Appendix R

CAPITAL IMPROVEMENT PROGRAM PROJECT SHEETS AND SUMMARY TABLE

SUPPLY PROJECTS

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-1	**Project Cost (Current $):**	$ -
Project Name:	Lathrop Water System Improvements	**Project Cost (Future $):**	$ -
Facility Type:	Supply	**Project Timing:**	2019 to 2019
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install new water main and connections to transfer all users from the existing Lathrop Water System to the City system. This project has been completed.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 12-inch							

Total Project Cost (Current $)	$ -

Notes on Cost Estimation:

Project Complete.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-1	**Project Cost (Current $):**	$ -
Project Name:	Lathrop Water System Improvements	**Project Cost (Future $):**	$ -
Facility Type:	Supply	**Project Timing:**	2019 to 2019
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ -
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ -

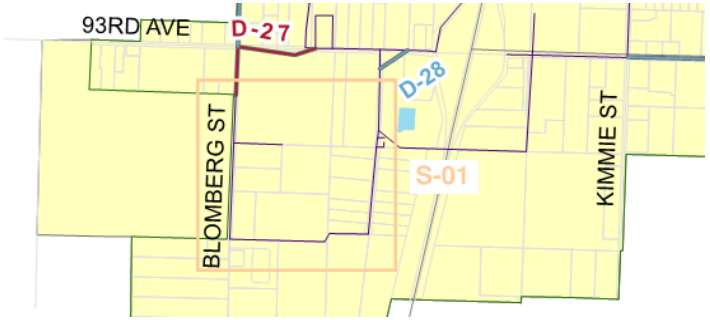
Triggers:

Project required when MDD reaches 4,200 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 12-inch	2019	$ -	$ -
Total Project Cost		$ -	$ -

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-2	**Project Cost (Current $):**	$ 5,290,782
Project Name:	Tumwater Golf Course Well	**Project Cost (Future $):**	$ 7,355,172
Facility Type:	Supply	**Project Timing:**	2027 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Conversion of the Golf Course Water Right and Well to potable water supply. Requires conversion of water right from Irrigation to Municipal Use. Well will require disinfection and additional yard piping to connect to existing water distribution system. Treatment for manganese and hydrogen sulfide will likely be necessary as well.

To be completed in conjunction with D-14 and D-29.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 16-inch	2,361	LF	$ 330	$ 779,130	$ 116,870	$ 194,783	$ 1,090,782
Groundwater Well	2,000	gpm	$ 1,500	$ 3,000,000	$ 450,000	$ 750,000	$ 4,200,000

Total Project Cost (Current $)	$ 5,290,782

Notes on Cost Estimation:

Disinfection included in the groundwater well cost.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-2	**Project Cost (Current $):**	$ 5,290,782
Project Name:	Tumwater Golf Course Well	**Project Cost (Future $):**	$ 7,355,172
Facility Type:	Supply	**Project Timing:**	2027 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 5,290,782
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 5,290,782

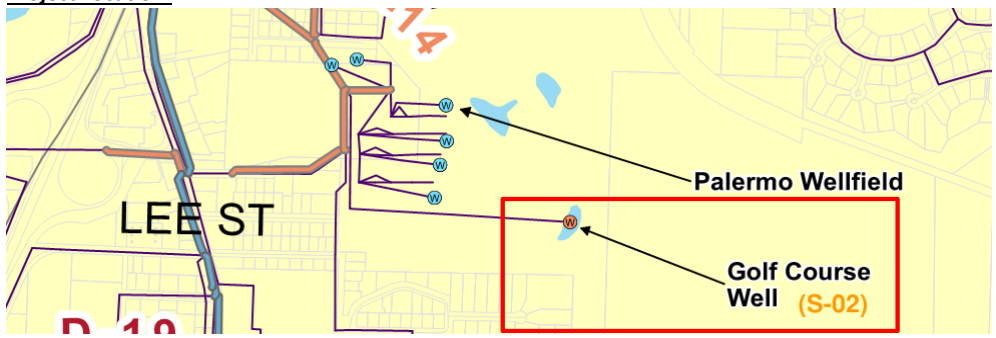
Triggers:

Project required when MDD reaches 4,500 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 16-inch	2028	$ 1,090,782	$ 1,423,223
Groundwater Well	2027	$ 2,100,000	$ 2,660,217
Groundwater Well	Long-term	$ 2,100,000	$ 3,271,732
Total Project Cost		$ 5,290,782	$ 7,355,172

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-3	**Project Cost (Current $):**	$ 7,150,000	**Go to CIP Summary**
Project Name:	Brewery Wellfield	**Project Cost (Future $):**	$ 7,644,547	
Facility Type:	Supply	**Project Timing:**	2020 to 2022	
		Inflation Rate:	3%	

Project Description:

City of Tumwater's portion of the development of the Brewery Wellfield. The Strategic Plan (RH2 2016) identified the completion of two (2) wells, disinfection, and potentially manganese treatment. The City is partnered with the Cities of Lacey and Olympia on this project. Distribution and transmission are recommended.

To be completed in conjunction with D-16.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 16-inch	469	LF					$ 250,000
Treatment	3	MGD					$ 6,900,000

Total Project Cost (Current $)	$ 7,150,000

Notes on Cost Estimation:

Cost estimate provided by City.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-3	**Project Cost (Current $):**	$ 7,150,000
Project Name:	Brewery Wellfield	**Project Cost (Future $):**	$ 7,644,547
Facility Type:	Supply	**Project Timing:**	2020 to 2022
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 7,150,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 7,150,000

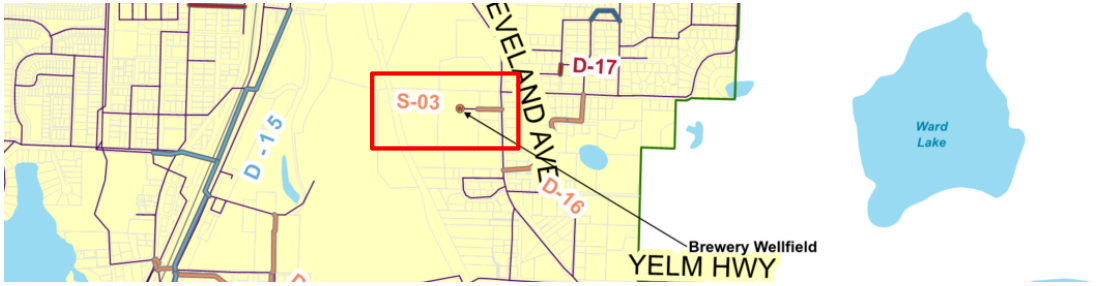
Triggers:

Project required when MDD reach 6,500 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 16-inch	2020	$ 250,000	$ 257,500
Treatment	2021	$ 4,800,000	$ 5,092,320
Treatment	2022	$ 2,100,000	$ 2,294,727
Total Project Cost		$ 7,150,000	$ 7,644,547

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-4	**Project Cost (Current $):**	$ 105,000
Project Name:	Well 15 Auxiliary Generator	**Project Cost (Future $):**	$ 114,736
Facility Type:	Supply	**Project Timing:**	2022 to 2022
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install auxiliary generator to reliably power Well 15.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Generator	1	EA	$ 75,000	$ 75,000	$ 11,250	$ 18,750	$ 105,000

Total Project Cost (Current $)	$ 105,000

Notes on Cost Estimation:

See Assumptions Tab for details.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-4	**Project Cost (Current $):**	$ 105,000
Project Name:	Well 15 Auxiliary Generator	**Project Cost (Future $):**	$ 114,736
Facility Type:	Supply	**Project Timing:**	2022 to 2022
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 105,000
Total Project Cost	100%	$ 105,000

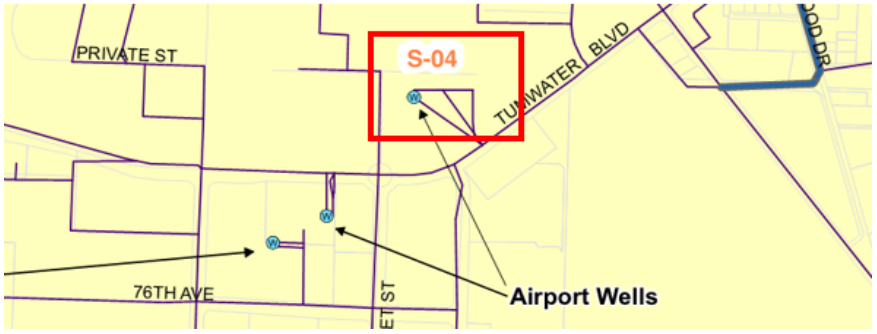
Triggers:

Project required when MDD totals 8,600 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Generator	2022	$ 105,000	$ 114,736
Total Project Cost		$ 105,000	$ 114,736

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-5	**Project Cost (Current $):**	$ 5,733,200
Project Name:	SW Wellfield	**Project Cost (Future $):**	$ 8,175,076
Facility Type:	Supply	**Project Timing:**	2027 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Obtain water rights (not included in this estimate) and develop the SW Wellfield. The water right application requested four wells be developed with an MDD of 2,300 gpm. The 2004 test well indicated that the wellfield could provide the requested instantaneous supply.

Install 800 LF of 20-inch pipe.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 20-inch	800	LF	$ 360	$ 288,000	$ 43,200	$ 72,000	$ 403,200
SW Wellfield	2,300	gpm	$ 1,500	$ 3,450,000	$ 517,500	$ 862,500	$ 4,830,000
Plan	1	LS	$ 500,000	$ 500,000	$ -	$ -	$ 500,000

Total Project Cost (Current $)	$ 5,733,200

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-5	**Project Cost (Current $):**	$ 5,733,200
Project Name:	SW Wellfield	**Project Cost (Future $):**	$ 8,175,076
Facility Type:	Supply	**Project Timing:**	2027 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 5,733,200
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 5,733,200

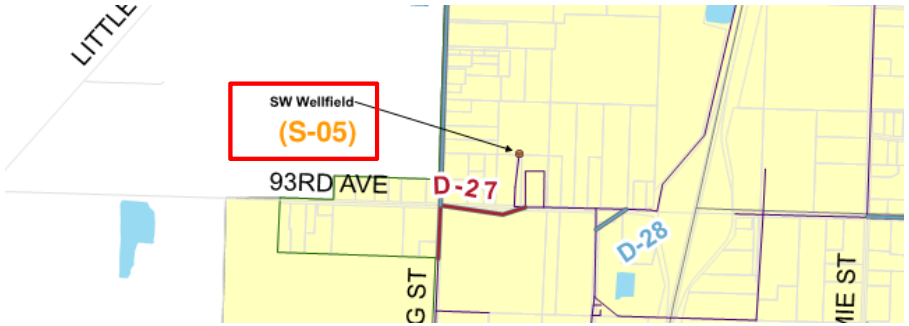
Triggers:

Project required when MDD totals 8,700 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 20-inch	Long-term	$ 403,200	$ 628,172
SW Wellfield	Long-term	$ 2,415,000	$ 3,762,491
SW Wellfield	2028	$ 2,415,000	$ 3,151,027
Plan	2027	$ 500,000	$ 633,385
Total Project Cost		$ 5,733,200	$ 8,175,076

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-6	**Project Cost (Current $):**	$ 4,361,700
Project Name:	NE Wellfield	**Project Cost (Future $):**	$ 6,795,386
Facility Type:	Supply	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Obtain water rights (not included in this estimate) and develop the NE Wellfield. The water right application requested four wells be developed with an MDD of 2,000 gpm.

Install 350 LF of 16-inch pipe.

To be done in conjunction with projects D-10 and D-20.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 20-inch	350	LF	$ 330	$ 115,500	$ 17,325	$ 28,875	$ 161,700
NE Wellfield	2,000	gpm	$ 1,500	$ 3,000,000	$ 450,000	$ 750,000	$ 4,200,000

Total Project Cost (Current $)	$ 4,361,700

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-6	**Project Cost (Current $):**	$ 4,361,700
Project Name:	NE Wellfield	**Project Cost (Future $):**	$ 6,795,386
Facility Type:	Supply	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 4,361,700
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 4,361,700

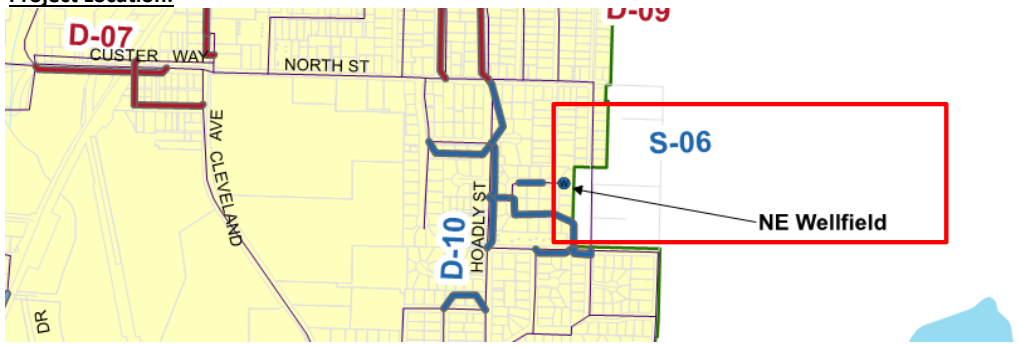
Triggers:

Project required when MDD reaches 10,900 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 20-inch	Long-term	$ 161,700	$ 251,923
NE Wellfield	Long-term	$ 4,200,000	$ 6,543,463
Total Project Cost		$ 4,361,700	$ 6,795,386

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-7	**Project Cost (Current $):**	$ 300,000
Project Name:	Brewery Wellfield Decommission of Existing Infrastructure	**Project Cost (Future $):**	$ 313,944
Facility Type:	Supply	**Project Timing:**	2020 to 2021
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

City of Tumwater's share of decommissioning the existing infrastructure at the Brewery Wellfield. This includes decommissioning the existing tank and wells. The Cities of Lacey and Olympia are partnered with the City of Tumwater to decommission and develop the Brewery Wellfield.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 0%	E/L/A 0%	Total Cost (Current $)
Wellfield & Reservoir Decommission	1	LF	$ 300,000	$ 300,000	$ -	$ -	$ 300,000

Total Project Cost (Current $)	$ 300,000

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	S-7	**Project Cost (Current $):**	$ 300,000	**Go to CIP Summary**
Project Name:	Brewery Wellfield Decommission of Existing Infrastructure	**Project Cost (Future $):**	$ 313,944	
Facility Type:	Supply	**Project Timing:**	2020 to 2021	
		Inflation Rate:	3%	

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 300,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 300,000

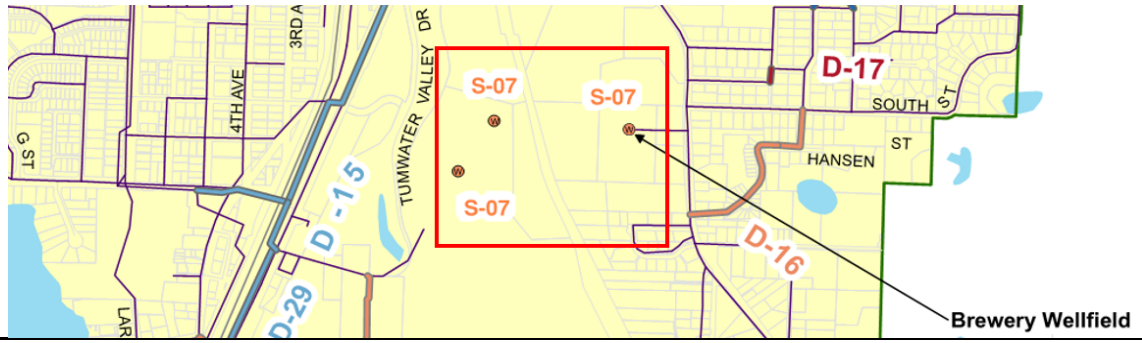
Triggers:

Project required when MDD reach 6,500 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Wellfield & Reservoir Decommission	2020	$ 140,000	$ 144,200
	2021	$ 160,000	$ 169,744
		$ -	$ -
		$ -	$ -
		$ -	$ -
Total Project Cost		$ 300,000	$ 313,944

Project Location:



Notes:

STORAGE PROJECTS

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	ST-1	**Project Cost (Current $):**	$ 8,050,000
Project Name:	SE Reservoir	**Project Cost (Future $):**	$ 8,588,542
Facility Type:	Storage	**Project Timing:**	2020 to 2022
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

To address the 350 Zone storage deficit, the City plans to build a new storage tank in the southeast corner of the 350 Zone. The location of the storage tank in the extreme southeast corner of the zone will result in several feet of headloss as the tank supplies the system. Further analysis will need to be done to precisely size the tank. For planning purposes, it is assumed that a tank with a total capacity of approximately 3 MG will be necessary to include the operational storage needed to account for headloss.

Project requires D-26 and D-30 to be constructed at the same time or before the tank.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Ground Storage Tank	3,000,000	Gallon					$ 8,050,000

Total Project Cost (Current $)	$ 8,050,000

Notes on Cost Estimation:

City provided cost estimate.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	ST-1	**Project Cost (Current $):**	$ 8,050,000
Project Name:	SE Reservoir	**Project Cost (Future $):**	$ 8,588,542
Facility Type:	Storage	**Project Timing:**	2020 to 2022
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 8,050,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 8,050,000

Triggers:

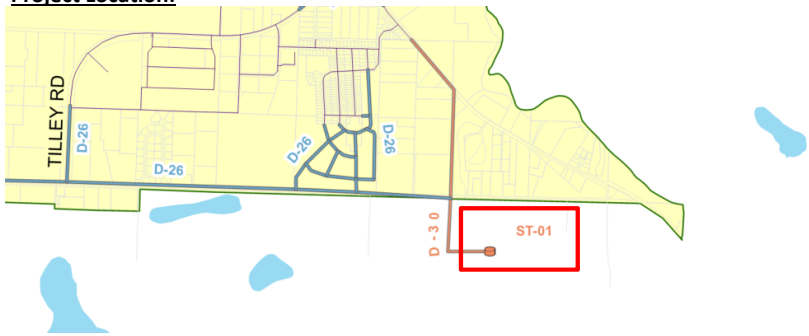
Tank needed when MDD greater than 5,700 gpm.

CAP

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Ground Storage Tank	2020	$ 600,000	$ 618,000
	2021	$ 5,350,000	$ 5,675,815
	2022	$ 2,100,000	$ 2,294,727
Total Project Cost		$ 8,050,000	$ 8,588,542

Project Location:



Notes:

DISTRIBUTION PROJECTS

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-1	**Project Cost (Current $):**	$ 207,900	**Go to CIP Summary**
Project Name:	North of 29th Ave SW Pipe Upsize	**Project Cost (Future $):**	$ 323,901	
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term	
		Inflation Rate:	3%	

Project Description:

Upsize 540 LF of 6-inch pipe to 8-inch, north of 29th Ave SW and west of railroad. Project to provide fire flow when property is developed for industrial use. This project is developer driven.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe upsize: 8-inch	540	LF	$ 275	$ 148,500	$ 22,275	$ 37,125	$ 207,900

Total Project Cost (Current $)	$ 207,900

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-1	**Project Cost (Current $):**	$ 207,900
Project Name:	North of 29th Ave SW Pipe Upsize	**Project Cost (Future $):**	$ 323,901
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 207,900
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 207,900

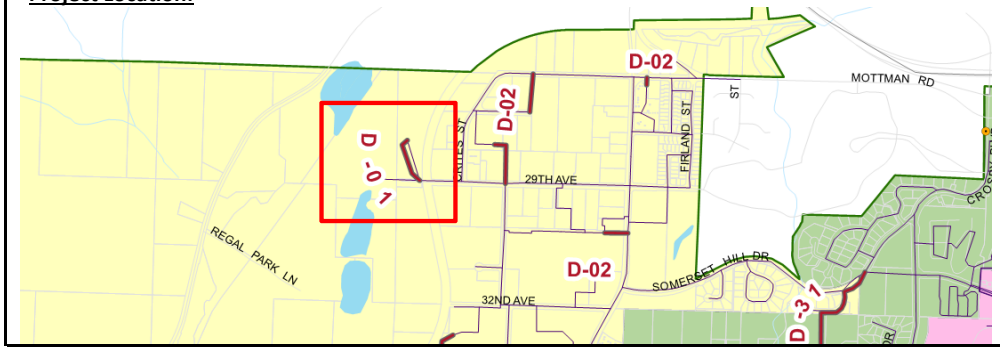
Triggers:

Fire flow. As funds available.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe upsize: 8-inch	Long-term	$ 207,900	$ 323,901
Total Project Cost		$ 207,900	$ 323,901

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-2	**Project Cost (Current $):**	$ 717,500
Project Name:	Looping Project at 26th Ave SW (Various Locations)	**Project Cost (Future $):**	$ 1,117,842
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 1,100 LF of 8-inch and 700 LF of 12-inch pipe at the following locations:
-East end of 26th Ave SW north to Mottman Rd SW (12-inch)
-29th Ave SW from Ferguson St SW north to connect to existing pipe (8-inch)
-Parking lot east of RW Johnson Blvd SW north to Mottman Rd SW (8-inch)
-Across RW Johnson Blvd SW from South Puget Sound CC west to existing pipe (12-inch)
-West end of Crites St SW north to existing pipe (8-inch)
This is a looping project to provide industrial/commercial and public fire flows in the area.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New pipe: 8-inch	1,100	LF	$ 275	$ 302,500	$ 45,375	$ 75,625	$ 423,500
New Pipe: 12-inch	700	LF	$ 300	$ 210,000	$ 31,500	$ 52,500	$ 294,000

Total Project Cost (Current $)	$ 717,500

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-2	**Project Cost (Current $):**	$ 717,500
Project Name:	Looping Project at 26th Ave SW (Various Locations)	**Project Cost (Future $):**	$ 1,117,842
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 717,500
Total Project Cost	100%	$ 717,500

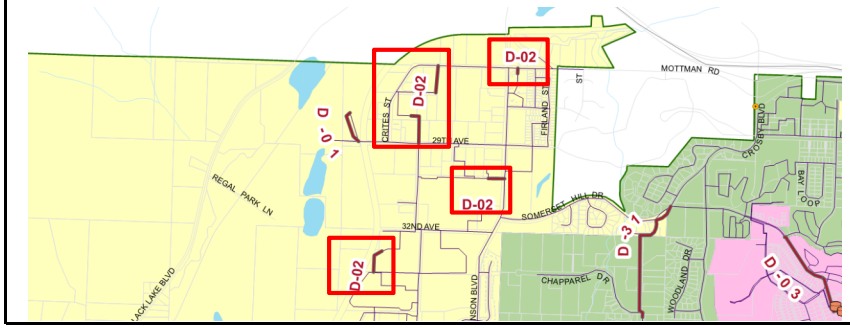
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New pipe: 8-inch	Long-term	$ 423,500	$ 659,799
New Pipe: 12-inch	Long-term	$ 294,000	$ 458,042
Total Project Cost		$ 717,500	$ 1,117,842

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-3	**Project Cost (Current $):**	$ 672,000
Project Name:	Tumwater Hill	**Project Cost (Future $):**	$ 1,046,954
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 1,600 LF of 12-inch pipe at Tumwater Hill on Barnes Blvd SW from Vista Loop SW south to 454/549 Zone Reservoirs. This is a new pipe project to provide fire flow on Barnes Blvd SW and Vista Loop SW parallel to the existing pipe.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New pipe: 12-inch	1,600	LF	$ 300	$ 480,000	$ 72,000	$ 120,000	$ 672,000

Total Project Cost (Current $)	$ 672,000

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-3	**Project Cost (Current $):**	$ 672,000
Project Name:	Tumwater Hill	**Project Cost (Future $):**	$ 1,046,954
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 672,000
Total Project Cost	100%	$ 672,000

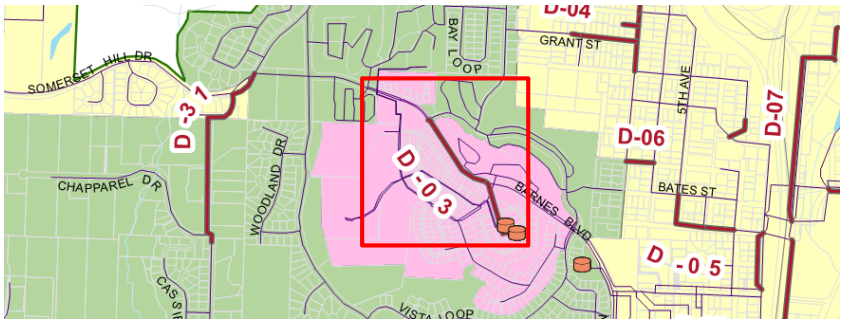
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New pipe: 12-inch	Long-term	$ 672,000	$ 1,046,954
Total Project Cost		$ 672,000	$ 1,046,954

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-4	**Project Cost (Current $):**	$ 693,000
Project Name:	Grant St Pipe Upsize (Various Locations)	**Project Cost (Future $):**	$ 1,079,671
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 1,800 LF of 4-inch pipe to 8-inch pipe at the following locations:
-Grant St SW from N 9th Ave SW to N 7th Ave SW
-N 7th Ave SW from Ferry St SW to Irving St SW
-Alley between Grant St SW and Hayes St SW west of N 7th Ave SW
Upsize project to provide SFR fire flow to the area.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe upsize: 8-inch	1,800	LF	$ 275	$ 495,000	$ 74,250	$ 123,750	$ 693,000

Total Project Cost (Current $)	$ 693,000

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-4	**Project Cost (Current $):**	$ 693,000
Project Name:	Grant St Pipe Upsize (Various Locations)	**Project Cost (Future $):**	$ 1,079,671
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	50%	$ 346,500
System Improvements:	50%	$ 346,500
Total Project Cost	100%	$ 693,000

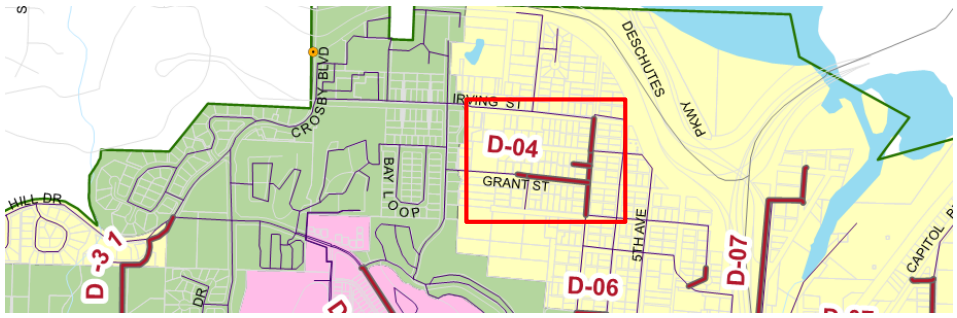
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe upsize: 8-inch	Long-term	$ 693,000	$ 1,079,671
Total Project Cost		$ 693,000	$ 1,079,671

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-5	**Project Cost (Current $):**	$ 756,000
Project Name:	N 3rd Ave SW New Pipe (Various Locations)	**Project Cost (Future $):**	$ 1,177,823
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 1,800 LF of 12-inch pipe at the following locations:
-N 5th Ave SW from Bates St SW to Division St SW; Division St SW from N 5th Ave SW to N 3rd Ave SW
-E St SW from S 4th Ave SW to S 2nd Ave SW
This is a looping project to provide SFR fire flows in the area.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New pipe: 12-inch	1,800	LF	$ 300	$ 540,000	$ 81,000	$ 135,000	$ 756,000

Total Project Cost (Current $)	$ 756,000

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-5	**Project Cost (Current $):**	$ 756,000
Project Name:	N 3rd Ave SW New Pipe (Various Locations)	**Project Cost (Future $):**	$ 1,177,823
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 756,000
Total Project Cost	100%	$ 756,000

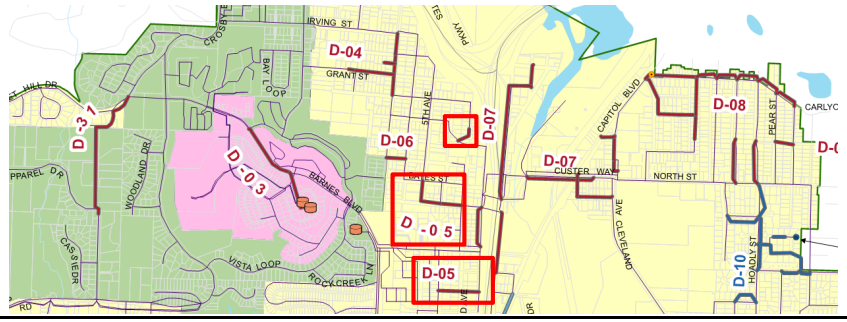
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New pipe: 12-inch	Long-term	$ 756,000	$ 1,177,823
Total Project Cost		$ 756,000	$ 1,177,823

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-6	**Project Cost (Current $):**	$ 443,100
Project Name:	Clark St SW Upsize Pipe (Various Locations)	**Project Cost (Future $):**	$ 690,335
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 950 LF of 6-inch pipe to 8-inch at the following locations:
-Clark St SW between N 6th Ave SW and N 7th Ave SW
-S 2nd Ave SW from Division St SW to C St SW. This segment of pipe overlaps the proposed seismic backbone.
Upsize project to lower velocity and provide fire flow in pipe.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L.A 25%	Total Cost (Current $)
Upsize pipe: 8-inch	300	LF	$ 275	$ 82,500	$ 12,375	$ 20,625	$ 115,500
Upsize pipe: 8-inch Seismic	650	LF	$ 360	$ 234,000	$ 35,100	$ 58,500	$ 327,600
Total Project Cost (Current $)							$ 443,100

Notes on Cost Estimation:

Seismic Pipe includes 50% Engineer/Legal/Admin Contingency

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-6	**Project Cost (Current $):**	$ 443,100
Project Name:	Clark St SW Upsize Pipe (Various Locations)	**Project Cost (Future $):**	$ 690,335
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 443,100
Total Project Cost	100%	$ 443,100

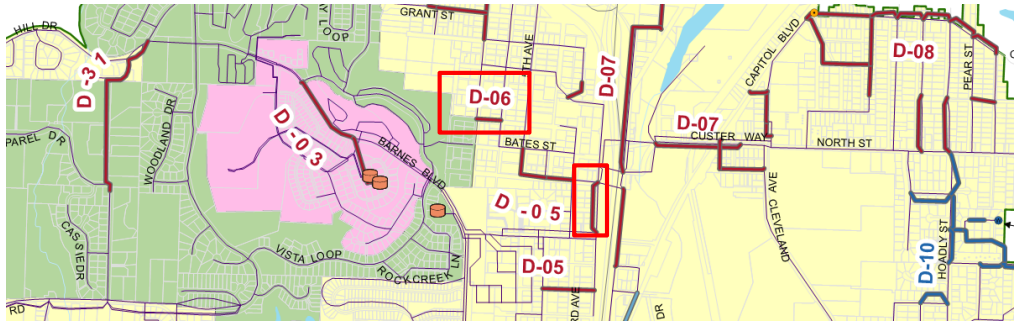
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.
Part of proposed Seismic Backbone.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Upsize pipe: 8-inch	Long-term	$ 115,500	$ 179,945
Upsize pipe: 8-inch Seismic	Long-term	$ 327,600	$ 510,390
Total Project Cost		$ 443,100	$ 690,335

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-7	**Project Cost (Current $):**	$ 2,763,600
Project Name:	Deschutes Pkwy Upsize (Various Locations)	**Project Cost (Future $):**	$ 3,977,505
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	2026 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 6,100 LF of 4-inch and 6-inch pipe to 12-inch pipe at the following locations:
-Deschutes Pkwy SW from Boston St SE to Grant St SW; Grant St SW from Deschutes Pkwy SW to Deschutes St SE; Deschutes St SE to end of pipe.
-Deschutes Way SW from D ST SW north to I-5 pipe crossing.
-Clark Pl SE from Custer Way SE to Bates St SE; Bates St SE from Clark Pl SE to Cleveland Ave SE. This portion overlaps the proposed seismic backbone pipe.
-Cleveland Ave SE from Custer Way SE to E Emerson St; E Emerson St from Cleveland Ave SE to Capitol Blvd.
Upsize project to provide industrial/commercial fire flows in the area and to provide fire flow to Tumwater Historical Park.
Historically, the City has pulled water from the Deschutes River to fight fires in the area. Note that as an alternative emergency fire flow source, the City can pull water from the Deschutes River.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe upsize: 12-inch	4,500	LF	$ 300	$ 1,350,000	$ 202,500	$ 337,500	$ 1,890,000
Pipe Upsize: 12-inch Seismic	1,600	LF	$ 390	$ 624,000	$ 93,600	$ 156,000	$ 873,600
Total Project Cost (Current $)							$ 2,763,600

Notes on Cost Estimation:

Seismic Pipe includes 50% Engineer/Legal/Admin Contingency

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-7	**Project Cost (Current $):**	$ 2,763,600
Project Name:	Deschutes Pkwy Upsize (Various Locations)	**Project Cost (Future $):**	$ 3,977,505
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	2026 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	50%	$ 1,381,800
System Improvements:	50%	$ 1,381,800
Total Project Cost	100%	$ 2,763,600

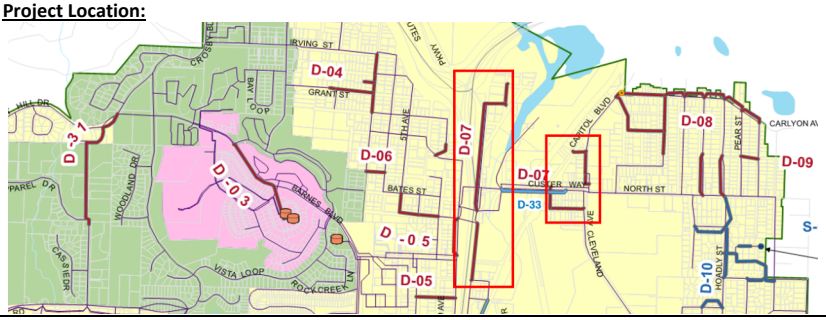
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.
Part of proposed Seismic Backbone.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Custer Way	2026	$ 1,000,000	$ 1,229,874
Deschutes Pkwy	Long-term	$ 1,763,600	$ 2,747,631
Total Project Cost		$ 2,763,600	$ 3,977,505

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-8	**Project Cost (Current $):**	$ 2,387,000
Project Name:	Sunset Way SE Pipe Upsize (Various Locations)	**Project Cost (Future $):**	$ 3,718,868
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 6,200 LF of 4-inch and 6-inch pipe to 8-inch pipe at the following locations:
-Sunset Way SE from Capitol Blvd to Burnaby Ave SE; Fairfield Rd SE from Sunset Way SE to Vista Ave SE; Vista Ave SE from Fairfield Rd SE to Maringo Rd SE; Maringo Rd SE from Carlyon Ave SE to 3201 Maringo Rd SE; Carlyon Ave SE from Capitol Blvd to Quince St SE.
-Moore St SE from North St SE north to 3498 Moore St SE.
-Hoadly St SE from North St SE north to 3307 Hoadly St SE.
Upsize project to provide SFR fire flow to the area.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe Upsize: 8-inch	6,200	LF	$ 275	$ 1,705,000	$ 255,750	$ 426,250	$ 2,387,000

Total Project Cost (Current $)	$ 2,387,000

Notes on Cost Estimation:

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CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-8	**Project Cost (Current $):**	$ 2,387,000
Project Name:	Sunset Way SE Pipe Upsize (Various Locations)	**Project Cost (Future $):**	$ 3,718,868
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	50%	$ 1,193,500
System Improvements:	50%	$ 1,193,500
Total Project Cost	100%	$ 2,387,000

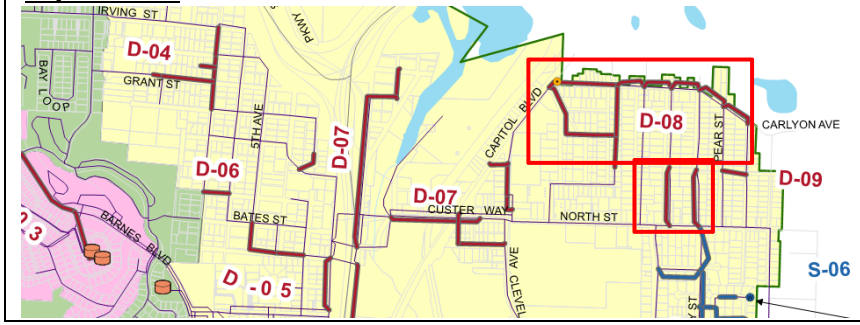
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe Upsize: 8-inch	Long-term	$ 2,387,000	$ 3,718,868
Total Project Cost		$ 2,387,000	$ 3,718,868

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-9	**Project Cost (Current $):**	$ 107,800	**Go to CIP Summary**
Project Name:	Mountain View Pl SE New Pipe	**Project Cost (Future $):**	$ 167,949	
Facility Type:	New Pipe	**Project Timing:**	Long-term	
		Inflation Rate:	3%	

Project Description:

Install 280 LF of 8-inch pipe on Mountain View Pl SE from Pear St SE to Quince St SE. This is a looping project to provide SFR fire flows in the area.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New pipe: 8-inch	280	LF	$ 275	$ 77,000	$ 11,550	$ 19,250	$ 107,800

Total Project Cost (Current $)	$ 107,800

Notes on Cost Estimation:

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CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-9	**Project Cost (Current $):**	$ 107,800
Project Name:	Mountain View Pl SE New Pipe	**Project Cost (Future $):**	$ 167,949
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 107,800
Total Project Cost	100%	$ 107,800

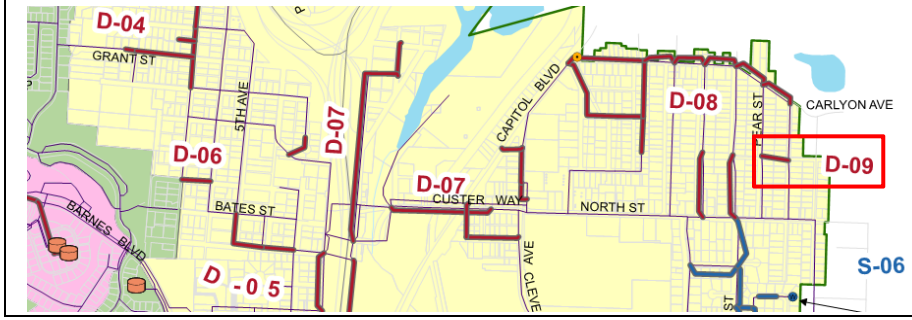
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New pipe: 8-inch	Long-term	$ 107,800	$ 167,949
Total Project Cost		$ 107,800	$ 167,949

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-10	**Project Cost (Current $):**	$ 1,635,900
Project Name:	Hoadly St SE Pipe Upsize (Various Locations)	**Project Cost (Future $):**	$ 2,548,679
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 3,970 LF of 4-inch and 6-inch pipe to 2,100 LF 8-inch pipe, 870 of 12-inch, and 1,000 of 16-inch pipe at the following locations:
-Hoadly St SE from North St SE to McDonald St SE (8-inch); Hoadly St SE from McDonald St SE to Middle St SE (12-inch); McDonald St SE from Hoadly St SE to Lorne St SE (8-inch); Middle St SE from Southglen Ave SE to Hawthorne St SE (8-inch); Hoadley Loop SE from Hoadly St SE to Middle St SE (16-inch).
-Barclift Ln SE from Armstrong Ave SE to Hoadly St SE (8-inch).
Upsize project to provide transmission capacity when NE wellfield is online. May want to expand extent of project to replace aging AC and PVC pipe in the area.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe Upsize: 8-inch	2,100	LF	$ 275	$ 577,500	$ 86,625	$ 144,375	$ 808,500
Pipe Upsize: 12-inch	870	LF	$ 300	$ 261,000	$ 39,150	$ 65,250	$ 365,400
Pipe Upsize: 16-inch	1,000	LF	$ 330	$ 330,000	$ 49,500	$ 82,500	$ 462,000

Total Project Cost (Current $)	$ 1,635,900

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-10	**Project Cost (Current $):**	$ 1,635,900
Project Name:	Hoadly St SE Pipe Upsize (Various Locations)	**Project Cost (Future $):**	$ 2,548,679
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 1,635,900
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 1,635,900

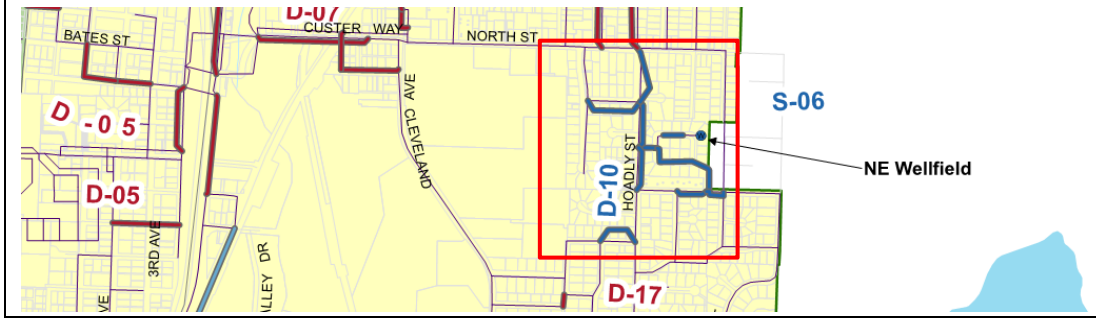
Triggers:

To be completed when MDD reaches 10,900 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe Upsize: 8-inch	Long-term	$ 808,500	$ 1,259,617
Pipe Upsize: 12-inch	Long-term	$ 365,400	$ 569,281
Pipe Upsize: 16-inch	Long-term	$ 462,000	$ 719,781
Total Project Cost		$ 1,635,900	$ 2,548,679

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-11	**Project Cost (Current $):**	$ 3,969,000
Project Name:	Black Lake New Pipe (Various Locations)	**Project Cost (Future $):**	$ 6,183,573
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 18,900 LF of new 12-inch pipe at the following locations:
-West from 32nd Ave SW to Regal Park Ln SW and continuing to Black Lake Blvd SW.
-Black Lake Blvd SW from City of Tumwater boundary south to Black Lake Belmore Rd SW.
-Black Lake Belmore Rd SW from Black Lake Blvd SW to connect to existing pipe at Dooley Ln SW.
-Sapp Rd SW from Black Lake Belmore Rd SW east to Union Pacific Railroad.

This project is developer driven as water system expands.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L./A 25%	Total Cost (Current $)
Install 12-inch pipe	18,900	LF	$ 300	$ 5,670,000	$ 850,500	$ 1,417,500	$ 7,938,000

Total Project Cost (Current $)	$ 7,938,000

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-11	**Project Cost (Current $):**	$ 3,969,000
Project Name:	Black Lake New Pipe (Various Locations)	**Project Cost (Future $):**	$ 6,183,573
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 7,938,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 7,938,000

Triggers:

Developer driven.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Install 12-inch pipe	Long-term	$ 3,969,000	$ 6,183,573
Total Project Cost		$ 3,969,000	$ 6,183,573

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-12	**Project Cost (Current $):**	$ 770,000
Project Name:	48th Ave SW Pipe Upsize	**Project Cost (Future $):**	$ 1,199,635
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 2,000 LF of 6-inch pipe to 8-inch at 48th Ave SW from Rural Rd SW west to end of street.

Upsize project to provide SFR fire flow to customers at dead end pipe.

A detailed analysis is recommended to evaluate alternatives, including looping the pipe to Lambskin St SW instead of upsizing the pipe on 48th Ave SW, when the project goes to design.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe upsize: 8-inch	2,000	LF	$ 275	$ 550,000	$ 82,500	$ 137,500	$ 770,000

Total Project Cost (Current $)	$ 770,000

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-12	**Project Cost (Current $):**	$ 770,000
Project Name:	48th Ave SW Pipe Upsize	**Project Cost (Future $):**	$ 1,199,635
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 770,000
Total Project Cost	100%	$ 770,000

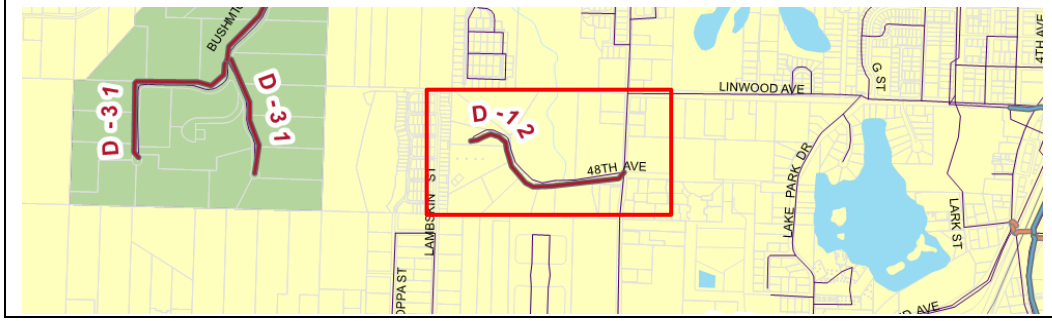
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe upsize: 8-inch	Long-term	$ 770,000	$ 1,199,635
Total Project Cost		$ 770,000	$ 1,199,635

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-13	**Project Cost (Current $):**	$ 714,000
Project Name:	Trosper Rd Pipe Upsize	**Project Cost (Future $):**	$ 757,483
Facility Type:	Pipe Upsize	**Project Timing:**	2021 to 2021
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 1,700 LF of 8-inch pipe to 12-inch at Trosper Rd SW from Commander Dr SW to Lake Park Rd SW

Upsize project proposed by City.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe upsize: 12-inch	1,700	LF	$ 300	$ 510,000	$ 76,500	$ 127,500	$ 714,000

Total Project Cost (Current $)	$ 714,000

Notes on Cost Estimation:

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CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-13	**Project Cost (Current $):**	$ 714,000
Project Name:	Trosper Rd Pipe Upsize	**Project Cost (Future $):**	$ 757,483
Facility Type:	Pipe Upsize	**Project Timing:**	2021 to 2021
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 714,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 714,000

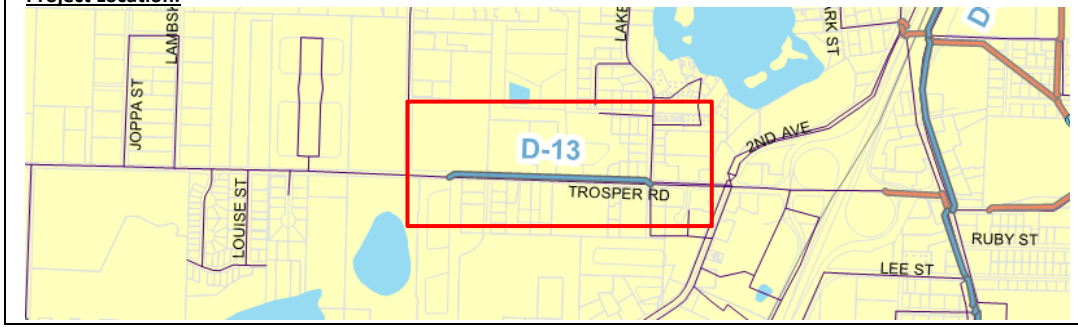
Triggers:

As funds available.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe upsize: 12-inch	2021	$ 714,000	$ 757,483
Total Project Cost		$ 714,000	$ 757,483

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-14	**Project Cost (Current $):**	$ 2,444,680
Project Name:	Palermo Wellfield Pipe Upsize (Various Locations)	**Project Cost (Future $):**	$ 3,049,997
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	2026 to 2027
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 5,520 of 6-inch, 8-inch, 10-inch, and 12-inch pipe to 8-inch, 12-inch, and 16-inch PVC pipe at the following locations:
Pipe from Palermo Wellfield northwest to Q St (16-inch) and northwest to Capitol Blvd (12-inch); Pipe from Palermo Wellfield southwest to Linda St SE (16-inch); Capitol Blvd from M St SE to Linda St SE (16-inch); Trosper Rd SW from Capitol Blvd west to I-5 (12-inch); Capitol Blvd from La Quinta Inn & Suites south to pipe cross of I-5 (16-inch); pipe crossing of I-5 and west to Little St SW (16-inch); Palermo Ave SE from O St NE north to M St SE (12-inch) and north to pipe between Capitol Blvd and Tumwater Valley Dr SE (8-inch)

Upsize project to provide transmission capacity when Golf Course well is online. To be completed in conjunction with S-2.
Part of this project overlaps with proposed seismic backbone pipe.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe upsize: 8-inch	680	LF	$ 275	$ 187,000	$ 28,050	$ 46,750	$ 261,800
Pipe upsize: 12-inch	2,400	LF	$ 300	$ 720,000	$ 108,000	$ 180,000	$ 1,008,000
Pipe upsize: 16-inch	2,100	LF	$ 330	$ 693,000	$ 103,950	$ 173,250	$ 970,200
Pipe upsize: 16-inch Seismic	340	LF	$ 430	$ 146,200	$ 21,930	$ 36,550	$ 204,680

Total Project Cost (Current $)	$ 2,444,680

Notes on Cost Estimation:

See Chapter for details of what locations require which size.
Seismic Pipe includes 50% Engineer/Legal/Admin Contingency

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-14	**Project Cost (Current $):**	$ 2,444,680
Project Name:	Palermo Wellfield Pipe Upsize (Various Locations)	**Project Cost (Future $):**	$ 3,049,997
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	2026 to 2027
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 2,444,680
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 2,444,680

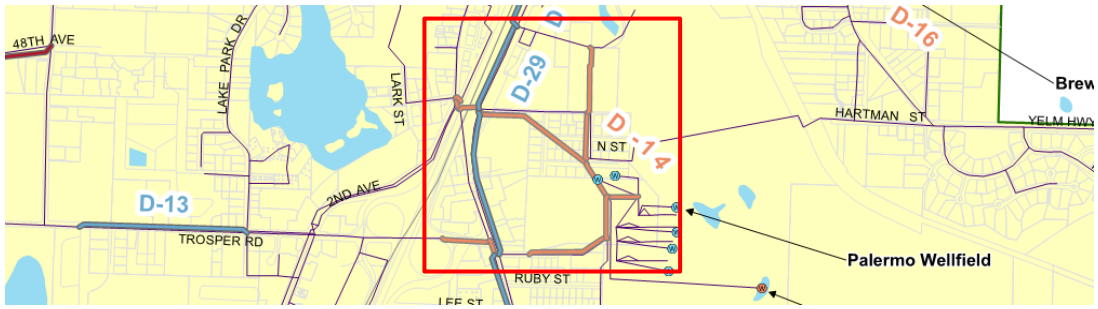
Triggers:

Project required when MDD reaches 4,500 gpm.
Part of proposed Seismic Backbone.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe upsize: 8-inch	2026	$ 261,800	$ 321,981
Pipe upsize: 12-inch	2026	$ 1,008,000	$ 1,239,713
Pipe upsize: 16-inch	2027	$ 970,200	$ 1,229,020
Pipe upsize: 16-inch Seismic	2027	$ 204,680	$ 259,283
Total Project Cost		$ 2,444,680	$ 3,049,997

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-15	**Project Cost (Current $):**	$ 350,000
Project Name:	Linwood Ave SW	**Project Cost (Future $):**	$ 350,000
Facility Type:	Pipe Upsize	**Project Timing:**	2019 to 2026
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 2,000 LF of 16-inch pipe and 740 LF of 24-inch pipe at Linwood Ave SW from S 5th Ave SW to Capitol Blvd (24-inch); Capitol Blvd from Linwood Ave SW to E St SW (16-inch).

This is a new pipe project proposed by City that will be constructed in the summer of 2019.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe	2,000	LF					$ 350,000

Total Project Cost (Current $)	$ 350,000

Notes on Cost Estimation:

See Chapter for details of what locations require which size. Cost estimate provided by City.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-15	**Project Cost (Current $):**	$ 350,000
Project Name:	Linwood Ave SW	**Project Cost (Future $):**	$ 350,000
Facility Type:	Pipe Upsize	**Project Timing:**	2019 to 2026
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 350,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 350,000

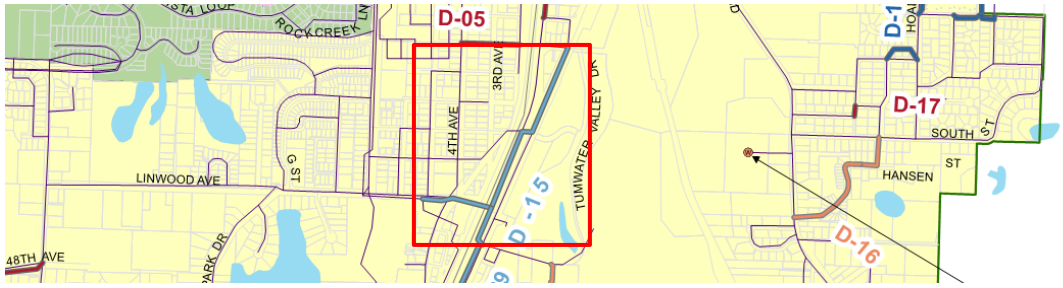
Triggers:

As funds available.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe	2019	$ 350,000	$ 350,000
New PIpe	2026	$ -	
Total Project Cost		$ 350,000	$ 350,000

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-16	**Project Cost (Current $):**	$ 616,000	**Go to CIP Summary**
Project Name:	Hansen St SE	**Project Cost (Future $):**	$ 757,602	
Facility Type:	Pipe Upsize	**Project Timing:**	2026 to 2026	
		Inflation Rate:	3%	

Project Description:

Upsize 1,600 LF of 4-inch pipe to 8-inch pipe at Hansen St SE from South St SE to Roberts Rd SE.

Looping project to provide SFR fire flows and to provide transmission capacity when Brewery wellfield is online.

To be completed in conjunction with S-3.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe Upsize: 8-inch	1,600	LF	$ 275	$ 440,000	$ 66,000	$ 110,000	$ 616,000

Total Project Cost (Current $)	$ 616,000

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-16	**Project Cost (Current $):**	$ 616,000
Project Name:	Hansen St SE	**Project Cost (Future $):**	$ 757,602
Facility Type:	Pipe Upsize	**Project Timing:**	2026 to 2026
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 616,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 616,000

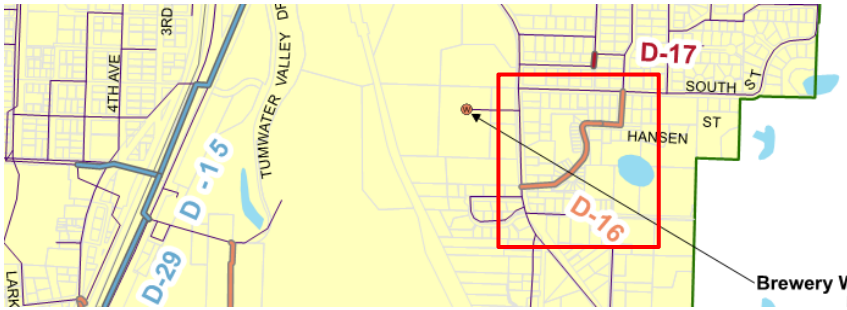
Triggers:

Needed when MDD reach 6,500 gpm. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe Upsize: 8-inch	2026	$ 616,000	$ 757,602
Total Project Cost		$ 616,000	$ 757,602

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-17	**Project Cost (Current $):**	$ 42,350	**Go to CIP Summary**
Project Name:	Lloyd St SE	**Project Cost (Future $):**	$ 65,980	
Facility Type:	New Pipe	**Project Timing:**	Long-term	
		Inflation Rate:	3%	

Project Description:

Install 110 LF of 8-inch pipe on Lloyd St SE from Kelsey St SE to Primrose Ln SE. Looping project to provide SFR fire flow in the area.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 8-inch	110	LF	$ 275	$ 30,250	$ 4,538	$ 7,563	$ 42,350

Total Project Cost (Current $)	$ 42,350

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-17	**Project Cost (Current $):**	$ 42,350
Project Name:	Lloyd St SE	**Project Cost (Future $):**	$ 65,980
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 42,350
Total Project Cost	100%	$ 42,350

Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 8-inch	Long-term	$ 42,350	$ 65,980
Total Project Cost		$ 42,350	$ 65,980

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-18	**Project Cost (Current $):**	$ 2,226,000
Project Name:	Kirsop Rd SW New Pipe	**Project Cost (Future $):**	$ 3,468,035
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 5,300 LF of 12-inch pipe on Kirsop Rd SW from 66th Ave SW north to Miner Dr SW. This project is developer driven as water system expands.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 12-inch	5,300	LF	$ 300	$ 1,590,000	$ 238,500	$ 397,500	$ 2,226,000

Total Project Cost (Current $)	$ 2,226,000

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-18	**Project Cost (Current $):**	$ 2,226,000
Project Name:	Kirsop Rd SW New Pipe	**Project Cost (Future $):**	$ 3,468,035
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 2,226,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 2,226,000

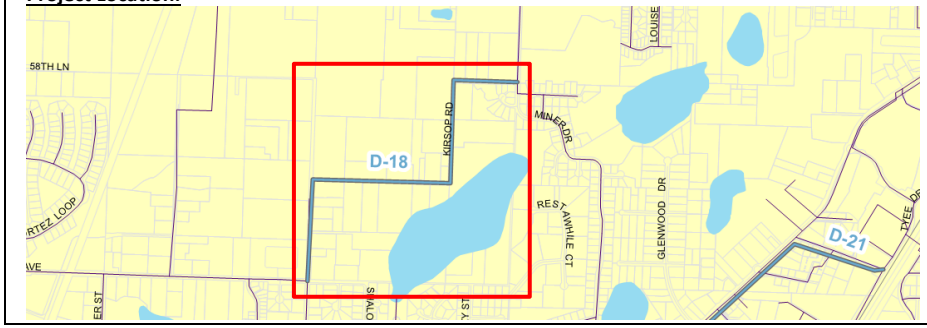
Triggers:

Developer driven.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 12-inch	Long-term	$ 2,226,000	$ 3,468,035
Total Project Cost		$ 2,226,000	$ 3,468,035

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-19	**Project Cost (Current $):**	$ 714,000
Project Name:	Pinehurst St SW Pipe Upsize	**Project Cost (Future $):**	$ 1,112,389
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 1,700 LF of 6-inch pipe to 12-inch pipe on Pinehurst St SW from Capitol Blvd west end of pipe.

Upsize project to provide MFR fire flow to customers at dead end pipe.

A detailed analysis is recommended to evaluate alternatives, including looping the pipe to Linderson Way instead of upsizing the pipe on Pinehurst St SW, when the project goes to design.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe Upsize: 12-inch	1,700	LF	$ 300	$ 510,000	$ 76,500	$ 127,500	$ 714,000

Total Project Cost (Current $)	$ 714,000

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-19	**Project Cost (Current $):**	$ 714,000
Project Name:	Pinehurst St SW Pipe Upsize	**Project Cost (Future $):**	$ 1,112,389
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 714,000
Total Project Cost	100%	$ 714,000

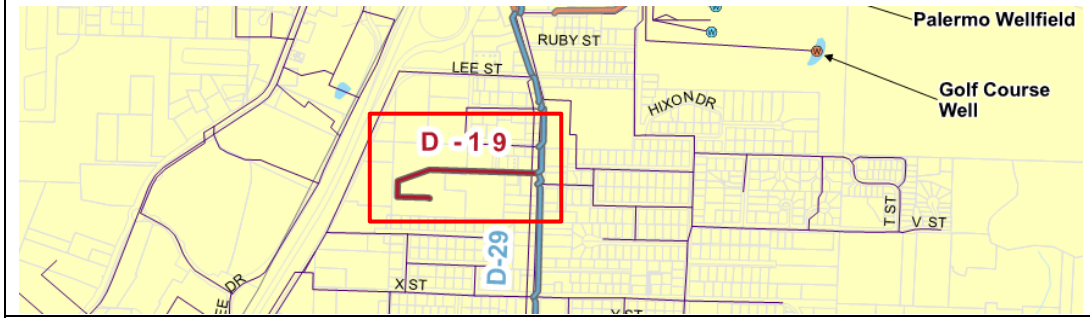
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe Upsize: 12-inch	Long-term	$ 714,000	$ 1,112,389
Total Project Cost		$ 714,000	$ 1,112,389

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-20	**Project Cost (Current $):**	$ 4,930,800
Project Name:	Henderson Blvd SE Pipe	**Project Cost (Future $):**	$ 7,682,026
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install new 12-in (2,500 ft) and 16-in pipe (8,400 ft) at the following locations:
-Install new 16-in pipe on Henderson Blvd SE from 58th Ave SE to 65th Ave SE (2,700 ft)
-Install new 16-in pipe on Tumwater Blvd SE from Henderson Blvd SE to Bonniewood Dr SE; Bonniewood Dr SE from Tumwater Blvd SE to 73rd Ave SE; 73rd Ave SE from Bonniewood Dr SE from 73rd Ave SE to Old Highway 99 SE. (5,700 ft)
-Insall new 12-in pipe on 73rd Ave SE from Henderson Blvd SE to Henderson Ct SE; Henderson Blvd SE from 73rd Ave SE to Old Highway 99 (2,500 ft)

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 16-inch	8,400	LF	$ 330	$ 2,772,000	$ 415,800	$ 693,000	$ 3,880,800
New Pipe: 12-inch	2,500	LF	$ 300	$ 750,000	$ 112,500	$ 187,500	$ 1,050,000

Total Project Cost (Current $)	$ 4,930,800

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-20	**Project Cost (Current $):**	$ 4,930,800
Project Name:	Henderson Blvd SE Pipe	**Project Cost (Future $):**	$ 7,682,026
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 4,930,800
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 4,930,800

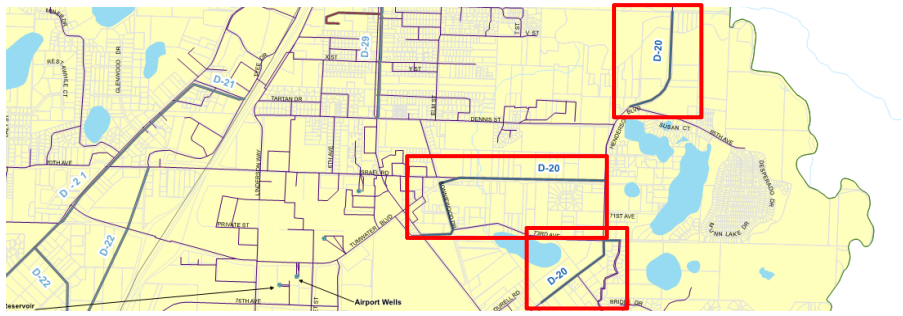
Triggers:

Developer driven. Necessary prior to NE Wellfield (S-6).

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 16-inch	Long-term	$ 3,880,800	$ 6,046,160
New Pipe: 12-inch	Long-term	$ 1,050,000	$ 1,635,866
Total Project Cost		$ 4,930,800	$ 7,682,026

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-21	**Project Cost (Current $):**	$ 4,628,400
Project Name:	Littlerock Rd SW & Bishop Rd New Pipe	**Project Cost (Future $):**	$ 7,210,896
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 9,200 LF of 16-in pipe on Bishop Rd from Tyee Dr SW to Littlerock Rd SW; and Littlerock Rd SW from Bishop Rd south to AG West Black Hills High School. Install 900 LF of 12-in pipe from Littlerock Rd SW north to AG West Black Hills High School

This project is developer driven as water system expands.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 12-inch	900	LF	$ 300	$ 270,000	$ 40,500	$ 67,500	$ 378,000
New Pipe: 16-inch	9,200	LF	$ 330	$ 3,036,000	$ 455,400	$ 759,000	$ 4,250,400

Total Project Cost (Current $)	$ 4,628,400

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-21	**Project Cost (Current $):**	$ 4,628,400
Project Name:	Littlerock Rd SW & Bishop Rd New Pipe	**Project Cost (Future $):**	$ 7,210,896
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 4,628,400
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 4,628,400

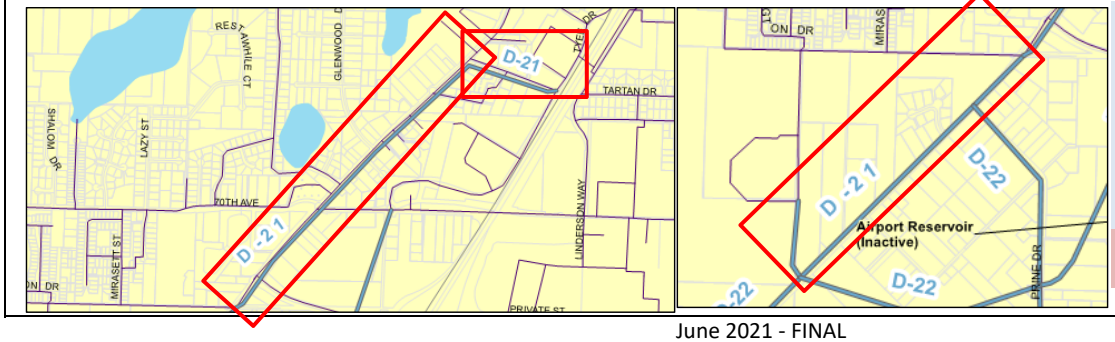
Triggers:

Developer driven.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 12-inch	Long-term	$ 378,000	$ 588,912
New Pipe: 16-inch	Long-term	$ 4,250,400	$ 6,621,985
Total Project Cost		$ 4,628,400	$ 7,210,896

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-22	**Project Cost (Current $):**	$ 10,141,600
Project Name:	Littlerock Rd SW & Prine Dr SW New Pipe	**Project Cost (Future $):**	$ 15,800,282
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 2,800 LF of 12-inch pipe, 8,400 LF of 16-inch pipe, 5,200 LF of 20-inch pipe, and 4,400 LF of 24-inch pipe in the following areas:
-Israel Rd SW south to Tumwater Blvd SW (24-inch) and from Tumwater Blvd SW south to Prine Dr SW (24-inch)
-Prine Dr SW southeast and across I-5 to Kimmie St SW; and north to Littlerock Rd SW (20-inch)
-Prine Dr SW west to Littlerock Rd SW (12-inch)
-Littlerock Rd SW from Prine Dr SW south to AG West Black Hills High School (12-inch)
-Littlerock Rd SW from AG West Black Hills High School south to 81st Ave SW and south along Bloomberg St SW to 93rd Ave SW (16-inch)

This project is developer driven as water system expands. The 20-in pipe on Littlerock Rd between Bishop Rd and 73rd Ave SW will be parallel to existing 12-in pipe.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 12-inch	2,800	LF	$ 300	$ 840,000	$ 126,000	$ 210,000	$ 1,176,000
New Pipe: 16-inch	8,400	LF	$ 330	$ 2,772,000	$ 415,800	$ 693,000	$ 3,880,800
New Pipe: 20-inch	5,200	LF	$ 360	$ 1,872,000	$ 280,800	$ 468,000	$ 2,620,800
New PIpe: 24-inch	4,400	LF	$ 400	$ 1,760,000	$ 264,000	$ 440,000	$ 2,464,000

Total Project Cost (Current $)	$ 10,141,600

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-22	**Project Cost (Current $):**	$ 10,141,600
Project Name:	Littlerock Rd SW & Prine Dr SW New Pipe	**Project Cost (Future $):**	$ 15,800,282
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 10,141,600
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 10,141,600

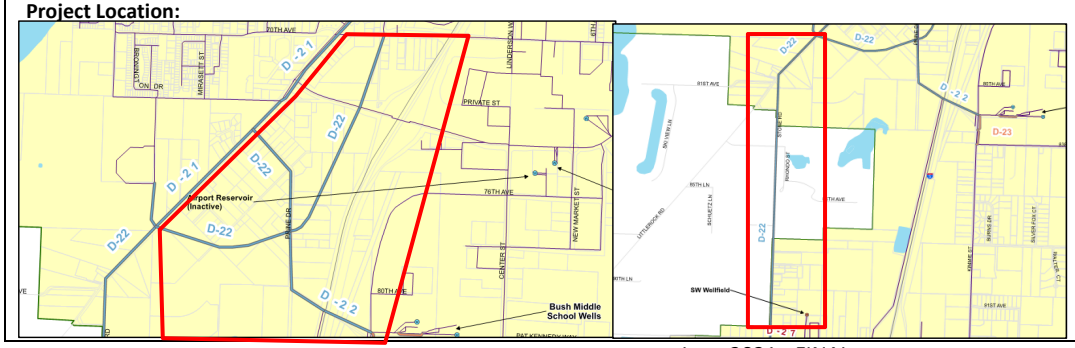
Triggers:

Developer driven.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 12-inch	Long-term	$ 1,176,000	$ 1,832,170
New Pipe: 16-inch	Long-term	$ 3,880,800	$ 6,046,160
New Pipe: 20-inch	Long-term	$ 2,620,800	$ 4,083,121
New PIpe: 24-inch	Long-term	$ 2,464,000	$ 3,838,832
Total Project Cost		$ 10,141,600	$ 15,800,282

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-23	**Project Cost (Current $):**	$ 764,400
Project Name:	Bush Middle School Wells and Kimmie St. Pipe Upsize	**Project Cost (Future $):**	$ 940,116
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	2026 to 2026
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 1,400 LF of 12-inch pipe to 16-inch pipe on Kimmie St SW from wells south to 83rd Ave SW and along 83rd Ave SW between Wells 12 and 14.

This project is to provide transmission capacity for Bush Middle School wells. This project overlaps with the proposed seismic backbone pipe.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe Upsize: 12-inch Seismic	1,400	LF	$ 390	$ 546,000	$ 81,900	$ 136,500	$ 764,400

Total Project Cost (Current $)	$ 764,400

Notes on Cost Estimation:

Seismic Pipe includes 50% Engineer/Legal/Admin Contingency

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CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-23	**Project Cost (Current $):**	$ 764,400
Project Name:	Bush Middle School Wells and Kimmie St. Pipe Upsize	**Project Cost (Future $):**	$ 940,116
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	2026 to 2026
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 764,400
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 764,400

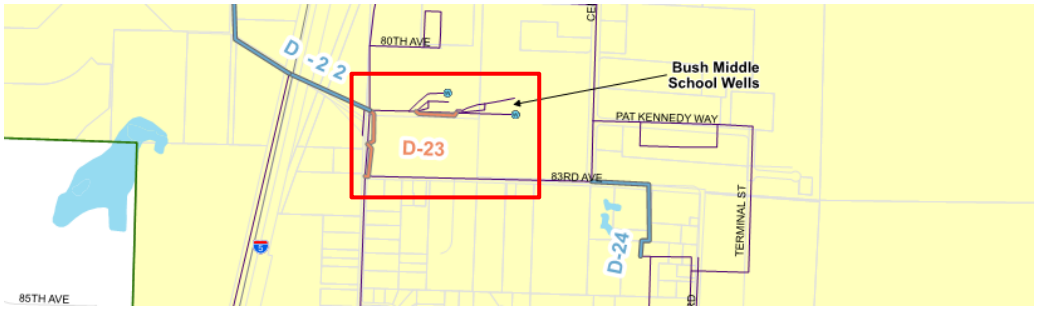
Triggers:

Capacity improvement; construct as funds available. This project addresses an existing deficiency.
Proposed Seismic Backbone.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe Upsize: 12-inch Seismic	2026	$ 764,400	$ 940,116
Total Project Cost		$ 764,400	$ 940,116

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-24	**Project Cost (Current $):**	$ 672,000
Project Name:	83rd Ave SW New Pipe	**Project Cost (Future $):**	$ 1,046,954
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 1,600 LF of 12-inch pipe along 83rd Ave SW from Center St SW south to existing pipe.

This project is developer driven as the water system expands.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe Upsize: 12-inch	1,600	LF	$ 300	$ 480,000	$ 72,000	$ 120,000	$ 672,000

Total Project Cost (Current $)	$ 672,000

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-24	**Project Cost (Current $):**	$ 672,000
Project Name:	83rd Ave SW New Pipe	**Project Cost (Future $):**	$ 1,046,954
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 672,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 672,000

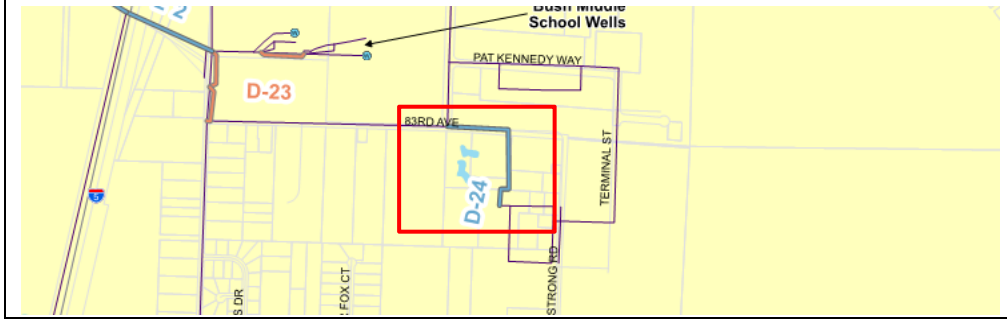
Triggers:

Developer driven.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe Upsize: 12-inch	Long-term	$ 672,000	$ 1,046,954
Total Project Cost		$ 672,000	$ 1,046,954

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-25	**Project Cost (Current $):**	$ 458,850
Project Name:	Arab Dr SE Pipe Upsize	**Project Cost (Future $):**	$ 714,873
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 1,130 LF of 6-inch and 8-inch pipe to 450 LF of 8-inch pipe and 680 LF of 12-inch pipe along Arab Dr SE from Trails End Dr SE to 7701 Arab Dr SE (12-inch) and from 77th Trail SE south to end of pipe (8-inch).

This project is to provide industrial/commercial fire flow to customers at dead end pipe.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe Upsize: 8-inch	450	LF	$ 275	$ 123,750	$ 18,563	$ 30,938	$ 173,250
Pipe Upsize: 12-inch	680	LF	$ 300	$ 204,000	$ 30,600	$ 51,000	$ 285,600

Total Project Cost (Current $)	$ 458,850

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-25	**Project Cost (Current $):**	$ 458,850
Project Name:	Arab Dr SE Pipe Upsize	**Project Cost (Future $):**	$ 714,873
Facility Type:	Pipe Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 458,850
Total Project Cost	100%	$ 458,850

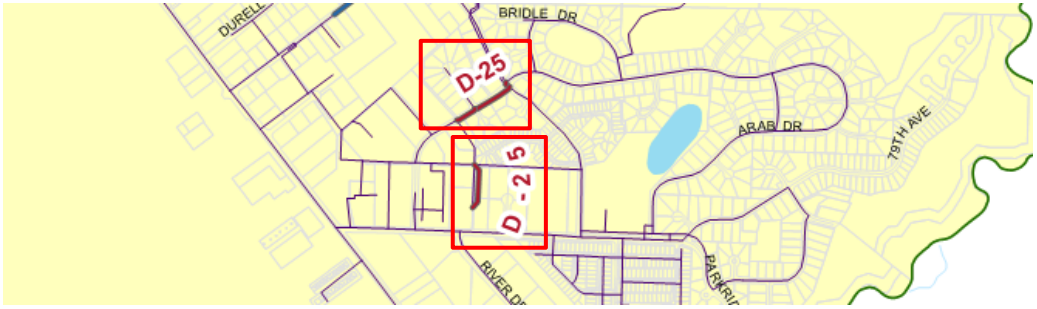
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe Upsize: 8-inch	Long-term	$ 173,250	$ 269,918
Pipe Upsize: 12-inch	Long-term	$ 285,600	$ 444,955
Total Project Cost		$ 458,850	$ 714,873

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-26	**Project Cost (Current $):**	$ 9,531,900
Project Name:	Old Highway 99 SE New Pipe (Various Locations)	**Project Cost (Future $):**	$ 14,850,390
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 7,500 LF of 8-inch pipe, 1,300 LF of 12-inch pipe, and 13,200 LF of 16-inch pipe at the following locations:
-The Preserve Development, extending to 93rd Ave SE (8-inch).
-93rd Ave SE from 1607 93rd Ave SE west to Kimmie St SW (16-inch) and from 93rd Ave north to existing pipe on Select Ct SE (12-inch).

This project is developer driven as water system expands. Project is necessary for ST-1.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 8-inch	7,500	LF	$ 275	$ 2,062,500	$ 309,375	$ 515,625	$ 2,887,500
New Pipe: 12-inch	1,300	LF	$ 300	$ 390,000	$ 58,500	$ 97,500	$ 546,000
New Pipe: 16-inch	13,200	LF	$ 330	$ 4,356,000	$ 653,400	$ 1,089,000	$ 6,098,400

Total Project Cost (Current $)	$ 9,531,900

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-26	**Project Cost (Current $):**	$ 9,531,900
Project Name:	Old Highway 99 SE New Pipe (Various Locations)	**Project Cost (Future $):**	$ 14,850,390
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 9,531,900
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 9,531,900

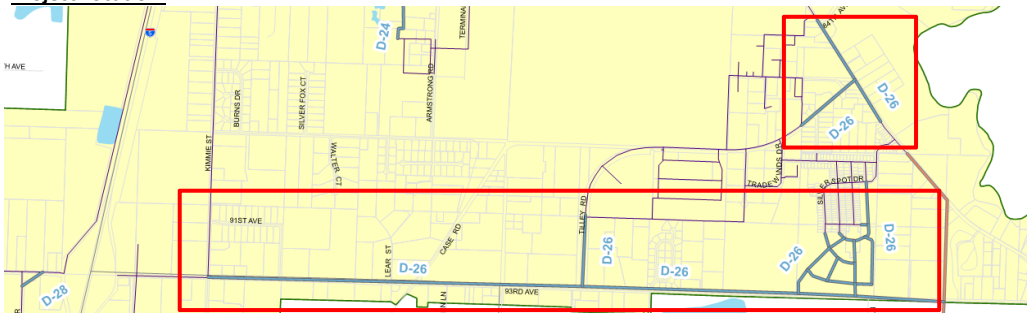
Triggers:

Developer driven.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 8-inch	Long-term	$ 2,887,500	$ 4,498,631
New Pipe: 12-inch	Long-term	$ 546,000	$ 850,650
New Pipe: 16-inch	Long-term	$ 1,524,600	$ 2,375,277
New Pipe: 16-inch	Long-term	$ 1,524,600	$ 2,375,277
New Pipe: 16-inch	Long-term	$ 1,524,600	$ 2,375,277
New Pipe: 16-inch	Long-term	$ 1,524,600	$ 2,375,277
Total Project Cost		$ 9,531,900	$ 14,850,390

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-27	**Project Cost (Current $):**	$ 785,400
Project Name:	93rd Ave SW New Pipe (A)	**Project Cost (Future $):**	$ 1,223,628
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 660 LF of 12-inch pipe and 1,100 LF of 16-inch pipe along 93rd Ave SW from SW Wellfield to Blomberg St S (16-inch); Blomberg St SW from 93rd Ave SW south to existing Lathrop pipe (12-inch).

This is a looping project to provide industrial/commercial fire flows in the area.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 12-inch	660	LF	$ 300	$ 198,000	$ 29,700	$ 49,500	$ 277,200
New Pipe: 16-inch	1,100	LF	$ 330	$ 363,000	$ 54,450	$ 90,750	$ 508,200

Total Project Cost (Current $)	$ 785,400

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-27	**Project Cost (Current $):**	$ 785,400
Project Name:	93rd Ave SW New Pipe (A)	**Project Cost (Future $):**	$ 1,223,628
Facility Type:	New Pipe	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 785,400
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 785,400

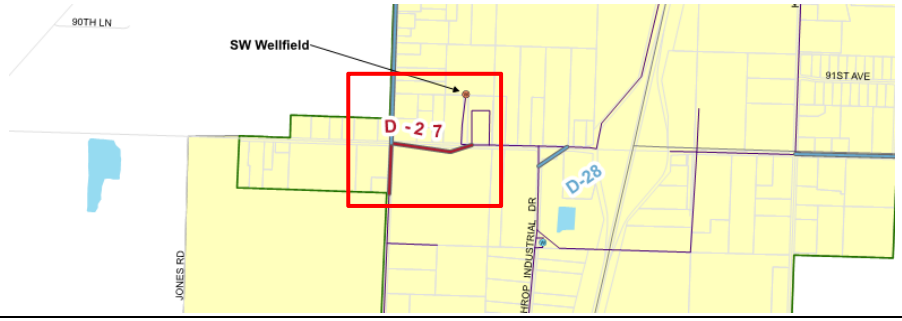
Triggers:

As development occurs.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 12-inch	Long-term	$ 277,200	$ 431,869
New Pipe: 16-inch	Long-term	$ 508,200	$ 791,759
Total Project Cost		$ 785,400	$ 1,223,628

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-28	**Project Cost (Current $):**	$ -	**Go to CIP Summary**
Project Name:	93rd Ave SW New Pipe (B)	**Project Cost (Future $):**	$ -	
Facility Type:	New Pipe	**Project Timing:**	Long-term	
		Inflation Rate:	3%	

Project Description:

Project Removed.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)

Total Project Cost (Current $)	$ -

Notes on Cost Estimation:

See Chapter for details of what locations require which size.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-28	**Project Cost (Current $):**	$ -	**Go to CIP Summary**
Project Name:	93rd Ave SW New Pipe (B)	**Project Cost (Future $):**	$ -	
Facility Type:	New Pipe	**Project Timing:**	Long-term	
		Inflation Rate:	3%	

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ -
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ -

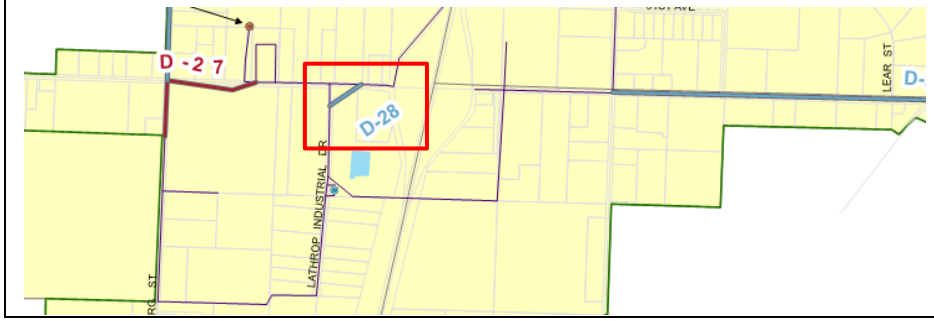
Triggers:

Developer driven.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Total Project Cost		$ -	$ -

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-29	**Project Cost (Current $):**	$ 850,000
Project Name:	Capital Blvd Pipe Upsize	**Project Cost (Future $):**	$ 1,143,231
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	2020 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Upsize 7,000 LF of 6-inch and 8-inch pipe to 16-inch pipe along Capitol Blvd from Linwood Ave SW to Dennis St SW

New Pipe Project proposed by City. Some pipe overlaps with project S-02. Any overlapping pipe will be designated to project S-02.

To be completed in conjunction with S-02. Most of this project overlaps with proposed seismic backbone pipe.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipe Upsize							$ 850,000

Total Project Cost (Current $)	$ 850,000

Notes on Cost Estimation:

City provided cost estimate.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-29	**Project Cost (Current $):**	$ 850,000
Project Name:	Capital Blvd Pipe Upsize	**Project Cost (Future $):**	$ 1,143,231
Facility Type:	Pipe Upsize, Seismic Backbone	**Project Timing:**	2020 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 850,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 850,000

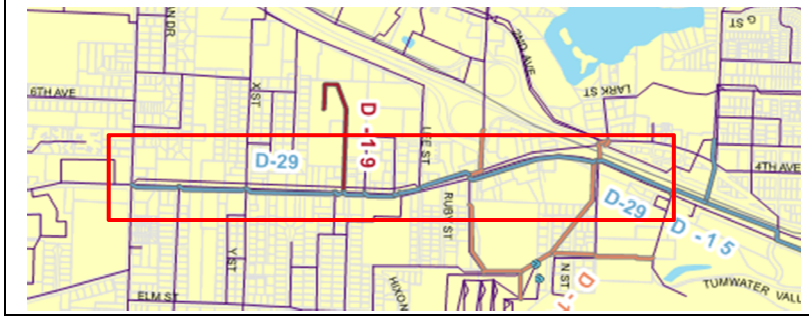
Triggers:

Needed when MDD reaches 4,500 gpm.
Part of proposed Seismic Backbone.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipe Upsize	2020	$ 10,000	$ 10,300
Pipe Upsize	2021	$ 260,000	$ 275,834
Pipe Upsize	2022	$ 100,000	$ 109,273
Pipe Upsize	Long-term	$ 480,000	$ 747,824
Total Project Cost		$ 850,000	$ 1,143,231

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-30	**Project Cost (Current $):**	$ 896,000
Project Name:	SE Water Tank Pipe Extension	**Project Cost (Future $):**	$ 1,038,710
Facility Type:	New Pipe	**Project Timing:**	2024 to 2024
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Install 1,600 LF of 24-inch pipe from 93rd Ave south to the new 350 Zone Reservoir (24-inch).

New pipe project corresponding to future 350 Zone storage reservoir.

Project required at the same time as ST-1.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 24-inch	1,600	LF	$ 400	$ 640,000	$ 96,000	$ 160,000	$ 896,000

Total Project Cost (Current $)	$ 896,000

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-30	**Project Cost (Current $):**	$ 896,000
Project Name:	SE Water Tank Pipe Extension	**Project Cost (Future $):**	$ 1,038,710
Facility Type:	New Pipe	**Project Timing:**	2024 to 2024
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 896,000
R&R:	0%	$ -
System Improvements:	0%	$ -
Total Project Cost	100%	$ 896,000

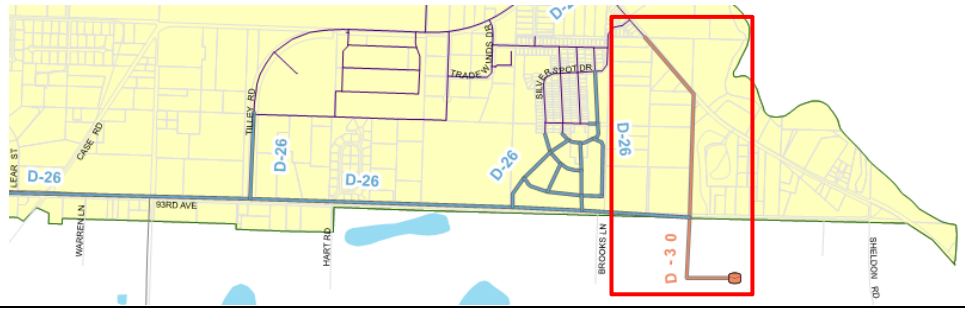
Triggers:

Tank needed when MDD greater than 5,700 gpm.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 24-inch	2024	$ 896,000	$ 1,038,710
Total Project Cost		$ 896,000	$ 1,038,710

Project Location:



Notes:

D-31 on map is D-30. Will be revised.

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-31	**Project Cost (Current $):**	$ -
Project Name:	Bush Mountain/Antsen New Pipe/Upsize Pipe	**Project Cost (Future $):**	$ -
Facility Type:	New Pipe/Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Project to provide SFR fire flow to Bush Mt residents. Project cost estimate is based on upsizing the existing water main from the Bush Mtn Pump Station. An alternative solution could be to install a storage tank on Bush Mtn to hold fire suppression storage (120k gallons) and only upsize the pipes from the tank to the hydrants to convey fire flow.
Install and upsize 7,100 LF of 6-inch and 8-inch pipe to 12-inch pipe at the following locations:
Bush Mountain St SW from Sapp Rd SW to end of streets.
Antsen St SW from Chapparel Dr SW to Somerset Hill Dr SW.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
New Pipe: 12-inch	7,100	LF	$ 330	$ 2,343,000	$ 351,450	$ 585,750	$ 3,280,200

Total Project Cost (Current $)	$ 3,280,200

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-31	**Project Cost (Current $):**	$ -
Project Name:	Bush Mountain/Antsen New Pipe/Upsize Pipe	**Project Cost (Future $):**	$ -
Facility Type:	New Pipe/Upsize	**Project Timing:**	Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 3,280,200
Total Project Cost	100%	$ 3,280,200

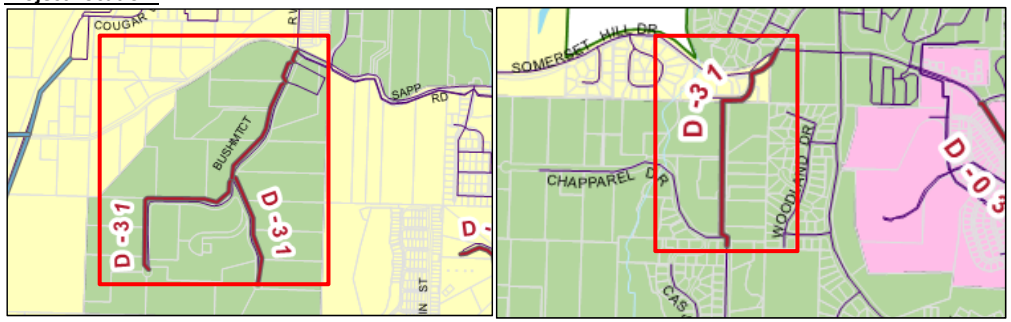
Triggers:

Fire flow. As funds available. This project addresses an existing deficiency.

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
New Pipe: 12-inch	Long-term	$ 3,280,200	$ 5,110,445
Total Project Cost		$ 3,280,200	$ 5,110,445

Project Location:



Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-32	**Project Cost (Current $):**	$ 6,560,000	**Go to CIP Summary**
Project Name:	Watermain Replacement Program	**Project Cost (Future $):**	$ 9,018,781	
Facility Type:	Pipe	**Project Timing:**	2019 to Long-term	
		Inflation Rate:	3%	

Project Description:

Annual program to replace aging watermains.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 0%	E/L/A 0%	Total Cost (Current $)
Watermain Replacement							$ 6,560,000
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
Total Project Cost (Current $)							$ 6,560,000

Notes on Cost Estimation:

City provided annual budget for this item.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

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Project ID:	D-32	**Project Cost (Current $):**	$ 6,560,000
Project Name:	Watermain Replacement Program	**Project Cost (Future $):**	$ 9,018,781
Facility Type:	Pipe	**Project Timing:**	2019 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	100%	$ 6,560,000
Upgrade:	0%	$ -
Total Project Cost	100%	$ 6,560,000

Triggers:

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Watermain Replacement	2019	$ -	$ -
Watermain Replacement	2020	$ 110,000	$ 113,300
Watermain Replacement	2021	$ 530,000	$ 562,277
Watermain Replacement	2022	$ 530,000	$ 579,145
Watermain Replacement	2023	$ 530,000	$ 596,520
Watermain Replacement	2024	$ 530,000	$ 614,415
Watermain Replacement	2025	$ 530,000	$ 632,848
Watermain Replacement	2026		$ -
Watermain Replacement	2027		$ -
Watermain Replacement	2028		$ -
Watermain Replacement	Long-term	$ 3,800,000	$ 5,920,276
Total Project Cost		$ 6,560,000	$ 9,018,781

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-33	**Project Cost (Current $):**	$ 1,200,000
Project Name:	Custer Way Extension - Boston to Capitol	**Project Cost (Future $):**	$ 1,236,000
Facility Type:	Pipe	**Project Timing:**	2020 to 2020
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

This project will extend the new 12-inch diameter water line from Boston Street to east of Capitol Boulevard. It is part of a joint water and storm project designed in 2019 and titled Custer Way Water and Storm Improvements. This work was originally planned to occur simultaneously with the sewer in this area (the sewer work was completed under a separate project), but due to the amount of roadway reconstruction required, the water component of the project was delayed. Project costs consider material (water main is part of the "seismic backbone" in the Water Comprehensive Plan), removal of concrete slabs within the existing roadway, and project complexity.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Pipeline extension				$ -	$ -	$ -	$ 1,200,000
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
Total Project Cost (Current $)							$ 1,200,000

Notes on Cost Estimation:

Cost estimate provided by City.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	D-33	**Project Cost (Current $):**	$ 1,200,000
Project Name:	Custer Way Extension - Boston to Capitol	**Project Cost (Future $):**	$ 1,236,000
Facility Type:	Pipe	**Project Timing:**	2020 to 2020
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

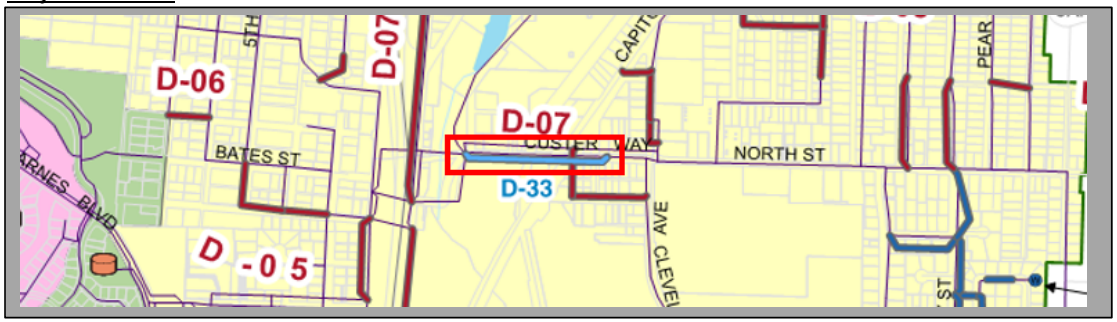
Project Type	Percent	Cost
Capacity:	100%	$ 1,200,000
R&R:	0%	$ -
Upgrade:	0%	$ -
Total Project Cost	100%	$ 1,200,000

Triggers:

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Pipeline extension	2020	$ 1,200,000	$ 1,236,000
		$ -	$ -
		$ -	$ -
		$ -	$ -
		$ -	$ -
		$ -	$ -
		$ -	$ -
		$ -	$ -
		$ -	$ -
		$ -	$ -
		$ -	$ -
Total Project Cost		$ 1,200,000	$ 1,236,000

Project Location:



Notes:

MISCELLANEOUS PROJECTS

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-1	**Project Cost (Current $):**	$ 250,000
Project Name:	Seismic Resiliency Plan	**Project Cost (Future $):**	$ 273,182
Facility Type:	Miscellaneous	**Project Timing:**	2022 to 2022
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Conduct a moderate seismic resiliency study that could include the following:
Establish Level of Service Goals to provide direction on how the City wants the water system to operate after an earthquake.
Update geotechnical hazard maps.
Perform facility structural resilience evaluations on previously identified critical structures and distribution systems.
Perform critical interdependencies assessment.
Develop an implementation strategy, identifying all the recommendations for reducing vulnerabilities and mitigating risk.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 0%	E/L/A 0%	Total Cost (Current $)
Seismic Resiliency Plan	1	LS	$ 250,000	$ 250,000	$ -	$ -	$ 250,000
Total Project Cost (Current $)							$ 250,000

Notes on Cost Estimation:

The cost of a a siesmic resiliency study is very scope dependent. The cost could range from $200k to $800k depending on the depth of the analysis.

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CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-1	**Project Cost (Current $):**	$ 250,000
Project Name:	Seismic Resiliency Plan	**Project Cost (Future $):**	$ 273,182
Facility Type:	Miscellaneous	**Project Timing:**	2022 to 2022
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 250,000
Total Project Cost	100%	$ 250,000

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Seismic Resiliency Plan	2022	$ 250,000	$ 273,182
Total Project Cost		$ 250,000	$ 273,182

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-2	**Project Cost (Current $):**	$ 1,345,500
Project Name:	Seismic Upgrades	**Project Cost (Future $):**	$ 1,922,377
Facility Type:	Miscellaneous, Seismic Backbone	**Project Timing:**	2019 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

This project was developed to determine the approximate cost of replacing pipe along the seismic backbone with seismically resilient pipe. The project cost estimate is divided over a 50-year time period.

The proposed seismic backbone is approximately 75,000 feet, and the average pipe diameter is 12-inch. At a unit cost of $390/LF, the approximate seismic backbone cost with contingencies is $42 million over a 50-year period. This CIP project only accounts for project costs over the next 20-year period.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Seismic Upgrades	75,000	LF	$ 390	$ 29,250,000	$ 4,387,500	$ 8,409,375	$ 42,046,875
	20	Years	$ 840,937.50	$ 16,818,750			$ 16,818,750

Total Project Cost (Current $)	$ 58,865,625

Notes on Cost Estimation:

Annual budget provided by City.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-2	**Project Cost (Current $):**	$ 1,345,500
Project Name:	Seismic Upgrades	**Project Cost (Future $):**	$ 1,922,377
Facility Type:	Miscellaneous, Seismic Backbone	**Project Timing:**	2019 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
System Improvements:	100%	$ 58,865,625
Total Project Cost	100%	$ 58,865,625

Percent not covered by other projects: 10%

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Seismic Upgrades	2019		$ -
Seismic Upgrades	2020		$ -
Seismic Upgrades	2021		$ -
Seismic Upgrades	2022		$ -
Seismic Upgrades	2023	$ 84,094	$ 94,648
Seismic Upgrades	2024	$ 84,094	$ 97,488
Seismic Upgrades	2025	$ 84,094	$ 100,412
Seismic Upgrades	2026	$ 84,094	$ 103,425
Seismic Upgrades	2027	$ 84,094	$ 106,527
Seismic Upgrades	2028	$ 84,094	$ 109,723
Seismic Upgrades	Long-term	$ 840,938	$ 1,310,153
Total Project Cost		$ 1,345,500	$ 1,922,377

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-3	**Project Cost (Current $):**	$ 1,450,000
Project Name:	Emerging Projects/Oversizing	**Project Cost (Future $):**	$ 1,880,113
Facility Type:	All	**Project Timing:**	2019 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Annual program for City support of developer driven projects.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 0%	E/L/A 0%	Total Cost (Current $)
Emerging Projects	20	Years	$ 60,000	$ 1,200,000	$ -	$ -	$ 1,200,000
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -

Total Project Cost (Current $)	$ 1,200,000

Notes on Cost Estimation:

City provided annual budget for this item.

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-3	**Project Cost (Current $):**	$ 1,450,000
Project Name:	Emerging Projects/Oversizing	**Project Cost (Future $):**	$ 1,880,113
Facility Type:	All	**Project Timing:**	2019 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	50%	$ 600,000
R&R:	50%	$ 600,000
Upgrade:	0%	$ -
Total Project Cost	100%	$ 1,200,000

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Emerging Projects	2019	$ 60,000	$ 60,000
Emerging Projects	2020	$ 310,000	$ 319,300
Emerging Projects	2021	$ 60,000	$ 63,654
Emerging Projects	2022	$ 60,000	$ 65,564
Emerging Projects	2023	$ 60,000	$ 67,531
Emerging Projects	2024	$ 60,000	$ 69,556
Emerging Projects	2025	$ 60,000	$ 71,643
Emerging Projects	2026	$ 60,000	$ 73,792
Emerging Projects	2027	$ 60,000	$ 76,006
Emerging Projects	2028	$ 60,000	$ 78,286
Emerging Projects	Long-term	$ 600,000	$ 934,780
Total Project Cost		$ 1,450,000	$ 1,880,113

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-4	**Project Cost (Current $):**	$ 9,000,000
Project Name:	Operation and Maintenance Facility	**Project Cost (Future $):**	$ 10,102,272
Facility Type:	Building	**Project Timing:**	2021 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
Water Fund portion of O&M Buildi	1	LS	$ 9,000,000	$ 9,000,000			$ 9,000,000
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -

Total Project Cost (Current $)	$ 9,000,000

Notes on Cost Estimation:

Go to Assumptions Tab

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-4	**Project Cost (Current $):**	$ 9,000,000
Project Name:	Operation and Maintenance Facility	**Project Cost (Future $):**	$ 10,102,272
Facility Type:	Building	**Project Timing:**	2021 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	100%	$ 9,000,000
Upgrade:	0%	$ -
Total Project Cost	100%	$ 9,000,000

Triggers:

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
Phase 1	2021	$ 240,000	$ 254,616
Phase 2	2022	$ 360,000	$ 393,382
0	2023	$ 8,400,000	$ 9,454,274
0	2022	$ -	$ -
0	2023	$ -	$ -
0	2024	$ -	$ -
0	2025	$ -	$ -
0	2026	$ -	$ -
0	2027	$ -	$ -
0	2028	$ -	$ -
0	Long-term	$ -	$ -
Total Project Cost		$ 9,000,000	$ 10,102,272

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-5	**Project Cost (Current $):**	$ 300,000
Project Name:	WSP Update	**Project Cost (Future $):**	$ 385,731
Facility Type:	Miscellaneous	**Project Timing:**	2021 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

10-year update to the Water System Plan.

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
WSP Update	1	LS	$ 300,000	$ 300,000			$ 300,000
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -

Total Project Cost (Current $)	$ 300,000

Notes on Cost Estimation:

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CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-5	**Project Cost (Current $):**	$ 300,000
Project Name:	WSP Update	**Project Cost (Future $):**	$ 385,731
Facility Type:	Miscellaneous	**Project Timing:**	2021 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	0%	$ -
Upgrade:	100%	$ 300,000
Total Project Cost	100%	$ 300,000

Triggers:

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
WSP Update Year 1	2027	$ 150,000	$ 190,016
WSP Update Year 2	2028	$ 150,000	$ 195,716
0	2021	$ -	$ -
0	2022	$ -	$ -
0	2023	$ -	$ -
0	2024	$ -	$ -
0	2025	$ -	$ -
0	2026	$ -	$ -
0	2027	$ -	$ -
0	2028	$ -	$ -
0	Long-term	$ -	$ -
Total Project Cost		$ 300,000	$ 385,731

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-6	**Project Cost (Current $):**	$ 1,350,000
Project Name:	Water Rights Acquisitions	**Project Cost (Future $):**	$ 1,461,009
Facility Type:		**Project Timing:**	2019 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Project Description:

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
WR Acquisitions	1	Year	$ 200,000	$ 200,000			$ 200,000
WR Acquisitions	1	Year	$ 200,000	$ 200,000			$ 200,000
WR Acquisitions	8	Year	$ 50,000	$ 400,000			$ 400,000
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
Total Project Cost (Current $)							$ 800,000

Notes on Cost Estimation:

Annual budget provided by City.

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CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-6	**Project Cost (Current $):**	$ 1,350,000
Project Name:	Water Rights Acquisitions	**Project Cost (Future $):**	$ 1,461,009
Facility Type:	0	**Project Timing:**	2019 to Long-term
		Inflation Rate:	3%

Go to CIP Summary

Cost Allocation:

Project Type	Percent	Cost
Capacity:	100%	$ 800,000
R&R:	0%	$ -
Upgrade:	0%	$ -
Total Project Cost	100%	$ 800,000

Triggers:

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
WR Acquisitions	2019	$ -	$ -
WR Acquisitions	2020	$ 600,000	$ 618,000
WR Acquisitions	2021	$ 400,000	$ 424,360
0	2022	$ 50,000	$ 54,636
0	2023	$ 50,000	$ 56,275
0	2024	$ 50,000	$ 57,964
0	2025	$ 50,000	$ 59,703
0	2026	$ 50,000	$ 61,494
0	2027	$ 50,000	$ 63,339
0	2028	$ 50,000	$ 65,239
0	Long-term	$ -	$ -
Total Project Cost		$ 1,350,000	$ 1,461,009

Project Location:

Notes:

CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

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Project ID: M-7

Project Name: ERP System

Facility Type:

Project Cost (Current $): $ 333,000

Project Cost (Future $): $ 358,579

Project Timing: 2021 to Long-term

Inflation Rate: 3%

Go to CIP Summary

Project Description:

Project Cost Estimate (Current $):

Project Element	Quantity	Unit	Unit Cost ($/Unit)	Subtotal	Contingency 15%	E/L/A 25%	Total Cost (Current $)
ERP System	1	LS	$ 333,000	$ 333,000			$ 333,000
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -

Total Project Cost (Current $) $ 333,000

Notes on Cost Estimation:

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CITY OF TUMWATER
WATER SYSTEM PLAN
Capital Improvement Program

Project ID:	M-7	**Project Cost (Current $):**	$ 333,000	**Go to CIP Summary**
Project Name:	ERP System	**Project Cost (Future $):**	$ 358,579	
Facility Type:	0	**Project Timing:**	2021 to Long-term	
		Inflation Rate:	3%	

Cost Allocation:

Project Type	Percent	Cost
Capacity:	0%	$ -
R&R:	100%	$ 333,000
Upgrade:	0%	$ -
Total Project Cost	100%	$ 333,000

Triggers:

Project Timing:

Project Element	Timing	Project Cost (Current $)	Project Cost (Future $)
ERP System Year 1	2021	$ 166,500	$ 176,640
ERP System Year 2	2022	$ 166,500	$ 181,939
0	2021	$ -	$ -
0	2022	$ -	$ -
0	2023	$ -	$ -
0	2024	$ -	$ -
0	2025	$ -	$ -
0	2026	$ -	$ -
0	2027	$ -	$ -
0	2028	$ -	$ -
0	Long-term	$ -	$ -
Total Project Cost		$ 333,000	$ 358,579

Project Location:

Notes: