

**TOWN OF SULLIVAN'S ISLAND
WATER AND SEWER COMMITTEE OF COUNCIL
MEETING MINUTES
Thursday, March 25, 2021
8:45 a.m.**

1. Call to Order & Freedom of Information Act Requirements:

The Water and Sewer Committee of Council met at 8:45 a.m. on Thursday, March 25, 2021 at Town Hall, all requirements of the Freedom of Information Act having been satisfied. Present were Council Committee members Bachman Smith, IV (Chair), Chauncey Clark and Tim Reese (joined the meeting at 9:13 a.m.). Staff members present were Andy Benke, Jason Blanton, Greg Gress, Courtney Sottile and Bridget Welch. There were three (3) members of the public present and no members of the media present.

Chair Bachman Smith called the meeting to order at 8:47 a.m., and stated the press and public were duly notified pursuant to State Law.

2. Communications/Additional Items from WWTF Manager, Greg Gress

Construction updates as to the Lift Station Conversion Project and Wastewater Treatment Plant Improvements: The Wastewater Treatment Plant Improvement Project is moving along as expected. The Department staff is currently undergoing all of the necessary training required to run the new equipment. Dominion Energy is requiring the Town to grant a permanent easement and access easement allowing Dominion Energy to construct a new power line supplying power to the Sullivan's Island Wastewater Treatment Plant. This item is on the April 20, 2021 Town Council meeting agenda for Third Reading and Ratification. The new Wastewater Treatment Plant will be online in early April. Once the plant goes live, there is a 30-day demonstration period. After that period, the current oxidation ditch will be demolished. The Lift Station Conversion Project is behind schedule. Lift Stations 1 and 2 are scheduled to be online today, March 25, 2021. Republic dug a hole for the wet well approximately 11 feet from where it belonged at Lift Station 3. That resulted in delays. Chair Bachman Smith, IV explained the current situation at that Lift Station. Work has commenced at Lift Stations 4 and 5. Resident Paul Vannatta spoke regarding Lift Station 3.

3. Discussions/Motions:

a. Approval of Minutes- February 25, 2021.

Motion was made by Councilmember Chauncey Clark, seconded by Councilmember Bachman Smith, IV, to approve the Water and Sewer Minutes from February 25, 2021, carried unanimously.

b. Budget Review

Greg Gress provided the Committee and staff with the draft proposed Budget for FY22 Attachment 1). The Committee reviewed each line item. Greg Gress stated that he has not calculated the water and sewer rates yet.

Motion was made by Councilmember Chauncey Clark, seconded by Councilmember Tim Reese, to send the FY22 Water and Sewer proposed budget as presented to full Council for First Reading, carried unanimously.

- c. Arborist report from Charleston Tree Experts for 1423 Middle Street re: dead tree. Chair Bachman Smith, IV gave a background on this property regarding a possibly damaged tree after a sewer line replacement. Joe Henderson stated that the subject Hackberry tree was large and was shedding branches, however, the symptoms are common with this type of tree. The homeowners hired Marshall Badeaux, consulting arborist, to report on the tree (Attachment 2). Chair Bachman Smith, IV suggested having Joe Henderson review the report and submit his conclusions. If Joe Henderson does not have any issues with the report, the Town would absorb the cost of removing the tree.
- d. Security of Lift Station 2 and others. Residents have expressed concerns regarding exposed pipes at Lift Stations. Chair Bachman Smith, IV stated that the Town will continue to monitor the stations and if it continues to be an issue then further action will be taken for safety purposes. He feels that it is only an issue while under construction and hopes that it will resolve itself once the stations go online and are properly fenced off. The Committee agreed.

4. **Review of Active and Pending Projects:**

The current status of active and pending projects (a. through h. below) was reviewed.

- a. Wastewater Treatment Plant Retrofit (Construction Phase)
- b. Charleston CPW/ICW Water Main Project (Construction Phase)
- c. CWS contract revisions
- d. Written Cost Recovery Program
- e. Private Sewer Lateral Policy for I&I Reduction
- f. Pump/Lift Stations flood proofing project (Contracting Phase)
- g. Water & Sewer Ordinance review/clean-up
- h. ASR: Aquifer Storage and Recovery (explore use of Pre-Disaster Mitigation Grant funds)

5. **The next Water and Sewer Committee Meeting is scheduled for: Thursday, April 22, 2021 8:45 a.m.**

6. **Adjournment:**


Motion was made by Councilmember Chauncey Clark, seconded by Councilmember Tim Reese, to adjourn at 9:41 a.m., carried unanimously.

Respectfully submitted,

A handwritten signature in blue ink that reads "Courtney Sottile". The signature is written in a cursive, flowing style.

Courtney Sottile

Water Sewer Highlights
PROPOSED
BUDGET FY22

					
5/19/2020		Water		Sewer	
		FY 2021		FY 2021	
		\$ increase/decrease		\$ increase/decrease	
Expenses Assumptions					
Salaries	\$	12,913 Increase		\$	12,913 Increase
Health Insurance	\$	(0) Increase		\$	(0) Same
Expenses Highlights					
Debt Service	\$	- Same		\$	- Same
Water Delivery Capital Improvements	\$	5,000 Increase			N/A
Capital Improvements	\$	- Same		\$	- Same
CWS H2O Purchase	\$	17,242 Increase			N/A
Lease Payments/Vehicle Replacement	\$	1,870 Increase		\$	- Same
Reserves	\$	- Same		\$	- Same
Operating Costs	\$	1,184 Increase		\$	3,693 Increase
Usage Demand Assumptions					
Usage					
Billed Usage (projections)		? Million Gallons			? Million Gallons
Revenue Requirements					
Estimated Budget Increase		3.50%			1.36%
Estimated Revenue Requirements	\$	38,209 Increase		\$	16,606 Increase
Avg 6,000 gallon user will actually see a				Combined Increase	
<i>All increases or decreases are referenced to budgeted numbers from FY21</i>					
Equipment replacements from reserves = 1-Dump Truck, 1-F250, 1-F350					

WATER EXPENDATURES
PROPOSED
BUDGET FY22

			FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 PROJECTED ACTUAL	FY21 BUDGETED	FY22 PROPOSED BUDGET	(+/-) % to BUDGET	(+/-) \$ Amount to Budget
1		SEWER 114								
2		DESCRIPTION								
3	124.0100	Salaries	\$ 162,038.24	\$ 200,337.94	\$ 202,981.51	\$ 260,394.94	\$ 301,057.86	\$ 307,387.47	2.1%	6,330
4	124.0200	Social Security	\$ 11,709.33	\$ 14,501.19	\$ 14,599.61	\$ 18,386.71	\$ 23,030.93	\$ 23,515.14	2.1%	484
5	124.0210	Health Insurance	\$ 21,312.97	\$ 27,530.90	\$ 25,279.07	\$ 35,857.89	\$ 47,050.90	\$ 47,050.90	0.0%	(0)
6	124.0220	Retirement	\$ 21,546.16	\$ 28,824.15	\$ 28,851.71	\$ 42,785.40	\$ 49,855.18	\$ 53,977.24	8.3%	4,122
7	124.0300	Gas & Oil Vehicles	\$ 3,118.47	\$ 5,419.64	\$ 4,831.51	\$ 3,877.46	\$ 7,000.00	\$ 7,000.00	0.0%	-
8	124.0310	Diesel--Fuel	\$ 669.39	\$ -	\$ -	\$ -	\$ 2,000.00	\$ 2,000.00	0.0%	-
9	124.0320	Diesel Equip Maint & Repairs	\$ 720.68	\$ 1,498.76	\$ 5,477.59	\$ 4,856.95	\$ 2,000.00	\$ 2,000.00	0.0%	-
10	124.0400	Maint & Repairs Vehicles	\$ 916.44	\$ 2,079.92	\$ 5,554.97	\$ 3,700.00	\$ 5,000.00	\$ 5,000.00	0.0%	-
11	124.0600	Supplies & Materials	\$ 14,332.05	\$ 4,277.55	\$ 5,535.79	\$ 10,649.16	\$ 12,000.00	\$ 12,000.00	0.0%	-
12	124.0610	Tools	\$ 2,216.70	\$ 919.78	\$ 5,936.98	\$ 330.22	\$ 1,600.00	\$ 1,600.00	0.0%	-
13	124.0620	Office Supplies	\$ 12,253.12	\$ 9,113.00	\$ 11,318.06	\$ 8,545.72	\$ 9,100.00	\$ 9,100.00	0.0%	-
14	124.0630	Lab Supplies	\$ 2,761.74	\$ 3,725.42	\$ 2,912.74	\$ 3,303.65	\$ 2,600.00	\$ 2,652.00	2.0%	52
15	124.0700	Telephone	\$ 7,111.61	\$ 7,894.84	\$ 5,855.42	\$ 6,518.93	\$ 5,800.00	\$ 5,916.00	2.0%	116
16	124.0900	Power & Electricity	\$ 4,390.22	\$ 3,540.50	\$ 3,245.77	\$ 3,379.92	\$ 3,605.00	\$ 3,677.00	2.0%	72
17	124.1000	Insurance	\$ 22,382.08	\$ 22,127.63	\$ 24,865.26	\$ 29,704.25	\$ 17,510.00	\$ 17,860.00	2.0%	350
18	124.1100	Equipment Repairs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
19	124.1200	System Repairs&Main	\$ 50,143.48	\$ 31,521.06	\$ 33,331.03	\$ 34,070.67	\$ 41,200.00	\$ 41,200.00	0.0%	-
20	124.1203	Uniforms and Clothing	\$ 4,542.81	\$ 544.51	\$ 1,121.81	\$ 618.15	\$ 1,600.00	\$ 1,600.00	0.0%	-
21	124.1210	capital Improvements	\$ 22,558.07	\$ 32,045.54	\$ 94,161.52	\$ 99,593.41	\$ 100,500.00	\$ 100,500.00	0.0%	-
22	124.1211	Admin. Bld. Expenses	\$ 30.00	\$ 2,381.58	\$ 1,061.07	\$ 256.00	\$ 1,000.00	\$ 1,000.00	-	-
23	124.1220	Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
24	124.1300	Dues & Certifications	\$ 5,259.96	\$ 5,479.36	\$ 5,263.00	\$ 8,588.85	\$ 9,270.00	\$ 9,270.00	0.0%	-
25	124.1400	Training & Seminars	\$ 3,311.40	\$ 4,640.30	\$ 4,440.62	\$ 4,519.77	\$ 4,700.00	\$ 4,794.00	2.0%	94
26	124.1900	Prof. Ser. - Audit	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	0.0%	-
27	124.2000	Prof. Ser. - Eng.	\$ 40,979.86	\$ 76,369.23	\$ 25,277.10	\$ 2,938.50	\$ 105,000.00	\$ 105,000.00	0.0%	-
28	124.3000	Miscellaneous	\$ 3,989.42	\$ 1,711.14	\$ 60.53	\$ -	\$ 1,564.35	\$ 1,564.35	0.0%	-
29	124.3100	Prop. & Equipment	\$ 13,080.50	\$ -	\$ -	\$ 81,000.00	\$ 94,000.00	\$ 94,000.00	0.0%	-
30	124.3110	Prop & Equip <\$5,000	\$ -	\$ 4,768.21	\$ -	\$ -	\$ -	\$ -	-	-
31	124.3500	Water Bond pmt to general fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	#DIV/0!	-
32	124.3510	Lease Payments	\$ 50,441.72	\$ 24,721.27	\$ 14,088.44	\$ 14,088.44	\$ 36,998.85	\$ 38,868.85	5.1%	1,870
33	124.3600	Water analysis	\$ 2,075.00	\$ 3,670.00	\$ 875.00	\$ 822.86	\$ 1,300.00	\$ 1,300.00	0.0%	-
34	124.3700	Chemicals	\$ 7,854.61	\$ 8,082.82	\$ 8,918.76	\$ 11,228.97	\$ 8,400.00	\$ 8,900.00	6.0%	500
35	124.3800	Meter Lease Payment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
36	124.3900	H2O Payment, Operation	\$ 127,538.43	\$ 151,433.76	\$ 164,605.14	\$ 166,899.45	\$ 142,758.00	\$ 160,000.00	12.1%	17,242
37	124.4000	CPW Improvements	\$ -	\$ -	\$ -	\$ -	\$ 36,000.00	\$ -	-100.0%	(36,000)
38	124.8900	Bad Debt Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
39		SUBTOTAL - WATER	\$ 803,784.46	\$ 853,160.00	\$ 874,450.01	\$ 1,030,916.26	\$ 1,247,501.07	\$ 1,283,732.95	2.9%	36,232
40										
41										
42		ADMINISTRATIVE								
43	ACCT #	DESCRIPTION								
44	129.0100	Admin. Salaries	\$ 43,364.71	\$ 45,438.56	\$ 49,230.77	\$ 51,300.55	\$ 47,859.07	\$ 49,055.56	2.5%	1,196
45	129.0200	Social Security	\$ 3,189.63	\$ 3,326.75	\$ 3,622.00	\$ 3,727.08	\$ 3,661.22	\$ 3,752.75	2.5%	92
46	129.0210	Hospital Insurance	\$ 3,055.85	\$ 3,989.94	\$ 4,138.81	\$ 4,922.33	\$ 5,071.21	\$ 5,071.21	0.0%	-
47	129.0220	Retirement	\$ 5,872.54	\$ 6,615.83	\$ 7,579.33	\$ 8,450.42	\$ 7,925.46	\$ 8,614.16	8.7%	689
48		Admin-Office Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
49		Bond Interest expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
50		Transfer to Gen. Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
51		Transfer to Water Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
52		Transfer to Sewer Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
53		Transfer to Special Rev	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-
54		TOTAL ADMINISTRATIVE	\$ 55,482.73	\$ 59,371.08	\$ 64,570.91	\$ 64,516.96	\$ 64,516.96	\$ 66,493.67	3.1%	1,977
55										
56		GRAND TOTAL - WATER	\$ 859,267.19	\$ 912,531.08	\$ 939,020.92	\$ 1,312,018.03	\$ 1,312,018.03	\$ 1,350,226.62	2.9%	38,209
57										
58		Reserve for Anticipated capital Outlays	\$ 105,500.00	\$ 95,000.00	\$ 95,000.00	\$ 95,000.00	\$ 95,000.00	\$ 95,000.00	0.0%	-
59		Reserve for CWS capital Charge	\$ 74,000.00	\$ 74,000.00	\$ 74,000.00	\$ 74,000.00	\$ 74,000.00	\$ 115,000.00	55.4%	41,000

WATER REVENUE
PROPOSED
BUDGET FY22

4	ACCT.#	DESCRIPTION	FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 PROJECTED ACTUAL	FY21 BUDGETED	FY22 PROPOSED REVENUES	(+/-) % to BUDGET
5	123-0005	Water Bond Transfer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
6	123-1000	Transfer From CIP Fund	\$ -	\$ -	\$ -	\$ 94,000.00	\$ 194,000.00	\$ 194,000.00	
7	123.2000	Transfer fr. Depreciation Fd.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8	123.3300	Interest earned	\$ 2,490.34	\$ 7,066.92	\$ 15,402.22	\$ 14,260.17	\$ 2,060.00	\$ 2,060.00	0.0%
9	123.4110	Water Sales	\$ 1,026,601.00	\$ 1,128,074.00	\$ 1,137,303.84	\$ 1,136,887.15	\$ 1,092,758.03	\$ 1,130,966.62	3.5%
10	123.4111	Penalties	\$ 3,395.00	\$ 3,585.00	\$ 2,934.32	\$ 4,482.86	\$ 5,500.00	\$ 5,500.00	0.0%
11	123.4112	Administrative Account Fees	\$ 7,460.00	\$ 7,845.00	\$ 6,465.00	\$ 9,120.00	\$ 8,240.00	\$ 8,240.00	0.0%
13	123.4114	Hydrant meter permits	\$ 297.34	\$ -	\$ 1,477.53	\$ -	\$ 200.00	\$ 200.00	0.0%
14	123.4300	Meter connect & renew	\$ 48,830.00	\$ 14,970.00	\$ 46,175.00	\$ 30,411.43	\$ 7,210.00	\$ 7,210.00	0.0%
15	123.4400	Meter Repairs	\$ 1,660.00	\$ 500.00	\$ 750.00	\$ 75.00	\$ 500.00	\$ 500.00	0.0%
16	123.4500	Service Calls	\$ 6,290.00	\$ 9,900.00	\$ 1,200.00	\$ 720.00	\$ 500.00	\$ 500.00	0.0%
17	123.4600	Inspection Fees	\$ 3,120.00	\$ 2,580.00	\$ 3,000.00	\$ 2,982.86	\$ 250.00	\$ 250.00	0.0%
18	123.4610	Backflow Testing	\$ 1,200.00	\$ 2,250.00	\$ 2,580.00	\$ 1,500.00	\$ 700.00	\$ 700.00	0.0%
19	124.4611	Unmetered Fire Line Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
21	124.4612	Repairs Caused by Others	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
22	123.4900	Miscellaneous	\$ 9,203.00	\$ 27.10	\$ 100.00	\$ 50.00	\$ 100.00	\$ 100.00	0.0%
23	123.9000	Transfer fr. Spec. Rev.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
24	123.9100	Transfer fr. Sewer Fd.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
25	123.9400	Transfer fr. Gen. Fd.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
26	123.9900	Advalorem Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
27		TOTAL	\$ 1,110,546.68	\$ 1,176,798.02	\$ 1,217,387.91	\$ 1,294,489.46	\$ 1,312,018.03	\$ 1,350,226.62	1.4%

WATER CAPITAL
PROPOSED
BUDGET FY22

124.3100 JUSTIFICATION OF .3100, 3110, 3500													
ACCT.#	DESCRIPTION	FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 PROJECTED ACTUAL	FY21 BUDGETED	FY22 PROPOSED BUDGET						
6	EXISTING DEBT SERVICE	\$ 50,441.72	\$ 24,721.27	\$ 14,088.44	\$ 14,088.44	\$ 13,218.00	\$ 14,088.00						
7	Equipment/Vehicle Capital Reserves			\$ 22,910.41	\$ 22,910.41	\$ 23,780.85	\$ 24,780.85						
8													
9	Utility Van												
10	Meter Reader Utility Vehicle												
11													
12													
13	2 - F150 xlt cew cab				\$ 33,000.00	\$ 33,000.00	\$ -						
14	Dump Truck 5 - 6 yd				\$ -	\$ 41,000.00	\$ 41,000.00						
15	Towable Air Compressor 180cfm				\$ 20,000.00	\$ 20,000.00	\$ -						
	1- F250 W/Utility Bed and pipe rack				\$ 19,000.00		\$ 19,000.00						
16	1- F350 W/crane						\$ 34,000.00						
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28	TOTAL PROPERTY & EQUIPMENT				\$ 72,000.00	\$ 94,000.00	\$ 94,000.00						
29													
30	124.3100 Property & Equipment				\$ 94,000.00	\$ 94,000.00	\$ 94,000.00						
31	124.3110 Property & Equipment <\$5,000				\$ -								
32	124.3510 Lease Payments/Vehicle replacements			\$ 36,998.85	\$ 36,998.85	\$ 36,998.85	\$ 38,868.85						
33													

						FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 PROJECTED ACTUAL	FY21 BUDGETED	FY22 PROPOSED BUDGET
4.1200 System Repairs & Maintenance											
General System Improvements						\$ 50,143.00	\$ 31,521.00	\$ 33,331.03	\$ 34,070.67	\$ 41,200.00	\$ 41,200.00
Total						\$ 50,143.00	\$ 31,521.00	\$ 33,331.03	\$ 34,070.67	\$ 41,200.00	\$ 41,200.00
4.1210 Capital Improvements Program											
Irrigation meter installes									\$ 30,411.43		
Meter Replacement Program									\$ 33,886.00		
Building Repairs										\$ 10,500.00	\$ 10,500.00
Pipe Replacement Program									\$ 2,000.00	\$ 90,000.00	\$ 90,000.00
Total						\$ 22,558.00	\$ 32,045.00	\$ 94,151.00	\$ 99,593.41	\$ 100,500.00	\$ 100,500.00
4.1220 Deprecation Fund/Reserves											
Reserve for Anticipated capital Outlays						\$ 105,500.00	\$ 95,000.00	\$ 95,000.00	\$ 95,000.00	\$ 95,000.00	\$ 95,000.00
Water Delivery Capital Reserves						\$ 74,000.00	\$ 74,000.00	\$ 74,000.00	\$ 74,000.00	\$ 74,000.00	\$ 115,000.00
Total						\$ 179,500.00	\$ 169,000.00	\$ 169,000.00	\$ 169,000.00	\$ 169,000.00	\$ 210,000.00
4.2000 Professional Services - Engineering											
Rate Study						\$ -			\$ -	\$ -	\$ -
ASR Study						\$ -			\$ -	\$ 100,000.00	\$ 100,000.00
Legal						\$ -			\$ -	\$ -	\$ -
Water System Modeling/Design						\$ -			\$ -	\$ -	\$ -
Design future years water line replacement						\$ -			\$ -	\$ -	\$ -
Miscellaneous Engineering						\$ 2,521.40			\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
GIS Mapping						\$ -			\$ -	\$ -	\$ -
Total						\$ 40,980.00	\$ 76,369.00	\$ 25,277.10	\$ 2,938.50	\$ 105,000.00	\$ 105,000.00
Reserve Offsets						\$ -			\$ -	\$ 100,000.00	\$ 100,000.00
Total						\$ 305,602.58	\$ 315,700.00	\$ 315,700.00	\$ 315,700.00	\$ 315,700.00	\$ 356,700.00

SEWER EXPENDATURES
PROPOSED
BUDGET FY22

1			FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 PROJECTED ACTUAL	FY21 BUDGETED	FY22 PROPOSED BUDGET	(+/-) % to BUDGET	(+/-) \$ Amount to Budget
2		SEWER 114 DESCRIPTION								
3	114.0100	Salaries	\$ 162,216.37	\$ 200,431.82	\$ 202,919.07	\$ 260,413.35	\$ 301,057.86	\$ 307,387.47	2.1%	\$ 6,330
4	114.0200	Social Security	\$ 11,712.50	\$ 14,503.09	\$ 14,586.96	\$ 18,389.25	\$ 23,030.93	\$ 23,515.14	2.1%	\$ 484
5	114.0210	Health Insurance	\$ 21,315.89	\$ 27,534.20	\$ 25,284.91	\$ 35,862.31	\$ 47,050.90	\$ 47,050.90	0.0%	\$ (0)
6	114.0220	Retirement	\$ 21,546.87	\$ 28,825.37	\$ 28,858.04	\$ 42,787.29	\$ 49,855.18	\$ 53,977.24	8.3%	\$ 4,122
7	114.0300	Gas & Oil Vehicles	\$ 3,141.05	\$ 5,424.73	\$ 4,782.07	\$ 3,040.66	\$ 7,000.00	\$ 7,000.00	0.0%	\$ -
8	114.0310	Diesel--Fuel	\$ 5,200.93	\$ 2,118.76	\$ -	\$ 3,000.00	\$ 3,400.00	\$ 3,800.00	11.8%	\$ 400
9	114.0320	Diesel Equip Maint & Repairs	\$ 1,189.39	\$ 1,696.78	\$ 9,272.21	\$ 2,185.20	\$ 5,500.00	\$ 5,700.00	3.6%	\$ 200
10	114.0400	Maint & Repairs Vehicles	\$ 936.43	\$ 5,384.76	\$ 5,698.87	\$ 3,700.00	\$ 5,000.00	\$ 5,000.00	0.0%	\$ -
11	114.0600	Supplies & Materials	\$ 12,213.26	\$ 12,211.78	\$ 11,834.38	\$ 9,355.37	\$ 10,300.00	\$ 10,500.00	1.9%	\$ 200
12	114.0610	Tools	\$ 1,919.00	\$ 642.18	\$ 7,376.14	\$ 1,286.25	\$ 2,100.00	\$ 2,150.00	2.4%	\$ 50
13	114.0620	Office Supplies	\$ 12,121.74	\$ 8,631.07	\$ 11,289.01	\$ 5,739.03	\$ 8,961.00	\$ 8,961.00	0.0%	\$ -
14	114.0630	Lab Supplies	\$ 8,418.48	\$ 6,017.93	\$ 6,618.30	\$ 3,874.68	\$ 7,500.00	\$ 7,650.00	2.0%	\$ 150
15	114.0700	Telephone	\$ 7,111.86	\$ 7,895.01	\$ 5,855.48	\$ 6,518.91	\$ 5,768.00	\$ 5,941.00	3.0%	\$ 173
16	114.0900	Power & Electricity	\$ 56,930.27	\$ 42,617.11	\$ 45,711.16	\$ 46,491.34	\$ 59,740.00	\$ 59,740.00	0.0%	\$ -
17	114.1000	Insurance	\$ 24,928.35	\$ 25,209.87	\$ 28,426.09	\$ 28,839.75	\$ 25,000.00	\$ 26,000.00	4.0%	\$ 1,000
18	114.1100	Equipment Repairs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
19	114.1200	System Repairs&Main	\$ 75,946.14	\$ 56,552.00	\$ 74,715.95	\$ 33,701.59	\$ 77,250.00	\$ 77,250.00	0.0%	\$ -
20	114.1201	Sludge Disposal	\$ 28,107.06	\$ 25,776.31	\$ 71,075.57	\$ 39,105.89	\$ 52,000.00	\$ 52,000.00	0.0%	\$ -
21	114.1202	Grit Disposal	\$ 1,158.74	\$ 2,859.10	\$ 1,207.35	\$ 3,333.83	\$ 1,500.00	\$ 1,550.00	3.3%	\$ 50
22	114.1203	Uniforms and Clothing	\$ 4,464.03	\$ 544.51	\$ 1,148.66	\$ 237.96	\$ 2,100.00	\$ 2,200.00	4.8%	\$ 100
23	114.1210	capital Improvements	\$ 118,948.86	\$ 57,156.85	\$ 25,210.30	\$ 18,795.39	\$ 100,000.00	\$ 100,000.00	0.0%	\$ -
24	114.1211	Admin. Bld. Expenses	\$ 30.00	\$ 2,374.55	\$ 761.06	\$ 336.00	\$ 1,000.00	\$ 1,000.00		\$ -
25	114.1220	Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
26	114.1230	Collection System I&I Monitoring	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
27	114.1300	Dues & Certifications	\$ 4,133.95	\$ 3,322.35	\$ 2,105.00	\$ 6,068.83	\$ 8,000.00	\$ 8,100.00	1.3%	\$ 100
28	114.1400	Training & Seminars	\$ 3,021.48	\$ 4,815.01	\$ 4,940.22	\$ 797.23	\$ 6,000.00	\$ 6,000.00	0.0%	\$ -
29	114.1900	Prof. Ser. - Audit	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	0.0%	\$ -
30	114.2000	Prof. Ser. - Eng.	\$ 271,300.62	\$ 14,862.48	\$ 42,305.50	\$ 1,470.00	\$ 5,000.00	\$ 5,000.00	0.0%	\$ -
31	114.3000	Miscellaneous	\$ 4,015.31	\$ 653,480.75	\$ 303,201.36	\$ -	\$ 1,124.82	\$ 1,124.82	0.0%	\$ -
32	114.3100	Prop. & Equipment	\$ 45,094.35	\$ 1,513.11	\$ 102.83	\$ 88,500.00	\$ 100,000.00	\$ 94,000.00	-6.0%	\$ (6,000)
33	114.3110	Prop & Equip <\$5,000	\$ -	\$ 2,266.11	\$ 77,424.00	\$ -	\$ -	\$ -		\$ -
34	114.3500	Admin. of Sewer bond	\$ 147,228.72	\$ 137,034.25	\$ 2,639,553.02	\$ 65,215.72	\$ 87,000.00	\$ 87,000.00	0.0%	\$ -
35	114.3510	Lease Payments	\$ 18,427.87	\$ 2,314,514.20	\$ 358,482.35	\$ 101,672.15	\$ 115,475.00	\$ 115,475.00	0.0%	\$ -
36	114.3600	Wastewater analysis	\$ 15,428.99	\$ 723,734.20	\$ 2,600.00	\$ 9,282.31	\$ 11,330.00	\$ 12,000.00	5.9%	\$ 670
37	114.3700	Chemicals (cl2,so2,)	\$ 18,557.43	\$ -	\$ -	\$ 18,800.07	\$ 20,000.00	\$ 20,600.00	3.0%	\$ 600
38	114.8900	Bad Debt Expense	\$ -	\$ 163,411.51	\$ 88,257.96	\$ -	\$ -	\$ -		\$ -
39			\$ -	\$ 112,305.49	\$ 101,672.15	\$ -	\$ -	\$ -		\$ -
41		SUBTOTAL - SEWER	\$ 1,148,765.94	\$ 4,667,361.75	\$ 4,218,603.82	\$ 972,800.37	\$ 1,266,043.69	\$ 1,274,672.57	0.7%	\$ 8,629
42										\$ -
43										\$ -
44		ADMINISTRATIVE								\$ -
45	ACCT #	DESCRIPTION								\$ -
46	119.0100	Admin. Salaries	\$ 43,363.92	\$ 45,437.59	\$ 49,183.58	\$ 51,299.62	\$ 47,859.07	\$ 49,055.56	2.5%	\$ 1,196
47	119.0200	Social Security	\$ 3,189.52	\$ 3,326.50	\$ 3,618.00	\$ 3,727.17	\$ 3,661.22	\$ 3,752.75	2.5%	\$ 92
48	119.0210	Hospital Insurance	\$ 3,055.76	\$ 3,989.68	\$ 4,138.33	\$ 4,922.02	\$ 5,071.21	\$ 5,071.21	0.0%	\$ -
49	119.0220	Retirement	\$ 5,872.56	\$ 6,615.92	\$ 7,579.34	\$ 8,450.37	\$ 7,925.46	\$ 8,614.16	8.7%	\$ 689
50		Admin-Office Supplies								\$ -
51		Bond Interest expense								\$ -
52		Transfer to Gen. Fund								\$ -
53		Transfer to Water Fund								\$ -
54		Transfer to Special Rev								\$ -
55		TOTAL ADMINISTRATIVE	\$ 55,481.76	\$ 59,369.69	\$ 64,519.25	\$ 68,399.18	\$ 64,516.96	\$ 66,493.67	3.1%	\$ 1,977
56										\$ -
57		GRAND TOTAL - SEWER	\$ 1,204,247.70	\$ 4,726,731.44	\$ 4,283,123.07	\$ 1,041,199.54	\$ 1,330,560.65	\$ 1,341,166.24	0.8%	\$ 10,606
58										
59		Reserve for Anticipated capital Outlays	\$ 37,000.00	\$ 109,000.00	\$ 112,000.00	\$ 109,000.00	\$ 112,000.00	\$ 112,000.00	0.0%	\$ -

SEWER REVENUE
PROPOSED
BUDGET FY22

4	ACCT.#	DESCRIPTION	FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 PROJECTED ACTUAL	FY21 BUDGETED	FY22 PROPOSED REVENUES	(+/-) % to BUDGET
5	113-0005	Sewer Bond Transfer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
6	113-1000	Transfer From CIP Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	#DIV/0!
7	113-2000	Transfer fr. Depreciation Fd.	\$ -	\$ -	\$ -	\$ 78,000.00	\$ 100,000.00	\$ 94,000.00	
8	113-3300	Intrest earned	\$ 3,072.42	\$ 5,492.31	\$ 7,936.73	\$ 6,613.94	\$ 1,000.00	\$ 1,000.00	0.0%
9	113-4110	Sewer Service Charges	\$ 1,026,601.00	\$ 1,128,074.00	\$ 1,137,303.84	\$ 1,221,622.98	\$ 1,221,560.65	\$ 1,238,166.24	1.4%
10	113-4111	Penalties	\$ 3,395.00	\$ 3,585.00	\$ 2,934.32	\$ 4,482.86	\$ 5,500.00	\$ 5,500.00	0.0%
11	113-4112	Administrative Account Fees	\$ 1,000.00	\$ 350.00	\$ 350.00	\$ 342.86	\$ 1,300.00	\$ 1,300.00	0.0%
12	113-4300	Tie-in fees & Installations	\$ 2,100.00	\$ 760.00	\$ 3,550.00	\$ 1,200.00	\$ -	\$ -	
13	113-4500	Service Calls	\$ -	\$ -	\$ -	\$ 68.57	\$ 500.00	\$ 500.00	0.0%
14	113-4600	Inspection Fees	\$ 3,050.00	\$ 3,657.50	\$ 2,600.00	\$ 3,171.43	\$ 1,500.00	\$ 1,500.00	0.0%
15	113-4610	Repairs Caused by Others	\$ -	\$ 134.00	\$ -	\$ -	\$ -	\$ -	
	113-4800	Federal Grant Revenue	\$ 2.00	\$ -	\$ -				
16	113-4900	Miscellaneous	\$ -	\$ -	\$ -	\$ -	\$ 200.00	\$ 200.00	0.0%
17	113-9100	Transfer fr. Water Fd.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
18	113-9200	Transfer fr. Gen. Fd.	\$ -	\$ 3,617,806.32	\$ 115,697.16	\$ -	\$ -	\$ -	#DIV/0!
19	113-9300	Transfer fr. Spec. Rev.	\$ -	\$ -	\$ 4,156,993.08	\$ 9,137,866.45	\$ -	\$ -	
20	113-9900	Advalorem Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	123.9901	Proceeds-Sale of Assets	\$ 2.00	\$ 34,100.00	\$ -	\$ -	\$ -	\$ -	
21		SRF Bond Reserve	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
22		TOTAL	\$ 1,039,222.42	\$ 4,793,959.13	\$ 5,427,365.13	\$ 1,331,560.65	\$ 1,331,560.65	\$ 1,342,166.24	0.8%

SEWER CAPITAL
PROPOSED
BUDGET FY22

JUSTIFICATION OF .3100, 3110, 3500																		
ACCT.#	DESCRIPTION	FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 PROJECTED ACTUAL	FY21 BUDGETED	FY22 PROPOSED BUDGET	(+/-) \$ to BUDGET	4.1200	System Repairs&Main	FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 PROJECTED ACTUAL	FY21 BUDGETED	FY22 PROPOSED BUDGET		
6	EXISTING DEBT SERVICE	\$ 18,427.87	\$ 112,305.49	\$ 101,672.15	\$ 101,672.15	\$ 102,257.00	\$ 102,257.00	\$ 585										
7	Equipment/Vhicle Capital Reserves		\$ 13,802.85	\$ 13,802.85	\$ 13,802.85	\$ 13,218.00	\$ 13,218.00	\$ (585)										
8								\$ -		General System Repairs	\$ 75,946.14	\$ 56,552.00	\$ 74,115.00	\$ 33,701.59	\$ 75,000.00	\$ 75,000.00		
9	Utility Van							#REF!		TOTAL	\$ 75,946.14	\$ 56,552.00	\$ 74,115.00	\$ 33,701.59	\$ 75,000.00	\$ 75,000.00		
10	Meter Reader Utility vehicle							#REF!	4.1210 capital Improvements Program									
11								\$ -		Building and Grounds Repairs				\$ 4,600.00	\$ 5,000.00	\$ 5,000.00		
12	2 - F150 xlt cew cab				\$ 33,000.00	\$ 33,000.00		\$ -		Repairs to lift stations				\$ -	\$ -	\$ -		
13	Sewer lateral camera				\$ 26,000.00	\$ 26,000.00		\$ (26,000)						\$ -	\$ -	\$ -		
14	Dump Truck 5 - 6 yd				\$ -	\$ 41,000.00	\$ 41,000.00	\$ 41,000										
15	1- F250 W/Utility Bed and pipe rack				\$ 19,000.00			\$ -										
16	1- F350 W/crane						\$ 34,000.00	\$ 34,000		I & I Monitoring								
17								\$ -		On Going Collection Sys Rehab and/or Replacements				\$ 85,000.00	\$ 95,000.00	\$ 95,000.00		
18								\$ -		Service Lateral Rehab & Replacement				\$ -		\$ -		
19								\$ -		Manhole Rehabilitation				\$ -		\$ -		
20								\$ -						\$ -		\$ -		
21								\$ -						\$ -		\$ -		
22								\$ -						\$ -		\$ -		
23								\$ -						\$ -		\$ -		
24								\$ -		TOTAL	\$ 118,948.00	\$ 57,156.00	\$ 25,210.00	\$ 18,795.39	\$ 100,000.00	\$ 100,000.00		
25								\$ -										
26								\$ -	4.1220 Deprecation Fund/Reserves					\$ -				
27								\$ -		Reserve for Anticipated capital Outlays	\$ 37,000.00	\$ 109,000.00	\$ 112,000.00	\$ 109,000.00	\$ 109,000.00	\$ 112,000.00		
28								\$ -						\$ -				
29	TOTAL PROPERTY & EQUIPMENT				\$ 78,000.00	\$ 100,000.00	\$ 94,000.00	\$ 16,000		TOTAL	\$ 37,000.00	\$ 109,000.00	\$ 112,000.00	\$ 109,000.00	\$ 109,000.00	\$ 112,000.00		
30								\$ -										
31								\$ -	4.2000 Professional Services - Engineering									
32	11.4.3100 Property & Equipment				\$ 100,000.00	\$ 100,000.00	\$ 94,000.00	#REF!		Rate Study				\$ 36,370.00	\$ -	\$ -		
33	11.4.3110 Property & Equipment <\$5,000				\$ -			\$ 94,000		NPDES Renewal				\$ 19,500.00	\$ -	\$ -		
34	11.4.3510 Lease Payments/Vehicle replacements				\$ 115,475.00	\$ 115,475.00	\$ 115,475.00	\$ -		WWTF Design								
35										WWTF FEMA				\$ 21,500.00				
36										GIS Mapping								
37										Sewer Pump Station Design					\$ 80,000.00	\$ -		
38										Miscellaneous Engineering				\$ 1,470.00	\$ 5,000.00	\$ 5,000.00		
39										TOTAL	\$ 271,300.00	\$ 14,852.00	\$ 42,305.00		\$ 85,000.00	\$ 5,000.00		
40										Reserve Offsets				\$ -	\$ (80,000.00)			
41										Totals	\$ 503,194.14	\$ 237,560.00	\$ 253,630.00	\$ 161,496.98	\$ 289,000.00	\$ 292,000.00		
42																		
43																		
44																		

To Whom It May Concern:

Enclosed is a report ordered by Natanya O'Donnell based on my independent field investigation of a 21.25" Sugarberry located to the rear right side of the home located at 1423 Middle Street, Sullivan's Island, SC 29482. It has been prepared for the consideration of her desire to determine the health and safety of the tree, determine the probable cause of tree failure, and to meet the requirements outlined in the municipal ordinance for removal of protected trees. I have included my assessment of the tree's current conditions, my investigation and expert opinion regarding its failure, as well as my recommendations for removal.

Please feel free to contact me with any questions you may have about this report, or any other service we can provide.

Best regards,



Marshall Badeaux
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Johns Island, SC 29455



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Tree Report
1423 Middle Street
Sullivan's Island, SC 29482

Prepared for:
Natanya O'Donnell

Prepared By:
Marshall Badeaux, Consulting Arborist
International Society of Arboriculture Certified Arborist SO-7159A
Member, American Society of Consulting Arborists
TRAQ, Tree Risk Assessment Qualified
TPAQ, Tree and Plant Appraisal Qualified
CTSP, Certified Treecare Safety Professional #03122
EHAP, Electrical Hazards Awareness Program

March 5, 2021

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SUMMARY

After Natanya O'Donnell had become concerned with the condition of a 21.25" Sugarberry growing to the rear right side of the home, my firm was contacted to provide an independent, objective opinion regarding the health and structural stability of the tree located on the site. I performed a Level 2: Basic Tree Risk Assessment (BTRA).

Based on this level 2 evaluation, I have determined that the tree outlined in this report is hazardous, beyond repair and should be removed as soon as possible to reduce unnecessary risk or spread of disease and pest and/or damage or injury to people or property.

INTRODUCTION

Background

In February 2021, Natanya O'Donnell contacted my firm and expressed concerns after observing a high-risk tree on the rear right side of the home. She first became concerned about the tree's wellbeing in advance of and in connection with the Town of Sullivan's Island's Wastewater Treatment Plant Seismic and Flood Hazard Upgrade Project commencement. Prior to the sewage easement installation, Natanya O'Donnell expressed her concerns regarding the wellbeing of their, at that time, healthy trees in regard to the scope of work projected. She was not advised of any concern voiced by the arborist used by the Sullivan's Island Water & Sewer Department regarding the health of the trees in close proximity to the easement associated with the project. Natanya O'Donnell continued to express her growing concerns with this tree as the project commenced, continued, concluded, and afterwards as she observed the tree declining. Upon request, my Qualified Arborist, Ashley Connelly, inspected and felt the tree was beyond repair and provided a proposal to assess the tree further. She discussed the terms of our engagement and upon approval of the Arborist Report line item, I was scheduled for site inspection to perform a BTRA.

Assignment

After discussing the terms of my engagement and the levels of assessment with Natanya O'Donnell, they agreed that I would conduct the following:

1. Identify the tree species.
2. Measure and determine the diameter at breast height (DBH).
3. Assess and provide a health grade and risk rating to the tree.
4. Provide my expert opinion on the cause of the tree failure.
5. Provide my findings in a booklet style report.

Limits of Assignment

My inspection was performed at ground level using visual observations, and my knowledge of the site history was limited to the past-history details provided by Natanya O'Donnell. These were my only limitations in addition to the normal restrictions of a Level 2: BTRA.

Purpose and Use of the Report

The purpose of this report is to provide an accurate depiction of defective or hazardous conditions of the tree and site, and develop recommendations based on that data. This report is intended to be used by Natanya O'Donnell. Upon submission, this report will become the property of Natanya O'Donnell and its use will be at her discretion. Reproduction or making of additional copies without explicit consent by the preparing Arborist is strictly prohibited.

OBSERVATIONS

Site

The tree is growing on the right rear side of the home near the back and right fence lines.

The tree poses a threat to Natanya O'Donnell's home and yard, the neighboring home and yard, and individuals enjoying leisure activities in the yards. These are the only targets within 1x the height of the trees. Most of these targets are constant and cannot be moved or mitigated.

ANALYSIS AND TESTING

The tree is approximately 50 feet in height with a crown spread of 35 feet.

Tree Inventory

Tree #	DBH	Species	Health	Risk Rating	Comment
1	21.25"	Sugarberry, <i>Celtis laevigata</i>	F	High	Dead

DISCUSSION

Trees provide numerous benefits to the urban environment. These benefits increase as the age and size of the trees increase. However, as trees becomes larger and more mature, they are likely to shed branches or develop decay or other conditions that can predispose it to failure. In assessing and managing trees, we strive to strike a balance between the risk that a tree poses and the benefits that individuals and communities derive from trees.

Tree risk assessment (TRA) is the systematic approach used to identify, analyze and evaluate tree risk. By identifying the tree risk, mitigation can be conducted to reduce risk while preserving the tree that meet acceptable levels of risk.

A primary goal of TRA is to provide the tree owner with resourceful information about the level of risk posed by a tree over a period of time. This is accomplished by conducting a qualitative analysis and determining the likelihood and consequences of a tree failure. If the risk rating defined for a tree exceeds the level of acceptable risk, mitigation is recommended.

Upon inspection of this tree, it was apparent that the tree was no longer living. It lacked any canopy, displayed large amounts of bark loss, and showed no visible signs of remaining life. I also noted decay on the buttress roots, which are important to the structural stability of the tree. This tree is an obvious hazard and will only become a greater hazard as time goes on. Natanya O'Donnell reported large branch drop beginning in September of 2020. It is appropriate to anticipate a growing amount of branch drop as time progresses. As is evident in the photographs in Appendix B, there is still a significant number of large leaders on the tree. This is a hazardous condition that should be eradicated at the earliest possible convenience.

The Town of Sullivan's Island's Wastewater Treatment Plant Seismic and Flood Hazard Upgrade Project began between July 2018 and November 2018. Prior to its commencement, no illness or decline in the subject tree was noted or reported and it appeared apparently healthy. As stated within the Ordinance to Amend Chapter 21 of the Zoning Ordinances for the Town of Sullivan's Island, a Category I tree, also known as a "significant" tree is a "tree [that] has a DBH of at least sixteen (16) inches or a height of at least forty (40) feet. A Category I tree has the highest level of protection based on its total value to the Island environment. (Island, 2005) The subject tree has a DBH of 21.25" and is therefore considered a significant, or Category 1, tree by the Town of Sullivan's Island standards and should have received the highest level of protection.

According to Lindsey Purcell, an Urban Forestry Specialist with Purdue University, "Tree roots usually are considered as 'out of sight, out of mind.' However, this underground system is one of the most vital and easily damaged parts of the plant, making roots the leading cause of decline and death of injured trees. Any encroachment, disturbance or compaction of the soil around the tree can lead to harm, destroying these fine absorbing roots. Injury caused by activities such as improper cutting, crushing, suffocation or poisoning can result in slow decline, dieback and, eventually, the death of the tree. Trees damaged during construction projects may take years to exhibit symptoms." (Purcell) The subject tree's critical root zone was unquestionably impacted during construction. The critical root zone is the area of soil around a tree where the minimum amount of roots considered critical to the structural stability or health of the tree are located. The critical root zone is usually based on the dripline or 1.5 feet per inch in DBH, whichever is greater. This is just the area considered critical, the actual tree roots extend out 2-3 times the dripline. The dripline is the area on the ground below the tree with a boundary designated by the edge of the tree's crown. Based on this information, the critical root zone for the subject tree would have been approximately 32 feet or to the dripline, whichever is greater.

In the photographs labeled Appendix C, there is a privacy fence that was installed in the middle of the construction area, post construction. Also visible in the photographs, as marked, are the subject tree's limbs extending out past the fence line. Additionally, based on the history provided by the property owner, trenching occurred in the area that was replaced by sod. As depicted in the last photograph of Appendix C, the sod was installed within the critical root zone, and up to the base of the tree. This verifies that the clearing and excavation would have impacted the critical root zone by impeding the dripline of the tree. This also increases the likelihood of damage to the branches of the tree caused by the machinery, which would also contribute to its failure. Since the area was cleared and excavated within the critical root zone it is appropriate to assume that the critical root area suffered from root compaction first then subsequently damage from cutting/excavation.

The root damage would be sufficient enough to cause overall tree failure. It can take multiple years for a tree to fail once negatively impacted by construction. Sugarberry trees tend to decline slightly quicker once damaged due to their soft wood which decays more rapidly than most, especially in humid environments. This coincides with the signs of decline noted by Natanya O'Donnell post construction. The timeline of the construction, the tree's decline and ultimate failure, along with the tree's apparently healthy status prior to construction indicates that the construction is the most probable cause of tree failure. It is also understood that no tree protection zone "TPZ" or tree protection/preservation plan was established during construction. Lack of the same left the tree extremely vulnerable to the many damaging activities associated with construction.

According to the Town of Sullivan's Island Tree Protection Standards: ANSI A300, A "Tree Protection Zone' is an Arborist defined area surrounding the trunk intended to protect the roots and soil to ensure future tree health and stability. A TPZ consists, at a minimum, of Zone A or B, whichever is greater, or may be another area (typically larger) as defined by the Arborist." Zone A being the Critical Root Zone (CRZ), and Zone B being the Drip Line. A TPZ is defined in a Tree Protection or Preservation Plan prior to the commencement of construction activities such as excavation, filling, tunneling, trenching, compacting, demolition, utility work, or other land disturbing activity. A Tree Protection Plan is extremely important before, during, and after construction to ensure the current and future health of the tree(s). On this project, regarding the subject tree, the Tree Protection Zone should have been approximately 32 feet at a minimum, marked with tree protection fencing. There should also have been tree protection signs affixed to the fencing. The photographs included in Appendix C show no signs of a marked TPZ or tree protection fencing throughout the project's construction.

Tree Grading System

A - Specimen tree exhibiting vigorous growth and showing little or no sign of disease or storm damage.

B - Healthy tree, exhibiting vigorous growth, showing minimal signs of disease, but having suffered notable storm damage.

C - Semi-healthy tree, showing some signs of decline which are perhaps correctable (i.e., some insect infestations, some diseases, root compaction, etc.); still shows signs of growth, but suffered significant storm damage.

D - Tree in declining health; has suffered extensive storm damage; tree may still live for many years without posing a hazard but may not be successfully treated to again become a healthy, specimen tree.

F - Tree which is determined to be irreparably damaged, diseased or hazardous.

CONCLUSION

Due to the size and current condition, this tree will continue to become a greater hazard and should be removed at earliest possibility.

With lack of a tree protection zone, or tree protection/preservation plan, during construction it is apparent that the construction project and the substantial damage it caused to the tree are the most probable cause of the decline and ultimate failure of this tree. As is evidenced by the photographs provided hereinbelow, there was an obvious lack of regard and care for this tree in connection with the The Town of Sullivan's Island's Wastewater Treatment Plant Seismic and Flood Hazard Upgrade Project. The Sullivan's Island Tree Protection Standards: ANSI A300 prohibits "excavating for utility or building construction" (Town of Sullivan's Island Tree Protection Standards: ANSI A300) within the Critical Root Zone and the Town's project negligently violated the same at every phase.

RECOMMENDATIONS

1. Complete removal utilizing ANSI A300 Standards for Tree Care Operations.

GLOSSARY

Acceptable risk--The degree or amount of risk that the owner, manager, or controlling authority is willing to accept.

ANSI A300 Standards for Tree Care Operations--In the United States, industry-developed, national consensus safety standards of practice for tree care.

Booklet style report--Booklet reports present information in an abbreviated book form. Booklet reports are probably the most commonly used and readily recognizable report format.

Canopy--Upper portion of the tree consisting of scaffolding branches, smaller limbs, and twigs.

Diameter--The length of a straight line through the center of a circle.

Failure--Breakage of a stem, branch, or roots, or loss of mechanical support in the root system.

Hazard--Situation or condition that is likely to lead to a loss, personal injury, property damage, or disruption of activities; a likely source of harm. Tree part identified as likely source of harm.

Levels of assessment--Categorization of the breadth and depth of analysis used in an assessment.

Likelihood of failure--The chance of tree failure occurring within the specified time frame.

Likelihood of impact--The chance of a tree failure impacting the target in the specified time frame.

Targets--People, property, or activities that could be injured, damaged, or disrupted by a tree.

Appendix A - Tree Map



Appendix B - Tree #1

Depiction of the tree's proximity to the home resulting in a serious hazard.



Note the loss of bark along the entirety of the trunk.



Depiction of the peeling bark throughout the entirety of the trunk and leaders.



Note the decay present on the buttress roots which compromises the structural stability of the tree.



Depiction of the proximity of the construction area to the base of the subject tree. The privacy fence was installed in the middle of the land clearing and excavation site for the project.



Appendix C – During and Post Construction Evidence

Depiction of the area post land clearing. The O'Donnell residence is situated on the right side of the photograph.



An additional photo showing the cleared land for the project. Note that there are no tree protection zones marked and no signage present.



Depiction of the excavation taking place. Note the heavy machinery used and lack of tree protection zone barriers.



Depiction of the finished project including the privacy fence placed in the middle of the construction area. It is important to note that the subject tree overhangs the fence, as identified below, indicating that the construction penetrated the critical root zone. The area in which the sod was installed is shown here. The sod extends to the base of the subject tree indicating that trenching occurred in the critical root zone.



Appendix D - Assumptions and Limiting Conditions

1. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable.
2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible for the accuracy of information provided by others.
3. The consultant/appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services described in the fee schedule and contract of engagement.
4. Loss or alteration of any report invalidates the entire report.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any person other than to whom it is addressed, without the prior expressed written consent of the consultant/appraiser.
6. This report and values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
7. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports.
8. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the tree or property in question may not arise in the future.

Appendix E - Certification of Performance

I, Marshall Badeaux, certify:

1. That I have personally inspected the tree referred to in the report, and have stated my findings accurately. The extent of the evaluation is stated in the attached report;
2. That I have no bias with respect to the parties involved;
3. That the analysis, opinion and conclusions stated herein is my own and is based on current scientific procedures and facts;
4. That my analysis, opinion and conclusions were developed and this report has been prepared according to commonly accepted Arboriculture practices;
5. That no one provided significant professional assistance to me, except as indicated within the report;
6. That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results if the assignment of stipulated results, or the occurrence of any subsequent events.

I furthermore certify that I am a member in good standing of the American Society of Arboriculture and the International Society of Arboriculture. I have been involved in the practice of Arboriculture and the care of tree for over 20 years.

Signed: 

Date: 03/05/2021

Works Cited

- Department, T. o. (n.d.). Town of Sullivan's Island Tree Protection Standards: ANSI A300. Sullivan's Island, South Carolina, United States of America.
- Island, T. C. (2005). *ORDINANCE TO AMEND CHAPTER 21 OF THE ZONING ORDINANCES FOR THE TOWN OF SULLIVAN'S ISLAND*. Retrieved from Sullivansisland.sc.gov: <https://sullivansisland.sc.gov/sites/default/files/Documents/Town%20Codes%20%26%20Ordinances/Sec21%20Zoning%20AMENDED%20111720%20With%20Bookmarks.pdf>
- Purcell, L. (n.d.). *Construction and Trees: Guidelines for Protection*. Retrieved from Purdue Extension: <https://www.extension.purdue.edu/extmedia/fnr/fnr-463-w.pdf>