WATER AND SEWER CAPITAL PROJECTS

Water and Sewer Capital Projects have one or more funding sources. Currently, the funding sources consist of Capital Recovery Fees, bond proceeds and transfers from the Water and Sewer Operating Fund. Projects eligible for Capital Recovery Fees (also known as Impact Fees) must be identified in a Capital Recovery Fee study. There are three significant Water and Sewer Capital Projects budgeted this fiscal year.

1) SCADA (Supervisory Control and Data Acquisition) Upgrade

JUSTIFICATION: The City currently has an outdated system which only provides basic control and monitoring of system performance. The updated system will provide much more sophisticated control and integration of major system components such as pump stations, storage tanks and lift stations. The updated capabilities include greater analytics for detecting inefficiencies and overall system performance.

FY 2013 BUDGET: \$250,000

OPERATING BUDGET IMPACT: The project is anticipated to save 10% of the department's \$230,000 maintenance budget and make the department more efficient.

2) Sanitary Sewer Lift Stations (2)

JUSTIFICATION: The City has two lift stations that are ageing and in need of updating. Once completed, the project will improve water pumps, piping and controls City-wide.

FTY 2013 BUDGET: \$130,000

OPERATING BUDGET IMPACT: The project will save the City, a minimum of, \$10,000 (annually) by reducing maintenance costs.

3) Video Camera/Monitoring System

JUSTIFICATION: The City has been paying an outside vendor to view and record sanitary sewer lines' conditions. Once the system is acquired, this function can be performed internally for a quicker response time to our citizens.

FY 2013 BUDGET: \$125,000

OPERATING BUDGET IMPACT: The project will save the City approximatley\$50,000 (annually) by eliminating out-sourcing expenses.

A complete listing of potential projects (through 2017) is listed in the later portion of this section.

CITY OF CEDAR HILL WATRE AND WASTEWATER CIP WORKSHOP

PROJECT NAME	ACTIVITY FROM TO FYE 13 FYE 14 FYE 15 TYE 16 FYE 17 TUTURE TO)TAL
	$\mathbf{x}_{\mathbf{k}}^{\mathbf{k}}\mathbf{x}_{\mathbf{k}$	
	PROJECTS:	848 A 48 A 4

WATER PROJECTS: CURRENT PROPOSED PLAN:

5.5 SERPHENE TWENT FROM 100 Miles	5									\$0
American Standard S	5 Lakeridge Pkwy Ground Storage Tank & Water Lines	Lake Ridge 2 MG Storage Tank	Lake Ridge Parkway		(3,000,000)	3,000,000				
Amening Noter Portional System Production System Production System System Production System System Production System Sy			<u> </u>			625,000				
Nonethines Security Systems None Central Vasion Nonethines Security Systems None Central Vasion Nonethines Security Systems Nonethines Security Sys		Replacing existing panels and radios due to changes in F	FCC regulations	Various	250,000					
Medianener Inflation Medianene Inflation Medianene Inflation Varier Varie	- ·				750,000					
Mechanistra Control Scores Trais 2000 2,					(300,000)					
22 Post Warre Line 12 Warre Line 13 Warre Line 14 Warr	10 Miscellaneous Line Resizing	Miscellaneous Line Resizing	Various	Various	300,000		200,000			
Polescriet Name Leve 16° Word Fare 16°	11 Meadowcrest Ground Storage Tank	Č					2,000,000	2,350,000		
14 Pater-like Cl 25 Water lase 34 Water lase 12 Water lase 12 Water lase 12 Water lase 12 Water lase 16 Water l		16" Water Line	Parkerville Road	Bear Creek				665,000		
18 obs. Name Claim Power Line 12 'Wart Line Neuerine Cloak Descorollis Robot Obs. Name Claim Power Line Obs. Name Claim								930,000		
10 Description Food Word Take 10 Weare File 10 Weare Fi									1,775,000	
17. Windows McDuncaroulle Robol 16° Water Line 16° Water Line Vincepture Robol 100 (19%) Demonstrate Robol 46° Robol 160° Robol 160° Robol Performance 100° 150° Robol 160° Robol Performance 100° Robol 160° Robol Performance 100° Robol 160° Robol 160° Robol Performance 100° Robol 160° Robol 160° Robol 160° Robol Performance 100° Robol 160° Ro			Waterford Oaks						494,000	
18 17 Werk Line Jorg from Link Pidge Pictowy on USP 12 State Line 12 S		16" Water Line							1,580,000	\$1,580,000
19 12 Warr Lines & PEV near Color Hill State Print 12 Warr Line & Pessure Reducing Valve Narios N	17 Wintergreen Rd./Duncanville Road 16" Water Line	16" Water Line	Wintergreen Road @ US67	Duncanville Road @ E. Pleasant Run Road					1,070,000	\$1,070,000
		12" Water Line	Lake Ridge Parkway	US Highway 67					1,525,000	\$1,525,000
Fame food Transmission (Road TA) Water Line 10° Water Line 10° Water Line 10° Nicer Line Line 10° Nicer Line 10° Nicer Line 10° Nicer Line Line Line Line Line Line Line Line	19 12" Water Lines & PRV near Cedar Hill State Park	12" Water Line, Pressure Reducing Valve		Various					1,365,000	\$1,365,000
22 Expansion PS. Expansion N.A N.A N.A 2.288,000 \$2.288	20 Flameleaf Transmission Water Line	30" Water Line	Flame leaf via Strauss	Belt Line Road					4,845,000	\$4,845,000
28 Bet Back 20°C'24 "Water Line 24°C00" Water Line Planck leaf Transmission Line Meadoworce Transmission Line 22°7000 \$2.270,000	21 Flameleaf Transmission (Road "A") Water Line	30" Water Line	Belt Line Road	Houston Street					985,000	\$985,000
24 Clark Road O'W Water Line 16 'Water Line Beb Line Road Parkeville Road 1,160,000 \$1,160,000	22 Flame Leaf Pump Station Expansion	PS Expansion	N/A	N/A					2,898,000	\$2,898,000
25 2° Water Line Connector - Windmill Hill Subdivision to US67 2° Water Line US Highway 67 Windmill Hill Subdivision 700,000 579,000 26 Clark Road 16° Water Line 16° Water Line Parkerville Road Opprior Windmill Hill Subdivision 905,000 \$505,000 27 FM 1582 - 12° Water Line 16° Water Line Parkerville Road Along City Junits 12.75,000 \$1275,000 \$1205,000 \$100,000 </td <td>23 Belt Line Rd. 20"/24" Water Line</td> <td>24"/20" Water Line</td> <td>Flame leaf Transmission Line</td> <td>Meadowcrest Transmission Line</td> <td></td> <td></td> <td></td> <td></td> <td>2,270,000</td> <td>\$2,270,000</td>	23 Belt Line Rd. 20"/24" Water Line	24"/20" Water Line	Flame leaf Transmission Line	Meadowcrest Transmission Line					2,270,000	\$2,270,000
26 Clark Road 16° Water Line Parkerville Road Capricom Road 905,000 \$905,00 27 FM 1882 - 12° Water Line Loop 12° Water Line PM 1882 Along City Limits 12° Loop 21.275,000 \$2.125,00 28 Waterford Oaks Parkerville Road 310,000 \$310,000 \$310,000 \$310,000 \$350,000	24 Clark Road 20" Water Line	16" Water Line	Belt Line Road	Parkerville Road					1,160,000	\$1,160,000
27 M 1882 - 12" Water Line Loop 12" Water Line M 1882 Along City Limits 1,275,000 \$1,275,000 \$1,275,000 \$2,275,000	25 12" Water Line Connector - Windmill Hill Subdivision to US67	12" Water Line	US Highway 67	Windmill Hill Subdivision					790,000	\$790,000
28 Waterford Oaks Water Line 12" Water Line Waterford Oaks Parkervile Road 310,000 \$310,000 29 20 Water Street (south extension) Water Line 12" Water Line Water Street Duncarville Road 30 Bear Creek Road Water Line 12" Water Line Jee Wilson Road Duncarville Road 31 Indicate Creek I." Water Line 12" Water Line Parkerville Road Bear Creek Road 655,000 \$655,000 32 Indicate Creek I." Water Line 12" Water Line Clark Road 962,000 \$655,000 33 Clark Road Water Line 12" Water Line Clark Road 962,000 \$655,000 34 Rocky Brook Stension Water Line 12" Water Line Clark Road 962,000 \$240,000 35 Bear Creek Extension Water Line 12" Water Line Osey Brook Brook Brook Bear Creek Road 1,170,000 \$245,000 36 Bear Creek Extension Water Line 12" Water Line Osey Wilson Road 8.17,000 \$245,000 37 Teach Road Creek Road NA NA 9.17,000 \$247,000	26 Clark Road 16" Water Line	16" Water Line	Parkerville Road	Capricorn Road					905,000	\$905,000
29 Weaver Street (south extension) Water Line 12° Water Line Meaver Street Duncanville Road 250,000 \$25,000	27 FM 1382 - 12" Water Line Loop	12" Water Line	FM 1382	Along City Limits					1,275,000	\$1,275,000
Section Sect	28 Waterford Oaks Water Line	12" Water Line	Waterford Oaks	Parkerville Road					310,000	\$310,000
Parkerville Bear Creek Connector 12° Water Line Parkerville Road Bear Creek Road Ge 5.000 Se 5.000	29 Weaver Street (south extension) Water Line	12" Water Line	Weaver Street	Duncanville Road					250,000	\$250,000
2	30 Bear Creek Road Water Line	12" Water Lines	Joe Wilson Road	Duncanville Rd.					565,000	\$565,000
38 Clark Road Water Line 16" Water Line Capricorn Rd Bear Creek Road 425,000 \$425,000 <t< td=""><td>31 Parkerville/Bear Creek Connector</td><td>12" Water Line</td><td>Parkerville Road</td><td>Bear Creek Road</td><td></td><td></td><td></td><td></td><td>625,000</td><td>\$625,000</td></t<>	31 Parkerville/Bear Creek Connector	12" Water Line	Parkerville Road	Bear Creek Road					625,000	\$625,000
38 Clark Road Water Line 16" Water Line Capricorn Rd Bear Creek Road 425,000 \$425,000 38 Rocky Brook Extension Water Line 12" Water Line Rocky Brook Bear Creek Extension 240,000 \$240,000	32 Little Creek 12" Water Line	12" Water Line	Clark Road	Joe Wilson Road					775,000	\$775,000
34 Rocky Brook Extension Water Line 12" Water Line Rocky Brook Bear Creek Extension 35 Bear Creek Extension Water Line 12" Water Line Joe Wilson Rd \$. Clark Road/Lake Ridge Parkway 660,000 \$60,000 36 5. Clark Road/Lake Ridge Water Line Connector 12" Water Line Clark Road Lake Ridge Parkway 1,170,000 \$1,170,00 37 Texas Plume 12" Water Line 12" Water Line Mt. Leon Lake Ridge Parkway 650,000 \$290,	33 Clark Road Water Line	16" Water Line	Capricorn Rd	Bear Creek Road						\$425,000
35 Bear Creek Extension Water Line 12" Water Line Joe Wilson Rd S. Clark Rd. 36 S. Clark Road/Lake Ridge Water Line Connector 12" Water Line Clark Road Lake Ridge Parkway 1,170,000 \$1,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000 \$290,000	34 Rocky Brook Extension Water Line	12" Water Line	Rocky Brook	Bear Creek Extension						\$240,000
36S. Clark Road/Lake Ridge Water Line Connector12" Water LineClark RoadLake Ridge Parkway1,170,00\$1,170,0037Texas Plume 12" Water Line12" Water LineMt. LebanonLake Ridge Parkway645,00\$645,0038Meadow Crest Pump StationPump Station ReplacementN/AN/A290,00\$290,0039Us 67 Elevated Storage Tank ReplacementSeplace Elevated Storage Tank420,000\$4420,00\$4420,0040Parkerville Rd. 24" water Line Extension24" Water LineClark RdParkerville Elevated Storage Tank300,000\$300,0042Parkerville Road/ Cockrell Hill Road Water Line Loop south of Bear Creek Road12" Water Line1,000\$1,000,00\$1,000,0042Parkerville Road/ Cockrell Hill Road Water Line Loop south of Bear Creek Road12" Water LineParkerville Road @ Duncanville RdCockrell Hill Rd @ Bear Creek Rd1,015,00\$1,015,0043S. Clark Rd./US67 Water Line Loop12" Water Line5. Clark Road @ Bear CreekUS Highway 671,840,00\$1,840,0045Clark Rd./US67 Water Line12" Water Line9arkerville Rd. @ US67Massey Lane530,00\$300,0045Kipswood Ground Storage Tank RehabReplace cooling tower system and repaint48ear CreekWassey Lane530,00\$300,00	35 Bear Creek Extension Water Line	12" Water Line	Joe Wilson Rd	S. Clark Rd.					-,	\$660,000
37Texas Plume 12" Water Line12" Water LineMt. LebanonLake Ridge Parkway645,000\$645,00038Meadow Crest Pump StationPump Station ReplacementN/AN/AN/A39US 67 Elevated Storage Tank ReplacementReplace Elevated Storage Tank4,20,000\$4,20,00040Parkerville Rd. 24" water Line Extension24" Water LineClark RdParkerville Elevated Storage Tank300,000\$300,00041Jew Wilson Road Water Line Loop south of Bear Creek Road12" Water LineJew Wilson Road at Bear Creek RoadBear Creek Subdivision1,080,000\$1,080,00042Parkerville Road/ Cockrell Hill Road Water Line12" Water LineParkerville Road @ Duncanville Rd.Cockrell Hill Rd @ Bear Creek Rd.1,015,000\$1,015,00045Cedar Hill Road 12" Water Line12" Water LineS. Clark Road @ Bear CreekUS Highway 671,840,000\$1,840,00045Kingswood Ground Storage Tank RehabReplace cooling tower system and repaintParkerville Rd. @ US67Massey Lane300,000\$300,000	36 S. Clark Road/Lake Ridge Water Line Connector	12" Water Line	Clark Road	Lake Ridge Parkway						\$1,170,000
38Meadow Crest Pump StationPump Station ReplacementN/AN/AN/A39Us 67 Elevated Storage Tank ReplacementReplace Elevated Storage Tank4,420,000\$4,420,00040Parkerville Rd. 24" water Line Extension24" Water LineClark RdParkerville Elevated Storage Tank300,000\$300,00040Parkerville Road Water Line Loop south of Bear Creek Road12" Water LineJoe Wilson Road at Bear Creek RoadBear Creek Subdivision1,080,000\$1,080,00042Parkerville Road/ Cockrell Hill Road Water Line12" Water LineParkerville Road @ Duncanville Rd.Cockrell Hill Rd @ Bear Creek Rd.1,015,000\$1,015,00043S. Clark Rd./US67 Water Line Loop12" Water LineS. Clark Road @ Bear CreekUS Highway 671,840,000\$1,840,00045Vedar Hill Road 12" Water Line12" Water LineParkerville Road @ US67Massey Lane530,000\$300,00045Kingswood Ground Storage Tank RehabReplace cooling tower system and repaint530,000\$300,000	37 Texas Plume 12" Water Line									\$645,000
39US 67 Elevated Storage Tank ReplacementReplace Elevated Storage Tank4,420,000\$4,420,00040Parkerville Rd. 24" water Line Extension24" Water LineClark RdParkerville Elevated Storage Tank300,000\$300,00041Joe Wilson Road Water Line Loop south of Bear Creek Road12" Water LineJoe Wilson Road at Bear Creek RoadBear Creek Subdivision1,085,00042Parkerville Road/ Cockrell Hill Road Water Line12" Water LineParkerville Road @ Duncanville Rd.Cockrell Hill Rd @ Bear Creek Rd.1,015,00043S. Clark Rd./US67 Water Line Loop12" Water LineS. Clark Road @ Bear CreekUS Highway 671,840,00045Vedar Hill Road 12" Water Line12" Water LineParkerville Road @ US67Massey Lane45Kingswood Ground Storage Tank RehabReplace cooling tower system and repaint	38 Meadow Crest Pump Station	Pump Station Replacement	N/A	N/A						\$290,000
40 Parkerville Rd. 24" water Line Extension 24" Water Line 24" water Line Extension 24" Water Line 300,000 \$300	39 US 67 Elevated Storage Tank Replacement	Replace Elevated Storage Tank								\$4,420,000
41 Joe Wilson Road Water Line Loop south of Bear Creek Road 12" Water Line Joe Wilson Road at Bear Creek Road Bear Creek Road © Duncanville Rd. Cockrell Hill Road Water Line Loop 12" Water Line 12" Water Line Parkerville Road © Duncanville Rd. Cockrell Hill Rod © Bear Creek Rd. 1,015,000 \$1,080,000 \$1,080,000 \$1,015,0	40 Parkerville Rd. 24" water Line Extension	24" Water Line	Clark Rd	Parkerville Elevated Storage Tank						\$300,000
Parkerville Road/ Cockrell Hill Road Water Line 12" Water Line 130,000 1530,000 15300,000	41 Joe Wilson Road Water Line Loop south of Bear Creek Road	12" Water Line	Joe Wilson Road at Bear Creek Roa	d Bear Creek Subdivision					· · · · · · · · · · · · · · · · · · ·	\$1,080,000
43 S. Clark Rd./US67 Water Line Loop 12" Water Line S. Clark Road @ Bear Creek US Highway 67 44 Cedar Hill Road 12" Water Line 12" Water Line Parkerville Rd. @ US67 Massey Lane 530,000 45 Kingswood Ground Storage Tank Rehab Replace cooling tower system and repaint 300,000	42 Parkerville Road/ Cockrell Hill Road Water Line	12" Water Line								\$1,015,000
44 Cedar Hill Road 12" Water Line 12" Water Line Parkerville Rd. @ US67 Massey Lane 530,000 \$530,000 \$300,000 \$	43 S. Clark Rd./US67 Water Line Loop									\$1,840,000
45 Kingswood Ground Storage Tank Rehab Replace cooling tower system and repaint 300,000 \$300,000	44 Cedar Hill Road 12" Water Line									\$530,000
Kingswood Ground Storage Talik Kenab Kepace cooling tower system and repaint									•	\$300,000
	46 PS Power Generators	Generators for water pump stations							2,000,000	\$2,000,000

CITY OF CEDAR HILL WATRE AND WASTEWATER CIP WORKSHOP

PROJECT NAME: FYE 15: FYE 16: FYE 17: FUTURE: TOTAL TO
PROJECT NAME: ACTIVITY FYE 17 FUTURE TOTAL TO
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SEWER:

CURRENT PROPOSED PLAN:

CURRENT PROPOSED PLAN:										
48 Lake Ridge 10" Lift Station & Force Main (Phase II)	Lake Ridge Lift Station and Force Main	Lake Ridge	Lake Ridge						3,800,000	\$3,800,000
49 Bee Branch Interceptor (TRA)	Relocate a 21" Interceptor	Joe Wilson Road	Bee Branch	250,000						\$250,000
50 Sanitary Sewer Lift Stations Upgrade	Rehabilitate Existing Sewer Lift Stations			130,000						\$130,000
51 Sub-Basin RO-7 Collector	12" Sewer Line	Cedar Hill Road	Parkerville Road	(650,000)					650,000	\$0
52 Videoamera/and Monitoring System	To televise the existing sanitary sewer & storm sewer pig	pes		125,000						\$125,000
53 Citywide I & I Rehabilitation	Rehab Existing Sewer Lines	Various	Various	300,000	250,000	250,000	250,000	250,000		\$1,300,000
54 Cedar Hill Relief Line (Shady Brook)	18" Relief	North of Pleasant Run	North of Pleasant Run		150,000					\$150,000
55 Sub-Basin RO-2 Interceptor	Various Sizes Sewer Lines	Joe Wilson Road	Red Oak Interceptor		1,410,000					\$1,410,000
56 Sub-Basin TCN-1 Collector	10" Sewer Line	Northwest Cedar Hill City Limits	FM1382			490,000				\$490,000
57 Stewart Branch Collector (Phase I)	10" & 12" Collectors	Northern City Limits							780,000	\$780,000
58 Bear Creek Interceptor	Various Sizes Sewer Lines	Duncanville Road	Bear Creek Road						1,240,000	\$1,240,000
59 South Sub-Basin RO - 2 Interceptor	12" & 15" Sewer Lines	Cedar Hill Rd.	Joe Wilson Rd.						1,680,000	\$1,680,000
60 RO-8 Sub-basin Collector, Lift Station & Force Main	Lift Station, 8" Force Main, 8" Sewer Line	US67	Cedar Hill Road						1,275,000	\$1,275,000
61 Baggett Branch Interceptor Extension	10" & 12" Sewers, 10" Force Main, Expand Lift Station	Lake Ridge II & III Lift Stations	Baggett Branch Lift Station						1,640,000	\$1,640,000
62 Sub-Basin RO-3 Interceptor	Various Sizes Sewer Lines	Clark Road	Little Creek						645,000	\$645,000
63 Clark Road Interceptor Relief	12"/24" Relief Sewer	Clark Road	Little Creek						1,165,000	\$1,165,000
64 Bear Creek Interceptor Extension	Various Sizes Sewer Lines	Highlands Lift Station	Duncanville Road						2,060,000	\$2,060,000
65 Duncanville Road Interceptor	10"/12"/15" Sewer Lines	Duncanville Road	North of Belt Line						885,000	\$885,000
66 Stewart Branch Collector (Phase II)	10" & 12" Sewer Lines	Northern City Limits							740,000	\$740,000
67 Sub-Basin TCN-1 Additional Collector	10" Sewer Line	Northwest Cedar Hill City Limits	FM1382						665,000	\$665,000
68 Belt Line Road Sanitary Sewer Improvements	Expand LS, 15" Sewer Line	Shady Ridge Drive	Belt Line LS						860,000	\$860,000
69 Lakeview Improvements	Expand LS, 10" Sewer Line	Lakeview							960,000	\$960,000
70 FM1382 Improvements	Expand LS, 16" Force Main	FM1382 Lift Station	30" Force Main						710,000	\$710,000
71 RO -2 Interceptor Sub-basin Collector, Lift Station and Force Main	LS, Force Main, 10" Sewer Line	Southeast Cedar Hill	Southeast Cedar Hill						1,560,000	\$1,560,000
72 Lake Ridge Collectors	10" Sewer Line	Existing Lift Station	East of Briarwood						330,000	\$330,000
73 Sub-Basin RO-2 Collector	10" Sewer Line	Tar Road	Johnson Rd						490,000	\$490,000
74 Sub-basin RO-8 Collector	8" Sewer Lines	US67	Cedar Hill Road						540,000	\$540,000
75 Sub-basin TCN-2 Collector	8" Sewer Lines	Sherwood Ct.	Northwood University						230,000	\$230,000
76 24" Red Oak Interceptor Relief	24" Relief Main	Capricorn Street	Clark Rd						540,000	\$540,000

Water & Sewer Fund \$2,470,000 \$5,435,000 \$2,940,000 \$4,195,000 \$250,000 \$63,822,000 \$74,172,000

ANNUAL REQUIREMENTS TO AMORTIZE DEBT

As of September 30, 2012

FISCAL			
PERIOD	PRINCIPAL	INTEREST	TOTAL
	X 1500 400 0		
2012-13	705,000	501,497.52	1,206,497.52
2013-14	740,000	472,021.26	1,212,021.26
2014-15	765,000	439,241.26	1,204,241.26
2015-16	805,000	405,072.52	1,210,072.52
2016-17	845,000	368,115.02	1,213,115.02
2017-18	885,000	328,941.26	1,213,941.26
2018-19	920,000	289,118.76	1,209,118.76
2019-20	655,000	247,146.26	902,146.26
2020-21	680,000	218,806.26	898,806.26
2021-22	720,000	188,958.76	908,958.76
2022-23	740,000	156,376.26	896,376.26
2023-24	780,000	122,838.76	902,838.76
2024-25	590,000	87,001.26	677,001.26
2025-26	620,000	59,770.00	679,770.00
2026-27	420,000	30,675.00	450,675.00
2027-28	215,000	10,750.00	225,750.00
TOTAL	\$11,085,000	\$3,926,330.16	\$15,011,330.16