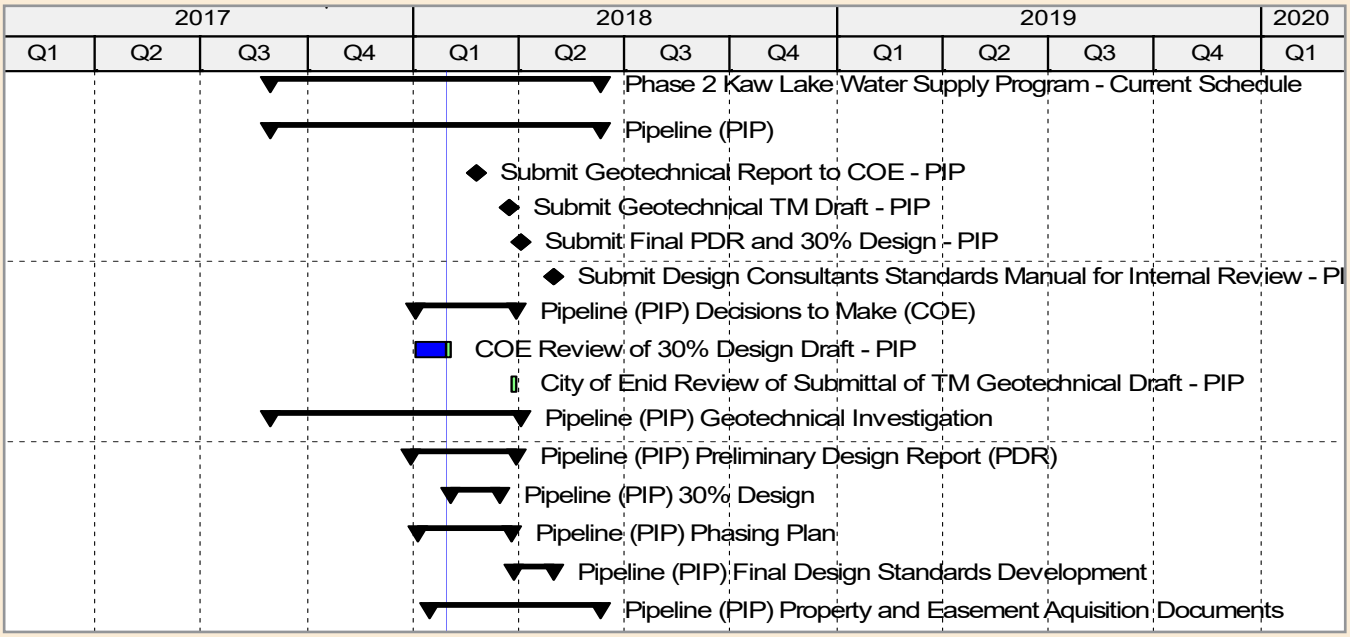
Pipeline

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		193	11-Jun-18
Pipeline (PIP)		193	11-Jun-18
MS1060	Submit Geotechnical Report to COE - PIP	0	23-Feb-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)		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		169	02-Apr-18
Pipeline (PIP) Preliminary Design Report (PDR)		65	30-Mar-18
Pipeline (PIP) 30% Design		31	16-Mar-18
Pipeline (PIP) Phasing Plan		57	26-Mar-18
Pipeline (PIP) Final Design Standards Development		25	30-Apr-18
Pipeline (PIP) Property and Easement Aquisition Documents		105	11-Jun-18


Final Preliminary Design Report and 30% Design
Geotechnical Report
Geotechnical TM Draft
Design Consultant Standards Manual
Q4 2017
Q1 2018
Q2 2018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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Pipeline (PIP)
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Submit Design Consultants Standards Manual for Internal Review - PI
Pipeline (PIP) Decisions to Make (COE)
COE Review of 30% Design Draft - PIP
City of Enid Review of Submittal of TM Geotechnical 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, 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 near 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 has begun 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

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

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

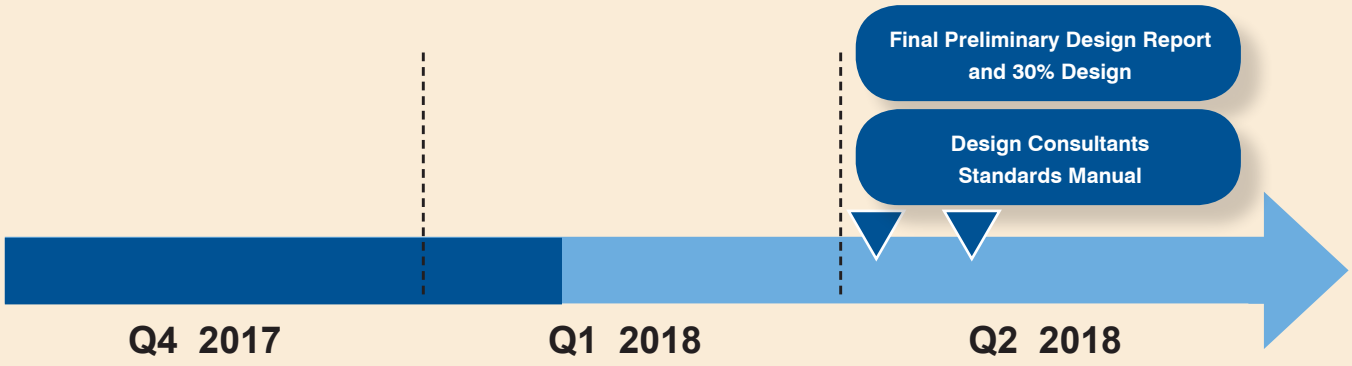
Right: Example terminal storage reservoir under construction

Terminal Storage

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		210	30-Apr-18
Terminal Storage Reservoirs (TSR)		210	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 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 Report		126	30-Mar-18
TSR 30% Design		85	16-Mar-18
TSR Phasing Plans		57	26-Mar-18
TSR Final Design Standards Development		25	30-Apr-18
TSR Property and Easement Acquisition Documents		21	22-Feb-18


Final Preliminary Design Report and 30% Design
Design Consultants Standards Manual
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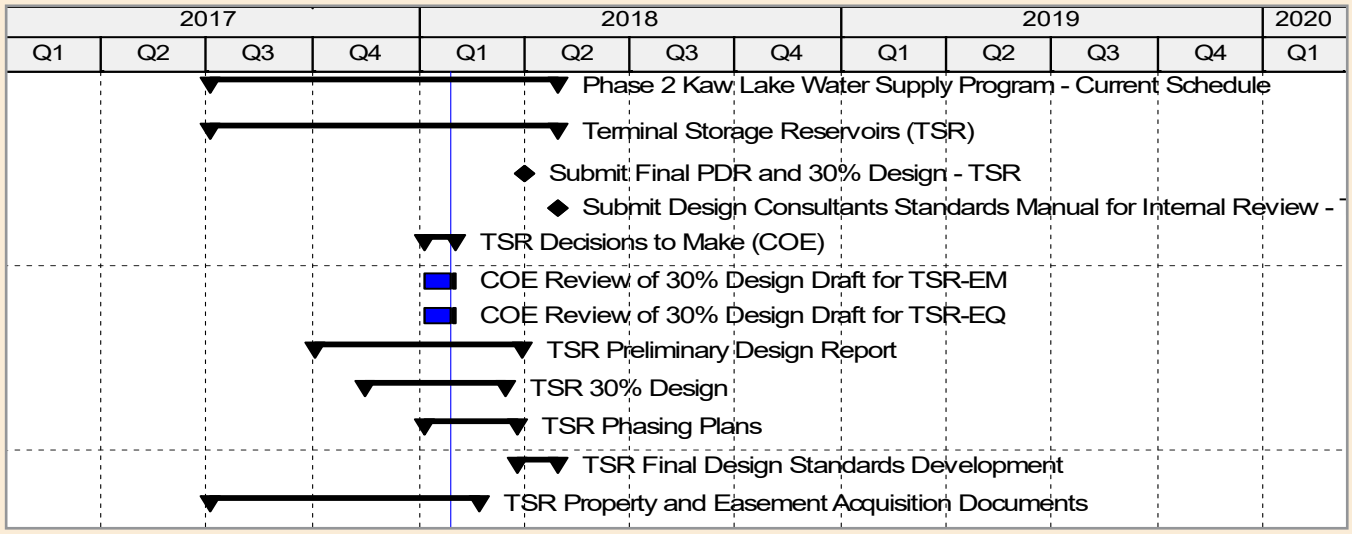
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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Terminal Storage Reservoirs (TSR)
Submit Final PDR and 30% Design - TSR
Submit Design Consultants Standards Manual for Internal Review -
TSR Decisions to Make (COE)
COE Review of 30% Design Draft for TSR-EM
COE Review of 30% Design Draft for TSR-EQ
TSR Preliminary Design Report
TSR 30% Design
TSR Phasing Plans
TSR Final Design Standards Development
TSR Property and Easement Acquisition Documents

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 30% opinion of probable construction cost estimate was delivered to the City in early January. The team is developing 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. 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.

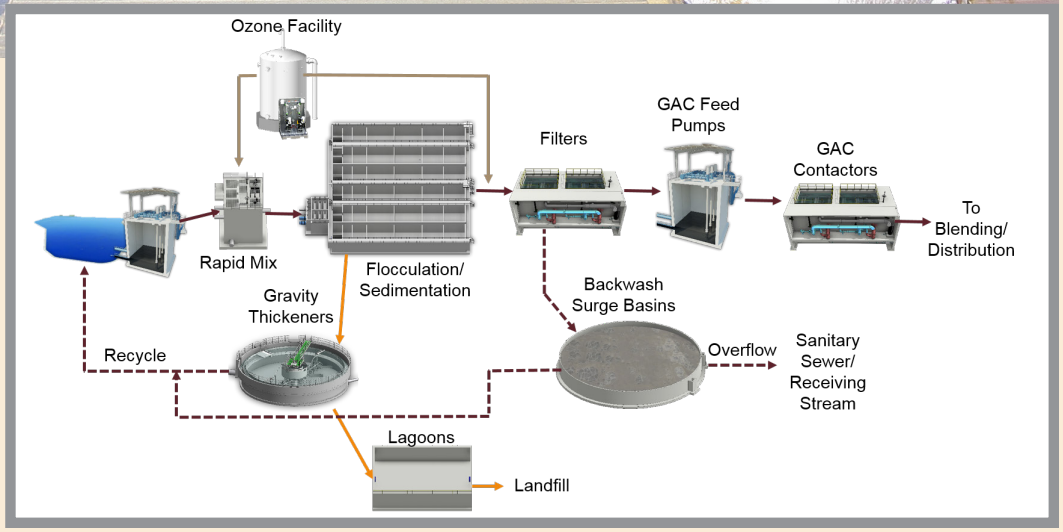
Completed

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

Future Activities

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

Above: Water treatment plant sedimentation basin



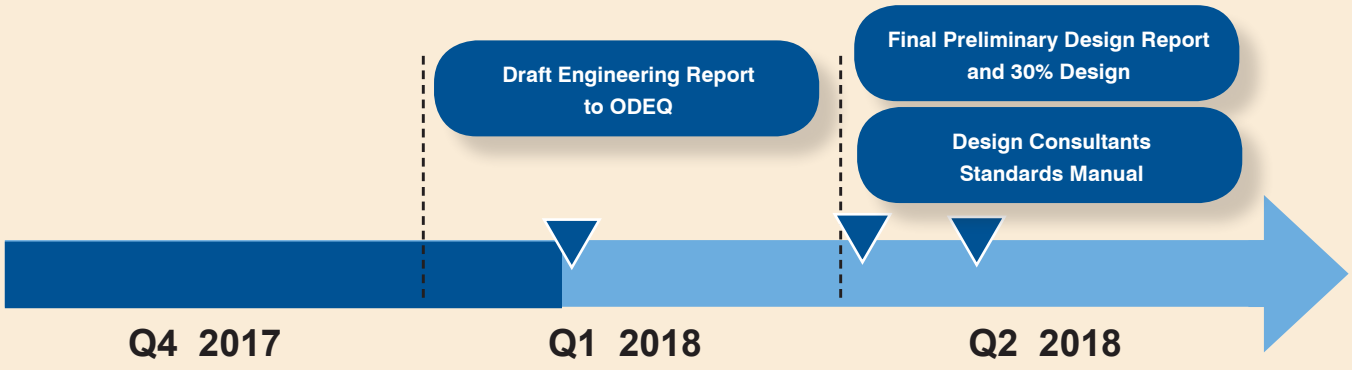
Right: Process flow diagram for selected alternative

Water Treatment Plant

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		99	30-Apr-18
Water Treatment Plant (WTP)		99	30-Apr-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 for Internal Review - WTP	0	30-Apr-18*
WTP Decisions to Make (COE)		20	01-Feb-18
WTP.1904	Final 30% Design and Cost Estimate - Owner review & comments - WTP	20	01-Feb-18
WTP Project Coordination		41	02-Apr-18
WTP Engineering Report		22	02-Feb-18
WTP Preliminary Design Report (PDR)		49	30-Mar-18
WTP 30% Design		31	16-Mar-18
WTP Phasing Plans		57	26-Mar-18
WTP Final Design Standards Development		25	30-Apr-18


Draft Engineering Report to ODEQ
Final Preliminary Design Report and 30% Design
Design Consultants Standards Manual
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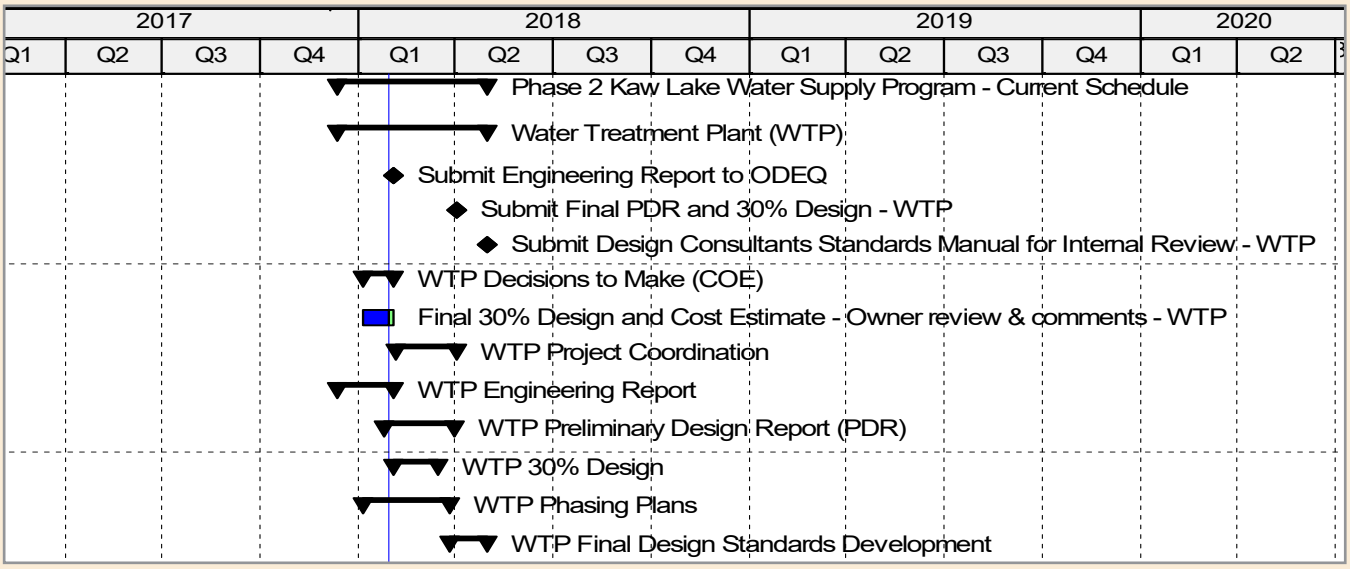
Q2 2018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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Water Treatment Plant (WTP)
Submit Engineering Report to ODEQ
Submit Final PDR and 30% Design - WTP
Submit Design Consultants Standards Manual for Internal Review - WTP
WTP Decisions to Make (COE)
Final 30% Design and Cost Estimate - Owner review & comments - 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

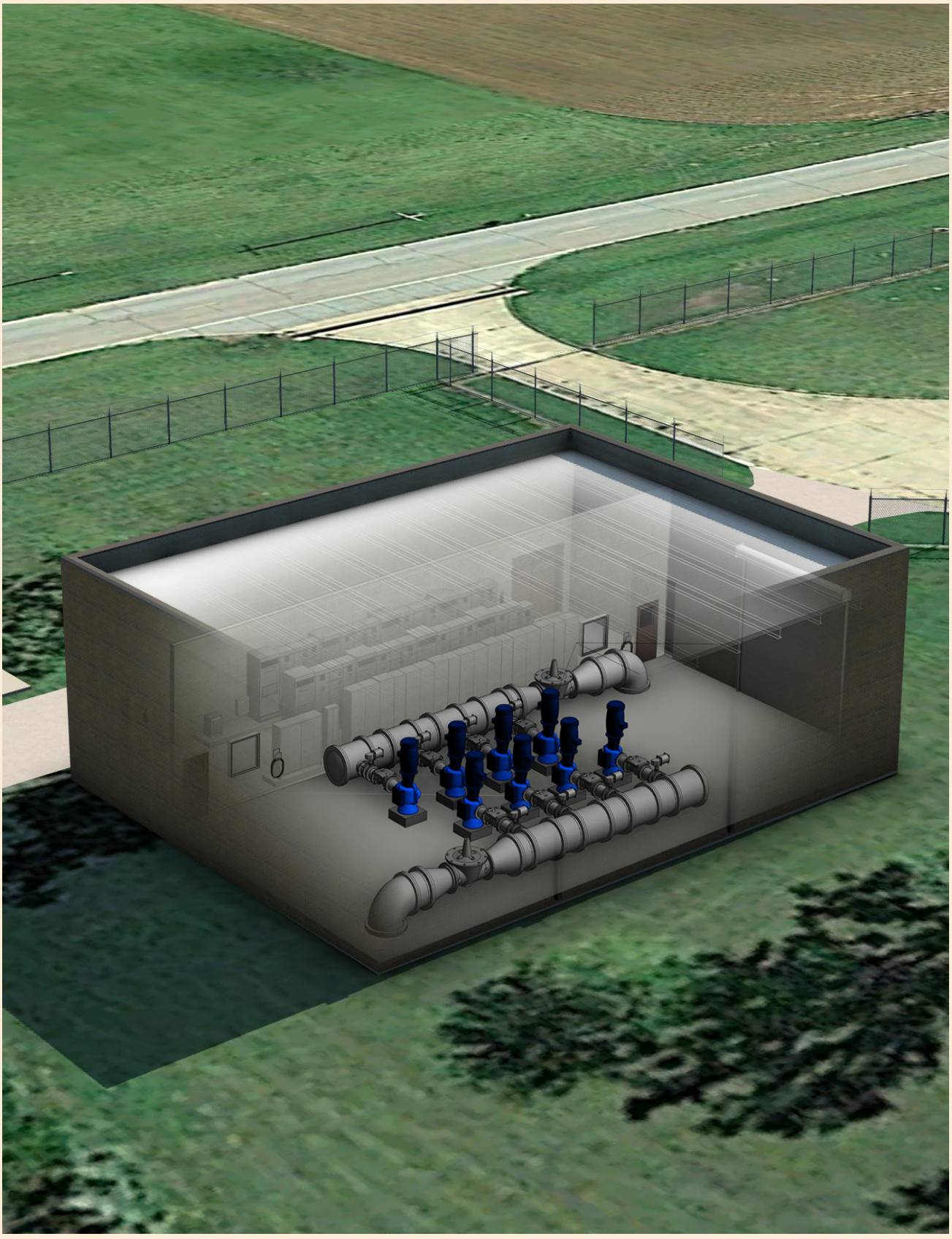
The preliminary design work for the transmission main, high-service pump station, blended storage tank, and site civil was completed, and the drawings were submitted for City review. The field work for geotechnical investigations along the transmission main was completed, and work continues on compilation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

Completed

- Submitted draft 30% design drawings to City staff for review
- Submitted 30% opinion of probable construction cost to City staff for review
- Started evaluation of alternatives for Distribution Interface Phasing Plan
- Conducted internal review of the East Pressure Plane Transmission Main Subsurface Investigation Report

Future Activities

- Revise final 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
- 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
- Refine and revise final 30% design drawings and 30% opinion of probable construction cost based upon comments received
- Submit final 30% design drawings and 30% opinion of probable construction cost to City staff
- Develop phasing plan for the Distribution Interface
- Prepare Design Consultant Standards Manual
- Submit Distribution Main Geotechnical Report to the City for review



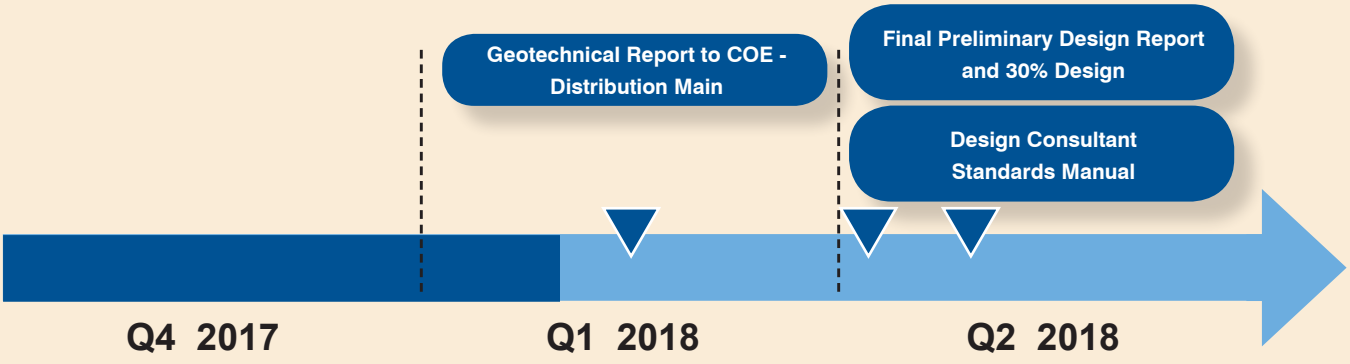
Above: Conceptual layout of high-service (distribution) pump station

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	16-Feb-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 Decisions to Make (COE)		20	01-Feb-18
DIS.COED.30DF.xx.R1	CIty of Enid Review of 30% Design Draft	20	01-Feb-18
DIS Project Coordination		20	09-Feb-18
DIS Preliminary Design Report (PDR)		57	30-Mar-18
DIS 30% Design		31	16-Mar-18
DIS Phasing Plans		57	26-Mar-18
DIS Final Design Standards Development		25	30-Apr-18
DIS Property and Easement Acquisition Documents		72	16-Apr-18


Geotechnical Report to COE - Distribution Main
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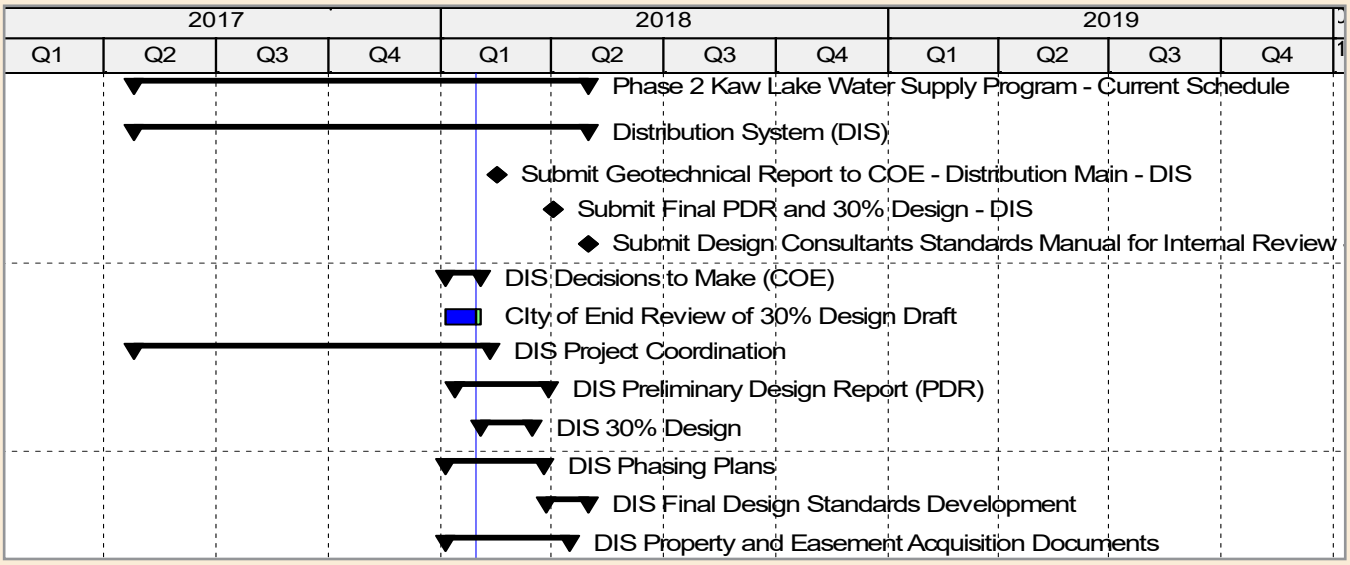
Q4 2017
Q1 2018
Q2 2018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Phase 2 Kaw Lake Water Supply Program - Current Schedule
Distribution System (DIS)
Submit Geotechnical Report to COE - Distribution Main - DIS
Submit Final PDR and 30% Design - DIS
Submit Design Consultants Standards Manual for Internal Review
DIS Decisions to Make (COE)
CIty of Enid Review of 30% Design Draft
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 50% complete. The State Archaeologist has indicated approval with the deep testing methods pending some additional information which has been submitted to the U.S. Army Corps of Engineers for review and distribution.

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 50% of the total cultural resources field work along the pipeline, from Enid to NS-301 Road in Garfield County
- Completed biological and cultural field work at Emergency Terminal Storage Reservoir site and Intermediate Booster Pump Station 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 survey on the Pipeline
- 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
- Preparation of the Draft Environmental Assessment

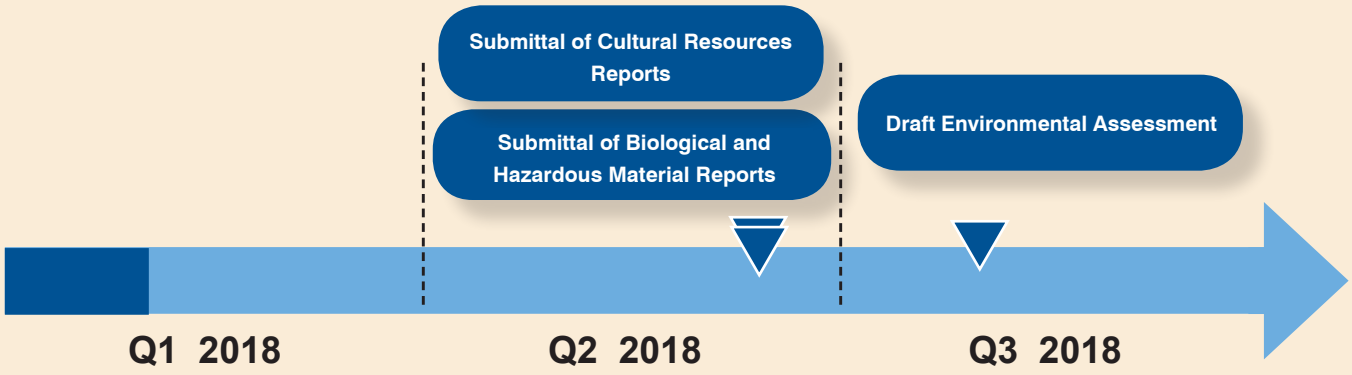
Above: Kaw Lake shoreline

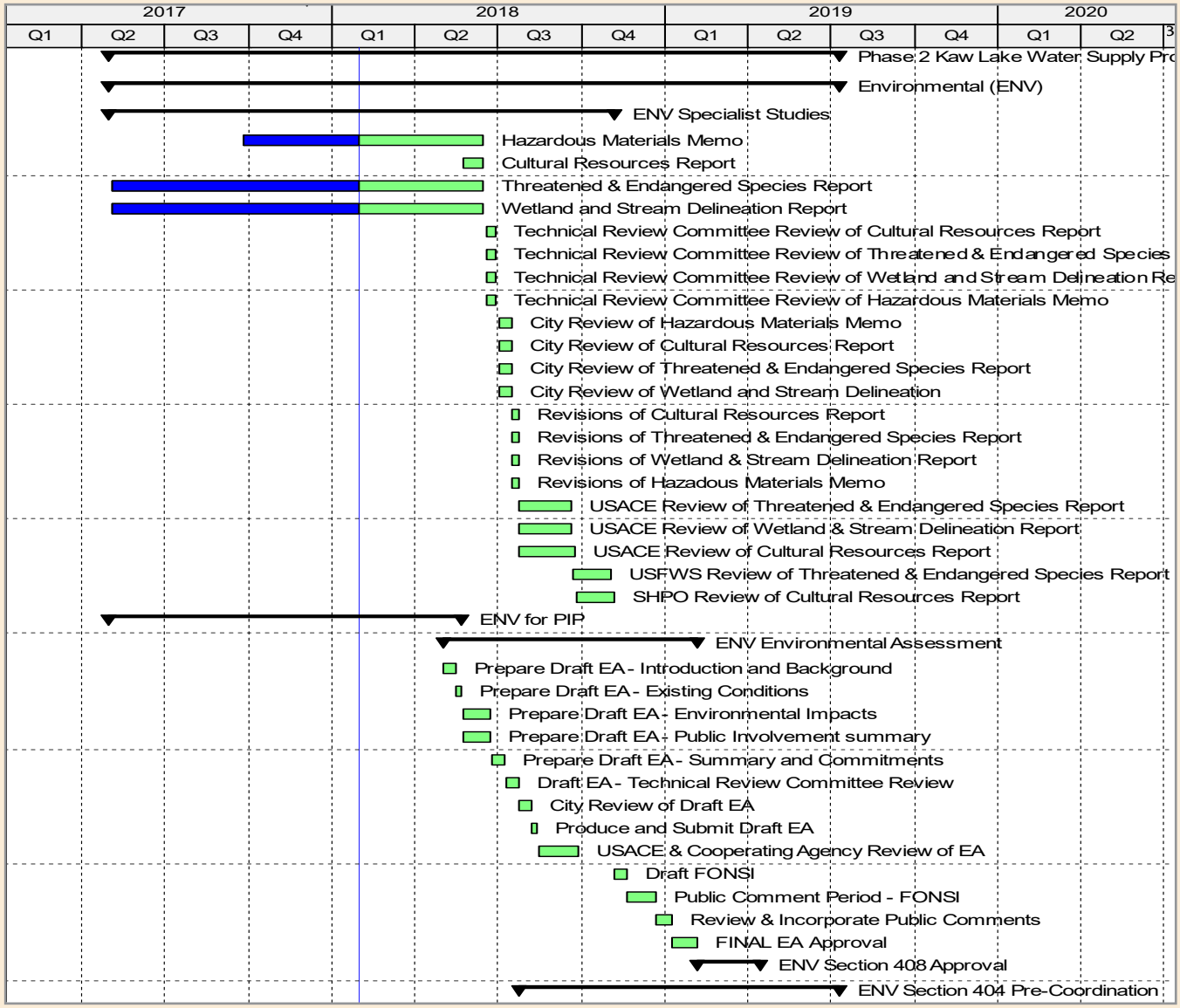
Environmental

Project Milestones

Project Schedule

Activity ID	Activity Name	Orig Dur (WD)	Finish
Phase 2 Kaw Lake Water Supply Program - Current Schedule		557	10-Jul-19
Environmental (ENV)		557	10-Jul-19
ENV Specialist Studies		386	05-Nov-18
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 Report	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 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-18
ENV Environmental Assessment		192	04-Feb-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	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-18
ENV.1130	Public Comment Period - FONSI	21	20-Dec-18
ENV.1140	Review & Incorporate Public Comments	10	07-Jan-19
ENV.1150	FINAL EA Approval	20	04-Feb-19
ENV Section 408 Approval		50	15-Apr-19
ENV Section 404 Pre-Coordination		245	10-Jul-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 Pro
Environmental (ENV)
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Hazardous Materials Memo
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Threatened & Endangered Species Report
Wetland and Stream Delineation Report
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Draft EA - Technical Review Committee Review
City Review of Draft EA
Produce and Submit Draft EA
USACE & Cooperating Agency Review of EA
Draft FONSI
Public Comment Period - FONSI
Review & Incorporate Public Comments
FINAL EA Approval
ENV Section 408 Approval
ENV Section 404 Pre-Coordination