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CITY OF AUSTIN, TEXAS  
AUSTIN WATER UTILITY

## WTP #4 COST ANALYSIS

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General Assumptions:

Daily Water Usage (MGD)	50
Annual Water Usage (Gallons)	18,250,000,000
Annual Water Usage (1,000 Gallon Units)	18,250,000

WTP #4 Cost Assumptions: (\$ in Millions)

WTP #4 Plant Construction Costs	\$283.1	Online in 2011
Ulrich Raw Water Line to Town Lake	\$10.0	
Bond Funded - 80%	\$234.6	
Cash Funded - 20%	\$58.6	
Plant/TM O & M Costs per Year	\$5.3	
Debt Service Coverage	1.50x	
Commercial Paper Interest Rate	3.6%	
Revenue Bond Interest Rate	5.5%	

Late Backup

WTP #4 Cost Analysis:		50-Year
(In Millions)	50-Year	Net Present
	Total Costs	Value (NPV)
O&M	\$269.7	\$130.6
Debt Service	519.4	290.3
CIP Transfers	58.6	52.1
Debt Coverage	1.4	1.3
Total	\$849.1	\$474.3
Rate Impact:	23.1%	

Cost Comparisons of WTP #4 Deferral:

Deferral of 1 Year		50-Year	Total Costs	50-Year	Net Present
(In Millions)	50-Year	Variance		Net Present	Value
	Total Costs			Value (NPV)	Variance
O&M	\$264.0	(\$5.7)		\$125.7	(\$4.9)
Debt Service	519.5	0.1		281.9	(8.4)
CIP Transfers	58.6	0.0		50.6	(1.5)
Debt Coverage	2.1	0.7		1.8	0.5
Total	\$844.2	(\$4.9)		\$460.0	(\$14.3)
Rate Impact:	23.4%	0.4%			

Deferral of 2 Years		50-Year	Total Costs	50-Year	Net Present
(In Millions)	50-Year	Variance		Net Present	Value
	Total Costs			Value (NPV)	Variance
O&M	\$258.2	(\$11.5)		\$120.9	(\$9.7)
Debt Service	519.5	0.1		273.7	(16.6)
CIP Transfers	58.6	0.0		49.2	(2.9)
Debt Coverage	2.1	0.7		1.8	0.5
Total	\$838.4	(\$10.7)		\$445.6	(\$28.7)
Rate Impact:	22.7%	-0.4%			

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Dollar Amounts (Based on "2008" Dollars)

Summary of Phase 1 + Phase 2 Costs if built in two 25 MGD phases

Site	Existing Green WTP Site*	SE Krieg	Govalle WWTP	Private #1	Private #2	Decker (River)**	Decker Lake (Town Lake Intake)
Intake & Pump Station	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	\$17,000,000	\$17,000,000
Raw Water Pipeline	\$4,000,000	\$10,000,000	\$32,000,000	\$35,000,000	\$20,000,000	\$25,000,000	\$72,000,000
WTP	\$269,000,000	\$168,000,000	\$168,000,000	\$169,000,000	\$168,000,000	\$168,000,000	\$168,000,000
High Service Pipeline	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$2,000,000	\$1,000,000	\$1,000,000
Distribution System TMs	\$57,000,000	\$37,000,000	\$30,000,000	\$30,000,000	\$41,000,000	\$17,000,000	\$17,000,000
Total	\$343,000,000	\$228,000,000	\$241,000,000	\$247,000,000	\$241,000,000	\$228,000,000	\$275,000,000

Summary of Phase 1 Costs

Site	Existing Green WTP Site*	SE Krieg	Govalle WWTP	Private #1	Private #2	Decker (River)**	Decker Lake (Town Lake Intake)
Intake & Pump Station	\$11,000,000	\$11,000,000	\$11,000,000	\$11,000,000	\$11,000,000	\$16,000,000	\$16,000,000
Raw Water Pipeline	\$4,000,000	\$10,000,000	\$32,000,000	\$35,000,000	\$20,000,000	\$25,000,000	\$72,000,000
WTP	\$220,000,000	\$115,000,000	\$116,000,000	\$116,000,000	\$117,000,000	\$115,000,000	\$115,000,000
High Service Pipeline	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$2,000,000	\$1,000,000	\$1,000,000
Distribution System TMs	\$0	\$19,000,000	\$19,000,000	\$19,000,000	\$14,000,000	\$17,000,000	\$17,000,000
Total	\$236,000,000	\$138,000,000	\$179,000,000	\$181,000,000	\$164,000,000	\$174,000,000	\$221,000,000

Summary of Costs for 50 MGD Built in One Phase

Site	Existing Green WTP Site*	SE Krieg	Govalle WWTP	Private #1	Private #2	Decker (River)**	Decker Lake (Town Lake Intake)
Intake & Pump Station	\$11,000,000	\$11,000,000	\$11,000,000	\$11,000,000	\$11,000,000	\$16,000,000	\$16,000,000
Raw Water Pipeline	\$4,000,000	\$10,000,000	\$32,000,000	\$35,000,000	\$20,000,000	\$25,000,000	\$72,000,000
WTP	\$257,000,000	\$158,000,000	\$156,000,000	\$158,000,000	\$156,000,000	\$157,000,000	\$156,000,000
High Service Pipeline	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$2,000,000	\$1,000,000	\$1,000,000
Distribution System TMs	\$57,000,000	\$38,000,000	\$30,000,000	\$30,000,000	\$40,000,000	\$17,000,000	\$17,000,000
Total	\$330,000,000	\$216,000,000	\$230,000,000	\$236,000,000	\$229,000,000	\$216,000,000	\$282,000,000

Summary of Phase 1 + Phase 2 Costs AS PERCENTAGE OF LOWEST COST LOCATION

Site	Existing Green WTP Site*	SE Krieg	Govalle WWTP	Private #1	Private #2	Decker (River)**	Decker Lake (Town Lake Intake)
Intake & Pump Station	100%	100%	100%	100%	100%	100%	142%
Raw Water Pipeline	40%	320%	320%	350%	200%	250%	720%
WTP	160%	100%	89%	101%	98%	100%	100%
High Service Pipeline	100%	100%	100%	100%	200%	100%	100%
Distribution System TMs	154%	81%	81%	81%	111%	46%	46%
Total	150%	106%	106%	108%	106%	100%	121%

Summary of Phase 1 Costs AS PERCENTAGE OF LOWEST COST LOCATION

Site	Existing Green WTP Site*	SE Krieg	Govalle WWTP	Private #1	Private #2	Decker (River)**	Decker Lake (Town Lake Intake)
Intake & Pump Station	100%	100%	100%	100%	100%	100%	145%
Raw Water Pipeline	40%	100%	320%	350%	200%	250%	720%
WTP	191%	100%	101%	101%	102%	100%	100%
High Service Pipeline	100%	100%	100%	100%	200%	100%	100%
Distribution System TMs	0%	100%	1900%	1800%	1400%	1700%	1700%
Total	171%	100%	130%	131%	119%	128%	160%

Summary of Costs for 50 MGD Built in One Phase AS PERCENTAGE OF LOWEST COST LOCATION

Site	Existing Green WTP Site*	SE Krieg	Govalle WWTP	Private #1	Private #2	Decker (River)**	Decker Lake (Town Lake Intake)
Intake & Pump Station	100%	100%	100%	100%	100%	100%	145%
Raw Water Pipeline	40%	100%	320%	350%	200%	250%	720%
WTP	163%	100%	89%	100%	98%	99%	98%
High Service Pipeline	100%	100%	100%	100%	200%	100%	100%
Distribution System TMs	158%	83%	83%	83%	111%	47%	47%
Total	153%	100%	106%	105%	108%	100%	121%

\*A conventional plant will not fit on the limited space at the existing Green WTP Site. Costs for this site are based on membrane softening allowing for buffer zone. Also note: Distribution modeling showed that the existing Green site would not require major new distribution piping until Phase 2 (expansion beyond 25 MGD). The lack of Phase 1 cost for this item is not an error.

\*\* Decker Lake site does NOT include Phase II Conveyance. This was not modeled or included. Cost here is for river intake (Town Lake intake resulted in very high raw water line cost). Assumed River intake cost is same as Town Lake intake. The Phase II cost would be high if the water must be brought south to Pleasant Valley Road. Also, assumed \$1 million for mitigation. Raw water line route is assumed to be approximately straight-line, with \$1 million allowance for easements. Intake cost is higher because two intakes will be needed: one at the River and one in Decker Lake. The Decker Lake intake is assumed to be slightly less than 50% of the main River intake.

Note: These estimates are planning-level only. They are not meant to accurately reflect the eventual cost of each option to a high level of accuracy. Additional information would be needed for such an estimate. These are for comparison purposes only.

Note: The \$137 million has increased to \$138 as we refined the estimates. The additional cost reflects the addition of a powdered activated carbon system at the plant.