



March 22, 2019

Project No.:
SENT VIA: EMAIL

Ms. Laura Barraza, P.E.
Senior Civil Engineer – Facilities Planning
Eastern Municipal Water District
2270 Trumble Road
Perris, CA 92570

SUBJECT: Proposal for Southern Wine Country Phasing Study

Dear Laura:

In response to your request, West Yost Associates (West Yost) is pleased to submit our proposal for the Southern Wine Country Phasing Study for Eastern Municipal Water District (District). The results of this study will update and refine the results contained the De Portola Sewer Study, March 2015 (De Portola Study) and in the Wine Country Infrastructure Study, May 2011 (Wine Country Study).

The De Portola Study identified, at a conceptual level, the wastewater infrastructure improvements required to serve the Southern Wine Country. These improvements include upgrades to existing infrastructure, as well as development of new infrastructure in areas not currently provided wastewater service by the District. The improvements identified in the De Portola Study were all sized to provide capacity for build-out wastewater flows based upon general Wine Country land use flow projections.

Since completion of the De Portola Study, several development projects have been identified in the Southern Wine Country. The identification of development projects allows for the calculation of more specific flow projections in these areas, thereby potentially changing the build-out flow projections for the Southern Wine Country. The need to serve these development projects places requirements on the phasing and timing of the required infrastructure improvements. The Wine Country Phasing Study will address the following questions:

- What are the build-out flow projections for the Southern Wine Country given current development projects?
- Which of the currently identified development projects can be accommodated before existing infrastructure needs to be improved to provide more capacity?
- When more capacity is required, where should it be provided?
- What is the phasing plan for the new capacity that is required?

The scope of work required to address these questions is presented below.

SCOPE OF WORK

Task 1: Revise Flow Projections for the Southern Wine Country

West Yost will update the build-out flows for the Southern Wine Country using the District's Database of Proposed Projects (DOPP), recent developer plans of service provided by the District, and other development information provided by the District. For areas of the Southern Wine Country that have not been identified as part of a development project and that therefore would have wastewater flow projected using general land use factors, West Yost will collaborate with District staff to evaluate the assumptions of the De Portola Study and to revise those assumptions and resulting flow projections as necessary.

After the build-out wastewater flow projections for the Southern Wine Country have been established, West Yost will use the best information available about the timing of the development projects to establish flow projections that correspond the timing of the Collection System Master Plan flow projections along the path to build-out flows. These projections will allow for the development of infrastructure phasing that matches the planning timeline in the Collection System Master Plan.

It is assumed that updated flows for areas that are outside of the Southern Wine Country but that may impact the results of this study will be provided by the District to West Yost as part of the Temecula Valley Regional Water Reclamation Facility (TVRWRF) collection system hydraulic model.

Deliverables: Draft and final revised wastewater flows for the study area will be presented in tables and figures.

Task 2: Identify Required Wastewater Infrastructure and Phasing Plan for Southern Wine Country

The De Portola Study identified both improvements to existing infrastructure outside of the Southern Wine Country that will be required to convey flow to the TVRWRF for treatment and new infrastructure required to provide service within the Southern Wine Country. This study will refine these recommendations based upon the revised flow projections developed in Task 1.

The improvements to existing infrastructure identified in the De Portola Study consisted of upsizing existing gravity mains in Highway 79. West Yost will use the collection system hydraulic model to determine which of the identified development projects can be accommodated in the gravity mains in Highway 79 before improvement is required. The goal of this exercise will be to optimize the use of existing capacity before capacity improvements are required. All capacity analysis as part of this task will consider the capacity allocated to Assessment District 159 (AD-159).

After the capacity of the existing infrastructure without improvements has been utilized, three phases of improvement for the existing infrastructure will be identified:

- Preliminary Phase to eliminate the first hydraulic bottleneck along Highway 79,
- Interim Phase to eliminate the second hydraulic bottleneck along Highway 79, and
- Build-out Phase to eliminate the final hydraulic bottleneck and provide capacity through build-out projections.

The phasing will be tied to year, number of connections, and identified development projects to provide flexibility in future adjustments as necessary. It is anticipated that the improvements to the existing infrastructure for all phases could consist of a combination of parallel alignments and replacement gravity mains. The corridor for providing such improvements is narrow and potentially crowded. West Yost will perform a walking/driving reconnaissance of the potential improvement phases to identify potential flaws and challenges for each.

The De Portola Study identified the recommended new infrastructure required in the Southern Wine Country (gravity mains in combination with two lift stations and associated force mains) at a highly conceptual level. This study will refine those recommendations in a feasibility-level analysis that considers realistic right-of-way options for gravity mains and potential property options for lift station locations. The study will evaluate the use of a single deep lift station in place of the two lift stations identified in the De Portola Study. Up to four phases of new infrastructure will be developed:

- Preliminary Phase to serve the first identified development projects to require service,
- Interim Phase 1 to serve the second group of potential development projects,
- Interim Phase 2 to serve the third group of potential development projects,
- Build-out Phase to serve any remaining potential development projects as well as general build-out development.

The phasing will be tied to year, number of connections, and identified development projects to provide flexibility in future adjustments as necessary. It should be noted that the phases for the new infrastructure in the Southern Wine Country will not necessarily correspond to the phases required for the improvement of the existing infrastructure. Depending upon the timing of potential development projects in the Southern Wine Country, it is possible that Interim Phase 2 of the new infrastructure will not be required.

The identification, refinement, and finalization of the phases for both the improvement of the existing infrastructure and the development of the new infrastructure will require substantial collaboration between West Yost and District staff. Two workshops are identified to further this collaboration: A Draft Phasing Workshop and a Final Phasing Workshop. Both workshops are budgeted under Task 5.

Deliverables: Draft and final phasing plans for existing and new infrastructure, presented in tables and figures.

Task 3: Develop Infrastructure Costs for the Phasing Plan

The very recent development, including new and replacement collection system infrastructure, in the Wine Country vicinity provides the opportunity to compare the District's standard unit costs with very recent actual bid costs. West Yost will compare the District's standard gravity main unit costs with the bid results from the Wine Country Phase 1 Project in order to assess the appropriateness of the unit costs for this study. West Yost will make recommendations where necessary for revisions to the unit costs for this study. After unit costs have been finalized and approved by the District, West Yost will use the unit costs to develop planning-level construction and project costs for the required infrastructure improvements identified in Task 2.

Deliverables: Draft and final revised unit costs for infrastructure improvements. Draft and final construction and project costs for infrastructure improvements identified in Task 2.

Task 4: Produce Southern Wine Country Phasing Study Technical Memorandum

A Draft Technical Memorandum (TM) will be prepared summarizing the work performed and the results generated in Task 1 – Task 3. Upon receipt of District comments on the Draft TM, a Final TM will be produced and distributed to the District.

Deliverables: Draft and Final Technical Memoranda.

Task 5: Project Management and Meetings

West Yost will provide project management-related activities. Monthly invoices will be prepared that include brief descriptions of services performed under this scope of work, and schedule and budget adherence. In addition, to ensure a consistent high quality of service, this task includes implementation of the West Yost Quality Assurance/Quality Control (QA/QC) program, which requires principal level review of all project deliverables.

West Yost will prepare for and participate in a kick-off meeting, a Draft Phasing Workshop, a Final Phasing Workshop, and monthly project status conference calls throughout the project.

Deliverables: Monthly Project Reports addressing completed work, updated schedule, and budget status including estimated percent complete versus budget spent. Meeting/workshops agendas, notes, and presentations.

SCHEDULE

The West Yost schedule for the project is provided in Exhibit A.

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COSTS

West Yost proposes to perform the scope of work described above for a not-to-exceed amount of \$85,000. A budget of hours and cost for the project are presented in Exhibit B.

We appreciate the opportunity to provide continuing service on this important project.

Sincerely,

WEST YOST ASSOCIATES



Jeffrey D. Pelz
Principal in Charge



Jon Wells
Project Manager

JDP:JW:cp

Attachments

**Exhibit A
Proposed Schedule for Southern Wine Country Phasing Study**

Task No.	Task Title	Weekly Schedule following Notice-to-Proceed																																			
		May 13, 2019	May 20, 2019	May 27, 2019	June 3, 2019	June 10, 2019	June 17, 2019	June 24, 2019	July 1, 2019	July 8, 2019	July 15, 2019	July 22, 2019	July 29, 2019	August 5, 2019	August 12, 2019	August 19, 2019	August 26, 2019	September 2, 2019	September 9, 2019	September 16, 2019	September 23, 2019	September 30, 2019	October 7, 2019	October 14, 2019	October 21, 2019	October 28, 2019	November 4, 2019	November 11, 2019	November 18, 2019	November 25, 2019	December 2, 2019	December 9, 2019	December 16, 2019	December 23, 2019	December 30, 2019		
1.0	Revise Flow Projections for the Southern Wine Country	★		▲																																	
2.0	Identify Required Wastewater Infrastructure and Phasing Plan for Southern Wine Country									▲		★				▲		★																			
3.0	Develop Infrastructure Costs for the Phasing Plan																																				
4.0	Produce Southern Wine Country Phasing Study Technical Memorandum																																				
5.0	Project Management and Meetings																																				
— District Review ▲ Deliverable ★ Meeting																																					

West Yost Associates		P/V/P \$298 Pelz	PE/PS/PG I \$249 Wells	ESG I \$157 Connell	CAD II \$150 Riedel	ADM IV \$133	Labor		Costs		
							Hours	Fee	Sub. w/ markup 10%	Other Direct	Total Costs
PROJECT: Southern Wine Country Phasing											
Task 1	Revise Flow Projections for the Southern Wine Country										
1.1	Update Development Project Projections		2	8			10	\$ 1,754			\$ 1,754
1.2	Update Build-out Projections		4	8			12	\$ 2,252			\$ 2,252
Subtotal, Task 1 (hours)		0	6	16	0	0	22				
Subtotal, Task 1 (\$)			\$ 1,494	\$ 2,512				\$ 4,006			\$ 4,006
Task 2	Identify Required Wastewater Infrastructure and Phasing Plan for Southern Wine Country										
2.1	Draft Existing Improvements and Phasing	8	20	60			88	\$ 16,784			\$ 16,784
2.2	Final Existing Improvements and Phasing	2	8	32			42	\$ 7,612			\$ 7,612
2.3	Draft New Infrastructure and Phasing	12	16	12	40		80	\$ 15,444			\$ 15,444
2.4	Final New Infrastructure and Phasing	4	4	6	20		34	\$ 6,130			\$ 6,130
Subtotal, Task 2 (hours)		26	48	110	60	0	244				
Subtotal, Task 2 (\$)		\$ 7,748	\$ 11,952	\$ 17,270	\$ 9,000			\$ 45,970			\$ 45,970
Task 3	Develop Infrastructure Costs for the Phasing Plan										
3.1	Update Unit Costs		2	6			8	\$ 1,440			\$ 1,440
3.2	Prepare Phasing Plan Cost Estimates	2	8	16			26	\$ 5,100			\$ 5,100
Subtotal, Task 3 (hours)		2	10	22	0	0	34				
Subtotal, Task 3 (\$)		\$ 596	\$ 2,490	\$ 3,454				\$ 6,540			\$ 6,540
Task 4	Produce Southern Wine Country Phasing Study Technical Memorandum										
4.1	Draft TM	1	16	24		4	45	\$ 8,582			\$ 8,582
4.2	Final TM	1	8	8		2	19	\$ 3,812			\$ 3,812
Subtotal, Task 4 (hours)		2	24	32	0	6	64				
Subtotal, Task 4 (\$)		\$ 596	\$ 5,976	\$ 5,024		\$ 798		\$ 12,394			\$ 12,394
Task 5	Project Meetings/Management										
5.1	Kickoff Meeting	4	4	4			12	\$ 2,816		\$ 500	\$ 3,316
5.2	Draft Phasing Workshop	4	4	4			12	\$ 2,816		\$ 500	\$ 3,316
5.3	Final Phasing Workshop	2	4	4			10	\$ 2,220		\$ 250	\$ 2,470
5.4	Monthly Progress Reports/Invoices		8				8	\$ 1,992			\$ 1,992
5.5	Project Management		20				20	\$ 4,980			\$ 4,980
Subtotal, Task 5 (hours)		10	40	12	0	0	62				
Subtotal, Task 5 (\$)		\$ 2,980	\$ 9,960	\$ 1,884				\$ 14,824		\$ 1,250	\$ 16,074
TOTAL (hours)		40	128	192	60	6	426				
TOTAL (\$)		\$ 11,920	\$ 31,872	\$ 30,144	\$ 9,000	\$ 798		\$ 83,734	#REF!	\$ 1,250	\$ 84,984

Legend:

Role	Name
PVP	Principal/Vice President Pelz
PE/PS/PG I	Principal Engineer/Scientist/Geologist I Wells
ESG I	Engineer/Scientist/Geologist I Connell
CAD II	CAD Designer II Riedel
ADM IV	Administrative IV

