Attachement to Councilmember Ed London's Commentary

Table 5 FROM R. SAMIMY

	INTENSITY (in./hr.)	January	February	March	April	May	June	July	August	September	October	November	December
		PERIOD OF RAINFALL RECORD 1990-2022 (32 Years)											
#	**1.0-1.5**	12	10	9	22	20	41	33	31	39	31	11	5
% IN ANY 1 YEAR		38%	31%	28%	69%	63%	128%	103%	97%	122%	97%	34%	16%
#	**1.5-1.75**	2	1	0	7	7	9	5	12	10	11	5	3
% OCCURANCE IN ANY 1 YEAR		6%	3%	0%	22%	22%	28%	16%	38%	31%	34%	16%	9%
#	**1.75-2.0**	0	3	2	3	8	6	1	7	3	6	2	3
% OCCURANCE IN ANY 1 YEAR		0%	9%	6%	9%	25%	19%	3%	22%	9%	19%	6%	9%
AVERAGE RAIN INCHES		**2.33**	**2.27**	**2.47**	**3.44**	**4.94**	**7.76**	**5.98**	**7.51**	**8.45**	**6.49**	**3.29**	**2.25**
AV RAIN DAYS (≥ 0.01")		**6.7**	**6**	**6.9**	**6**	**8.9**	**14.5**	**12.1**	**14**	**14.9**	**11.2**	**8.1**	**6.9**

Source: NOAA (extremes 1927–present)[6]

AECOM	TECH MEMO 3/15/2021
p2	89,768 lin' storm sewer pipes; 1100 drainage structures
p2	39 gravity wells; 20 outfalls; 20 outfalls; 2 pump stations
p2	Current discharge capacity to bay =210cfs; gravity wells capacity = 92cfs
p2	Total existing capacity = 302 cfs; bay 70% and wells 30%
p4	KB acres =793.66
p4	Service area = 793.66 - 204.59 Condo Area = 589.07 acres
p4	10 year 24 hour storm = 8.75" -- need 1766cfs - 209cfs currently(no wells) =1557cfs deficit
p4	5 year 24 hour storm= 7.5" need???
p4	Wells not included because of rising ground water in the future
p6	Trenching method reccomended for installation
p6	1 or 2 pumps fit into a man hole size for 1 force main
p7	Small pump = 42 to 46 cfs with 1000' force main length
p7	3 small pumps needed for Cape Forida streets
p8	Shallow wells (80-300') have a design life of 20 years, need rehab every 3 to 4 years
p9	Conclusion- small and large pumps
p10	Need to acquire additional easements for pump and transfer stations

MY ASSUMPTIONS

1. **RAIN UNIFORM OVER ENTIRE ISLAND**
2. **RAIN PERCOLATES INTO GROUND**
3. **CURRENT SYSYTEM OF 302 CFS IS 100% EFFICIENT**
4. **WORST CONDITION 7.5" IN 3.75 HOURS**
5. **ONLY 3 MONTHS OF YEAR AVERAGE => 7.5" OF RAIN**
6. **EMERGENCY VEHICHES LESS THEN 14" ON STREET**
7. **ASSUME STREET AND SWALE 25% OF AREA**
8. **ALL AREA FLAT, IN REALITY PITCHED TO INLETS.**