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## **TECHNICAL MEMORANDUM**

To: Peter Sevcik, PE Nipomo Community Services District

- From: Mike Nunley, PE | MKN Julia Cannon, EIT | MKN
- **Date:** August 14, 2024

Re: Dana Reserve Development Phasing Study – Revised Figures for Annexation Agreement

#### Introduction & Background

This technical memorandum (TM) presents updated project phasing schedule and cost analysis to be utilized for the Nipomo Community Services District (District) phased planning efforts for Dana Reserve Development (Development). Since the County of San Luis Obispo has approved the Development, the District is moving forward with an annexation agreement of the Development into the District service area. In March 2024, the Dana Reserve Development Phasing Study (2024, MKN) provided recommendations for expansion of water and wastewater services to the Development, requiring strategic integration with the District's existing systems. Tables and figures from the original Phasing Study have been updated as a result of discussions between the District and Developer regarding a draft annexation agreement.

Major water transmission and storage projects were recommended in the Phasing Study for implementation prior to completion and occupancy of the first residential unit due to the need for fire flow, emergency storage, and redundant water supply to the project. Major wastewater system improvements are also recommended for implementation prior to completion and occupancy of the first residential unit to provide wastewater service.

#### **Implementation Phasing Schedule**

The updated schedule for implementation of these projects is provided in **Figure 5-1** (attached). The implementation schedule would be initiated with the approval of the annexation agreement between the District and the property owner. The schedule is organized according to months from completion of the annexation agreement. Updates made as an adaptation to the original Phasing Study include the following:

- Wastewater projects have been organized into two major phases, requiring completion of either the first residential unit or Unit No. 1009 of the Development to initiate each major phase.
- Wastewater Project 6 has been separated into Project 6A and 6B, for each aeration basin respectively.
- The District will need to complete Wastewater Project 6A Extended Aeration Basin No. 2 prior to completion of the first residential unit
- The District will need to complete prior to completion of Unit 1009:
  - Wastewater Project 6B Extended Aeration Basin No. 3
  - Wastewater Project 8 Gravity Belt Thickener
  - Wastewater Project 9 Dewatering Screw Press



#### **Project Cost Opinions**

**Table 6-1** (attached) summarizes the updated total project costs from the Dana Reserve Evaluation (2022, MKN), escalated to 2023 dollars using the Engineering News-Record Los Angeles Construction Cost Index (ENR-LA CCI). The cost opinions for engineering, administration, and construction management; construction; and contingency are shown separately. Updates made to the original Phasing Study tables include the following:

- Water Project 6 has been removed from the water projects subtotal and will be determined separately by the District.
- Wastewater Project 6 has been separated into Project 6A and 6B, and Projects 8 and 9 have been updated to match the updated implementation schedule.
- The total construction cost for the extended aeration basins has been increased by \$440,000 to allow the District flexibility to provide additional facilities during the construction of Aeration Basin No.2, given that Aeration Basin No. 3 will be implemented in the second major construction phase.
- An additional cost of \$130,000 has been added both to Engineering, Administration, & Construction Management, and Contingency costs for the extended aeration basins to accommodate the updated phasing described above.

**Table 6-2** (attached) provides the updated cashflow analysis in which all project costs (provided in **Table 6-1**) have been escalated to the midpoint of construction by a factor of 5% per year, which is the rounded annual average ENR-CCI LA increase from August 2018 to August 2023.

#### **Cashflow Analysis**

To estimate quarterly cashflow, the following breakdown of Engineering, Administration, and Construction Management cost was assumed:

- Preliminary Planning and Permitting = 10%
- Engineering design = 40%
- Engineering services during construction and construction management = 50%

These factors were applied to the cost opinions in **Table 6-2** to develop cost opinions for each phase of project development. It was assumed contingency would be spread through the construction phase of the project. Those cost opinions were applied to the schedule presented in **Figure 5-1** and were spread evenly through each phase of the project to estimate quarterly cashflow. **Figures 6-1**, **6-2**, and **6-3** (attached) present the anticipated expenditures, not including financing charges, interest, or any fees associated with project financing. The cashflow analysis was developed assuming money is spent at the end of the quarter.

#### Attachments

- Figure 5-1: Phased Implementation Schedule
- Table 6-1: Summary of Project Cost Opinions
- Table 6-2: Summary of Project Cost Opinions with Escalation to Midpoint of Construction
- Figure 6-1: Cash Flow Report Water Projects
- Figure 6-2: Cash Flow Report Wastewater Projects
- Figure 6-3: Cash Flow Report Water and Wastewater Projects

#### Figure 5-1 Nipomo Community Services District Dana Reserve Development Water and Wastewater Phasing Study

	Water and Wastewater Phasing Study																																					
ID	Task Name     Q1     Q2     Q3     Q4     Q5     Q6     Q7     Q8     Q9     Q10     Q11     Q12     Q13     Q14     Q15     Q16     Q17     Q18     Q19     Q20     Q21     Q22     Q23     Q24     Q25     Q26     Q27     Q28     Q29     Q30     Q31     Q32     Q33     Q34       M1     M3     M5     M7     M9     M11     M13     M25     M27     M29     M31     M33     M33     M35     M35     M35     M55     M57     M69     M61     M63     M65     M67     M69     M71     M75     M77     M79     M81     M83     M85     M87     M89     M101																																					
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75	IV. Construction Phase																											
76	V. Startup and Commissioning																											
77	Project 7 - Secondary Clarifiers																											
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79	II. Design																											
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Table 6-1: Summary of Project Cost Opinions													
Project and Description	Complete Units to Initiate Construction	Engineering, Administration, & Construction Management	Construction	Contingency	Total								
Water Projects													
Project 1 - New 16" Main on North Oak Glen Drive	Prior to first Unit	\$730,000	\$2,410,000	\$730,000	\$3,870,000								
Project 2 - New 16" HWY 101 Crossing at Sandydale	Prior to first Unit	\$260,000	\$850,000	\$260,000	\$1,370,000								
Project 4 - Willow EOL Connection	Prior to first Unit	Developer Funded											
Project 5 - 16" Main Replacement on Tefft Street	Prior to Unit 689	\$1,300,000	\$4,320,000	\$1,300,000	\$6,920,000								
Project 6 - Foothill Tank Improvements	Prior to first Unit	То	Be Financed Sepa	nced Separately by District									
Project 7 - Joshua Road Pump Station Reservoir	Prior to Unit 1000	\$1,030,000	\$3,420,000	\$1,030,000	\$5,480,000								
Water	Projects Subtotal	\$3,320,000	\$11,000,000	\$3,320,000	\$17,640,000								
Wastewater Projects													
Project 2A – Proposed Sanitary Sewer Lift Station, Force Main, and Wastewater Connection System Connection for Dana Reserve Development	Prior to first Unit Developer Funded												
Project 2B – Dana Reserve Lift Station Pump #3	Prior to first Unit Developer Funded												
Project 3 – Sanitary Sewer Replacement	In Progress – District Funded												
Project 4 – Influent Lift Station	Prior to first Unit	\$20,000	\$50,000	\$20,000	\$90,000								
Project 5 – Grit Removal	Prior to Unit 1009	\$160,000	\$510,000	\$160,000	\$830,000								
Project 6A – Extended Aeration Basin #3	Prior to first Unit	\$540,000	\$1,790,000	\$540,000	\$2,870,000								
Project 6B – Extended Aeration Basin #3	Prior to Unit 1009	\$520,000	\$1,730,000	\$520,000	\$2,770,000								
Project 7 – Secondary Clarifiers	Prior to Unit 1009	\$710,000	\$2,350,000	\$710,000	\$3,770,000								
Project 8 – Gravity Belt Thickener	Prior to Unit 1009	\$220,000	\$710,000	\$220,000	\$1,150,000								
Project 9 – Dewatering Screw Press	Prior to Unit 1009	\$400,000	\$1,310,000	\$400,000	\$2,110,000								
Wastewater	Projects Subtotal	\$3,600,000	\$11,880,000	\$3,260,000	\$18,740,000								
Notes:													
1. All project costs were escalated using the ENR-LA CCI (August 2023 = 15179.26). All costs (except Wastewater Project 3) were developed in the Dana Reserve Evaluation (ibid.)  2. Wastewater Project 3 (Sanitary Sewer Replacement) was updated in the June 2023 60% Progress Submittal 20% of construction cost was													

assumed for contingency and 30% was assumed for engineering, administration, and construction management. 3. All numbers rounded to \$10,000.



Table 6-2: Summary of Project Cost Opinions with Escalation to Midpoint of Construction												
Project and Description	Complete Units to Initiate Construction	Engineering, Administration, & Construction Management	Construction	Contingency	Total							
Water Projects												
Project 1 - New 16" Main on North Oak Glen Drive	Prior to first Unit	\$800,000	\$2,640,000	\$800,000	\$4,240,000							
Project 2 - New 16" HWY 101 Crossing at Sandydale	Prior to first Unit	\$280,000	\$930,000	\$280,000	\$1,490,000							
Project 4 - Willow EOL Connection	Prior to first Unit		Develope	r Funded								
Project 5 - 16" Main Replacement on Tefft Street	Prior to Unit 689	\$1,650,000	\$5,470,000	\$1,650,000	\$8,770,000							
Project 6 - Foothill Tank Improvements	Prior to first Unit	o first Unit To Be Financed Separately by Distr										
Project 7 - Joshua Road Pump Station Reservoir	Prior to Unit 1000	\$1,360,000	\$4,500,000	\$1,180,000	\$7,040,000							
Water	Projects Subtotal	\$4,090,000	\$13,540,000	\$3,910,000	\$21,540,000							
Wastewater Projects												
Project 2A – Proposed Sanitary Sewer Lift Station, Force Main, and Wastewater Connection System Connection for Dana Reserve Development	Prior to first Unit Developer Funded											
Project 2B – Dana Reserve Lift Station Pump #3	Prior to first Unit	r Funded										
Project 3 – Sanitary Sewer Replacement		In Progre	ess – District Fur	nded								
Project 4 – Influent Lift Station	Prior to first Unit	\$20,000	\$60,000	\$20,000	\$100,000							
Project 5 – Grit Removal	Prior to Unit 1009	\$210,000	\$650,000	\$210,000	\$1,070,000							
Project 6A – Extended Aeration Basin #3	Prior to first Unit	\$610,000	\$2,020,000	\$610,000	\$3,240,000							
Project 6B – Extended Aeration Basin #3	Prior to Unit 1009	\$650,000	\$2,180,000	\$650,000	\$3,480,000							
Project 7 – Secondary Clarifiers	Prior to Unit 1009	\$910,000	\$3,020,000	\$910,000	\$4,840,000							
Project 8 – Gravity Belt Thickener	Prior to Unit 1009	\$270,000	\$880,000	\$270,000	\$1,420,000							
Project 9 – Dewatering Screw Press	Prior to Unit 1009	\$500,000	\$1,620,000	\$500,000	\$2,620,000							
Wastewater	Wastewater Projects Subtotal     \$3,170,000     \$10,430,000     \$3,170,000     \$16,770,000											
Notes: All numbers rounded to \$10,000												



## Figure 6-1 Cash Flow Report - Water Projects



## Figure 6-2 Cash Flow Report - Wastewater Projects



## Figure 6-3 Cash Flow Report - Water and Wastewater Projects