

City of Tulare

Capital Improvement Plan Review

March 21, 2024



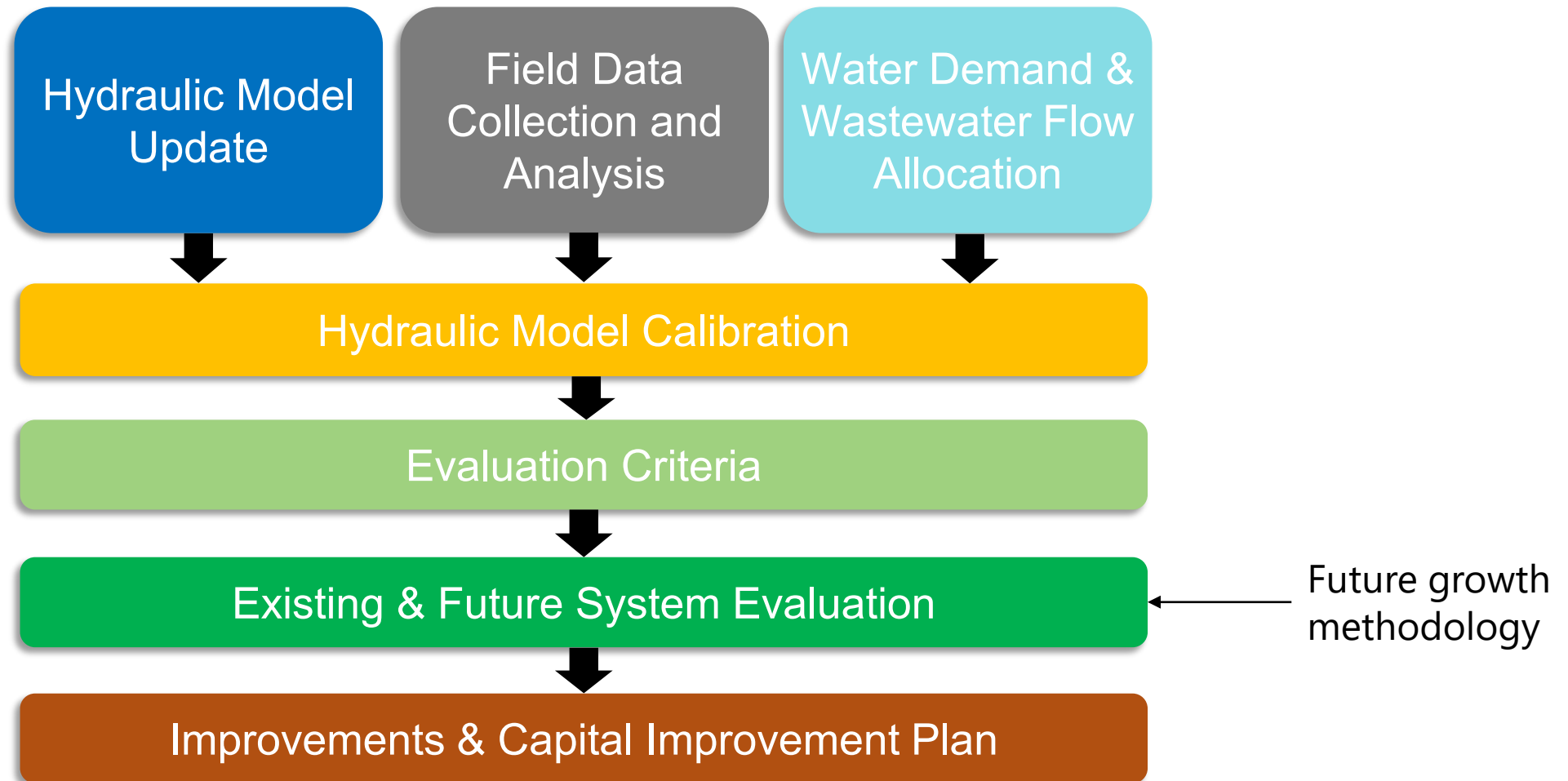
— Agenda

- Master Plan Background
 - » Future growth assumptions
 - » Future demand/flow projections
- Performance Criteria
- Proposed Improvements
- Capital Improvement Program Costs

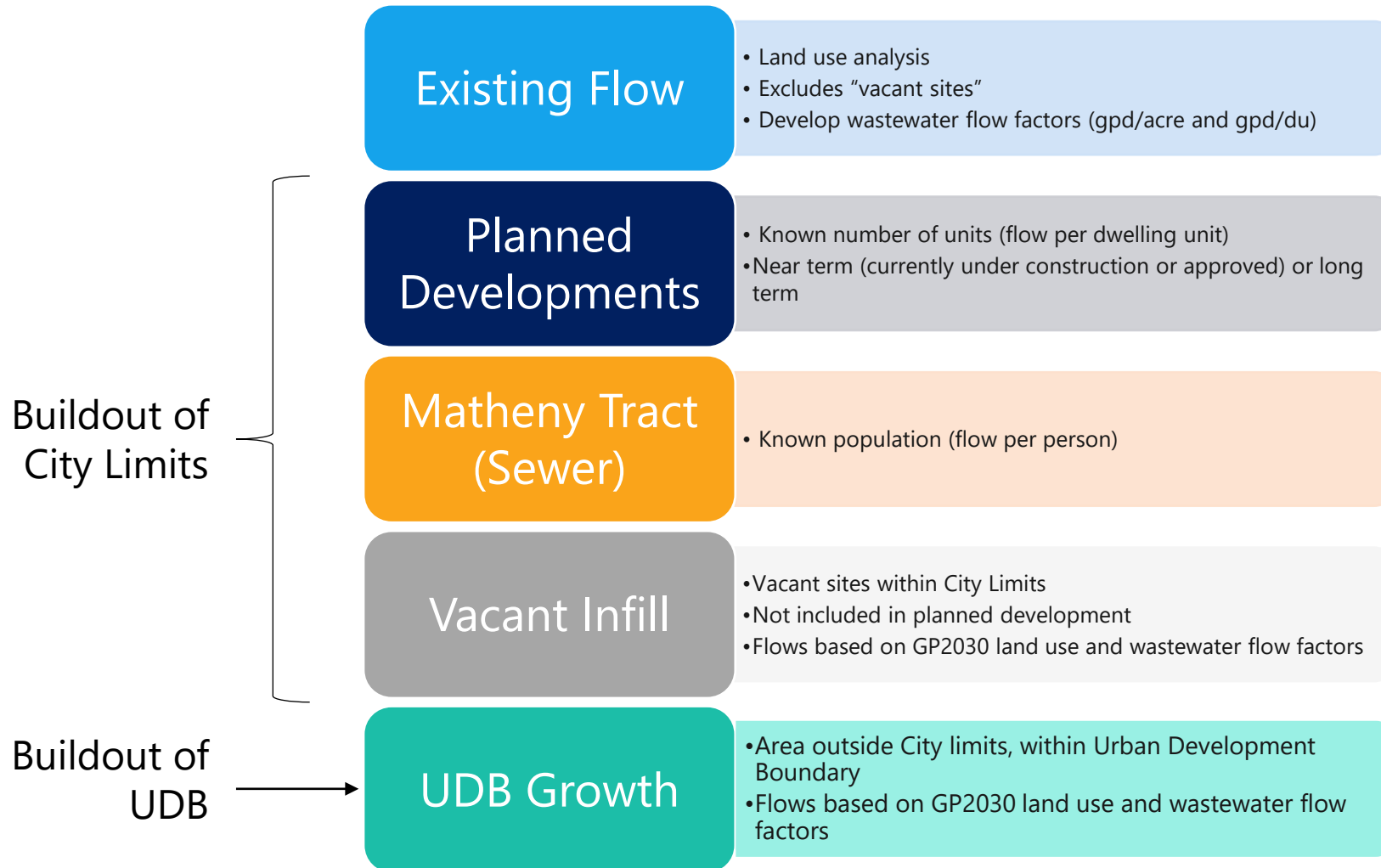
01

Master Plan Background

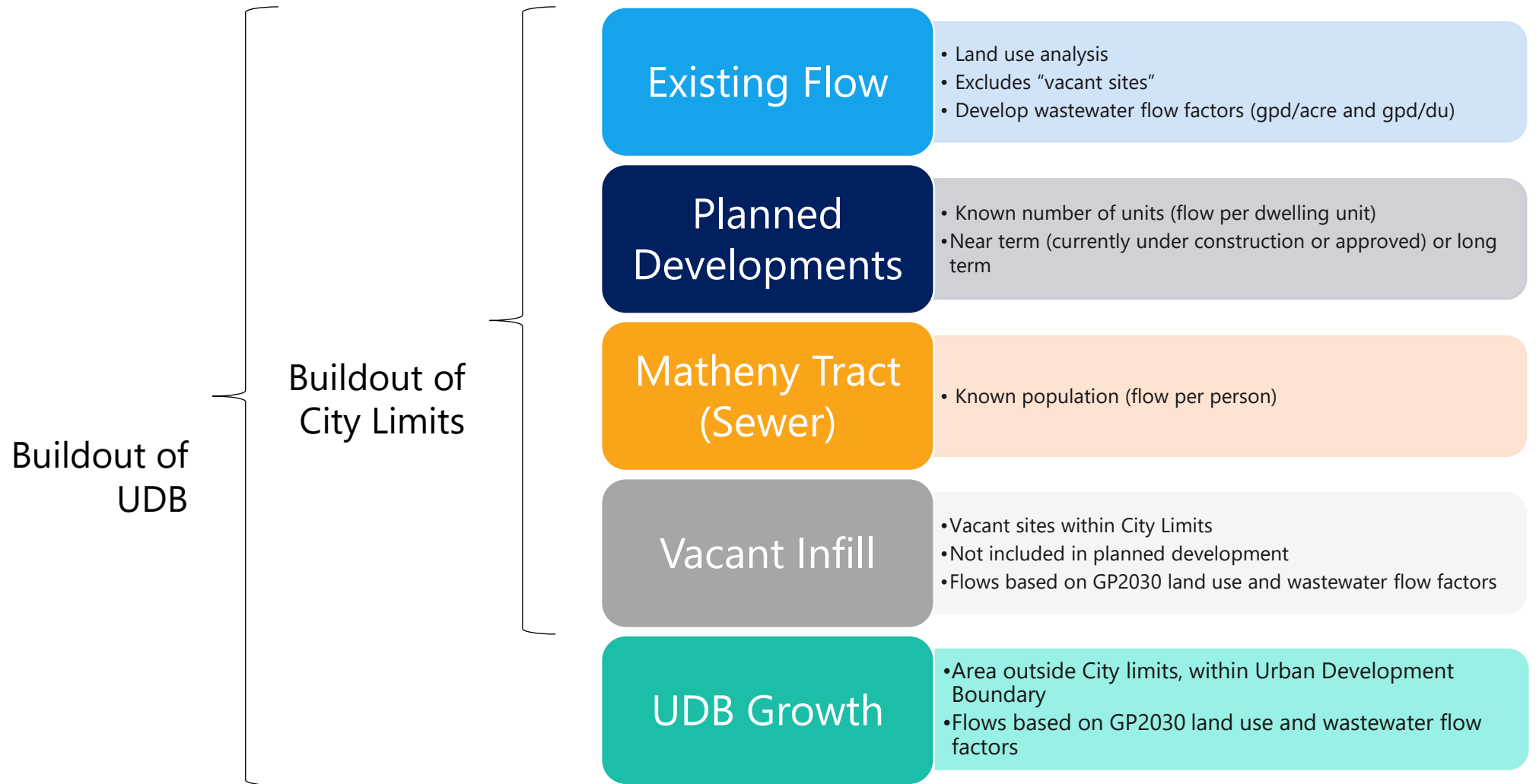
Development of the master plan has been a multi-step process



Future Growth Components



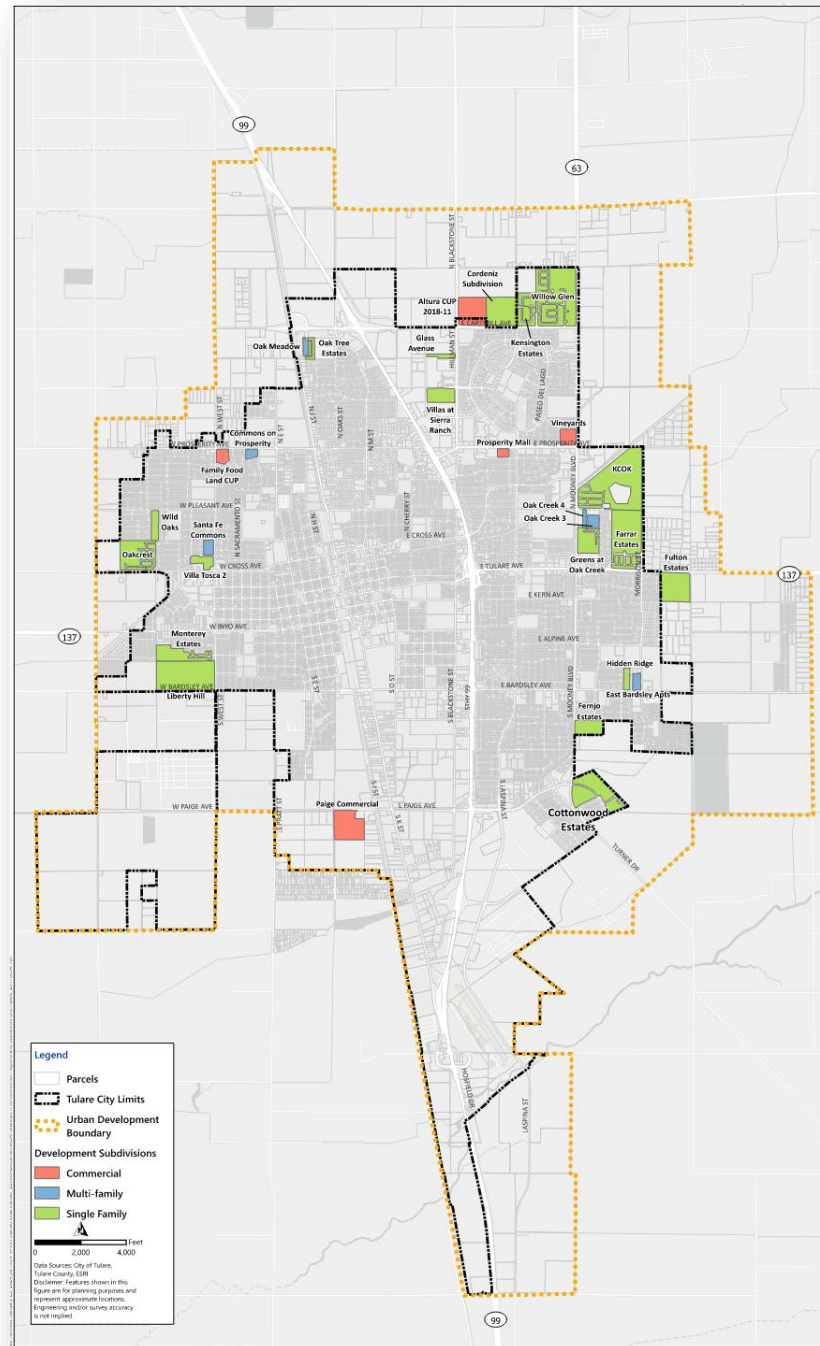
Two future scenarios were evaluated



Planned Developments

Future Demands/Flows Added

Water Demand	1.9 mgd
Wastewater Flow	1.1 mgd



Legend

- Parcels
- Tulare City Limits
- Urban Development Boundary

Development Subdivisions

- Commercial
- Multi-family
- Single Family



Data Sources: City of Tulare, Tulare County, ESRI
 Disclaimer: Features shown in this figure are for planning purposes and represent approximate locations. Engineering and/or survey accuracy is not implied.

Legend

- Parcels
- Tulare City Limits
- Urban Development Boundary

Development Subdivisions

- Commercial
- Multi-family
- Single Family

Feet
 0 2,000 4,000

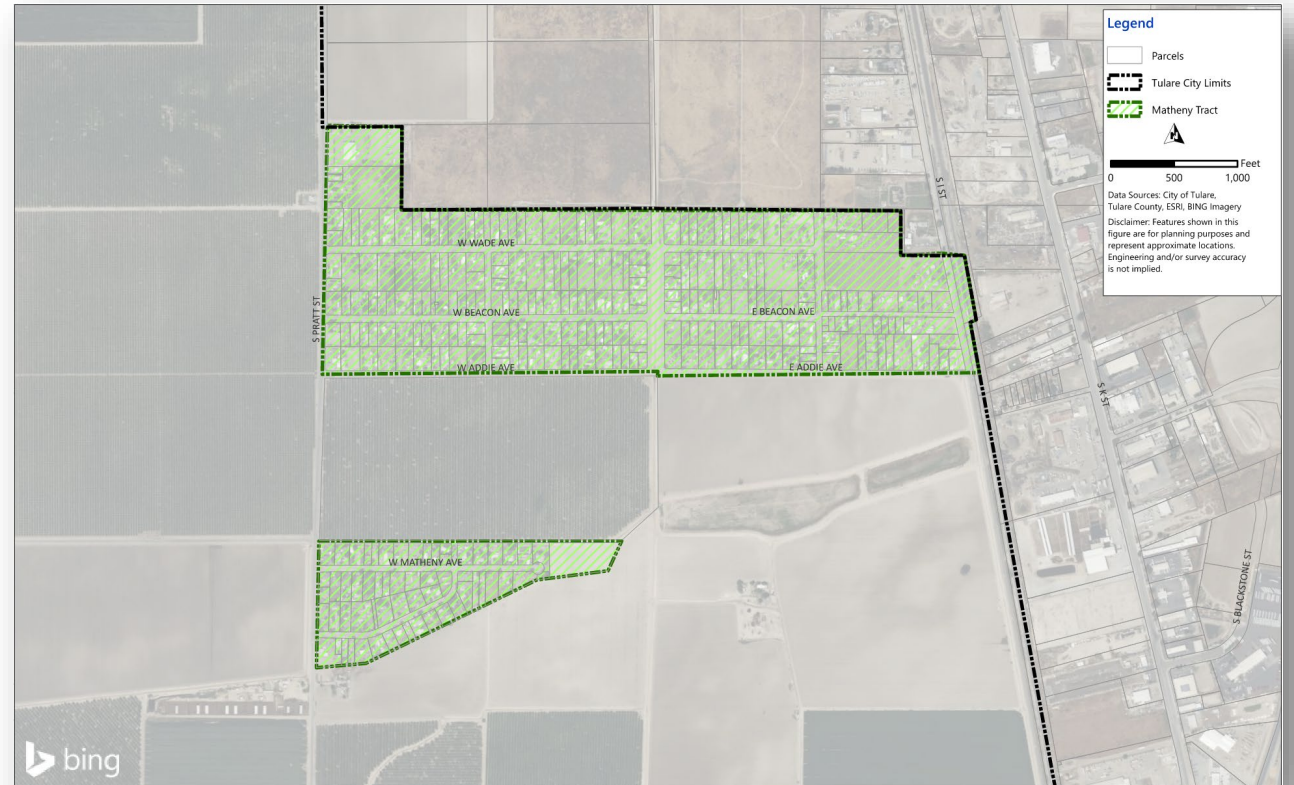
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Matheny Tract

Future Demands/Flows Added

Water Demand	0.00 mgd*
Wastewater Flow	0.07 mgd

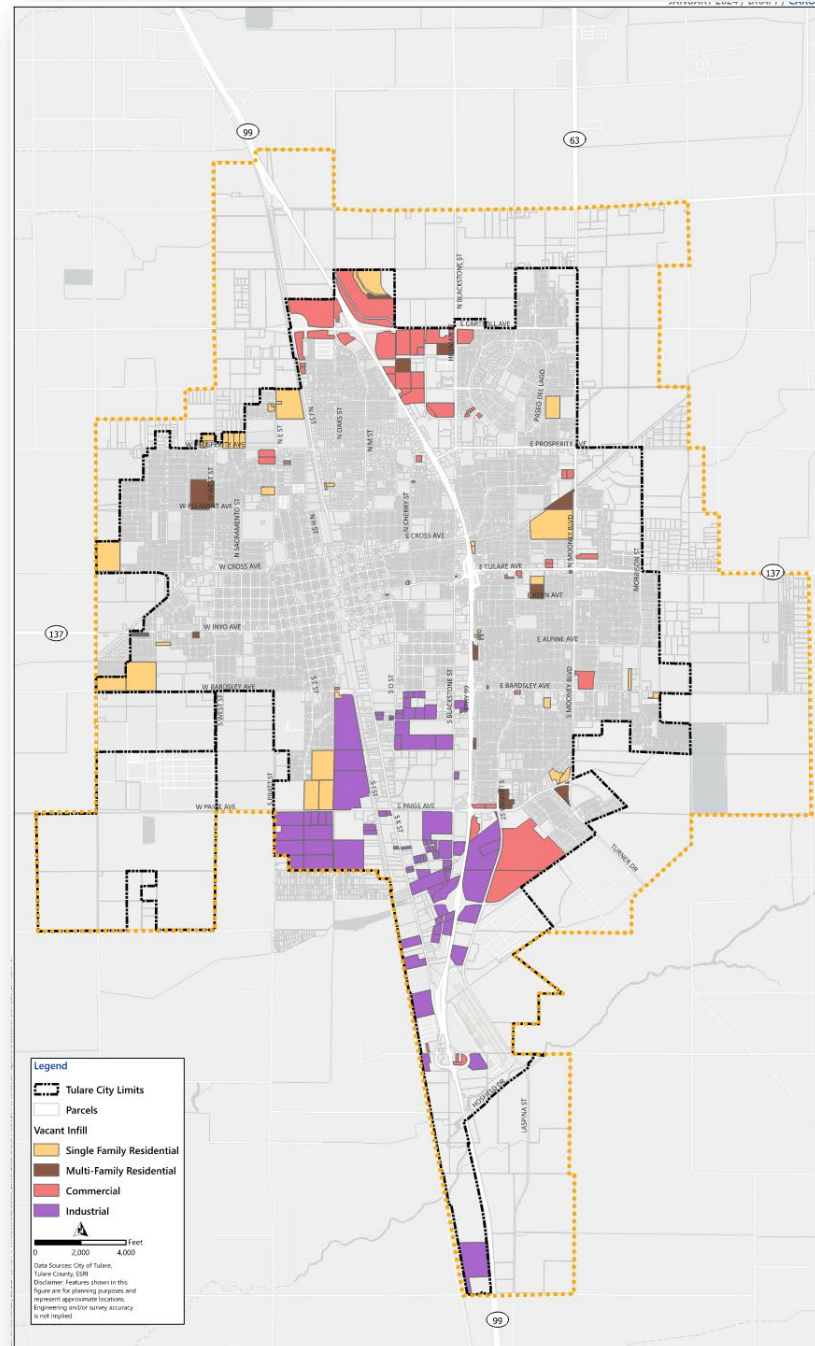
*City already provides potable water to Matheny Tract



Vacant Infill

Future Demands/Flows Added

Water Demand	2.0 mgd
Wastewater Flow	1.3 mgd



Legend

Tulare City Limits

Parcels

Vacant Infill

Single Family Residential

Multi-Family Residential

Commercial

Industrial



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Legend

- Tulare City Limits
- Parcels

Vacant Infill

- Single Family Residential
- Multi-Family Residential
- Commercial
- Industrial

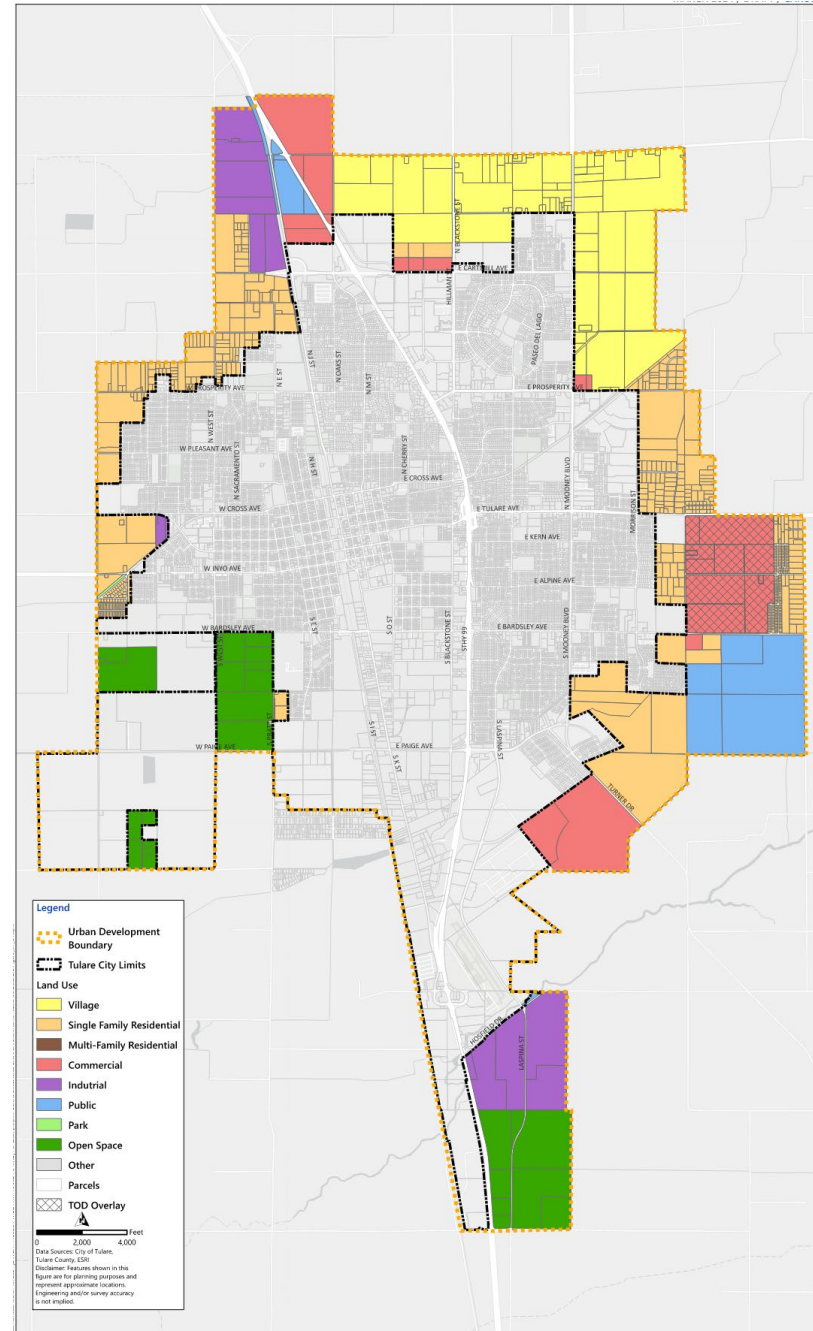
0 2,000 4,000 Feet

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Urban Development Boundary

Future Demands/Flows Added

Water Demand	9.2 mgd
Wastewater Flow	5.2 mgd



Legend

- Urban Development Boundary
- Tulare City Limits
- Land Use**
- Village
- Single Family Residential
- Multi-Family Residential
- Commercial
- Industrial
- Public
- Park
- Open Space
- Other
- Parcels
- TOD Overlay

0 2,000 4,000 Feet

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Demand and Flow Projection Summary

Planning Period	Average Water Demand (mgd)	Average Wastewater Flow (mgd)
Total Existing	14.9	11.5
Planned Developments	1.9	1.0
Matheny Tract	0.0	0.1
Vacant Infill	2.0	1.3
Lactalis	0.8	1.1
Total Buildout Within City-Limits	18.6	15.0
UDB	9.2	5.2
Total Buildout to UDB	27.8	20.2

Performance Criteria

Water	Sewer	Storm
<ul style="list-style-type: none">✓ Supply Analysis✓ Storage Analysis✓ Pipeline Capacity✓ Fire Flow Availability✓ Undersized Pipes	<ul style="list-style-type: none">✓ Maximum Flow Depth✓ Lift Station Capacity✓ Force Main Capacity	<ul style="list-style-type: none">✓ Pipeline capacity✓ Street flooding✓ Retention/detention pond capacity✓ Pump station capacity

Water Distribution System Improvements

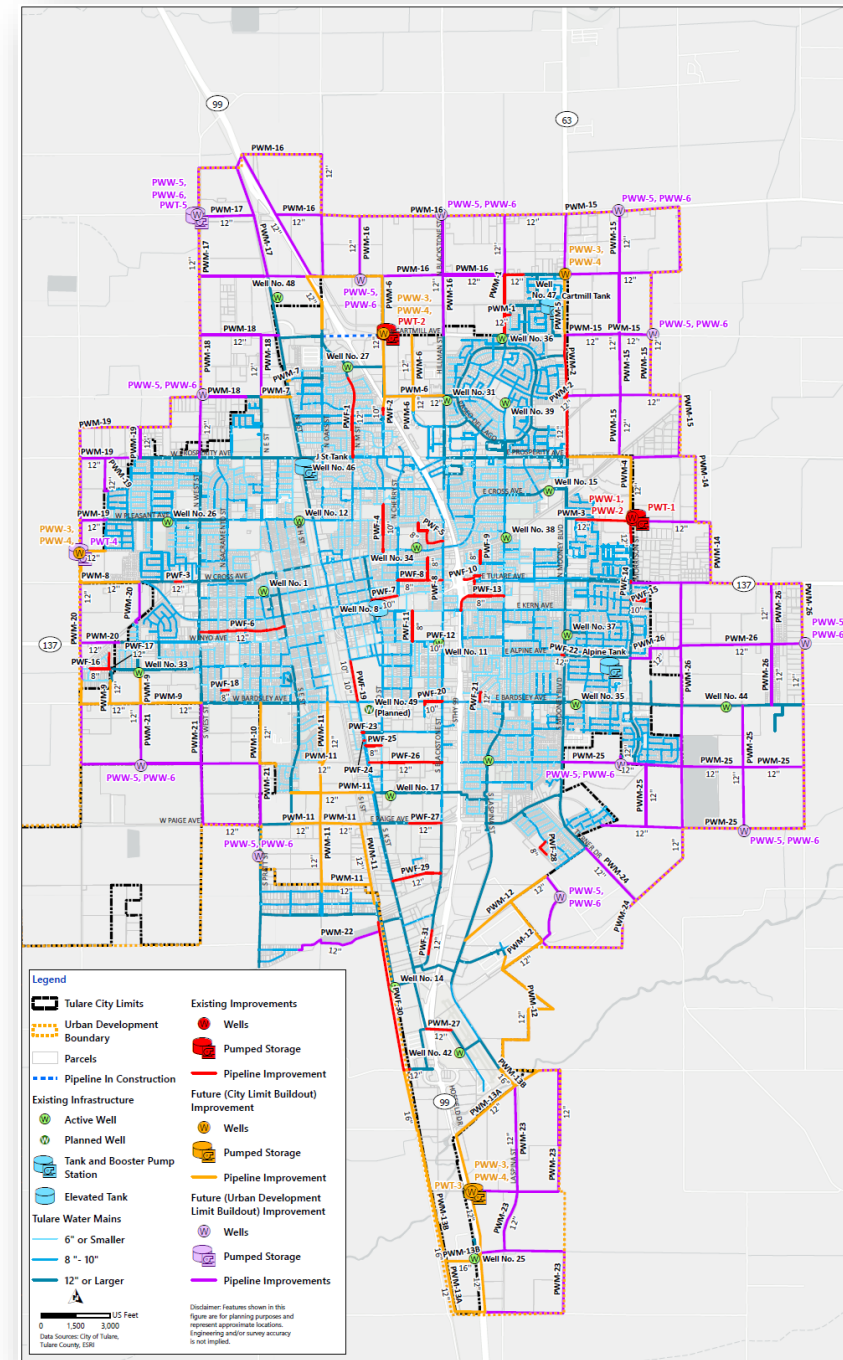
Component	Existing	Near-Term	Long-Term
New Water Mains			
12-inch	13,900-ft	101,600-ft	300,500-ft
16-inch		11,200-ft	
Existing Fire Flow Improvements			
8-inch	14,300-ft		
10-inch	7,500-ft		
12-inch	23,800-ft		
Wells with treatment			
Wells with treatment	1	4	12
Tanks			
2 MG	1	1	
2.3 MG	1		
2.6 MG			2

Legend

- Tulare City Limits
- Urban Development Boundary
- Parcels
- Pipeline In Construction
- Existing Infrastructure**
 - Active Well
 - Planned Well
 - Tank and Booster Pump Station
 - Elevated Tank
- Tulare Water Mains**
 - 6" or Smaller
 - 8" - 10"
 - 12" or Larger
- Existing Improvements**
 - Wells
 - Pumped Storage
 - Pipeline Improvement
- Future (City Limit Buildout) Improvement**
 - Wells
 - Pumped Storage
 - Pipeline Improvement
- Future (Urban Development Limit Buildout) Improvement**
 - Wells
 - Pumped Storage
 - Pipeline Improvements

US Feet
 0 1,500 3,000
 Data Sources: City of Tulare, Tulare County, ESRI

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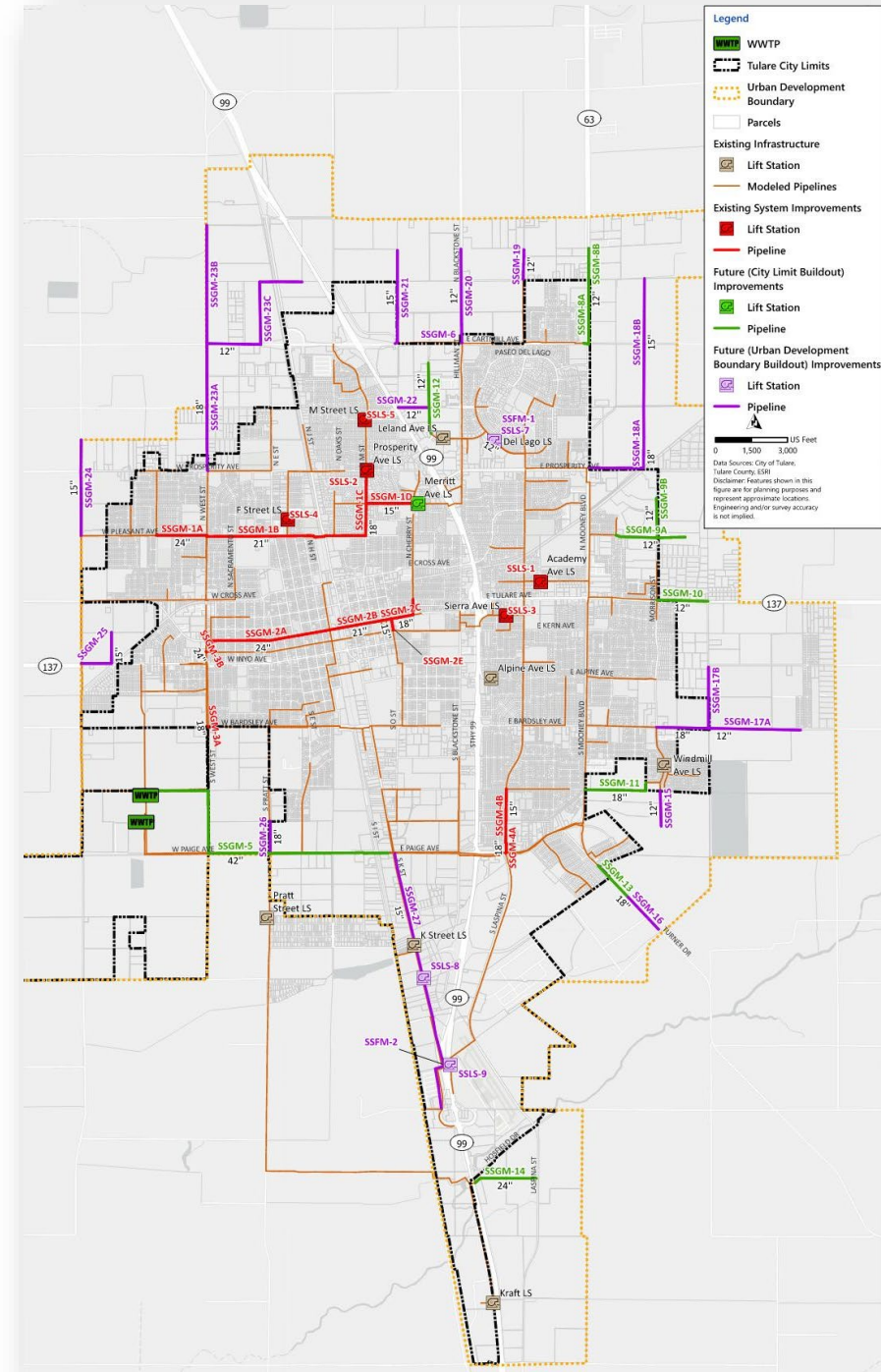


Wastewater Collection System Improvements

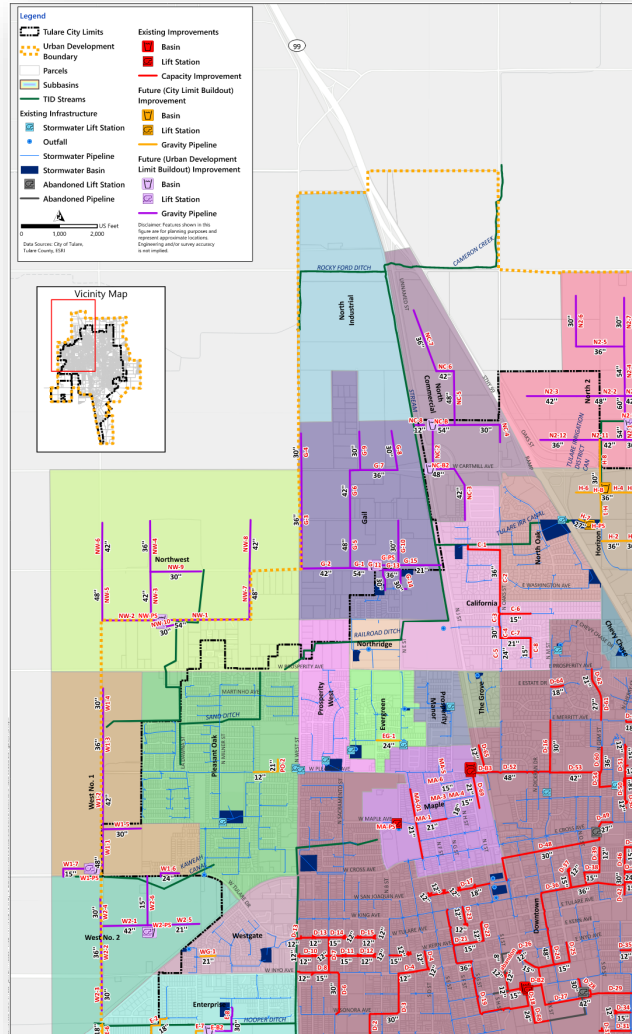
Project Type	Existing	City Limit Buildout	UDB Buildout
Gravity Pipe			
12-inch	--	13,900	22,000
15-inch	5,500	--	35,200
18-inch	6,400	4,600	13,300
21-inch	7,200	--	--
24-inch	7,500	2,600	--
42-inch	--	12,800	--
Lift Stations			
Upgrades	5	1	1
New	--	--	2
Force Main			
8-inch	--	--	300
12-inch	--	--	100

Legend

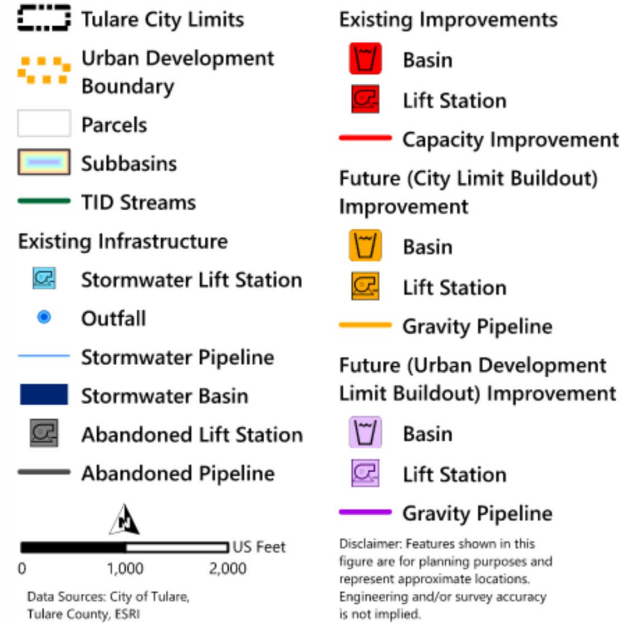
- WWTP
 - Tulare City Limits
 - Urban Development Boundary
 - Parcels
 - Existing Infrastructure**
 - Lift Station
 - Modeled Pipelines
 - Existing System Improvements**
 - Lift Station
 - Pipeline
 - Future (City Limit Buildout) Improvements**
 - Lift Station
 - Pipeline
 - Future (Urban Development Boundary Buildout) Improvements**
 - Lift Station
 - Pipeline
- 0 1,500 3,000 US Feet
 Data Sources: City of Tulare, Tulare County, ESRI
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Storm Drain System Improvements



Legend



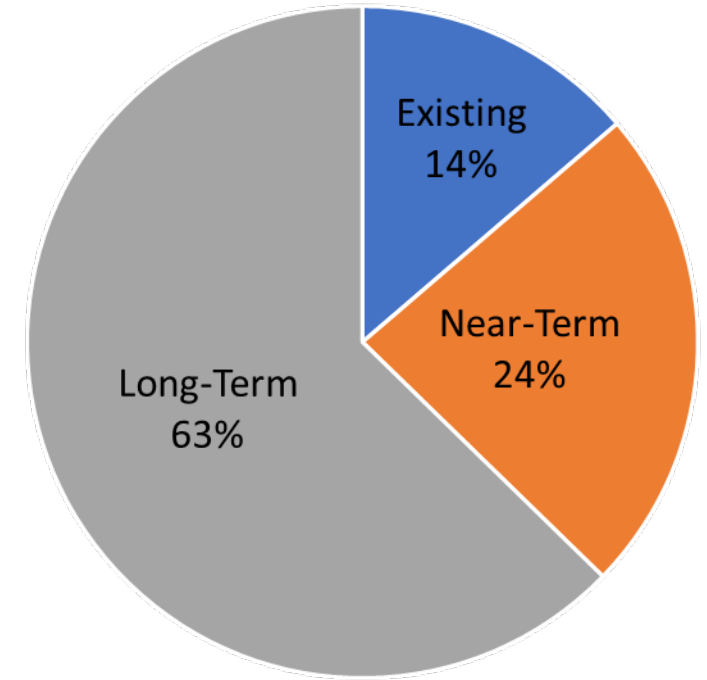
Component	Existing	Near-Term	Long-Term
Gravity Mains			
12-inch	12,300-ft	600-ft	--
14-inch	--	--	--
15-inch	20,750-ft	800-ft	--
18-inch	8,200-ft	6,000-ft	--
21-inch	3,300-ft	5,700-ft	3,100-ft
24-inch	6,200-ft	5,000-ft	8,200-ft
27-inch	3,300-ft	--	--
30-inch	14,200-ft	8,000-ft	41,300-ft
36-inch	12,300-ft	3,300-ft	55,900-ft
42-inch	5,800-ft	2,400-ft	40,700-ft
48-inch	8,600-ft	1,500-ft	25,800-ft
54-inch	--	1,600-ft	18,600-ft
Force Mains			
12-inch	--	--	400-ft
14-inch	300-ft	--	--
18-inch	800-ft	--	--
20-inch	1,000-ft	1,200-ft	1,600-ft
24-inch	1,300-ft	2,400-ft	2,400-ft
30-inch	1,500-ft	--	1,200-ft
36-inch	--	--	2,300-ft
Pump Stations			
Less than 5 cfs	--	3	1
5 to 10 cfs	2	--	2
10 to 15 cfs	2	2	3
15 to 20 cfs	--	1	2
Greater than 20 cfs	2	--	5
Retention/Detention Basin			
Less than 25 AF	--	6	5
25 to 50 AF	2	--	7
50 to 100 AF	1	1	5
Larger than 100 AF	--	--	3

02

Capital Improvement Plan

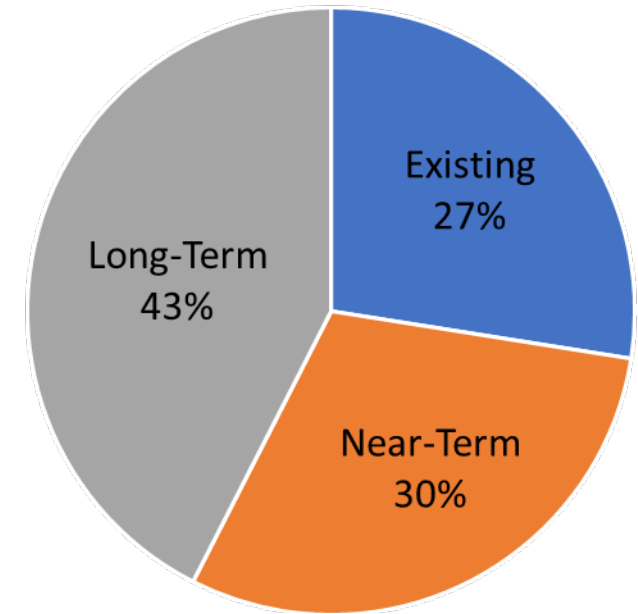
Water System CIP

Component	Capital Improvement Cost (\$, Millions)			
	Existing	City Buildout	UDB Buildout	Total
Water Mains	\$6.9	\$68.3	\$165.3	\$240.6
Fire Flow Improvements	\$23.1	\$0.0	\$0.0	\$23.1
Wells	\$9.4	\$37.4	\$112.3	\$159.1
Tanks	\$20.1	\$9.4	\$24.3	\$53.8
Other Projects	\$7.8	\$0.0	\$0.0	\$7.8
Total	\$67.3	\$115.1	\$302.0	\$484.4



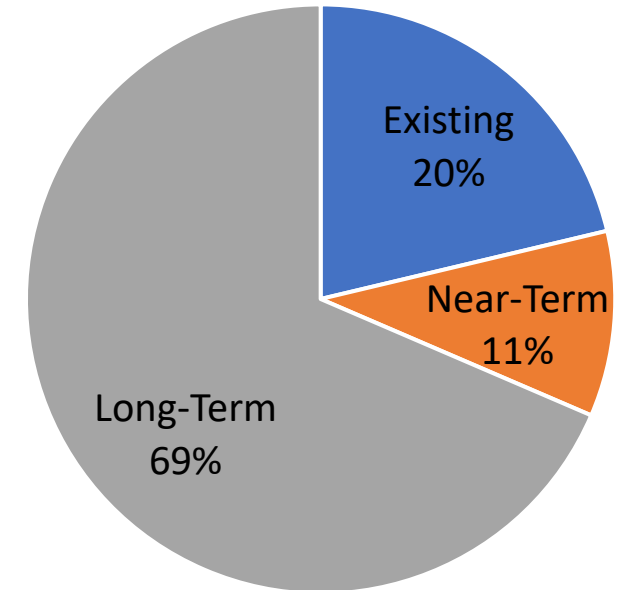
Wastewater Collection System CIP

Component	Capital Improvement Cost (\$, Millions)			
	Existing	City Buildout	UDB Buildout	Total
Gravity Mains	\$26.3	\$42.0	\$52.7	\$121.0
Lift Stations	\$13.7	\$2.4	\$10.0	\$26.1
Force Mains	\$0.0	\$0.0	\$0.2	\$0.2
Other Projects	\$0.7	\$0.0	\$0.0	\$0.7
Total	\$40.6	\$44.4	\$62.9	\$147.9



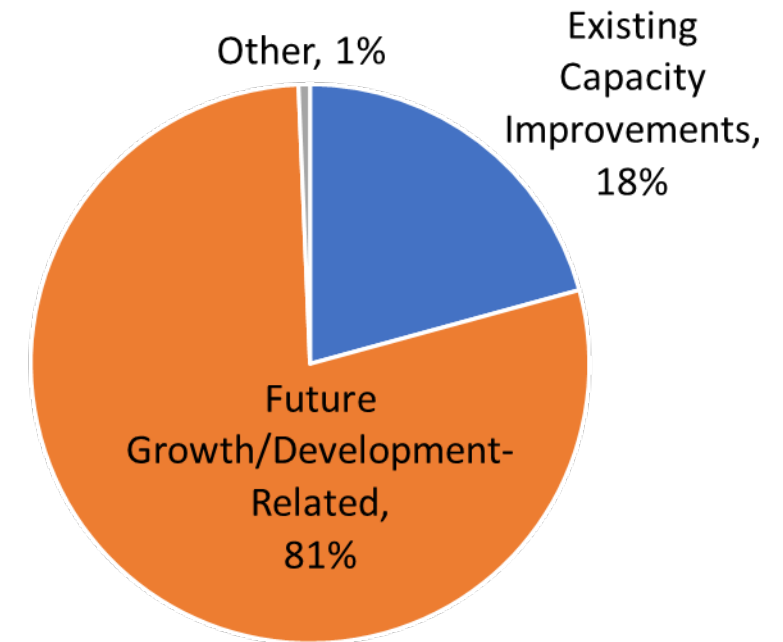
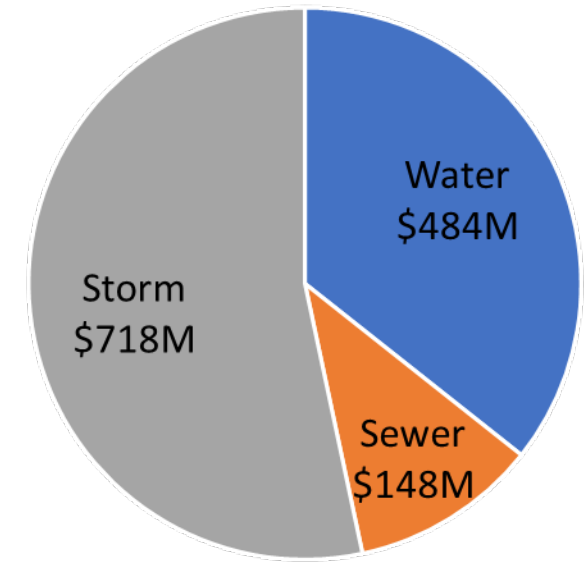
Storm Drain System CIP

Component	Capital Improvement Cost (\$, Millions)			
	Existing	City Buildout	UDB Buildout	Total
Storm Pipes	\$116.4	\$55.1	\$371.6	\$543.1
Basins	\$11.0	\$11.7	\$77.2	\$99.9
Pump Stations	\$14.4	\$8.6	\$33.1	\$56.1
Force Mains	\$4.8	\$3.5	\$10.1	\$18.4
Other Projects	\$0.4	\$0.0	\$0.0	\$0.4
Total	\$147.0	\$78.9	\$492.1	\$717.9



CIP Summary and Phasing

System	Total (\$, millions)	CIP Trigger (\$, millions)		
		Existing	City Limit Buildout	UDB Buildout
Existing System Improvements				
Water Distribution	\$59.5	\$59.5	\$0.0	\$0.0
Sanitary Sewer	\$74.5	\$40.0	\$28.7	\$5.9
Storm Drain	\$146.6	\$146.6	\$0.0	\$0.0
Capacity Subtotal	\$280.6	\$246.0	\$28.7	\$5.9
Development Related Improvements				
Water Distribution	\$417.1	\$0.0	\$115.1	\$302.0
Sanitary Sewer	\$72.7	\$0.0	\$15.7	\$57.0
Storm Drain	\$571.0	\$0.0	\$78.9	\$492.1
Development Subtotal	\$1,060.8	\$0.0	\$209.8	\$851.0
Other Projects				
Water Distribution	\$7.8	\$7.8	\$0.0	\$0.0
Sanitary Sewer	\$0.7	\$0.7	\$0.0	\$0.0
Storm Drain	\$0.1	\$0.1	\$0.0	\$0.0
Other Subtotal	\$8.6	\$8.6	\$0.0	\$0.0
Total	\$1,350.0	\$254.6	\$238.5	\$856.9
Average Annual	--	\$50.9	\$47.7	--



Thank You!