EXHIBIT A
Newport MUD - Capital Improvement Plan
As of 2/6/20

	Item	Page	Proposed Bonds in Bond Election 2020	2021	2022	2023	2024	2025	Total Proposed Bonds 2020 - 2025
	DISTRICT ITEMS (1)								
1	Surface Water Plant	2C		$186,353	$0	$0	$1,397,647	$13,044,706	**$14,628,706**
2	Water Plants	4		$0	$0	$0	$0	$0	**$0**
3	Water Distribution System	5	$1,118,118	$1,118,118	$1,056,000	$1,087,059	$1,149,176	$1,149,176	**$6,677,647**
4	Sanitary Sewer System	6		$1,087,059	$1,149,176	$1,118,118	$931,765	$929,717	**$5,215,835**
5	Lift Station & Force Mains	30	$707,412	$512,471	$194,118	$139,765	$267,106	$108,706	**$1,929,577**
6	Wastewater Treatment Plant	34		$0	$0	$0	$0	$14,752,941	**$14,752,941**
7	Detention Ponds	37		$0	$0	$0	$0	$0	**$0**
8	Administration Building	38		$0	$0	$0	$0	$0	**$0**
9	Water Lines, Force Mains & Lift Station to serve Compass Tract Defined Area	2A		$0	$2,360,471	$0	$1,910,118	$0	**$4,270,588**
	DISTRICT ITEMS TOTAL		**$1,825,530**	**$2,904,000**	**$4,759,765**	**$2,344,941**	**$5,655,812**	**$29,985,247**	**$47,475,294**
	DEVELOPER CONTRIBUTION ITEMS (2)								
1	Newport Section 4, PR 4 (DH Builders)							$220,000	**$220,000**
2	Newport Section 6, Partial Replat 1, Dev. Reim. (Rochester)				$382,353				**$382,353**
3	Newport Section 7, Developer Reimbursement (Lennar)				$4,117,647				**$4,117,647**
4	Newport Section 10, Partial Replat 1 Dev. Reim. (Rochester)				$764,706				**$764,706**
	DEVELOPER CONTRIBUTION ITEMS TOTALS		**$0**	**$0**	**$5,264,706**	$0	**$0**	**$220,000**	**$5,484,706**
	TOTAL BOND ISSUE AMOUNT		**$1,825,530**	**$2,904,000**	**$10,024,471**	**$2,344,941**	**$5,655,812**	**$30,205,247**	**$52,960,000**
	WSD Bond Capacity								
	Previous WSD Bond Capacity		$0	$51,134,470	$48,230,470	$38,206,000	$35,861,059	$30,205,247	
	New Bond Authorization Amount		**$52,960,000**	**$0**	$0	$0	$0	$0	
	Proposed Bond Issues during the year		$1,825,530	$2,904,000	$10,024,471	$2,344,941	$5,655,812	$30,205,247	
	Remaining WSD Bond Capacity Balance		**$51,134,470**	**$48,230,470**	**$38,206,000**	**$35,861,059**	**$30,205,247**	**$0**	

(1) Includes Construction Costs (CC), + 10% of CC for Contingencies, + 22% of CC for Engineering, + 23.29% of CC for Bond Issuance Costs

(2) Includes Construction Cost + Engineering + Developer Interest + Bond Issuance Costs

Newport MUD
WSD to serve Compass Tract - Defined Area Commitments
As of 2/6/20

No.	Project	Justification	Low Range Conceptual Cost (2019$)	High Range Conceptual Cost (2019$)	Bond Issue #4 2016	Bond Issue #5 2018	Bond Issue #6 2019	Year Anticipated 2020	2021	2022	2023	2024	2025
	District Projects for Defined Area												
	Water Line Ext. Phase 1 to serve Compass Tr Defined Area	District Commitment		$190,000						$190,000			
	Water Line Ext. Phase 2 to serve Compass Tr Defined Area	District Commitment		$270,000								$270,000	
	Force Main Phase 1 to serve Compass Tr Defined Area	District Commitment		$470,000						$470,000			
	Force Main Phase 2 to serve Compass Tr Defined Area	District Commitment		$960,000								$960,000	
	Lift Station to serve Compass Tr. Defined Area	District Commitment		$860,000					-	$860,000			
	Defined Area Projects Total			**$2,750,000**				**$0**	**$0**	**$1,520,000**	**$0**	**$1,230,000**	**$0**
	Total Bond Issue Requirement (1)		**$0**		**$0**	**$0**	**$0**	**$0**	**$0**	**$2,360,471**	**$0**	**$1,910,118**	**$0**

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

Newport MUD
Surface Water Treatment Plant
As of 2/6/20 Prepared by : Luis Sanabria, P.E.

No.	Project	Description of Problem, Project and Information	Justification	When Needed (years)	Low Range Conceptual Cost (2019$)	High Range Conceptual Cost (2019$)	LAN Project Number	Bid Amount	Operations Funds 2020	Bond Funds from Previous Bond Election: Bond Issue #4 2016	Bond Issue #5 2018	Bond Issue #6 2019	Surplus Funds Needed	Bond Issue #7 2020	Future Bond Funds from Future Bond Election: 2020	2021	2022	2023	2024	2025
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 center column near bottom of the clarifier. A portion of the aeration feed to the clarifier is not passing thru the centerwell and is not being properly clarified	Need to repair before the scraper arms becomes lodged and stops operating	ASAP		$100,000	12195	$24,955	$24,995											
2	Replace Existing Hydro Tank	The 20,000 gallon Hydro Tank interior has only approximately 20% of its coating remaining and some of the metal has corroded. After the design had commenced the compressor was found to be at the end of its useful life & the controls were inoperable and both needed to be replaced	Safety and Operation Issue	ASAP		$70,000	12194	$163,500		$25,670		$49,500	$88,330							
3	Elevated Storage Tank Interior & Exterior Recoating	600,000 gallons, composite tank. Exterior and interior recoating.	The EST was coated in 2006. It should be recoated every 8-10 years or 2014-2016	1		$425,000	12197	$351,500	$351,500											
Projects required for exisitng 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 has 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 3.6 MGD	Will need to expand the Plant to meet Peak Flows at Ultimate Buildout and to meet Subsidence District requirements 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 $8/gpd. **Projects #1 thru #9 below would be included in this expansion**	Meet Ultimate Buildout and meet Subsidence District requirements in 2025		$4,200,000	$8,400,000														$8,400,000
2	New Generator	Existing generator is 350 kW and is almost 25 ys old. It 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	
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 Treatment Process and Operational Efficiencies			$250,000														
2	Add Membrane Filters	After determination of #1	Improve the Treatment Process and Operational Efficiencies		$500,000	$800,000								$800,000						
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 Treatment Process and Operational Efficiencies			$40,000														
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 Treatment Process and Operational Efficiencies			$80,000														
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, prevents overdosing of chemicals			$75,000														
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 Chloromines 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 Plant Expansion			$20,000														
7	Change Filter Media from Powder Activated Carbon to Sand and Granular Activated Carbon	The current Powder Activated Carbon Fileter Media is very messy to work with	Improve operations			$200,000														

Newport MUD Surface Water Treatment Plant As of 2/6/20		Prepared by : Luis Sanabria, P.E.								Bond Funds from Previous Bond Election										
No.	Project	Description of Problem, Project and Information	Justification	When Needed (years)	Low Range Conceptual Cost (2019$)	High Range Conceptual Cost (2019$)	LAN Project Number	Bid Amount	Operations Funds 2020	Bond Issue #4 2016	Bond Issue #5 2018	Bond Issue #6 2019	Surplus Funds Needed	Bond Issue #7 2020	Future Bond Funds from Future Bond Election 2020	2021	2022	2023	2024	2025
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 Treatmnet Process and Operational Efficiencies			$500,000														
9	Add equipment to mix water within the Water Storage Tanks	Pulsed air. Red Valve, Pipeflex, or SolarBee.	Improve water quality			$350,000														
10	Abandon existing Water Plant #2 Water Well and add New Water Well on SWTP site	This water well at WP #2 is not used due to taste & odor issues. A TV inspection of the well casing shows it to be in bad condition. Recommend abandoning & plugging well. Drill new well at another site.	A new well required		$1,300,000	$1,500,000								$1,300,000						
	Surface Water Treatment Plant Projects Total					$12,330,000				$25,670	$0	$49,500	$88,330	$2,100,000	$0	$120,000	$0	$0	$900,000	$8,400,000
	Total Bond Issue Requirement (1)													$3,261,176	$0	$186,353	$0	$0	$1,397,647	$13,044,706

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

Newport MUD
Water Plants
As of 2/6/20

Prepared by : Adam Anderson, P.E.

No.	Project	Description of Problem, Project and Information	Justification	When Needed (years)	Low Range Conceptual Cost (2019$)	High Range Conceptual Cost (2019$)	Bond Funds from Prev Election Bond Issue #4 2016	Bond Issue #6 2019	Bond Issue #7 2020	Future Bond Funds from May 2020 Bond Election 2020	2021	2022	2023	2024	2025
	Water Plant No. 1 (Constructed in 1978)														
1	Replace the 2 existing submersible pumps/ motors (combined 1900 gpm) in Water Well 1 with Vertical Turbine motors & 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									
2	Install an Aeration Tank on Platform	Need to aerate the water to reduce or remove the sulfide levels	To remove sulfide odor in water			$200,000			**$200,000**						
3	Remove & replace all valves	The site has valves which are 30 years old and hard to operate													
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									
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									
6	Insert/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							
	Water Plant No. 2 (Constructed in 1973)														
1	Cap and abandon existing Water Well (1300 gpm).	Well has not been in operation. Weisinger performed a video survey and reports that casing in bad shape, water quality is not good. Abandon and cap well				$40,000			**$40,000**						
Water Plant Projects Total			**$0**	**$0**	**$0**	**$715,000**	**$0**	**$15,000**	**$240,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Bond Issue Requirement (1)									**$372,706**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

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

Newport MUD
Water Distribution System - Inspection, Evaluation and Rehabilitation
As of 2/6/20

No.	Subdivision	Year Built	Pipe Material	Rehab Cost	Bond Issue #4 2016	Bond Issue #5 2018	Bond Issue #6 2019	Bond Issue #7 2020	2020	2021	2022	2023	2024	2025
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	1972	AC	$1,410,000					$470,000	$470,000				
7	Newport Section 2	1972	AC	$0										
8	Newport Section 3	1972	AC	$1,410,000							$430,000	$450,000		
9	Newport Section 4	1972	AC	$490,000										
10	Newport Section 4, Partial Replat 1		PVC	$0										
11	Newport Section 4, PR 4 (DH Builders)		PVC	$0										
12	Newport Section 5	1972	AC	$490,000									$490,000	
13	Newport Section 6	1972	AC	$830,000										$490,000
14	Newport Section 6, Partial Replat 1			$0										
15	Newport Section 7	1978	AC	$0										
16	Newport Section 8	1978	AC	$530,000										
17	Newport Section 8, Partial Replat 1		PVC	$0										
18	Newport Section 8, Partial Replat 2		PVC	$0										
19	Newport Section 8, Partial Replat 3		PVC	$0										
20	Newport Section 8, Partial Replat 4		PVC	$0										
21	Newport Section 9	2017	PVC	$0										
22	Newport Section 10	1978	AC	$0										
23	Newport Section 10, Partial Replat 1		PVC	$0										
24	Newport Section 11 (portion of Section 6 Res B)			$0										
25	Newport Section 12 (Newport Villas)	2016	PVC	$0										
26	Newport Section 13			$0										
27	Oaks at Newport Section 1	1981		$0										
28	Patio Woods	1975	AC	$0										
29	Seven Oaks North	2006	PVC	$0										
30	Seven Oaks South	2014	PVC	$0										
31	Union of Operating Engineers Training Fac.	2019	PVC	$0										
32	Villas at Newport	2014	PVC	$0										
	Water Meter Replacement Program				$24,803									
	Valve Survey and Replacement Program (Replace approximately 50 valves per year)								$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
	Water Distribution Projects Total				**$24,803**	**$0**	**$0**	**$0**	**$720,000**	**$720,000**	**$680,000**	**$700,000**	**$740,000**	**$740,000**
	Total Bond Issue Requirement (1)							**$0**	**$1,118,118**	**$1,118,118**	**$1,056,000**	**$1,087,059**	**$1,149,176**	**$1,149,176**

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

Newport MUD
Sanitary Sewer System - Inspection, Evaluation and Rehabilitation
As of 2/6/20

No.	Subdivision	Year Built	Pipe Material	High Wet Weather Flows	Expansive Soils	TV & Inspection Cost	Rehab Cost	Bond Issue #7 2020	2020	2021	2022	2023	2024	2025
1	Country Club Villas of Newport Section 1 & 2	1982	Truss & Conc			$20,000	$50,000					$20,000	$50,000	
2	Deerpointe Section 1	1978	Truss & Conc			$10,000	$110,000	$10,000		$70,000				
3	Newport Country Club Estates Section 1	1979	Truss			$10,000	$40,000					$10,000	$40,000	
4	Newport Country Club Golf Club	1972	Concrete			$10,000	$70,000	$10,000		$70,000				
5	Newport Court (Defined Area)	2016	PVC			$0	$0							
6	Newport Section 1	1972	Concrete	Y	Y	$110,000	$1,070,000	$215,000						
7	Newport Section 2	1972	Truss & Conc			$90,000	$740,000			$90,000	$650,000			
8	Newport Section 3	1972	Truss & Conc	Y	Y	$60,000	$500,000							
9	Newport Section 4	1972	Concrete			$70,000	$470,000	$70,000		$470,000				
10	Newport Section 4, Partial Replat 1													
11	Newport Section 4, PR 4 (DH Builders)													
12	Newport Section 5	1972	Concrete	Y	Y	$50,000	$320,000	$320,000						
13	Newport Section 6	1972	Truss & Conc	Y	Y	$80,669	$940,000							
14	Newport Section 6, Partial Replat 1													
15	Newport Section 7	1978	Truss			$50,000	$330,000				$50,000	$330,000		
16	Newport Section 8	1978	Truss			$40,000	$320,000				$40,000	$290,000		
17	Newport Section 8, Partial Replat 1													
18	Newport Section 8, Partial Replat 2													
19	Newport Section 8, Partial Replat 3													
20	Newport Section 8, Partial Replat 4													
21	Newport Section 9	2017	PVC			$0	$0							
22	Newport Section 10	1978	Truss & Conc			$50,000	$490,000					$50,000	$380,000	
23	Newport Section 10, Partial Replat 1													
24	Newport Section 11 (portion of Section 6 Res B)													
25	Newport Section 12 (Newport Villas)	2016	PVC			$0	$0							
26	Newport Section 13													
27	Oaks at Newport Section 1	1981	Truss			$10,000	$70,000					$10,000	$50,000	
28	Patio Woods	1975	Truss			$10,000	$80,000					$10,000	$80,000	
29	Seven Oaks North	2006	PVC			$0	$0							
30	Seven Oaks South	2014	PVC			$0	$0							
31	Union of Operating Engineers Training Fac.	2019	PVC											
32	Villas at Newport	2014	PVC			$0	$0							
33	Sanitary Sewer TV & Rehabilitaiton													$598,682
	Sanitary Sewer Projects Total							**$625,000**	**$0**	**$700,000**	**$740,000**	**$720,000**	**$600,000**	**$598,682**
	Total Bond Issue Requirement (1)							**$970,588**	**$0**	**$1,087,059**	**$1,149,176**	**$1,118,118**	**$931,765**	**$929,717**

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

Newport MUD
Lift Stations
As of 6/6/19
Surace inspection performed on all lift stations in 2019

No.	Project	Description and Information	Justification	When Needed (Year)	Conceptual Cost (2019$)	Bond Issue #7 2019	Year Anticipated 2020	2021	2022	2023	2024	2025
1	Compass Bank Lift Station - 6011-1/2 FM 2100	Wet Well	Constructed 2014. Minor aggregate showing	2030	$20,000		$0	$0	$0	$0	$0	$0
2	Compass Bank Lift Station - 6011-1/2 FM 2100	Riser Pipes	Constructed 2014. PVC	2030	$20,000		$0	$0	$0	$0	$0	$0
3	Compass Bank Lift Station - 6011-1/2 FM 2100	Valves/ Yard Piping	Constructed 2014. PVC	2030	$10,000		$0	$0	$0	$0	$0	$0
4	Compass Bank Lift Station - 6011-1/2 FM 2100	MCC	Constructed 2014.	2036	$80,000		$0	$0	$0	$0	$0	$0
5	Compass Bank Lift Station - 6011-1/2 FM 2100	Misc. - Install fence, reset hatch, site lighting.	Existing PVC fence is not 6' tall, does not have barbed wire, does not have a 16 ft wide access gate. Space within the fencing is limited and if possible be pushed out to provide more manueverability. Bottom of fence needs repair. Hatch does not close completely, leaving a couple inch gap open for storm water to get in. Add site lighting	2020	$20,000		$20,000	$0	$0	$0	$0	$0
	Compass Bank Lift Station Total						**$20,000**	**$0**	**$0**	**$0**	**$0**	**$0**
6	Lift Station #1 - 514 Helmsman	Wet Well - Add Liner, Seal I/I	Age (1972)	2024	$30,000		$0	$0	$0	$0	$30,000	$0
7	Lift Station #1 - 514 Helmsman	Riser Pipes - Replace	Age (1972)	2024	$25,000		$0	$0	$0	$0	$25,000	$0
8	Lift Station #1 - 514 Helmsman	Valves/ Yard Piping - Replace	Exterior pipe is chalking, dry pit pipes have signs of corrosion. Pipe supports need replacement. Valves in good condition, some need recoating.	2024	$15,000		$0	$0	$0	$0	$15,000	$0
9	Lift Station #1 - 514 Helmsman	MCC - Replace	Move to surface for safer access. Age (1972). Replace Prior to SCADA. Add site lighting.	2021	$80,000		$0	$80,000	$0	$0	$0	$0
10	Lift Station #1 - 514 Helmsman	Misc. - Install Access Drive	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.	2024	$16,000		$0	$0	$0	$0	$16,000	$0
	Lift Station #1 Total						**$0**	**$80,000**	**$0**	**$0**	**$86,000**	**$0**
11	IUOE Lift Station	Wet Well	Constructed 2018	2033	$0		$0	$0	$0	$0	$0	$0
12	IUOE Lift Station	Riser Pipes	Constructed 2018	2033	$0		$0	$0	$0	$0	$0	$0
13	IUOE Lift Station	Valves/ Yard Piping	Constructed 2018	2033	$0		$0	$0	$0	$0	$0	$0
14	IUOE Lift Station	MCC	Constructed 2018	2048	$0		$0	$0	$0	$0	$0	$0
15	IUOE Lift Station	Misc. Items	Constructed 2018	2033	$0		$0	$0	$0	$0	$0	$0
	IUOE Lift Station Total						**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
16	Lift Station #2 - 16062 Dunes Dr.	Wet Well - Add Liner, Seal I/I	Age (1972)	2024	$30,000		$0	$0	$0	$0	$30,000	$0
17	Lift Station #2 - 16062 Dunes Dr.	Riser Pipes - Replace	Age (1972)	2024	$25,000		$0	$0	$0	$0	$25,000	$0

Newport MUD
Lift Stations
As of 6/6/19
Surace inspection performed on all lift stations in 2019

No.	Project	Description and Information	Justification	When Needed (Year)	Conceptual Cost (2019$)	Bond Issue #7 2019	Year Anticipated 2020	2021	2022	2023	2024	2025
18	Lift Station #2 - 16062 Dunes Dr.	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		$0	$0	$0	$0	$15,000	$0
19	Lift Station #2 - 16062 Dunes Dr.	MCC - Replace	Move to surface for safer access. Age (1972). Replace Prior to SCADA. Add site lighting.	2021	$80,000		$0	$80,000	$0	$0	$0	$0
20	Lift Station #2 - 16062 Dunes Dr.	Misc. - Install Access Drive	Site currently does not have a driveway from ROW. Appears to have a crushed stone access. COH LS design manual (2016), requires an all-weather access drive to lift station such that the ROW is not blocked by a vehicle.	2024	$16,000		$0	$0	$0	$0	$16,000	$0
	Lift Station #2 Total						**$0**	**$80,000**	**$0**	**$0**	**$86,000**	**$0**
21	Lift Station #3 - 1212 S. Diamondhead Blvd	Wet Well - Add Liner, Seal I/I	Age (1972)	2022	$60,000		$0	$0	$60,000	$0	$0	$0
22	Lift Station #3 - 1212 S. Diamondhead Blvd	Riser Pipes - Replace	Signs of corrosion	2022	$25,000		$0	$0	$25,000	$0	$0	$0
23	Lift Station #3 - 1212 S. Diamondhead Blvd	Valves/ Yard Piping - Replace	Pipes and valves have signs of corrosion, valve vault is brick with no working space. Move to surface and fill vault.	2022	$20,000		$0	$0	$20,000	$0	$0	$0
24	Lift Station #3 - 1212 S. Diamondhead Blvd	MCC	Replaced in 2018	2048	$0		$0	$0	$0	$0	$0	$0
25	Lift Station #3 - 1212 S. Diamondhead Blvd	Misc. - Install Fence	Existing fence is not min. 6' tall, does not encompass the valve vault. Add site lighting.	2022	$20,000		$0	$0	$20,000	$0	$0	$0
	Lift Station #3 Total						**$0**	**$0**	**$125,000**	**$0**	**$0**	**$0**
26	Lift Station #4 - 931 Flying Bridge Way	Wet Well - Reline, Seal I/I	Coal tar liner is showing signs of deterioration.	2025	$30,000		$0	$0	$0	$0	$0	$30,000
27	Lift Station #4 - 931 Flying Bridge Way	Riser Pipes - Replace	Signs of corrosion	2025	$25,000		$0	$0	$0	$0	$0	$25,000
28	Lift Station #4 - 931 Flying Bridge Way	Valves/ Yard Piping - Replace	Exterior pipe is chalking.	2025	$15,000		$0	$0	$0	$0	$0	$15,000
29	Lift Station #4 - 931 Flying Bridge Way	MCC - Replace	Experiencing ongoing electrical issues with the service from the main. Age (1978). Replace Prior to SCADA. Provide more site lighting	2020	$80,000		$80,000	$0	$0	$0	$0	$0
30	Lift Station #4 - 931 Flying Bridge Way	Misc. - Install Fence	Minor rust, fencing is close to eletrical pole and if possible be pushed out to provide more manueverability.	2020	$10,000		$10,000	$0	$0	$0	$0	$0
	Lift Station #4 Total						**$90,000**	**$0**	**$0**	**$0**	**$0**	**$70,000**
31	Lift Station #5 - 1310-1/2 Stem Way	Wet Well - Add Liner, Seal I/I	Age (1974). Minor deficiencies observed.	2026	$30,000		$0	$0	$0	$0	$0	$0
32	Lift Station #5 - 1310-1/2 Stem Way	Riser Pipes - Replace	Signs of corrosion	2026	$25,000		$0	$0	$0	$0	$0	$0
33	Lift Station #5 - 1310-1/2 Stem Way	Valves/ Yard Piping - Replace	Signs of corrosion	2026	$15,000		$0	$0	$0	$0	$0	$0

Newport MUD
Lift Stations
As of 6/6/19
Surace inspection performed on all lift stations in 2019

No.	Project	Description and Information	Justification	When Needed (Year)	Conceptual Cost (2019$)	Bond Issue #7 2019	Year Anticipated 2020	2021	2022	2023	2024	2025
34	Lift Station #5 - 1310-1/2 Stem Way	MCC - Replace	Age (1974). Replace Prior to SCADA. Provide more site lighting	2021	$80,000		$0	$80,000	$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 be pushed out to provide more manueverability.	2021	$10,000		$0	$10,000	$0	$0	$0	$0
	Lift Station #5 Total						**$0**	**$90,000**	**$0**	**$0**	**$0**	**$0**
36	Lift Station #6 - 818 Handspike Way	Wet Well - Add Liner	Minor aggregate showing from aboveground inspection. Age (1977)	2023	$30,000		$0	$0	$0	$30,000	$0	$0
37	Lift Station #6 - 818 Handspike Way	Riser Pipes - Replace	Age (1977)	2023	$25,000		$0	$0	$0	$25,000	$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.	2023	$15,000		$0	$0	$0	$15,000	$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		$0	$80,000	$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.	2023	$20,000		$0	$0	$0	$20,000	$0	$0
	Lift Station #6 Total						**$0**	**$80,000**	**$0**	**$90,000**	**$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		$0	$0	$0	$0	$0	$0
42	Lift Station #7 - 15727 Via Dora	Riser Pipes - Replace	Signs of corrosion	2027	$25,000		$0	$0	$0	$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		$0	$0	$0	$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		$0	$0	$0	$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		$0	$0	$0	$0	$0	$0
	Lift Station #7 Total						**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
46	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	Wet Well	Constructed 2006, reline wet well	2029	$30,000		$0	$0	$0	$0	$0	$0
47	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	Riser Pipes	Constructed 2006, recoat piping	2029	$15,000		$0	$0	$0	$0	$0	$0
48	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	Valves/ Yard Piping	Constructed 2006, recoat piping	2029	$15,000		$0	$0	$0	$0	$0	$0

Newport MUD
Lift Stations
As of 6/6/19

Surace inspection performed on all lift stations in 2019

No.	Project	Description and Information	Justification	When Needed (Year)	Conceptual Cost (2019$)	Bond Issue #7 2019	Year Anticipated 2020	2021	2022	2023	2024	2025
49	Seven Oaks Lift Station - 16146-1/2 Golf Club Dr	MCC	Constructed 2006	2036	$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	$0	$0	$0	$0	$0
	Seven Oaks Lift Station Total						**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
							$345,531					
	Lift Station Projects Total					**$0**	**$455,531**	**$330,000**	**$125,000**	**$90,000**	**$172,000**	**$70,000**
	Total Bond Issue Requirement (1)					**$0**	**$707,412**	**$512,471**	**$194,118**	**$139,765**	**$267,106**	**$108,706**

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

Newport MUD
Wastewater Treatment Plant
As of 2/6/20

Prepared by: Adam Anderson, P.E.

1.0 MGD WWTP constructed in 1972
0.3 MGD Expansion in 2008, 1.3 MGD Total
Currently permitted for 1.3 MGD

No.	Project	Description of Problem & Information	Justification	When Needed (years)	Low Range Conceptual Cost (2019$)	High Range Conceptual Cost (2019$)	LAN Project Number	Status	Bond Issue #4 2016	Bond Issue #5 2018	Bond Issue #6 2019	Bond Issue #7 2020	Year Anticipated 2020	2021	2022	2023	2024	2025
Projects Needed to Prevent Imminent Failure																		
Projects not yet completed from previous bond funds																		
1	Rehabilitate Clarifier #1					$245,000	12190	Request advertising 3/19/20	$245,000									
2	Aeration System Improvements					$150,000	12191	PER presented 2/20/20. Request design 3/19/20	$150,000									
Projects related to Flood Prevention																		
1	Remap Site out of 100-yr Floodway-Engineering	Rerun San Jacinto Floodplain/Floodway model with updated info. Submit to reviewing agencies	Without being remapped out of the Floodway, no construction permits will be allowed by Harris County for a WWTP Expansion that extends above Natural Ground	ASAP		$40,000		Authorized 8/15/19. Co. approval expected 2/28/20. FEMA approval exp July - Sept			$40,000							
2	Remap Site out of 100-yr Flood Plain-Engineering	Apply for Letter of Map Revision (LOMR) to HCFCD	With the site mapped out of the Flood Plain, construction permits can be granted for a WWTP expansion and no mitigation will be required for the "Fill" area (the area above the Natural Ground). **This will reduce FEMA Insurance Premiums $75,000 per year**	ASAP after No. 1	$40,000	$40,000						$40,000						
2A	Apply to the U.S. Army Corp of Engineers for a Certification of WWTP Berm - Engineering	Certify that the existing Berm meets the US Corps Criteria. This could take 5 years to approve.	Required by FEMA and U.S. Army Corps with #2		$100,000	$300,000						$300,000						
2B	Remove all trees from the berm	Required by the U.S. Army Corps of Engineers	Required by FEMA and U.S. Army Corps with #2			$85,000						$85,000						
3	Raise Flood Protection Berm	Raise berm elevation 3 ft above expected 500 year Flood Plain, a distance of 6 vertical feet to elevation 38.0	Protect the WWTP from a Hurricane Harvey type flood. Can't start until #2 is completed			$1,100,000												$1,100,000
4	Remap Site out of 500-yr Flood Plain-Engineering	Apply for Letter of Map Revision (LOMR), Corp of Engineers Certification of berm	With the site mapped out of the Flood Plain, the insurance rate for the WWTP will drop		110000	$310,000												
5	Flood Pump Station Rehabilitation	New flood pumps, automated flood gate, check valves, backup float control system, walkway from the berm to the pump station	Proper operation during a flood or loss of power	ASAP	$500,000	$1,000,000						$1,000,000						
6	New Elevated Operations Building (Approx 1,500 SF footfprint 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	Proper operation during a flood or loss of power. Currently can be permitted at an elevation 2 ft above 500-yr FW. Have to complete #1 first which is remove site from FW		$400,000	$800,000												
6A	New Operations Building (Approx 1,500 SF footfprint built at Natural Ground)		Would need to remove site from 100-yr Flood Plain first, Task #2, but it could take 5 years		$150,000	$200,000												
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 subermisble pumps in the case of flooding -	ASAP		$500,000						$500,000						

Newport MUD Wastewater Treatment Plant As of 2/6/20		Prepared by: Adam Anderson, P.E.	1.0 MGD WWTP constructed in 1972 0.3 MGD Expansion in 2008, 1.3 MGD Total Currently permitted for 1.3 MGD		Low Range	High Range											
				When	Conceptual	Conceptual	LAN		Bond	Bond	Bond	Bond	Year Anticipated				
No.	Project	Description of Problem & Information	Justification	Needed (years)	Cost (2019$)	Cost (2019$)	Project Number	Status	Issue #4 2016	Issue #5 2018	Issue #6 2019	Issue #7 2020	2020	2021	2022	2023	2024	2025
Projects required due to projected buildout																		
1	Preliminary Engineering Report for WWTP Expansion-Engineering	$109,757 available in Bond Issue 2018	Will need a plant expansion with buildout progresses	1	100000	$200,000				$109,757	$90,243							
2	Complete Design Report for WWTP Expansion	Can prepare scope after all improvements are determined		1-2														
3	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												$8,400,000
Projects to improve operational efficiencies																		
1	SCADA System for WWTP	Ability to control the plant via Supervisory Control And Data Acquisition Sysem (SCADA)	A SCADA system will allow operational data collected 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												
2	SCADA System for Lift Stations	Operations ability to monitor LS operations. Would prefer to have done at the same time as the WWTP SCADA	A SCADA system will allow operational data collected 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	500000	$1,300,000												
3	Online instrumentation	Online instrumentation with control capability for Dissolved Oxygen, Chlorine & Ammonia.	Online instrumentation for dissolved oxygen will allow energy savings to be attained. Electrical power for aeration is the most expensive operating cost in the wastewater plant. Typical energy savings of 30% can be attained in plants when they shift from uncontrolled aeration to controlled aeration. Online instrumentation is the first step in allowing these changes to be achieved. Other improvements will also be required to attain these savings, including: addition of automated aeration valves; blower replacement; and possibly diffuser changes. Online ammonia analyzer will ensure that the lowest amount of air is being used while still meeting ammonia limits.	2-10		$100,000												
4	New control valves on aeration and digestors	Funds available in 2016 Bond Issue	Operational Efficiency and Safety for Operators during Lightning Storms	1														
5	New Automated Control Valves throughout the plant to control flows	Currently manually operated gate valves	Operational Efficiency and Safety for Operators during Lightning Storms	2-10														
6	Clean & Televise 54" Trunk Line	There is a buildup of approximately 2.5 feet of sludge in the line	Restricting wastewater from reaching the WWTP	1		$200,000												
7	Grease Control through system	Vapex Grease Control System	Help grease move through the system more easily and help prevent clogs. Paul recommends peforming that field test of the equipment would last a couple of months before purchasing and installing the Vapex system.	5-10		$600,000												

Newport MUD
Wastewater Treatment Plant
As of 2/6/20

Prepared by: Adam Anderson, P.E.

1.0 MGD WWTP constructed in 1972
0.3 MGD Expansion in 2008, 1.3 MGD Total
Currently permitted for 1.3 MGD

No.	Project	Description of Problem & Information	Justification	When Needed (years)	Low Range Conceptual Cost (2019$)	High Range Conceptual Cost (2019$)	LAN Project Number	Status	Bond Issue #4 2016	Bond Issue #5 2018	Bond Issue #6 2019	Bond Issue #7 2020	Year Anticipated 2020	2021	2022	2023	2024	2025
8	Add a Blower system for the Chlorine System	Disconnect the air line from the main plant aeration system, 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												
9	Blower Modifications for Aeration and Digestor Basins	Add sensors, motor actuated valves, and a new blower that is controlled by a VFD to be able to add air as needed to the system	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. Also, 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 into the system			$1,200,000												
10	Chlorine Rapid- Mix System		The exisitng system met the TCEQ requirements in place at the time of design and construction but does not meet the revised 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												
11	RAS/WAS system		The exisitng system met the TCEQ requirements in place at the time of design and construction but does not meet the revised 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												
12	Screw Dewater System		Operational Effeciency, District may be able to cut back on costs of contracting out dewatering -			$750,000												
Wastewater Treatment Plant Projects Total					**$16,770,000**				**$395,000**	**$109,757**	**$130,243**	**$1,925,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$9,500,000**
Total Bond Issue Requirement (1)												**$2,989,412**	**$0**	**$0**	**$0**	**$0**	**$0**	**$14,752,941**

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

Newport MUD
Detention Ponds
As of 2/6/20

	Detention Ponds	Amount	2019	2020	2021	2022	2023	2024	2025
1	IUOE - Detention Pond								
2	Newport Court - Detention Pond								
3	Newport Section 7 - Detention Pond								
4	Newport Section 8 - Detention Pond								
5	Newport Section 9 - Detention Pond								
6	Newport Section 10, PR1 - Detention Pond								
7	Seven Oaks Detention Pond								
	Detention Pond Projects Total		**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
	Total Bond Issue Requirement (1)		**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

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

Newport MUD
Facilities
As of 2/6/20

	Cost	Bond Issue #7 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