Norwood Water Commission Potable Transmission Main

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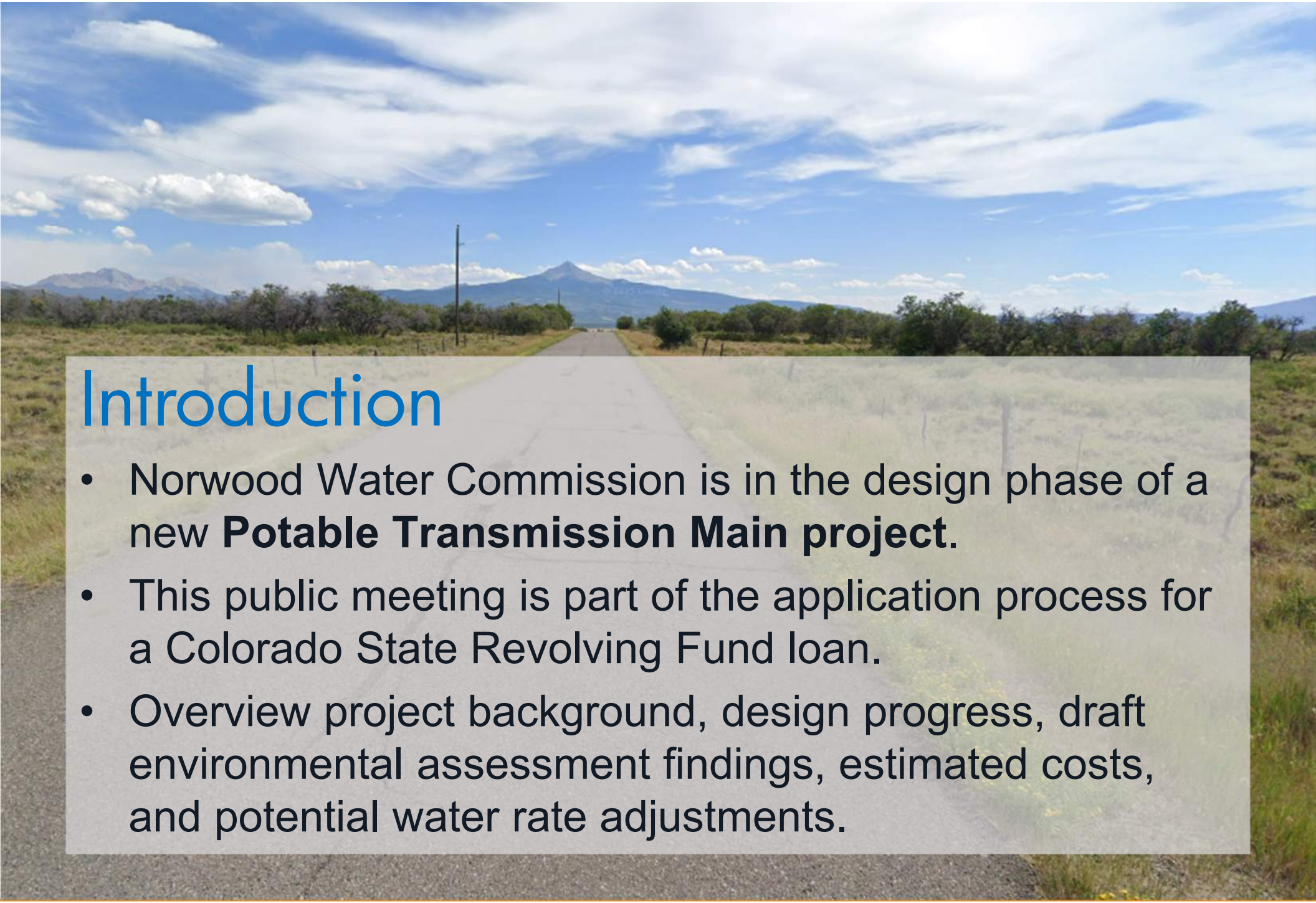
Design Engineer IV / Project Manager

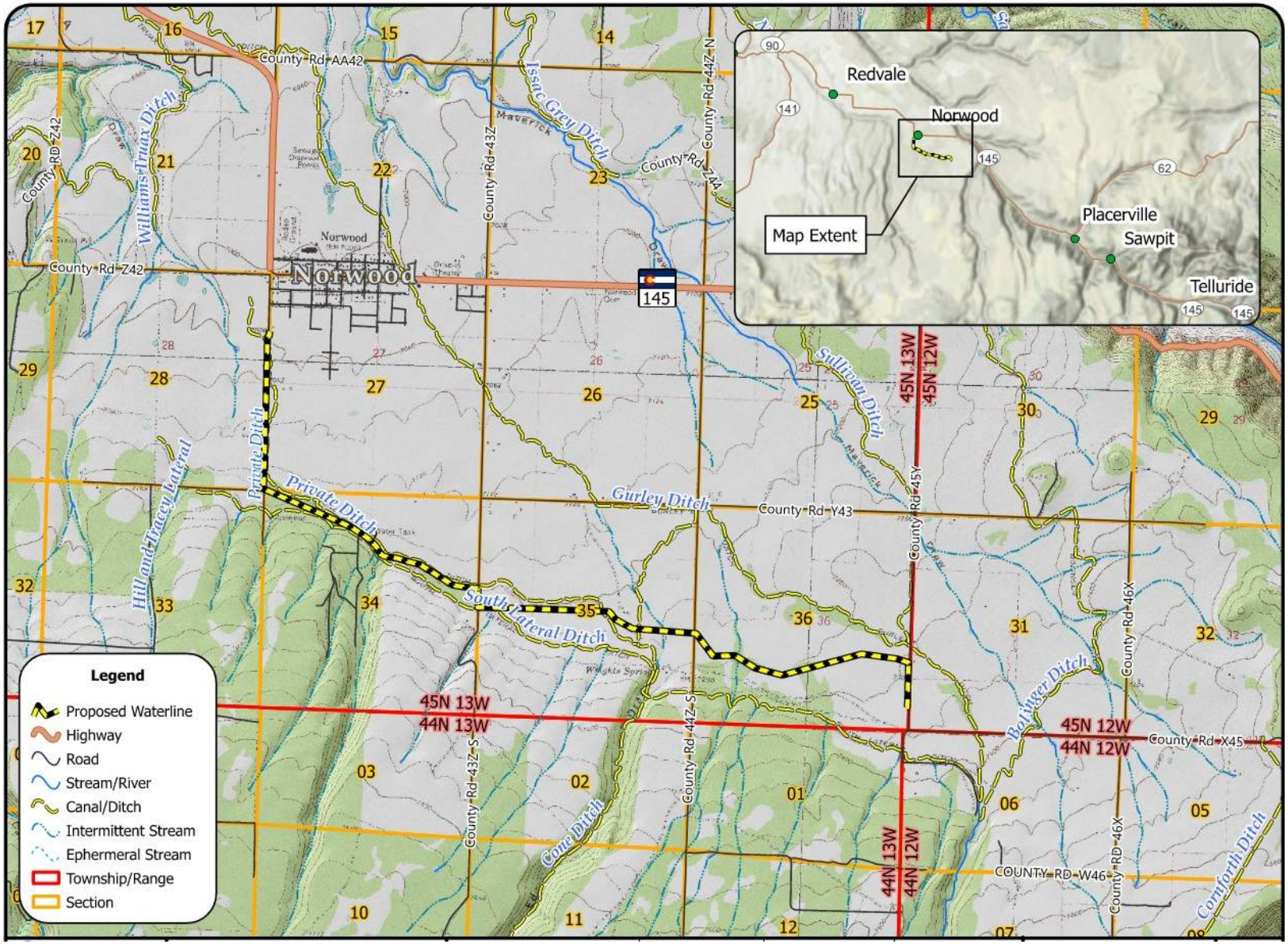
SGM



Introduction

- Norwood Water Commission is in the design phase of a new **Potable Transmission Main project**.
- This public meeting is part of the application process for a Colorado State Revolving Fund loan.
- Overview project background, design progress, draft environmental assessment findings, estimated costs, and potential water rate adjustments.

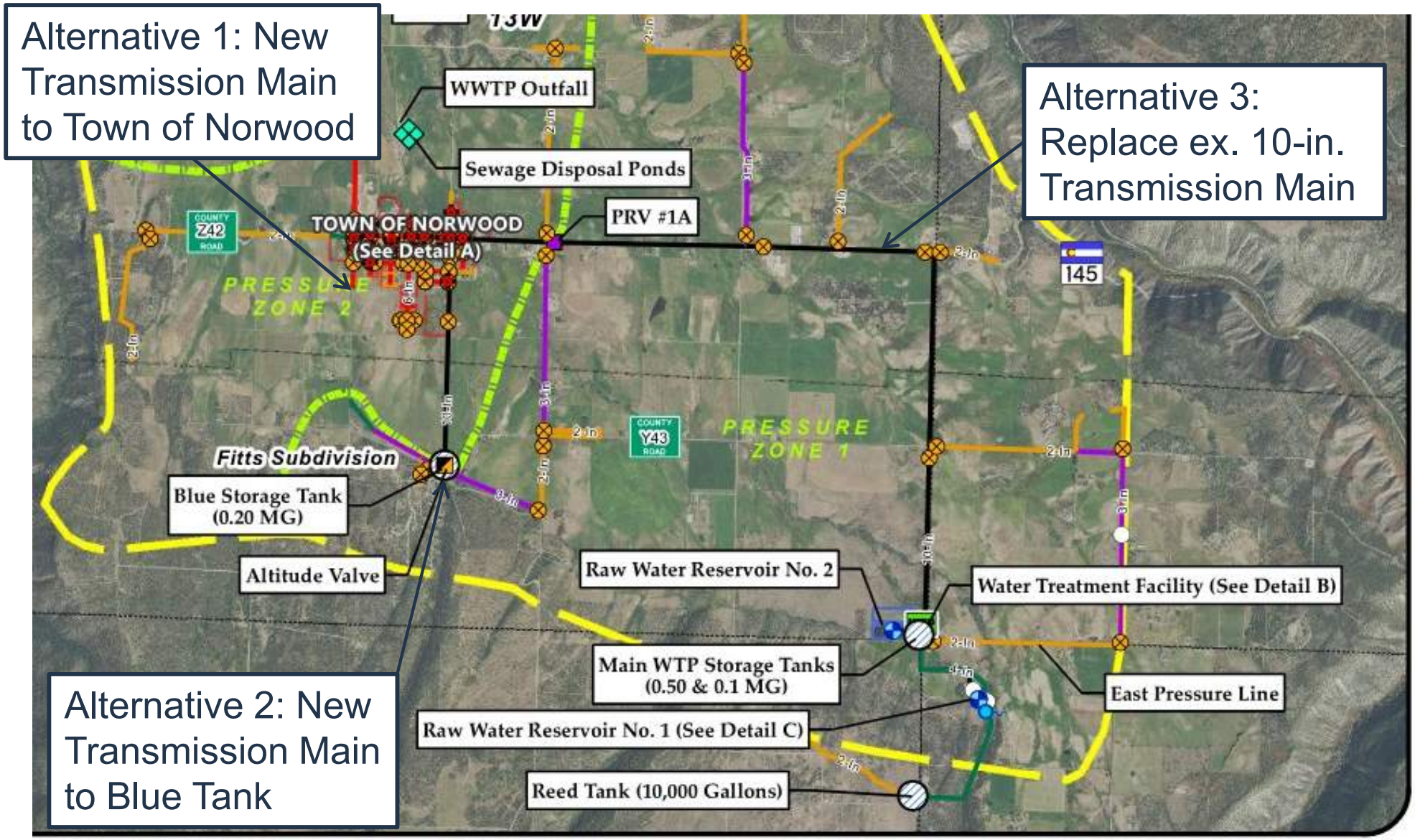
Proposed Water Main Map



Purpose and Background

- Today, the entire water service area relies on a single transmission main that has experienced multiple failures, causing water outages, water loss, low pressure, reduced chlorine residuals, and limited fire-flow capacity.
- **Key Benefits** of the proposed Waterline
  - Improved water system reliability and redundancy
  - Reduced water outages
  - Better water quality for the community
  - Increased fire-flow capacity
  - Reduced water loss and emergency repairs
  - Enhanced resilience to drought and future growth

Project Alternatives and Phases



Transmission Main Cost Estimate

Pay Item No.	Item Description	Unit	Quantity	Unit Cost	Estimated Costs
12" Water Transmission Main - WTP to west side of Town of Norwood					
1	Stormwater Management/Erosion Control	DAY	360	$ 90.00	$ 32,400
2	Traffic Control Management & Devices	DAY	250	$ 200.00	$ 50,000
3	12" HDPE Waterline and Fittings (Incl. excavation, pipe, fittings, bedding, geotextile filter fabric above bedding, clay dams, testing) (Excl. imported backfill, asphalt paid elsewhere)	LF	22,715	$ 220.00	$ 4,997,300
4	Imported 1" Screened Rock, Assumes 25% of WL has unsuitable native material	TON	4,000	$ 60.00	$ 240,000
5	12" Gate Valves	EA	28	$ 10,000.00	$ 280,000
6	1" Air Release/Vacuum Valve Vaults	EA	5	$ 15,000.00	$ 75,000
7	PRV Vault	EA	2	$ 168,000.00	$ 336,000
8	Fire Hydrants	EA	1	$ 7,500.00	$ 7,500
9	Connection to Existing Waterlines	EA	6	$ 5,000.00	$ 30,000
10	3/4" Water Service Tap, Curb Stop, Meter Assembly	EA	4	$ 8,000.00	$ 32,000
11	Non-Potable Utility Crossing and Flowfill Backfill in Roadway	EA	8	$ 10,000.00	$ 80,000
12	Sawcut and Replace Hot Bituminous Pavement. Includes all material and labor necessary to provide full depth (4" Thickness) asphalt placement. Assumes 8-ft width patch.	TON	110	$ 400.00	$ 43,864
13	Cl. 6 Aggregate Gravel Shoulder/Driveway Replace, 8" Thickness, Assume 20% of WL	TON	2,700	$ 65.00	$ 175,500
14	Dewatering, Assume 20% of WL	LF	4,400	$ 100.00	$ 440,000
15	Restoration /Seeding	AC	9	$ 8,400.00	$ 75,600
				Subtotal of Construction Items	$ 6,896,000

Other Construction Costs	Unit	Quantity	Unit Cost	Estimated Costs
Mobilization	%	6.0%		$ 414,000
Bonds/Insurance	%	1.5%		$ 103,000
Management/Superintendent	%	3.0%		$ 207,000
Labor - Misc., General	%	10.0%		$ 690,000
Overhead and Profit	%	7.0%		$ 483,000
Geotechnical - Materials Testing	%	0.5%		$ 34,000
Construction Surveying	%	0.5%		$ 34,000
Construction Contingencies	%	10.0%		$ 690,000
			Subtotal of Other Construction Costs	$ 2,655,000
			Engineer's Opinion of Probable Construction Costs (EOPCC)	$ 9,551,000

Additional Project Costs	Unit	Quanitity	Unit Cost	Estimated Costs
Legal Services (Assumes 1 Private Easement and 1 SLB Lease)	LS	1	$ 100,000.00	$ 100,000
Planning, PNA, Survey, Subsurface Utility Engineering (SUE), Env. Surveys and Permitting, Cultural Resources, Geotechnical	LS	1	$ 306,000.00	$ 306,000
Project Mgt, Design Engineering, Funding Assistance, Bid Phase Support	LS	1	$ 204,000.00	$ 204,000
Construction Mgt. Engineering	LS	1	$ 150,000.00	$ 150,000
Construction Onsite RPR, Full-Time, Local	LS	1	$ 70,000.00	$ 70,000
			Subtotal of Additional Project Costs	$ 830,000

Engineer's Opinion of Probable Project Costs (EOPPC)	$ 10,381,000

Transmission Main Project Funding

Total Estimated Project Cost	**$10.4M**
1. Planning & Design Grants Awarded	$0.5M
2. Construction	
• EPA Community Grant	$1.25M
• San Miguel County	$1.0M
• CO Office of Just Transition	$0.5M
• State Revolving Fund Loan	$7.0M
• Up to 50% Loan forgiveness ends in 2026	

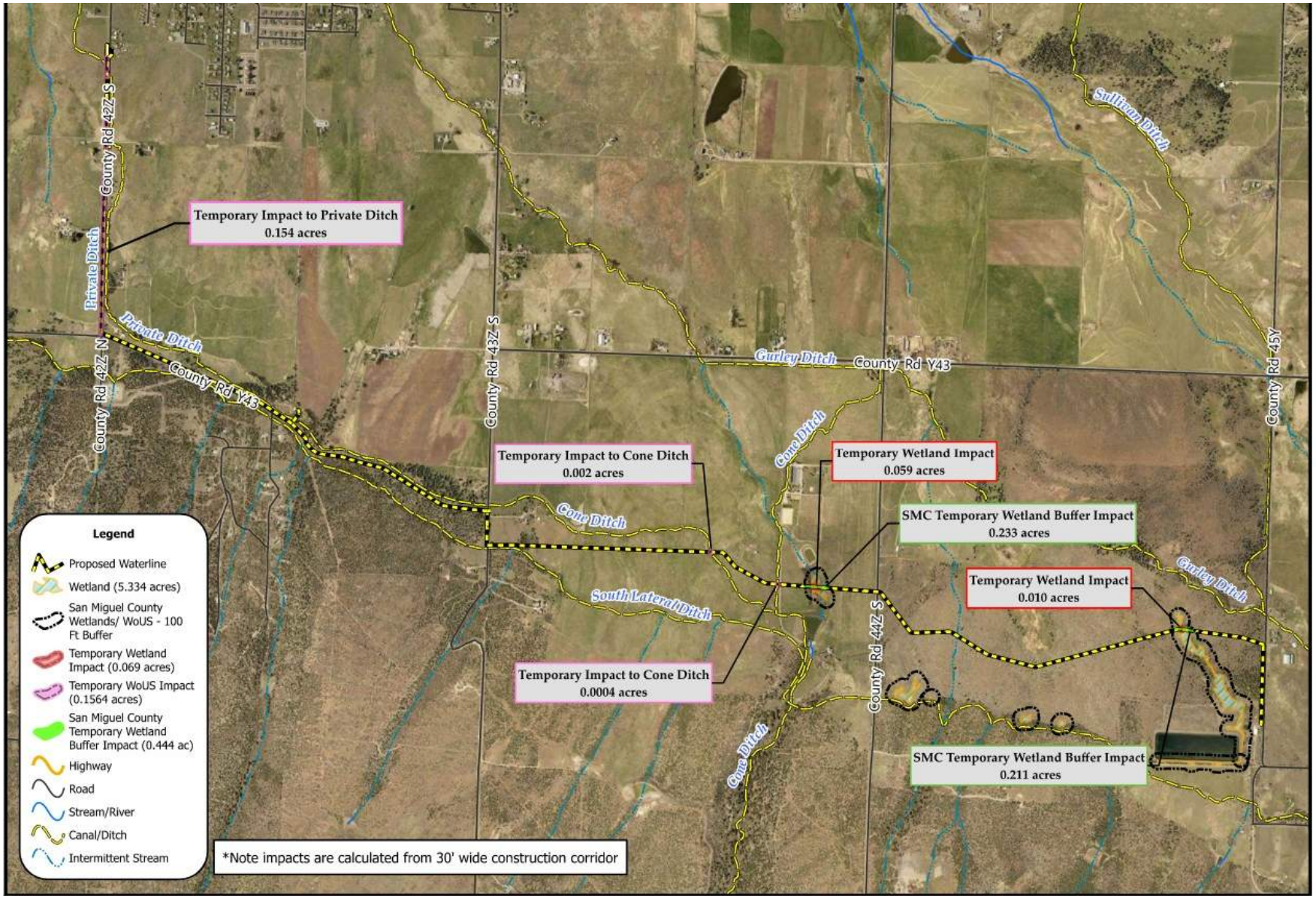
Estimated Water Rate Adjustment

- Years of Planning, Environmental Surveys, and Engineering
- Planning efforts span Multiple NWC Boards, Committed to project
- 2024 Base Rate Increase $3
- 2025 Base Rate Increase 10%
- 2026 Base Rate Increase 10%
- Anticipated 2027 Base Rate Increase 5%

Draft Environmental Assessment (EA)

- The proposed project is expected to have no significant long-term environmental impacts to wetlands, floodplains, groundwater, wildlife habitat, or cultural resources.
- Construction will cause temporary disturbances including trenching, short-term traffic increases, noise, dust, and minor impacts to irrigation ditches and approximately 0.07 acres of wetlands, all of which will be restored following construction.
- Protective measures such as erosion and sediment controls, stormwater management, revegetation, and wetland restoration will be implemented to minimize impacts.

Delineated Wetlands



Next Steps

- Submit the loan application to CDPHE for review
- Finalize the construction funding strategy, necessary water-rate adjustments, and design.
- Incorporate agency review comments into environmental assessment and 30-day public comment period.
- Obtain landowner permissions and authorizations.
- Project documents are on display in the back of the room or may be viewed here: NWC Potable Transmission Main Public Meeting

Questions?

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