

Newport MUD - Capital Improvement Plan																	
LAN Job No. 120-12151-000-100																	
As of 3/6/23, CIP in 2022\$																	
Item	Status (as of 3/18/24)	Amount	\$5,500,000	\$4,225,000	\$7,500,000	\$20,840,000	Projected Year when Funds will be needed										
			Bond Issue #4 2016	Bond Issue #5 2018	Bond Issue #6 2019	Actual Bond Issue #7 2021/2022	Bond Issue 8 2022	2023	2024	2025	2026	2027	2028	2029	2030		
DISTRICT IMPROVEMENTS & REHABILITATION																	
1	Surface Water Plant (including GW Well @ SWTP), page 9	Adjustments due to increased construction costs, projects no longer applicable due to Purifics filters and priority changes.	\$50,000	\$0	\$470,000	\$7,820,000	\$0	\$4,000,000	\$0	\$0	\$1,800,000	\$120,000	\$0	\$0	\$350,000		
2	Ground Water Plants, page 10	Adjustments due to increased construction costs and priority changes.	\$0	\$0	\$15,000	\$240,000	\$0	\$0	\$0	\$0	\$110,000	\$600,000	\$0	\$0	\$160,000		
3	Water Distribution System, page 3 (includes SDH Bridge Relo)	Adjustments due to increased construction costs. Additional needs identified. TxDOT requirement for SDH.	\$0	\$0	\$0	\$970,000	\$0	\$550,000	\$1,240,000	\$1,620,000	\$1,300,000	\$1,350,000	\$1,130,000	\$1,140,000	\$1,420,000		
4	Sanitary Sewer System, page 4 (includes SDH Bridge Relo)	Adjustments due to increased construction costs. Evaluations show ~40-50% of system needs rehab. Lines deeper than originally assumed. TxDOT requirement for SDH.	\$0	\$1,142,900	\$765,417	\$2,720,000	\$0	\$2,000,000	\$0	\$950,000	\$1,020,000	\$1,100,000	\$1,080,000	\$1,030,000	\$1,050,000		
5	Lift Station & Force Mains, page 5 & 6	Adjustments due to increased construction costs and priority changes.	\$0	\$0	\$110,000	\$440,000	\$0	\$0	\$352,000	\$100,000	\$100,000	\$265,000	\$0	\$80,000	\$90,000		
6	Wastewater Treatment Plant, page 7 & 8 (includes new Berm Costs)	Adjustments due to increased construction costs and increase in scope of work required by HCFCD for WWTP berm.	\$395,000	\$0	\$819,583	\$500,000	\$0	\$0	\$0	\$7,200,000	\$16,500,000	\$17,840,000	\$0	\$0	\$3,450,000		
7	Detention Ponds, page 11	District Owned	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
8	Administration Building	District Owned	\$250,000	\$0	\$0	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
9	Water Line Ext. Phase 1 to serve Compass Tr Defined Area	District Commitment	\$190,000						\$190,000								
10	Water Line Ext. Phase 2 to serve Compass Tr Defined Area	District Commitment	\$270,000							\$270,000							
11	Force Main Phase 1 to serve Compass Tr Defined Area	District Commitment	\$470,000							\$470,000							
12	Force Main Phase 2 to serve Compass Tr Defined Area	District Commitment	\$960,000							\$960,000							
13	Lift Station to serve Compass Tr. Defined Area	District Commitment	\$860,000							\$860,000							
DISTRICT ITEMS TOTAL			\$445,000	\$1,142,900	\$2,180,000	\$12,940,000	\$0	\$6,550,000	\$3,112,000	\$11,100,000	\$20,830,000	\$21,275,000	\$2,210,000	\$2,250,000	\$6,520,000		
INFRASTRUCTURE EXPANSION																	
1	Newport Court, Developer Reimbursement (Compass)	Bond Issue #6	\$1,147,442			\$1,147,442											
2	Newport Section 4, Partial Replat 1, Dev. Reim. (Katt)	Bond Issue #6	\$360,516			\$360,516											
3	Newport Section 4, PR 4 (DH Builders)	Future Reimbursement	\$220,000						\$220,000								
4	Newport Section 6, Partial Replat 1, Dev. Reim. (Rochester)	Bond Issue #7	\$330,596			\$330,596											
5	Newport Section 7, PR1, PR3, DP Developer Reim. (Lennar)	Bond Issue #7	\$1,528,874			\$1,528,874											
6	Newport Section 7, PR4, PR5 Developer Reim. (Lennar)	Bond Issue #8	\$1,262,309						\$1,262,309								
7	Newport Sec 8, PR 3 & 4 Clearing & Grubbing Dev. Reim. (Lennar)	Bond Issue #6	\$39,588			\$39,588											
8	Newport Section 8, Partial Replat 3, Dev. Reim. (Lennar)	Bond Issue #6	\$322,630			\$322,630											
9	Newport Section 8, Partial Replat 4, Dev. Reim.(Lennar)	Bond Issue #6	\$1,016,250			\$1,016,250											
10	Newport Section 9, Dev. Reim. (Rochester)	Bond Issue #6	\$962,578			\$962,578											
11	Newport Section 10, Partial Replat 1 Dev. Reim. (Rochester)	Bond Issue #8	\$546,612						\$546,612								
12	Newport Sec 4, Reserve C (Area 7), 3.42 Acres		\$0														
13	Newport Sec 4, Reserve D (Area 8), 12.35 Acres		\$0														
14	Country Club Villas of NP (Area 12), 8.28 Acres		\$0														
15	Country Club Villas of NP (Area 13), 2.12 Acres, 1.13 ac Dev		\$0														
16	HOA Country Club Tr (Area 16) 3.04 Acres	NPBOD will not offer any future developer reimbursement. No Exist. Developer Agmt. Therefore	\$0														

Item	Status (as of 3/18/24)	Amount	\$5,500,000	\$4,225,000	\$7,500,000	\$20,840,000	Projected Year when Funds will be needed									
			Bond Issue #4	Bond Issue #5	Bond Issue #6	Actual Bond Issue #7	Bond Issue 8									
			2016	2018	2019	2021/2022	2022	2023	2024	2025	2026	2027	2028	2029	2030	
17 Crosby Development Reserve A (Area 20), 4.87 Acres	est. amt. removed from CIP.	\$0														
18 Newport Villages (Area 21) 15.31 Acres - Rampart		\$0														
19 187.7-acre Compass Tract (in Defined Area) - Dev. Reimb.	In Defined Area	\$0														
DEVELOPER CONTRIBUTION ITEMS TOTALS		\$7,737,395	\$0	\$0	\$3,849,004	\$1,859,471	\$0	\$1,808,921	\$220,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contingencies																
1 Contingencies (10% of District Construction Costs)					\$218,000	\$1,294,000	\$0	\$655,000	\$311,200	\$1,110,000	\$2,083,000	\$2,127,500	\$221,000	\$225,000	\$652,000	
Contingencies Total			\$0	\$0	\$218,000	\$1,294,000	\$0	\$655,000	\$311,200	\$1,110,000	\$2,083,000	\$2,127,500	\$221,000	\$225,000	\$652,000	
Engineering																
1 Developer Engineering						\$476,560		\$640,284								
2 Engineering & Surveying (22% of Construction Costs)					\$479,600	\$2,846,800	\$0	\$1,441,000	\$684,640	\$2,442,000	\$4,582,600	\$4,680,500	\$486,200	\$495,000	\$1,434,400	
Engineering Total		\$0	\$0	\$0	\$479,600	\$2,846,800	\$0	\$2,081,284	\$684,640	\$2,442,000	\$4,582,600	\$4,680,500	\$486,200	\$495,000	\$1,434,400	
CONSTRUCTION COSTS			\$445,000	\$1,142,900	\$6,726,604	\$18,940,271	\$0	\$11,095,205	\$4,327,840	\$14,652,000	\$27,495,600	\$28,083,000	\$2,917,200	\$2,970,000	\$8,606,400	
IUOE Funds (\$4,500,000)	\$4,300,000 Available															
Insurance and FEMA Reimbursement Funds	\$2,173,911 Available															
NON-CONSTRUCTION COSTS (Normally 15 % of Total BIR)	15.0%		\$0	\$0	\$773,396	\$1,899,730	\$0	\$1,334,795	\$763,736	\$2,585,647	\$4,852,165	\$4,955,824	\$514,800	\$524,118	\$1,518,776	
TOTAL BOND ISSUE AMOUNT			\$445,000	\$1,142,900	\$7,500,000	\$20,840,000	\$0	\$12,430,000	\$5,091,576	\$17,237,647	\$32,347,765	\$33,038,824	\$3,432,000	\$3,494,118	\$10,125,176	
WSD Bond Capacity																
Previous WSD Bond Capacity					\$15,590,000	\$8,090,000	\$40,210,000	\$40,210,000	\$27,780,000	\$22,688,423	\$5,450,776	-\$26,896,988	-\$59,935,812	-\$63,367,812	-\$66,861,930	
2020 Bond Authorization Amount					\$0	\$52,960,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Proposed Bond Issues during the year					\$7,500,000	\$20,840,000	\$0	\$12,430,000	\$5,091,576	\$17,237,647	\$32,347,765	\$33,038,824	\$3,432,000	\$3,494,118	\$10,125,176	
Remaining WSD Bond Capacity Balance					\$8,090,000	\$40,210,000	\$40,210,000	\$27,780,000	\$22,688,423	\$5,450,776	-\$26,896,988	-\$59,935,812	-\$63,367,812	-\$66,861,930	-\$76,987,106	
Inflation Adjustments																
Annual Inflation Values										3.0%	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%
ANNUAL BIR INFLATION VALUES (3% per year from 2024-2026 and 2% per year from 2027-2030)										\$5,401,653	\$18,836,042	\$38,195,513	\$39,791,729	\$4,216,146	\$4,378,306	\$12,941,105
WSD Bond Capacity (with Inflation)																
Previous WSD Bond Capacity					\$15,590,000	\$8,090,000	\$40,210,000	\$40,210,000	\$27,780,000	\$22,378,346	\$3,542,304	-\$34,653,209	-\$74,444,938	-\$78,661,085	-\$83,039,391	
2020 Bond Authorization Amount					\$0	\$52,960,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Proposed Bond Issues during the year					\$7,500,000	\$20,840,000	\$0	\$12,430,000	\$5,401,653	\$18,836,042	\$38,195,513	\$39,791,729	\$4,216,146	\$4,378,306	\$12,941,105	
Remaining WSD Bond Capacity Balance					\$8,090,000	\$40,210,000	\$40,210,000	\$27,780,000	\$22,378,346	\$3,542,304	-\$34,653,209	-\$74,444,938	-\$78,661,085	-\$83,039,391	-\$95,980,496	

Newport MUD																			
Water Distribution System - Inspection, Evaluation and Rehabilitation																			
As of 3/6/23																			
No.	Subdivision	Status (as of 3/18/24)	Year	Pipe	Rehab	Bond Authorization Prior to 2020			Bond Funds from May 2020 Bond Election				Year Anticipated						
						Bond Issue #4	Bond Issue #5	Bond Issue #6	Bond Issue #7	Bond Issue #8									
						\$5.5M	\$4.225M	\$7.5M	\$20.84M	Proposed	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Country Club Villas of Newport Section 1 & 2		1982		\$0														
2	Deerpointe Section 1		1978	AC	\$0														
3	Newport Country Club Estates Section 1		1979	AC	\$0														
4	Newport Country Club Golf Club		1972	AC	\$0														
5	Newport Court (Defined Area)		2016	PVC	\$0														
6	Newport Section 1	\$600,000 of BI7 Funds Reallocated to SDH Utility Reloc	1972	AC	\$2,680,000							\$550,000	\$510,000	\$510,000	\$510,000	\$510,000	\$600,000		
7	Newport Section 2		1972	AC	\$0														
8	Newport Section 3	Adjustment due to increased construction costs	1972	AC	\$1,520,000							\$460,000	\$490,000		\$570,000				
9	Newport Section 4	Adjustment due to increased construction costs	1972	AC	\$890,000											\$890,000			
10	Newport Section 4, Partial Replat 1		2016	PVC	\$0														
11	Newport Section 4, PR 4 (DH Builders)		2017	PVC	\$0														
12	Newport Section 5	Adjustment due to increased construction costs, Additional needs identified.	1972	AC	\$1,440,000							\$530,000	\$370,000	\$540,000					
13	Newport Section 6	Adjustment due to increased construction costs	1972	AC	\$900,000										\$530,000	\$370,000			
14	Newport Section 6, Partial Replat 1		2019	PVC	\$0														
15	Newport Section 7		1972	AC	\$0														
16	Newport Sec 7, Partial Replat No. 1		2018	PVC	\$0														
17	Newport Sec 7, Partial Replat No. 3		2019	PVC	\$0														
18	Newport Sec 7, Partial Replat No. 4		2019	PVC	\$0														
19	Newport Sec 7, Partial Replat No. 5		2020	PVC	\$0														
20	Newport Section 8	Adjustment due to increased construction costs	1978	AC	\$570,000												\$570,000		
21	Newport Section 8, Partial Replat 1		2015	PVC	\$0														
22	Newport Section 8, Partial Replat 3		2018	PVC	\$0														
23	Newport Section 8, Partial Replat 4		2017	PVC	\$0														
24	Newport Section 9		2017	PVC	\$0														
25	Newport Section 10		1974	AC	\$0														
26	Newport Section 10, Partial Replat 1		2019	PVC	\$0														
27	Newport Section 11 (portion of Section 6 Res B)		2006 & 2010		\$0														
28	Newport Section 12 (Newport Villas)		2016	PVC	\$0														
29	Oaks at Newport Section 1		1981		\$0														
30	Patio Woods		1975	AC	\$0														
31	Seven Oaks North		2010	PVC	\$0														
32	Seven Oaks South		2014	PVC	\$0														
33	Union of Operating Engineers Training Fac.		2019	PVC	\$0														
34	Villas at Newport		2014	PVC	\$0														
35	Water Meter Replacement Program	Est. 20 year battery life	2018		\$1,500,000														
36	S. Diamondhead Utility Relocation (Water)	Construction Start 2023	2023							\$970,000									
37	Valve Survey and Replacement Program (Replace approximately 50 valves per year)	\$120,000 of BI7 Funds Reallocated to SDH Utility Reloc								\$0	\$0	\$0	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000		
Water Distribution Projects Total						\$0	\$0	\$0	\$0	\$970,000	\$0	\$550,000	\$1,240,000	\$1,620,000	\$1,300,000	\$1,350,000	\$1,130,000	\$1,140,000	\$1,420,000
Total Bond Issue Requirement (1)										\$1,506,353	\$0	\$854,118	\$1,925,647	\$2,515,765	\$2,018,824	\$2,096,471	\$1,754,824	\$1,770,353	\$2,205,176

(1) Total Bond Issue Requirement = Construction Costs + Contingencies + Engineering + Bond Issuance Costs

Newport MUD			Completed																						
Lift Stations			No longer applicable																						
As of 3/6/23			Further investigation																						
Original Prepared by : Kelly Shipley, P.E.																									
Updated by: Abigail Stanhouse, P.E.																									
Surface inspection performed on all lift stations in 2019										BA Prior to 2020	Bond Funds from May 2020 Bond Election					Year Anticipated									
No.	Project	Description and Information	Justification	When Needed (Year)	Conceptual Cost (2019S)	Conceptual Cost (2022S)	LAN Project Number	Status (as of 3/18/24)	Bid Amount	Operations Funds	Bond Issue #6 \$7.5M	Bond Issue #7 \$20.84M	Bond Issue #8	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
32	Lift Station #5 - 1310-1/2 Stem Way	Riser Pipes - Replace	Signs of corrosion	2026	\$25,000	\$30,000					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0
33	Lift Station #5 - 1310-1/2 Stem Way	Valves/ Yard Piping - Replace	Signs of corrosion	2026	\$15,000	\$20,000					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0	\$0
34	Lift Station #5 - 1310-1/2 Stem Way	MCC - Replace	Age (1974). Replace Prior to SCADA. Provide more site lighting	2021	\$80,000	\$80,000			Coordinating with operator to replace in Q1 2024		\$0	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35	Lift Station #5 - 1310-1/2 Stem Way	Misc. - Install Fence	Existing wooden fence is not 8' tall, does not have barbed wire, does not have a 16 ft wide access gate. Poor condition. Space within the fencing is limited and if possible relocate fence to provide more maneuverability.	2021	\$10,000	\$10,000			Coordinating with operator to replace in Q1 2024		\$0	\$0	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lift Station #5 Total											\$0	\$0	\$90,000	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0		
36	Lift Station #6 - 818 Handspike Way	Wet Well - Add Liner	Minor aggregate showing from aboveground inspection. Age (1977)	2024	\$30,000	\$50,000			Postponed 2024		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0
37	Lift Station #6 - 818 Handspike Way	Riser Pipes - Replace	Age (1977)	2024	\$25,000	\$30,000			Postponed 2024		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0
38	Lift Station #6 - 818 Handspike Way	Valves/ Yard Piping - Replace	Exterior pipe is chalking, dry pit pipes have signs of corrosion. Valves in good condition, some need recoating.	2024	\$15,000	\$20,000			Postponed 2024		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0
39	Lift Station #6 - 818 Handspike Way	MCC - Replace	Move to surface for safer access. Age (1977). Replace Prior to SCADA. Add site lighting.	2021	\$80,000	\$80,000			Completed		\$0	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40	Lift Station #6 - 818 Handspike Way	Misc. - Install Access Drive and Fence	Site currently does not have an access drive. COH LS design manual (2016), requires an all-weather access drive to lift station such that the ROW is not blocked by a vehicle. Existing fence is not min. 6' tall. Add Odor Control.	2024	\$20,000	\$20,000			Postponed 2024		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0
Lift Station #6 Total											\$0	\$0	\$80,000	\$0	\$0	\$120,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
41	Lift Station #7 - 15727 Via Dora	Wet Well - Add Liner, Seal I/I	Age (1978). Radial crack around the exterior of the wet well. Walls look good, joints have cracks nearby.	2027	\$30,000	\$50,000			Postponed 2027		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0
42	Lift Station #7 - 15727 Via Dora	Riser Pipes - Replace	Signs of corrosion	2027	\$25,000	\$30,000			Postponed 2027		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0
43	Lift Station #7 - 15727 Via Dora	Valves/ Yard Piping - Recoat	Coating is chalky. Concrete pipe support is cracked, needs replacement.	2027	\$15,000	\$20,000			Postponed 2027		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0
44	Lift Station #7 - 15727 Via Dora	MCC - Replace	Age (1978). Add site lighting. Rotate generator hook up for easier access.	2027	\$80,000	\$150,000			Postponed 2027		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0
45	Lift Station #7 - 15727 Via Dora	Misc. - Replace stairs, handrails, and fencing	Bolt securing stairs is exposed and corroded. Handrails have come apart in places. Existing fence is not min. 6' tall. Has rust.	2027	\$15,000	\$15,000			Postponed 2027		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0	\$0	\$0
Lift Station #7 Total											\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265,000	\$0	\$0	\$0
46	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	Wet Well	Constructed 2006, reline wet well	2029	\$30,000	\$50,000			Postponed 2029		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	\$0
47	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	Riser Pipes	Constructed 2006, recoat piping	2029	\$15,000	\$15,000			Postponed 2029		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0
48	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	Valves/ Yard Piping	Constructed 2006, recoat piping	2029	\$15,000	\$15,000			Postponed 2029		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0
49	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	MCC	Constructed 2006	2036	\$0	\$0			No work planned		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
50	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	Misc. Items	Constructed 2006	2029	\$0	\$0			No work planned		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Seven Oaks Lift Station Total											\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80,000	\$0
Lift Station Projects Total											\$110,000	\$0	\$330,000	\$0	\$0	\$352,000	\$100,000	\$100,000	\$265,000	\$0	\$80,000	\$90,000			
Total Bond Issue Requirement (1)													\$512,471	\$0	\$0	\$546,635	\$155,294	\$155,294	\$411,529	\$0	\$124,235	\$139,765			
(1) Total Bond Issue Requirement = Construction Costs + Contingencies+ Engineering + Bond Issuance Costs																									

Newport MUD		1.0 MGD WWTP constructed in 1972		Completed																												
Wastewater Treatment Plant		0.3 MGD Expansion in 2008, 1.3 MGD Total		No longer applicable																												
As of 3/6/23		Currently permitted for 1.3 MGD		Desired but not required for plant function																												
Original Prepared by: Adam Anderson, P.E.				Further Investigation																												
Revised by: A Stanhouse, P. E.				Low	High							Bond Authorization Prior to 2020		Bond Funds from May 2020 Bond Election																		
				Conceptual	Range	Conceptual	Conceptual	LAN																								
				When	Cost	Conceptual	Conceptual	Project																								
No.		Project		Description of Problem & Information		Justification		When	Cost	Conceptual	Conceptual	LAN	Operations	Funds	2016	2018	2019	Surplus	Funds	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Projects Needed to Prevent Imminent Failure								(years)	(2019\$)	(2022\$)	(2022\$)	Number	Status (as of 3/18/24)	Bid Amount	Funds	2016	2018	2019	Funds	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Projects not yet completed from previous bond funds																																
1	Rehabilitate Clarifier #1				\$245,000			12190	Completed 5/20/21				\$377,500		\$245,000				\$132,500													
2	Aeration System Improvements				\$150,000			12191	Completed 12/16/21				\$137,000		\$150,000																	
Projects related to Flood Prevention																																
1	Remap Site out of 100-yr Floodway-Engineering	Reman San Jacinto Floodplain/Floodway model with updated info. Submit to reviewing agencies for a LOMR	Without being remapped out of the Floodway, Harris County will not allow construction permits for a WWTP Expansion that extends above natural ground	ASAP	\$40,000			12192	LOMR approved with effective date of 2/1/21								\$0															
2	Remap Site out of 100-yr and possibly 500-yr Flood Plain - Engineering	If the WWTP site is in the Flood Plain, FP Mitigation measures are required with building permits adding to the cost of the project	Could potentially reduce FEMA Insurance Premiums by \$75,000 per year, and reduce project costs by eliminating FP Mitigation measures	After berm is constructed	\$40,000		\$40,000																								\$40,000	
3	Apply to FEMA/HCFCD for a Certification of WWTP Berm - Engineering	Certify that the existing Berm meets the US Corps Criteria. This could take 5 years to approve.	The berm does not require USACE certification to be approved by FEMA as it is not attached to a navigable water body. However, FEMA prefers to have the US Army Corp review the berm for compliance.	After berm is constructed	\$140,000-\$340,000		\$300,000		Authorized Engineering on 12/16/21																						\$300,000	
4	Remove all trees from the Berm	Required by the U.S. Army Corps of Engineers	Required by USACE for berm maintenance		\$85,000		\$85,000		Will be incorporated with construction of berm																							
5	Raise Flood Protection Berm	Raise berm elevation 3 ft above expected 500 year Flood Plain pre-Atlas 14, a distance of 6 vertical feet to elevation 38.0	Protect the WWTP from a Hurricane Harvey type flood. The berm cannot be raised until the site is remapped out of the flood plain.		\$3,700,000	\$5,700,000	\$22,200,000	12313	Per HCFCD Regulations, detention and mitigation is required.																\$5,700,000	\$16,500,000						
6	Effluent & Storm Water Pump Station Improvements - Phase 1	New Platform 3 ft above 500 yr. FP with New Motor Starters & VFD Controllers, Replace existing Pumps/Motors with 2 VFD Pumps/Motors, New duct bank	Proper operation during a flood or loss of power	ASAP	\$500,000-\$1,000,000			12158	Completed 2/17/22	\$819,583						\$819,583																
7	Effluent & Storm Water Pump Station Improvements - Phase 2	New Detention Pond for WWTP Expansion, Relocate Ex. Pumps/Motors, Add 2 New Pumps/Motors, Piping, Flow Control, Electrical	Required for WWTP operation during a flood or loss of power. Also required with the WWTP expansion.	2025	\$1,000,000		\$1,500,000																	\$1,500,000								
8	New Elevated Operations Building (Approx 1,500 SF footprint at Elevation 39.0, 14 feet high)	At 5/16/19 meeting FEMA discussed reimbursement for up to \$500,000. The building could be sized for future MCC panels, for expansion and if another flood event occurs	Required for WWTP operation during a flood or loss of power. Harris County can permit construction at an elevation 2 ft above 500-yr flood elevation. The site will need to be remapped out of the flood way first.	2023	\$400,000-\$800,000	\$800,000	\$1,600,000	12157	Bids collected 11/8/22; \$835,390 FEMA reimbursable	\$1,295,000	\$460,610																					
Projects required for existing plant to meet inspections, permit or regulations																																
1	Replace Air Lift Pumps from Clarifier to Digestors with Dry/Pit Submersible Pumps	TCEQ requires measuring the flow	Cannot accurately measure flow with an air lift pump, Would prefer to have dry pit submersible pumps in the case of flooding -	ASAP	\$500,000		\$500,000		Funding included in BI7; will be included in the overall plant expansion																						\$500,000	
Projects required due to projected buildout																																
1	Preliminary Engineering Report for WWTP Expansion-Engineering	\$109,757 available in Bond Issue 2018	To accommodate projected buildout	1	\$100,000-\$200,000			12193	PER completed 4/15/20. Summary letter presented at the 4/1/20 Board Meeting							\$109,757																
2	WWTP Expansion	Will need to expand the WWTP from 0.5 to 0.7 MGD for a total of 1.8 to 2.0 MGD	To accommodate projected buildout	2-10	\$8,400,000	\$9,000,000	\$17,500,000	12193	Project is in design. May recommend construction be separated into two phases.																						\$17,500,000	
Projects to improve operational efficiencies																																
1	SCADA System for WWTP	Ability to control the plant via Supervisory Control And Data Acquisition System (SCADA)	A SCADA system will allow operational data collection from on-line instrumentation to be recorded electronically. This will allow the staff to easily trend data. This can improve energy usage among other operational improvements. Easily searchable operations records is invaluable when trying to diagnose plant problems.		\$1,200,000		\$1,200,000		Not included in WWTP expansion.																						\$1,200,000	
2	SCADA System for Lift Stations	Ability to monitor LS operations. Would prefer to have installed at the same time as the WWTP SCADA.	A SCADA system will allow operational data collection from on-line instrumentation to be recorded electronically. Information such as pump run time, pressure, flow, wet well level, current (amp) draw, etc. will allow operational staff to detect some pump problems prior to pump failure and damage. SCADA monitoring will also allow operators to respond in a timely fashion helping to reduce sanitary sewer overflows (SSOs).	2-10	\$500,000-\$1,300,000		\$1,500,000		Not included in WWTP expansion.																						\$1,500,000	
3	Online instrumentation	Online instrumentation with control capability for Dissolved Oxygen, Chlorine & Ammonia.	Online instrumentation for dissolved oxygen will allow energy savings. Electrical power for aeration is the most expensive operating cost in the WWTP. Typically, plants reduce energy use by 30% when they shift from uncontrolled aeration to controlled aeration. Online instrumentation is the first step. Other improvements will also be required to attain these savings, including: addition of automated aeration valves, blower replacement, and possibly diffuser changes. An online ammonia analyzer will ensure that the lowest amount of air is being used while still meeting ammonia limits.	2-10	\$100,000				In the basin improvement project, they installed DO monitors to assist manual control. May be included in expansion if not cost prohibitive. Need to evaluate cost/benefit ratio.																							
4	New control valves on aeration and digestors	Operational efficiency and safety	Operational efficiency and safety for operators during lightning storms	1					Not applicable for the digester in the WWTP Expansion. Will be included for the aeration in the WWTP Expansion.																							
5	New Automated Control Valves throughout the plant to control flows	Currently gate valves are operated manually	Operational efficiency and safety for operators during lightning storms	2-10																												
6	Clean & Televis 54" Trunk Line	There is a buildup of approximately 2.5 feet of sludge in the line	Restricting wastewater from reaching the WWTP	1					Included in SS Ph. 2 TV (LAN#12261)																							
7	Grease Control through system	Vapex Grease Control System	Help grease move through the system and prevent clogging. Field testing of the equipment is recommended prior to purchase.	5-10	\$600,000				This item is part of the collection system.																							

Newport MUD		1.0 MGD WWTP constructed in 1972		Completed																																					
Wastewater Treatment Plant		0.3 MGD Expansion in 2008, 1.3 MGD Total		No longer applicable																																					
As of 3/6/23		Currently permitted for 1.3 MGD		Desired but not required for plant function																																					
Original Prepared by: Adam Anderson, P.E.				Further Investigation																																					
Revised by: A Stanhouse, P.E.																																									
				Low		High				Bond Authorization Prior to 2020		Bond Funds from May 2020 Bond Election								Year Anticipated																					
				Conceptual		Conceptual		LAN		Bond		Bond		Bond																											
				When		When		When		Issue #4		Issue #5		Issue #6		Issue #7		Issue #8																							
				Needed		Conceptual		Project		Operations		Surplus		Funds																											
				(years)		(2019\$)		(2022\$)		2016		2018		2019		2020		2021		2022		2023		2024		2025															
No.		Project		Description of Problem & Information		Justification		Status (as of 3/18/24)		Bid Amount		Funds		2016		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030	
8	Add a Blower system for the Chlorine System	Disconnect the air line from the main plant aeration system and construct separate blower to provide the required air.	A dedicated blower will simplify aeration control. A small blower can be used to supply this air to the clarifier.		\$200,000				Blower system for Chlorine will be included in WWTP Expansion Phase 2.																																
9	Blower Modifications for Aeration and Digester Basins	Add sensors, motor actuated valves, and a new blower controlled by a VFD to add air to the system, as needed.	Improve operational efficiency. The system needs DO and/or ORP sensors connected to motor actuated valves for the air system in the basins to control air flow in each basin. The sensors will be connected to a PLC to read the measurements and send data to a VFD connected to a new blower to help regulate the amount of air.		\$1,200,000				Intended to be addressed through other improvements included in WWTP expansion.																																
10	Chlorine Rapid- Mix System	TCEQ requirements	The existing system met the TCEQ requirements at the time of design and construction but does not meet the current requirements. Refer to TCEQ §217.281(a)(2) "Chlorine and Sodium Hypochlorite Application. A disinfection system must apply the chlorine gas or solution in a highly turbulent flow regime created by in-line diffusers, mechanical mixers, or jet mixers. Effective initial mixing for the mean velocity gradient (G value) in the area of turbulent flow must exceed 500 per second."		\$320,000				Included in WWTP Expansion Phase 2 with disinfection improvements.																																
11	RAS/WAS system	TCEQ requirements	The existing system met the TCEQ requirements at the time of design and construction but does not meet the current requirements. Refer to TCEQ §217.158(a)(2) "A monitoring and control system must provide a means to control return and waste sludge flows from each clarifier, to control return sludge flows into each aeration basin, to meter return sludge flows, and to measure waste sludge flows. The present system using air lift pumps cannot be metered or adequately controlled to meet these requirements. In addition, air pumping is one of the most expensive ways to pump fluids		\$350,000				Replacement of air lift pumps with self-priming pumps is included in WWTP Expansion Phase 1.																																
12	Screw Dewater System		Improves operational efficiency. District may be able to reduce dewatering costs.		\$750,000				Review cost/benefit ratio.																												\$750,000				
Wastewater Treatment Plant Projects Total												\$395,000	\$109,757	\$819,583			\$0	\$500,000	\$0	\$0	\$0	\$0	\$7,200,000	\$16,500,000	\$17,840,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,450,000							
Total Bond Issue Requirement (1)																	\$0	\$776,471	\$0	\$0	\$0	\$0	\$11,181,176	\$25,623,529	\$27,704,471	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,357,647							
(1) Total Bond Issue Requirement = Construction Costs + Contingencies+ Engineering + Bond Issuance Costs																																									

Newport MUD		Completed		No longer applicable		Desired but not required for plant function																							
Surface Water Treatment Plant																													
As of 3/6/23																													
Prepared by : Luis Sanabria, P.E.																													
Revised by : A Stanhouse, P.E.																													
No.	Project	Description of Problem, Project and Information	Justification	When Needed (years)	Conceptual Cost (2019\$)	Range Conceptual Cost (2022\$)	High Conceptual Cost (2022\$)	LAN Project Number	Status (as of 3/18/24)	Bid Amount	Operations Funds 2020	Bond Issue #4 \$5.5M 2016	Bond Issue #5 \$4.225M 2018	Bond Issue #6 \$7.5M 2019	Surplus Funds	Funds Needed	Bond Funds from 2020 Bond Election	Bond Issue #7 \$20.84M 2020	Bond Issue #8 2023	Bond Issue #8 2024	Bond Issue #8 2025	Bond Issue #8 2026	Bond Issue #8 2027	Bond Issue #8 2028	Bond Issue #8 2029	Bond Issue #8 2030			
Projects required to prevent Imminent Failure																													
1	Rehabilitate Tonka Clarifier	It is believed that the Scraper Arm is out of alignment and is rubbing holes in the center column near bottom of the clarifier. A portion of the aeration feed to the clarifier is not passing through the center well and is not being properly clarified.	Need to repair before the scraper arms becomes lodged and stops operating	ASAP	\$100,000			12195	Completed 5/21/20	\$24,955	\$24,995																		
2	Replace Existing Hydro Tank	The 20,000 gallon hydro-tank has only ~20% of its interior coating remaining and some metal has corroded. After the design began, the compressor was found to be at the end of its useful life and the controls were inoperable. Both were replaced.	Improved safety and operation	ASAP	\$70,000			12194	Completed 9/1/20	\$163,500		\$50,000	\$45,000																
3	Elevated Storage Tank Interior & Exterior Recoating	600,000 gallon, composite tank. Exterior and interior recoating required.	The EST was coated in 2006. It should be recoated every 8-10 years or 2014-2016.	1	\$425,000			12197	Completed 8/20/20	\$351,500			\$425,000	\$73,500															
Projects required for existing plant to meet inspections, permit or regulations																													
1	Ground Storage Tank Exterior Coating	The existing GST has mold buildup on the exterior of the tank. The Operator tried power washing but the buildup does not come off.			\$120,000																						\$120,000		
Projects required due to projected buildout																													
1	Expand SWTP from 2.4 to 4 MGD	Will need to expand the SWTP to meet buildout projections and HGSD requirements beginning in 2025. Need to model the Water System to confirm. Hydraulic Modeling is \$40,000. Low range cost is \$4/gpd and high range is \$7/gpd. Projects #1 thru #9 below would be included in this expansion.	Meet buildout projects and HGSD requirements beginning in 2025		\$4,800,000-\$8,400,000	\$4,000,000	\$5,000,000		Project is in design and projected to bid Q2 2024; delay with Purifics and TCEQ coordination.																		\$4,000,000		
2	New Generator	Existing generator is 350 kW and is almost 25 yrs. old. The generator will be under-sized for the future needs (additional onsite 1300 gpm well with 200 Hp motor/pump). Need 700 kW Diesel Generator or 750 kW Natural Gas Generator. This assumes there is an adequate natural gas supply.		5-10	\$800,000-\$900,000	\$900,000			To be included in SWTP well replacement project.																				
Projects to improve the treatment process and operational efficiencies, if chosen individually from the expansion																													
1	Treatability Study	This study would evaluate the most efficient mix of filter media and membrane filters to produce the optimum water quality at minimum operational costs	Improve the operational efficiencies		\$250,000				No longer applicable due to Purifics																				
1A	Purifics Filter Pilot Study	This study would evaluate the performance effectiveness and efficiency of the Purifics Filter to the treat/remove Total Organic Carbon (TOC) and Pathogens within the purification process	Improve the operational efficiencies	1	\$15,000-\$25,000			12151	Completed November 2020	\$23,000	\$23,000																		
2	Add Membrane Filters	After determination of treatability study	Improve the operational efficiencies		\$500,000-\$800,000	\$7,038,000	\$7,820,000	12210/12263	PER for Pilot Study completed 2/21 and sent to TCEQ for 7/21. Board purchased filters 9/22. Filters included in SWTP expansion project.	\$7,820,000							\$7,820,000												
3	Add Streaming Current/Zeta Potentiometer for coagulant dosage control.	Adding equipment to monitor water quality and allow more accuracy in chemical dosing. Chemical dosing is a function of both water flow rate and water quality.	Improve the operational efficiencies		\$40,000				No longer applicable due to Purifics																				
4	Add online monitoring of pH (D3), Monochloramine, Total Cl2, NTU & Nitrate/Nitrite	Adding equipment to allow online analysis of water quantity and disinfectant concentrations	Improve the operational efficiencies		\$80,000				No longer applicable due to Purifics																				
5	Add online monitoring of pH (D2), Monochloramine, Total Cl2, Free Ammonia	Adding equipment to allow online analysis of water quantity and disinfectant concentrations	Ensures chemical dosing is adequate and prevents overdosing		\$75,000				No longer applicable due to Purifics																				
6	Add Inline Mixers at Clarifiers for Chlorine and Liquid Ammonia Sulphate	Plant does not meet current TAC Ch 290.42e7 regulations to flash mix Chloramines but did meet the regulations in place at the time of design & construction. These changes will be required with a plant expansion. An inline mixer would be added to fully disperse disinfecting chemicals.	Include with SWTP Expansion		\$20,000				No longer applicable due to Purifics																				
7	Change Filter Media from Powder Activated Carbon to Sand and Granular Activated Carbon	The current Powder Activated Carbon Filter Media is very messy to work with	Improve operations		\$200,000				No longer applicable due to Purifics																				
8	Add Pretreatment Basin - to add Chlorine and Aerate the Water	This will be required with a Plant Expansion to meet TAC Ch 290.42 regulations.	Improve the operational efficiencies		\$500,000				No longer applicable due to Purifics																				
9	Add equipment to mix water within the Water Storage Tanks	Pulsed air. Red Valve, Pipeflex, or SolarBee. Will help keep nitrification down when using chloramine. Could potentially remove this project.	Improve water quality		\$350,000		\$350,000		Desired but not required for plant function (PUS 12/22)																		\$350,000		
10	Abandon existing Water Plant #2 Water Well and add New Water Well on SWTP site	Water well at WP#2 is not used due to taste & odor issues. A TV inspection shows the well casing is in bad condition. Recommend abandoning and plugging the well at WP#2 and drill new well at SWTP.	A new well is required		\$1,300,000-\$1,500,000	\$1,800,000	\$2,200,000		Reviewing preliminary layout of proposed well Q4 2023. B17 Funds Reallocated to purchase Purifics Filters. Abandon existing Water Plant #2 Water Well is included in Water Plant Tab.																		\$1,800,000		
Surface Water Treatment Plant Projects Total							\$15,370,000				\$50,000	\$0	\$470,000	\$0	\$0	\$7,820,000	\$0	\$4,000,000	\$0	\$0	\$1,800,000	\$120,000	\$0	\$0	\$350,000				
Total Bond Issue Requirement (1)												\$0	\$12,144,000	\$0	\$6,211,765	\$0	\$0	\$2,795,294	\$186,353	\$0	\$0	\$543,529							
(1) Total Bond Issue Requirement = Construction Costs + Contingencies + Engineering + Bond Issuance Costs																													

Newport MUD Water Plants As of 3/6/23			Desired but not required for plant function Further Investigation																																	
Prepared by : Adam Anderson, P.E. Revised by : A Stanhouse, P.E.					Low	High															Bond Authorization Prior to 2020					Bond Funds from May 2020 Bond Election					Year Anticipated					
			When Needed (years)		Conceptual Cost Range (2019S)	Conceptual Cost Range (2022S)	Conceptual Cost Range (2022S)	LAN Project Number	Status (as of 3/18/24)	Bid Amount	Funds	Operations	Bond Issue #4 \$5.5M	Bond Issue #5 \$4.225M	Bond Issue #6 \$7.5M	Surplus Funds	Funds Needed	Bond Issue #7 \$20.84M	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030							
No.	Project	Description of Problem, Project and Information	Justification	When Needed (years)	Conceptual Cost Range (2019S)	Conceptual Cost Range (2022S)	Conceptual Cost Range (2022S)	LAN Project Number	Status (as of 3/18/24)	Bid Amount	Funds	Operations	Bond Issue #4 \$5.5M	Bond Issue #5 \$4.225M	Bond Issue #6 \$7.5M	Surplus Funds	Funds Needed	Bond Issue #7 \$20.84M	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030							
Water Plant No. 1 (Constructed in 1978)																																				
1	Replace the two existing submersible pump motors (combined 1900 gpm) in Water Well 1 with one Vertical Turbine motor and pump	One pump is 60 HP and the other is 75 HP. Every 8 - 10 years the motor & pump need to be rehabbed. At the next pump & motor rehab consider replacing the 2 pumps with a single pump & motor.	Reduce the repair cost in half		\$300,000		\$400,000																							\$400,000						
2	Install an Aeration Tank on Platform	Need to reduce or remove the sulfide levels	To remove sulfide odor in water		\$200,000		\$200,000		PER completed 12/2023, at 1/2024 meeting board authorized further study										\$200,000																	
3	Remove & replace all valves	The site has 30 yr. old valves, which are difficult to operate					\$200,000																						\$200,000							
4	Change the roof pitch and recoat of building	Existing roof is flat and doesn't drain well, possibly change to gable roof			\$50,000		\$50,000																													
5	Add equipment to mix water within the 500,000 gallon Water Storage Tank	Add mixing equipment to keep consistent water age throughout tank and provide uniform chlorine residual			\$110,000		\$110,000																													
6	Install one isolation valve on distribution pipe inside water plant.	The existing water plant does not have an isolation valve and one is needed for maintenance purposes			\$15,000		\$15,000								\$15,000																					
Water Plant No. 2 (Constructed in 1973)																																				
1	Cap and abandon existing Water Well at Water Plant #2 (1300 gpm).	Well is not used. A TV inspection shows casing in poor condition and water quality is not good. Recommend abandon and cap well.			\$40,000		\$150,000		Well to be capped by fall 2026. Replacement Water Well is included in Surface Water Plant Tab										\$40,000							\$110,000										
Water Plant Projects Total			\$0	\$0	\$0	\$1,125,000						\$0	\$0	\$15,000	\$0	\$0	\$0	\$0	\$240,000	\$0	\$0	\$0	\$0	\$0	\$0	\$110,000	\$600,000	\$0	\$0							
Total Bond Issue Requirement (1)															\$23,294			\$0	\$372,706	\$0	\$0	\$0	\$0	\$0	\$170,824	\$931,765	\$0	\$0					\$248,471			

(1) Total Bond Issue Requirement = Construction Costs + Contingencies + Engineering + Bond Issuance Costs

Newport MUD														
Detention Ponds														
As of 3/6/23														
	<u>Detention Ponds</u>	Amount	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>
1	Newport Court - Detention Pond													
2	Newport Section 7 - Detention Pond													
3	Newport Section 8 - Detention Pond													
4	Newport Section 9 - Detention Pond													
5	Newport Section 10, PR1 - Detention Pond													
6	Seven Oaks Detention Pond													
	Detention Pond Projects Total		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Bond Issue Requirement (1)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
(1) Total Bond Issue Requirement = Construction Costs + Contingencies+ Engineering + Bond Issuance Costs														

Newport MUD														
Facilities														
As of 3/6/23														
		Bond Issue #7												
	Cost	2020	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Admin Bldg	\$250,000	\$250,000												
Facilities Total		\$250,000	\$0	\$0	\$0	\$0	\$0	\$0						
Total Bond Issue Requirement (1)		\$388,235	\$0	\$0	\$0	\$0	\$0	\$0						
(1) Total Bond Issue Requirement = Construction Costs + Contingencies+ Engineering + Bond Issuance Costs														