



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	USEPA GHD Asset Management Training Workshops 2006																	
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3																		
4																		
5																		
6	What is the State of My Assets?																	
7	Asset Register and Hierarchy					Installed Date	Asset Class	Original Cost	Estimated Effective Life	Condition Rating	Effect Life Adjust Factor	Calc Residual Physical Life	Judgment Resid Life	% Asset Consumed (Physical)	Annual Dep	Accum Dep	Current Performance	Current Reliability
8	Current Year	2006				Year		\$	Years	1 to 10				\$	\$			
9	Level 1	Level 2	Level 3	Level 4	Level 5	Act or Est	Tab A	Act or Est	Calculated	Tab A	Tab B	Calculated		Calculated	Calculated	Tab A	Tab A	
10	Sanitation System																	
11	Disposal System																	
12	Treatment Plants																	
13	Collection Systems																	
14	Sewer Mains																	
15	Pump Station																	
16	Incoming Sewer																	
17						1963	3	\$ 1,725	100	4	0%	57		43%	\$ 17	\$ 742	1	1
18						1963	3	\$ 340	100	3	0%	57		43%	\$ 3	\$ 146	1	1
19						1986	5	\$ 442	30	5	0%	10		67%	\$ 15	\$ 295	1	1
20	Incoming Power																	
21						2006	4	\$ -	40	1	0%	40		0%	\$ -	\$ -	4	2
22						2006	7	\$ -	35	1	0%	35		0%	\$ -	\$ -	1	1
23	Control system																	
24						1985	8	\$ 85	25	4	0%	4		84%	\$ 3	\$ 71	1	1
25						1983	8	\$ 8,600	25	4	0%	2		92%	\$ 344	\$ 7,912	1	1
26						1978	8	\$ 425	25	3	20%	2		92%	\$ 17	\$ 476	1	1
27	Land & Improvemnts.																	
28						1950	10	\$ 630	300	1	0%	244		19%	\$ 2	\$ 118	1	1
29						1963	1	\$ 12,500	75	5	0%	32		57%	\$ 167	\$ 7,167	1	1
30						2000	1	\$ 595	75	4	0%	69		8%	\$ 8	\$ 48	1	1
31						1963	1	\$ 1,360	75	4	0%	32		57%	\$ 18	\$ 780	1	1
32	Sub Structure																	
33						1963	1	\$ 30,600	75	3	0%	32		57%	\$ 408	\$ 17,544	1	1
34						1963	1	\$ 4,250	75	3	0%	32		57%	\$ 57	\$ 2,437	1	1
35						1963	1	\$ 6,800	75	3	0%	32		57%	\$ 91	\$ 3,899	1	1
36						1963	9	\$ 4,250	60	3	0%	17		72%	\$ 71	\$ 3,046	2	2
37						1963	1	\$ 5,100	75	2	0%	32		57%	\$ 68	\$ 2,924	1	1
38						1963	1	\$ 850	75	3	0%	32		57%	\$ 11	\$ 487	1	1
39						1963	4	\$ 595	40	3	0%	-3	1	98%	\$ 15	\$ 640	3	3
40	Pumps																	
41						2006	6	\$ 12,560	35	1	0%	35		0%	\$ 359	\$ -	2	1
42						2006	4	\$ 29,750	40	1	0%	40		0%	\$ 744	\$ -	3	3
43						2006	6	\$ 32,500	35	1	0%	35		0%	\$ 929	\$ -	4	5
44	Electrics																	
45						1963	7	\$ 1,275	35	4	0%	-8	1	97%	\$ 36	\$ 1,566	2	2
46						1963	7	\$ 2,705	35	4	0%	-8	1	97%	\$ 77	\$ 3,323	2	2
47						1963	7	\$ 1,445	35	5	0%	-8	1	97%	\$ 41	\$ 1,775	2	2
48						2006	7	\$ 765	35	0	0%	35		0%	\$ 22	\$ -	2	2
49						1963	7	\$ 595	35	4	0%	-8	1	97%	\$ 17	\$ 731	2	2
50	Force Main																	
51						1963	2	\$ 2,380	60	4	0%	17		72%	\$ 40	\$ 1,706	1	1
52						1978	5	\$ 1,105	30	5	-10%	-1	1	97%	\$ 37	\$ 1,031	1	1
53	Superstructure																	
54						1963	9	\$ 3,400	60	3	0%	17		72%	\$ 57	\$ 2,437	2	2
55						1963	9	\$ 1,445	60	5	0%	17		72%	\$ 24	\$ 1,036	2	2
56						1963	9	\$ 408	60	4	0%	17		72%	\$ 7	\$ 292	2	2
57						1963	9	\$ 2,040	60	4	0%	17		72%	\$ 34	\$ 1,462	2	2
58								\$ 171,520						\$ 3,736	\$ 63,972			
59																		
60																		

	A	B	C	D	E	S	T	U	V	W	X
1											
2	USEPA GHD Asset Management Training Work										
3											
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5											
6	Asset Register and Hierarchy					Required LOS?		Which Are Most "Critical"?			
7						Current LOS?	Minimum Condition	Backup Reduction (Redundancy)	Probability of Failure	Consequence of Failure	BRE Rating
8	Current Year	2006					%	Rating	1 to 10		
9	Level 1	Level 2	Level 3	Level 4	Level 5		Tab A	Tab D	Calculated	Tab C	Calculated
10	Sanitation System										
11	Disposal System										
12	Treatment Plants										
13	Collection Systems										
14	Sewer Mains										
15	Pump Station										
16	Incoming Sewer										
17	Pipes										
18	Manhole										
19	Influent Gate Valve										
20	Incoming Power										
21	Pole & Transformer										
22	Connection										
23	Control system										
24	Incoming Telephone										
25	PLC										
26	Manual controls										
27	Land & Improvemnts.										
28	Land										
29	Access Road										
30	Landscaping										
31	Security fence										
32	Sub Structure										
33	Cassion Outer										
34	Upper Floor										
35	Dry well										
36	Landings and Stairs										
37	Wet Well										
38	Shaped floor										
39	Sump pump										
40	Pumps										
41	Drive shafts										
42	Pumps										
43	Motors										
44	Electrics										
45	Meters & Breakers										
46	Switchboard										
47	Pump Starters										
48	Emergency connect.										
49	Alarms / General L& P.										
50	Force Main										
51	Pipes										
52	Valves(check& gate)										
53	Superstructure										
54	Walls										
55	Roof										
56	Roller door										
57	Gantry Crane										
58											
59											
60											

	A	B	C	D	E	Y	Z	AA	AB	AC	AD
1											
2	USEPA GHD Asset Management Training Work										
3											
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5											
6	What Strategies?										
7	Asset Register and Hierarchy					Renewal Strategy	Maint Strategy	Future Maintenance % Change	Cost of Renewal Option	Recommended Renewal Date	Present Value of Renewal Cost
8	Current	2006					%	\$			
9	Level 1	Level 2	Level 3	Level 4	Level 5	Tab F	Tab E	Estimate	Calculated	2.50%	
10	Sanitation System										
11	Disposal System										
12	Treatment Plants										
13	Collection Systems										
14	Sewer Mains										
15	Pump Station										
16	Incoming Sewer										
17				Pipes		2	25%	\$ -	2063	\$ -	
18				Manhole		5	0%	\$ 2,200	2063	\$ 538	
19				Influent Gate Valve		7	CBM	\$ 2,600	2016	\$ 2,031	
20	Incoming Power										
21				Pole & Transformer		1	-25%	\$ -	2046	\$ -	
22				Connection		1	0%	\$ -	2041	\$ -	
23	Control system										
24				Incoming Telephone		1	RTF/CM	\$ 500	2010	\$ 453	
25				PLC		8	RTF/CM	\$ 5,000	2008	\$ 4,759	
26				Manual controls		7	CBM	\$ 2,500	2008	\$ 2,380	
27	Land & Improvemnts.										
28				Land		1	CBM	\$ -	2250	\$ -	
29				Access Road		2	CBM	\$ 8,500	2038	\$ 3,857	
30				Landscaping		7	CBM	\$ 3,500	2075	\$ 637	
31				Security fence		5	CBM	\$ 8,000	2038	\$ 3,630	
32	Sub Structure										
33				Cassion Outer		2	CBM	\$ 180,000	2038	\$ 81,679	
34				Upper Floor		2	CBM	\$ 25,000	2038	\$ 11,344	
35				Dry well		2	CBM	\$ 40,000	2038	\$ 18,151	
36				Landings and Stairs		2	CBM	\$ 25,000	2023	\$ 16,430	
37				Wet Well		2	CBM	\$ 30,000	2038	\$ 13,613	
38				Shaped floor		2	CBM	\$ 5,000	2038	\$ 2,269	
39				Sump pump		8	CBM	\$ 3,500	2007	\$ 3,415	
40	Pumps										
41				Drive shafts		TBD	TBD	\$ 35,000	2041	\$ 14,748	
42				Pumps		TBD	TBD	\$ 35,000	2046	\$ 13,035	
43				Motors		TBD	TBD	\$ 35,000	2041	\$ 14,748	
44	Electrics										
45				Meters & Breakers		8	CBM	\$ 7,500	2007	\$ 7,317	
46				Switchboard		8	CBM	\$ 34,000	2007	\$ 33,171	
47				Pump Starters		7	CBM	\$ 8,500	2007	\$ 8,293	
48				Emergency connect.		8	CBM	\$ 4,500	2041	\$ 1,896	
49				Alarms / General L& P.		8	CBM	\$ 3,500	2007	\$ 3,415	
50	Force Main										
51				Pipes		5	PM	\$ 14,000	2023	\$ 9,201	
52				Valves(check& gate)		7	CBM	\$ 6,500	2007	\$ 6,341	
53	Superstructure										
54				Walls		5	CBM	\$ 20,000	2023	\$ 13,144	
55				Roof		6	CBM	\$ 8,500	2023	\$ 5,586	
56				Roller door		7	CBM	\$ 2,400	2023	\$ 1,577	
57				Gantry Crane		5	CBM	\$ 12,000	2023	\$ 7,886	
58								Renewal	\$ 567,700		
59								Replace	\$ 510,000	\$ 305,544	
60											