

Table 9 - City of Lee's Summit Water Master Plan Proposed Projects

Figure 7/8 Reference	Project Description ¹	Facility Description		Opinion of Probable Cost ³				Year In Service	Justification
				Tap Fund		Construction Fund			
				LS	Dist. 14	Road	Maint.		
1	Hook Rd Tank (remaining cost)	3.0	MG Elev. Storage Tank	400				2006	Provides peaking storage and fire flow to the rapidly growing southwest portion of Lee's Summit.
2	North System Supply Improvements		Pipe Line Interconnects	1,300				2007	Improves supply reliability and efficiency by maximizing the water supply from Independence, City's most economical supply source.
3	Woods Chapel Rd Transmission Main (Lakewood Way to Georgian Dr)	4,800 2,800	feet of feet of	12 16	inch pipe inch pipe	1,729		2007	Improves fire flow and provides supply to future development along Woods Chapel Road.
4 ⁹	South Terminal East Discharge Main	3,900	feet of	36	inch pipe	1,685		2007	Necessary to utilize the increased supply resulting from the KCMO Phase III & IV improvements.
NA	KCMO Phase III Improvement (remaining cost, see Fig. 5)	36,000	feet of	54	inch pipe	3,100		2007	Increases supply to the South Terminal Pump Station by 6 MGD.
5	High Service Reservoir Rehabilitation (5.5 MG Steel Tank)						1,000	2007	Maintains investment in existing infrastructure.
6 ⁹	Low Head Storage at South Terminal Pump Station	9.0	MG Ground Storage	8,100				2008	Provides additional low head storage during the peak demand season. Contingent on KCMO delivery conditions.
Cr	Current CIP Projects (Road Construction)		Several Projects			1,320		2008	Replaces or constructs new water lines in association with road construction.
Cm	Current CIP Projects (Maintenance)		Several Projects				1,742	2008	Improves service to existing customers.
NA	KCMO Phase IV Improvement (see Fig. 5)	12,700	feet of	72	inch pipe	8,000		2010	Increases supply to the South Terminal Pump Station and completes the pipeline projects included in the cooperative agreement with KCMO.
7	Pryor Rd Transmission Main (Scherer Rd to Eagle View Dr.) ⁵	4,000	feet of	16	inch pipe	384		2010	Transmits water to the rapidly growing southwest portion of Lee's Summit.
8	Woods Chapel Tank Recoating						300	2011	Maintains investment in existing infrastructure.
9	High Service Pumping		Additional Pump Capacity	80				2013	Maximizes High Service Pump Station capacity to 20 MGD.
10	East Terminal Transmission Main	17,500	feet of	36	inch pipe	7,560		2013	Transmits new 21 MGD supply from KCMO to East Terminal Pump Station.
11	East Terminal Pump Station and Storage ²		21 MGD Pump Station 5 MG Storage Tank			13,650		2013	Pumps additional 21 MGD supply to Lee's Summit.
12	East Terminal Transmission Main	6,000	feet of	24	inch pipe	1,728		2013	Transmits new 21 MGD supply from KCMO to East Terminal Pump Station.
13	Bowlin Tank	2.0	MG Ground Storage				1,800	2013	Provides control volume
T	City's Share for Growth/Upsizing of Water Lines in Lee's Summit ^{6,7}	13,890	feet of	12	inch pipe	1,000		As Needed	Primarily 12" piping to be installed as development dictates
TI4	WD 14's Share for Growth/Upsizing Along Hwy's in WD 14 ⁶								Primarily 12" piping to be installed as development dictates
	Hwy 50 Transmission Main (Church Rd. to Smart Rd.)	7,000	feet of	20	inch pipe		840	As Needed	Portion of the link to transmit water to WD 14 area and Hwy 7 Tank
	Hwy 50 Transmission Main (Smart Rd. to Hwy 7)	11,500	feet of	16	inch pipe		1,104	As Needed	Portion of the link to transmit water to WD 14 area and Hwy 7 Tank
	Hwy 7 Tank	1.5	MG Elevated Storage			1,125		As Needed	Provides peaking storage, fire protection and pressure stabilization (higher minimum pressures).
	Hwy 7 Transmission Main (Hwy 50 to Herring Rd.)	5,300	feet of	20	inch pipe	636		As Needed	Portion of the link to transmit water to WD 14 area and Hwy 7 Tank
	Miscellaneous 12" Water Lines	6,500	feet of	12	inch pipe	468		As Needed	Primarily 12" piping to be installed as development dictates
NA	Replacement/Repair ⁸		12 inch pipe and smaller				500	As Needed	Replaces and/or repairs problematic small diameter piping.
NA	Water Lines Integral to Road Construction Projects		See Thoroughfare Master Plan			9,422		As Needed	Projects and costs are identified in the 2006 Thoroughfare Master Plan
NA	Annual Updates to the Water Master Plan						300	As Needed	Updates the planning criteria, projects and cost estimates.
		2016 Subtotals		48,216	4,173	10,742	5,642		
14	Lee's Summit Rd Transmission Main (Gregory to Lakewood Dr)	8,000	feet of	20	inch pipe	1,920		2018	Allows the capacity of East Terminal (21 MGD) to be recieved into the water system.
15	Pryor Rd Transmission Main (Scherer Rd to Longview Rd)	5,400	feet of	20	inch pipe	1,296		2020	Extends transmission capacity to the southwest
NA	Tank Painting/Rehabilitation (Scherer, Hook, Ranson)						1,000	2021	Maintains investment in existing infrastructure.
16 ⁹	Hook Rd Transmission Main (Hook Tank to M-291)	7,000	feet of	30	inch pipe	2,520		2022	Transmits water from the Hook Road Tank to southeast.
17 ⁹	Blackwell Rd Transmission Main (Scruggs Rd to Coblen Rd)	5,300	feet of	36	inch pipe	2,290		2024	Transmits TCWA supply to the system.
18 ⁹	Scruggs Rd Transmission Main (Blackwell Rd to Jason Ave)	2,200	feet of	16	inch pipe	422		2024	Transmits TCWA supply to the system.
19 ⁹	Blackwell Rd Transmission Main (Langsford Rd to Scruggs Rd)	5,300	feet of	30	inch pipe	1,908		2024	Transmits TCWA supply to the system.
20 ⁹	Colbern Rd Pump Station	16.5	MGD	Pump Station		6,660		2024	Pumps additional 16.5 MGD supply from TCWA into Lee's Summit.
21 ⁹	Colbern Rd Ground Storage	5.0	MG	Ground Storage		4,500		2024	Stores the water that TCWA supplies.
22 ⁹	Langsford Rd Transmission Main (Todd George to Blackwell)	6,000	feet of	20	inch pipe	1,440		2024	Transmits TCWA supply to the system.
23 ⁹	Langsford Rd Transmission Main (Blackwell to Milton Thompson)	6,200	feet of	16	inch pipe	1,190		2024	Transmits TCWA supply to the system.
NA	TCWA Well Field and Treatment Plant	16.5	MGD	Wells and Plant		46,200		2024	Provides raw water source for new 16.5 MGD supply from TCWA.
NA	TCWA Transmission Main upsizing	90,000	feet of	36	inch pipe	38,880		2024	Transmits 16.5 MGD from TCWA to I-70.
NA	TCWA Transmission Main	70,000	feet of	30	inch pipe	25,200		2024	Transmits 16.5 MGD from I-70 to Colbern Road Pump Station.
T	City's Share for Growth/Upsizing of Water Lines in Lee's Summit ⁶	114,000	feet of	12	inch pipe	8,208		As Needed	Primarily 12" piping to be installed as development dictates.
TI4	WD 14's Share for Growth/Upsizing in WD 14 ⁶	69,500	feet of	12	inch pipe		5,004	As Needed	Primarily 12" piping to be installed as development dictates
NA	Replacement/Repair ⁸		12 inch pipe and smaller				1,700	As Needed	Replaces and/or repairs problematic small diameter piping 8" and less. ⁸
NA	Water Lines Integral to Road Construction Projects		See Future Thoroughfare Master Plan			11,540		As Needed	Supports water line construction for new and existing roads.
NA	Annual Updates to the Water Master Plan						900	As Needed	Updates the planning criteria, projects and cost estimates.
		Ultimate Development Subtotals		142,574	5,004	11,540	3,600		

Notes

- Projects are shown when needed to meet projected demand increases.
- East Terminal adds 21 MGD but 7 MGD is lost at the Lee's Summit Rd. meters (Lakewood Blvd., Gregory Blvd., and Lee's Summit Rd.) for a net increase in supply of 14 MGD.
- The opinions of probable cost are based on \$12/inch/foot for pipe, \$400,000/MGD for pumping, \$0.90/gallon for ground storage and \$1.50 /gallon for elevated storage. These include administration, land, engineering and construction.
- September 2006 ENR Construction Cost Index for Kansas City is 8521.19. Future costs should be escalated using future ENR indexes.
- Estimated cost is City's share of the upsizing from 8" to 16".
- These projects are driven by the development market. The City or Water District 14 share is assumed at 50% of the total project cost. Values shown are just the City's or Water District 14's share of the total cost.
- The value shown is based on historical upsizing costs from 1996 to 2006 of approximately \$100,000 per year.
- Cost shown is based on current budgetting of \$50,000 per year.
- Project is impacted if 2024 supply is different from TCWA near Colbern Road.