# ANNEX 3 (APPENDIX XVII) DETAILED FINANCIAL PROJECTIONS ALTERNATIVE 2

COM INTERF CLARCED TO INCOME         198         1991 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>K 2</th><th>Alternative 2 Scenario 3/ Table 1</th><th>Z Table 1</th><th></th><th></th><th></th><th></th></t<>												K 2	Alternative 2 Scenario 3/ Table 1	Z Table 1				
M072         J11.5         J57.7         415.1         LMM5         LMM5         LMM5         LMM5         LMM5         LMM5         LMM10         LMM10 <thlm10< th="">         LMM10         <thlm10< th=""> <thlm10< th=""> <thlm10< thr=""></thlm10<></thlm10<></thlm10<></thlm10<>	0	6661 8661	9 2000	1002 0	1 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	4 2015
3.4         1.5         3.0         6.6         77.3         77.5         73.5         73.7           3.16         315.1         36.0         418.1         1,093.3         1,73.8         73.9         73.7           316.6         315.1         36.0         418.1         1,093.3         1,47.4         77.86.7         1,93.8         13.8           55.9         106.1         139.7         418.1         1,093.3         13.8         473.6           65.9         106.1         139.7         148.1         109.3         38.4         413.9         21.84.3           11.6         36.6         154.7         407.8         38.4         13.8         477.4           12.9         21.4         12.8         77.5         90.3         111.9         28.8.4           12.9         21.4         12.8         77.7         90.3         13.1.2         28.8.4           12.9         21.4         12.8         77.7         90.3         28.8.4         28.8.4           12.9         21.4         12.8         14.8         199.1         111.9         28.8.4           12.9         21.4         12.8         14.8.4         199.1         28.8.4         <	257.1 387.0 2,168.7 2,208.6 1,171 7,185.4	0 6609 8 2,919.2 4 1948.5	906.5	1,004.2	1,236A	1,576.5	1000	2,250.9	2,755.3	0.0101,5 0.0255,5	3,588.9	1.4 - 1	4,670.1	5,105.5	5,713.6	6,408.4	7,173.0	7,927.5
3106         315.1         560.7         418.1         1,093.3         1,473.4         1,786.7         1,928.9         2,346.3         2,           061         155         166.1         159.7         146.2         310.3         393.5         433.8         473.4         273.4         234.3         234.3         23         433.8         473.4         273.4         235.3         433.4         473.4         273.4         235.3         433.4         473.4         235.							464.1	4673	511,7 511,7 129,8	5373 1362	564.1	592.A 150.2	5,205.4 622.0 157.7	3,420.0 653.1 165.6	3,692.6 692.6 173.9	3,617.9	763.6 763.6	
PMRIS         153         106.1         1937         146.2         310.3         533.6         433.4         472.4           71.4         53.6         67.5         152.7         407.5         331.3         415.9         413.8         472.4           71.4         53.6         67.5         152.7         407.5         331.3         415.9         413.8         472.4           36.0         24.5         71.5         21.1         45.4         314.3         90.1         111.1           21.9         23.5         34.1         45.6         71.4         56.0         341.4         90.1         111.1           27.1         45.5         71.5         21.1         45.3         74.4         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8         25.5         241.8	2,509.4 2,683.6	.6 3,072.3	3,389.8	3,691.7		4,451.6	5,149.8	5,420.3	6,083.2	6,596.2	7,257.9		8,715.1	9,352.8	10,236.2	11,136.1	12.137.1	5
659         1061         1397         1462         3103         3395         4303         4538         4754           714         50.6         57.6         57.7         6075         3813         4159         4734         7735           714         50.6         57.6         57.7         6075         3813         4159         4734         7345           36.0         46.5         71.5         21.4         12.9         12.3         3814         3853         3834           17.9         21.3.5         34.1         62.0         47.6         19.0         19.3         1139         58.3         3834           25.7         46.7         71.6         47.6         50.0         47.3         50.0         49.3         26.2         24.1.3         26.3           25.4         27.7         40.2         47.6         10.37         70.0         109.3         26.2         24.1.3         26.3         24.1.4         25.3         26.3         24.1.4         25.3         26.3         24.1.4         25.6         24.1.3         26.7         24.1.3         26.7         24.1.3         26.7         24.1.4         25.6         24.1.3         27.1.4         26.3																		
PARTS         1/A         200         0.50         2.50         0.50         5.60         4.55         7.15         5.10         4.55         5.61         7.55         5.61         7.11         5.61         7.11         5.61         7.11         5.61         7.11         5.61         7.11         5.61         7.11         5.61         7.11         5.61         7.11         5.61         7.11         5.61         7.11         7.61         7.11         7.61         7.11         7.61         7.71         7.61         7.71         7.71         7.71         7.71         7.71         7.71         7.71         7.71 <th7< td=""><td></td><td></td><td></td><td>622.2</td><td></td><td></td><td>725.2</td><td>774.2</td><td>822.9</td><td>874.0</td><td>277.2</td><td>964.2</td><td>1,043.5</td><td>1,105.9</td><td>1,1713</td><td>1,240.2</td><td>13125</td><td></td></th7<>				622.2			725.2	774.2	822.9	874.0	277.2	964.2	1,043.5	1,105.9	1,1713	1,240.2	13125	
380         45.5         71.5         21.1         45.4         33.4         33.4         33.4         33.4         33.4         33.4         33.4         33.6         33.4         33.6	505.0 539.5	4 129.5	5 136.0		149.9	746.4	801.0	892.4	£ 681	1,1003	1,213.7	1,334.1	1,461.7	1,598.7	1,743.9	1,896.5	2,063.2	2,259.6
473         425         341         600         473         3601         4745         363           267         170         475         504         430         7743         9501         4745         363           267         170         475         504         430         700         1693         2562         2413           2654         2773         4029         4766         1,0391         1,293         2662         2413           2654         2773         4029         4766         1,0391         1,293         2632         2413           453         374         (422)         (66.5)         641         2637         3393         2413         3134           0.6         61         31.1         10120         9956         76.9         932         101.0           44.4         31.1         (102.0)         9956         76.9         932         101.0         101.0           44.4         31.1         (102.0)         9956         76.9         932         101.2         116.8           404AUER         363         355         394         69.1         54.0         101.0         116.8           909			2	-	Ξ.	-	2,143.3	2,369.4	2,720.5	2,976.4	3,340.5	3,707.2	4,099.9	4,516.5	4,995.5	5,485.7	6,077.1	
23.7         17.0         47.6         50.4         43.0         70.0         169.3         25.5.2         241.5           265.4         277.7         40.2.9         476.6         1,03.9.1         1,209.7         1,41.5.8         1,516.1         2,11.5           45.2         37.4         (42.2.)         (60.5)         64.3         24.13         1,916.1         2,216.4         1,21.6         1,21.6         1,21.6         1,21.6         1,21.6         1,21.6         1,21.6         1,21.6         1,21.6         1,22.4         1,01.0           0.6         5.1         6.0.1         3.1.1         141.1         100.0         166.4         139.4         101.0           44.6         34.1         (102.3)         09.5.6         (76.9)         93.0         163.2         101.2         116.3           407AUERD         30.9         36.7         35.6         39.3         69.1         83.0         83.2         101.2         116.3           30.9         36.7         35.6         39.3         69.1         83.0         83.2         101.2         116.3           30.9         36.7         35.6         39.3         69.1         83.0         101.2         116.3						343.1	361.6	362.1	409.7	439.4	470.6	503.3	537.8	574.0	612.3	652.5	694.8	
265.4         277.7         402.9         478.6         1,403.1         1,209.7         1,449.8         1,667.1         1,219.4         1,21           45.2         37.4         (42.2)         (60.5)         64.2         263.7         339.0         241.6         328.4         3           0.6         6.3         60.1         33.1         141.1         150.0         163.4         139.4         101.0           44.6         31.1         (102.0)         (93.6)         (56.9)         83.9         193.4         101.0           44.6         31.1         (102.0)         (93.6)         (56.9)         83.9         193.6         102.4         227.4         2           407MUZED         30.9         36.7         35.6         39.8         69.1         63.0         63.2         101.2         116.8         1           30.9         36.7         35.6         39.8         69.1         63.0         63.2         101.2         116.8         1           30.9         36.7         35.6         35.6         39.8         69.1         63.0         101.2         116.8         1         164.0         1         1         1         1         1         1	275.0 277.0	0.99.0	131.7				2013	211.9	1.38.1	258.4	284.6	319.8	342,3	367.5	402.5	436.1	477.8	
45.2         37.4         (42.2)         (60.5)         64.2         25.3.7         339.0         241.8         378.4         0           0.6         6.1         60.1         31.1         114.1         100.6         164.4         139.4         101.0           44.6         31.1         (102.3)         (93.6)         (76.9)         83.9         170.6         102.4         227.4         2           AFMAUERD         30.9         36.7         35.6         39.4         69.1         63.1         63.2         101.2         116.8         1           30.9         36.7         35.6         39.8         69.1         63.0         63.2         101.2         116.8         1           30.9         36.7         35.6         39.8         69.1         63.0         63.2         101.2         116.8         1           30.9         36.7         35.6         39.8         69.1         63.0         63.2         101.2         116.8         1           30.9         36.7         35.6         39.8         69.1         63.0         10.2         116.8         1           30.7         (13.0         11.2.0         11.3.0         11.3.4         10	2,185.4 2,522.2	2,909.6	3,113.5	3,358.9	3,694.5	4,186.2	4,775.2	5,217.7	5,842,4	6,360.3	7,022.2	2,707,7	8,423.6	9,184.9	10,043.4	0.159,01	11,957.6	13,040.4
0.6 6.1 60.1 13.1 14.1 150.8 16.4 139.4 101.0 44.6 31.1 (102.3) (93.6) (76.9) 83.9 170.6 101.2 227.4 2 44.6 31.1 (102.3) (93.6) (76.9) 83.9 170.6 101.2 116.8 1 30.9 36.7 35.6 39.8 69.1 83.0 83.2 101.2 116.8 1 30.9 36.7 35.6 39.8 69.1 83.0 83.2 101.2 116.8 1 13.7 (5.6) (112.9) (113.4 (146.0) 0.0) 73.4 13.1 10.7 1	324.1 161.4	4 162.7	7 276.2	332.8	279.8	265.4	374.6	202.6	240.8	235.9	235.7	437.7	291.5	167.9	192.8	205.0	179.4	
44.6         31.1         (102.3)         (93.6)         (76.5)         63.0         63.2         12.4         227.4           APHALIZED         30.9         36.7         35.6         39.3         69.1         63.0         63.2         101.2         116.8           APHALIZED         30.9         36.7         35.6         39.3         69.1         63.0         63.2         101.2         116.8           30.9         36.7         35.6         39.3         69.1         63.0         63.2         101.2         116.8           30.9         36.7         35.6         39.8         69.1         63.0         63.2         101.2         116.8           30.9         36.7         135.6         135.8         135.1         164.0         100.0         116.8	62.7 32.5	5 13.4	4.2	0.9	0.1													
APTAUZED 30.9 36.7 35.6 39.8 69.1 63.0 63.2 101.2 116.8 30.9 36.7 35.6 39.8 69.1 63.0 63.2 101.2 116.8 13.7 (5.6 112.5) 113.41 1146.01 60.0 27.4 1.1 110.7	261.3 128.9	.9 149.3	3 272.1	331.9	279.7	265.4	374.6	202.6	240.8	235.9	235.7	437.7	291.5	167.9	192.8	205.0	179.4	174.4
30.9         36.7         35.6         39.8         69.1         83.0         83.2         101.2         16.8           13.7         (5.60)         (13.50)         (13.46.0)         (0.00)         2.3         10.12         16.8	116.2 122.7	7 136.2	2 131.7	116.2	106.7	113.2	145.7	160.6	169.7	181.3	8.061	151.3	162.5	145.4	139.9	144.4	153.9	
13.7 (5.6) (137.9) (1346.0) (0.0) 87.4 1.1 110.7	116.2 122.7	7 1362	131.7	116.2	106.7	113.2	145.7	160.6	169.7	2,181	190.8	C.181	162.8	145.4	139.9	144.4	153.9	167.5
	145.1 6.2	1.61 2	1 140.3	215.7	0.271	152.2	228.9	42.1	1.17	54.6	44.9	256.3	128.7	22.5	52.9	60.6	25.5	
TAXES ON INCOME NET INCOME 13.7 (3.4) (137.9) (133.4) (146.0) (0.0) 87.4 (.3 110.7 145.1		6.2 13.1	140.3	215.7	0.671	152.2	228.9	42.1	112	545	6.11	1411				-	1	

NATIONAL WATER COMMISSION

							g Doll	BALANCE SHEFT () Dollars Million)														<i>a</i>	Alternative 2 Scenario V Table	1 able 2				
HSCAL YEAR ENDING MARCH 314	1988	1989	ACTUAL 1990	1661	2661	1993	1994	1995	9661	PROJECTED 1997	8661 Q	6661	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	201
A\$SETS													-															
FRED ASSETS IN OPERATION PROVISION FOR DEPERATION	261.0	275.1	547.5	5512	944.0	1,064.0	1,406.5	1,971.6	2,575.1	3,222.5	4,245.1	5,176.9	5,725.6	6,312.9	7,265.1	8,621.7	10,702.4	11,633.0	13,588.5	14,668.2	16,688.7	18,519.3	20,483.1	22,565.9	24,961.0	27,411.6	30,369.1	33,365.7
NIT FIXED ASSUES IN OPER'N	200.9	209.5	472.3	458.0	\$03.6	873.6	1,151.7	1,635.0	2,131.6	2,644.0	3,489.0	4,201.8	4,501.4	4,806.5	5,429.1	6,585.2	2'626'2	8,559.8	9,676.0	10,239.7	11,244.7	12,155.0	13,083.6	14,006.6	15,100.1	16,098.4	17,427.2	18,608.5
HIXED ASSETS OUT OF USE WORK-IN-PROCRESS	298.2	393.5	1.181	295.0	107.0	416.0	489.3	553.7	351.4	136.1	0.0	0'0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL NET FIXED ASSETS	499.1	603.0	653.4	753.0	910.6	1,289.6	1,640.9	2,188.7	2,483.0	2,780.1	3,489.0	4,201.8	4,501.4	4,806.5	5,429.1	6,585.2	5'626'2	8,559.8	9,676.0	10,239.7	11,244.7	12,155.0	13,083.6	14,006.7	15,100.1	16,098.4	17,427.2	18,608.5
CURGETERM DEPOSITS/INVESTMENTS CURRENT ASSETS:	0.5	0.5	0.8	0.8	0.8	0.8																						
CASH & BANK	22.7	19.61	23.5	15.5	7.8	44.8	68.1	118.5	179.2	153.7	356.0	442.3	480.0	516.1	£.655	619.1	867.9	1,062.6	1,314.5	6'609'1	1,949.8	2,046.6	2,152,2	2,216.0	2,574.1	3,026.7	3,547.0	4,147.
CONSUMERS ACCOUNTS RECEIVABLE INVENTORIES OTHER ACCOUNTS RECEIVABLE	261.6 20.5 3.2	296.5 35.1 8.1	263.6 34.9 6.0	323.5 34.5 10.3	847.3 35.0 17.5	1,043.7 32.0 30.0	1,073.7 35.8 53.7	989.3 44.4 57.9	947.1 55.2 67.4	942.0 57.9 75.3	809.5 60.8 80.5	7225 639 922	541.3 67.1 101.7	590.1 70.4 110.8	635.8 73.9 119.2	713.3 77.6 133.5	8272 815 1545	870.7 85.6 162.6	978.6 89.9 182.5	1,061.9 94.4 197.9	1,169.6 1,99.1 2,17.7	1,314.3	1,406.7 109.2 261.5	1,510.2 114.7 280.6	1,654.1 120.4 307.1	1,800.6 126.5 334.1	1,963.6 132.8 364.1	2,139.
TOTAL CURRENT ASSETS	306.0	359.3	345.0	1.185	907.6	1,150.4	1,231.2	1,210.1	1,248.9	1,329.0	1,306.9	1,320.8	1,190.1	1,287.4	1,358.2	1,543.6	1.159,1	2,151.5	2,565.5	2,964.1	3,436.2	3,709.2	3,929.6	4,121.5	4,655.7	5,287.8	6,007.5	6,522.
TOTAL ASSETS	807.9	963.1	1,002.2	1,137.9	1,819.0	2,440.8	2,872.2	3,398.9	3,11.9	4,109.1	4,795.9	5,522.7	5,193,2	6,093.9	6,817.3	8,128.8	9,910.6	10,741.3	12,241.5	13,203.8	14,680.9	15,864.2	17,013.2	18,128.1	19,755.8	21,386.2	23,434.7	25,431,
EQUITY & LIMBILITIES																												
EQUITY:																												
OFERATIONAL SURPLUS RESERVE FUND COVERVIMENT CRANTS REVALUATION SURFLUS	18.5 71.5 167.9	12.9 71.5 198.1	(125.0) 64.0 244.4	(258,4) 64.0 302.3	(401.4) 64.0 432.3	(404.4) 64.0 592.3	(136.5) (136.5) (136.5)	(74.9) 64.0 890.6	175.3 64.0 1,012.9	476.9 64.0 1,139.6	673.3 64.0 1,473.3	907.4 64.0 1,809.5	1,285.2 64.0 1,941.0	1,755.3 64.0 2,076.5	2,216.2 64.0 2,371.3	2,717.7 64.0 2,929.1	3,369.9 64.0 3,601.9	3,867.4 64.0 3,871.4	4,454.2 64.0 4,409.4	5,056.7 64.0 4,677.5	5,704.6 64.0 5,170.5	6,614.7 64.0 5,622.9	7,449.3 64.0 6,092.7	8,230.2 64.0 6,570.0	9,103.1 64.0 7,143.5	10,041.3 64.0 7,683.6	11,019.6 64.0 8,403.0	12,047.1 64.1 9,067.1
TOTAL EQUITY	257.9	282.5	183.4	107.9	6119	251.9	559.8	879,6	1,252.3	1,680.6	2,210.6	2,781.2	3,290.2	3,896.2	4,651.5	5,710.8	7,035.7	7,802.8	8,927.6	9,798.2	10,939.2	12,301.6	13,606.0	14,864.1	16,310.6	17,788.9	19,486.6	21,178.
LMBILITIES:																												
LONG-TERM LIABILITIES:																												
FOREIGN LOANS & DOMESTIC CURRENCY LOANS OTHER LONG-FERM LUBILITIES	1.652	331.2	387.0	431.5	559.4	2:069	785.0	115.3 860.3	240.6 745.6	367.3 630.9	701.0	823.5	740.7 286.8	662.5	743.0 57.4	1,086.5	1,545.6 (0.0)	1'109'1	1,925.1 (0.0)	2 6 7 9, 1	1,751.2	1,542.6 (0.0)	1,319.5	1,320.1 (0.0)	1,416.6	1,479.7	1,722.1 (0.0)	271,2
DIAL LONG-TERM LIABILITES REVAL'D	1.591	2166	337.0	431.5	559.4	690.7	785.0	978.6	986.2	5.869	2712,1	1,225.0	1,027.5	634.6	500.4	1,106.2	1,545,6	1'109'1	1,925,1	2.626'1	7192'1	1,542.6	8.91E,1	1,320.1	1,416.6	1,479.7	1,772.1	1111
CURRENT LMBILITIES:							3																					
ACCOUNTS PAYABLE CURRENT PORTION OF LONGTERM DEBT SHORT-TERM LOANS & CREDITS OTHER CURRENT LUABILITIES	19.0 5.7 232.2	38.9 15.8 5.9 288.8	88.8 6.9 10.4 325.7	1683 13.61 1.21 401.3	589.1 20.7 36.2 521.7	597.1 7.6.7 86.9 737.6	607.2 95.7 86.9 737.6	610.2 114.7 78.2 737.6	608.4 114.7 69.5 700.7	591.0 114.7 60.8 663.8	574.4 114.7 52.1 626.9	554.4 326.7 43.4 590.0	4572 328.7 34.7 553.1	492.2 328.7 26.0 516.2	540.1 328.7 17.3 479.3	605.9 252.0 8.6 442.4	690.3 233.4 0.0 405.5	754.5 214.0 0.0 363.6	543.1 214.0 0.0 331.7	917.5 214.0 0.0 294.5	1,011,5 0,100 0,00 257,9	0.107.9 0.102 0.102 221.0	1,210.6 692.6 0.0	1,319.6 477.0 0.0 147.2	1,441.2 477.0 0.0 110.3	1,567.1 477.0 0.0 73.4	1,712.4 477.0 0.0 36.5	1,566. 214.1 0.1 (0.1
TOTAL CURRENT LUBILITIES	5957	349.4	431.6	598.5	1,167.7	1,498.3	1,527.4	1,540.7	E.E64,1	1,430.3	1,368.2	1,516.5	1,273.7	1,363.1	1,365.4	1,311.9	1,329.2	1,337.4	1,365.6	1,426.3	1,960.5	2,019.9	£,087.3	1,943.8	2,028.5	2,117.6	2,225.9	2,080.
TOTAL LUABILITIES	550.0	680.6	818.8	1,030.0	1,727.1	2,189.0	2,312.4	2,519.2	2,479.5	2,428.5	2,585.4	2,741.5	2,401.3	2,197.8	2,165.8	2,418.0	2,874.8	2,938.5	3,513,8	3,405.5	3,741.7	3,562.5	3,407.1	3,263.9	3,445.1	3,597.2	3,948.0	4,252,4
						and a second																						

							U D'OHATS IMITTON	(NOTION)														-	Scenario 3/ Lable 3	2				
FISCAL YEAR ENDING MARCH 314	1988	A 1989	ACTUAL 1990	1661	1992	1661	1 1661	1995 1	PROJECT	e.	1 8661	1999 20	2000 2001		2002 20	2003 20	2004 2	2005 2	2006 2	2007 2	2008	2009	2010	2011	2012	2013	2014	2015
SOURCES OF FUNDS:					-																							
OPERATING INCOME ADD: DEPRECUTION DISPOSAL OF EXED ASSETS LESS: TAXES ON INCOME	44.6 4.7 3.0	31.1 4.6 0.1	(102.3) 9.6	(93.6)	(76.9) 47.1	50.0	170.6 10	102.4 22 69.0 9	10 1.06	261.3 120	128.9 14	149.3 272.1	2,1 331,9	.9 279.7 .0 254.3	3.7 265.4	5.4 374.6		202.6 24	240.5 23	235.9 23 520.4 58	235.7 4 584.1 6	437.7 2 437.7 2 648.2 7	291.5 716.9	167.9 789.8	192.6 873.6	205.0	179.4	174.4
TOTAL INTERNAL FUNDS GENERATION	52.3	35.8	(92.7)	(75.6)	(7.62)	133.0 2	219.8 13	10 11/1	317.5 31	374.1 27	277.5 33	A274 230.5	2.4 552.9	.9 534.0	1.0 574.1		749.2 61	616.8 71	716.4 75	756.3 81	819.8	1,085.8 1,0	1,008.4	1 2256	1,066.4	1,164.5	1,242.4	1,342.2
COVENMENT GRANTS WORLD BANK LOAN LONG TRIMS LOANS	8.0	30.2	46.3 61.1	53.3	130.0	160.0	0.09 11 11 11 11 11	21 E.802 21 E.811 21 0.061	122.4 U	126.7 33 126.7 33	333.7 33 333.7 33	336.5 131 336.5 131	8261 <u>2161</u> 8261 <u>2161</u>	18 2945 18 2945	1.5 557.8		672.8 26 672.8 26	269.5 52	538.0 26 538.0 26	268.2 49 268.2 49	493.0 4	4523 4	469.5	4773	573.5	540.1 540.1	719.4	664.2
TOTAL EXTERNAL SOURCE OF FUNDS	8.0	1.16	107.4	116.2	278.6	368.0 2	280.0 5	516.5 24	244.8 21	253.3 66	667.4 67	672.9 262	262.5 271.6	6.882 8.9	5.211,1 6.8	8.2 1,345.6		10'1 0'655	1,076.0 53	536.3	986.1 9	2.106	9.926	954.5 1,	1,147.0	1,080.2	1,438.9	1,328.3
TOTAL SOURCES OF FUNDS.	5.03	6.611	14.7	40.6	248.9	\$01.0	19 B.994	687.9 56	562.3 6	627.5 94	944.9 1,00	FEZ P'E00'I	734.9 824.5	1,122.9	1,689.7	9.7 2,094.8		1,155.0 1,75	1,792.4 1,29	1,292.6 1,80	1, 805.9 1,9	6'1 5'066'1	1,948.0 1,	1,912.2 2,	FUZZ	2,244.7	2,681.2	2,670.6
APPLICATION OF FUNDS:																												
CAPITAL EXPENDITURE-BANK PROJECT -OTHER	225	105.6	6:59	117.6	201.8	429.0 2	270.0 2	236.5 24	244.8 21	253.3 66	667.4 67	672.9 262	262.5 271.6		588.9 1,115.5	5.5 1,345.6		539.0 1,0	1,076.0 53	536.3 92	966.1 9	904.7	939.6	954.5 1,	1,147.0	1,060.2	1,438.9	1,328.3
TOTAL CAPITAL EXPENDITURE	22.5	108.6	6:59	117.6	204,8	429.0 2	270.0 54	506.5 24	244.8 2	253.3 66	667.4 67	672.9 262	262.5 271.6	.6 588.9	5.211,1 2.8	5.5 1,345.6		0'1 0'655	1,076.0 53	536.3 92	936.1 9	904.7	939.6	954.5 1	1,147.0	1,080.2	1,438.9	E.82E,1
LOAN INTEREST CHURCED TO INCOME REPAYMENT OF LONG-TERM LOAN PRINCIPAL	30.9	36.7	35.6	39.8	69.1 13.8	83.0 20.7	83.2 1	101.2 11	116.8 1	116.2 12	122.7 13	136.2 131	131.7 116.2 365.6 365.6	106.7	5.6 365.6		145.7 16	160.6 10	169.7 18 250.9 25	181.3 19 250.9 21	190.8	151.3	162.8 727.9	145.4 729.5	139.9	144.4 513.9	153.9 513.9	167.5 513.5
DfBf stRvict	42.6	42.4	51.4	46.7	82.9	103.7	1 6.921	196.9 26	268.4 21	267.8 27	274.3 21	287.8 497	497.3 481.8	12.572.3	2.3 478.8		434.6 43	430.9	420.6 43	432.2 44	41.7 9	2.909	2.068	874.9	653.8	6.58.3	667.8	681.0
SHORT-TERM DEPOSITS OTHER CURRENT ASSETS SHORT-TERM LONNS OTHER CURRENT LIMBILITIES	7.75 5.0 (35.8)	54.4 (5.9) (76.5)	(15.2) (4.5) (86.8)	44.1 (4.27) (1552.1)	531.2 (21.0) (51.2)	205.9 (50.7) (223.9)	57.5 ( (10.1)	0 (217) 7.6 (0.6)	(22.0) 6.7 1.5	5.6 (12 8.7 17.4	(124.4) () 6.7 16.6	01) (523) 8.7 20.1 20.1 20.1	(166.5) 61.2 6.7 61.2 97.2 (35.0)		57.6 95 8.7 8 (47.9) (64	95.6 13 8.7 (5 (6.8.8) (5	138.7 5 8.6 (51.4) (6	55.7 1: (64.5) (0	01 1.551 01 (6.66)	103.1 13	1 2.251	1 6.361	114.7	1.821	176.1 (121.6)	179.5	199.4 (145.2)	214.6
CHANGE IN WORKING CAPITAL-INOR/(DECR)	(1.6)	(28.0)	(106.5)	(115.7)	(0.16)	(9.8.8)	47.4 0	(65.6) ()	(511)	31.7 (9	F) (1.99)	(43.6) (62	(62.6) 34.9		18.5 35	35.5 6	65.8	(8.8)	43.6 2	26.7 3	36.2	6.62	12.0	1.61	54.5	53.6	54.2	60.8
LONG-TRIAN DEPOSITS/IAVISTAIENTS INCR/(DICR) OTHR LONG-TRIAN LIMBILITES INCR/(DICR) DIRECT TRANSACTIONS TO EQUITY FUNDS					-		(0.0)																					
TOTAL APPLICATION OF FUNDS	62.0	123.0	10.8	48.6	256.6	463.9 4	476.6 6	637.5 50	501.6 5	552.9 84	842.6 91	917.2 692	697.2 788.4	1,079.7	9.7 1,629.9	9.9 1,846.1		5'1 1'196	1,540.5 99	997.2 1,46	1,466.0 1,8	8,1 8.228,1	1,842.4 1,	1,848.5 1,	£'558'1	1'262'1	2,160.9	2,070.1
CASH INCREASEDECREASE CASH BALANCE, BEGINNING CASH BALANCE, ENDING	11.71 24.4 22.7	(3.1) 22.7 19.6	3.9 19.6 23.5	(6.0) 23.5 15.5	(7.8) 15.5 7.8	37.0 7.5 44.8	23.3 44.5 1	50.4 6 65.1 11 118.5 11	60.7 116.5 179.2 2	74.5 10 179.2 25 253.7 35	102.3 2 253.7 35 356.0 44	86.3 37 356.0 442 442.3 480	37.7 36.1 442.3 450.0 480.0 516.1	11 412	8.92 59.8 5.925 1.3 5.925 5.9		245.8 19 619.1 56 867.9 1.06	194.7 21 867.9 1,06	251.9 29 1,062.6 1,31	295.4 34 1,214.5 1,60 1,609.9 1,94	340.0 1,609.9 1,949.8 2,0	96.7 1 1,949.5 2,0 2,046.6 2,1	105.7 2,016.6 2, 2,152.2 2,	63.7 2,152.2 2,216.0 2,	358.1 2,216.0 2,574.1	452.6 2,574.1 3,026.7	520.3 3,026.7 3.547.0	600.4 3,547.0 4,147.4

Total Antipole     Total A	Tolevandel	IDollare Millioo)           ACTUAL           ACTUAL           ACTUAL           TOTAL           ACTUAL		SUMMARY FINANCIAL ANALYSIS	IAL ANALY	SIS															
ATTAL         MOTCAL         MOTCAL </th <th>ATUA         MOUL         MOULO         M</th> <th>ACTIMAL         1990         1991         1993         1993         1994         15.05         9995         15.05         3.15</th> <th></th> <th>Sce</th> <th>stative 2 vario 3/ Lab</th> <th>le 4</th> <th></th> <th></th> <th></th> <th></th>	ATUA         MOUL         MOULO         M	ACTIMAL         1990         1991         1993         1993         1994         15.05         9995         15.05         3.15													Sce	stative 2 vario 3/ Lab	le 4				
101         101 <th>We         We         We&lt;</th> <th>1918         1939         1931         1933         1934         1034         <th< th=""><th></th><th>CTED</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<></th>	We         We<	1918         1939         1931         1933         1934         1034 <th< th=""><th></th><th>CTED</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>		CTED																	
15         1	15         15<	ISSAS         MAIN         III.7%         II4.5%         94.1%         B.2.1%         B10.5%         G10.5%         G10.5% <thg1.5%< th=""></thg1.5%<>	1996			2000	2001	2002	2003	2004	2005	-	2007	2008	2009		2011	2012	2013	2014	2015
843         811         11.3         11.43         11.3         11.43         11.3         11.43         11.3         11.43         11.3         11.43         11.3         11.43         11.3       <	65         61         117         113	55.4 b. 0.1%         11.5%         11.4.5%         9.1.1 b. 0.5         0.1.1 b. 0.5         0.1.2 b. 0.5         0.1.2 b. 0.5         0.1.1 b. 0.5																			
11.         11. <td>11         12         13&lt;</td> <td>1.8%         1.7%         1.8%         3.3%         5.0%         4.7%         3.5%         3.3%         5.0%         4.7%         3.5%         <th< td=""><td>85.4%</td><td></td><td></td><td>\$6'16</td><td>\$0.19</td><td>93.0%</td><td>94.0%</td><td>92.7%</td><td>96.3%</td><td></td><td></td><td></td><td></td><td></td><td></td><td>96.1%</td><td>98.2%</td><td>96.5%</td><td>63.3</td></th<></td>	11         12         13<	1.8%         1.7%         1.8%         3.3%         5.0%         4.7%         3.5%         3.3%         5.0%         4.7%         3.5% <th< td=""><td>85.4%</td><td></td><td></td><td>\$6'16</td><td>\$0.19</td><td>93.0%</td><td>94.0%</td><td>92.7%</td><td>96.3%</td><td></td><td></td><td></td><td></td><td></td><td></td><td>96.1%</td><td>98.2%</td><td>96.5%</td><td>63.3</td></th<>	85.4%			\$6'16	\$0.19	93.0%	94.0%	92.7%	96.3%							96.1%	98.2%	96.5%	63.3
(518         (328         (308         (318         (328 <th< td=""><td>(4)         (3)</td></th<> <td>45.4.K         15.2.K         30.0         20.1 K         :1.2.2 K         99.K         16.8 K         1.3         1.4           112         0.8         (1.8)         (1.6)         (0.4)         1.3         1.4         1.4           ACD         19.5 K         35.6 K         51.8 K         51.8 K         31.5 K         1.4         1.4           ACD         19.5 K         35.6 K         51.8 K         51.8 K         32.5 K         31.5 K         1.4           S69 K         19.7 K         55.6 K         39.3 K         73.3 K         56.4 K         7         1.4           BS1         1.1         0.3         0.5 K         0.5 K         0.3 K         0.5 K         0.5         <td< td=""><td>3.5%</td><td></td><td></td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td></td><td></td><td>3.5%</td><td></td><td></td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td></td<></td>	(4)         (3)	45.4.K         15.2.K         30.0         20.1 K         :1.2.2 K         99.K         16.8 K         1.3         1.4           112         0.8         (1.8)         (1.6)         (0.4)         1.3         1.4         1.4           ACD         19.5 K         35.6 K         51.8 K         51.8 K         31.5 K         1.4         1.4           ACD         19.5 K         35.6 K         51.8 K         51.8 K         32.5 K         31.5 K         1.4           S69 K         19.7 K         55.6 K         39.3 K         73.3 K         56.4 K         7         1.4           BS1         1.1         0.3         0.5 K         0.5 K         0.3 K         0.5 K         0.5 <td< td=""><td>3.5%</td><td></td><td></td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td></td><td></td><td>3.5%</td><td></td><td></td><td>3.5%</td><td>3.5%</td><td>3.5%</td><td>3.5%</td></td<>	3.5%			3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%			3.5%			3.5%	3.5%	3.5%	3.5%
12         08         13         14         08         13         14         13<	12         03<	12         0.5         (1.4)         (1.6)         (0.4)         1.3         1.4           19.5 %         31.5 %         33.6 %         5.1 %         31.5 %         31.5 %         31.8	12.1%			6.3%	2.1%	5.5%	4.4%	\$1.5	2.5%	2.6%	2.4%	2.2%	3.7%	2.3%	1.2%	13%	13%	1.1%	1.5%
19.3         31.4 <th< td=""><td>13.8         31.64         51.8         31.8         13.8         13.64         13.8         &lt;</td><td>19.5%         33.6%         5.1%         31.2.5%         31.5.%</td></th<> <td>12</td> <td></td> <td></td> <td>0.9</td> <td>1.1</td> <td>1.1</td> <td>1.2</td> <td>17</td> <td>1.4</td> <td>17</td> <td>1.7</td> <td>61</td> <td>1.2</td> <td>11</td> <td></td> <td>1.6</td> <td>1.6</td> <td>61</td> <td>14</td>	13.8         31.64         51.8         31.8         13.8         13.64         13.8         <	19.5%         33.6%         5.1%         31.2.5%         31.5.%	12			0.9	1.1	1.1	1.2	17	1.4	17	1.7	61	1.2	11		1.6	1.6	61	14
569         973         571         568         318         138 <td>568         19.3         51.8         568         19.3         51.8         5</td> <td>56.9%         19.7%         55.1%         5.6%         19.3%         2.2.8%         4.6%         6           51.2%         54.0%         67.3%         56.9%         59.9%         71.3%         56.4%         22           11.2         1.0         0.3         0.5         0.6%         0.3         0.8         0.3<td>18.1%</td><td></td><td></td><td>8.4%</td><td>\$9.6</td><td>6.6%</td><td>5.9%</td><td>24.9%</td><td>\$2.91</td><td>35.1%</td><td>34.1%</td><td>42.0%</td><td>10.2%</td><td>113%</td><td>63%</td><td>33.8%</td><td>37.0%</td><td>40.6%</td><td>43.</td></td>	568         19.3         51.8         568         19.3         51.8         5	56.9%         19.7%         55.1%         5.6%         19.3%         2.2.8%         4.6%         6           51.2%         54.0%         67.3%         56.9%         59.9%         71.3%         56.4%         22           11.2         1.0         0.3         0.5         0.6%         0.3         0.8         0.3 <td>18.1%</td> <td></td> <td></td> <td>8.4%</td> <td>\$9.6</td> <td>6.6%</td> <td>5.9%</td> <td>24.9%</td> <td>\$2.91</td> <td>35.1%</td> <td>34.1%</td> <td>42.0%</td> <td>10.2%</td> <td>113%</td> <td>63%</td> <td>33.8%</td> <td>37.0%</td> <td>40.6%</td> <td>43.</td>	18.1%			8.4%	\$9.6	6.6%	5.9%	24.9%	\$2.91	35.1%	34.1%	42.0%	10.2%	113%	63%	33.8%	37.0%	40.6%	43.
3.13         5 605         5 73         5 13         5 5 73         5 13         5 5 3 5 73         5 5 3 5 73         5 13 7 5 7 5 73         5 13 7 5 7 5 73         5 13 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7	313         5105         033         313         513 <td>51.2         54.0         5.0.5         80.0         85.9         81.2         84.8         51.2           1.1         0.3         0.5         0.6         0.5         0.6         0.7         0.7         0.7           1.1         0.9         0.7         0.6         0.7         0.7         0.7         0.7           10.1         1.1         0.9         0.7         0.6         0.7         0.7         0.7           10.1         1.1         0.9         0.7         0.6         0.7         0.7         0.7           10.1         1.1         9.4         9.4         9.4         2.0         1.0         1.2           10.1         1.1         1.2         2.0.4         2.0.5         2.0.4         2.0         1.0           10.1         1.1         2.0.5         2.0.4         2.0.5         2.0.4         1.0</td> <td>24.8%</td> <td></td> <td></td> <td>14.4%</td> <td>13.3%</td> <td>73%</td> <td>5.4%</td> <td>18.5%</td> <td>36.1%</td> <td>23.4%</td> <td></td> <td>34.5%</td> <td>10.7%</td> <td>11.2%</td> <td>6.7%</td> <td>31.2%</td> <td>41.9%</td> <td>36.2%</td> <td>45.</td>	51.2         54.0         5.0.5         80.0         85.9         81.2         84.8         51.2           1.1         0.3         0.5         0.6         0.5         0.6         0.7         0.7         0.7           1.1         0.9         0.7         0.6         0.7         0.7         0.7         0.7           10.1         1.1         0.9         0.7         0.6         0.7         0.7         0.7           10.1         1.1         0.9         0.7         0.6         0.7         0.7         0.7           10.1         1.1         9.4         9.4         9.4         2.0         1.0         1.2           10.1         1.1         1.2         2.0.4         2.0.5         2.0.4         2.0         1.0           10.1         1.1         2.0.5         2.0.4         2.0.5         2.0.4         1.0	24.8%			14.4%	13.3%	73%	5.4%	18.5%	36.1%	23.4%		34.5%	10.7%	11.2%	6.7%	31.2%	41.9%	36.2%	45.
12         10         03         04         03<	12         10         02<	12         1.0         0.3         0.6         0.8         0.3         0.5           1.1         0.9         0.7         0.6         0.7         0.7         0.7           10.1         1.1         9.4         9.3         9.3         0.7         0.7         0.7           10.1         11.3         9.4         9.3         9.3         3.5         7.2           310.8         345.1         289.4         284.7         265.4         270.8         272           30         55         9.4         150         285.4         270.8         272           30         55         9.4         15.0         230.8         230.8         216.3           9.3         54.8         15.1.8         4.4%         5.0.9         180           9.4         1,971         720         1,233         659         654         194	44.1%			23.5%	17.6%	14.7%	16.2%	18.0%	17.0%	17.7%	16.8%	14.0%	31.1%	3.5%	8.2%	8.0%	7.7%	3.1%	3.5.6
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# APPENDIX XIX

Preliminary Sociological Assessment of the Soapberry Lands

(by Environmental Solutions Ltd.)



27 Tobago Avenue, Kingston 10, Jamaica, Tet: (809)929-9481, 929-4217. Fax: (809)929-5731 Telex: 2442 JAMTLNKN JA.

November 24, 1993

8899295151

Mr. Horace Beckford Sentar Consultants Ltd. 231a Old Hope Road Kingston 6

Dear Mr. Beckford

Attached, please find the report on the Preliminary Sociological Assessment of the Soapberry Lands, St. Catherine.

As we discussed, this report addresses two main themes, a public education programme outline and qualification of benefits from Harbour clean-up. Please let us know if this report meets your requirements.

> Yours sincerely ENVIRONMENTAL SOLUTIONS LTD.

ELEANOR JONES MANAGING DIRECTOR

Attach

Post-It" brand fax transmittal memo 7671 #01 pages + 10 To Honace Beekford From Gleanor Jones: Co. Sentar Consultants Co. Gurronmental Scal. Dept. Phone # 92-99481 Fax# 92-99481 Fax# 92-95731

Comprehensive Services in Environmental Management

Directors:

Barry A. Wade, O.D., Ph.D., Chairman

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PRELIMINARY SOCIOLOGICAL ASSESSMENT

OF THE

SDAPBERRY LANDS, ST, CATHERINE

Submitted to SENTAR CONSULTANTS LTD. 231a Dld Hope Road Kingston 6

ENVIRONMENTAL SOLUTIONS LTD. 27 Tobago Avenue Kingston 10 14

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#### 1.0 INTRODUCTION

SENTAR Consultants Ltd. (Canada) is proposing sewage treatment facilities using sewage stabilisation ponds to be sited on the Soapberry Lands, St. Catherine. Environmental Solutions Ltd (ESL) was requested by SENTAR to carry out a site description of the Soapberry Lands. This was completed in September 1993. ESL has now been requested to carry out a Preliminary Sociological Assessment of the proposed project.

#### 1.1 BACKGROUND

The site was formerly a floodplain with mangroves and other wetland/swamp vegetation above a peaty substrate. The site was dumped with various types of landfill in preparation for a housing development, which has since been aborted.

#### 1.2 SCOPE OF WORK

ESL was retained by SENTAR to carry out a Preliminary Sociological Assessment of the proposed project based on previous site inspection, informed opinion and structured interviews. This assessment will focus on two areas:

- 1. Public Education Programme Dutline
- Qualification of Benefits from Harbour Clean Up.

## 2.0 EXISTING SOCIOLOGICAL ENVIRONMENT

The Scapberry Lands are situated on Jamaica's south east coast between Hunts Bay and the railway right-of-way south and north, respectively, and between the Rio Cobre and the Duhaney River, west and east, respectivley. The Lands are surrounded by the settlements of Waterford to the west, Riverton City to the north east and the periphery of the Kingston Metropolitan Area to the east.

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To the south east is the city of Kingston, the capital and largest city in the island and to the south west is Portmore a town which is reported as being the fastest growing area in Jamaica (PIOJ, 1993).

#### 2.1 CURRENT LAND USE

At present there is considerable evidence of human disturbance at the site. These include the following:

- 1. Use of dykes as walkways
- 2. Mangrove cutting
- 3. Squatting
- 4. Overgrown agricultural plots
- 5. Unfinished construction
- 6. Sand mining

Mangrove cutting, squatting and sand mining are all illegal activities. Fishermen use the dykes as walkways to access the mouth of the Rio Cobre and Hunts Bay from surrounding townships such as Waterford and Riverton City. Agricultural activities have been abandoned and it is not known at present who is responsible for the unfinished construction.

The acreage and layout of the land suggest that the construction of sewage ponds should not have a negative impact on the surrounding communities.

3.0 PUBLIC EDUCATION PROGRAMME OUTLINE

3.1 THE NEED FOR PUBLIC EDUCATION

It is anticipated that a public education programme will be essential for the following reasons:

- To increase awareness of the existing condition of Kingston Harbour and Hunts Bay
- To inform the public of the role of SENTAR Consultants in the clean up of Kingston Harbour

- To inform the public of the establishment of the sewage ponds, and
- To inform the public of the potential benefits of the sewage ponds.

Without adequate public education there could be resistance and non-acceptance of the project by the public. This could result in public resentment, bad publicity, blocking of the project and non cooperation.

Sewage ponds are a relatively new concept in Jamaica being recently implemented by the National Water Commission due to the low technology, low maintenance and low energy benefits. Sewage ponds are currently in use in the Greater Portmore Development.

3.2 OUTLINE OF PUBLIC EDUCATION PROGRAMME

The public education programme outline being put forward will specifically assist with:

- 1. Acceptance of ponds
- 2. Acceptance of need for dislocation during construction
- 3. Gully clean-up and alternatives to gully dumping, and
- 4. Health benefits of Harbour clean-up.

#### 3.2.1 Target Groups and Areas

The following groups should be targeted:

- 1. Fishermen
- 2. School children

The following townships/communities should be targeted:

- 1. Portmore
- 2. Waterford
- 3. Riverton City
- 4. Spanish Town
- 5. Periphery of the KMA

#### 5.0 OPINIONS

During the course of the site assessment the opportunity was taken to interview available persons in order to get their opinions on the use of the Soapberry Lands for sewage ponds. Three fishermen were interviewed. They had similar views and collectivley their responses were:

- 1. There was no knowledge at all of the proposed project.
- There was no objection to the idea of the establishment of sewage ponds.
- 3. There was eagerness to have the Harbour and Hunts Bay cleaned up as they recognise that the problem of pollution has resulted in diminished fish stocks.
- If sewage ponds will improve the fisheries in any way they will support them.
- If sewage ponds will decrease the fisheries in any way they will reject them.

7

#### REFERENCES

PLANNING INSTITUTE OF JAMAICA (PIOJ). 1993. Economic and Social Survey, Jamaica 1992. PIOJ, June 1993.

GENTAR CONSULTANTS LTD. 1993. Kingston Harbour Favironmental Project - Site Description of the Soapberry Lands, St. Cahterine. Prepared by Environmental Solutions 1td. September 1993.

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## 3.2.2 Acceptance of Ponds

The following outlines the topics that should be addressed in order to ensure acceptance of the ponds:

- 1. Current state of degradation of Kingston Harbour
- 2. Reasons for this current state of degradation
- Current methods of sewage treatment for surrounding townships
- The need for adequate sewage facilities
- 5. Sewage ponds vs alternative methods
- 6. Short term and long term benefits of the sewage ponds.

#### 3.2.3 Dislocation during construction

At present it does not appear that there will be any need for dislocation of residents in surrounding communities. This should be made known. It is anticipated that there will have to be removal of the single squatter. There may be possible dislocation of fishermen who currently use the dykes as walkways although this should not be necessary if construction boundaries are placed inside the dykes and not on top of them. The public needs to be informed of site preparation and construction activities as well as maintenance activities in the long term.

#### 3.2.4 Gully Clean-Up

The following issues should be addressed:

- Effects of dumping in gullies and rivers (flooding, reduction of aesthetic appeal, public health risk)
- 2. Existing legislation prohibiting dumping
- Schools clean-up programme
- 4. Proper methods for solid waste disposal.

#### 3.2.5 Health Benefits of Harbour Clean-Up

The following topics should be addressed:

- 1. Existing health risks and causes
- 2. Skin disorders
- 3. Improved quality of fish and other marine life.

4.0 BUALIFICATION OF BENEFITS FROM CLEAN-UP

The following table summarises the main areas of interest regarding Harbour clean-up, the existing problems and potential benefits from clean-up.

# Table 1: Harbour Clean-Up: Areas of Interest, Existing Problems and Potential Benefits

Area of Interest	Existing Problems	Potential Benefits
Fish Resources	<ol> <li>Diminishing fish stocks</li> <li>Reduction in size of catch</li> <li>Increasing catch of 'trash'fish'</li> </ol>	<ol> <li>Long term increase in fish stocks</li> <li>Increase in size of catch</li> <li>Increasing catch of 'market fish'</li> </ol>
Recreational Opportunities	1. Poor swimming conditions due to poor water quality and solid waste deposition	<ol> <li>Better water quality and hence better swimming conditions</li> </ol>
Aesthetics/Visual Amenities	<ol> <li>Solid waste deposition</li> <li>Scum/slime on water</li> <li>Ambient smell</li> </ol>	<ol> <li>Improved visual appeal</li> <li>Overall improved aesthetic conditions</li> </ol>
Health Benefits	<ol> <li>Skin disorders</li> <li>Consumption of fish that ingest poor quality water</li> </ol>	<ol> <li>Reduction of skin disorders</li> <li>Consumption of cleaner fish and other marine organisms</li> </ol>

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period under review. Projected current ratio is in some years lower than 1, and never higher than 2.2.

Since the need for cash flow to service debt is the most important factor driving tariff increases, the rate of return target is a less critical determinant of tariffs. As is shown in Table 4 (Scenario 1), the NWC is expected to generate an annual return on net fixed assets not lower than 3.0%. However, the rate of return projected is higher than this, due to the revenue provided to meet debt service requirements and the fact that the fixed assets have never been revalued. Projected revaluation over the 1994-2015 period will be sufficient to reflect future inflation, but cannot offset its influence over the past period. Net income which is presented in the projected income statement in Table 1 (Scenario 1), is projected to be positive over the whole period under review.

Under Scenario 2, the average annual increase in the total revenue over the 1995-2015 period is projected not to be higher than 16.5%. The average annual increase in incremental sewerage tariffs is projected to be very high, in some years more than 75%. The required increase in total revenue and average incremental tariffs is presented in Table 5 and Table 6 respectively. The requirement for tariff increases is primarily driven by the need to generate sufficient cash flows to cover debt service. However, Government grants would reduce internal cash generation needs and, therefore, would reduce somewhat the magnitude of required tariff increases. Cash balances should increase significantly over the 1995-2015 period. As shown in Table 4 (Scenario 2), projected ending cash balances increased from 31 days worth of cash operating and maintenance expenses in 1995 to 82 days in 2005 and 181 days by 2015.

Under Scenario 3, the average annual increase in the total revenue over the 1995-2015 period is projected not to be higher than 16.5%. The average annual increase in incremental sewerage tariffs is projected to be very high; in some years more than 75%. The required increase in total revenue and average incremental tariffs is presented in Table 5 and Table 6 respectively. The lower rate of increase required under Scenario 3 relative to Scenario 2 is due entirely to the lower rate of return target established for the former.

Although the annual rates of return generated under Scenario 3 are 1.0%, while those for Scenario 2 are 3.0%, cash flows under the former scenario should be satisfactory. Projected total internal cash generation is shown in Table 3 (Scenario 3). As shown in Table 4 (Scenario 3), projected ending cash balances increase from 31 days worth of cash operating and maintenance expenses in 1995 to 84 days in 2005 and to 133 days by 2015.

#### 7.2 PROJECTED FINANCIAL PERFORMANCE

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There is presently a requirement to significantly increase water and sewerage tariffs totally independent of the proposed project. This requirement is due to a lack of an adequate increase in tariffs over the past period. Therefore, existing tariffs need to be immediately increased in order to offset the cumulative impact on operating and maintenance costs of inflation over the 1988-1992 period and to reflect the existing NWC operation and maintenance costs.

In order to obtain full cost recovery by 1998, it is estimated that the average water and sewerage tariffs would need to be increased by just over 20%. All of the three scenarios evaluated, therefore, incorporate a 19.6% increase in the average water and sewerage tariff by 1998 which is that required to ensure an adequate cash flow position and to offset a portion of past inflation.

However, it is important to bear in mind that all projections are based on the NWC's 1993 budget, which already incorporated 28% tariffs increase in the same year.

The other important fact is that all of the three scenarios include only the proposed project. Due to limited available data, it was not possible to project all other capital works to be undertaken by NWC over the project implementation time period.

NATIONAL WATER COMMISSION

INCOME STATEMENT

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IIII         IIII         IIII         IIIII         IIIII         IIIIIII         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII					18.1 1,6																					6,937.3	10,806.0	11,682.6	12,552
IIII         IIII         IIII         IIII         IIIII         IIIII         IIIIII         IIIIII         IIIIIII         IIIIIIIIII         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	OPERATING EXPENSES					-																							
(1)         (1) <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td>398.5</td> <td>430.3</td> <td>453.8</td> <td>478.4</td> <td>504.2</td> <td>531.6</td> <td>560.4</td> <td>590.5</td> <td></td> <td></td> <td>690.5</td> <td>728.2</td> <td>773.2</td> <td>820.8</td> <td>870.8</td> <td>923.3</td> <td></td> <td></td> <td></td> <td>1,161.6</td> <td>1,228.9</td> <td>1,299.6</td> <td>1,374</td>						_	398.5	430.3	453.8	478.4	504.2	531.6	560.4	590.5			690.5	728.2	773.2	820.8	870.8	923.3				1,161.6	1,228.9	1,299.6	1,374
ISASWEFWIS         168         113         123         103         113         103         1133         1033         1133         1033 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>381.3</td><td>415.9</td><td></td><td>473.9</td><td>505.6</td><td>540.2</td><td>576.9</td><td></td><td>657.1</td><td></td><td>748.2</td><td>803.1</td><td>882.2</td><td>-</td><td>-</td><td>161.8 1</td><td></td><td></td><td></td><td>1,623.6</td><td>1,758.7</td><td>1,902.2</td><td>2,055</td></th<>							381.3	415.9		473.9	505.6	540.2	576.9		657.1		748.2	803.1	882.2	-	-	161.8 1				1,623.6	1,758.7	1,902.2	2,055
10         5         11         10.1         10.4         10.3         10.0         21.1         20.4         21.4         20.4 </td <td>MATERIALS, CHEMICALS, SUPPLIES, &amp; SPARE PARTS</td> <td></td> <td>21.4</td> <td></td> <td></td> <td>56.0</td> <td>58.4</td> <td>72.5</td> <td>90.1</td> <td>6111</td> <td>117.5</td> <td>123.4</td> <td>129.5</td> <td>136.0</td> <td>142,8</td> <td>149.9</td> <td>157.4</td> <td>165.3</td> <td>173.6</td> <td>182.3</td> <td>4.161</td> <td>200.9</td> <td>211.0</td> <td>221.5</td> <td>232.6</td> <td>244.2</td> <td>256.4</td> <td>269.3</td> <td>282</td>	MATERIALS, CHEMICALS, SUPPLIES, & SPARE PARTS		21.4			56.0	58.4	72.5	90.1	6111	117.5	123.4	129.5	136.0	142,8	149.9	157.4	165.3	173.6	182.3	4.161	200.9	211.0	221.5	232.6	244.2	256.4	269.3	282
NUC         13         51         713         731			46.5			45.4	53.4	98.5	5'621	285.4	421.0	638.9											1	-2	-	4,916.5	5,402.5	5,880.2	6,355
N         4.7         4.6         9.6         9.01         17.2         9.04         9.05         9.05         9.01         17.2         9.04         9.05         9.05         9.04         9.05         9.05         9.04         9.04         9.05         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04         9.04<		21.9	23.5			114.0	198.1	213.9	224.6	237.0	249.9	263.5	277.9	293.1	0.905	325.8	343,3	361.9	382.4	408.0	435.5	464.4	494.7	526.7	560.3	595.8	633.0	672.3	213
MANCE         357         170         475         504         400         750         1950         711         1950         7212         7223         2861         7233         3134<			4.6			47.2	50.0	49.2	0.69	1.06	112.8	148.6	181.2	200.4	221.0	254.3	304,4	365.4	404.5	465.4	2.905	572.8	636.3	704.4	776.7	859.8	944.9	1,028.5	11111
364         777         40.3         786         100         149         198.3         198.3         198.5         1339.5         156.5         157.2         157.5         157.5         158.5         753.3         687.5         753.5         161.5 <td></td> <td></td> <td>17.0</td> <td></td> <td></td> <td>48.0</td> <td>20.0</td> <td>169.3</td> <td>226.2</td> <td>241.8</td> <td>275.0</td> <td>277.0</td> <td>0.661</td> <td>129.9</td> <td></td> <td>153.6</td> <td>172.0</td> <td>189.8</td> <td>207.8</td> <td>232.7</td> <td>252.5</td> <td>288.1</td> <td>307.3</td> <td>332.4</td> <td>358.3</td> <td>390.5</td> <td>424.9</td> <td>459.6</td> <td>494</td>			17.0			48.0	20.0	169.3	226.2	241.8	275.0	277.0	0.661	129.9		153.6	172.0	189.8	207.8	232.7	252.5	288.1	307.3	332.4	358.3	390.5	424.9	459.6	494
452       774       (32.2)       (60.5)       64.2       2817       236.1       2315       (66.6       (61.7       230.3       307.8       235.4       157.5       (161.6       204.5       211.5       656.6       293.3       233.4         MNCIC       0.6       6.3       60.1       31.1       141.1       130.8       165.4       139.4       131.5       141.4       142       20.5       134.4       255.4       157.5       181.6       204.5       211.5       456.6       293.3       233.4         KET       445       31.1       (102.3)       035.0       75.9       139.4       141.2       130.7       135.1       141.7       130.5       131.7       131.2       156.7       156.8       135.1       141.2       150.7       135.2       131.7       131.2       150.7       150.7       150.8       156.8       159.3       153.8       153.8       153.8       156.8       159.3       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       153.8       156.8       156.8       156.8 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>9,792.0</td><td>10,649.4</td><td>11,511.6</td><td>12,387</td></td<>																										9,792.0	10,649.4	11,511.6	12,387
0.6         6.1         311         141.1         3008         16.4         139.4         101.0         6.27         32.5         13.4         4.2         0.9         0.1           44.6         31.1         (102.3)         03.50         (76.9)         33.0         15.64         13.97         146.3         25.61         36.61         35.7         45.66         777         193.3         152.8         153.8           ACTION CAPTIALIZED         36.7         35.6         39.6         69.1         43.0         15.2         153.7         133.7         131.7         131.2         150.7         150.7         152.8         155.9         155.8         155.8         <							263.7			328.1		160.6	161.7				255.4		181.6	204.5		458.6	299.3	239.8	160.1	145.3	156.6	170.9	165
446       311       (102.3)       (93.6)       (75.9)       83.0       170.6       102.3       227.1       260.8       128.1       148.3       226.1       306.9       252.3       255.4       157.5       181.6       211.5       458.6       299.3       239.4       1         UCTION CAPITALIZED       30.9       36.7       35.6       39.8       69.1       83.2       100.2       158       114.2       123.2       131.7       131.2       150.7       166.6       177.7       193.3       187.8       165.3       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1	LOSSES ON FOREIGN EXCHANGE	0.6	6.3			1.111	180.8	168.4	139.4	0.101	62.7	32.5	13.4	4.2	6.0	0.1													
309       36.7       35.6       39.8       69.1       83.0       81.2       100.2       115.8       114.2       13.7       13.1       114.7       133.2       150.7       150.7       193.3       107.8       166.3       152.8       1         STRUCTION CAPITALIZED       30.9       36.7       35.6       39.8       69.1       83.2       100.2       115.8       114.2       133.7       121.2       114.7       133.2       150.7       165.6       177.7       193.3       165.3       152.8       1         OPHANTONS       30.9       36.7       35.6       39.8       69.1       83.2       100.2       115.8       144.2       123.2       133.7       131.2       144.7       133.2       150.7       165.6       177.7       193.3       165.3       152.8       1       145.9       152.8       1       165.3       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       152.8       1       1       1       1       1       1       1       1       1       1						(76.9)	83.0	170.6	102.2	227.1	260.8	128.1	148.3	226.1	306.9	252.3	255.4	157.5	181.6	204.5	211.5	458.6	£.99.3	239.8	160.1	145.3	156.6	170.9	165
OFRATIONS 30.9 36.7 35.6 39.8 69.1 83.0 83.2 100.2 115.8 114.2 120.7 135.2 133.7 121.2 114.7 133.2 150.7 166.6 177.7 193.3 187.8 165.3 132.8 13 13.7 (5.6) (137.9) (133.4) (146.0) (0.0) 87.4 2.1 111.3 146.5 7.4 13.0 92.4 185.7 137.6 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 7.0 13.7 (5.6) (137.9) (133.4) (146.0) (0.0) 87.4 2.1 11.3 146.5 7.4 13.0 92.4 185.7 137.6 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 87.0 87.0 10.0 10.0 10.0 10.0 10.0 10.5 7.4 11.3 146.5 7.4 13.0 92.4 185.7 137.6 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 87.0 10.0 10.0 10.0 10.0 10.0 10.0 10.5 7.4 11.3 146.5 7.4 13.0 92.4 185.7 137.6 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 10.0 10.0 10.0 10.0 10.0 10.0 10.5 7.4 13.0 92.4 185.7 137.5 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 10.0 10.0 10.0 10.0 10.0 10.0 10.5 7.4 13.0 92.4 185.7 137.5 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 10.0 10.0 10.0 10.0 10.0 10.0 10.5 7.4 13.0 92.4 185.7 137.5 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 10.0 10.0 10.0 10.0 10.0 10.0 10.5 7.4 13.0 92.4 185.7 137.5 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1	TOTAL INTEREST ON LOANS LESS.INTEREST-DURING-CONSTRUCTION CAPITALIZED	30.9				1.98	83.0	83.2		115.8	114.2	120.7	135.2	133.7	121.2	27411	133.2	150.7	166.6	111.1	193.3	187.8	166.3	152.8	139.4	135.9	141.4	142.9	138
13.7 (5.6) (137.9) (146.0) (0.0) 87.4 2.1 111.3 146.5 7.4 13.0 92.4 185.7 137.6 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0 13.7 (5.6) (137.9) (131.4) (146.0) (0.0) 87.4 2.1 111.3 146.5 7.4 13.0 92.4 185.7 137.6 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0					8.95	1.69	83.0	83.2		115.8	114.2	120.7	135.2	133.7	121.2	114.7	133.2	150.7	166.6	177.7	E.E91	187.8	E.881	152.8	139.4	135.9	141.4	142.9	138
13.7 (5.6) (137.9) (133.4) (146.00) (0.0) 87.4 2.1 111.3 146.5 7.4 13.0 92.4 185.7 137.6 122.2 6.8 15.0 26.8 18.2 270.8 133.0 87.0		13.7	(5.6) (	1) (6.261		146.0)	(0.0)	87.4		EIII	146.5	7.4	13.0	92.4	185.7	137.6	122.2	6.8	15.0	26.8	18.2	270.8	133.0	87.0	20.7	9.4	15.2	28.0	26
		13.7	(5.6) ()	1) (6.75	33.4) (	146.0)	(0.0)	87.4	51	EIII	146.5	7.4	13.0	92.4	185.7		122.2	6.8	15.0	26.8	18.2	270,8	133.0	87.0	20.7	9.4	15.2	28.0	26

							(I Doll	BALANCE SHEET (I Dollars Million)														Alterr	Alternative 1 Scenario 3/ Table 2	2			
HSCAL YEAR ENDING MARCH 314	1988	1989	ACTUAL 1990	1661	1992	1993	1994	5661	PR(	PROJECTED 1997	8661	6661	2000	2001	2002 2	2 6003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
ASSETS					T																						
FIRED ASSETS IN OPPRATION FROVISION FOR DUPILICATION	261.9	275.1	547.5	5112	944.0	1.0440.1	1,406.5 1	336.6 2	2,575.1 3,	3,222.5 4,2	756.0	5,176.9 5,7	5,725.7 6,3	6,312.9 7,2	7,265.2 8,696.2 1,835.9 2,232.1	6.2 10,440.4 (2.1 2,709.1		87E 1 6735711	13,298.2 14,50	14,562.6 16,3	16,367,0 18,1	14,180.8 20,1 6,287.8 7,3	20,126.7 22,1 7,306.7 8,4	22,190.8 24,5 8,448.7 9,7	24,566.1 26, 9,730.9 11,	26,996.1 29,3 11,162.3 12,7	29,384.4 31,762.8 12,748.9 14,498.1
NET FIXED ASSETS IN OPER'N	200.9	2.09.5	472.3	458.0	803.6	873.6 1	1, 151.7	1,635.0 2,	2,131.6 2,	2,644.0 3,4	3,489.1 4,3	4,201.9 4,5	4,501.5 4,80	4,806.6 5,4	5,429.2 6,464.1	E.167,7 1.46		8,308.2 9,4	9,421.2 9,90	9,982.1 10,91	10,984.6 11,8	11,892.9 12,8	12,820.0 13,7	13,742.1 14,8	14,835.2 15,	15,833.8 16,6	16,635.4 17,264.7
FIXED ASSETS OUT OF USE WORK-IN-PROGRESS	298.2	393.5	181.1	295.0	107.0	416.0	489.3	553.7	351.4	136.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL NET FIXED ASSETS	499.1	603.0	653.4	753.0	910.6	1,289.6 1	1,640.9 2	2,188.7 2,	2,483.0 2,	2,780.1 3,4	3,489.1 4,7	4,201.9 4,5	4,501.5 4,8	4,806.6 5,4	5,429.2 6,46	6,464.1 7,731.3		8,308.2 9,4	9,421.2 9,9	9,982.1 10,984.7		11,892.9 12,8	12,820.0 13,7	13,742.1 14,8	14,835.2 15,	15,833.8 16,6	16,635.5 17,264.8
LONG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS:	0.8	0.8	0.8	0.8	0.8	0.8																					
CASH & BANK SHORT TERM DEPOSITED CANC	22.7	19.6	23.5	15.5	7.8	44.8	68.1	E.911	180.8	256.8	360.3	446.5 4	485.4 5	527.2 5	575.4 63	639.1 74	740.6 8	1,1 8,99.8	1,141.1 1,4	1,427.8 1,5	1,510.3 1,5	1,599.9 1,6	1,688.9 1,7	1,783.8 2,1	2,107.9 2,	2,515.9 3,0	3,019.5 3,608.8
CONSUMERS ACCOUNTS RECEIVABLE INVENTORIES OTHER ACCOUNTS RECEIVABLE	261.6 20.5 3.2	296.5 35.1 8.1	283.6 34.9 6.0	323.8 34.5 10.3	847.3 35.0 17.5	1,043.7 1 32.0 30.0	1,073.7 35.8 53.7	989.3 44.4 57.9	947.1 55.2 67.4	942.0 57.9 75.3	809.5 60.8 80.5	722.5 5 63.9 92.2 1	533.7 5 67.1 100.3 1	586.1 6 70.4 110.0	07 4.163 7. 9.67 7. 118.4	706.9 77 77.6 8 132.4 14	779.9 8 81.5 145.9	854.1 9 85.6 159.6	956.1 1,0 89.9 178.4 1	1,037.8 1,1 94.4 193.5 2	1,184.1 1,2 99.1 1 220.4 2	1,263.0 1,3 104.0 1,3 235.0 2	1,366.0 1,4 109.2 1 254.0 2	1,472.6 1,6 114.7 273.7	,605.0 1, 120.4 298.1	1,746.3 1,8 126.5 324.2 3	1,888.9 2,030.3 132.8 139.4 350.5 376.6
TOTAL CURRENT ASSETS	308.0	359.3	348.0	384.1	907.6	1,150.4 1	1,231.2	1,211.0 1	1,250.4 1,	1,332.1 1,2	1 21161	1,1 1,325.1	1,186.4 1,2	1,293.8 1,3	1,399.2 1,55	1,556.1 1,74	1,747.9 1,9	1,999.0 2,3	2,365.4 2,7	2,753.5 3,0	3,013.8 3,2	3,201.9 3,4	3,418.1 3,6	3,644.9 4,1	4,131.4 4,	4,712.8 5,3	5,391.7 6,155.2
TOTAL ASSETS	807.9	963.1	1,002.2	1,137.9	1,819.0	2,440.8 2	2,872.2 3	3,399.7 3	3,733.4 4,	4,112.2 4,1	4,800.3 5,	5,527.0 5,6	5,687.9 6,1	6,100.4 6,8	6,828.4 8,020.2		9,479.2 10,3	10,307.2 11,7	11,786.7 12,7	12,735.7 13,9	0'51 5'866'EI	15,094.8 16,2	16,238.2 17,3	17,387.0 18,5	18,966.6 20,	20,546.6 22,0	22,027.1 23,419.9
EQUITY & LIABILITIES																											
Equity:																											
OPERATIONAL SURPLUS RESERVE FUND GOVERAMENT GRANTS REVALUATION SURPLUS	18.5 71.5 167.9	12.9 71.5 198.1	(125.0) 64.0 244.4	(258.4) 64.0 302.3	(404.4) 64.0 432.3	(404.4) 64.0 592.3	(186.5) 64.0 682.3	(74.1) 64.0 890.6 1	176.8 64.0 1,012.9 1,	479.8 64.0 1,139.6 1,	677.4 64.0 1,473.3 1,	911.4 1,2 64.0 1,809.8 1,9	1,241.4 1,6 64.0 1,941.0 2,0	1,681.5 2,1 64.0 2,076.9 2,3	2,107.0 2,57 64.0 6 2,371.3 2,86	2,572.2 2,98 64.0 6 2,869.5 3,48	2,989.4 3,4 64.0 3,480.6 3,7	3,446.9 3,9 64.0 3,750.1 4,2	3,976.1 4,5 64.0 4,288.1 4,5	4,528.6 5,3 64.0 4,556.2 5,0	5,388.7 6,1 64.0 5,049.2 5,5	6,161.6 6,9 64.0 5,501.6 5,9	6,940.6 7,7 64.0 5,971.4 6,4	7,705.5 8,5 64.0 6,448.7 7,0	8,520.8 9, 64.0 7,022.2 7,	9,399.2 10,3 64.0 7,562.3 8,0	10,338.3 11,315. 64.0 64.6 8,021.8 8,416.1
TOTAL EQUITY	257.9	282.5	183.4	107.9	91.9	251.9	8.925	880.4 1	1,253.7 1,	1,683.4 2,	2,214.7 2,	2,785.3 3,2	3,246.4 3,8	3,822.3 4,5	4,542.3 5,50	5,505.6 6,53	6,534.0 7,2	7,260.9 8,3	8,328.2 9,1	9,148.8 10,5	10,502.0 11,7	11,727.2 12,9	12,975.9 14,2	14,218.1 15,6	15,606.9 17,	17,025.5 18,4	18,424.1 19,796.7
LIA BILITIES.																											
LONG-TERM LIABILITIES:																											
FOREIGN LOANS & DOMESTIC CURRENCY LOANS OTHER LONG-TERM LUBILITIES	293.1	331.2	387.0	431.5	559.4	2.069	785.0	E.038	240.6 745.6	367.3	701.0	863.5 8 401.5 2	820.7 7 286.8 1	782.6	903.0 1,22 57.4	1,227.2 1,66	1,664.3 1,7 (0.0)	1,759.8 2,1	2,123.8 1,7	1,754.9 1,6	1,610.9	1,426.3 1,2	1,257.5 1,2 (0.0)	(0.0)	1,382.3 1,	1,459.4 1,4	1,455.9 1,677.0 (0.0)
TOTAL LONG-TERM LIABILITIES-REVAL'D	293.1	331.2	387.0	431.5	559.4	690.7	785.0	978.6	986.2	1 2.866	1 2:12'1	1,265.0 1,1	1,107.5 9	954.7	960.4 1,24	1,246.6 1,66	1,664.3 1,7	1,759.8 2,1	2,123.8 1,7	1,754.9 1,6	1,610.9 1,4	1,426.3 1,2	1,257.5 1,2	C'1 8'1/2'1	1 5.282.1	1,459.4 1,4	1,455.9 1,677.0
CURRENT LIABILITIES:					1																						
ACCOUNTS PAYABLE CURRENT PORTION OF LONG-TERM DEBT SHORT-TERM LOANS & CREDITS OTHER CURRENT LUBILITIES	19.0 5.7 232.2	38.9 15.8 5.9 288.8	88.8 6.9 10.4 325.7	168.3 13.8 1.51 1.51	589.1 20.2 36.2 521.7	597.1 76.7 86.9 737.6	607.2 95.7 86.9 737.6	610.2 114.7 78.2 737.6	608.5 114.7 69.5 700.7	591.2 114.7 60.8 663.8	574.7 574.7 52.1 52.1 626.9	554.6 4 2288.7 2 43.4 5 590.0 5	457.4 4 457.4 4 388.7 2 34.7 2 34.7 2 553.1 5	492.5 288.7 26.0 516.2	540.4 60 288.7 21 17.3 4 479.3 44	605.1 68 212.0 19 8.6 442.4 40	682.1 7 193.4 1 0.0 405.5 3	743.9 8 1174.0 1 0.0 3 368.6 3	829.1 9 174.0 6 0.0 5 331.7 2	900.2 9 637.0 6 0.0 294.8 2	990.7 1,0 637.0 6 0.0 0 257.9 2	1,1 1,1 1,1 1,1 1,1 1,1 1,1 1,1 1,1 1,1	182.1 1,2 638.6 4 0.0 184.1 1	1,286.9 1,4 463.0 0.0 147.2	,404.1 1, 463.0 0.0 110.3	1,525.4 1,6 463.0 4 0.0 73.4	1,647.7 1,772.3 463.0 1,74.0 0.0 0.0 36.5 (0.0)
TOTAL CURRENT LIABILITIES	256.9	349.4	431.6	2.862	1,167.7	1.498.3	1 V/25'1	1,540.8 1	1,493.4 1,	1,430.5 1,	1 1.368.4	1,476.7 1,3	E.1 0.40E.1	1,1 1,525,1	1,325.7 1,26	1,268.1 1,28	1,281.0 1,2	1,286.5 1,3	1,334.8 1,8	1,832.0 1,8	1,885.6 1,9	1,941.3 2,0	2,004.8 1,8	1,897.1 1,5	1,977.4 2,	2,061.8 2,1	2,147.2 1,946.3
TOTAL UABILITIES	550.0	680.6	818.8	1,030.0	1,727.1	2,189.0 2	2,312.4 2	2,519.3 2	2,479.7 2,	2,428.7 2,	2,585.6 2,	2,741.8 2,4	2,441.5 2,2	2,278.1 2,2	2,286.1 2,51	2,514.7 2,94	2,945.3 3,0	3,046.3 3,4	3,458.5 3,5	3,586.9 3,4	3,496.5 3,3	3,367.6 3,2	3,262.3 3,1	3,168.9 3,3	3,359.7 3,	3,521.2 3,6	3,603.1 3,623.4
TOTAL EQUITY & UABILITIES	807.9	1.1.76	1 007 2	1 127 9	1 819.0	2 440.4 2	2 677.7 2	2 2 949 7 3	4 45575	4 112 2 41	4.800.3 5.	5 527.0 5.6	5 6879 61	6 100 4 6 3			C 01 2 0 2 0 0	C TAP A1	T 20 T 207 11	13 735 7 13 0	13 998 5 15 0	10 101 8 10 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			

# ANNEX 1

# APPENDIX XVI

# IMPACT OF WETLANDS DISCHARGE TO FRESH RIVER

# (BY UNDERGROUND WATER AUTHORITY)

## Effluent Discharge to Ferry River

#### Background

SENTAR Consultants Ltd. is considering the use of the abandoned 600 acre experimental fresh water removal pond at Caymanas Bay for sewage treatment.

An estimated 30 - 60 MGD of treated effluent would then be discharge into the Ferry River.

SENTAR has requested the UWA to advise on:-

- (1) Embankment height and width of channel required to contain flow adjacent to "Wetlands"
- (2) Capacity of lower river channel to contain the additional flow.

#### Methodology

The present assessment should be considered preliminary or prefeasibility level.

Feasibility level assessment to enable engineering design will require detailed survey of channel profile at different crosssection, back-water analysis and tidal-integration analysis of stream flow.

The analysis is done by considering the following:

- 1 Review of existing stream flow data for the two stations on the Ferry River to determine average flow velocity
- 2 Determination of cross-section area at the two stations
- 3 Review of stream hydrograph to assess magnitude of tidal influence
- 4 Review of existing information on flooding in the Ferry-Caymanas Bay area.

The increase in river stage as a result of addition of treated effluent is calculated from the relationship :

h = Q/WV

where	h - river stage (ft)
	Q - discharge (cfs)
	W - width of stream channel (ft)
	V - average flow velocity (ft/s)

#### River Discharge

The UWA in the past, have monitored the flow in the Ferry River at gauging stations at Caymanas and at the high-way bridge (see map).

The stream flow at Caymanas gauging station range from 31 cfs to 94.4 cfs with a mean of 48.9 cfs.

The flow at the high-way bridge station range from 26.8 cfs to 144 cfs and a mean of 49.10 cfs. The discharge measurements at the high way bridge station is influenced by flow regulation at the weir. The weir has since been removed.

The period of record at the two stations are not the same.

The maximum stage observed at the Ferry River gauging station and at the high-way bridge station are 6.25 ft. and 5.95 ft. respectively.

The Ferry River is influenced by tide. The tidal influence on the river extends to the Caymanas gauging station where the river bed is 4 ft below sea level. The tidal range is 0.25 ft. at the Caymanas gauging station and 0.61 ft. at the high-way bridge station.

## Impact of Effluent Discharge

The exact point of discharge of the treated effluent into the river is not known.

The addition of 60 MGD (93 cfs) of treated effluent represent approximately 100% of the high flow at the Caymanas gauging station, and 65% of the recorded high flow at the high-way bridge station.

Preliminary calculation indicates that the addition of 60 MGD of effluent discharge would create a 3 feet rise in stage at the highway bridge and 4.5 feet rise at the Caymanas gauging station. This is assuming the discharge point will be up-stream of the Caymanas gauging station.

The influence of the tide will create an additional increase in stage which is expected to be approximately 0.5 - 0.75 feet.

The estimated rise in stage as a result of effluent discharge is expected to cause flooding in low lying areas adjacent to the river channel.

The addition of this quantity of discharge will create a back-water effect, which could result in flooding in the Caymanas Bay area.

An embankment of a minimum 3 ft. would be required adjacent to the Wetlands and also along other sections of the stream to confine peak flow to the river channel.

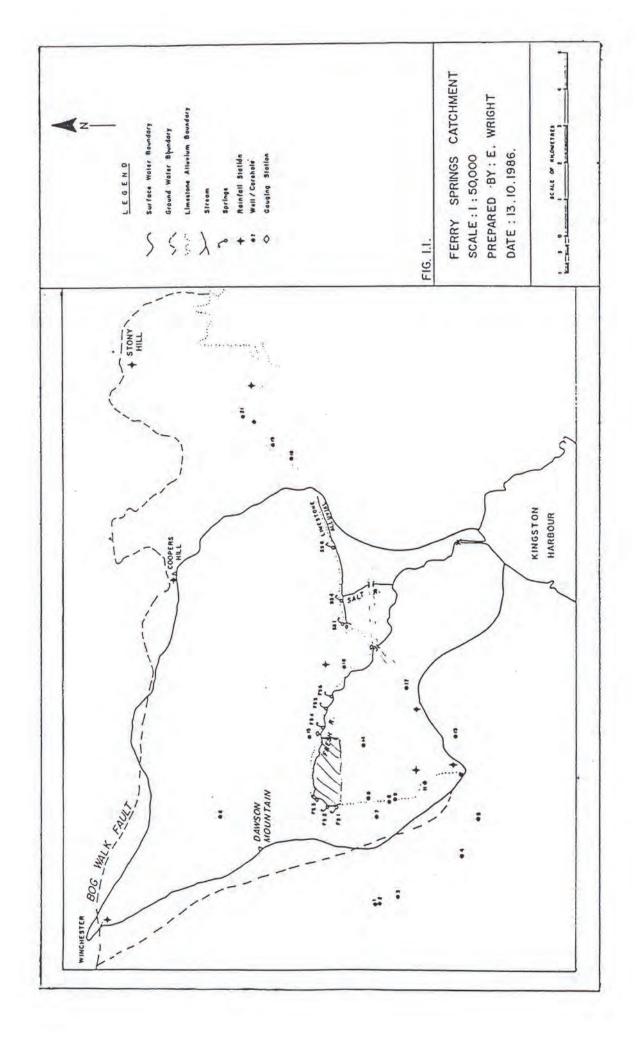
Conclusions

The findings presented are very preliminary and more detailed work is necessary for engineering design.

The addition of 60 MGD of treated effluent to the Ferry River is likely to cause flooding at Caymanas Bay and also in the lower section of the channel.

An embankment of a minimum 3 feet is required to confine the additional flow to the river channel. This will not only be required adjacent to the wetlands but also in other areas.

Underground Water Authority July 1993



# APPENDIX XVII

Financial Analysis of Sewerage System

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## 1.0 FINANCIAL MANAGEMENT POLICIES AND OBJECTIVES

The National Water Commission (NWC) is a statutory body of the Government of Jamaica, providing potable water and sanitary sewer services throughout the island. The NWC provides retail service to approximately 265,000 customers, about 50,000 of whom also are registered as customers of sewerage.

The overall financial policies and objectives of the NWC have been set by the National Water Commission Act of 1980. Since its establishment, the National Water Commission has alternatively been assigned to either the Ministry of Local Government or the Ministry of Public Utilities and Transport. After recent changes implemented by a newly elected Government, the National Water Commission is currently assigned to the Ministry of Water and Transport. Those policies and objectives stated in the Act, relating to financial management are as follows:

- It shall be the function of the Commission to provide and improve water supply services within the limits of its resources throughout the island.
- All rates and charges imposed by the Commission for water sold and services rendered by the Commission shall be so fixed that, taking one year with another, the revenue derived in any year by the Commission from such sales and services, together with its revenue (if any) in such year from other sources, will be sufficient and only sufficient as nearly might be, to pay all remunerations, allowances, salaries, gratuities, working expenses and other outgoings of the Commission properly chargeable to income in that year including the payments falling to be made in such year by the Commission in respect of the interest on, or repayment of, the principal of any money borrowed by the Commission under this Act, and such sums as the Commission may think proper to set aside in that year for reserve fund, expansions, extensions, renewals, depreciations, loans and other like purposes.

- The rates and charges may, if the Commission thinks fit, be fixed on different scales for different localities.
- The accounts and records shall be kept in such manner as to serve the provisions of separate information as respects the supply of water, and each of any other main activities or undertaking of the Commission, and to show as far as may be, the financial and operating results of each such activity or undertaking.
- It shall be the function of the Commission to prepare and submit to the Minister from time to time proposals for the establishment of an efficient, co-ordinated and economical water supply system capable of meeting the needs for water throughout the island.

The 1980 Act provided the NWC with broad powers and autonomy in key matters. However, all significant powers (policy making, rates and charges, annual budgets, power to borrow and spend money) are subject to review and approval by the Minister, so the NWC has never been allowed to fully exercise this autonomy.

#### 2.0 FINANCIAL MANAGEMENT SYSTEMS

The NWC operates on a fiscal year ending March 31. Its annual financial statements are audited by auditors appointed annually by the National Water Commission's Board of Directors, subject to approval by the Minister of Water and Transport. The Auditor General is entitled, on the direction of the Minister, at all reasonable times to examine the accounts and other records in relation to the business of the NWC.

The results of the audit are reported to the Members of the NWC. The audit, by law, should be completed and the financial statements, together with a copy of any report made by the auditor on these statements, should be sent to the Minister within four months after the end of the fiscal year. The 1991 audit was completed in March 1993.

All annual audit reports reviewed (years 1988-1991) are 'disclaimer of' reports. Although the financial statements are in agreement with the accounting records, the auditor was unable to express an opinion as to whether or not the financial statements gave a true and fair view of the state of affairs of the Commission at March 31, and of the results of its operations and changes in its financial position for the years then ended, due to the possible material effects of the matters referred to in the audit report.

The annual audits have, in all given years, identified deficiencies in internal controls over the accuracy of billings generated in the current year and accordingly, a lack of internal controls in recording revenue in previous years. This prevented the auditor from verifying the accuracy of the total revenue, the consequent consumer receivable balances and the adequacy of the provision for doubtful consumer receivable balances, again in all given years.

Due to inadequate internal controls over the fixed assets (fixed assets were reported incorrectly) the auditors were unable to substantiate the balances shown in the financial

statements and verify the Commission's rights and titles to certain lands included in fixed assets.

It appears that the Internal Audit Department within the NWC has not been able to assist in monitoring internal accounting controls or to assist the external auditors. As a result, the NWC was not able to remedy weaknesses identified in the past audit reports. A project to identify and assign values to fixed assets is underway, but due to problems such as assets age estimation and difficulties in underground assets survey, its completion is not expected before the year end.

Financial Statements are produced annually on an accrual basis, under the historical cost convention modified for the inclusion of certain fixed assets at valuation. However, according to the information available, none of the net fixed assets in operation have ever been revalued.

The NWC Accounting Department has continuously operated with a number of vacant staff positions. This problem has recently became increasingly severe with the departure of two key staff members. It is estimated that Accounting Department requires approximately sixty employees, which is twice the current number of staff. This situation is primarily attributable to low salaries and unsatisfactory work conditions.

The NWC produces a detailed financial budget, usually during the fourth quarter of each year for the upcoming financial year and submits it to the Minister for approval. The NWC has recently improved its approach to budgeting. A 1991/92 Operations Plan was based on zero-based budgeting and required that participants justify their budget requests with detailed work programs. Prior to this, budgets were imposed by top management. Unfortunately, unforeseen circumstances affecting revenue generation, such as high inflation rates, have prevented the NWC from fully implementing this plan. Due to the same reasons, the

1992/93 budget could not contribute towards the NWC's ability to control its operating, maintenance and capital expenditures.

The NWC currently produces a monthly financial report for the Board of Directors. Several other reports dealing with the commercial, engineering, finance and administration functions of the NWC are also produced on a monthly basis. As the balances of the accounts are not reconciled to the general ledger on a monthly basis, overall reliability of these reports is doubtful.

The current management information system reports only aggregate information and cost centre details are not available. In order to adequately address these deficiencies, the NWC contracted International Computers Limited (ICL) to implement a new management system. Under the new system, more than three hundred cost centres have been identified in order to provide as much detailed information on all aspects of the NWC operations as is cost effective. In this way, various reports could be derived, depending on the current needs. This will provide management with the details on each of the main activities in order to show the financial and operating results of each such activity or undertaking.

The application software environment called Prophecy has been chosen as the core of the new system. The package contains 11 modules covering general ledger, accounts payable, purchasing, inventory control, bank reconciliation, project costing, asset register, payroll, budgeting and human resources. The system will be implemented gradually by the end of 1993. The general ledger and the accounts payable module implementation was to be completed by the end of July 1993.

Further, serious consideration has been given to improving the integrity of the billing process. The new billing system has been proposed by the Welsh Water Authority.

2-3

After the implementation of the new management information system, data retrieval will be much quicker and the system will enable the NWC to use information produced for projections and decision-making, not just for retroactive analysis.

However, the accuracy and reliability of the accounting data is the problem with the most significant impact on the NWC financial position. It is expected that all of the NWC's accounts will be brought up to date and cleaned up by the time the new management information system is implemented.

## 3.0 BILLINGS AND COLLECTIONS

The NWC has implemented a new billing system in January 1993. To date, this system covers Kingston, St. Andrew, St. Catherine and St. Thomas areas which represent 55% of existing water accounts and approximately 70% of existing water revenue. By August 1993, the system was to be implemented in all NWC service areas.

Upon the full implementation of the new billing system, all bills will be prepared and printed in the NWC Central Office in Kingston. Prior to the system's implementation, bills were prepared by the Fiscal Services Limited (FSL), a Government Agency, and sent to the NWC.

The water and sewerage charges are incorporated into a single monthly customer bill. In the case of metered customers, bills are prepared on the basis of actual water consumption. Meter readings should be undertaken every two months (monthly for commercial consumers), but this objective is not consistently achieved. This failure to consistently achieve the meter reading target is primarily attributable to absenteeism.

The handheld devices incorporated in the new system should replace the existing meter books. Meter readers will be equipped with such devices containing the present meter reading route for the whole week. Once the meter reader completes his task at the premises and registers the reading, the device indicates the next one to be read. At the end of the day, all data entered are downloaded by supervisors to PC computers (in the parish and metro offices) linked by telephone lines to the central system in Kingston. Such readings could be billed the next day.

Customers will be able to pay their bills at any commercial office regardless of the location of their premises. All payments made in NWC offices can be updated the same day, while payments made under the existing system sometimes take more than one month to be reflected in the accounts. The payments sent through banks or post offices will be updated in four to seven days.

The new system will be designed to produce a number of financial reports which will enable the management staff to identify the key accounts (the biggest customers) and monitor these accounts to ensure that they are metered properly. A significant improvement is expected in providing precise sewerage revenues information.

The system is currently used by Welsh Water Authority (Wales, Great Britain) and consists of hardware and software components which have been already tested (for example ITRON, USA - handheld devices)in actual service. The software to be employed by the NWC will be a modified version of that used in Wales in order to reflect legislation and regulations applicable in Jamaica. Staff will be recruited from the already existing staff and properly trained.

Unmetered customers are divided into two categories. The first, customers who have been metered in the past, pay a charge based on estimated water consumption. The second category, consisting of all other customers, pays a flat charge, referred to as the minimum rate, which equates to the rate for consumption up to 3,000 imperial gallons per month.

The fact that less than 50% of existing customers are metered has a negative impact on NWC financial performance. In order to improve the control of revenue, a meter replacement program is planned, which consists of the installation of 30,000 new meters during the 1993 fiscal year. An additional 40,000 meters will be purchased and installed within the next upcoming two years.

The NWC's collections performance over the 1988-1991 period has been extremely poor. At the end of 1988, consumer receivables represented J\$261.6 million or 311 days worth of water and sewerage billings. Although the NWC exhibited slight improvement in its collections performance over the period, gross consumers receivables as of the end of 1991 remained at an unsatisfactory level of J\$323.9 million or 285 days worth of water and sewerage billings. The 1989 audit report indicated the following ages of the accounts receivable: 18% collectable in 6 months, 19% collectable in 12 months, 23% collectable after 12 months and 41% uncollectible. The provision for uncollectible accounts receivable over the 1988-1991 period represented 6%-7% of the annual billings. This percentage, somewhat high relative to other water and sewerage utilities in developing countries, has been provided only to cover inactive accounts, but has not been sufficient to cover non-paying accounts. The NWC's July 1991 staff study indicated the problem of red zones. Red zones are areas of low income residences where the NWC is unable to collect payments for its services. These accounts represent about 4% of total accounts billed. The situation described indicates a total lack of an adequate disconnection policy and the absence of the organisational and institutional ability to enforce collection of overdue accounts.

In an effort to address its poor collection performance, the NWC has contracted collections in certain areas to independent private contractors. Currently, two private firms collect overdue accounts in the Metro Region on the NWC's behalf. Collectors are monitored by Accounts Executives, two in Metro and one each for the other regions. It is planned that the number of persons acting as collectors will be expanded, but since the requirements for indemnity insurance are very high, this activity has to date been limited to corporate entities. In order to further improve its control of revenue, the NWC has undertaken actions such as privatisation of disconnection and reconnection activities and meter installation. Under the provision of the National Water Commission Act of 1980, the NWC is allowed to establish water and sewerage tariffs which will achieve full cost recovery. Water and sewerage charges are assessed as a uniform set of tariffs, although the NWC under the provisions of the same Act, has the right to fix charges on different scales for different localities.

The existing tariff structure, which became effective on July 1, 1992, consists of two customer classifications: (i) domestic; and, (ii) commercial and industrial.

Metered customers are charged for water on the basis of actual consumption. An increasing step tariff is applied to domestic consumers with a monthly minimum charge of J\$65 for water consumption up to 3,000 imperial gallons, rising to J\$84.38 per 1,000 gallons/month for consumption in excess of 20,000 IG. The commercial and industrial customers pay a uniform rate of \$81.24 per each 1,000 IG consumed.

Unmetered domestic customers who have been metered in the past, pay rates based on the estimated consumption which are contracted with the NWC. Other unmetered domestic consumers are charged with a flat rate of J\$65 per month.

Sewerage charges are assessed on the basis of metered water consumption, representing 45% of the water bill amount for domestic customers and 100% of the same amount for commercial and industrial customers.

In addition to water and sewerage, the National Water Commission has implemented a standardized schedule of charges for water and sewer connections, disconnections, reconnections, removal and replacement of service. Connection service charge varies from \$19 to \$608 according to connection size.

The NWC's water and sewerage tariffs are subject to regulation by the Ministry of Water and Transport (MWT) under the authority of the National Water Commission Act. Before any changes in tariffs can be implemented, a written request must be prepared by the NWC and submitted to the Ministry for approval. The MWT prepares submission and makes presentation to Cabinet. After the decision is made by Cabinet, the MWT advises the NWC of the decision and publishes the rate increase. Water and sewerage tariffs have undergone relatively major changes since 1988, being characterised by large increases at irregular intervals (88% in 1986, 30% in 1990, 25% in 1992). However, the rates of inflation in the prices of the NWC's operating and maintenance inputs have exceeded increase in tariffs approved over the same period, which led to the NWC's request for a 100% tariff increase in June 1992. The application was approved and the new tariffs became effective on July 1, 1992. The requested increase in rates were based on the assumption that there would be refinancing of outstanding payments for electricity and statutory deductions. Due to the costs, attributable to the current restructuring process in the NWC which were not taken into account, and increase in inflation rates and a depreciation of the Jamaican dollar, which occurred after the request had been approved, the 1992 budget, projected as a surplus of J\$146 million turned out to be a deficit of the same amount.

A detailed tariff study was undertaken in 1986. Some of the study's recommendations were implemented, but no major changes were made. The study was reviewed and updated in 1991, recommending an application of an automatic index in order to adjust rates in Jamaica's high inflation environment. The NWC is eligible for government grants to subsidize the cost of capital works. There is no formalized methodology for the determination of grant eligibility for capital works. The NWC's management recommends new projects to its Board and the government on the basis of economic and financial feasibility.

It sometimes happens that the NWC starts projects based on the government's budget approval and that, after significant expenditure has been incurred, are faced with inadequate revenues to cover project costs.

The NWC received government grants totalling J\$143.5 million over the 1987-1991 period. These funds, consisting of government internal revenues, were channelled to the NWC through the Ministry of Finance. During the same period, total NWC capital expenditures were J\$347.6 million.

Over the 1989-1991 period, the NWC received a grant of J\$28.1 million from United States Agency for International Development (USAID), which represented 9.6% of the NWC's total capital expenditures in these years. However, attributable to net losses generated in 1990 and 1991, government grants received during the same period were partly used to absorb the National Water Commission's operating losses.

Most of the NWC's capital expenditures over the past have been financed through long term debt. As at the end of 1991 fiscal year, foreign exchange loans represented 82% of total NWC long term liabilities. All long term debt financing has been provided by the Government with the exception of the one loan provided by the World Bank and one by the Caribbean Development Bank. An amount of J\$34.7 million due to the Government, on account of debt service payments, has been netted off against payment of outstanding

accounts by the Government to the NWC in 1990, according to the agreement with the Government.

Consistent with the provisions of the National Water Commission Act, the NWC "should meet payments of interest falling due in any year from money borrowed, while the expenditure out of such moneys remains unremunerative, for such period and subject to such conditions as the Minister may determine". Under the provisions of the same Act, "the Minister responsible for finance, with the approval of the House of Representatives, may guarantee the repayment of the principal and the payment of interest and charges on any authorized borrowings of the Commission".

The repayments of some foreign loan principal and interest are settled by the Accountant General and Bank of Jamaica on behalf of the National Water Commission. There is no clear indication whether these payments are government grants or loans to NWC.

#### 6.0 RECENT FINANCIAL PERFORMANCE

The NWC, with the exception of 1988, did not achieve full cost recovery over the 1988-1992 period. Although it did generate revenue sufficient to cover all cash operating and maintenance expenses and depreciation in 1989, the NWC did not cover interest expenses. The NWC's financial performance significantly deteriorated over the 1990-1991 period. Due to the NWC's inability to obtain the tariff increases necessary to offset inflationary cost increases, it was not able to generate positive income before depreciation in these years.

Summary financial statements for the years 1988-1992 are presented in Tables 1,2 and 3. The statements presented are based on audited financial statements for the years 1988-1991 and preliminary revenue, operating and maintenance expenses data for 1992, produced by the NWC for its Board. The statements have been reorganised in order to conform to that format employed by the World Bank in its appraisal of potential projects. Due to the present incomplete status of the financial statements and limited information available for 1992, this analysis focuses primarily on the NWC's financial performance over the 1988-1991 period.

The NWC's revenues were insufficient to cover depreciation and interest expenses which resulted in annual net losses ranging from a low J\$5.6 million in 1989 to a high of J\$137.9 million in 1990. In 1991 the annual net loss declined by 3%, to J\$133.3 million, as a result of foreign exchange loss decrease.

A number of factors have contributed to the generation of net losses. The first, and the most important factor is that the NWC's operations were exposed to the influence of very high inflation rates, while tariffs were maintained at lower levels. While NWC total revenue increased by 35% over the 1988-1991 period, operating expenses increased by 77%. The Jamaica Consumer Price Index increased by 310% over the same period. Although tariffs were increased twice in 1992, on January 1, by 25% and on July 1, by 100%, these increases were not sufficient to offset the cumulative impact of inflation up to 1992 on the

#### INCOME STATEMENT

(J Dollars )	Million)			Table 1	
			ACTUAL		
	1988	1989	1990	1991	1992
EXISTING REVENUE	307.2	313.6	357.7	415.1	1083.6
WATER				348.7	910.2
SEWERAGE				66.4	173.4
OTHER OPERATING INCOME	3.4	1.5	3.0	3.0	9.7
TOTAL OPERATING REVENUE	310.6	315.1	360.7	418.1	1,093.3
OPERATING EXPENSES					
SALARIES,WAGES & STAFF BENEFITS	85.9	106.1	159.7	148.2	310.9
ELECTRICTY	71.4	58.6	67.6	155.7	407.6
MATERIALS, CHEMICALS, SUPPLIES, & SPARE PARTS	16.8	21.4	12.8	27.0	56.0
MAINTENANCE	36.0	46.5	71.5	21.1	45.4
ADMINISTRATION	21.9	23.5	34.1	58.2	114.0
PROVISION FOR DEPRECIATION	4.7	4.6	9.6	18.0	47.2
DOUBTFUL ACCOUNTS ALLOWANCE	28.7	17.0	47.6	50.4	48.0
TOTAL OPERATING EXPENSES	265.4	277.7	402.9	478.6	1,029.1
NET OPERATING INCOME	45.2	37.4	(42.2)	(60.5)	64.2
LOSSES ON FOREIGN EXCHANGE	0.6	6.3	60.1	33.1	141.1
NET INCOME BEFORE INTEREST	44.6	31.1	(102.3)	<u>(93.6</u> )	(76.9)
TOTAL INTEREST ON LOANS	30.9	36.7	35.6	39.8	69.1
LESS:INTEREST-DURING-CONSTRUCTION CAPITALIZED					
NET INTEREST CHARGED TO OPERATIONS	<u>30.9</u>	36.7	35.6	<u>39.8</u>	<u>69.1</u>
NET INCOME BEFORE TAXES	13.7	(5.6)	(137.9)	(133.4)	(146.0)
TAXES ON INCOME					
NET INCOME	13.7	(5.6)	(137.9)	(133.4)	(146.0)

#### BALANCE SHEET

FISCAL YEAR ENDING MARCH 31st ASSETS FIXED ASSETS IN OPERATION PROVISION FOR DEPRECATION NET FIXED ASSETS IN OPER'N FIXED ASSETS OUT OF USE WORK-IN-PROGRESS TOTAL NET FIXED ASSETS LÓNG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS: CASH & BANK SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE INVENTORIES	261.9 61.0 200.9 298.2 499.1 0.8 22.7 261.6 20.5	1989 275.1 65.6 209.5 393.5 603.0 0.8 19.6	ACTUAL	1991 551.2 93.2 458.0 295.0 753.0 0.8 15.5	1992 944.0 140.4 803.6 107.0 910.6
ASSETS FIXED ASSETS IN OPERATION PROVISION FOR DEPRECATION NET FIXED ASSETS IN OPER'N FIXED ASSETS OUT OF USE WORK-IN-PROGRESS TOTAL NET FIXED ASSETS LÓNG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS: CASH & BANK SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	261.9 61.0 200.9 298.2 499.1 0.8 22.7 261.6 20.5	275.1 65.6 209.5 393.5 603.0 0.8 19.6	547.5 75.2 <u>472.3</u> 181.1 653.4 0.8	551.2 93.2 458.0 295.0 753.0 0.8	944.0 140.4 <u>803.6</u> 107.0 910.6
PROVISION FOR DEPRECATION VET FIXED ASSETS IN OPER'N TXED ASSETS OUT OF USE WORK-IN-PROGRESS TOTAL NET FIXED ASSETS ÓNG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS: CASH & BANK SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	61.0 200.9 298.2 499.1 0.8 22.7 261.6 20.5	65.6 209.5 393.5 603.0 0.8 19.6	75.2 <u>472.3</u> 181.1 653.4 0.8	93.2 458.0 295.0 753.0 0.8	140.4 <u>803.6</u> 107.0 910.6
PROVISION FOR DEPRECATION VET FIXED ASSETS IN OPER'N TXED ASSETS OUT OF USE WORK-IN-PROGRESS TOTAL NET FIXED ASSETS ÓNG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS: CASH & BANK SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	61.0 200.9 298.2 499.1 0.8 22.7 261.6 20.5	65.6 209.5 393.5 603.0 0.8 19.6	75.2 <u>472.3</u> 181.1 653.4 0.8	93.2 458.0 295.0 753.0 0.8	140.4 <u>803.6</u> 107.0 910.6
TXED ASSETS OUT OF USE WORK-IN-PROGRESS TOTAL NET FIXED ASSETS ONG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS: CASH & BANK SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	298.2 499.1 0.8 22.7 261.6 20.5	393.5 603.0 0.8 19.6	181.1 653.4 0.8	295.0 753.0 0.8	107.0 910.6
WORK-IN-PROGRESS FOTAL NET FIXED ASSETS ÓNG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS: CASH & BANK SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	499,1 0.8 22.7 261.6 20.5	603.0 0.8 19.6	653.4 0.8	753.0 0.8	910.6
LÒNG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS: CASH & BANK SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	0.8 22.7 261.6 20.5	0.8 19.6	0.8	0.8	
CURRENT ASSETS: CASH & BANK SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	22.7 261.6 20.5	19.6			0.8
HORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	261.6 20.5		23.5	15.5	
CONSUMERS ACCOUNTS RECEIVABLE	20.5	and the		10.0	7.8
2 Education Constitution Constitution Constitution Constitution Constitution Constitution	20.5	296.5	283.6	323.8	847.3
	20021	35.1	34.9	34.5	35.0
OTHER ACCOUNTS RECEIVABLE	3.2	8.1	6.0	10.3	17.5
TOTAL CURRENT ASSETS	308.0	359.3	348.0	384.1	907.6
TOTAL ASSETS	<u>807.9</u>	<u>963.1</u>	1,002.2	1.137.9	1,819.0
EQUITY & LIABILITIES					
EQUITY:					
OPERATIONAL SURPLUS	18.5	12.9	(125.0)	(258.4)	(404.4
RESERVE FUND	71.5	71.5	64.0	64.0	64.0
GOVERNMENT GRANTS REVALUATION SURPLUS	167.9	198.1	244.4	302.3	432.3
TOTAL EQUITY	257.9	282.5	183.4	107.9	91.9
LIABILITIES:					
LONG-TERM LIABILITIES:					
FOREIGN LOANS &					
DOMESTIC CURRENCY LOANS	293.1	331.2	387.0	431.5	559.4
OTHER LONG-TERM LIABILITIES					
TOTAL LONG-TERM LIABILITIES-REVAL'D	293.1	331.2	387.0	431.5	559.4
CURRENT LIABILITIES:					
ACCOUNTS PAYABLE	19.0	38.9	88.8	168.3	589.1
CURRENT PORTION OF LONG-TERM DEBT	5.7	15.8	6.9	13.8	20.7
HORT-TERM LOANS & CREDITS THER CURRENT LIABILITIES	232.2	5.9 288.8	10.4 325.7	15.1 401.3	36.2 521.7
OTAL CURRENT LIABILITIES	256.9	349.4	431.8	598.5	1,167.7
OTAL LIABILITIES	550.0	680.6	818.8	1,030.0	1.727.1
OTAL EQUITY & LIABILITIES	807.9	963.1	1,002.2	1,137.9	1,819.0

#### STATEMENT OF SOURCES & APPLICATION OF FUNDS

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(J Dollars	Million)			Table 3	
			CTUAL -		
FISCAL YEAR ENDING MARCH 31st	1988	1989	1990	1991	1992
SOURCES OF FUNDS:					
OPERATING INCOME	44.6	31.1	(102.3)	(93.6)	(76.9)
ADD: DEPRECIATION DISPOSAL OF FIXED ASSETS LESS: TAXES ON INCOME	4.7 3.0	4.6 0.1	9.6	18.0	47.2
TOTAL INTERNAL FUNDS GENERATION	<u>52.3</u>	35.8	(92.7)	<u>(75.6</u> )	(29.7)
GOVERNMENT GRANTS WORLD BANK LOAN	8.0	30.2	46.3	57.9	130.0
LONG-TERMS LOANS		53.9	61.1	58.3	148.6
TOTAL EXTERNAL SOURCE OF FUNDS	<u>8.0</u>	<u>84.1</u>	107.4	116.2	278.6
TOTAL SOURCES OF FUNDS:	<u>60.3</u>	<u>119.9</u>	14.7	40.6	248.9
APPLICATION OF FUNDS:					
CAPITAL EXPENDITURE-BANK PROJECT -OTHER	22.5	108.6	65.9	117.6	204.8
TOTAL CAPITAL EXPENDITURE	22.5	108.6	<u>65.9</u>	117.6	204.8
LOAN INTEREST CHARGED TO INCOME REPAYMENT OF LONG-TERM LOAN PRINCIPAL	30.9 11.7	36.7 5.7	35.6 15.8	39.8 6.9	69.1 13.8
DEBT SERVICE	42.6	<u>42.4</u>	<u>51.4</u>	46.7	<u>82.9</u>
SHORT-TERM DEPOSITS		411			840.0
OTHER CURRENT ASSETS SHORT-TERM LOANS	27.7 5.0	54.4 (5.9)	(15.2) (4.5)	44.1 (4.7)	531.2 (21.1)
OTHER CURRENT LIABILITIES	(35.8)	(76.5)	(86.8)	(155.1)	(541.1)
CHANGE IN WORKING CAPITAL-INCR/(DECR)	(3.1)	(28.0)	(106.5)	(115.7)	<u>(31.1</u> )
LONG-TERM DEPOSITS/INVESTMENTS-INCR/(DECR) DTHER LONG-TERM LIABILITIES-INCR/(DECR) DIRECT TRANSACTIONS TO EQUITY FUNDS					
TOTAL APPLICATION OF FUNDS	<u>62.0</u>	123.0	<u>10.8</u>	48.6	256.6
CASH INCREASE/DECREASE	(1.7)	(3.1)	3.9	(8.0)	(7.8)
CASH BALANCE, BEGINNING CASH BALANCE, ENDING	24.4 22.7	22.7	19.6	23.5	15.5
-ASH BALANCE, ENDING	44.1	<u>19.6</u>	23.5	<u>15.5</u>	7.8

NWC's cost structure. Meanwhile, in 1992, a further 40% increase in Consumer Price Index occurred.

A second contributing factor is the NWC's high level of non-revenue water (NRW). The NWC can account for only 60%-70% of water produced. The fact that almost 20% of all active accounts do not have a meter and that of the total number classified as metered, less than 50% have functioning or accessible meters, indicates a serious problem, which together with inadequate maintenance and high operation expenses had a strong negative impact upon the NWC's financial results.

The existence of 40,000 inactive (disconnected) accounts prevents the NWC from billing the actual volume of water used. A significant proportion of these inactive accounts have made illegal connections to the system, while other customers are billed for water they have not actually used. Income generated from connections and other related services is insufficient to meet relative costs. Water supply to standpipes is essentially free of charge, which further affects NWC's revenue.

The single largest NWC expense item, representing about 26% of total expenses, is electricity. The NWC utilizes about 10% of Jamaica's production and is the largest consumer of electricity. Expenditures on maintenance fell to 4.4% of total costs in 1991 and 1992. This reduction should not be regarded as an efficiency improvement but rather as an indication that the system is not being adequately maintained due to the NWC's constrained financial position.

The NWC's return on net fixed assets over the 1990-1991 period has been negative due to its net operating losses shown in the same years. Fixed assets have never been revalued and as a result, the rates of return on net fixed assets of 45.4% and 15.2% in the years 1988 and 1989 respectively, provide a misleading indication of financial performance. In order to

determine an accurate return on investments, fixed assets should be annually revalued and their costs maintained at a current value.

The NWC's average depreciation rates, even on such underestimated values of fixed assets, were maintained on the very low level of 1.7-1.8% annually, with the exception of 1991, when the rate was 3.3%. This is because reservoirs, pumps and sewerage plants totalling J\$130.8 million which were originally the property of the National Water Authority have not been depreciated at all. Consequently, if the generally accepted rate of depreciation on gross reevaluated assets in the range of 3.0%-4.0% had been applied on the NWC's assets, its financial performance would have been significantly worse than has been reported.

The NWC's cash flow, with exceptions of 1988 and 1989, and liquidity positions have not been satisfactory over the 1988-1991 period. As is illustrated in Table 3, total internal cash generation decreased from about J\$52.3 million in 1988 to a deficit of J\$92.7 million in 1990. While in 1988 and 1989, internally generated cash represented 87% and 30% of the NWC's total sources of cash, respectively, losses generated in later years prevented the NWC from any satisfactory cash generation performance. The NWC's cash balances have declined annually since 1988 and as of the end of 1991 were J\$15.5 million, which represented a decrease of 37% from that in 1988. Consistent with this reduction, the proportion of NWC's net internally generated funds available for investments has declined and, as is presented in Table 4, the self-financing ratio has dropped from 56.9% in 1988 to negative 57.1% and 5.6% in 1990 and 1991 respectively.

As shown in Table 4, the NWC's current ratio is less than satisfactory and has deteriorated over the 1988-1991 period. The current ratio has declined from 1.2 in 1988 to 0.7 in 1991. Accordingly, the quick ratio has decreased from 1.1 in 1988 to 0.6 in 1991.

Historically, the Government has not paid for water and sewer services. It has not been clear in the records how much of the total revenues are from the government. It is estimated that

#### 7.0 PROJECTED FINANCIAL PERFORMANCE

#### 7.1 DESCRIPTION OF SCENARIOS EMPLOYED IN FINANCIAL PROJECTIONS

Several implementation scenarios have been proposed under this project.

Financial projections for the NWC over the 1993 - 2015 period have been prepared under a number of different scenarios for the implementation Scenario 1B (referred to as Alternative 1). While most of the assumptions underlying each of the financial scenarios are identical, important differences exist between the scenarios in terms of the assumed sources of financing for capital works and the financial performance objectives employed in deriving the projections. Financial Scenario 1 assumes that the capital cost of the proposed Bank project is provided as a loan. Financial Scenario 2 assumes that the capital cost of the proposed project is provided to the NWC partly as a grant (50%), partly as a loan (50%). Financial Scenario 3 is identical to Scenario 2 in terms of the assumed funding arrangements but incorporates a lower rate of return target.

For implementation Scenario 2 (referred to as Alternative 2), requiring the highest capital costs, the financial projections have been prepared only under Scenario 3 assumptions. This Alternative is environmentally most acceptable, so the analysis has been performed in order to assess its affordability under the most favorable financing terms. Detailed financial projections are presented in Annex 2 and Annex 3. The affordability for the lowest income groups is analyzed in Section 8.2.

The key assumptions which are unique to each financial scenario are as follows:

**Scenario 1:** It is assumed that the Government provides 100% of the capital cost of the proposed project, including the proposed Bank loan, to the NWC as a loan. The term of the loan is assumed to be 17 years, including a five year grace period, with an interest rate of 7.25% which is the World Bank's current rate. The key financial performance objective to be achieved by the World Bank's current rate. The key financial performance objective to be achieved by the NWC is to generate at least a 3.0% return on net fixed assets (operating income/average net fixed assets in operation

on a revalued basis) annually. The minimum acceptable ending cash balance is assumed to be the equivalent of 50 days cash operating and maintenance expenses.

**Scenario 2:** It is assumed that the Government provides 100% of the capital cost of the proposed project, including a proposed Bank loan to the NWC, 50% as a loan, 50% on a grant basis. The key financial performance objective to be achieved by the NWC is to generate a 3.0% return on net fixed assets annually. The minimum acceptable ending cash balance is assumed to be the equivalent of 50 days cash operating and maintenance expenses.

**Scenario 3:** Scenario 3 is identical to Scenario 2 with the exception of the rate of return target. Under Scenario 3, the NWC is to generate at least a 1.0% return on net fixed assets annually.

The analysis of the three scenarios, as described above, is intended to provide the data necessary to determine appropriate funding arrangements for the proposed Bank project and the establishment of realistic financial performance objectives to be achieved by the NWC. For a complete description of the assumptions common to the above scenarios, please refer to Annex 1.

Under Scenario 1, the average annual increase in the total revenue over the 1995-2015 period is projected not to be higher than 24.1%. Project implementation will result in a high average annual increase in incremental sewerage tariffs, which are projected to be in some years over 100%. The required increase in total revenue and average incremental tariffs is presented in Table 5 and Table 6 respectively. The higher required rate of increase in tariffs under this scenario relative to Scenarios 2 and 3 is due to the assumption that the funds required for the proposed project are provided to the NWC as a loan, rather than a grant. The major factor driving tariff increases is not the 3.0% rate of return target, but rather the requirement to generate cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain and the service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash flows sufficient to service debt and maintain acceptable cash balances. Even given these large increases in incremental tariffs, as is shown in Table 6, cash balances expressed in terms of day work of cash operating and maintenance expenses are projected at a level not higher than 67 days over the whole

PROJECTED REVENUE () Dollar Million)

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PROJECTED							the second se											
1997	8661	6661	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0 100	0 102 6	1 200	1 205 1	A 740 K	4 018 8	8 515 5	8.078.6	\$ 207.6	THUS	6.143.6	6.728.5	8,192.3	8,500.7	9,141.6	9,414.5	10,223.4	11,050.11	11,709.7
518.3	2.659.9	2.947.5	3.242.6	3.504.2	3.778.6	4,091.5	4,649.0	5,073.2	5,634.4	6,103.6	6,684.3	7,380.5	7,956.1	8,631.0	9,414.5	10,223.4	11,050.3	11,709.7
2,518.3	2,659.9	2,947.5	3,242.6	3,504.2	3,778.6	4,091.5	4,585.0	4,994.8	5,547.1	5,997.1	6,566.7	7,380.5	7,807.6	8,437.4	L'111.9	9.120,0	0.257,01	11,569.2
312.6	404.4	\$94.8	1,014.9	1,133.1	1,280.9	1,460.0	1,854.3	2,038,2	2,406.3	2,649.3	3,059.5	4,339.8	4,455.6	4,894.3	4,911.9	5,495.8	6,086.3	6,422.3
266.0	363.3	536.1	759.3	1.968	1,040,1	1,216.7	1,630.5	1,903.8	2,306.5	2,609.4	3,015.3	3,528.1	3,911.0	4,383.7	4,911.9	5,495.8	6,086.3	6,422.3
266.0	5.535	536.1	159.3	896,7	1,040,1	1,216.7	2.866.5	1,825.4	2,912,2	2,502.9	2,897.7	3,528.1	3,762.5	4,190.1	4,669.1	5,223.9	5,789.8	6,281.8
2.4%	5.3%	11.3%	16.4%	\$6.9	7.4%	7.9%	12.4%	26.9	10.1%	7.1%	9.5%	21.8%	3.8%	7.5%	3.0%	8.6%	8.1%	6.0%
11.0%	5.6%	10.8%	10.0%	8.1%	7.8%	8.3%	13.6%	9.1%	31.1%	8.3%	9.5%	10.4%	7.8%	8.5%	9.1%	8.6%	8.1.8	6.0%
11 1.00	5.64	10 2 2	20.05	818	784	2 3 4	31 11	202	11.1%	81%	9.5%	12.4%	5.8%	8.1%	8.7%	8.5%	8.1%	7.6%

														energie entre etter				
	FISCAL YEAR ENDING MARCH 314	 REVENUE: Total	Securio I	Securio 2	Socialize 3	REVENDER New Project	Somerio 1	Scenario 2	Somerio 3	ANNUAL INCREASE!	Secratio I	Sommin 2.	Socrario 3					

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PROJECTED INCREMENTAL TARIFFS

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f	TIONA	PROJECTED			and	the second se	the second se	the second se			and the second se	The second se	and the second se							
-	9661	1661	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	0.73	47.0	0.92	81.0	131.0	0.961	144.0	150.0	174.0	182.0	193.0	199.0	208.0	278.0	270.0	278.0	263.0	283.0	308.0	320.0
	\$1.4	36.8	45.8	62.9	101.5	107.6	112.3	117.9	138.0	144.4	155.0	160.6	169.7	227.6	221.8	229.5	218.0	234.8	254.8	264.0
	45.6	78.4	5.72	0.1410	216.3	229.1	239.1	251.1	293.9	307.5	330.3	342.0	361.5	484.9	472.4	488.8	464.3	500.0	\$42.8	\$62.3
a	5.0	40.0	53.0	73.0	98.0	110.0	117.0	125.0	153.0	170.0	185.0	196.0	205.0	226.0	237.0	249.0	263.0	283.0	308.0	320.0
61	8.61	51.3	41.1	56.7	76.0	85.1	91.2	98.3	121.3	134.9	148.6	158.2	167.2	185.1	1.421	205.5	218.0	234.8	254.8	264.0
Υ.	12.2	66.7	87.6	120.7	161.8	181.3	194.3	209.3	258.4	287.3	316.6	336.9	356.2	394.2	414.7	437.8	464.3	500,0	542.8	\$62.3
~	5.0	40.0	53.0	73.0	0'86	110.0	117.0	125.0	147.0	163.0	178.0	188.0	197.0	226.0	228.0	238.0	250.0	269.0	293.0	313.0
-	8.01	5115	41.1	56.7	76.0	85.1	91.2	98.3	116.6	129.3	143.0	151.7	160.7	185.1	187.3	196.5	207.2	223.1	242.4	258.2
	12.2	66.7	87.6	120.7	161.8	181.3	194.3	209.3	248.3	275.4	304.6	323.1	342.3	394.2	308.0	418.5	441.4	475.3	E YIS	10.025

	5661	12.0 9.6 20.5	9.0 7.2 15.4	9.0 7.2 15.4						
anna an ann an an an an an an an an an a	<b>A 316</b> 6 - 1 35 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 -									
	FISCAL YEAR ENDING MARCH 314		Socratio 2 Residential Industrial	Scentrio 3 Residential Industrial						
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						NATIO	NATIONAL WATER COMMISSION	R COMMIS	NOIS																			
							INCOME STATEMENT	COME STATEMENT														Alt	Alternative 1 Scenario 2/ Table 1	ble 1				
LOAN INTEREST CLARGED TO INCOME	1988	A(	ACTUAL 1990	1661	1992	6661	1994	5661	PRC 1996	PROJECTED 1997	8661	6661	2000	1002	2002	2002	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
RIVENUE: NEW PROJECT REVENUE: EXISTING WATER SEWERZING INCOME	307.2	313.6	357.7	415.1 1, 348.7 66.4 3.0	1,083.6 1,083.6 1,010.2 1,73.4 2.7	1,406.5 1 1,181.5 1 225.0 66.9	1,716.5 1 1,441.9 1 274.6 72.3	50.8 50.8 1,802.3 2 1,513.9 1, 288.4 75.9	142.0 2,024.9 1,700.9 324.0 79.7	257.1 2,168.7 2, 1,821.7 1, 347.0 83.6	387.0 2,208.8 2 1,855.4 1, 353.4 87.8	660.9 2,319.2 2,319.2 2,319.2 1,948.2 371.1 371.1 92.2	860.0 1,1 2,386.5 2, 2,004.7 2, 381.8 96.8	1,859.7 1, 2,505.8 2, 2,104.9 2, 400.9	1,209.7 1, 2,631.1 2 2,210.1 2 421.0 106.7	1,537.9 1, 2,762.7 2, 2,320.6 2, 442.0 112.1	1,907.5 2,2900.8 3,2,436.7 2,436.7 2,4464.1	2,217.3 2, 3,045.8 3, 2,558.5 2, 487.3 123.6	2,693.0 3, 3,198.1 3, 2,686.4 2, 511.7 129.8	3,035.3 3 3,358.0 3 3,358.0 2 2,820.7 2 537.3 136.2	3,677.2 4 3,525.9 3 3,525.9 3 2,961.8 3 564.1 143.1	4,027,6 4 3,702,2 3 3,109.9 3 592.4 150.2	4,554.6 5 3,887.3 4 3,265.4 3 622.0 157.7	5,123.1 4,081.7 3,428.6 653.1 165.6	5,733.6 4,328.6 3,636.1 692.6	6,408.4 4,545.1 3,817.9 727.2 182.6	7,054.5 4,772.3 4,008.8 763.6	7,445.8 5,086.1 5,086.1 4,272.3 813.8 201.3
TOTAL OPERATING REVENUE					1,093.3	1,473.4	1,788.7		2,246.5 2,	2,509.4 2,	2,683.6 3	3,072.3 3		3,667.2 3,			-		-		N						12,018.5	12,733.2
OPERATING EXPENSES																												
SALARIES WAGES & STAFF BENEFITS	85.9	106.1	159.7	148.2	310.9	398.5	430.3	453.8	478.4	504.2	531.6	560.4	590.5	622.2	466.5	5 069	738.7	273.2	8.008	870.8	F.FCP	978 5	1 036 5	1 007 5	1 161.6	D 8CC 1	1 200 6	1 37
ELECTRICTY	71.4	58.6			407.6	381.3	415.9	444.1	473.9		540.2	576.9		657.1	6.007		803.1	882.2	-						91631	1 758 7	0.552,1	3 330 6
MATERIALS CHEMICALS SLIPPLIES & SPARE PARTS	16.8	214			24.0	58.4	3.62	1.02	6111		173.4	179.5		147.8	140 0		1.631	9221							C 886	1.06 1.1	1.4026	
MAINTENANCE	14.0	44.5	215	21.1	45.4	53.4	98.5	179.5	285.4		6.36.9		-												2 210 2	5 400 5	C.202	1.202
ADMINISTRATION	21.9	23.5	34.1	58.2	114.0	1.961	213.9	224.6	237.0		263.5														8.202	633.0	672.3	3136
PROVISION FOR DEPRECIATION	4.7	4.6	9.6	18.0	47.2	50.0	49.2	69.0	90.1	112.8	148.6	181.2		221.0	254.3		365.4	404.5	465.4	2.902	572.8	636.3	704.4	776.7	859.8	944.9	1.028.5	1111
DOUBTFUL ACCOUNTS ALLOWANCE	28.7	17.0	47.6	50.4	48.0	70.0	169.3	226.2	241.8	275.0	277.0	199.0		142.6	9.621	172.0	192.3	210.5	235.6	255.7	288.1	309.2	337.7	368.2	402.5	438.1	473.1	E-105
TOTAL OPERATING EXPENSES	265.4	277.2	402.9	478.6 1	1,029.1	1,209.7	1,449.8	1,687.3 1	1,918.5 2,	185.9	2,523.0 2	2,910.6 3	3,113.0 3,	3,359.5 3	3,695.2 4	4,157.2 4	4,707.1 5	5,140.6 5	5,744.5 6	6,241.5 6	6,887.6 7	7,535.7	8,233.1 8	8,973.7	9,804.0	10,662.6	1,525,11	12,394.6
NET OPERATING INCOME	45.2	37.4	(42.2)	(60.5)	64.2	263.7	339.0	241.7	328.1	323.5	160.6	161.7	230.3	307.8	252.4	255.4	218.9	246.1	276.3	288.1	458.6	344.3	366.6	396.7	432.2	473.5	493.4	338.6
LOSSES ON FOREIGN EXCHANCE	0.6	6.3	60.1	33.1	141.1	180.8	168.4	139.4	101.0	62.7	32.5	13.4	4.2	6.0	0.1													
NET INCOME BEFORE INTEREST	44.6	FIE	(102.3)	(93.6)	(26.9)	83.0	170.6	102.2	227.1	260.8	128.1	148.3	226.1	306.9	252.3	255.4	218.9	246.1	276.3	268.1	458.6	544.3	366.6	396.7	432.2	473.5	493.4	338.6
TOTAL INTEREST ON LOANS LESS:INTEREST-DURING-CONSTRUCTION CAPITALIZED	30.9	36.7	35.6	39.8	69.1	83.0	83.2	100.2	115.8	114.2	120.7	135.2	133.7	121.2	114.7	133.2	150.7	166.6	1.111	E.C01	167.8	166.3	152.8	139.4	135.9	141.4	142.9	138.5
NET INTEREST CHARGED TO OPERATIONS	30.9	36.7	35.6	39.8	69.1	83.0	83.2	100.2	115.8	114.2	120.7	135.2	133.7	121.2	114.7	133.2	150.7	166.6	111.7	E.E.E.I	187.8	166.3	152.8	139.4	135.9	141.4	142.9	138.5
NET INCOME BEFORE TAXES	13.7	(3.6)	(137.9) (133.4)		(146.0)	(0.0)	87.4	2.1	EIII	146.3	1.4	13.0	92.4	185.7	137.6	122.2	68.2	2.67	98.6	94.9	270.8	6.771	213.7	E.725	296.3	332.1	350.5	200.1
TAXES ON INCOME NET INCOME	13.7	(2.6)	(FEE) (6-2E1)		(146.0)	(0.0)	87.4	2.1	1113	146.5	7.4	13.0	92.4	100	9211	1 11 1	183	70 6		0 70	370.8	e 771					1	

								action th	II Dollars Million															Alternative 1	e1				
HSCAL YEAR ENDING MARCH 31st	1987	1 8861	ACTUAL 1989 199		1661	2661	6661	1994	1995	PRC 1996	PROJECTED 1997	8661	6661	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		0 2011	1.13	2012 20	2013 20	2014 2015
ASSETS						-																							
FIXED ASSETS IN OPERATION PROVISION FOR DEPRECATION	4.6	261.9 27 61.0 6	275.1 54 65.6 7	547.5 5 75.2	551.2 9 1 2.69	944.0 1,0 140.4 1	1,064.0 1,	1,406.5 1,	1,971.6 2,3	2,575.1 3, 443.6	3,222.5 4,7	4,245.1 5,1 756.0 9	5,176.9 5,7 975.0 1,7	5,725.7 6,3	6,312.9 7,2 1,506.3 1,8	7,265.2 8,6 1,835.9 2,2	8,696.2 10, 2,232.1 2,	10,440.4 1 2,709.1	1,557,3 1	13,298.2	14,562.6 4,580.5	16,367.0 5,382.4	18,180.8	20,126.7 7,306.7	7 22,190.8 7 8,448.7	8 24,566.1 7 9,730.9	1 26,996.1	5.1 29,384.4 2.3 12,748.9	4.4 31,762.8 8.9 14,498.1
NET FIXED ASSETS IN OPER'N HIXED ASSETS OUT OF USE	(4.6)	200.9 20	209.5 47	472.3 4	458.0 8	803.6	873.6 1,	112121	1,635.0 2,1	2,131.6 2,	2,644.0 3,4	3,489.1 4,2	4,201.9 4,3	4,501.5 4,8	4,806.6 5,4	5,429.2 6,4	6,464.1 7,	EIEL'L	8,308.2	9,421.2	9,982.1	10,984.6	11,892.9	12,820.0	13,742,1	1 14,835.2	.2 15,833.8	1.8 16,635.4	5.4 17,264.7
WORK-IN-PROGRESS	1	298.2 39	31.5.166	181.1 2	1 0'562	107.0	416.0	E.984	2.125	121'4	1.96.1	0.0	0.0	0.0	0.0	0.0	0.0	0'0	0.0	0'0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0 0.0
TOTAL NET FIXED ASSETS	(971)	499.1 60	603.0 65	4.653.4	753.0 9	910.6 1.2	1,289.6 1,	1,640.9 2,	2,188.7 2,4	2,483.0 2,	2,780.1 3,	3,489.1 4,2	4,201.9 4,	4,501.5 4,8	4,806.6 5,4	5,429.2 6,4	6,464.1 7	ENEL'Z	8,308.2	9,421.2	9,982.1	10,984.7	11,892.9	12,820.0	13,742.1	1 14,835.2	15,833.8	3.8 16,635.5	5.5 17,264.8
LONG-TERM DEPOSITS/INVESTMENTS CURRENT ASSETS:	0.8	0.8	9.6	8.0	0.8	0.8	0.8																						
CASH & BANK	24.4	22.7	19.6 2	23.5	15.5	7.8	44.8	68.1	E.611	180.8	256.8	360.3	446.5	485.4	527.2 5	575.4 6	1.963	789.5	1,012,4	1,324.2	1,686.6	1,784.6	1.910.1	2,109.3	3 2,418.6	6 3,019.4	1.4 3,738.3	8.3 4,563.3	3.356,2
SHORT TERM DEPOSITS/LOANS CONSUMERS ACCOUNTS RECEIVABLE	228.5	261.6 29	296.5 28	283.6 3	323.8 8	847.3 1,0	1,043.7 1,	1,073.7	589.3	947.1	942.0	809.5	722.5	533.7 5	586.1 6	631.4 7	706.9	790.4	865.2	968.4	1,051.0	1,184.1	1,270.6	1,387.7	1,513.1	1 1.654.1	1, 1,800.6	0.6 1.944.1	4.1 2.060.0
INVENTORIES OTHER ACCOUNTS RECEIVABLE	26.8	3.2 3	35.1 3	34.9	34.5	35.0	32.0 30.0	35.8 53.7	44.4 57.9	55.2 67.4	57.9	60.8 80.5	63.9 92.2	1.78	70.4	73.9	77.6 132.4	81.5	85.6 161.6	89.9	94.4	99.1	104.0 236.4						
TOTAL CURRENT ASSETS	282.0	308.0 35	FE E.92E	348.0 3	384.1 9	907.6 1,1	1, 150.4 1,	1,231.2 1,	1211.0 12	1,250.4 1,	1 1.332.1 1,	1, 2,116,1	1,325.1 1,	1, 186.4 1,2	E'I 8'E62'I	2,1 2.992,1	1,556.1 1	1,809.2	2,124.8	2,563.1	3,027.9	3,288.1	3,521.2	'n	*	5	- 10	2	h
TOTAL ASSETS	278.2	807.9	963.1 1,00	1,002.2 1,1	1,137.9 1,8	1,819.0 2,4	2,440.8 2,	2,872.2 3,	3,399.7 3,	4 FEE7E	4,112.2 4,	4,800.3 5,5	5,527.0 5,	5,687.9 6,1	6,100.4 6,8	6,828.4 8,0	8,020.2	9,540.5 1	1 0.655,01	E.486,11	13,010.0	14,272.8	15,414.1	16,684.3	3 18,069.7	7 19,936.2	2.0833.2	3.2 23,636,2	6.2 25,202.5
EQUITY & LIABILITIES						~																							
EQUITY:						-																							
OPERATIONAL SURPLUS RESERVE FUND GOVERNMENT GRANTS REVALUATION SURPLUS		18.5 71.5 71.5 167.9 19	12.9 (12 71.5 6 198.1 24	(125.0) 12 64.0 244.4 3	(258.4) (4 64.0 302.3 4	(404.4) (4 64.0 432.3 5	(404,4) ( 64.0 592.3	(186.5) 64.0 682.3	(7.4.1) 64.0 890.6 1,1	176.8 64.0 1,012.9 1,	479.8 64.0 1,139.6 1,	677.4 9 64.0 1,473.3 1,8	911.4 1, 64.0 1,809.8 1,	1,241.4 1,6 64.0 1,941.0 2,0	1,681.5 2,1 64.0 2,076.9 2,3	2,107.0 2,5 64.0 2,371.3 2,8	2,572.2 3 64.0 2,869.5 3	3,050.8 64.0 3,480.6	3,572.8 64.0 3,750.1	4,173.8 64.0 4,288.1	4,803.0 64.0 4,556.2	5,049.2	6,481.0 64.0 5,501.6	7,386.6 64.0 5,971.4	6 8,388.2 64.0 1 6,448.7	2 9,490.3 0 64.0 7 7,022.2	10,685.7 10,685.7 10 64.0 12 7,562.3	5.7 11,947.3 4.0 64.0 2.3 8,021.8	7.3 13,098.1 4.0 64.0 1.8 8,416.9
TOTAL EQUITY		257.9 28	282.5 18	183.4	6.701	91.9 2	251.9	559.8	880.4 1,	1,253.7 1,	1,683.4 2,	2,214.7 2,7	2,785.3 3,	3,246.4 3,8	3,822.3 4,5	4,542.3 5,5	5,505.6 6	6,595.4	7,386.8	8,525.9	9,423.2	10,776.3	12,046.6	13,422.0	14,900.8	8 16,576.5	18,312.0	2.0 20,033.1	3.1 21,579.0
LIABILITIES:						-																							
LONG-TERM LIABILITIES:						-																							
FOREIGN LOANS & DOMESTIC CURRENCY LOANS OTHER LONG-TERM LIABILITIES	276.7	293.1 33	331.2 38	387.0 4	431.5 5	559.4 6	2.069	785.0	860.3	240.6 745.6	367.3	701.0 8	863.5	820.7 7 286.8 1	782.6 9	903.0 1,2 57.4	1,227.2	1,664.3	8.0201	2,123.8 (0.0)	1,754.9	1,610.9	1,426.3	1,257.5	5 1,271.8 )) (0.0)	8 1,382.3 0) (0.0)	1,459.4	9.4 1,455.9 0.0) (0.0)	5.9 1,677.0 0.0) 1,677.0
TOTAL LONG-TERM LIABILITIES REVAL 'D 276.7 CURRENT LIABILITIES:		EE 1.E62	331.2 38	387.0 4	431.5 5	559.4 6	2.069	785.0	978.6	986.2	998.2 1,	217.2 1,2	1,265.0 1,	1,107.5	954.7 9	960.4 1,2	1,246.6 1	1,664.3	8.627,1	3,123.8	1,754.9	1,610.9	1,426.3	1,257.5	1,271.8	8 1,382.3	.3 1,459.4	9.4 1,455.9	5.9 1,677.0
ACCOUNTS PAYABLE CURRENT PORTION OF LONG-TERM DE SHORT-TERM LOANS & CREDITS OTHER CURRENT LIABILITIES	23.1 1.2 5.0 190.3	19.0 3 5.7 1 5.7 28	38.9 8 15.8 1 5.9 1 288.8 32	88.8 1 6.9 10.4 325.7 4	168.3 5 13.8 15.1 401.3 5	589.1 5 20.7 36.2 521.7 7	597.1 76.7 86.9 737.6	607.2 95.7 86.9 737.6	610.2 114.7 78.2 737.6	608.5 114.7 69.5 700.7	591.2 114.7 60.8 663.8	574.7 114.7 52.1 52.1 626.9	554.6 288.7 43.4 590.0	457.4 4 288.7 2 34.7 2 553.1 5	492.5 5 288.7 2 26.0 4 516.2 4	540.4 6 288.7 2 17.3 4 479.3 4	605.1 212.0 8.6 442.4	682.1 193.4 0.0 405.5	743.9 174.0 0.0 368.6	829.1 174.0 0.0 331.7	900.2 637.0 0.0 294.8	990.7 637.0 0.0 257.9	1,083.3 637.0 0.0 221.0	1,182.1 638.6 0.0 184.1	1,286.9 463.0 0.0 147.2	1,404.1 0.463.0 0.0 0.0	(1 1,525,4 0 463.0 0 0.0 33.4		1,647.7 1,772.3 463.0 174.0 0.0 0.0 36.5 (0.0)
TOTAL CURRENT LIABILITIES	232.1	256.9 34	349.4 43	431.8 5	1,1 2.862	1,167.7 1,4	1,498.3 1,	1,527.4 1,	1,540.8 1,	1,493.4 1,	1,430.5 1,	1,368.4 1,4	1,476.7 1,3	1,334.0 1,5	1,323.4 1,3	1,325.7 1,2	1,268.1 1	1,281.0	1,286.5	1,334.8	1,832.0	1,885.6	E.196.1	2,004.8	1.897.1	1 1.977.4	4 2.061.8	2.147.2	7.2 1.946.7
TOTAL LIABILITIES	508.8	550.0 68	680.6 81	818.8 1,0	1,030.0 1,7	1,727.1 2,1	2,189.0 2,	2,312.4 2,	2,519.3 2,4	2,479.7 2,	2,428.7 2,	2,585.6 2,7	2,741.8 2,4	2,441.5 2,2	2,278.1 2,2	2,286.1 2,5	2,514.7 2	2,945.3	3,046.3	3,458.5	3,586.9	3,496.5	3,367.6						
TOTAL EQUITY & LIABILITIES	508.8	807.9 96	963.1 1,00	1,002.2 1,1	1,137.9 1,8	1,819.0 2,4	2,440.9 2,1	2,872.2 3,	3,399.7 3,5	3,733.4 4,	4,112.2 4,1	4,800.3 5,5	5,527.0 5,0	5,687.9 6,1	6,100.4 6,8	6,828.5 8,0	8,020.3 9,	9,540.6 1	10,433.1 1	11,984.4	13,010.1	14,272.9	15,414.2	16,684.3	18,069.7	7 19.936.2	2 21.813.1		1

#### 8.0 PROPOSED TARIFFS

#### 8.1 OBJECTIVES

To date, separate cost accounts for water and sewerage have not been kept. Based on aggregate figures for various elements of NWC's operations, it was possible to determine the impact of the project on the overall financial performance, but not on the sewerage elements of NWC's activities. For the same reason a useful separate tariff structure could not be developed, nor could the adequacy of such a structure be assessed.

Table 5 shows projected increase in total NWC revenue over the 1993 - 2015 period under each scenario, while average incremental sewerage tariff per 1000 IG are presented in Table 6. More details on incremental sewerage tariffs are given in Table 7, which shows the relation between projected residential and industrial tariffs based on the existing tariff structure. The incremental sewerage tariffs are developed in order to assess acceptable and affordable funding requirements and realistic financial targets to be achieved.

However, these tariffs can be only considered as an indicator of global relation between scenarios. This is because the projected financial performance is based on the aggregate NWC data, which already incorporated influence of a certain degree of cross-subsidizing between water and sewerage elements of the NWC's activities.

#### 8.2 AFFORDABILITY

The target group for the affordability analysis is the lower income consumers group. Tariffs are generally considered to be affordable if low income consumers do not pay more than approximately 6% of their gross income for water and sewerage. It is estimated that a low income household currently earns about J\$5,200 per month. A household earning J\$5,200 per month would currently pay 2.6% of its gross income for water and sewerage. Given the assumption that this household income increases at a projected 5% annual inflation rate, the estimated level in the year 2015 should be

J\$15,200 per month. The proportion of household income required to pay for water and sewerage would increase by 2015 under each scenario. Based on the projected incremental tariffs, following are the incremental percentages:

Alternative 1	Stage 1	Stage 2
Scenario 1	0.1 % - 2.1 %	2.2 % - 4.1 %
Scenario 2	0.1 % - 1.9 %	2.1 % - 4.1 %
Scenario 3	0.1 % - 1.8 %	2.0 % - 4.0 %

Although these proportions could be considered to be affordable, they reflect only incremental sewerage tariffs. Therefore, it is assumed that each household should also pay for water used. Based on the current tariff structure and the estimated water consumption, the amounts of total monthly bills are projected.

The analysis indicates, as is shown in the table below, that, rates are within generally accepted affordability, with exception of the last year of Scenario 1 and 2, over the whole Stage 1 period. However, the implementation of the second phase, Stage 2 phase could impose higher tariffs, which might not be affordable, under current circumstances.

Alternative 1	Stage 1	Stage 2
Scenario 1	0.4 % - 6.8 %	7.1 % - 13.1 %
Scenario 2	0.4 % - 6.1 %	6.7 % - 13.1 %
Scenario 3	0.4 % - 5.9 %	6.5 % - 12.8 %

The total amounts of monthly bills are estimated only for the illustrative purpose. However, they clearly indicate that the funding of the second phase should be provided under more favourable conditions than it is assumed in this analysis.

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PROJECTED INCREMENTAL TARIFFS

1995 annaitheasta tobacture the graduate PISCAL YEAR ENDING MARCH 31H

# TARIFPS: Now project

Sconario 1 Sconario 2 Sconario 3

					STA	TEMENT	NATIONAL WATER COMMISSION OF A OF SOURCES & APPLICATION C () Dollars Million)	URCES & APPLICA () Dollars Million)	STATEMENT OF SOURCES & APPLICATION OF FUNDS (1 Dollars Million)	N OF FUI	SOL											Alterna	Alternative 1 Scenario 2/ Table 3				
HSCAL YEAR ENDING MARCH 31st	1988	4891	ACTUAL 1990	1991	1992	1993	1994	1995 1	PRO	PROJECTED 1997 19	1998 19	1999 200	2000 2001	11 2002	02 2003	03 2004	04 2005		2006 20	2007 20	2008 20	2009 20	2010 20	2011 2	2012 21	2013 2	2014 201
SOURCES OF FUNDS:																											
DYLKATING INCOMI ADD: DIPRECATION DISPOSAL OF HXED ASSETS LESS: TAXES ON INCOME	44.6 4.7 3.0	11.1 4.6 0.1	9'6 (E'701)	19.0	Ub.M 47.2	81.0 50.0	170.6 10	102.2 21 69.0 5	227.1 260.8 90.1 112.8	1.8 128.1		148.3 226.1 181.2 200.4	1 306.9	9 252.3 0 254.3	3 255.4	4 218.9	(9 246.1	1 276.3 5 465.4	288.1	3.1 458.6 9.7 572.8	16 344.3 28 636.3	1.3 366.6 5.3 704.4	6.6 396.7 4.4 776.7		432.2 47 859.8 94	473.5 493.4 944.9 1,028.5	3.4 338. 8.5 1,111.
TOTAL INTERNAL FUNDS GENERATION	52.3	35.8	(92.7)	(75.6)	(29.7)	133.0	219.8 1	171.2 31	317.2 373.6	3.6 276.7	.7 329.5	9.5 426.5	.5 527.8	8 506.6	6 559.8	8 584.3	.3 650.6	6 741.8		797.8 1,031.4	.4 980.6	0.6 1,071.0	FEZ1'1 0'1	3.4 1,292.0	2.0 1,418.4	8.4 1,521.9	1.9 1,450.
GOVERNMENT CRANTS WORLD BANK LOAN LONG-TERMS LOANS	8.0	30.2	46.3 61.1	57.9 58.3	130.0	160.0 208.0	90.0 2 1 1	208.3 11 118.3 11 1190.0	122.4 126.7 122.4 126.7	6.7 333.7 6.7 333.7	17 336.5 17 336.5	55 131.2 55 131.2	.2 135.8 .2 135.8	8 294.5	5 498.1	1119 L	.1 269.5	5 538.0		268.2 493.0 268.2 493.0	3.0 452.3 3.0 452.3		469.8 477.3 469.8 477.3		573.5 54 573.5 54	540.1 45	459.5 395. 459.5 395.
TOTAL EXTERNAL SOURCE OF FUNDS	8.0	84.1	107.4	116.2	278.6	368.0	280.0 5	516.5 24	244.8 253.3	3.3 667.4	4 673.0	3.0 262.5	5 271.6	6 588.9	£.966 E.	3 1,222.2	22 539.0	.0 1,076.0	5.0 536.3	6.3 986.1	5.1 904.7		939.6 954.5	4.5 1,147.0	7.0 1,080.2		919.0 790.
TOTAL SOURCES OF FUNDS:	60.3	6.611	14.7	40.6	248.9	501.0	499.8 6	687.7 56	562.0 626.9	6.9 944.2	1,002.4	2.4 689.0	5'662 0'1	5 1,095.5	.5 1,556.0	.0 1,806.5	5 1,189.6	.6 1,817.8	1,934,1	4.1 2,017.5	1,885.3	5.3 2,010.6	0.6 2,127.9	7,9 2,439,0	9.0 2,498.6		2,440.9 2,240
APPLICATION OF FUNDS:					-																						
CAPITAL EXPENDITURE-BANK PROJECT -OTHER	22.5	108.6	65.9	117.6	204.8	429.0	270.0 2	236.5 2	244.8 253.3	3.3 667.4		673.0 262.5	271.6	6 588.9	6.996. 9.	3 1,222.2	2.2 539.0	0.920,1 0.		536.3 986.1	5.1 904.7		939.6 954	954.5 1,14	1,147.0 1,080.2		919.0 790.
TOTAL CAPITAL EXPENDITURE	22.5	108.6	62.9	117.6	204.8	429.0	270.0 5	506.5 2-	244.8 25	253.3 667.4		673.0 262.5	271.6	6 588.9	E.996 E.	3 1,222.2	2.2 539.0	.0 1,076.0	5.0 536.3		986.1 904.7		939.6 954	954.5 1,147.0	7.0 1,080.2		919.0 790.
LOAN INTEREST CHARGED TO INCOME REPAYMENT OF LONG-TERM LOAN PRINCIPAL	30.9	36.7 5.7	35.6 15.8	39.8	69.1 13.8	83.0	83.2 1	100.2 1	115.8 11	114.2 120.7 151.6 151.6		135.2 133.7 151.6 325.6	1,7 121,2 5.6 325.6	2 114.7 6 325.6	7 133.2 6 325.6	.2 150.7 .6 248.9	3.7 166.6 3.9 230.3	4 177.7 210.9		193.3 187.8 210.9 673.9	6.673 9.5 9.9		152.8 135 673.9 675	139.4 13 675.5 49	135.9 14 499.9 49	141.4 14 499.9 49	142.9 138. 499.9 499.
DEBT SERVICE	42.6	42.4	51.4	46.7	82.9	103.7	1 6.631	195.9 21	267.4 26	265.8 272.3		286.8 459.3	446.8	8 440.3	3 458.8	399.6	9.6 396.9	.9 388.6	8.6 404.2		861.7 840.2		826.7 814	814.9 63	635.8 64	641.3 64	642.8 638.
SHORT-TERM DEPOSITS OTHER CURRENT ASSETS SHORT-TERM LOANS OTHER CURRENT UABILITIES	27.7 5.0 (35.8)	54.4 (5.9) (76.5)	(15.2) (4.5) (9(6.8)	44.1 (4.7) (1.55.1)	531.2 (21.0) (511.2)	205.9 150.7) (223.9)	(1.01)	(71.5) 8.7 (1.1)	(22.0) 8.7 1.7 1.	5.6 (124.4) 8.7 8.7 7.3 16.5		(2.71) (E.27) (2.78) 7.8 2.79 2.00 2.72	77.5) 65.5 8.7 8.7 97.2 (35.0)	5 57.2 7 8.7 0) (47.9)	2 93.2 7 8.7 9) (64.7)	91	32.8 92.7 8.6 77.0) (61.8)		E.201 2.321 (1.17) (1.28)		162.3 107.5 (90.5) (92.6)		143.9 154.0 (98.0) (104.9)		172.7 17 117.2) (12	51 2.651 (E.121)	176.3 144. (122.3) (124.
CHANGE IN WORKING CAPITAL-INCR/(DECR) LONG-TERM DEPOSITS/INVESTIMENTS-INCR/(DECR) OTHER LONG-TERM LIABILITIES-INCR/(DECR) DIRECT TRANACTIONS TO EQUITY EINDS	6.9	(28.0)	(106.5)	(15.7)	6.113	(6.8.3)	47.4 (	) (6:5:9)	(11.6) 3	31.7 (99	(5) (4)	(43.6) (71	2.95 (0.17)	2 18.0	.0 37.2		34.3 30.8		41.4 31	31.2 71	71.8 14	14.9 45	45.1 49	49.1 5	55.5 5	58.2 5	54.0 19.
TOTAL APPLICATION OF FUNDS	62.0	123.0	10.8	48,6	256.6	463.9	476.6 6	636.4 51	500.5 550	550.9 840.6		916.2 650.2	12 757.6	6 1,047.3	3 1,492.3	3 1,656.1	1.966.7	7 1,506.1	2179 1.2	3.919.6	1,759.8	9.8 1,811.4	1.4 1,818.5	8.5 1,838.3	1,977,1 8.8	9.7 1,615.9	5.9 1,447.
CASH INCREASEDECREASE CASH BALANCE, BEGINNING CASH BALANCE, ENDING	(1.7) 24.4 22.7	(3.1) 22.7 19.6	3.9 19.6 23.5	(8.0) 23.5 15.5	(7.8) 15.5 7.8	37.0 7.8 44.8	23.3 44.8 68.1 1	51.3 1 1.83 11 1.9.3	61.4 7( 119.3 18( 180.8 25(	76.1 103.5 180.8 256.8 256.8 360.3		86.2 38.9 360.3 446.5 446.5 485.4	8.9 41.8 5.5 485.4 6.4 527.2	8 48.2 4 527.2 2 575.4	.2 63.7 .2 575.4 .4 639.1	.7 150.4 .4 639.1 .1 789.5	0.4 222.9 0.1 789.5 0.5 1,012.4	9 311.7 5 1,012.4 4 1,324.2	1.7 362.5 2.4 1,324.2 4.2 1,686.6	2.5 97.9 4.2 1,686.6 6.6 1,784.6	7.9 125.5 5.6 1,784.6 1.910.1	- 14	199.2 309.4 ,910.1 2,109.3	CI P	m n	718.9 825.0 019.4 3,738.3	5.0 792. 8.3 4,563.

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ŭ	SUMMARY FINANCIAL ANALYSIS (] Dollars Mil	INANCIAL 01	AL ANALYSIS () Dollars Million)	(ioi)					su	SUMMARY FINANCIAL ANALYSIS	VANCIAL	NALYSIS										Alte	Alternative 1 Scenario 2/ Table 4	5				
HSCAL YEAR ENDING MARCH 314	1988	AC 1988 1989	ACTUAL 1990	1661	1992	6661	1994	5661	PRC 1996	PROJECTED 1997	8661	6661	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	1102	2012	2013	2014	2015
IINANCIAL KATIOS:																												
OPERATING RATIO	85.4%	88.1% 1	1 %/111	114.5% 9	94.1% 8	82.1%	81.0%	87.5%	85.4%	87.1%	94.0%	94.7%	93.1%	21.6%	93.6%	94.2%	\$95.6%	95.4%	95.4%	95.6% 9	93.8%	39:56	95.7% 9	28.8%	95.8%	95.7%	36.9%	97.3%
DEPRECIATION (%)	1.8%	1.7%	1.8%	3.3%	5.0%	4.7%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5
RATE OF RETURN ON NET FIXED ASSETS	45.4%	15.2%	30.0%	20,1% -1	-12.2%	3.9%	16.8%	7.3%	12.1%	10.9%	4.2%	3.9%	5.2%	6.6%	4.9%	4.3%	3.1%	3.1%	3.1%	3.0%	4.4%	3.0%		3.0%	3.0%	3.1%	3.0%	3.1%
DEBT SERVICE COVERAGE- (TIMES)	1.2	0.8	(1.8)	(1.6)	(0.4)	1.3	1.4	0.9	1.2	1.4	1.0	1.1	0.9	1.2	1.2	1.2	1.5	1.6	1.9	2.0	1.2	1.2	1.3	1.4	2.0	2.2	2.4	2.3
SELF-FINANCING RATIO (%):(3-YEAR AVERAGE)	19.5%	32.6% -	38.6%	5,1% .3	-32.5% 3	32.5%	3.1%	12.1%	16.3%	19.6%	19.5%	16.1%	9.7%	11.2%	7.8%	6.8%	16.4%	23.6%	43.5% 4	41.8% 1	12.1%	13.3%	21.3% 3	30.5%	56.6%	68.5%	88.7%	92.8%
SELF-FINANCING RATIO (%): (YEAR)	56.9%	19.7%	57.1%	-5.6% -3	-39.8%	22.8%	4.6%	8.2%	25.1%	30.0%	15.5%	12.8%	14.8%	15.4%	8.2%	6.4%	12.3%	41.4%	29.0% 6	67.6%	9.9%	13.9%	21.2% 3	32.4%	52.4%	66.5%	\$8.6%	100.3%
% LONG-TERM DEBT, TO L-TERM DEBT + EQUITY	53.2%	54.0%	67.8%	80.0% 8	85.9%	73.3%	58.4%	52.6%	44.0%	37.2%	35.5%	31.2%	25.4%	20.0%	17.5%	18.5%	20.1%	19.2%	19.9%	15.7% 1	13.0%	10.6%	8.6%	7.9%	7.7%	7.4%	6.8%	7.2%
CURRENT RATIO - (CURR.ASSETS/CURR.LIAB'S)	1.2	1.0	8.0	0.6	0.8	0.8	0.8	0.8	0.8	0.9	1.0	0.9	0.9	1.0	1:1	1.2	1.4	1.7	1.9	1.7	1.7	1.8	1.9	23	2.6	2.9	3.3	4.1
QUICK RATIO - (QUICK ASSETS/CURR.LIAB'S))	11	6.0	0.7	9.0	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.9	1.1	1.2	1.5	1.7	1.5	1.6	1.6	1.7	2.1	2.4.	2.7	3.0	3.8
ACCOUNTS RECEIVABLE- AVER. NO MONTHS SALES	10.1	11.3	9.4	6.9	93	8.5	7.2	6.2	5.1	4.5	3.6	2.8	1.9	1.9	1.9	6'1	6'1	1.9	6.1	1.9	6'1	1.9	1,9	1.9	1.9	1.9	1.9	1.9
Acc. Rec No of days worth of water & sewerage billings	310.8	345.1	289.4	284.7	285.4	270.8	228.3	194.9	159.5	141.7	113.8	88.5	60.0	60.0	60.0	60.0	60.09	60.0	60.03	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Acc. Payable/ Cash Expenditures - No. of days	30	55	94	150	230	200	180	160	140	120	100	80	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Doubtfull Allowance/ Water and Sewerage Billings	9.3%	5.4%	13.3%	32.1%	4.4%	5.0%	3.9%	12.2%	11.2%	11.3%	10.7%	6.7%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0
Other Accounts Receivable/ Other Income	344	1,971	730	1,253	659	n/a	n/a	n/a	nla	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Inventories/Materials, chemicals etc.	445	665	566	466	228	200	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	181
Cash & Bank	36	28	35	14	*	15	20	31	47	52	63			6.4	17	13	60	63	96	112	108	106	201	117	174	247	100	181

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## Attachment 6.9 Environmental Monitoring Checklist

Ref:

Monitoring		
Date:		

Time

Air Quality General:	Yes	No	Photo/Remarks/ECPAR Ref.
Are site vehicles travelling within the site speed limit of 20 kmh?			
Are site vehicle movements confined to designated roads?			
Is the public road around the site entrance kept clean and free from dust?			
Do areas of the site with regular traffic movement have hard surface?			
Are the roads watered regularly to avoid dust generation?			
Are unpaved areas watered regularly to avoid dust generation?			
Are materials transported on trucks covered?			
Are all trucks loaded to a level within the side and tail boards to prevent spillage?			
Is open burning avoided?			
Are completed earthworks sealed as soon as practicable?			
Are vehicles and equipment switched off whilst not in use?			
Are vehicles maintained to prevent black smoke?			
Have Dust Barriers been installed at any problem locations?			
Are Dust Barriers which have been installed effective?			
Observable dust sources Wind erosion Vehicle/equ	ipment m	ovements	
Loading/unloading of materials Others			

Environmental Monitoring Checklist	Ref:
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Water Quality	Yes	No	Photo/Remarks/ECPAR Ref.
Is drainage: system adequate?			
Are there dykes surrounding areas of earthworks for flood protection			
Are there temporary ditches for runoff discharge into appropriate watercourse and			
Is the drainage system well maintained?			
Is exposed earth stabilized after earthworks have been completed?			
Are exposed slope: surfaces covered (by tarpaulin or other means)?			
Are open stockpiles covered during rainstorm?			
Are manholes covered and sealed?			
Modified sections of culverts - Sediment traps installed upstream and downstream of the section?			
- Vortex tube silt traps installed within the section?			
Pumping Station Drainage system adequately designed for storm flow?			
Sediment control measures inspected and maintained after rain storms?			
Chemical/fuel storage area - Is storage area bunded?			
<ul> <li>Adequate bund capacity? (&gt;110% of the largest tank)?</li> <li>Are storage areas provided with locks and located on sealed areas?</li> </ul>			
Is construction work force sewage discharge directed to foul sewer or treatment facility?			
Are chemical toilets provided during construction?			
Is debris and rubbish on Site collected and disposed of properly?			
is debits and rubbish on Site conected and disposed of propeny:			
			-

Water Quality Other Remarks :

Environmental Monitoring Checklist	Ref:
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Noise	Yes	No	Photo/Remarks/ECPAR Ref.
Are the construction works scheduled to minimise noise nuisance?			
Are the works or equipment sited to minimise noise nuisance?			
Are all plant and equipment well maintained and in good operating condition?			
Is idle equipment turned off or throttled down?			
Are powered mechanical equipment covered or shielded by appropriate acoustic materials (if required)			
Are silenced equipment used where practicable?			
Are noise enclosures, noise barriers, or portable noise barriers used where necessary?			
Major noise Source(s) Traffic Construction	on activities	inside of	site
Construction activities outside of Other site			

Noise Management Other Remarks

Waste Management	Yes	No	Photo/Remarks
General refuse Accumulation avoided?			
Receptacles (e.g. rubbish bins) available?			
Disposed of regularly and properly?			
Chemical waste (e.g. Oil and Chemicals)			
Have temporary storage areas been approved by the Construction Manager?			
Stored properly?			
Disposed of properly?			
Construction Waste (including topsoil)			
Has construction waste, in particular stripped topsoil, been stored properly?			
Reused where practicable?			
Disposed of properly?			
Waste Management Other Remarks			

Waste Management Other Remarks

	Environmenta	l Monitoring Checklist	Ref:	
General Er	nvironmental Management	Yes	s No	Photo/Remarks/ECPAR Ref.
	I Planning & Communication ific License / Permit needs been identified	I & obtained?		
Are the required	d licenses / permits publicly displayed?			
Have public me	eetings been held if works may affect the	surrounding community?		
•	neetings been held with any companies o vironmental Mitigation Plan?	r communities based on		
	acts been discovered and reported to the appropriately demarcated / protected to p			
	I Training and Awareness ntal Training been conducted?			
Are there record	ds of training conducted?			
Is the workforce	e aware of any required general or specifi	c mitigation measures?		
	Corrective Action conformities identified been raised & recor	rded on an ECPAR?		
Have suitable C	Corrective Actions been agreed?			
Have agreed ac	ctions been completed satisfactorily withir	n the agreed timescale?		

General Remarks

	Details of any Complaints Received du	ing the Reporting Period (include all r	parties, such as NEPA and the local community)
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Position

Name

Signature

## APPENDIX H SOCIAL SURVEYS

#### THE PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

#### FINAL REPORT APPENDIX H SOCIAL SURVEYS

### TABLE OF CONTENTS

Summary

**Survey Result** 

## Summary

#### Summary

#### 1. Community Profiles

#### 1) Outline of the target area

The target area includes four catchment areas in Portmore namely Independence City Catchment, Bridgeport Catchment, Hamilton Gardens Catchment and Caymanas Gardens Catchment, and four lots in North Kingston namely Lot-A (Pembroke Hall), Lot-B (Havendale), Lot-C (Birdsucker) and Lot-D (Hope Pastures). Estimated population of the target area in 2010 is 154,534 or 99,160 in Portmore side and 55,374 in North Kingston side as shown in Table 1.

Catchment	Community	2010 Estimated Population	Responses of Questionnaire Survey	
Portmore	Subtotal	99,160	97	
Independence City	Meadowvale, Portmouth, Passagefort, Independence City, Waterford, Portmore Gardens, Cumberland, Westchester, South East, South Central and Town Center	60,409	19	
Bridgeport	Westport, Bridgeview, Garveymeade, Westmeade, Bridgeport, Southboro, West Bay, Edgewater, Marine Park, Breaton, Maggo Head, Bayside and Forum	30,318	16	
Hamilton Gardens	Hamilton Gardens, Cedar Grove, Christian Gardens, Christian Meadows and Christian Pen	1,960	24	
Caymanas Gardens	Caymanas Gardens including Caymanas Estate	6,473	38	
North Kingston	Subtotal	55,374	83	
Lot-A (Pembroke Hall)	Pembroke Hall	12,998	20	
Lot−B (Havendale)	Havendale, Meadowbrook and White Hall	25,678	33	
Lot-C (Birdsucker)	Birdsucker, Billy Dunn and a small part of Barbican	5,869	18	
Lot-D (Hope Pasture)	Hope Pasture, Mona Heights and University of Technology	10,829	12	
	Total	154,534	180	

Table 1	Outline	of the	<b>Target Areas</b>
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Almost all the houses in Portmore side are in the newly developed housing schemes and are connected to the sewage system, where most of the houses in North Kingston side are in old high-class residential areas, detached and not connected to the sewage system.

Development of Portmore started in 1969 with the construction of 1,100 two- / threebedroom houses in Independence City as shown in Table 2. Bridgeport housing scheme followed in three phases from 1972 to 1977 with 700 two-bedroom and 660 three-bedroom houses. Waterford housing scheme near Independence City Water Treatment Plant was constructed with the largest number of 3,725 two-bedroom twins from 1975 to 1977. Cedar Grove Estate with 840 service lots and Christian Gardens with 632 studios in Hamilton Gardens Catchment are the newest schemes developed in 1998-2000. Houses are still being constructed in Cedar Grove Estate. On North Kingston side, Mona Heights, which is a part of Lot-D (Hope Pasture), was developed under a large-scale housing scheme and 880 three-bedroom houses were constructed as early as in 1959-1960. College Green Estate in Hope Pasture is a newly developed large-scale housing scheme with 158 houses and was completed by 1998.

Year		Name of community	Developer	Developer 1BRM	2BRM 3	3BRM	2BRM	Studios	Service	Total
from	to		Bevelopei	1 BI WI	ZBIW		TWN	Otadios	lots	Total
1969	1970	Independence City	WHICON		1,100					1,1
1971	1972	Edgewater Villas	WHICON			700				7
1972	1972	Bridgeport Phase I	WHICON			280				2
1973	1974	Bridgeport Phase II	WHICON		700					7
1974	1976	Passagefort	WHICON		1,200					1,2
1975	1977	Waterford	WHICON				3,725			3,7
1976	1977	Bridgeport Phase III	WHICON			380				3
	1978	Braeton	MEH		435					4
	1978	Marine Park	Essn House Ltd.		100	110				2
	1978	Westmeade	Ashtrom		368					3
1978	1979	Portmouth	WHICON		1,000					1,0
1979	1980	Southborough	WHICON		900					
1979	1980	Caymanas Gardens	Gore Tuca	192	134	152				4
1983	1983	Westchester	WHICON		1,140					1.1
1983	1984	Cumberland	WHICON		1,134					1,1
1983	1984	Hamilton Gardens	MEH		300					;
1987	1987	Westbay Phase I	WHICON			20				
	1988	Cumberland (Pureto Rican)	UDC		396	160				
1988	1988	Westbay Phase II	WHICON			80				
1990	1990	Westbay Phase III	WHICON			54				
	1991	Christian Pen	MHT/Mutual Life		45					
	1993	Bridgeview	UDC		408					4
1993	1994	Cumberland (Trunco)	Trunco		4					
1993	1994	Cumberland Meadows	NHT		78			101		
1996	1997	Bridgeport	WHICON			380				;
1998	1999	Cedar Grove Estate	Cedar Grove Invest. Ltd.						840	2
1999	2000	Christian Gardens	WHICON					632		(
			Total							17.
MEH: for	mer Minist	y of Environment and Housing					1			. 7 1

 Table 2 Development of Housing Schemes in Portmore

\* Source: Portmore Municipal Council (NHT, WHICON and other developers.)

#### 2) Portmore side of the target area

Independence City Catchment (Meadowvale, Portmouth, Passagefort, Independence City, Waterford, Portmore Gardens, Cumberland, Westchester, South East, South Central and Town Center. 2010 estimated population is 60,409): There are eight housing schemes with 9,937 houses, of which 3,725 are two-bedroom twins and the rest are two-bedroom houses and some three-bedroom houses.



Bridgeport Catchment (Westport, Bridgeview, Garveymeade, Westmeade, Bridgeport, Southboro, West Bay, Edgewater, Marine Park, Breaton, Maggo Head, Bayside and Forum. 2010 estimated population is 30,318): There are 13 housing schemes & phases with 5,016 houses, of which 2,911 or about 60% are twobedroom houses, 2,004 or about 40% are three-



bedroom houses and 101 are studios.

Hamilton Gardens Catchement (Hamilton Gardens, Cedar Grove, Christian Gardens, Christian Meadows and Christian Pen. 2010 estimated population is 1,960): There are four housing schemes with 345 two-bedroom houses, 632 studios and 840 service lots. Not all the service lots are occupied by houses yet, but they are connected to the sewage system. This is newly developed area and is still under



construction, so that the 2010 population might be underestimated.

Caymanas Gardens Catchment (Caymanas Gardens including Caymanas Estate. 2010 estimated population is 6,473): Caymanas Gardens Scheme has 192 one-bedroom, 134 two-bedroom and 152 threebedroom houses. This is the only scheme in Portmore with one-bedroom houses.



#### 3) North Kingston side of the target area

Lot-A (Pembroke Hall, 2010 estimated population is 12,998): 1,311 houses were constructed under a housing scheme which was developed in the early 1970's.



Lot-B (Havendale, Meadowbrook and White Hall. 2010 estimated population is 25,678): There are 2,438 houses in Havendale and 569 houses in Meadowbrook which are developed in late 1970's. White Hall is one of the 'depressed' areas with 3,628 houses.



Lot-C (Birdsucker, Billy Dunn and a small part of Barbican. 2010 estimated population is 5,869): Statistical figures are available only for Barblican including Birdsucker and they are 9,744 with 3,453 houses. The average household size is 2.9 and is smaller than other lots of North Kingston where the average is 3 to 4. Barblican Road and Birdsucker Lane at the lower part of Lot-C represent the middlelow to low income level groups, where the upper part represents home-owners with tertiary level education.



Lot-D (Hope Pasture, Mona Heights and University of Technology. 2010 estimated population is 10,829): Mona Heights was originally developed in 1959-1960 with 880 three-bedroom houses and there are 1,547 houses with 5,003 residents in Hope Pasture. College Green Estate, which has 158 houses, was newly developed by 1998, and is connected to the sewage system. The residents represent the upper to middle-upper class.



#### (2) Methodology of the Questionnaire Survey

#### 1) Sample size and sampling

Target of the sample size was 200 in total, or 100 each from Portmore side and North Kingston side. Since there are four catchments / lots for Portmore and North Kingston, 20 was the minimum target size for each catchment / lot.The Team spent 10 days for visiting related institutions and for pre-interviews and preparation of the questionnaire survey:

- Since almost all the households in Portmore side are connected to the sewage system, while almost all the households in North Kingston side are not connected and using soak-away, two slightly different questionnaires were prepared.
- The Team got a list of citizens associations from Portmore Municipal Council, visited them and discussed the proposed sewage development project / the questionnaire survey. Many associations, including the ones in North Kingston side, agreed to invite the Team for their meetings and to do the survey.
- The Team adjusted the questions to the reality learned through observations and preinterviews. Then the Team spent two weeks for attending the meetings of citizens associations and conducting a door-to-door survey.
- There were no citizens associations in Lot-C (Birdsucker), and the associations did not have general meetings during the survey period in Independence City and in Lot-D (Hope Pasture). The Team conducted more door-to-door survey in these three communities, however, the

responses were 18, 19 and 12 respectively and the minimum targets were not fulfilled. Also the numbers of attendants were not so large in the two meetings of Bridgeport Citizens Association so that the responses were only 16. (See Table 3.)

	<u> </u>					
Catchment	Date & Time of Citizens	Responses at	Additional	Door-to-door	Total	
Gatorinioni	Accociation Meetings	the Meetings	Responses	Visits		
Portmore		40	22	35	97	
Independence City	Cancelled	0	0	19	19	
Bridgeport	5PM 4 Nov. 2009 Wednesday	8	2	0	16	
	7PM 8 Nov. 2009 Sunday	6	2			
Hamilton Gardens	7PM 15 Nov. 2009 Sunday	8	0	16	24	
Caymanas Gardens	1PM 8 Nov. 2009 Sunday	18	20	0	38	
North Kingston		39	0	44	83	
Lot-A (Pembroke Hall)	7PM 14 Nov. 2009 Saturday	16	0	4	20	
Lot-B (Havendale)	4PM 15 Nov. 2009 Sunday	18	0	15	33	
Lot-C (Birdsucker)	No Citizens Association	0	0	18	18	
Lot-D (Hope Pasture)	7PM 9 Nov. 2009 Monday	5	0	7	12	
	Total	79	22	79	180	

 Table 3 Collection of Questionnaire Survey

#### (3) Social characteristics of the target area

#### 1) Age Structure

Age structures of the respondents of the questionnaire survey in Portmore and North Kingston are totally different. There are few respondents 75 years and over in Portmore, but close to 20% in North Kingston are over 75 years as shown in Figure 1. The ratios are especially high in Lot-A (Pembroke Hall) and Lot-B (Havendale). About 30% of the respondents in Lot-A (Pembroke Hall) are 25-34 years so that old generations, who live more in the upper part, and young generations, who live more in the lower part, coexist.

30-40% of the respondents of Independence City and Bridgeport are 65-74 years so that it is expected to see many people over 75 years in ten years. 30-40% of the respondents of Hamilton Gardens and Caymanas Gardens are 55-64 years and those age structures reflect the history of housing development.

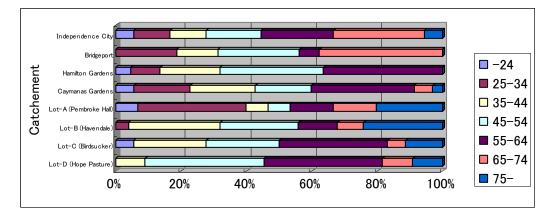


Figure 2 Age Composition of the Target Area (160 valid samples)

#### 2) Sex of the heads of household.

Female headed households are many especially in Lot-C (Birdsucker) and then in Hamilton Gardens and Lot-B (Heavendale) as shown in Figure 2.

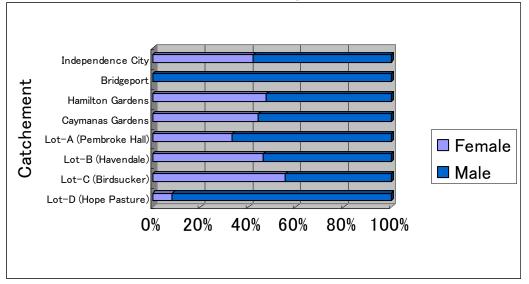
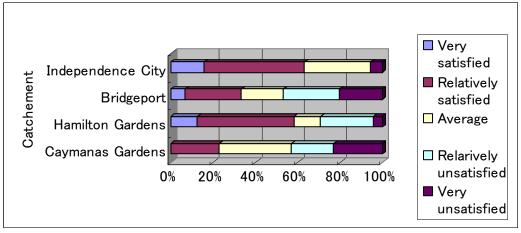


Figure 2. Sex of the Heads of the household (166 valid samples)

#### 3) Satisfaction Rating of the Sewage System

Satisfaction was rated according to the five-rank system of very satisfied, relatively satisfied, average, relatively unsatisfied and very unsatisfied by the respondents in the four catchments in Portmore, where houses are connected to the sewage system. Satisfaction rate is high in Independence City, but more than 20% of the respondents were very unsatisfied in Bridgeport and Caymanas Gardens as shown in Figure 3. From the open-ended questions of the questionnaire survey and the opinions at the citizens association's meetings, the major issue in Bridgeport turned to be mosquitoes and the one in Caymanas Gardens is drainage. Odor is also mentioned by the nearby residents of Independence City and other Wastewater Treatment Plants.



#### Figure 3 Satisfaction Rating of the Sewage System (93 valid samples)

#### 4) Water Bills

Out of 97 respondents in Portmore, only one respondent is not connected to the sewage system and she is not paying water bills. Only three out of 83 respondents in North Kingston are paying sewage bills. For comparison, water bills excluding sewage bills are shown in Figure 4.

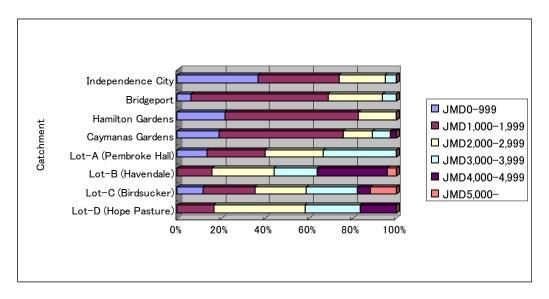


Figure 4 Water bills (164 valid samples)

The average water bills of the catchments in Portmore are from JMD1,250 to 1,750, where those of the lots in North Kingston are from JMD2,150 to 3,800. The majority of the respondents of Portmore are paying less than JMD2,000, but the majority of the respondents in North Kingston are paying more than JMD3,000.

The sewage bills are equivalent to the water bills and all the respondents in Portmore except one and three respondents in North Kingston are actually paying that amount.

#### 5) JPS (Electricity) Bills

The average JPS (electricity) bills of the catchements in Portmore are from JMD6,000 to 6,300, while those of the lots in North Kingston are from JMD7,000 to 10,000. Majority of the respondents in Portmore are paying less than JMD8,000, but majority of the respondents in North Kingston are paying more than JMD8,000.

Residents are paying three to four times more for JPS than water excluding sewage, or one and a half to double for JPS than water including sewage.

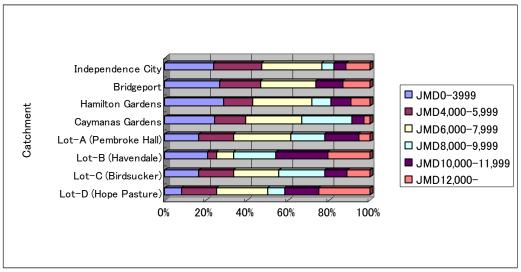
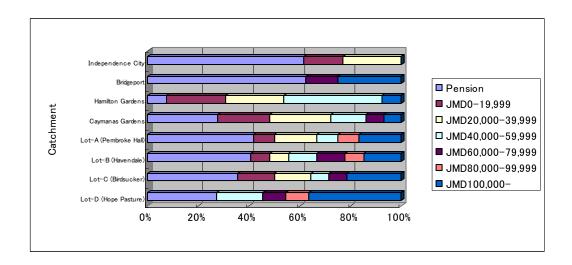


Figure 5 JPS (electricity) bills (158 valid samples)

#### 6) Income level

Income level is highest in Lot-D (Hope Pasture) and relatively high in all the lots in North Kingston where majority of the employed households get more than JMD40,000 per month. No respondents in Lot-D (Hope Pasture) get less than JMD40,000. Pensioners are more than 30% except in Hamilton Gardens, Lot-D (Hope Pasture) and Caymanas Gardens. Some pensioners get more than JMD100,000 per month, but the pension is more likely to be JMD30,000 to 40,000.



## Figure 6 Income Level (127 valid samples)

#### 7) Individual connection to houses

All the respondents in Portmore except one are in housing schemes and are connected to the sewage system from the beginning. On the other hand, all the respondents in North Kingston except one are not connected to the sewage system. All the respondents in Portmore except

one are paying water bills including sewage bills, but all the respondents in Nroth Kingston except three are not paying sewage bills yet.

Among the respondents in North Kingston, only one house was already connected to the sewage system and they paid JMD400,000 for individual connection to the house including restoring cost of the walls and toilet. The house is also at the center of a town house and the connection cost must be higher than the average. Yet the connection cost could be JMD200,000 to 300,000 in the residential areas of North Kingston where average household income is JMD60,000 to 70,000 per month. It means the connection cost worth three to four months of income, or five to eight months of pension for ordinary residents.

#### (4) **Recommendations from social consideration aspect**

Most of the existing connections to houses are through housing schemes and no obstacles can be foreseen continuing that way. It would be same with new construction of detached houses or apartments. Replacement of existing soak-away and pits, however, is a difficult task because 1) most of the residents of the target area do not know about the project and particularly the cost for individual connection, and 2) the cost might be much higher than they think. At the moment, most of the residents are willing to pay less than JMD10,000 except the ones who know the actual cost, and the cost will be JMD100,000 or even JMD300,000 sometimes. A lot of questions were asked about the new billing system, K-factor and X-factor during the citizens associations meetings also. The residents of the target area need to have more information about the project, the sewage system, sewage bills and individual connection to houses. Regardless of the result of screening for Environmental Impact Assessment, the Team recommends NWC to have at least four explanation meetings in the target area; two meetings in North Kingston side and two meetings in Portmore side.

The means of the income could be JMD60,000 to JMD70,000 in North Kingston side and JMD30,000 to JMD40,000 in Portmore side. The length of pipes in the high-class residential areas in Lot-D (Hope Pasture) and Lot-B (Havemdale) are longer than average because of the sizes of the lots and also the location of the houses. The main sewage pipes will come along the roads but soak-away is on gully side. Also more than 20% of the respondents in Lot-A (Pembroke Hall) and Lot-B (Havendale) are over 75 years old, about 40% of the heads of the households are pensioners in Lot-A (Penbroke Hall), Lot-B (Havendale) and Lot-C (Birdsucker), and more than 50% are female-headed households in Lot-C (Birdsucker). So that the Team recommends NWC to exempt senior pensioners from immediate connection and to defer until the registration of transfers. Also the Team recommends to include subsidies of JMD100,000 or more depending on the actual cost and the installment plan.

# **Survey Result**

			1				T.		1	1		Summary of S	urvey Result													
No. Area	1.1 1 Water M	1.2 Meter 1.3 Source (1)	Source (2)	2.1 Sewer	2.2 2. Treat T	2.3 2.4 Foilet Eva.	2.5 Reason (1)	2.5 Reason (2)	2.5 Reason (3)	Others	3.1 Bill	Sources Drainage	Others	3.2 JPS	Cooking Pr	ice mo	onth F	Phone Oth	4.1 Charge	4.2 Connect Size	5.2 Income	5.3 Saving 5.4 Area	6.1 Occu	Age Sex	6.2 Head	Age Sex
1 Kingston	1	1		2	2	1	1				2,000			4,800	30	2,100	3		800	1,000	4 65,000	2,000 Mona Heights	Supervisor	47	2 Supervisor	47
2 Portmore	1	1		1		1	4 Foul odors	High sewage charge			5,900				100	6,500	6		0	/	3	Bridgeport	Businessman		2 Businessman	49
3 Portmore 4 Portmore	1	1 Rainwater 2 Bottled water	r .	1		1	3				3,000			5.000	N/A 30	1 200	1		300		4 60.000	Bridgeport	Retired Engineer		2 Retired 2 Engineer	66
5 Portmore	1	1 None		1		1	5 Sewage overflow	Foul odors	High sewage charge		3,500				100		6		000		1 Pension	0 Bridgeport	Retired pensioner		2 Retired pensioner	50 68
6 Portmore 7 Portmore	1	1 Bottled water	r	1			5 Foul odors				3,000				25		3		200		3	Bridgeport	Events planner	52		53 69 70
8 Portmore	1	1		1			2 Sewage overflow 4 Foul odors	High sewage charge			6,000	N.A.			100		6		0		5 Retired	4,000 Bridgeport Bridgeport	Retired Housewife/marketer		2 Retired 1 Retired journalist	70
9 Portmore	1	1		1			4 Foul odors	High sewage charge			4,000				100				C		2	Bridgeport	Retired journalist		2 Retired journalist	70
10 Kingston	1	1 Communal tag		2	2	1	1				6,000	0			25		1			2,500	4 25,000	4,000 Lower Birdsucker	Plumber		2 Plumber	48
11 Kingston 12 Kingston	1	1 Bottled water 1 Bottled water		2	2	1	2 High sewage charge				1,000 4,970	0			100					0 1,250	4 40,000 3 89,500	0 Lower Birdsucker 40.000 Meadowbrook	Musician Manager	39	2 Musician 1 Sales manager	39
13 Kingston	1	1 Communal ta		2	2 1		2 None				1,500	50			30				1,200		7 24,000	0 White Hall Garden	Counter clerk		2 Counter clerk	39 31 36 60
14 Kingston	1	1 Bottled water		2	2	1	1				4,500	200			25				1,600		8	White Hall Garder	Restaurant owner		1 Restaurant owner	60
15 Kingston	1	1 Rainwater 1 Bottled water	Bottled wate	r 2	2		1 None 4 Sewage overflow				800 1,500	0			30				600	0 0 1,000	0	Lower Birdsucker Lower Birdsucker	Retired		1 Retired 2 Porter	80
16 Kingston 17 Kingston	1	1 Bottled water	r	2	2		1				4,000	0		6,000	25 25	1,600	1				7 25,000	0 Lower Birdsucker	Self-employed	55	2 Self-employed	39 55 50
18 Kingston	1	1 Bottled water		2	2	1	2				2,500	0			25						3 Pension	0 Birdsucker	Hair dresser	50	1 Hair dresser	50
19 Kingston 20 Kingston	1	1 Bottled water 1 Rainwater	r	2	2	1	2				5,000	0			100				600	2,000	1 0	Birdsucker Birdsucker	Unemployed Unemployed	50+ 60	1 Architect 1 Unemployed	50+ 60
21 Kingston	1			2	1	1	1				3,500				100			5,500		,	4 120,000	0 Birdsucker	Manager		2 Manager	43
22 Kingston	1	1		2	2	1	2				800	0			100		7	2,200	Cable 0	0 0	1 30,000	0 Birdsucker	Retired nurse	75	1 Retired nurse	75 41
23 Kingston	1	1 Bottled water 1 Bottled water	r	2	2	1	3 Foul odors	Foul odors	High course charge		1,000	0		4,500	25	1,300	7	2 700	900		2 70.000 5 10.000	0 Birdsucker	Teacher None	41 57	1 Teacher 1 Husband	41
24 Portmore 25 Portmore	1	1 Bottled water		1		1	5 Sewage overflow 4 Sewage overflow	Foul odors	High sewage charge High sewage charge		1,500				25 100				300		3 Pension	0 Caymanas Garder 0 Caymanas Garder	Housewife		1 Pensioner	57 57 45
26 Portmore	1	1		1	1	1	3 Foul odors				4,000		3,000 Everything	7,500	25	1,800	1.5		100		4 50,000	1,000 Caymanas Garder	Driver	45	2 Driver	45
27 Portmore 28 Portmore	1	2 Bottled water	-	1	$\left  \right $	1	5 Foul odors	High sewage charge			7,000			5,000	100	6,000	10	2,600	300 Depende 100		1 15,000 4 37,500	2,000 Caymanas Garder	Retired Clarical assistant	69	2 Retired 1 Clarical assistant	69
29 Portmore	1	1		1	1	1 4	4.5 Sewage overflow	Foul odors			2,000			7,550		1,750	2	1,000	100		5	Caymanas Garder	Labour	56	2 Labour	69 30 56 39
30 Portmore	1	1 Communal ta		1		1	3 All of the listed				2,800				30		1		100		6 30,000	0 Caymanas Garder	Clarical officer	25	1 Security officer	39
31 Portmore	1	T Bottloa Mator		1		1	3 Low discharging capabi	lityHigh sewage charge	-		2,000	-   -			30				100 Coal 0		3 40,000	0 Caymanas Garder	Clerk Sepier eitizen	42 Sonid		42
32 Portmore 33 Portmore		2 Bottled water 2	1			1	4 High sewage charge 2 Foul odors	High sewage charge			3,000			8,700	35	2,000	0.9 1	800	Coal 0		2 Pension 4 Pension	0 Caymanas Garder 0 Caymanas Garder	Senior citizen Pensioner		1 Senior citizen 2 Pensioner	Senic 80
34 Portmore 35 Portmore	1	1		1		1	3	an entrance on ango			2,500			2,500	25	1,500	2		100	$\sim$	4 8,000	0 Caymanas Garder	Retired nurse	44	1 Retired nurse	44
35 Portmore	1	1 1 Bottled water		1	$\vdash$	1	5 All of the listed	Foul odore	High courses shows	A new system is needed.	1,500	$\vdash$		3,800	30	2,000	1.5	12,000	100		1 40.500	Caymanas Garder	Civil servant	48	2 Civil servant	48
36 Portmore 37 Portmore	1	1 Bottled water 1 Bottled water				1	3 Sewage overflow 5 High sewage charge	Foul odors	High sewage charge		2,500			6,000	30	2,000	1.5		100		40,000	Caymanas Garder Caymanas Garder	Customer care rep. Correctional officer	43	2 Pensioner 1	48 57
38 Portmore	1	1 Rainwater	Bottled wate	r 1		1	2				2,000			8,000	25 30	1,800	1		200		4 40,000	0 Caymanas Garder	Housewife	42	1 Housewife	42
39 Portmore	1	1 Communal tag	p	1		1	5 Low discharging capabi	lity Foul odors			8,000				30				600		4 0 3 Pension	0 Caymanas Garder 0 Caymanas Garder	Unemployed Retired Bellevue Hose	64	1 Housewife 2 Unemployed 2 Retired Bellevue Hos	64
40 Portmore 41 Portmore	1	1 Communal ta	n	1		1	2 Low discharging capabi 4 Sewage overflow	Foul odors			2,000			3,000	00	1,900	1		100		3 Pension	0 Caymanas Garder 0 Caymanas Garder			2 Plumber	53
42 Portmore	1	1 Bottled water	r	1		1	Foul odors	r dui duoro			2,900			6,000	100 60	+000	7		0		4	Bridgeport	Pensioner		2 Pensioner	
43 Portmore	1	T Dottiou Mator	r	1		1	3 Sewage overflow	Foul odors			3,500				100		5		0		5	Bridgeport	Housewife	46	1 Businessman	52 38
44 Portmore 45 Portmore	1	1 Bottled water 1 Bottled water	r	1		1	4 Foul odors 5 Foul odors	High sewage charge High sewage charge			4,000 3,000			5,000	100	6,400	0				4	0 Bridgeport Bridgeport	Technician Teacher	38	2 Technician	38
46 Portmore	1	1		1		1	3 High sewage charge	nigh bonago onargo			3,100			4,500	30	2,000			Ň		3	Bridgeport	Communicator	40	2 Communicator	40 70
47 Portmore	1			1		1	2				1,200			3,500		7.000	0.5	7.000 5.000	Cable 1.000		2 4 200.000	Bridgeport	Retired		2 Retired	70
48 Kingston 49 Kingston	1		p	2	2	1	3 Foul odors				4,000			20,000		7,000		7,000 5,000 6,000	Cable 1,000		4 200,000	0 Hope Pasture 20,000 Hope Pasture	Lecturer Maintenance engineer	42	1 Lecturer 2 Maintenance enginee	46 er 56
50 Kingston	1	1		2	1	1	5 Foul odors				4,000	5000		25,000			1	0,000	1,400	)	5	Hope Pasture	Mechanical engineer	48	2 Mechanical engineer	r 48
51 Kingston	1	1			1&2		2			Environmental	1,200			10,000		4,800	8		600	)	2 80,000	Hope Pasture	Sales representative	51	2 Sales representative	e 51
52 Kingston 53 Portmore	1	1		1	2		2 Foul odors				3,000 2,200			6,000		4.000	1	2,500	600 300		3 100,000 5 28,000	Hope Pasture Waterford	Housewife Machinist	56 54	1 Airline pilot 2 Machinist	55 54
54 Portmore	1	1 Rainwater	Bottled wate	r 1			2 Foul odors				1,600			7,000	25	1,800	0.6	3,000 1,800	Cable 0	Ž	2 Pension 40	0000 Passage Fort	Retired	65	1 Retired	65
55 Portmore	1	1 Communal tag	р	1		1	3 Foul odors	High sewage charge			1,800			2,500				2,200 1,800	Cable 0 100		4 Pension	0 Independence Cit	Retired mechanic		2 Retired mechanic	67
56 Portmore 57 Portmore	1	1 1 Rainwater	Bottled wate	r 1			3 Foul odors 2 Foul odors	High sewage charge			3.000			6,000	100 25	1.500	1	2,100	200		2 3,000	0 Independence Cit Independence Cit	Retired manager Housewife		2 Retired manager 1 Housewife	81 51
58 Portmore	1	1		1		1	2				4,500			10,000	25	1,800 0	0.75		100		7 50,000	0 Hamilton Gardens	Security officer	48	2 Security officer	48
59 Portmore 60 Portmore	2	2 Rainwater	Bottled wate	r 2	2	1	3 High sewage charge 1 Foul odors				0 900			0	25	1,500	2		600		4	Christian Pen Hamilton Gardens	Vendor Housekeeper	51 40	1 Vendor 1 Bailiff / Collecotr	51
61 Portmore	1	1		1			5 Foul odors	High sewage charge			5.000			15.000		1,800			400		3 20.000	5.000 Hamilton Gardens	Shopkeeper	22	1 Shopkeeper	22
62 Portmore	1	1		1		1	2	v 00 <sup>2</sup>			2,300			5,000	25	1,700 1	1.75	500 1,000	Cable 300	$\overline{)}$	2 55,000	3,000 Hamilton Gardens	Housewife	52	1 Salesman (self-empl	22 lo 52
63 Kingston 64 Kingston	1	1 Bottled water 1 Bottled water		2	2	1	1				3,000 2,400	0	0	8,000	25 100	1,700 1	1.38	3,000	600	8,000	2	Birdsucker Barbican	Retired Retired bank officer	62 71	1 Retired 1 Retired bank officer	62 70+
65 Kingston	1	1 Bottled water		2	2	1	3				3,000	0		8,000	0	0	0		600	10,000	5 5,000	1,000 Birdsucker	Cosmetologist	50	1 Cosmetologist	50
66 Kingston	1	1 Rainwater	Bottled wate	r 2	2		2 Foul odors			Smell in back bathroom a	2,500				100				600	8,000	4 100,000	10,000 Birdsucker	Retired	64	1 Retired	64
67 Kingston 68 Kingston	1	1		2	2		2 4 Foul odors	-	-	-	2,800 4,000	500	(tenant)	12,000	100 25	5,300 1 900	6 3 3	6,000		0 10,000	2 45,000 2 0	Havendale 0 Havendale	Computer technicaion Sales representative (	57 38	2 Computer technician 1 Sales representative	
69 Kingston	1	1 Bottled water	r	2	2		2 Foul odors	High sewage charge			2,000	5000	(condite)	4,500	30	1,950	2		800	50,000	2 150,000	50,000 Shortwood	Engineer	22	2 Banker	50
70 Kingston	1	1 Rainwater	Bottled wate	r 2	2	1	1				2,000	0	0		100		12	4,000			4 0	0 Havendale	Unemployed	50+	1 Unemployed	50+
71 Kingston 72 Kingston	1	1 Rainwater 1 Bottled water	Bottled wate	r 2	2	1	3 Sewage overflow 5 Sewage overflow	High sewage charge	+	-	14,000 25,000			20,000	100	6,000 2,000	6 1.5 1	0.000	600		8 0 2 200.000	0 Havendale 50,000 Shortwood	Retired vendor Banker		1 Retired vendor 1 Banker	69 50 57
73 Portmore	1	1 Bottled water	r	1		1	3 Sewage overflow			1	4,000			6,000	100	6,500	3	5,000	100	Ž	6 120,000	Caymanas Garder	Businee consultant	57	2 Business consultant	57
74 Portmore	1	1 Bottled water	r	1		1	3 Sewage overflow	Foul odors			2,000			3,500	25	1,800	1.6	2,000	100	Ĭ	3 40,000	4,000 Hamilton Gardens		55	2 Electrician	55
75 Portmore 76 Portmore	1	1 Bottled water 1 Bottled water		1	$\left  \right $		4 Low discharging capabi 2 Sewage overflow	Foul odors	-	-	3,000 600				100		6	3,000	100		4	Hamilton Gardens Hamilton Gardens	Life underwriter Teacher	41 55	2 Life underwriter 1 Teacher	41 55
77 Portmore	1	1		1			4 Sewage overflow	Foul odors			2,500			12,000	30	2,000	1		100	$\sim$	2 20,000	10,000 Hamilton Gardens	Dancer	33	2 Dancer	33
78 Portmore	1	1		1		1	2 High sewage charge				4,000				25	2,000	1	1,000			5	3,000 Hamilton Gardens	Nurse	49	1 Nurse	49
79 Portmore 80 Portmore	1	1 Bottled water 1 Bottled water		1	$\vdash$	1	2	-	+	-	3,000 4,000			7,000		2,000	2	2,500	Cable 300 100		4 0 6	0 Hamilton Gardens 0 Passage Fort	Housewife Student	51 22	1 Housewife 1 Room assistant	51 50
81 Portmore	1	1 Bottled water		1 1		1	1 Foul odors				800			3,000		1,700	1	1,500 2,100		_	5 120,000	60,000 Passage Fort	Retired fire officer		2 Retired fire officer	62
82 Portmore	1	1		1			3 Foul odors			-	3,500			8,500		2,100	1	800	Cable 0	$\sim$	4 0	0 Passage Fort	Retired	61	1 Retired	62 61
83 Portmore 84 Portmore	1	1 1 Bottled water	r	1	$\vdash$		3 Foul odors				3,000 2,000	$ \rightarrow $		6 000	30	2 100	2	4 000	100		3	Passage Fort Gregory Park	Home maker Unemployed		1 Sales manager 1 Unemployed	+
85 Portmore	1	2 Bottled water					2 Foul odors				4,000			7,000	25	1,750	1	1,000	Cable 300		7 15,000	0 Independence Cit	Self-employed	33	2 Self-employed	53
86 Portmore	1	1 Bottled water		1		1	2			-	4,000			4,000	25	1,750	1	1,700	Cable 200	$\sim$	7 20,000	0 Independence Cit	Carpenter / sub-cont	36	2 Carpenter / sub-cor	nt 36 73
87 Portmore 88 Portmore	1	1 1 Bottled water	-	1		1	2				2,800 2,200			10,000	100 25	6,000	4	7,000 1,000	100 Cable 200		5	Independence Cit Christian Gardens	Retired Housewife		2 Retired 1 Police officer	57
89 Portmore	1	1 Bottled water		1		1	2			1	4,000			4,000		2,000	1	2,000			2 0	0 Cumberland	Self-employed	58	2 Self-employed	57 58
90 Portmore	1	1		1		1	1				1,500				25		3		0		2 20,000	0 Cumberland	Businessman	49	2 Theatre attendant	31
91 Portmore	1	1 Bottled water 1 Bottled water		1	$\left  \right $		2 Low discharging capabi 2 Foul odors	lityFoul odors	High sewage charge	When it rains	4,000 2,800				100			6,000 4,000 3,000			3 250,000	40,000 Bridgeport 80,000 Bridgeport	Manager Senior manager		1 Manager 1 Self-employed	30
92 Portmore 93 Portmore	1	1 Bottled water 1 Bottled water		1		1	2			No problems	2,800			2,000		2,000		-, 3,000	Cable 600		2 50,000	0 Cedar Grove	Senior manager Sales representative		2 Sales representative	e 40
94 Kingston	1				2		3				1,800				25	1,800	2		600		3 24,000	0 Meadowbrook	Household helper	38	1 Household helper	38
95 Kingston		1	1	2	2	1	31	1	1	1	2.000		1	1 2 000	25	1 800 l	4	1	600	5,000	2 50.000	0 Meadowbrook	Florist	47	1 Gardener	51

										s	ummary	of Survey	Result												
No. Area	1.1 1 Water 1	1.2 1.3 Source (1) Source (2)	2.1	2.2 2	.3 2.4 nilet Eva	2.5 Reason (1)	2.5 Reason (2)	2.5 Reason (3)	Others	3.1 Bill So	rces Drain	age	Others	3.2 JPS	looking Pr	rice	month Phone	Others	4.1 4.2 Connect	5.1 Sine 5.2 Income	5.3 Saving 5.4 Area	6.1 Occu	Age Sex	6.2 Head	Age Sex
96 Kingston	water N	1 Well Bottled water	Sewer	i reat i	ollet Eva.	2			When it rains foul odor (s	4,500		000	1	8 500	100	5 500	2.5 2.000	4,700 Securit	v 800 2,500	6 60,000	0 Meadowbrook	Housewife	41	1 Marketing manager	46
97 Kingston	1	1 Bottled water	2	2	1	3 Foul odors			when it rains four odor (s	4,000	3	000		11.000	25	2,800	2.5 2,000	13,000 Phone,	i 1,000 15,000	6 320,000	0 Meadowbrook	Inrerior decorator	41	1 Sales manager	40
98 Kingston	1	1 Rainwater Bottled water	2	2		2				4,500		0		8,000	100				600 10,000	3 180,000	50,000 Meadowbrook	Business owner	68	2 Business owner	68
99 Kingston	1	1 Bottled water	2	2		3 Foul odors				3,200							6 8,000		1,000 10,000		10,000 Meadowbrook			1 Teacher	35
100 Kingston	1	1 Rainwater Bottled water 1 Rainwater	2	2		3 Foul odors				2,800	_	600					10 3,000	4,000 Cable 8	600 600 600 1.000	2 25,000 3 75,000		Retired		2 Retired	89 49
101 Kingston 102 Kingston	1	1 Rainwater Bottled water	2	2		2 Foul odors				2,000	-	600					10 4,000		1,000 8,000	3 40.000			61	1 Self-employed 1 Hair dresser	61
103 Portmore	1	1 Bottled water	1	-		3 High sewage charge				3,000				6.000	30	2.100	3.5 3.000		100	3	Passage Fort	Computer technicaid		2 Computer technician	36
104 Portmore	1	1 Bottled water	1		1	5				7,000				14,000	100	6,000	4	3,400 Cable 8		7	Passage Fort	Self-employed	m 36 57		
105 Portmore	1	1	1		1	2				3,000		_			100			1,200 Cable	100	5 0			74	1 Retired	74
106 Portmore 107 Portmore	1	1			1	1 High sewage charge				1,000+		_		5,000	25	2,000		1,000 Cable	300	1 9,000	Passage Fort 4,000 Passage Fort	Retired civil servant JUTA driver		1 Retired civil servant- 2 JUTA driver	66 34
108 Kingston	1	1	2	2	1	1				5,000			Paying sewa	6,000	23	1,000	4.000	3,000 Cable 8	internet 300.000	4 45,000		Retired	50+		50+
109 Kingston	1	1	2	2	1	1				2,500			Paying sewa	4,000	100	6,000	3 2,000	4,000 Cable 8	internet	3 50,000	5,000 Mona Heights	Civil servant	45	2 Realtor	60
110 Kingston	1	1	2	2	1	3 Sewage overflow	Foul odors			2,500	Not	for 5 year	'S					2,000 Internet		7 20,000	0 Pembroke Ha	I Shopkeeper	60	1 Shopkeeper	60
111 Kingston	1	1 Bottled water	2	2	1	2				3,000				6,000	25	1,800	1		800 2,000	4 35,000			29	2 Electrician	29
112 Portmore 113 Portmore	1	1 Bottled water 1 Communal tap	1			4 Sewage overflow				3.000		_		10.000	100	6 500	4	6.000 Phone a	100	3	Cedar Grove	Secretary Banker	31	1 Secretary	31 38
114 Portmore	1	1	1		1	2 High sewage charge				1,453				4,735				0,000 Fridrie a	200	2 30,000			54	1 Building controctor 1 Canteen worker	54
115 Portmore	1	1	1		1	5 Sewage overflow	Foul odors			4,000+				3,000+					0	4	Caymanas Ga				
116 Portmore	1	1 Bottled water	1		1	3 Sewage overflow	Foul odors			3,000				3,500	20	1,350	0.75 2,000	5,000 Mortgag		4 16,000			20	1	42
117 Portmore	1	1	1			5 Sewage overflow				900		_							200	3 100,000	13,000 Caymanas Ga		40	1 DUCO man	40
118 Portmore	1	2 1 Pattlad water		-	1 4	1.5 Foul odors	High course ober	+		500 2.200	-	_	-		25	1,800		<u> </u>	100	2	Caymanas Ga		Sanid	1 Hausawifa	Sanid
119 Portmore 120 Portmore	1	1 Bottled water 1 Rainwater Bottled water	1	$\vdash$	1	Foul odors 3 Sewage overflow	High sewage charge Foul odors		Nemerous water / lockof	1.400				8,100	100	5.500	4 6,000			3	Caymanas Ga Caymanas Ga	rden Housewife rden Mother	57	1 Housewife 1 Mother	Senic 57
121 Portmore	1	1 Bottled water	1			3 Sewage overflow	Foul odors	High sewage charge	Interest and that of a lock of	2,000				8.000	30	2.000	2		0	3 28,500		rden Call quality analyst	26	1 Sales assistant	25
122 Portmore	1	1	1		1	2 Foul odors				2,145				5,153	100	6,000	6.5 2,964		600	3 30,000	4,000 Caymanas Ga	rden Drapery making	35	1 Driver	25 35
123 Portmore	1[	1	1	L [	1	3 High sewage charge	1	+		5,000				6,000	30	2,000	1		100	5 70,000	13,000 Caymanas Ga	rdens	-	Pensioner	60
124 Portmore	1	1 1 Peinweter	1	$\vdash$		4 Sewage overflow		-		1,413 4,000	_		Devin 7 7 7		100			7.000 0-51 0	200	1 60,000		rden Leacher	58	1 Teacher	58 54
125 Kingston 126 Kingston	1	1 Rainwater 1 Bottled water	2	1		2 2 Sewage overflow	1	1		2,500			Paying sewa		100			7,000 [Gable &	800 5,000	5 85 000	80,000 Mona Heights 10,000 Pembroke Ha	Auditor Retired teacher	54 64	1 Civil servant 2 Retired teacher	54 64
127 Kingston	1	1	2	2	1	2				3,000				10,000	100	5,800	3		600 5,000		10,000 Pembroke Ha		30	1 Manager	60
128 Kingston	1	1	2		1	2									100	6,000	4		600	4 8,000	Pembroke Ha		84	2 Retired	84
129 Kingston	1	1	2	1	1	3				1,200					100				600	2	Pembroke Ha		73	2 Pensioner	73
130 Kingston	1	1 Communal tap	2	1	1	2				1,000				6,000	25	1,900	1 3,800				Pembroke Ha		30		78
131 Kingston 132 Kingston	1	1 Bottled water 1 Communal tap Bottled water	2	2	1	1 High sewage charge 3 High sewage charge				3,500	_	_		2,000	25	1,750	1		600 2,000 600	5 7 12,000	Pembroke Ha Pembroke Ha		30	2 Retired	
133 Kingston	1	1 Communal tap	2	2	1	2				3,600				9,000	23	3,600	- 1		000	7 12,000	Pembroke Ha		- 34		60
133 Kingston 134 Kingston	1	1	2		1	2				3,500				9,000		3,000					Pembroke Ha				
135 Kingston	1	1	2	1	1	5 High sewage charge				2,000					100		6			4	Pembroke Ha		78	1 Retired	78
136 Kingston	1	1 Bottled water	2	1	1	2				1,500	_	7,000		3,000		2,000	1				20,000 Pembroke Ha		68	1 Retired	78 45
137 Kingston 138 Kingston	1	1 Bottled water	2	2	1	2			Size of septic tank.	600 800				3,800	100	1,700			600	3 57,000	20,000 Pembroke Ha Pembroke Ha	Computer technicaid Retired	n 25 82	1 Landscaper 2 Retired	45 82
139 Kingston	1	1	2	2	1	2			Dize of septic carik.	000				0,000	100	0,000				3	Pembroke Ha		54	1 Housewife	54
139 Kingston 140 Kingston	1	1 Bottled water	2	2	1	3				1,400				6,500	30	2,200	3 2,000		600	3	Pembroke Ha			2 Electrician	43
141 Kingston	1		2	1	1	2			Current capacity.					10,000						5	Pembroke Ha				
142 Kingston	1	1 Bottled water	2	1	1	2			Capacity.	2.000	8	000			100				000	6	Pembroke Ha				
143 Kingston 144 Kingston	1	1 Communal tap 1 Rainwater		2		1				3,000		_		9,000			3 8,000		800	3 180,000	15,000 Pembroke Ha Havendale	I I.T. support Retired teacher		2 Administrative officer 1 Retired teacher	70+
145 Kingston	1	1	2	2	1	5				1,000				3,000	100	6.000	3 1,000		600	3 Retired	Havendale	Practical nurse		1 Retired	80
146 Kingston	1	1	2	2	1	1				3,000				19,000	100	6,600				2	Havendale	Retired	78	Retired	80 78
147 Kingston	1	1	2	2	1															3	Havendale	Retired		2 Retired	
148 Kingston	1	1 Rainwater	2	2	1	1				3,000	_	_		N/A beca					1.100	3 100,000	0 Havendale	Carpenter	-	2 Carpenter	
149 Kingston 150 Kingston	1	1 Bottled water	2	2		2 Low discharging capabilit	ty			4,650	-		-		100	0,000	0		1,400	4	Havendale Havendale	Mechanic	89	2 Mechanic	89
151 Kingston	1	1		-	1	2		1							-				1 1	4	Havendale	Retired		2 Retired	
152 Kingston	1	1 Rainwater Bottled water	2	2	1	1															Havendale				
153 Kingston	1	1	2		1	1				3,000							3 3,000		1,000	1 0	Havendale	Retired	84	1 Retired	84
154 Kingston	1	1 Bottled water	2	2	1	1		+		4.500	_	_	-		100		9	5,000 Phone 8	600 20,000	2 50,000	0 Havendale	Unemployed	49	1 Unemployed	49 75
155 Kingston 156 Kingston	1	1	2	1	1	1	1	1		2,500	-		+	10,000			4	<u>                                      </u>	1	5 0	0 Havendale Havendale	Retired Operator	75 51	1 Retired 1 Operator	51
157 Kingston	1	1	2	2	1	1				1,000				5,000	100	4,500	5		600	2 70,000	Havendale	Supervisor	52	1 Supervisor	52
158 Kingston	1	1 Bottled water	2	2	1									12,000	100	3,000	4 20,000		1,600		200,000 Havendale	Evacuation surveyer	50		52 50
159 Kingston	1	1 Rainwater	2	2	1	2		+		2,000	_			T		T			<b>↓</b>	3	Meadowbrook	Retired	+	Retired	
160 Kingston	1	1	2	2	1	High sewage charge					_	_	-					<u> </u>	<b>├</b> ──	1	Havendale 0 Maadaudaraak	Landload Retired airiil convent		Landload Retired eivil convent	
161 Kingston 162 Portmore	1	1	1	2	1	4 High sewage charge				1,200			+	5 000	20	1 000	15	<u>                                      </u>	200	1 Pension 2 20.000	0 Meadowbrook 0 Hamilton Gard		63	Retired civil servant 1 Mail controctor	67
163 Portmore	1	2	1		1	2	1	1		2,000				3.000	100	5,500	6			3 0		lens Not working			55
164 Portmore	1	1 Communal tap	1			4				3,646				4,568	25	1,770	1.5		200	3	Hamilton Gard	lens Valuator / Surveyor	54	1 Valuator / Surveyor	54
165 Portmore	1	1 Communal tap	1		1	4				2,150				2,330	25	1,770	1.5		200	1	Hamilton Gard	lens Geriatric caregiver	55	1 Geriatric caregiver	55
166 Portmore	1	1 1 Pattlad water		$ \rightarrow $	1	3 2 Foul odoro		-		3,000	-	_		7,000	100	6,500	5 5,500	<u> </u>	100	3 40,000	Hamilton Gard		59	1 Driver 2 Collector	59
167 Portmore 168 Portmore	1	1 Bottled water 1 Communal tap		+		2 Foul odors 4 High sewage charge	1	1		990 4,000	Λ	000	+	6,000					300	4 180 000	2,000 Hamilton Gard 30,000 Hamilton Gard	lens Counsellor	00	2 Collector 1 Counsellor	59 60
169 Portmore	1	1	1		1	2				2,500	1			3,500		2,000			/	4 100,000	Hamilton Gard	lens Retired secretary	62	1 Retired technician	72
170 Portmore	1	1 Bottled water	1		1	2 Sewage overflow	Foul odors			2,500				12,000	30	2,300	0.75		100	7	Caymanas Ga	rden Nurse		1 Pensioner	
171 Portmore	1	1 Bottled water	1		1	Sewage overflow	Foul odors	High sewage charge		1,000									100	4 35,000	0 Caymanas Ga	rden Pensioner	58	2 Pensioner	65
172 Portmore	1	1 1 Dettile downst	1		1	2 Foul odors	High sewage charge	-		3,500	_	_		5,000		1,800			600	4 20	0 Caymanas Ga	rden Pensioner	47	1 Pensioner	47
173 Portmore 174 Portmore	1	1 Bottled water		$\vdash$	1	4	+	+		5,000 6,700	-		+	8,000	25 30	2 200	1	+	600 500	6 24,000	8,000 Caymanas Ga Caymanas Ga		30 59	2 Provide for the house	e 30 65
175 Portmore	1	1 Bottled water	1		1	5 Sewage overflow	Foul odors	High sewage charge		2,500				6,000	30	1,900	0.75		100	6 600	Caymanas Ga		50	i	60
176 Portmore	1	1	1		1	4 Sewage overflow	Foul odors			7,000				5,000	30	1,900	1		0	4 20,000	0 Caymanas Ga	rden Sub-contractor	25		25
		1 Communal tap	1		1	3				2,500				2,700	25	1,800	1			4 18,000			24	1 Colour technician	24
177 Portmore	1			-																					1 601
177 Portmore 178 Kingston	1	1 Rainwater	2	1	1	1				3,500	_			9,000	100	6.000	5 2 500		0 0 0 500	3	Birdsucker	Business woman Betired	55	1 Businessman	70
177 Portmore	1		2	1 2 2	1	1 2 1				3,500 3,000 3,750					100	6,000	3 5 3,500 6 8,000	2,600 Cable	0 800 2,500 600 50,000	3 2 Pension 3 104,000	0 Mona Heights	Retired	78	1 Retired	60 78 73

	Date	Communities
	4 Nov. 2009 Wednesday	1. Mona Heights, 2–9 Bridgeport
	5 Nov. 2009 Thursday	10–11 Lower Birdsucker
	6 Nov. 2009 Friday	12 Meadowbrook, 13–14 White Hall
	7 Nov. 2009 Saturday	15–17 Lower Birdsucker, 18–23 Upper Birdsucker
	8 Nov. 2009 Sunday	24–41 Caymanas Gardens, 42–47 Bridgeport
	9 Nov. 2009 Monday	48-52 Hope Pasture
()	10 Nov. 2009 Tuesday	53 Waterford, 54 Passage Fort, 55–57 Independence City, 58 Hamilton Gardens, 59 Christian Pen, 60–62 Hamilton Gardens
	11 Nov. 2009 Wednesday	63–66 Birdsucker, 67–68 Birdsucker, 69 Shortwood, 70–71 Havendale, 72 Shortwood
	12 Nov. 2009 Thursday	73 Caymanas Gardens, 74–79 Hamilton Gardens, 80–83 Passage Fort, 84 Gregory Park, 85–87 Independence City, 88 Christian Gardens, 89–90 Cumberland, 91–92 Bridgeport, 93 Cedar Grove, 94–101 Meadowbrook, 102 Hope Pasture
	13 Nov. 2009 Friday	103-107 Passage Fort
	14 Nov. 2009 Saturday	108–109 Mona Heights, 110–111 Lower Pembroke Hall, 112–113 Cedar Grove, 114–124 Caymanas Gardens, 125 Mona Heights, 126–143 Pembroke Hall
()	15 Nov. 2009 Sunday	144–158 Havendale, 159 Meadowbrook, 160 Heavendale, 161 Meadowbrook, 162–169 Hamilton Gardens, 170–177 Caymanas Gardens, 178 Birdsucker
	17 Nov. 2009 Tuesday	179-180 Mona Heights

1. Present status of wate	r supply					
1.1 Is your house connecte	d to water supply sy	/stem?				
Yes	<u>No</u>					
1.2 Is your water connection	on metered?					
(Yes)	<u>No</u>					
1.3 Use of other water sup	ply sources:					
Communal tap	Well Rainwat	er <u>Bot</u>	tled water			
2. Present status of wast	ewater treatment					(
2.1 Is your house connecte	d to sewer collectio	n network?	· · · · · · · · · · · · · · · · · · ·			
Yes	(No)		.*			
2.2 If "No" to Q2.1, what i	s the wastewater tro	eatment at you	house?			
Septic tank	Soakaway (pit lat	rine				
2.3 Does your house have	indoor toilet(s)?					
Yes	<u>No</u>		$N_{\infty}$			
2.4 How do you evaluate t	he current sewage s	ervices at your	home?	- 		
Very satisfied	Relative	ly satisfied		Average		
Relatively unsatis	sfied	Ver.	Vunsatisfied	N.		
2.5 Reason of dissatisfaction	on		x			
Low discharging	<u>capability</u>	Sewage over	flow	<u>Others</u>	ALIO	
Foul odors		<u>High sanitati</u>	on service tariff		NIA	
			NY NY SAU			(
3. Water consumption a	nd demand	Otl	her water source	(s) if any		
3.1 Monthly water charges	-					
Water bill includi	ing sewage: 🐗 🎗	6-9.000	\$/month			
Drainage eg. sept	tic tank / cess pool:	NIA_	\$/month			1
Others:			<u>\$/month</u> for	•	NIA	
3.2 Monthly payment for o		es			ł	
		<u>\$/month</u>			~	
	e of cylinder: 30		Loorse How	v long does	it last: S month	<u>ies</u>
Others:	(  A	\$/month				

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

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\$600/month	<u>\$800/month</u>	\$1,000/month
\$1,200/month	<u>\$1,400/month</u>	\$1,600/month
\$ 1000,	00 \$	

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

65000.00 \$/month 2000 - 50 \_\$/month OG FASTURE DUR

SUPERVISOR

SAME

7 YRS

persons

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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#### Preparatory Survey for Kingston Sewerage Development Project **Questionnaire for Portmore Area** Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? <u>Yes</u> No 1.2 Is your water connection metered? No Yes] 1.3 Use of other water supply sources: Communal tap Rainwater Bottled water Well 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? (Yes) <u>No</u> 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? (Yes) No 2.4 How do you evaluate the current sewage services at your home? Very satisfied **Relatively satisfied** Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Others Low discharging capability High sewage charge Foul odors Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household 15900 \$/month Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month for Others: 3.2 Monthly payment for other utilities services \$ 12 000 \$/month JPS: Cooking gas: Size of cylinder: 100 lbs Price: \$6500 How long does it last: 6 months \$/month Others:

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#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify amount in between)

<u>\$100/month</u>	<u>\$200/month</u>	\$ <u>300/month</u>	<u>\$400/month</u>	
<u>\$500/month</u>	<u>\$600/month</u>	# O		

Please note that these payments would be in addition to your current monthly household expenditures.

\$/month

#### 5. Profile of your household

- 5.1 Household size: persons 5.2 Monthly income: \$/month
- 5.3 Monthly saving:

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5.4 Area of Residence:

Bridgepor

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation:
- Age:
- Sex:
- Eusinessman
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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Please circle the appropriate responses and answer all questions to the best of your ability.

Rainwater

#### 1. Present status of water supply

Yes

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1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

No Yes

1.3 Use of other water supply sources:

Communal tap Well Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Soakaway (pit latrine) Septic tank

2.3 Does your house have indoor toilet(s)?

(Yes) <u>No</u>

2.4 How do you evaluate the current sewage services at your home?

	Very satisfied	Relatively satisfied	Average >	
	Relatively unsatisfied	Very unsatisfied	and the second sec	
2.5	Reason of dissatisfaction			
	Low discharging capability	Sewage overflow	Others	
	Foul odors	High sewage charge		(
3.	Water consumption and deman	nd Other water sourc	e(s) if any	

3.1 Monthly water charges of your household 3,000 <u>\$/month</u> Water bill including sewage: Drainage eg. septic tank / cess pool: \$/month \$/month for Others:

3.2 Monthly payment for other utilities services

JPS \$/month Cooking gas: Size of cylinder: MA lbs Price: MA How long does it last: months Others: \$/month

#### [Portmore – Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> <u>addition to</u> the current sewage charges? (Choose one or specify amount in between)

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\$100/month \$200/month \$300/month \$400/month \$500/month \$600/month NOME

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	persons
5.2 Monthly income:	\$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	ERIDGED VR

#### 6. Profile of interviewee and household leader

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#### 6.1 Interviewee

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- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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		66

Retired

Please circle the appropriate responses and answer all questions to the best of your ability.

## 1. Present status of water supply

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1.1 Is your house connected to water supply system?

(Yes) No	
1.2 Is your water connection metered?	
Yes	
1.3 Use of other water supply sources:	
Communal tap Well Rainwater Bottled water	
Ŷ	(
2. Present status of wastewater treatment	
2.1 Is your house connected to sewer collection network?	
Yes No	
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?	
Septic tank Soakaway (pit latrine)	
2.3 Does your house have indoor toilet(s)?	
Yes No	
2.4 How do you evaluate the current sewage services at your home?	
Very satisfied Relatively satisfied Average	
Relatively unsatisfied Very unsatisfied	
2.5 Reason of dissatisfaction	
Low discharging capability Sewage overflow Others	
Foul odors     High sewage charge	
3. Water consumption and demand Other water source(s) if any	
3.1 Monthly water charges of your household	
Water bill including sewage: # 3000. \$/month	
Drainage eg. septic tank / cess pool:\$/month	
Others: \$/month_for	
3.2 Monthly payment for other utilities services	
JPS: \$5000.00 \$/month	
Cooking gas: Size of cylinder: 30 lbs Price: \$ 1200. How long does it last: ONemonthe	
Others: \$/month	

#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> <u>addition to</u> the current sewage charges? (Choose one or specify amount in between)

<u>\$100/month</u>	<u>\$200/month</u>	\$ <u>300/month</u> ^	<u>\$400/month</u>	
<u>\$500/month</u>	<u>\$600/month</u>			

Please note that these payments would be in addition to your current monthly household expenditures.

persons

#### 5. Profile of your household

5.1 Household size:

(

- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month \$/month Port More

## 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:

Age:

- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age;
  - Sex:

Engmeek 50 above

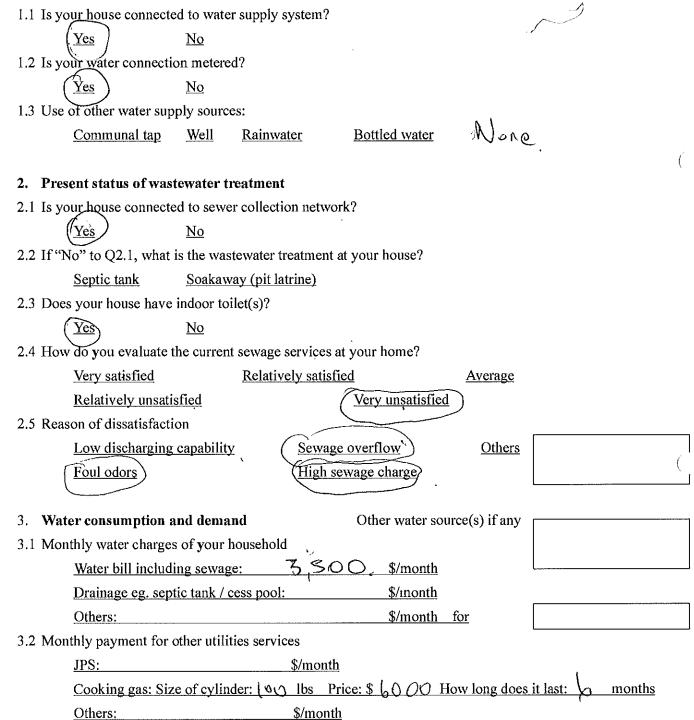
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Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

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#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

<u>\$100/month</u> \$500/month \$<u>300/month</u> ZONO \$400/month

ĺ

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	person
5.2 Monthly income:	\$/month ->Pensioner.
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	Bridge port.
	- 1

\$200/month

\$600/month

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

(

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- Occupation:
- Age:
- Sex:
- <u>Retired Pens</u>, oner\_ <u>68</u> <u>E</u>(M)
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

	$\sim$	
	C o	
_	Dame	······································
	Same	
Ē	(M)	

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

(Yes

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(

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

<u>No</u>

2.3 Does your house have indoor toilet(s)?

Yes

2.4 How do you evaluate the current sewage services at your home?

<u>Very satisfied</u>	Relatively satisfied	<u>Average</u>	
Relatively unsatisfied	Very unsatisfied		
2.5 Reason of dissatisfaction			
Low discharging capability	Sewage overflow	Others	
Foul odors	High sewage charge		(

Other water source(s) if any

Bottled wate

## 3. Water consumption and demand

- 3.1 Monthly water charges of your household
  - Water bill including sewage:
     \$ 3000
     \$/month

     Drainage eg. septic tank / cess pool:
     \$/month

     Others:
     \$/month for

3.2 Monthly payment for other utilities services

 JPS:
 (p 0 0)
 \$/month

 Cooking gas:
 Size of cylinder:
 25 lbs
 Price:
 \$ 7000
 How long does it last:
 3
 months

 Others:
 \$/month

#### [Portmore – Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> <u>addition to</u> the current sewage charges? (Choose one or specify amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

ĺ

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	
5.2 Monthly income:	N/A \$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	Bridgeport

<u>F</u>

 $(\mathbf{M})$ 

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

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- Occupation:

Age:

- Sex:

Sex:

- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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	52			-	
Ē	M				

2

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

Yes No

1.2 Is your water connection metered?

Yes V

1.3 Use of other water supply sources:

(

(

Communal tap Well Rainwater Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

<u>No</u>

Yes / No

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

2.3 Does your house have indoor toilet(s)?

Yes / No

2.4 How do you evaluate the current sewage services at your home?

<u>V</u>	ery satisfied	Relatively satisfied	Average		6,0002
<u>R</u>	elatively unsatisfied	Very unsatisfied		and the second se	6,000 .
2.5 Reason	of dissatisfaction			and the second se	
<u>L</u>	ow discharging capability	Sewage overflow	<u>Others</u>	1	
F	<u>oul odors</u>	High sewage charge			
		í.			
3. Water	consumption and deman	d Other water soui	rce(s) if any		
3.1 Monthl	ly water charges of your ho	usehold	)		
<u> </u>	/ater bill including sewage:	(600 \$/month-			
<u>D</u>	rainage eg. septic tank / ce	ss pool: n//A \$/month			
<u>0</u>	thers:	\$/month	for		
3.2 Monthl	ly payment for other utilitie	es services			
JI	PS: 4/1/000	\$/month			
<u>C</u>	ooking gas: Size of cylinde	er: 100 lbs Price: \$ 5500 Ho	ow long does	it last: 沟 - n	<u>nonths</u>
0	thers:	\$/month			

#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

persons

\$/month

\$/month

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:

5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:

(

- Sex:
- <u>Herite of</u> <u>69 years</u> <u>F</u> MV

<u>'110 Ø</u>

- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

M

F

	Please circle the appropriate responses and answer all questions to the best of your ability.							
	1. Present status of water supply							
	1.1 Is your house connected to water supply system?							
	Yes No							
	1.2 Is your water connection metered?							
	(Yes) No							
	1.3 Use of other water supply sources:							
6	Communal tap Well Rainwater Bottled water							
(	2. Present status of wastewater treatment							
	2.1 Is your house connected to sewer collection network?							
	Yes No							
	2.2 If "No" to Q2.1, what is the wastewater treatment at your house?							
	Septic tank Soakaway (pit latrine)							
	2.3 Does your house have indoor toilet(s)?							
	(Yes) No							
	2.4 How do you evaluate the current sewage services at your home?							
	Very satisfied Relatively satisfied Average							
	Relatively unsatisfied Very unsatisfied							
	2.5 Reason of dissatisfaction							
( )	Low discharging capability Sewage overflow Others							
	Foul odors (High sewage charge							
	3. Water consumption and demand Other water source(s) if any							
	3.1 Monthly water charges of your household							
	Water bill including sewage: そうらの \$/month							
	Drainage eg. septic tank / cess pool: \$/month							
	Others: \$/month_for							
	3.2 Monthly payment for other utilities services							
	JPS: \$ 10,000 \$/month							
	Cooking gas: Size of cylinder: $100$ lbs Price: $59^{\sigma D}$ How long does it last: 6 months							
	Others: \$/month							

#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

<u>\$100/month</u>

\$<u>300/month</u>

\$400/month

(

<u>\$500/month</u> <u>\$600/month</u>

\$200/month

Please note that these payments would be in addition to your current monthly household expenditures.

\$/month

#### 5. Profile of your household

- 5.1 Household size: \_\_\_\_\_\_\_persons
- 5.2 Monthly income: \_\_\_\_\_\$/month
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

wije/Markefer Μ l'Journalis

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present statns of water supply

Ýes

Yes

Yes

Yes

(

(

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

<u>Septic tank</u> <u>Soakaway (pit latrine)</u>

No

2.3 Does your house have indoor toilet(s)?

2.4 How do you evaluate the current sewage services at your home?

 Very satisfied
 Relatively satisfied
 Average

 Relatively unsatisfied
 Very unsatisfied
 2.5 Reason of dissatisfaction

Sewage overflow

High sewage charge

Others

Other water source(s) if any

Reason of dissatistaction

Foul odors

Low discharging capability

## 3. Water consumption and demand

- 3.1 Monthly water charges of your household
  - Water bill including sewage:
     # 4 000 \$/month

     Drainage eg. septic tank / cess pool:
     \$/month

Others: \$/month\_for

3.2 Monthly payment for other utilities services

JPS: 8/2000	<u>\$/month</u>		
Cooking gas: Size of cylinder: /01	D lbs Price: \$ 6,40	How long does it last: 6	months
Others:	<u>\$/month</u>		

#### [Portmore - Sewage conveyor facility development by the project]

\$200/month

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

\$300/month-

<u>\$100/month</u>

<u>\$400/month</u>

(

<u>\$500/month</u> <u>\$600/month</u>

o'

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.2 Monthly income: \_\_\_\_\_\$/month
- 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation: 16/1782 Jour halis

Ē

- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

M

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

Yes No

1.3 Use of other water supply sources:

(

(

Communal tap Well Rainwater Bottled water

## 2. Present status of wastewater treatment

2.1 1s your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

2.3 Does your house have indoor toilet(s)?

Yes No

2.4 How do you evaluate the current sewage services at your home?

Very satisfiedRelatively satisfiedAverageRelatively unsatisfiedVery unsatisfied

2.5 Reason of dissatisfaction

Others:

Yes

Low discharging capability Foul odors

3.1 Monthly water charges of your household

Water bill including sewage:

Drainage eg. septic tank / cess pool:

3. Water consumption and demand

Sewage overflow High sewage charge

<u>Others</u>

Ot	her water source(s) if any	
\$6000	∂ <u>\$/month</u>	
Ø	\$/month	

3.2 Monthly payment for other utilities services

 JPS:
 Image: Cooking gas: Size of cylinder:
 251bs
 Price: \$ (800 #How long does it last:
 Image: month

 Others:
 \$/month

\$/month for

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>	
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/inonth</u>	
\$ 2,500	3		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

## 5. Profile of your household $S_1 \mathcal{Y}$

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

Kappican BirdSucker Lower

25,000 \$/month

4000

persons

\$/month

#### 6. Profile of interviewee and household leader

F

F

#### 6.1 Interviewee

- Occupation:

- Age:

- Sex:

ame

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

M

Ple	ase circle the appropria	te respons	es and answer al	I questions to the I	best of your abili	ity.
1.	Present status of wat	er supply				
1.1	Is your house connected	ed to water	supply system?	)		
	$(\underline{Yes})$	<u>No</u>				
1.2	Is your water connecti	on metere	d?			
	$\left(\underline{Yes}\right)$	<u>No</u>				
1.3	Use of other water sup	ply source	es:			
	<u>Cominunal tap</u>	Well	<u>Rainwater</u>	Bottled water		
2.	Present status of was	tewater tr	reatment			
<b>2.</b> 1	Is your house connected	ed to sewe	r collection netw	vork?		
	Yes	$(\underline{No})$				
2.2	If "No" to Q2.1, what	is the was	tewater treatmer	it at your house?		
	Septic tank	Soakaw	ay (pitiatrine)			
2.3	Does your house have	indoor toi	let(s)?			
	$\left(\underline{Yes}\right)$	<u>No</u>				
2.4	How do you evaluate	the current	sewage service	s at your home?		
	(Very satisfied)		Relatively sati	<u>sfied</u>	<u>Average</u>	
	Relatively unsati	sfied		Very unsatisfi	ed	
2.5	Reason of dissatisfaction	on				<u></u>
	Low discharging	capability	<u>Sewa</u>	nge overflow	Others	
	Foul odors		<u>High</u>	sewage charge		E
3.	Water consumption a			Other water s	source(s) if any	
3.1	Monthly water charge	•				
	Water bill includ			() . \$/month	$(\mathbf{N})$	
	<u>Drainage eg. sep</u>	tic tank / c	ess pool?	S \$/month		Brained -
	Others:			\$/month	<u>1 for</u>	
3.2	Monthly payment for					
		1001				1
	Cooking gas: Siz	e of cyline	ter: <b>1</b> 00 lbs	Price: \$ 6,00 (	) How long doe	s it last: 6 months

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

(\$600/month)	<u>\$800/month</u>	<u>\$1,000/month</u>	
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
\$1,000-	9500.		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

## 5. Profile of your household

F

<u>M</u>

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
  - Sex:  $\underline{F}$
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

 $\frac{1}{39}$ F(M)

 $\mathbf{2}$ 

Meadowbrook / Havendale

Please circle the appropriate responses and answer all questions to the best of your ability.

Rainwater

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

(Yes) (Nb)

1.2 Is your water connection metered?

(Yes) No

1.3 Use of other water supply sources:

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(

Communal tap Well

2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

2.3 Does your house have indoor toilet(s)?

<u>Yes</u> <u>No</u>

Yes

2.4 How do you evaluate the current sewage services at your home?

Very satisfied	<u>Rélatively satisfied</u>	<u>Average</u>	
Relatively unsatisfied	Very unsatisfied		
2.5 Reason of dissatisfaction			
Low discharging capability	Sewage overflow	Others	
Foul odors	/High sewage charge		

Bottled water)

3.	Water consumption and demand	Other water so	urce(s) if any f	
3.1	Monthly water charges of your household			
	Water bill including sewage: 44970	\$/month		
	Drainage eg. septic tank / cess pool:	\$/month	included in the	rent
	Others:	\$/month	for	
3.2	Monthly payment for other utilities services		-	
	$\underline{JPS: \not\models (O, 923) \qquad \$/month}$			

 Cooking gas: Size of cylinder:
 100
 Ibs
 Price:
 5000
 How long does it last:
 100
 months

 Others:
 \$/month

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

	<u>\$600/month</u>	<u>\$800/month</u>	\$1,000/month
	\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
ion	\$ 3000.		

(ii) Initial payment for connection

(i) Monthly sewage charges:

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

5.1 Household size:	
5.2 Monthly income:	\$\month \$\month
5.3 Monthly saving:	<u> 静 40 ついう・</u> \$/month
5.4 Area of Residence:	Alcodowbioo k

(Townhouse)

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Nanager Occupation: Age:
- Sex: F M

6.2 Head of the Household

- Sceles Hanager Occupation: -
- Age:
  - 31 F

M

Sex:

White Hall Havendale

Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
(Yes) No
1.2 Is your water connection metered?
(Yes) No
1.3 Use of other_water supply sources:
(Communal tap) Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
$\underline{\text{Yes}}$
2.2 If "No" to Q2.1, what is the wastewater treatment at your house? <u>Septic tank</u> (Soakaway (pit latrine))
2.3 Does your house have indoor toilet(s)?
$(\underline{Yes})$ No $(\underline{Ves})$ $(\underline{Yes})$ No $(\underline{Ves})$
2.4 How do you evaluate the current sewage-services at your home?
<u>Very satisfied</u> ( <u>Relatively satisfied</u> ) <u>Average</u>
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors High sewage charge NOAQ
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 1500 \$/month offer 10 yrs
Drainage eg. septic tank/cess pool: 6000 \$/month Haven't been drawn in yea
Others: \$/month_for
3.2 Monthly payment for other utilities services
<u>JPS: <math>6000</math> \$/month</u>
Cooking gas: Size of cylinder: 30 lbs Price: \$1,600 How long does it last: 2, months
Others: \$/month

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ 20	00	

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

<b>*</b>	_persons
24,000	\$/month
	\$/month
Whitehe	1).

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# 7. Please feel free to write any opinion about sewage.

Feels as if the current situation with the soak-away is adequate as opposed to the New system.

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Whitehall Harendale

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

Yes

Yes

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1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater

<u>No</u>

Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

$$(\underline{N}\hat{c})$$

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

(Soakaway (pit latrine)) Septic tank

No

2.3 Does your house have indoor toilet(s)?

2.4 How do you evaluate the current sewage services at your home?

(Very satisfied) **Relatively satisfied** Average Relatively unsatisfied Very unsatisfied

2.5 Reason of dissatisfaction

Low discharging capability Sewage overflow Others Foul odors High sewage charge

<u>\$/month\_for</u>

#### 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household $4,500^{\circ}00$ \$/month Water bill including sewage: 7,000.00\$/month every Drainage eg. septic tank / cess pool: Others:

3.2 Monthly payment for other utilities services

40,000.00 \$/month JPS: Cooking gas: Size of cylinder: 25 lbs Price: \$ 1600 How long does it last: 2 months Others: \$/month

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

\$/month

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	\$1,600/month
(ii) Initial payment for connection	\$		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

В 5.1 Household size: persons

5.2 Monthly income: \$/month

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- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: -
  - Age: -
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

7. Please feel free to write any opinion about sewage.

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Please circle the appropriate responses and answer all questions to the best of your ability.

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1.	Present status of water supply
	Is your house connected to water supply system?
	(Yes) No
	Is your water connection metered?
	Yes No
	Use of other water supply sources:
	Communal tap Well (Rainwater) (Bottled water)
2.	Present status of wastewater treatment
	Is your house connected to sewer collection network?
	Yes (No)
	If "No" to Q2.1, what is the wastewater treatment at your house?
	Septic tank (Soakaway (pit latrine)
	Does your house have indoor toilet(s)?
	(Yes) <u>No</u>
	How do you evaluate the current sewage services at your home?
	Very satisfied         Average
	Relatively unsatisfied Very unsatisfied
	Reason of dissatisfaction
	Low discharging capability Sewage overflow Others
	Foul odors High sewage charge
3.	*
	Monthly water charges of your household
	Water bill including sewage: S() C \$/month
	Drainage eg. septic tank / cess pool: \$/month Does not drain
	Others: \$/month_for
	Monthly payment for other utilities services
	<u>JPS: <math>\sqrt{500}</math>, <math>\frac{1}{1000}</math></u>
	Cooking gas: Size of cylinder: $30$ lbs Price: $150$ How long does it last: $2$ months
	Others: \$/month

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#### 4. Willingness to pay for sanitation services

#### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	( <u>\$600/month</u> )	<u>\$800/month</u>	<u>\$1,000/month</u>
	\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	5 <u>0</u>		

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

Household size:
Monthly income:
Monthly saving:
Area of Residence:

Occupation:

Head of the Household

Occupation:

Interviewee

Age:

Sex:

Age: Sex:

6. Profile of interviewee and household leader

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persons \$/month \$/monthy Lowef

## 7. Please feel free to write any opinion about sewage.

Thinks it is a good idea to implement because of the effect that it will have. In terms of improved health



Please circle the appropriate responses and answer all questions to the best of your ability.

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1.	Present status of water supply				
	Is your house connected to water supply system?				
	$\left(\underline{Yes}\right)$ <u>No</u>				
	Is your water connection metered?				
	Yes No				
	Use of other water supply sources:				
	Communal tap Well Rainwater Bottled water				
2.	Present status of wastewater treatment				
	Is your house connected to sewer collection network?				
	Yes				
	If "No" to Q2.1, what is the wastewater treatment at your house?				
	Septic tank (Soakaway (pit latrine)				
	Does your house have indoor toilet(s)?				
	<u>Yes</u> <u>No</u>				
	How do you evaluate the current sewage services at your home?				
	Very satisfied Relatively satisfied Average				
	(Relatively unsatisfied) Very unsatisfied				
	Reason of dissatisfaction				
	Low discharging capability Sewage overflow Others				
	Foul odors High sewage charge				
3.	Water consumption and demand   Other water source(s) if any				
	Monthly water charges of your household				
	Water bill including sewage: \SO \$/month				
	Drainage eg. septic tank / cess pool: \$/month				
	Others: \$/month_for				
	Monthly payment for other utilities services				
	$\underline{\text{MS: } (500 /\text{month})}$				
	Cooking gas: Size of cylinder: 25 Ibs Price: \$ 1300 How long does it last: 2 months				
	Others: \$/month				

### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

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<u>\$600/month</u>	\$800/month	\$1,000/month
<u>\$1,200/month</u>	<u>\$1,400/month</u>	\$1,600/month
<u>\$ 1,000</u>	>	

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

5.	Profile of your houseb	old 🔿	7. Please feel free to write any opinion
	Household size:	persons	about sewage.
	Monthly income:	\$/month	Gartila
	Monthly saving:	\$/month //	0000 rold vecame
	Area of Residence:	Birdsucher/LOW	Good idea, because it would refigue the sewage
		V	in the pit.
6.	Profile of interviewee	and household leader	an rac para
	Interviewee	0 +	
	- Occupation:	Porter	
	- Age:	39	
	- Sex:	$\underline{\mathbf{F}}$ $(\underline{\mathbf{M}})$	
	Head of the Household	_	
	- Occupation:	Same	
	- Age:		
	- Sex:	<u>F</u> <u>M</u>	



<u>Ple</u>	Please circle the appropriate responses and answer all questions to the best of your ability.				
1.	. Present status of water supply				
	Is your house connected to water supply system?				
	$(\underline{Yes})$ <u>No</u>				
	Is your water connection metered?				
	(Yes) No				
	Use of other water supply sources:				
	Communal tap Well Rainwater Bottled water				
2.	Present status of wastewater treatment				
	Is your house connected to sewer collection network?				
	Yes (No)				
	If "No" to Q2.1, what is the wastewater treatment at your house?				
	Soakaway (pit latrine)				
	Does your house have indoor toilet(s)?				
	(Yes No				
	How do you evaluate the current sewage services at your home?				
	(Very satisfied) Relatively satisfied. Average				
	Relatively unsatisfied Very unsatisfied				
	Reason of dissatisfaction				
	Low discharging capability Sewage overflow Others				
	Foul odors     High sewage charge				
3.	Water consumption and demand Other water source(s) if any				
	Monthly water charges of your household				
	Water bill including sewage: $4000$ \$/month				
	Drainage eg. septic tank / cess pool: \$/month Nover Drained				
	Others: \$/month_for				
	Monthly payment for other utilities services				
	JPS: $6,000$ \$/month				
	Cooking gas: Size of cylinder: 10 Ibs Price: \$ \ 600 How long does it last: \ months				
	Others: \$/month				

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### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

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(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

persons 25,000 \$/month 0 \$/month Birdsucker/Low

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# 7. Please feel free to write any opinion about sewage.

It would be better option because it would free the ground of the contaminated water.

6. Profile of interviewee and household leader

- Interviewee
- Occupation:
- Age:
- Sex:
- Head of the Household
- Occupation:
- Age:
  - Sex:  $\underline{F}$

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Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes <u>No</u>
1.2 Is your water connection metered?
Yes No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
Yes (No)
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
(Yes) No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied (Relatively satisfied) Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors     High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: $2,>00$ \$/month
Drainage eg. septic tank / cess pool: 5/month
Others: \$/month_for
3.2 Monthly payment for other utilities services
$\underline{JPS: \underbrace{1}_{S,OOO} \underline{\$/month}}_{OS}$
Cooking gas: Size of cylinder: 25 lbs Price: \$ \800 How long does it last: months
Others: \$/month

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### [North Kingston Area – Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>( \$600/month</u>	<u>\$800/month</u>	(\$1,000/month)	
\$1,200/month	<u>\$1,400/month</u>	\$1,600/month	
<u>\$ 5,00</u>	0		

### (ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

- 5. Profile of your household
- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

<u> </u>	persons
Pension	_\$/month
$\bigcirc$	\$/month
Birdsucker	Heigh?

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7. Please feel free to write any opinion about sewage.

It would be a good idea if implemented properly.

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Please circle the appropr	iate responses and ans	wer all questions to the be	est of your ability.
1. Present status of wa	ater supply		
1.1 Is your house conned	eted to water supply sy	/stem?	
$\left(\underline{\mathbf{Y}_{es}}\right)$	<u>No</u>		
1.2 Is your water connect	tion metered?		
( <u>Yes</u> )	<u>No</u>		
1.3 Use of other water s	upply sources:		
<u>Communal tap</u>	<u>Well</u> <u>Rainwat</u>	er Bottled water	)
2. Present status of wa	astewater treatment	•	
2.1 Is your house connect	eted to sewer collection	n network?	
Yes	No		
2.2 If "No" to Q2.1, what	at is the wastewater tre	atment at your house?	
Septic tank	Soakaway (pit latr	ine (2)	
2.3 Does your house hav	e indoor totlet(s)?		
$\langle \underline{\mathbf{Y}}_{es} \rangle$	No		
2.4 How do you evaluat	e the current sewage so	ervices at your home?	
Very satisfied	Relative	ly satisfied	Average
Relatively unsa	tisfied	Very unsatisfie	: <u>d</u>
2.5 Reason of dissatisfac	tion		
Low dischargin	ig capability	Sewage overflow	Others
Foul odors		High sewage charge	None
3. Water consumption	and demand	Other water so	ource(s) if any
3.1 Monthly water charge	ses of your household		
Water bill inch	iding sewage: 5	<u> いつつ \$/month</u>	
Drainage eg. se	ptic tank / cess pool:	\$/month	Never Drained in
Others:		\$/month	for
3.2 Monthly payment fo	r other utilities service	ờS	
JPS: 6	000	\$/month	
Cooking gas: S	ize of cylinder: 100	<u>Ibs</u> Price: \$5,000	How long does it last: 3 months

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### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

( <u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>	
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
\$ 2.00	D		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

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### 5. Profile of yonr household

5.4 Area of Residence:

### 6. Profile of interviewee and household leader

6.1 Interviewee

Occupation:

Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

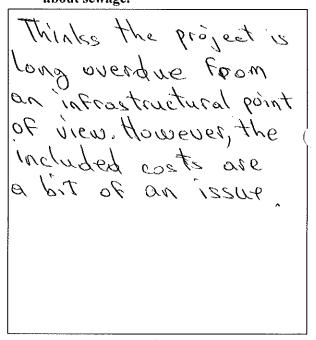
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Birdsuc

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	Please circle the appropriate responses and answer all questions to the best of your ability.			
	1. Present status of water supply			
	1.1 Is your house connected to water supply system?			
	(Yes) <u>No</u>			
	1.2 Is your water connection metered?			
	$\left( \underline{\mathbf{\widehat{Y}es}} \right)$ <u>No</u>			
	1.3 Use of other water supply sources:			
6 .	Communal tap Well (Rainwater) Bottled water			
\ \	2. Present status of wastewater treatment			
	2.1 Is your house connected to sewer collection network?			
	Yes (No)			
2.2 If "No" to Q2.1, what is the wastewater treatment at your house? <u>Septic tank</u> (Soakaway (pit latrine) - 5)				
	$\left(\frac{\text{Yes}}{\text{No}}\right)$ No			
	2.4 How do you evaluate the current sewage services at your home?			
	Very satisfied <u>Relatively satisfied</u> <u>Average</u>			
	Relatively unsatisfied Very unsatisfied			
	2.5 Reason of dissatisfaction			
(;	Low discharging capability Sewage overflow Others			
· .	Foul odors High sewage charge			
	3. Water consumption and demand Other water source(s) if any			
	3.1 Monthly water charges of your household			
	Water bill including sewage: 1,200 \$/month			
	Drainage eg. septic tank / cess pool: \$/month			
	Others: \$/month_for			
	3.2 Monthly payment for other utilities services			
	$\frac{JPS: \sqrt{0}}{(2 + 1)} \frac{\sqrt{5}}{(2 + 1)}$			
	Cooking gas: Size of cylinder: 100 lbs Price: \$ 6,000 How long does it last: 4 months			
	Others: \$/month			

### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

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\$/month \$/month

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ ()		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

Close

- 5. Profile of your household
- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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Acount	•• •••••••••••••••••••••••••••••••••••
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(<u>F</u>) <u>M</u>

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7. Please feel free to write any opinion about sewage.

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you have thas serious
issues with the costs
that are associated
with the venture

Please circle the appropriate responses and answer all questions to the best of your ability.

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#### 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection metered? No Yes 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to server collection network? Yes No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes) No 2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others High sewage charge Foul odors 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household 3,500 Water bill including sewage: \$/month Drainage eg. septic tank / cess pool \$/month Others: \$/month for 3.2 Monthly payment for other utilities services 18,00 JPS: \$/month Cooking gas: Size of cylinder: 100lbs Price: \$ 6000 How long does it last: 10 months 5500 \$/month Others:

### [North Kingston Area - Street sewer development by the project]

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(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	\$1,400/month	<u>\$1,600/month</u>
\$ 5.00	NEED TO THE OWNER OF THE OWNER	

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

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### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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1. Present status of water supply         1.1 Is your house connected to water supply system?
Yes       No         1.2 Is your water connection metered?       No         Yes       No         1.3 Use of other water supply sources:       Communal tap         Communal tap       Well       Rainwater         Bottled water       Sevent status of wastewater treatment         2.1 Is your house connected to sewer collection network?       Yes         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Low discharging capability       Sewage overflow         Others       No
1.2 Is your water connection metered?         Yes       No         1.3 Use of other water supply sources:       Communal tap         Yes       No         2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Sewage overflow       Others         Foul odors       High sewage charge
Yes       No         1.3 Use of other water supply sources:       Communal tap         Communal tap       Well       Rainwater         Bottled water       No         2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Sewage overflow       Others         Foul odors       High sewage charge
1.3 Use of other water supply sources:         Communal tap       Well       Rainwater       Bottled water         2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Low discharging capability       Sewage overflow         Foul odors       High sewage charge
Communal tap       Well       Rainwater       Bottled water         2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Sewage overflow       Others         Foul odors       High sewage charge
2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Low discharging capability       Setvage overflow         Others       No         Low discharging capability       Setvage charge
2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Sewage overflow       Others         Foul odors       High sewage charge
Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)? Yes       No         2.4 How do you evaluate the current sewage services at your home? Very satisfied       No         2.4 How do you evaluate the current sewage services at your home? Very satisfied       Average         2.5 Reason of dissatisfaction       Relatively satisfied         Low discharging capability       Sewage overflow       Others         Foul odors       High sewage charge       No
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Average         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Sewage overflow       Others         Foul odors       High sewage charge
Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Sewage overflow         Low discharging capability       Sewage overflow         Foul odors       High sewage charge
<ul> <li>2.3 Does your house have indoor toilet(s)?</li> <li>Yes No</li> <li>2.4 How do you evaluate the current sewage services at your home?</li> <li>Very satisfied Relatively satisfied Very unsatisfied</li> <li>2.5 Reason of dissatisfaction</li> <li>Low discharging capability Sewage overflow Others</li> <li>Foul odors High sewage charge</li> </ul>
Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Sewage overflow         Low discharging capability       Sewage overflow         Foul odors       High sewage charge
2.4 How do you evaluate the current sewage services at your home? <u>Very satisfied</u> <u>Relatively unsatisfied</u> 2.5 Reason of dissatisfaction <u>Low discharging capability</u> <u>Foul odors</u> <u>High sewage charge</u> <u>NDNC</u>
Very satisfied       Relatively satisfied       Average         Relatively unsatisfied       Very unsatisfied       Average         2.5 Reason of dissatisfaction       Sewage overflow       Others         Low discharging capability       Sewage overflow       Others         Foul odors       High sewage charge       Now C
Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Image: Sewage overflow       Others         Low discharging capability       Sewage overflow       Others         Foul odors       High sewage charge       NowC
2.5 Reason of dissatisfaction         Low discharging capability       Sewage overflow       Others         Foul odors       High sewage charge       NOWC
Low discharging capabilitySewage overflowOthersFoul odorsHigh sewage chargeNOWC
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household Water bill including sewage: 800 \$/month
Drainage eg. septic tank / cess pool: 5/ \$/month
Others: \$/month_for
3.2 Monthly payment for other utilities services
$\rightarrow$ JPS: $(000)$ \$/month
Cooking gas: Size of cylinder: 100 lbs Price: \$5,300 How long does it last: T months
Others: $220$ \$/month
$C \circ \mathcal{O} e$ 1

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### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

	<u>} \$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>	
ĺ	\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>	$\bigcirc$
	\$ 0			·

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

5. Profile of your household 7. Please feel free to write any opinion 5.1 Household size: about sewage. persons Peakion 00 ∩ \$/month + 1 5.2 Monthly income: Its a good idea, but the costs will be too NIS \$/month 5.3 Monthly saving: test 05 5.4 Area of Residence: great given the current 6. Profile of interviewee and household leader 6.1 Interviewee Financial situation. wed hund Occupation: Age: Sex: Μ 6.2 Head of the Household BWB Occupation: Age: F Sex: <u>M</u>



Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? No Yes 1.2 Is your water connection metered? No 1.3 Use of other water supply sources: Bottled wate Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? (Soakaway (pit latrine)) Septic tank 2.3 Does your house have indoor toilet(s)? Yes <u>No</u> 2.4 How do you evaluate the current sewage services at your home? **Relatively** satisfied Very satisfied verage Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Others Low discharging capability Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household REPROX 1,800 Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month <u>\$/month\_for</u> Others: 3.2 Monthly payment for other utilities services approx 14,500 JPS: \$/month Cooking gas: Size of cylinder: 25 lbs Price: \$ 1 300 How long does it last inonths \$/month Others:

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### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

i intese triptises.	(choose one of op	
<u>\$600/month</u>	( <u>\$800/month</u> )-	<u>\$1,000/month</u>
<u>\$1,200/month</u>	\$1,400/month	\$1,600/month

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

- 5.1 Household size:2 persons5.2 Monthly income:70 000 \$/month5.3 Monthly saving:0 \$/month5.4 Area of Residence:Barbican

### 6. Profile of interviewee and household leader

### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

<u>F</u><u>M</u>

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teacher

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- F M
  - <u>M</u>

a central system/ is a fantastic idea and seems like it affec wel. abr pleased idea.

Preparatory Survey for Kingston Sewerage Development Project **Questionnaire for Portmore Area** Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes 🗸 <u>No</u> 1.2 Is your water connection metered? Yes V No 1.3 Use of other water supply sources: Bottled water 🛩 Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? <u>Yes</u>  $\checkmark$ No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank, Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes 🗸 <u>No</u> 2.4 How do you evaluate the current sewage services at your home? Very satisfied **Relatively** satisfied <u>Average</u> Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household 4 7000 Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: <u>\$/month</u> Others: \$/month for 3.2 Monthly payment for other utilities services JPS: \$ 9000 \$/month Cooking gas: Size of cylinder: 25 Ibs Price: \$ 1,900 How long does it last: Memonths Others: hone bill 3,700 \$/month

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J 11:08 Caym

### [Portmore – Sewage conveyor facility development by the project]

\$200/month

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Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month

\$500/month

\$300/month

\$400/month

\$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

NON \$/monus ST CAthuine ElGarde

persons

\$ 10,000\$/month

NON \_\$/month

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- RIONE. 37. E-M Hussband 6.2 Head of the Household

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- Occupation:
- Age:

Sex:

### 7. Please feel free to write any opinion about sewage.

F∠ M

	<u>Please circle the appropriate responses and answer all questions to the best of your ability.</u>
	1. Present status of water supply
	1.1 Is your house connected to water supply system?
	Yes <u>No</u>
	1.2 Is your water connection inetered?
	(Yes) <u>No</u>
	1.3 Use of other water supply sources:
	Communal tap Well Rainwater (Bottled water)
(	
	2. Present status of wastewater treatment
	2.1 Is your house connected to sewer collection network?
	(Yes) <u>No</u>
	2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
	Septic tank Soakaway (pit latrine)
	2.3 Does your house have indoor toilet(s)?
	(Yes) <u>No</u>
	2.4 How do you evaluate the current sewage services at your home?
	Very satisfied <u>Relatively satisfied</u> <u>Average</u>
	Relatively unsatisfied Very unsatisfied
	2.5 Reason of dissatisfaction
	Low discharging capability Sewage overflow U Others
( '	Foul odors High sewage charge
	3. Water consumption and demand Other water source(s) if any
	3.1 Monthly water charges of your household
	Water bill including sewage: \$1,500 \$/month
	Drainage eg. septic tank / cess pool: \$/month
	Others: \$/month_for
	3.2 Monthly payment for other utilities services
	JPS: 4 < 000 \$/month
	$\frac{\text{Cooking gas: Size of cylinder: } / 00 \text{ lbs Price: $ 6,000 \text{ How long does it last: } months}{\text{Others: Phone Bills $/month } = 500}$
	Others: Phone Bills \$/month \$ \$ 500

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### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month \$600/month \$500/month

Please note that these payments would be in addition to your current monthly household expenditures.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# \_\_persons Unsion \$/month \$/month

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex: \_
- Þ M 6.2 Head of the Household
  - Occupation:
  - Age: -
  - Sex:

### <u>F</u> M

<u>Ple</u>	ase circle the appropriate res	sponses and answer all qu	estions to the best of	<u>`your ability.</u>
1.	Present status of water su	ipply		
1.1	Is your house connected to	water supply system?		
	Yes No	<u>)</u>		
1.2	Is your water connection m	retered?		
	(Yes) No	2		
1.3	Use of other water supply s	sources:		
	<u>Communal tap</u> <u>We</u>	ell <u>Rainwater</u>	Bottled water	
2.	Present status of wastewa	iter treatment		
2.1	Is your house connected to	sewer collection network	?	
	Yes <u>No</u>	2		
2.2	If "No" to Q2.1, what is the	e wastewater treatment at j	your house?	
	Septic tank So	akaway (pit latrine)		
2.3	Does your house have indo	or toilet(s)?		
	Yes No	2		
2.4	How do you evaluate the ci	urrent sewage services at y	your home?	~
	Very satisfied	Relatively satisfied	1	Average
	Relatively unsatisfied	<u>l</u>	Very unsatisfied	
2.5	Reason of dissatisfaction			
	Low discharging capa	ability Sewage c	overflow	Others
	Foul odors	High sew	age charge	
3.	Water consumption and d	lemand ()	Other water source(	(s) if any
3.1	Monthly water charges of y	our household		
	Water bill including se		<b>\$/month</b>	
	Drainage eg. septic ta	nk / cess pool:	\$/month	
	<u>Others: \$3,000</u>	EULI yttang	\$/month_for	
3.2	Monthly payment for other	utilities services		<b>L</b>
	<u>JPS: 7, 500</u>	\$/month		
	Cooking gas: Size of	cylinder: 25 lbs Price	e: \$ /800 44 How	long does it last: 1.5 months
	Others:	\$/month		

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### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

50000.00 \$/month

1000. == \$/month

Laymanas Goods

Please note that these payments would be in addition to your current monthly household expenditures.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- Drivic 45

6.2 Head of the Household

- Occupation:
- Age:

Sex:

Drivu 45 (E) M

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Please circle the appropriate responses and answer all questions to the best of your ability.

### 1. Present status of water supply

1.1 Is your house connected to water supply system?

Yes No

1.2 Is/your water connection metered?

<u>No</u>

1.3 Use of other water supply sources:

Communal tap Well Rainwater

Bottled water

### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

<u>Septic tank</u> <u>Soakaway (pit latrine)</u>

<u>No</u>

2.3 Does your house have indoor toilet(s)?

Yes

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2.4 How do you evaluate the current sewage services at your home?

Very satisfiedRelatively satisfiedAverageRelatively unsatisfiedVery unsatisfied

2.5 Reason of dissatisfaction

Low discharging capability

Sewage overflow High sewage charge <u>Others</u>

Foul odors

### 3. Water consumption and demand

Other water source(s) if any

- 3.1 Monthly water charges of your household
  - Water bill including sewage:
     体子のの、のの、外のの
     \$/month

     Drainage eg. septic tank / cess pool:
     \$/month
  - Others: \$/month\_for
- 3.2 Monthly payment for other utilities services

JPS: \$ 5,000.00 \$/month

Cooking gas: Size of cylinder: 100 lbs Price: \$6,000 How long does it last: 10 months Others: 01 2,600.00 [Talephone \$/month]

### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# \_\_\_\_\_persons <u>(\$ / 5, 012) : W</u> \$/month \_\_\_\_\_\_\$/month <u>Caypranas</u> Gardans :\_\_\_\_\_

#### 6. Profile of interviewee and household leader

6.1 Interviewee

	-	Occupation:		Retured
	-	Age:		69
	-	Sex:	<u>F</u>	M
6.2	Hea	ad of the Household		a
	-	Occupation:		Same
	-	Age:	<u></u>	· · · · · · · · · · · · · · · · · · ·
	-	Sex:	<u>F</u>	M

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Please circle the appropriate responses and answer all questions to the best of your ability.

### 1. Present status of water supply

1.1 Is your house connected to water supply system?

1.2 Is your water connection metered?

Yes No Estimated

<u>No</u>

1.3 Use of other water supply sources:

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Communal tap Well Rainwater

### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

(Yes) <u>No</u>

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

2.3 Does your house have indoor toilet(s)?

<u>No</u>

Yes)

Foul odors

2.4 How do you evaluate the current sewage services at your home?

 Very satisfied
 Relatively satisfied
 Average

 Relatively unsatisfied
 Very unsatisfied

 2.5 Reason of dissatisfaction
 Very unsatisfied

Bottled water

Low discharging capability Sewage overflow

High sewage charge

Others

3. Water consumption and demand Other water source(s) if any

- 3.1 Monthly water charges of your household
  - Water bill including sewage: 2000.@\$/month

Drainage eg. septic tank / cess pool: \$/month

Others: \$/month\_for

3.2 Monthly payment for other utilities services

<u>JPS: 7960.00\$/month</u>

Cooking gas: Size of cylinder: 100 lbs Price: \$ 6500 How long does it last: 4 months Others: Defendents 3 1800 \$/month

### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

### 5. Profile of your household

5.1 Household size:	<u> </u>	_persons
5.2 Monthly income:	37,500	\$/month

- 5.3 Monthly saving: \_\_\_\_\_\_\$/month
- 5.4 Area of Residence: <u>Caynanas Golns.</u>, Site D

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: <u>Clevical</u> Assistant
  - Age: <u>30</u>
  - Sex:  $\bigvee \underline{F} \quad \underline{M}$

6.2 Head of the Household

- Occupation: <u>Bameas</u> above
- Age:
  - Sex:  $\underline{F} \underline{M}$

### 7. Please feel free to write any opinion about sewage.

I feel that it is unfair that when you call NWC to clear the adjoining man hole between neighbouring houses, I have to stand the cost of it. I thought that was the reason for paying Bewage charges that comes monthly on my bill.

Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Present status of water supply 1.1 Is your house connected to water supply system? <u>Yes</u>  $\mathcal{N}$ <u>No</u> 1.2 Is your water connection metered? Yes A No 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes 1 <u>No</u> 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank 1 Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes A No 2.4 How do you evaluate the current sewage services at your home? Very satisfied **Relatively satisfied** <u>Average</u> Relatively unsatisfied A. Very unsatisfied # 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow 1 Others Foul odors 1 High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household 1 2 6.00 \$/month Water bill including sewage: Drainage eg. septic tank / cess pool: \$/month Others: \$/month for 3.2 Monthly payment for other utilities services JPS: <u>\$/month</u> Cooking gas: Size of cylinder: 30 Ibs Price: \$ 1750 How long does it last: Jul months Others: \$/month

### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

\_persons \_\_\$/month

\$/month

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### 5. Profile of your household

5.1 Household size: <u>5</u>

- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:

Age:

Sex:

Labour ΜV F

6.2 Head of the Household

- Occupation:
- Age:
- Sex:
- <u>Labocek</u> 56 E Ma

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Please circle the appropriate responses and answer all questions to the best of your ability.

### 1. Present status of water supply

Ċ

1.1 Is your house connected to water supply system?

<u>No</u> 1.2 Is your water connection metered? No Yes 1.3 Use of other water supply sources: Communal tar Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? <u>No</u> 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? No Ye8 2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied Avera Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction-Sewage overflow ow discharging capabilit Others High sewage charge the List ed odors 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household 1800. Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month Unknown Others: JPS-\$/month for 3.2 Monthly payment for other utilities services JPS: 10,000 \$/month Cooking gas: Size of cylinder: 30 lbs Price: \$ [850 How long does it last: months Others: \$/month

### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- <u>So,000</u> \$/month <u>NIL</u> \$/month <u>Carymanas</u> Golas.

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: <u>Clevical</u> Officer - Age: <u>25</u> - Sex: <u>F M</u> 6.2 Head of the Household - Occupation: <u>Security</u> Officer - Age: <u>31</u> - Sex: <u>F M</u>

1.1 Is your house connecte	d to water supply s	system?			
Yes	No	J			
1.2 Is your water connection					
Yes	No				
1.3 Use of other water sup					
<u>Communal tap</u>	Well Rainwa	iter Bo	ttled water V	, <b>A</b>	
2. Present status of wast	tewater treatment		e		
2.1 Is your house connecte	d to sewer collection	on network?			
Yes L	<u>No</u>				
2.2 If "No" to Q2.1, what i	is the wastewater th	eatment at you	r house?		
Septic tank	<u>Soakaway (pit la</u>	trine)			
2.3 Does your house have	indoor toilet(s)?				
Yes V	<u>No</u>				
2.4 How do you evaluate t	he current sewage	services at you	r home?		
Very satisfied	Relativ	ely satisfied		Average U	
Relatively unsatis	sfied	Ver	<u>y unsatisfied</u>		
2.5 Reason of dissatisfaction	on				
Low discharging	capability V	Sewage over	<u>flow</u>	<u>Others</u>	NI / A
Foul odors		High sewage	: charge		N/A
3. Water consumption a	nd demand	Of	her water sour	re(s) if any	
3.1 Monthly water charges				<b>v</b> (s) ii uiij	
Water bill includi	-		> \$/month <	LORMA	N/A
	ic tank / cess pool:		\$/month	fr - /4	
Others:			\$/month f	for	
3.2 Monthly payment for c	other utilities servic	es		(	L
• I •	3500				
JPS:	000	<u>\$/month</u>			

### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 ✓\$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

### 5. Profile of your household

5.1 Household size:	3	persons
5.2 Monthly income:	40,000	\$/month
5.3 Monthly saving:	Nil	\$/month
5.4 Area of Residence:	Cayna	nas Gdns

#### 6. Profile of interviewee and household leader

6.1 Interviewee

-	Occupation:	clerk
-	Age:	<u> </u>

- Sex:  $(\underline{F}) \underline{M}$ 

6.2 Head of the Household

- Occupation:  $\underline{Cleck}$ - Age:  $\underline{42}$ - Sex:  $(\underline{F}) \underline{M}$ 

Severage charge is much to hege for poor service. 1

Prepara	tory Surv	ey for Kingsto	n Sewerage Deve	lopment Projec	t j
	Q	uestionnaire fo	or Portmore Area		· · · · ·
Disease sincle the environmin	ta mananana		mussilisus to the hose	6 a farmer a 1211/4 a	4
Please circle the appropria	-	es and answer an	questions to the bes		and a start of the
1. Present status of wat		aunalu autom 9		ana ang tang panganan T	and a standard standard.
1.1 Is your house connects Yes	No No	supply system?			
1.2 Is your water connecti		19			
Yes	1º				
1.3 Use of other water sup	No v	cr+			n an
<u>Communal tap</u>	Well	s. <u>Rainwater</u>	Bottled water		
<u>communar tap</u>		<u>IXani wator</u>	Dottion Water		
2. Present status of was	tewater tr	eatment			
2.1 Is your house connect			rk?		
Yes	<u>No</u>				
2.2 If "No" to Q2.1, what		ewater treatment	at your house?		
Septic tank		ay (pit latrine)			
2.3 Does your house have					:
Yes	No				
2.4 How do you evaluate	the current	sewage services	at your home?		
Very satisfied		Relatively satisf	ied	Average	
Relatively unsati	<u>sfied</u>		Very unsatisfied	-	
2.5 Reason of dissatisfacti	on				
Low discharging	capability	Sewag	e overflow	Others	
Foul odors		High s	ewage charge		
		Ŷ		<b>k</b> an <u>-</u> t	
3. Water consumption a	and deman	ıd	Other water sour	rce(s) if any	·
3.1 Monthly water charge	s of your h	ousehold			
Water bill includ	ing sewage	: 3000 <u>~</u>	\$/month		
Drainage eg. sep	tic tank / ce	ess pool:	\$/month		
Others:			\$/month	for	
3.2 Monthly payment for		es services			
<u>JPS: 9700 · 0</u>	7-O	\$/month	1		
Cooking gas: Siz	e of cylind	er: 35 lbs P	<u>1</u> rice: \$ / 600 <sup>-16</sup> Hc	w long does it las	st: 33- month

### [Portmore - Sewage conveyor facility development by the project]

\$200/month

warmin

asmaned

SENIER

4aw-0

 $M_{L}$ 

<u>M</u>

NIL

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month

\$500/month

\$300/month

\$400/month

Site C

\$600/month

 $\frac{$500/\text{month}}{\text{Please note that these payments would be in addition to your current monthly household expenditures.}}$ 

persons

\$/month

\$/month

garelus

- 5. Profile of your household
- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: -
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
    - Sex: F

### 7. Please feel free to write any opinion about sewage.

~F

Not Good, Need Improvement

2

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Please circle the appropr	riate responses and answer all questions to the best of your ability.
1. Present status of wa	ater supply
1.1 Is your house connect	cted to water supply system?
Yes v	No
1.2 Is your water connec	tion metered?
Yes	No - estimated
1.3 Use of other water su	
Communal tap	Well Rainwater Bottled water
2. Present status of wa	astewater treatment
2.1 Is your house connec	cted to sewer collection network?
Yes L	No
2.2 If "No" to Q2.1, what	at is the wastewater treatment at your house?
Septic tank	Soakaway (pit latrine)
2.3 Does your house hav	e indoor toilet(s)?
Yes L	No
2.4 How do you evaluate	e the current sewage services at your home?
Very satisfied	Relatively satisfied <u>Average</u>
Relatively unsa	tisfied Very unsatisfied
2.5 Reason of dissatisfac	xtion
Low dischargin	ng capability Sewage overflow Others
Foul odors	High sewage charge
3. Water consumption	and demand Other water source(s) if any
3.1 Monthly water charg	•
Water bill inclu	Iding sewage: 1000\$/month
Drainage eg. se	eptic tank / cess pool: \$/month
Others:	\$/month_for
3.2 Monthly payment for	
JPS:	1000 \$/month
Cooking gas: Si	ize of cylinder: 30 lbs Price: \$ 2000 How long does it last: months
Others:	\$/month

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### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Chobse one or specify an amount in between)

 \$\sum\$100/month
 \$\\$200/month
 \$\\$300/month
 \$\\$400/month

 \$\\$500/month
 \$\\$600/month
 \$\\$

Please note that these payments would be in addition to your current monthly household expenditures.

### 5. Profile of your household

5.1 Household size:	<u></u>	persons
5.2 Monthly income:	Pensioner	_\$/month
5.3 Monthly saving:	NIL	_\$/month
5.4 Area of Residence:	Caymanas	Gdns

### 6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation: <u>Pensionen</u> - Age: <u>BOYrs</u>. - Sex: <u>F</u>(<u>M</u>)

6.2 Head of the Household

-	Occupation:	Pensioner
-	Age:	<u> </u>
-	Sex:	E

Needs	improvement	

34

Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Present status of water supply	
1.1 Is your house connected to water supply system?	
(Yes) No	
1.2 Is your water connection metered?	
Yes No	
1.3 Use of other water supply sources:	
Communal tap Well Rainwater Bottled water None	
2. Present status of wastewater treatment	
2.1 1s your house connected to sewer collection network?	
$\left(\underline{Yes}\right)$ <u>No</u>	
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?	
Septic tank Soakaway (pit latrine) No	
2.3 Does your house have indoor toilet(s)?	
Yes No	
2.4 How do you evaluate the current sewage services at your home?	
Very satisfied Relatively satisfied (Average)	
Relatively unsatisfied Very unsatisfied	
2.5 Reason of dissatisfaction	_
Low discharging capability Sewage overflow Others	
Foul odors     High sewage charge	
3. Water consumption and demand Other water source(s) if any	٦
3.1 Monthly water charges of your household	
Water bill including sewage: $2500$ , \$/month	
Drainage eg. septic tank / cess pool: \$/month	
Others: \$/month_for	
3.2 Monthly payment for other utilities services	
$\frac{JPS: 2500}{500}$	
Cooking gas: Size of cylinder: $25$ lbs Price: $1,500$ How long does it last: $3$ months	
Others: \$/month	

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month ) \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

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#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

## persons <u>\}</u>month \$/month

iractical Nurse.

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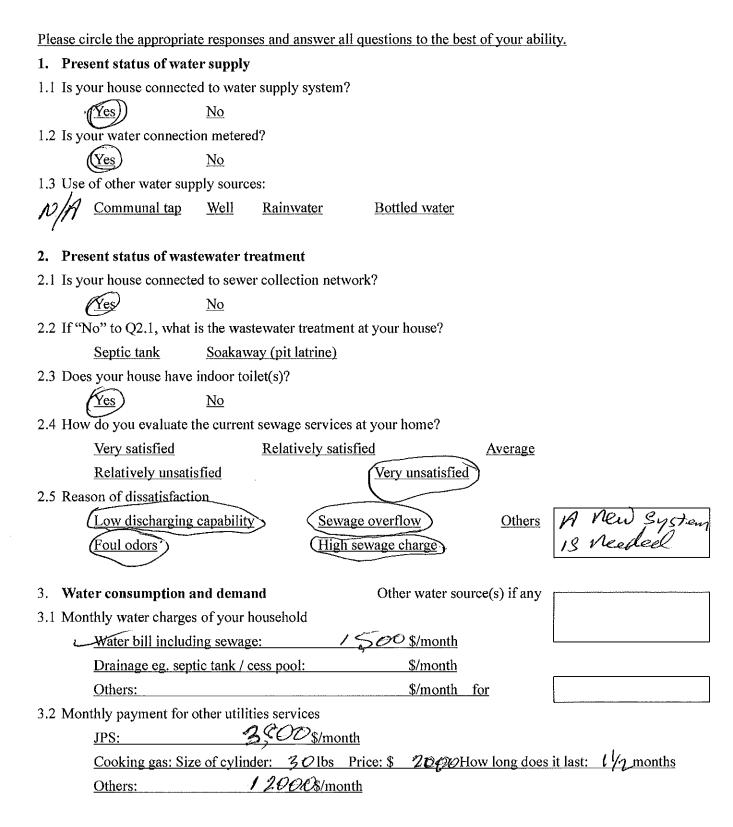
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#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
    - <u>F</u> Sex:

#### 7. Please feel free to write any opinion about sewage.

Agrees with the system as long as it will give you a better service. The changes have to suit the financial situation of the customer.



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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u> <u>\$200/month</u> <u>\$300/month</u> <u>\$500/month</u> <u>\$600/month</u> <u>Cnaraph</u> is brain paiel for maslequeate Please note that these payments would be in addition to your current monthly household expenditures. Byster

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#### 5. Profile of your household

5.1 Household size: \_\_\_\_\_\_\_persons

- 5.2 Monthly income: \_\_\_\_\_\$/mon
- 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month \$/month Coymanas D.

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- <u>cine beroart</u> <u>-4</u> E M

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

7. Please feel free to write any opinion about sewage.

E

M

The existing Savage rate Should not be meneael for the new lagton,

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

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Communal tap Well Rainwater

<u>No</u>

# Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

<u>Septic tank</u> <u>Soakaway (pit latrine)</u>

<u>No</u>

2.3 Does your house have indoor toilet(s)?

Yes

Others:

2.4 How do you evaluate the current sewage services at your home?

\$/month

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# 40,500 \$/month \_\_\_\_\_\$/month ymanes Gaidens

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Customer Que Rop 30 Occupation:
  - Age:
  - F Sex:

6.2 Head of the Household

Occupation: Kension \_ Age: Sex:

#### 7. Please feel free to write any opinion about sewage.

Instead of dischargin	g-the heated / sen-treated sewage
Into the rivers) wil	in ust fill groud wake deposite
that can be used	for agricultural purposes
	1. Human huthor 2

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37

Please circle the appropriat	te responses and answer all questions to the best of your ability.
1. Present status of wate	er supply
1.1 Is your house connected	d to water supply system?
Yes	No
1.2 Is your water connection	on metered?
Yes	No
1.3 Use of other water sup	ply sources:
<u>Communal tap</u>	Well Rainwater Bottled water
2. Present status of wast	ewater treatment
2.1 Is your house connecte	d to sewer collection network?
Yes	No
2.2 If "No" to Q2.1, what i	s the wastewater treatment at your house?
Septic tank	Soakaway (pit latrine)
2.3 Does your house have	indoor toilet(s)?
Yes	No
2.4 How do you evaluate the	he current sewage services at your home?
Very satisfied	Relatively satisfied <u>Average</u>
Relatively unsatis	sfied Very unsatisfied
2.5 Reason of dissatisfaction	on
Low discharging	capability Sewage overflow Others
Foul odors	High sewage charge
3. Water consumption a	nd demand Other water source(s) if any
3.1 Monthly water charges	of your household
Water bill includi	ng sewage:\$/month
Drainage eg. sept	ic tank / cess pool:\$/month
Others:	\$/month_for
3.2 Monthly payment for o	
JPS:	6.000 \$/month ( ) ) / (A
Cooking gas: Size	e of cylinder: $h$ bs Price: \$ $2 \cdot 0^{00}$ How long does it last $h$ months
Others:	s of cylinder: 1bs Price: \$ 2.000 How long does it last. months
	< mbrillion
	$\langle \mathcal{L}_1 \rangle$
	$\gamma_0$ · ·

#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month

\$200/month

\$300/month \$400/month

<u>\$500/month</u> Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons \$/month \$/month nodens aymamas

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

Lerrichonal Officer 431

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

7. Please feel free to write any opinion about sewage.

F

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Alley av we Rouging Somul you Sewerge. It does Not marke Same. Worter & Sewerge must not be the Same Surveye must be the Same

Please circle the appropriate responses and answer all questions to the best of your ability.

	1. Present status of water supply
	1.1 Is your house connected to water supply system?
	$(\underline{Yes})$ <u>No</u>
	1.2 Is your water connection metered?
	$\left(\frac{Yes}{Yes}\right)$ <u>No</u>
	1.3 Use of other water supply sources:
	Communal tap Well (Rainwater) (Bottled water)
(	
	2. Present status of wastewater treatment
	2.1 Is your house connected to sewer collection network?
	(Yes) <u>No</u>
	2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
	Septic tank Soakaway (pit latrine) None
	2.3 Does your house have indoor toilet(s)?
	Yes No
	2.4 How do you evaluate the current sewage services at your home?
	Very satisfied (Relatively satisfied) Average
	Relatively unsatisfied Very unsatisfied
	2.5 Reason of dissatisfaction
	Low discharging capability Sewage overflow Others
(	Foul odors High sewage charge
	3. Water consumption and demand Other water source(s) if any
	3.1 Monthly water charges of your household
	Water bill including sewage: 2,000 _ \$/month
	Drainage eg. septic tank / cess pool: \$/month
	Others: \$/month_for
	3.2 Monthly payment for other utilities services
	- JPS: $8000$ \$/month
	Cooking gas: Size of cylinder: $25$ lbs Price: $1800$ How long does it last: months
	Others: \$/month

#### [Portmore - Sewage conveyor facility development by the project]

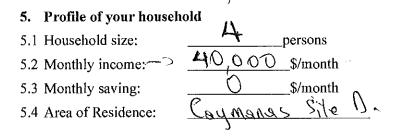
Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$100/month
 \$100/month

ame.

Please note that these payments would be in addition to your current monthly household expenditures.



#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:  $\frac{Housewife}{42}$ - Age:  $\frac{42}{E}M$

6.2 Head of the Household

- Occupation: \_
- Age:
  - Sex:

#### 7. Please feel free to write any opinion about sewage.

F

M

Thinks it is a good idea, but and is willing Foot the charges. To-

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

Yes

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(

1.1 Is your house connected to water supply system?

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

<u>Communal tap</u> <u>Well</u> <u>Rainwater</u> <u>Bottled water</u>

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

<u>No</u>

2.3 Does your house have indoor tollet(s)?

2.4 How do you evaluate the current sewage services at your home?

	Very satisfied H	Relatively satisfied	<u>Average</u>	
	Relatively unsatisfied	Very unsatisfie	d	
2.5	Reason of dissatisfaction			
	Low discharging capability	) <u>Sewage overflow</u>	Others	
	Foul odors	High sewage charge		
3.	Water consumption and demand	Other water so	ource(s) if any	
3.1	Monthly water charges of your hou	isehold		

 Water bill including sewage:
 SOTU.
 \$/month

 Drainage eg. septic tank / cess pool:
 \$/month

Others: \$/month\_for

3.2 Monthly payment for other utilities services

JPS: (<u>600 50</u> \$/month <u>Cooking gas: Size of cylinder: 3 Olbs Price: \$ 2/100 × How long does it last: 2 months</u> <u>Others:</u> \$/month

#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u> <u>\$200/month</u> <u>\$300/month</u> <u>\$400/month</u>

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- \_\_\_\_\_persons \_\_\_\_\_\_\$/month \_\_\_\_\_\_\$/month \_\_\_\_\_\_\$/month \_\_\_\_\_squardend

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: UNERAPIOY - Age: 64
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex: <u>F</u>
- 7. Please feel free to write any opinion about sewage.

F

SAME

<u>M</u>

UNHARPPY WITH the Scewage, and looking towards this programme.

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. Present status of wat	er supply			
.1 Is your house connected	ed to water supply s	ystem?		
Yes	<u>No</u>			
.2 Is your water connecti	on metered?			
(Yes	No			
.3 Use of other water sup	ply sources:			
Communal tap	Well Rainwa	ter Bottled y	vater	
. Present status of was	tewater treatment			
.1 Is your house connected				
(Yes	No	a generation de la companya de la co	1. M	
.2 If "No" to Q2.1, what	is the wastewater tr	eatment at your hour	se?	
Septic tank	Soakaway (pit lat			
.3 Does your house have	•	-		
(Yes)	No		1 A.	
.4 How do you evaluate		services at your hom	e?	
Very satisfied	All and a second s	ely satisfied)	Average	
Relatively unsati		Very uns	atisfied	
.5 Reason of dissatisfact	on			
Low discharging	capability	Sewage overflow	<u>Others</u>	
Foul odors		High sewage charge	ze	
			-	
. Water consumption a	and demand	Other wa	ater source(s) if any	[
.1 Monthly water charge	s of your household			
Water bill includ	ing sewage:	2000 \$/n	nonth	
Drainage eg. sep	tic tank / cess pool:	\$/n	nonth	
Others:	· · · · · · · · · · · · · · · · · · ·		nonth for	
.2 Monthly payment for	other utilities service	es		
JPS:	100001			
			30 How long does	<u>s it last: <i>i</i> months</u>
		<b>v</b>		

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#### [Portmore - Sewage conveyor facility development by the project]

\$200/month

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month

\$500/month

\$300/month

\$400/month

\$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons <u>timer </u>\$/month Bellerwe Hospital \$/month 24manas Gardens.

- 6. Profile of interviewee and household leader
- 6.1 Interviewee
  - Occupation:
  - Age: ....
  - Sex: ....
- F M

Retired

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- 6.2 Head of the Household
  - Occupation: -
  - Age:
  - Sex:

<u>F</u>

7. Please feel free to write any opinion about sewage. The rate that is charge which is quavalant to bill is tolelly unpier. 10 1 le

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Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes Y No
1.2 Is your water connection metered?
Yes No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
<u>Yes</u> <u>No</u>
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 2.500-3%/month
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month_for
3.2 Monthly payment for other utilities services
JPS:
Cooking gas: Size of cylinder: 25 lbs Price: \$ 1960. How long does it last: 1 months
Others: \$/month

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

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 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	persons
5.2 Monthly income:	\$/month
5.3 Monthly saving:	<u> </u>
5.4 Area of Residence:	CMYMANIAU GRADENS

#### 6. Profile of interviewee and household leader

6.1 Interviewee	
Plumen Occupation:	Plummer
53 Age:	53 YRJ
m plEsex:	$\underline{F}(\underline{M})$
6.2 Head of the Household	
- Occupation:	Same
- Age:	
- Sex:	F M

#### 7. Please feel free to write any opinion about sewage.

J Bridge port 42

Please circle the appropri	ate responses and answer all questions to the best of your ability.
1. Present status of wa	ter supply
1.1 Is your house connec	ted to water supply system?
Yes	No
1.2 Is your water connect	ion metered?
Yes	No
1.3 Use of other water su	pply sources:
Communal tap	Well Rainwater Bottled water
2. Present status of wa	
2.1 Is your house connec	ted to sewer collection network?
(Yes)	No
2.2 If "No" to Q2.1, wha	t is the wastewater treatment at your house?
Septic tank	<u>Soakaway (pit latrine)</u>
2.3 Does your house hav	e indoor toilet(s)?
Yes	No
2.4 How do you evaluate	the current sewage services at your home?
Very satisfied	Relatively satisfied Average
Relatively unsa	tisfied Very unsatisfied
2.5 Reason of dissatisfac	tion
Low dischargin	g capability Sewage overflow Others
Foul odors	High sewage charge
3. Water consumption	and demaud Other water source(s) if any
3.1 Monthly water charg	es of your household
Water bill inclu	ding sewage: # 270 0 \$/month
Drainage eg. se	ptic tank / cess pool: \$/month
Others:	\$/month_for
3.2 Monthly payment for	r other utilities services
JPS:	<u>6600 \$/month</u>
Cooking gas: S	ize of cylinder: 100 lbs Price: \$ 6000 How long does it last: 7 months
Others:	\$/month

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#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

\$500/month \$600/month 07 5°, DO	<u>\$100/month</u>	<u>\$200/month</u>	\$ <u>300/month</u>	<u>\$400/month</u>	
	<u>\$500/month</u>	<u>\$600/month</u>	\$0.	$\mathcal{O}$	

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Please note that these payments would be in addition to your current monthly household expenditures.

persons

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month \$/month Ø

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6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

F	$(\underline{M})$	

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Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection metered? Ýes No 1.3 Use of other water supply sources: Communal tap Rainwater Bottled water Well 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? No Yes 2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Others Low discharging capability Foul odors High sewage charge Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household 00 \$/month Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month for Others: 3.2 Monthly payment for other utilities services 5 000 JPS: \$/month Cooking gas: Size of cylinder: 100 lbs Price: \$ 6 Cov How long does it last: 5 months \$/month Others: 1

#### [Portmore – Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify amount in between)

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<u>\$100/month</u>	<u>\$200/month</u>	\$ <u>300/month</u>	<u>\$400/month</u>
<u>\$500/month</u>	<u>\$600/month</u>	A D	

Please note that these payments would be in addition to your current monthly household expenditures.

persons

#### 5. Profile of your household

### 5.1 Household size:

5.2 Monthly income:

\$/month

- 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month or

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

Occupation:

Onserver

Age:

....

Sex: ....

6.2 Head of the Household

- Occupation: 4
- Age:
- Sex:

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Please circle the appropri	ate responses and answer all questions to the best of your ability.
1. Present status of wa	ter supply
1.1 Is your house connect	ted to water supply system?
Yes	No
1.2 Is your water connect	ion metered?
(Yes)	No
1.3 Use of other water su	pply sources:
<u>Communal tap</u>	Well Rainwater Bottled water
2. Present status of wa	stewater treatment
2.1 Is your house connec	ted to sewer collection network?
Yes	No
2.2 If "No" to Q2.1, what	t is the wastewater treatment at your house?
Septic tank	Soakaway (pit latrine)
2.3 Does your house have	e indoor toilet(s)?
Yes	No
2.4 How $\overline{do}$ you evaluate	the current sewage services at your home?
Very satisfied	Relatively satisfied Average
Relatively unsat	
2.5 Reason of dissatisfac	ion
Low dischargin	g capability Sewage overflow Others
Foul odors	(High sewage charge)
3. Water consumption	
3.1 Monthly water charge	•
	ling sewage: \$ 4000 \$/month
	ptic tank / cess pool: \$/month
Others:	\$/month_for
3.2 Monthly payment for	
JPS:	\$ 6000 \$/month
	ze of cylinder: 100 lbs Price: \$6400 How long does it last: 6 months
Others:	<u>\$/month</u>

#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

<u>\$100/month</u>	<u>\$200/month</u>	\$ <u>300/month</u>	<u>\$400/month</u>
<u>\$500/month</u>	<u>\$600/month</u>	NOME	

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Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:\_\_\_\_\_\_\_\_persons5.2 Monthly income:\_\_\_\_\_\_\_\$/month5.3 Monthly saving:\_\_\_\_\_\_\_\$/month5.4 Area of Residence:\_\_\_\_\_\_\_\$Lidgepoint

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 7 Fechnician
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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	<u> </u>	
<u>F</u>	$(\underline{M})$	

Bottled water

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

1.2 Is your water connection metered?

Ē

1.3 Use of other water supply sources:

Communal tap Well Rainwater

No

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

No

2.3 Does your house have indoor toilet(s)?

Yes

Others:

2.4 How do you evaluate the current sewage services at your home?

Very satisfied	Relatively satisfied	Alexage
Relatively unsatisfied	Very unsatisfied	D
2.5 Reason of dissatisfaction	C	
Low discharging capability	Sewage overflow	Others
Foul odors	High sewage charge	
_		
3. Water consumption and deman	d Other water sou	urce(s) if any
3.1 Monthly water charges of your ho	ousehold	
Water bill including sewage:	: \$7000 \$/month	
Drainage eg. septic tank / ce	ss pool: \$/month	
Others:	\$/month	for
3.2 Monthly payment for other utilitie	es services	
JPS: 5000	\$/month	
Cooking gas: Size of cylinde	er: Ibs Price: \$ H	Iow long does it last: months

\$/month

#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

(

<u>\$100/month</u>	<u>\$200/month</u>	\$ <u>300/month</u>	<u>\$400/month</u>
<u>\$500/month</u>	<u>\$600/month</u>	<b>H</b>	nil

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	/persons
5.2 Monthly income:	\$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	BRIDGEPORT

#### 6. Profile of interviewee and household leader

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#### 6.1 Interviewee

- Occupation:

Age: ----

- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

TEACHER 34

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Please circle the appropri-	ate responses and answer	all questions to the bes	t of your abili	<u>ty.</u>
1. Present status of wa	ter supply			
1.1 Is your house connect	ed to water supply system	1?		
(Yes)	<u>No</u>			
1.2 Is your water connect	ion metered?			
Yes	<u>No</u>			
1.3 Use of other water su	oply sources:			
Communal tap	Well Rainwater	Bottled water		
·				
2. Present status of was	stewater treatment			
2.1 Is your house connect	ed to sewer collection net	work?		
(Yes)	<u>No</u>			
2.2 If "No" to Q2.1, what	is the wastewater treatme	ent at your house?		
Septic tank	Soakaway (pit latrine)			
2.3 Does your house have	indoor toilet(s)?			
Yes	No			
2.4 How do you evaluate	the current sewage service	es at your home?		
Very satisfied	Relatively sat	tisfied	<u>Average</u>	-
Relatively unsat	isfied	Very unsatisfied	and the second s	
2.5 Reason of dissatisfact	ion			
Low discharging	capability Sew	age overflow	Others	· · · · · · · · · · · · · · · · · · ·
Foul odors	Hig	h sewage charge		
		az latz-nazmen nači výve französsen výsku zajem angli stran v fernén el konstrukció konstrukció na s		L,
3. Water consumption	and demand	Other water sour	rce(s) if any	
3.1 Monthly water charge				
Water bill inclue	ing sewage: 31	がい <u>\$/month</u>		
	tic tank / cess pool:	\$/month		
Others:		\$/month	for	
3.2 Monthly payment for	other utilities services			L
<u>JPS:</u>	4500 \$/mo	<u>nth</u>		
/	ze of cylinder: <u>30 lbs</u>	Price: \$ 200 PH	ow long does	it last: months
Others:	\$/mo		-	

#### [Portmore – Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

<u>\$100/month</u> <u>\$200/month</u>

\$300/month \$400/month

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<u>\$500/month</u> <u>\$600/month</u>

Please note that these payments would be in addition to your current monthly household expenditures.

persons

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#### 5. Profile of your household

- 5.1 Household size: <u>3</u>
- 5.2 Monthly income: \_\_\_\_\_\$/month
- 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month REPORT

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation:
- Age:
- Sex:

- *₩*0
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Present status of wat	ter supply					
1.1 Is your house connect	ed to water sup	ply system?				
Yes	<u>No</u>					
1.2 Is your water connect	ion metered?					
Yes	<u>No</u>					
1.3 Use of other water su	pply sources:					
Communal tap	<u>Well</u> Rai	nwater	Bottled wate	er v		
2. Present status of was	stewater treatn	ient				·
2.1 Is your house connect	ed to sewer col	ection networ	k?			
Yes V	<u>No</u>					
2.2 If "No" to Q2.1, what	is the wastewar	ter treatment a	t your house?			
Septic tank	<u>Soakaway (p</u>	it latrine)				
2.3 Does your house have	e indoor toilet(s)	17				
<u>Yes</u>	No					
2.4 How do you evaluate	the current sew	age services a	t your home?			
Very satisfied	Rel	atively satisfi	ed 🗸	Average		
Relatively unsat	<u>isfied</u>		Very unsatis	fied		
2.5 Reason of dissatisfact	ion					
Low discharging	<u>capability</u>	Sewage	overflow	Others		
Foul odors		<u>High se</u>	wage charge			
3. Water consumption	and demand		Other water	source(s) if any	<b></b>	
3.1 Monthly water charge	s of your house	hold				
Water bill includ	ling sewage: 🏾 🎜	1200.00	2 \$/mon	th		
Drainage eg. ser			\$/mon	<u>th</u>		
Others:			\$/mon	<u>th for</u>		
3.2 Monthly payment for	other utilities se	ervices			1	
JPS: \$3,500	00	\$/month			_	
Cooking gas: Siz	ze of cylinder: /	oo lbs Pr	ice: \$?	How long does	it last: ?	months
Others:	۶	\$/month				
		•				

#### [Portmore – Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you, were to receive the satisfactory sewerage service as explained above, how much would you agree to pay <u>in</u> addition to the current sewage charges? (Choose one or specify amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	2	persons
5.2 Monthly income:		\$/month
5.3 Monthly saving:	?	\$/month
5.4 Area of Residence:	BRIDGEN	PORT

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

-	Occupation:	RETIREE

- Age: \_\_\_\_\_\_
- Sex:  $\underline{F} \underline{M}$
- 6.2 Head of the Household
  - Occupation: <u>RETIREE</u>
  - Age: <u>70</u>
  - Sex:  $\underline{F} \underline{M} \checkmark$

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Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

Yes

Yes

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1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Soakaway (pit latrine) Septic tank

<u>No</u>

2.3 Does your house have indoor toilet(s)?

2.4 How do you evaluate the current sewage services at your home?

Relatively satisfied Very satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction

Low discharging capability Foul odors

Sewage overflow

High sewage charge

Others

3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household 4 ( NR. N \$/month Water bill including sewage: \$/month Drainage eg. septic tank / cess pool Others: \$/month for

3.2 Monthly payment for other utilities services

JPS: 15-70,054. \$/month Cooking gas: Size of cylinder: 100 lbs Price: \$ 2 500 How long does it last: 3-4 months Othersp 2, 05 (phone) \$/month \$ 5,000.05 (children) 1

#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	< <u>\$1,000/month</u>	
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
\$	? I	VSt Sure.	

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

F

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

	_persons
16,250,000	∑_\$/month
φ'	\$/month
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# 7. Please feel free to write any opinion about sewage.

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<u>i lease chere ine appropriat</u>	e responses and answe	r all questions to the be	st of your abili	<u>ty.</u>
1. Present status of wate	r supply			
1.1 Is your house connected to water supply system?				
(Yes)	<u>No</u>			
1.2 Is your water connection	n metered?			
(Yes)	No			
1.3 Use of other water supp	bly sources:		L L	
<u>Communal tap</u>	Well Rainwater	Bottled water	NA	
2. Present status of wast	ewater treatment			
2.1 Is your house connected	to sewer collection n	etwork?		
Yes	No			
2.2 If "No" to Q2.1, what is	s the wastewater treatr	nent at your house?		
Septic tank	Soakaway (pit latrine			
2.3 Does your house have i	ndoor toilet(s)?			
Yes	No			
2.4 How do you evaluate the	e current sewage serv	ices at your home?		<b>`</b>
Very satisfied	Relatively s	<u>satisfied</u>	( <u>Average</u>	)
Relatively unsatis	fied	Very unsatisfied		
2.5 Reason of dissatisfaction	n			
Low discharging	capability Se	ewage overflow	Others	
(Foul odors)	<u>H</u>	igh sewage charge		
3. Water consumption an	nd demand	Other water sou	urce(s) if any	[]
3.1 Monthly water charges	of your household			
Water bill including	ng sewage:	4,000.00 \$/month		
Drainage eg. septi	c tank / cess pool:	\$/month		
Others:		\$/month_	for	
3.2 Monthly payment for o	ther utilities services			
JPS:	<u> </u>	ionth .		
Cooking gas: Size	of cylinder: lb	s Price: \$ NA.	How long doe	s it last: months
Others: 06,	000.00 (More) \$/r			

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

<u>\$600/month</u>	<u>\$800/month</u>	(\$1,000/month)	
<u>\$1,200/month</u>	<u>\$1,400/month</u>	\$1,600/month	
\$ 2 0 000.	30		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household 7. Please feel free to write any opinion 5.1 Household size: \_\_\_\_persons about sewage. 570 000. 00 \$/month 5.2 Monthly income: ADDOO. Nomonth 5.3 Monthly saving: Hove PASTURES. 5.4 Area of Residence: 6. Profile of interviewee and household leader 6.1 Interviewee MaintenANCE Engineer 56. Occupation: \_ Age: Sex: F 6.2 Head of the Household Occupation: Age: Sex: F M

Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? No 1.2 Is your water connection metered? <u>No</u> Yes 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? No Yes 2.2 If "No" to O2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? No Yes 2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied Average Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household 400.00 \$/month Water bill including sewage: **এ**কা Drainage eg. septic tank / cess pool: \$/month \$/month for Others: 3.2 Monthly payment for other utilities services 21,000.00 JPS: \$/month Cooking gas: Size of cylinder: Ibs Price: \$ How long does it last: months 10,000.00 Others: \$/month (phone) 1

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

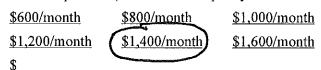
How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

\$/month

(i) Monthly sewage charges:



(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

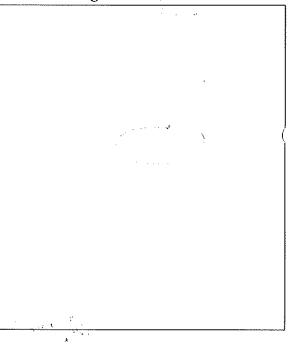
#### 6. Profile of interviewee

- 6.1 Interviewee
  - Occupation: -
  - Age: -
  - Sex: -
- 6.2 Head of the Household
  - Occupation: -
  - Age:
  - Sex:

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- F M

7. Please feel free to write any opinion about sewage.



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Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection metered?  $\underline{\text{Yes}}$   $\mathcal{V}$ No 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Not Yes 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) V Septic tank 2.3 Does your house have indoor toilet(s)? Yes 1/ No 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied V Very satisfied <u>Average</u> Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others Environmer Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month Others: \$/month for 3.2 Monthly payment for other utilities services 10.000-00 JPS: \$/month Cooking gas: Size of cylinder: 100 Ibs Price: \$ 4,800 How long does it last: 8 months Others: \$/month 1

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

for these expenses, (choose one of speeny uniount in between)					
<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>			
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>			
\$					

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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	80	000.	UU	\$/month
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	140	be	la	stures
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# 7. Please feel free to write any opinion about sewage.

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

Yes

Yes

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1.1 Is your house connected to water supply system?

<u>No</u>

<u>No</u>

I.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater

Bottled water

NA

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network? No

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Soakaway (pit latrine) Septic tank

No

2.3 Does your house have indoor toilet(s)?

2.4 How do you evaluate the current sewage services at your home?

(Very satisfied) Relatively satisfied <u>Average</u> Relatively unsatisfied Very unsatisfied

2.5 Reason of dissatisfaction

Low discharging capability Sewage overflow Others Foul odors High sewage charge

#### 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household Water bill including sewage: \$/month <u>300 (</u> Drainage eg. septic tank / cess pool \$/month Others: \$/month for 2000 3.2 Monthly payment for other utilities services JPS: \$/month 000Cooking gas: Size of cylinder: lbs Price: \$ How long does it last: months 960 \$/month Others: (phune)

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

(\$600/month)	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$	```	

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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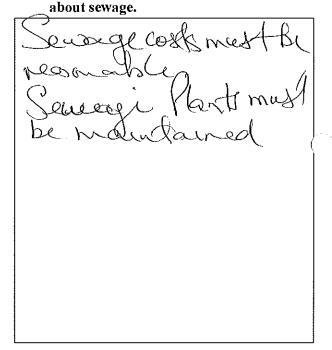
M

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

 $\frac{3}{100,000} \text{ persons}$   $\frac{100,000}{\text{$/month}}$   $\frac{100}{100} \text{$/month}$   $\frac{100}{100} \text{$/month}$ 

## 7. Please feel free to write any opinion



Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? No Yes ) 1.2 Is your water connection metered? Yes ( No ff 1.3 Use of other water supply sources: Well Bottled water NON Communal tap <u>Rainwater</u> 2. Present status of wastewater treatment k 2.1 Is your house connected to sewer collection network? Yes V No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes V No 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Very satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household WW HUNDREI Dolbar Water bill including sewage: Jow / hqi SAD \$/month Drainage eg. septic tank / cess pool: \$/month Others: \$/month for 3.2 Monthly payment for other utilities services gouNT 1000 Lo JPS: 13,000 \$/month/ Cooking gas: Size of cylinder: 1000 Ibs Price: \$2000 How long does it last: PHONF months Others: AA \$/month

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#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$400/month \$300/month \$100/month \$200/month \$500/month \$600/month

28 100 \$/month

Please note that these payments would be in addition to your current monthly household expenditures.

\$/month

## 5. Profile of your household FIVE Performs

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - ..... Age:
  - Sex: ....
- 6.2 Head of the Household
  - Occupation: ....
  - Age:
  - Sex:

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#### 7. Please feel free to write any opinion about sewage.

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I WOOD LIKE TO SEE IT MOVE TO A NEW LOW COLTINO (WTP)

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# 54

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropriate responses and answer all questions to the best of your ability.

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#### 1. Present status of water supply 1.1 Is your-house connected to water supply system? No Yes 1.2 Is your water connection metered? No 1.3 Use of other water supply sources; N Bottled water Well Rainwater Communal tap 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? No Yes 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? Yes <u>No</u> 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Average Very satisfied Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others oul odors High sewage charge Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household 600 Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month \$/month for Others: 3.2 Monthly payment for other utilities services IPS: 7 0 0 Cooking gas: Size of cylinder: Size 2-3 weels \$/month Ibs Price: \$ \, 800 How long does it last: 10 months one Others: 3,000 for \$/month able 1,800

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size: 5.2 Monthly income: 5.3 Monthly saving: 5.4 Area of Residence:  $\frac{2}{Pensioner} s/month$   $\frac{1}{2} N. I < N. I <$ 

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#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: <u>Ketired</u>
  - Age: - Sex:
  - John .
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

#### 7. Please feel free to write any opinion about sewage.

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Very dissatisfied with the smell that the plant gives. She to affected I am affected at home and also whilst at church. There was no initially, atter installing more tanks the smell became apparent. 2

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	Please circle the appropriate responses and answer all questions to the best of your ability.						
	1. Present status of water supply						
	1.1 Is your house connected to water supply system?						
	Yes <u>No</u>						
	1.2 Is your water connection metered?						
	Yes <u>No</u>						
	1.3 Use of other water supply sources:						
(	Communal tap Well Rainwater Bottled water						
	2. Present status of wastewater treatment						
	2.1 Is your house connected to sewer collection network?						
	Yes No						
	2.2 If "No" to Q2.1, what is the wastewater treatment at your house?						
	Septic tank Soakaway (pit latrine)						
	2.3 Does your house have indoor toilet(s)?						
	Yes No						
	2.4 How do you evaluate the current sewage services at your home?						
	Very satisfied Relatively satisfied Average						
	Relatively unsatisfied Very unsatisfied						
	2.5 Reason of dissatisfaction						
ί.	Low discharging capability Sewage overflow Others						
(	Foul odors High sewage charge						
	3. Water consumption and demand Other water source(s) if any						
	3.1 Monthly water charges of your household						
	Water bill including sewage: 1853. 5 \$/month						
	Drainage eg. septic tank / cess pool: \$/month						
	Others: \$/month for						
	3.2 Monthly payment for other utilities services						
	JPS: 2587. 67 \$/month						
	Cooking gas: Size of cylinder: 75 lbs Price: \$/37 How long does it last: / months						
	Others: \$450.12 \$/month for Jele + Boble						
	-						

#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

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<u>\$100/month</u> <u>\$200/month</u> <u>\$400/month</u>

Please note that these payments would be in addition to your current monthly household expenditures.

persons

\$/month

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

6. Profile of interviewee and household leader

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- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
    - x: <u>F</u>
- 6.2 Head of the HouseholdOccupation:
  - .
  - Age: - Sex:
- M

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7. Please feel free to write any opinion about sewage.

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1. Present status of water supply         1.1 Is your house connected to water supply system?         Ves       No         1.2 Is your water connection metered?         Ves       No         1.3 Use of other water supply sources:         Communal tap       Well         Relatively used indoor toilet(s)?         Ves       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Ves       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         Very unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Sewage overflow       Others         1.1 Monthly water charges of your household       \400         Water toil including sewage:       \$\frac{300}{300000000000000000000000000000000	Please circle the appropriat	te responses and	answer all que	stions to the best	t of your abili	ty.
Vess       No         1.2 Is your water connection metered?       No         1.3 Use of other water supply sources:       Communal tap       Weil       Rainwater       Bottled water         2. Present status of wastewater treatment       2.1 Is your house connected to sewer collection network?       No         2.1 Is your house connected to sewer collection network?       Yess       No         2.1 If "No" to Q2.1, what is the wastewater treatment at your house?       Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?       Yess       No         2.4 How do you evaluate the current sewage services at your home?       Average         Very satisfied       Relatively satisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability       Sewage overflow       Others	1. Present status of wate	er supply				
1.2 Is your water connection metered?         Image: Second Status of Water Supply sources:         Communal tap       Well         Rainwater       Bottled water         2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Image: Ves       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Ves       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         Low discharging capability       Sewage overflow         Others	1.1 Is your house connecte	d to water supply	√ system?			
No         1.3 Use of other water supply sources:         Communal tap       Well       Rainwater       Bottled water         2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?       Yes       No         2.4 How do you evaluate the current sewage services at your home?       Average         Very satisfied       Relatively satisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability       Sewage overflow       Others         3. Water consumption and demand       Other water source(s) if any       Migh sewage:       S/month         3.1 Monthly water charges of your household \4000       Mater bill including sewage:       S/month       Month         Others:       S/month       S/month       Month       Month         3.2 Monthly payment for other utilities services       S/month       Month       Month	Yes	<u>No</u>				
1.3 Use of other water supply sources:         Communal tap       Well       Rainwater       Bottled water         2. Present status of wastewater treatment       2.1 Is your house connected to sewer collection network?       Vas       No         2.1 Is your house connected to sewer collection network?       Vas       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?       Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?       Vas       No         2.4 How do you evaluate the current sewage services at your home?       Very satisfied       Average         Relatively unsatisfied       Very unsatisfied       Average         2.5 Reason of dissatisfaction       Low discharging capability       Sewage overflow       Others         3. Water consumption and demand       Other water source(s) if any          3.1 Monthly water charges of your household \1400       \400       \Mater bill including sewage:       \frac{3400-45}{3/month}         Drainage eg. septic tank / cess pool:       \$/month            3.2 Monthly payment for other utilities services       J300 \$/month	1.2 Is your water connection	on metered?				
Communal tap       Well       Rainwater       Bottled water         2. Present status of wastewater treatment       2.1 Is your house connected to sewer collection network?       Yes       No         2.1 Is your house connected to sewer collection network?       Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?       Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?       Yes       No         2.4 How do you evaluate the current sewage services at your home?       Average         Very satisfied       Relatively satisfied       Average         Relatively unsatisfied       Very unsatisfied       Average         2.5 Reason of dissatisfaction       Low discharging capability       Sewage overflow       Others	(Yes)	<u>No</u>				
2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         Low discharging capability       Sewage overflow       Others         Foul odors       High sewage charge	1.3 Use of other water sup	ply sources:				
<ul> <li>2.1 Is your house connected to sewer collection network? <ul> <li>Yes</li> <li>No</li> </ul> </li> <li>2.2 If "No" to Q2.1, what is the wastewater treatment at your house? <ul> <li>Septic tank</li> <li>Soakaway (pit latrine)</li> </ul> </li> <li>2.3 Does your house have indoor toilet(s)? <ul> <li>Yes</li> <li>No</li> </ul> </li> <li>2.4 How do you evaluate the current servage services at your home? <ul> <li>Very satisfied</li> <li>Relatively satisfied</li> <li>Very unsatisfied</li> </ul> </li> <li>2.5 Reason of dissatisfaction <ul> <li>Low discharging capability</li> <li>Sewage overflow</li> <li>Others</li> <li>Other water source(s) if any</li> </ul> </li> <li>3.1 Monthly water charges of your household \400 <ul> <li>Water bill including sewage: \$/month</li> <li>Drainage eg. septic tank / cess pool: \$/month</li> <li>Others: \$/month</li> <li>Others: \$/month</li> <li>for</li> </ul> </li> </ul>	Communal tap	Well Rain	vater I	Bottled water		
Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)? Yes         Yes       No         2.4 How do you evaluate the current sewage services at your home? Very satisfied         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Image: Average         Low discharging capability       Sewage overflow       Others         Foul odors       (High sewage charge)	2. Present status of was	tewater treatme	nt			
<ul> <li>2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine)</li> <li>2.3 Does your house have indoor toilet(s)? Yes No</li> <li>2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied Relatively unsatisfied Very unsatisfied</li> <li>2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others Foul odors</li> <li>3. Water consumption and demand Other water source(s) if any</li> <li>3.1 Monthly water charges of your household \400 Water bill including sewage: \$300 \$/month Drainage eg. septic tank / cess pool: \$/month Others: \$/month for</li> <li>3.2 Monthly payment for other utilities services JPS: \$300 \$/month</li> </ul>	2.1 Is your house connected	d to sewer collect	tion network?			
Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?       No         Yes       No         2.4 How do you evaluate the current sewage services at your home?       Average         Very satisfied       Relatively satisfied       Average         Relatively unsatisfied       Very unsatisfied       Average         2.5 Reason of dissatisfaction       Low discharging capability       Sewage overflow       Others         Foul odors       High sewage charge	(Yes)	<u>No</u>				
2.3 Does your house have indoor toilet(s)?         Yes       No         2.4 How do you evaluate the current sewage services at your home?         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         Average         2.5 Reason of dissatisfaction         Low discharging capability       Sewage overflow         Others         Foul odors         High sewage charge         3. Water consumption and demand         Other water source(s) if any         3.1 Monthly water charges of your household \1400         Water bill including sewage:       \$/month         Drainage eg. septic tank / cess pool:       \$/month         Others:       \$/month         3.2 Monthly payment for other utilities services         JPS:       \$300 \$/month	2.2 If "No" to Q2.1, what	is the wastewate	treatment at y	our house?		
Yes       No         2.4 How do you evaluate the current sewage services at your home?       Average         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Very unsatisfied         Low discharging capability       Sewage overflow       Others         Foul odors       High sewage charge	Septic tank	<u>Soakaway (pit</u>	<u>latrine)</u>			
2.4 How do you evaluate the current sewage services at your home?       Average         Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Low discharging capability       Sewage overflow         Foul odors       High sewage charge         3. Water consumption and demand       Other water source(s) if any         3.1 Monthly water charges of your household \1400         Water bill including sewage:       \$/month         Drainage eg. septic tank / cess pool:       \$/month         Others:       \$/month         3.2 Monthly payment for other utilities services         JPS:       \$300 \$/month	2.3 Does your house have	indoor toilet(s)?				
Very satisfied       Relatively satisfied         Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability         Sewage overflow       Others         Foul odors       High sewage charge         3. Water consumption and demand       Other water source(s) if any         3.1 Monthly water charges of your household \400         Water bill including sewage:       \$/month         Drainage eg. septic tank / cess pool:       \$/month         Others:       \$/month         3.2 Monthly payment for other utilities services         JPS:       \$300 \$/month	$\left(\underline{\text{Yes}}\right)$	<u>No</u>			1	
Relatively unsatisfied       Very unsatisfied         2.5 Reason of dissatisfaction       Low discharging capability       Sewage overflow       Others         Foul odors       High sewage charge       Others         3. Water consumption and demand       Other water source(s) if any         3.1 Monthly water charges of your household \400       Water bill including sewage: \$\$\frac{390-453}{590-453}\$/month         Drainage eg. septic tank / cess pool:       \$/month         Others:       \$/month         3.2 Monthly payment for other utilities services       JPS: \$\frac{300}{5300}\$/month	2.4 How do you evaluate t	he current sewag	e services at y	our home?	$\frown$	
<ul> <li>2.5 Reason of dissatisfaction <ul> <li>Low discharging capability</li> <li>Foul odors</li> </ul> </li> <li>3. Water consumption and demand <ul> <li>Other water source(s) if any</li> </ul> </li> <li>3.1 Monthly water charges of your household \400 <ul> <li>Water bill including sewage: <ul> <li>Smonth</li> <li>Drainage eg. septic tank / cess pool:</li> <li>S/month</li> <li>Others: <ul> <li>S/month</li> <li>for</li> </ul> </li> <li>3.2 Monthly payment for other utilities services <ul> <li>JPS: <ul> <li>Jac</li> <li>S/month</li> </ul> </li> </ul></li></ul></li></ul></li></ul>	Very satisfied	<u>Relat</u>	ively satisfied		Average	
Low discharging capability Foul odors 3. Water consumption and demand 3.1 Monthly water charges of your household \400 Water bill including sewage: +340+53 \$/month Drainage eg. septic tank / cess pool: \$/month Others: \$/month for 3.2 Monthly payment for other utilities services JPS: 5-30-3-15300 \$/month	Relatively unsati	sfied	• -	Very unsatisfied		
Foul odors       High sewage charge         3. Water consumption and demand       Other water source(s) if any         3.1 Monthly water charges of your household 1400       Water bill including sewage:         Water bill including sewage:       Shorth         Drainage eg. septic tank / cess pool:       S/month         Others:       S/month         S.2 Monthly payment for other utilities services         JPS:       Soo \$/month	2.5 Reason of dissatisfacti	on				
3. Water consumption and demand       Other water source(s) if any         3.1 Monthly water charges of your household \400         Water bill including sewage:       \$\frac{340-5}{3}\$ \$\mathcal{s}\$ month         Drainage eg. septic tank / cess pool:       \$\mathcal{s}\$/month         Others:       \$\mathcal{s}\$/month         3.2 Monthly payment for other utilities services         JPS:       \$\frac{3}{300}\$/month	Low discharging	capability	Sewage o	verflow	<b>Others</b>	
3.1 Monthly water charges of your household \400         Water bill including sewage:         Water bill including sewage: <td>Foul odors)</td> <td></td> <td>High sewa</td> <td>age charge</td> <td></td> <td></td>	Foul odors)		High sewa	age charge		
3.1 Monthly water charges of your household \400         Water bill including sewage:         Water bill including sewage: <td></td> <td></td> <td></td> <td></td> <td></td> <td>Landon and San San San San San San San San San San</td>						Landon and San
Water bill including sewage:       300-653       \$/month         Drainage eg. septic tank / cess pool:       \$/month         Others:       \$/month       for         3.2 Monthly payment for other utilities services       JPS: 5300 \$/month       5300 \$/month	3. Water consumption a	and demand		Other water sour	rce(s) if any	
Drainage eg. septic tank / cess pool:       \$/month         Others:       \$/month         3.2 Monthly payment for other utilities services         JPS:       \$300 \$/month	3.1 Monthly water charges	s of your househo	old 1,400			
Drainage eg. septic tank / cess pool:       \$/month         Others:       \$/month         3.2 Monthly payment for other utilities services         JPS:       \$300 \$/month	Water bill includ	ing sewage: 👎	390-6-3	<u> </u>		
3.2 Monthly payment for other utilities services JPS: 5308-231 5300 \$/month			ι	\$/month		
JPS: 5-30-8-2-1-5300 \$/month	Others:			\$/month	for	
JPS: 5-308-3-1 5300 \$/month	3.2 Monthly payment for	other utilities ser	vices			L
						~
Cooking gas: Size of cylinder: 100 lbs Price: \$ 5,00 How long does it last: months	Cooking gas: Siz	e of cylinder: \	O lbs Price	<u>: \$ 5,000н</u>	ow long does	<u>it last: Smonths</u>
Others: $2, 00$ $$/month$ for				, í		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- <u>2</u>, persons <u>3,000</u> \$/month <u>6</u> \$/month Independence City

Same.

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

6.2 Head of the Household

- Occupation:
- Age:
  - Sex: <u>F</u>

#### 7. Please feel free to write any opinion about sewage.

F

Μ

<u>M</u>

It is necessary, and I hope to see it come through in my time.

Retired Brand Manager Tropical Bothery

	Please circle the appropriate responses and answer all questions to the best of your ability.
	1. Present status of water supply
	1.1 Is your house connected to water supply system?
	Yes No
	1.2 Is your water connection metered?
	(Yes) <u>No</u>
	1.3 Use of other water supply sources:
	Communal tap Well Rainwater Bottled water
	2. Present status of wastewater treatment
	2.1 Is your house connected to sewer collection network?
	(Yes) No
	2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
	Septic tank Soakaway (pit latrine)
	2.3 Does your house have indoor toilet(s)?
	(Yes) <u>No</u>
	2.4 How do you evaluate the current sewage services at your home?
	Very satisfied     (Relatively satisfied)     Average
	Relatively unsatisfied Very unsatisfied
	2.5 Reason of dissatisfaction
-	Low discharging capability Sewage overflow Others
	Foul odors     High sewage charge
	3. Water consumption and demand Other water source(s) if any
	3.1 Monthly water charges of your household
	Water bill including sewage: 3000 \$/month
	Drainage eg. septic tank / cess pool: \$/month
	Others: \$/month for
	3.2 Monthly payment for other utilities services
	<u>JPS: <math>6000</math> \$/month</u>
	Cooking gas: Size of cylinder: 25 Ibs Price: \$ 1,500How long does it last: months
	Others: \$/month for Te

## 57

#### 4. Willingness to pay for sanitation services

#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u> <u>\$200/month</u> <u>\$300/month</u> <u>\$400/month</u>

Please note that these payments would be in addition to your current monthly household expenditures.

persons

#### 5. Profile of your household

5.1 Household size:

5.2 Monthly income:

- >>> 5.3 Monthly saving:
  - 5.4 Area of Residence:
- \_\_\_\_\_\$/month \_\_\_\_\_\$/month \_\_\_\_\_\_\$/ence City

Housewife.

Μ

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#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

ausewife ,awb

#### 7. Please feel free to write any opinion about sewage.

If something can be constructed that will improve the system, then I am in agreeance.

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Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes No
1.2 Is your water connection metered?
(Yes) No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
<u>Yes</u> <u>No</u>
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Ves <u>No</u>
2.4 How do you evaluate the current sewage services at your home?
Very satisfied (Relatively satisfied) Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors     High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 4500 \$/month
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month for
3.2 Monthly payment for other utilities services
JPS: NO OOO \$/month 3wks
Cooking gas: Size of cylinder: 35 lbs Price; \$ 1,800 How long does it last: months
Others: \$/month for

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

persons

\_\$/month \$/month

Goldus

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: Security Officer- Age: <math>48- Sex: F(M)6.2 Head of the Household - Occupation: Same- Age: - Sex: F(M)

<u>20,000</u>

Hamilton

#### 7. Please feel free to write any opinion about sewage.

will reduce the odor in the area, then support the project.

	59
Preparatory Survey for Kingston Sewerage Developme Questionnaire for <del>North Kingsto</del> n Area Brimore	nt Project
Please circle the appropriate responses and answer all questions to the best of you	<u>ur ability.</u>
1. Present status of water supply	
1.1 Is your house connected to water supply system?	
Yes (No)	
1.2 Is your water connection metered?	
Yes No	
1.3 Use of other water supply sources:	
Communal tap Well Rainwater Bottled water	
2. Present status of wastewater treatment	
2.1 Is your house connected to sewer collection network?	
Yes No	
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?	
Septic tank Soakaway (pit latrine)	
2.3 Does your house have indoor toilet(s)?	
Yes No	
2.4 How do you evaluate the current sewage services at your home?	
<u>Very satisfied</u> <u>Relatively satisfied</u> ( <u>Aven</u>	age
Relatively unsatisfied Very unsatisfied	
2.5 Reason of dissatisfaction	
	thers
Foul odors (High sewage charge	1.000-7.000
3. Water consumption and demand Other water source(s) i	fany
3.1 Monthly water charges of your household	
Water bill including sewage: C \$/month	
Drainage eg. septic tank / cess pool: \$/month	
Others: \$/month for	
3.2 Monthly payment for other utilities services	·
JPS: O \$/month	<u>^</u>
Cooking gas: Size of cylinder: 25 lbs Price: \$1,500 How los	ng does it last: A months
Others: \$/month for	

#### [North-Kingston-Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>	
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
\$	(one	-time payment)	

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household .

- 5.1 Household size: 4
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month bev di

#### 6. Profile of interviewee and household leader

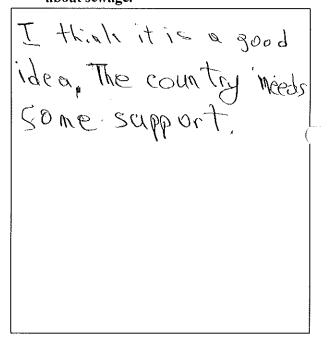
- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

<u>F</u> M

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## 7. Please feel free to write any opinion about sewage.



Please circle the a	ppropriate response	es and answer al	ll questions to the	best of your abil	lity.
1. Present statu	is of water supply				
1.1 Is your house	connected to water	supply system?	2		
<u>Yes</u>	<u>No</u>				
1.2 Is your water	connection metered	1?			
1 Yes	No				
1.3 Use of other	water supply source	s:			
Commu	<u>nal tap Well</u>	<u>Rainwater</u>	Bottled water	· N/A	
2. Present statu	s of wastewater tr	eatment			
2.1 Is your house	connected to sewer	collection netw	vork?		
Ves	No				
2.2 If "No" to Q2	.1, what is the wast	ewater treatmen	t at your house?		
Septic ta	ink <u>Soakawa</u>	<u>ıy (pit latrine)</u>			
2.3 Does your ho	use have indoor toil	et(s)?			
<u>Yes</u>	<u>No</u>				
2.4 How do you e	evaluate the current	sewage services	s at your home?		
<u>√Very sat</u>	isfied	Relatively satis	sfied	Average	
<u>Relative</u>	ly unsatisfied		Very unsatisf	īed	
2.5 Reason of dis	satisfaction				
Low dis	charging capability	Sewa	<u>ge overflow</u>	<b>Others</b>	
./ <u>Foul odd</u>	<u>)rs</u>	<u>High</u>	sewage charge		
3. Water consu	mption and deman	d	Other water	source(s) if any	
3.1 Monthly wate	r charges of your he				
Water bi	ll including sewage	: 90	D \$/mont	<u>h</u>	
Drainage	e eg. septic tank / ce	ess pool:	\$/montl	<u>h</u>	
Others:			\$/montl	<u>h</u> for	
3.2 Monthly payn	nent for other utiliti	es services			t
JPS:	800	\$/mont	t <u>h</u>		
<u>Cooking</u>	gas: Size of cylind	er: 25 lbs 1	Price: \$ 1300	How long does	it last: Q · months
Others:		\$/mon	<u>th</u> for		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \_\$600/month
 \$400/month
 \$400/month

Please note that these payments would be in addition to your current monthly household expenditures.

persons

\$/month

\$/month

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- 6. Profile of interviewee and household leader
- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- m: <u>Housekeep</u> HO NF M

Hamilton

- 6.2 Head of the Household
  - Occupation:
  - Age:

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Sex:

#### 7. Please feel free to write any opinion about sewage.

Ε LM

idea box the 0,000

Bolliff/collector

61

Please circle the appropriate response and answer all questions the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
$(\underline{Yes})$ <u>No</u>
1.2 Is your water connection metered?
(Yes) <u>No</u>
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water NA
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
<u>Ves</u> <u>No</u>
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
<u>Septic tank</u> Soakaway (pit latrine) $M_{\mathcal{D}}$
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied (Very unsatisfied)
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
(Foul odors) (High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 5000 \$/month
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month_for
3.2 Monthly payment for other utilities services
JPS: $V$ , $OOO$ \$/month
Cooking gas: Size of cylinder: 30 Ibs Price: \$1,980 How long does it last: 1 months
Others: \$/month

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#### [Portmore - Sewage conveyor facility development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is connected to the sewerage system and you pay sanitation tariffs to NWC. If you were to receive the satisfactory sewerage service as explained above, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify amount in between)

 \$100/month
 \$200/month
 300/month
 \$400/month

 \$500/month
 \$600/month
 \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

persons

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

20 00 JMD/month JMD/month Hornorthen Gordan

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Household leader
  - Occupation:
  - Age:
  - Sex:

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Please circle the appropriat	e responses and ansu	wer all questions to the best of your ability.
1. Present status of wate	r supply	
1.1 Is your house connecte	d to water supply sy	rstem?
(Yes)	<u>No</u>	
1.2 Is your water connection	on metered?	
( <u>Yes</u> )	<u>No</u>	
1.3 Use of other water supp	ply sources:	
<u>Communal tap</u>	<u>Well</u> <u>Rainwate</u>	er Bottled water
2. Present status of wast	ewater treatment	
2.1 Is your house connecte	d to sewer collection	n network?
Yes	<u>No</u>	
2.2 If "No" to Q2.1, what i	is the wastewater tre	atment at your house?
Septic tank	<u>Soakaway (pit latr</u>	ine)
2.3 Does your house have	indoor toilet(s)?	
(Yes)	<u>No</u>	
2.4 How do you evaluate t	he current sewage se	ervices at your home?
Very satisfied	Relative	ly satisfied Average
Relatively unsatis	sfied	Very unsatisfied
2.5 Reason of dissatisfaction	on	
Low discharging	capability	Sewage overflow Others
Foul odors		High sewage charge
3. Water consumption a	nd demand	Other water source(s) if any
3.1 Monthly water charges	of your household	
Water bill includi	ng sewage: 🕸	2,300. 0\$/month
Drainage eg. sept	ic tank / cess pool:	\$/month
Others:		<u>\$/month</u> for
3.2 Monthly payment for a		
JPS:	\$5,000.	
Cooking gas: Siz	e of cylinder: 25	Ibs Price: \$1,700. How long does it last: 7 works months
Others: BI	000. Cable 500- Phon	\$/month for
· \$	500- Phon	٩
1		

#### [Portmore - Sewage conveyor facility development by the project]

\$200/month

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u>

(\$30<u>0/month</u>

\$400/month

\$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

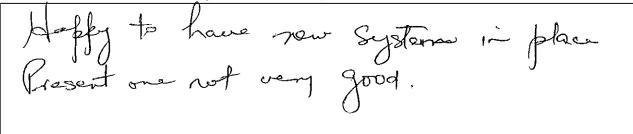
- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- persons か・\$/month 570 - \$/month

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

## es non 15.

#### 7. Please feel free to write any opinion about sewage.



Please circle the appropriate responses and answer all questions to the best of your ability.

1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection metered? No 1.3 Use of other water supply sources: Bottled water Communal tap Well <u>Rainwater</u> 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? (<u>No</u>) Yes 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank (Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? No (Yes) 2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others Foul odors High sewage charge Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household Water bill including sewage: 3,000 \$/month \$/month Never in 12 years Drainage eg. septic tank / cess pool: \$/month for Others: 3.2 Monthly payment for other utilities services 5-6 uks.

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#### [North Kingston Area – Street sewer development hy the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month \$/month

29

(i) Monthly sewage charges:

, (\$600/month)	<u>\$800/month</u>	<u>\$1,000/month</u>	
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
n <u>\$ 8,00(</u>	)		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

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- 5. Profile of your household
- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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7. Please feel free to write any opinion about sewage.

is a good 'idea i will 'improve water quality makes good sense

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

1.2 Is your water connection metered?

Yes

Yes

1.3 Use of other water supply sources:

Communal tap Well Rainwater

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

$$\left(\frac{No}{No}\right)$$

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

<u>Septic tank</u> (Soakaway)(pit latrine)

2.3 Does your house have indoor toilet(s)?

Yes

2.4 How do you evaluate the current sewage services at your home?

<u>No</u>

Very satisfiedRelatively satisfiedAverageRelatively unsatisfiedVery unsatisfied

2.5 Reason of dissatisfaction

Others:

Low discharging capability	Sewage overflow	Others	
Foul odors	High sewage charge		

3. Water consumption and de	mand	Oth	er water so	urce(s) if any		]
3.1 Monthly water charges of yo	ur household					
Water bill including sev	vage: \$2,4	400.00	<u>\$/month</u>			
Drainage eg. septic tanl	c / cess pool:	NIL	\$/month			
Others:		NIL.	\$/month	for		
3.2 Monthly payment for other u	tilities services				L	
<u>JPS:</u>	<u>15,000 \$/m</u>	onth				
Cooking gas: Size of cy	linder: 100 lbs	Price: \$	5,500	How long doe	es it last: 2 months	

\$/month

for

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/inonth</u>	I will have no
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>	choue but to pay He NWC Bill.
(ii) Initial payment for connection	\$	(one-	-time payment)	He NWC Bill.

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

5.1 Household size:	Persons
5.2 Monthly income:	\$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	BARBICHN

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation: <u>RETIRED BANK</u>OFFICER
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:

Sex:

- Age:
- <u>Retired</u> Accountant <u>70 f</u> F M

7. Please feel free to write any opinion about sewage.

The project 18 worthwile as it is best way to go in an expanding town/ community.

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

Yes

Ýes

Yes

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

<u>No</u>

2.3 Does your house have indoor toilet(s)?

Yes)

2.4 How do you evaluate the current sewage services at your home?

Very satisfied	Relatively satisfied	Average
<b>Relatively unsatisfied</b>	Very unsatisfied	

2.5 Reason of dissatisfaction

Low discharging capability	Sewage overflow	<u>Others</u>	
Foul odors	High sewage charge		

Bottled water

3. Water consumption and demand	0	ther water source	e(s) if any	
3.1 Monthly water charges of your household				
Water bill including sewage: \$300	0.50	\$/month		
Drainage eg. septic tank / cess pool:	0	\$/month		
Others:		\$/month	for	

3.2 Monthly payment for other utilities services

JPS: ( SOOV . OV	\$/month		
Cooking gas: Size of cylinder:	bs Price: \$	How long does it last: months	
Others: \$ 8000, 50	\$/month for	Flow	

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

500.10 \$/inonth

1000.00 \$/month

COSMETOLOGIST

Amê

BIASSUCKER

215	3.4		1
(1)	) Monthly	sewage	cnarges:

\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ 10,000	100 (on	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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M

6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

#### - Occupation:

- Age:
- Sex:

7. Please feel free to write any opinion about sewage.

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Please circle the appropriate responses and answer all questions to the best of your ability.

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(<sup>1</sup>)

1. Present status of water supply
1.1 Is your house connected to water supply system?
(Yes) No
1.2 Is your water connection metered?
Yes <u>No</u>
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
Yes No
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank (Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others Level of the buch both room & times
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
<u>Water bill including sewage:</u> $( 2, 500 \cdot 00 ) \text{month}$
Drainage eg. septic tank / cess pool: \$/month
Others: \$/mouth for
3.2 Monthly payment for other utilities services
JPS: <b>(a 3,000 · 00</b> \$/month
Cooking gas: Size of cylinder: 100 lbs Price: \$ 5,000 · 00 How long does it last: 6-7 months
Others: ( 3,800.00 (Mow) \$/month for

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

**(#100,000:00**\$/month

*latived* 

\$ 10, 000 . 00\$/month

Birdsucher (Drive)

64

(i) Monthly sewage charges:

\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ <u> </u>	20 (one	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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M

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

6.2 Head of the Household

- Occupation:

- Age:
- Sex:

7. Please feel free to write any opinion about sewage.

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Please circle the appropria	te responses and	<u>l answer all c</u>	uestions to the	<u>best of your abil</u>	<u>ity.</u>
1. Present status of wat	er supply				
1.1 Is your house connect	ed to water supp	oly system?			
(Yes)	<u>No</u>				
1.2 Is your water connect	on metered?				
$(\underline{Yes})$	<u>No</u>				
1.3 Use of other water suj	oply sources:				,
<u>Communal tap</u>	<u>Well</u> <u>Rai</u>	nwater	Bottled water		
2. Present status of was	tewater treatm	ent			
2.1 Is your house connect	ed to sewer coll	ection networ	k?		
Yes	$(\underline{No})$				
2.2 If "No" to Q2.1, what	is the wastewat	er treatment a	t your house?		
Septic tank	Soakaway (p	it latrine)			
2.3 Does your house have	indoor toilet(s)	?			
Yes	<u>No</u>				
2.4 How do you evaluate	the current sewa	ige services a	t your home?		
Very satisfied	<u>Rel</u>	atively satisfi	ed	Average	
Relatively unsat	isfied	**************************************	Very unsatisf	ied	
2.5 Reason of dissatisfact	ion				
Low discharging	<u>capability</u>	Sewage	overflow	<u>Others</u>	
Foul odors		<u>High se</u>	wage charge		
3. Water consumption	and demand		Other water	source(s) if any	
3.1 Monthly water charge	s of your house	hold	<i>(</i> )		
Water bill includ	ling sewage:	2	Sov s/mont	<u>h</u>	
Drainage eg. ser	tic tank / cess p	ool:	500 \$/mont	<u>h</u>	
Others:			\$/mont	<u>h</u> for	
3.2 Monthly payment for	other utilities se	rvices			L
JPS:	F1201	v \$/month	14		
Cooking gas: Si	ze of cylinder:	inv lbs Pi	ice: \$6300	How long doe	es it last: 6 months
Others:	4 6000	. # \$/month	for	TEL PHON	E JINTERNET
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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly	sewage	charges
(i) INDUMINY	Somago	viiai gos

(	\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
	\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
1	\$ 10,000.	ene (one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

persons \$/month \$/month ENDALE

Comparier

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about sewage.

7. Please feel free to write any opinion

On the face it seems a good idea. Showed be good for the environment.

TECHNICIAN

Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Present status of wa	ter supply			
1.1 Is your house connec	ted to water supply sy	/stem?		
Yes	No			
1.2 Is your water connec	tion metered?			
Yes	<u>No</u>			
1.3 Use of other water su	pply sources:			
<u>Communal tap</u>	<u>Well</u> <u>Rainwat</u>	er Bottled water	Ľ	
2. Present status of wa	stewater treatment			
2.1 Is your house connec	ted to sewer collectio	n network?		
Yes	<u>No</u> .		2 ?	
<u>Yes</u> 2.2 If "No" to <del>Q2.1</del> , wha	t is the wastewater tre	eatment at your house?		
Septic tank	<u>Soakaway (pit lat</u>			
2.3 Does your house hav	e indoor toilet(s)?			
Yes	No			
2.4 How do you evaluate	the current sewage s	ervices at your home?		
Very satisfied	Relative	ly satisfied	<u>Average</u>	
Relatively unsa	isfied 1	Very unsatisf	ied	
2.5 Reason of dissatisfac	tion	·		
Low dischargin	g capability	Sewage overflow	Others	
Foul odors		High sewage charge		
3. Water consumption	and demand	Other water	source(s) if any	
3.1 Monthly water charge	es of your household			
Water bill inclu	ling sewage:	<u> 4000 \$/mont</u>	<u>h</u>	
	otic tank / cess pool:	\$/montl	<u>h</u>	
Others:	-	\$/mont	<u>h</u> for	······································
3.2 Monthly payment for	other utilities service	ŚŚ	1	
JPS:	000	\$/month		
	ze of cylinder: 25		How long does	it last: 3 months
COURING gas, or		<u>lbs</u> Price: \$ 1700	TION IONE GOOD	

#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

\$/month

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Sales Rep

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>	
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
\$ 5000	(one-time payment)		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

area

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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#### 6.1 Interviewee

- Occupation:
- Age:
  - Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

7. Please feel free to write any opinion about sewage.

we Need This Service ASA.P

1. Present status of water supply	
1.1 Is your house connected to water supply system?	
(Yes) No	
1.2 Is your water connection metered?	
Yes <u>No</u>	
1.3 Use of other water supply sources:	
Communal tap Well Rainwater Bottled water	
2. Present status of wastewater treatment	
2.1 Is your house connected to sewer collection network?	
Yes	
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?	
Septic tank (Soakaway (pit latrine)	
2.3 Does your house have indoor toilet(s)?	
Yes No	
2.4 How do you evaluate the current sewage services at your home?	
Very satisfied (Relatively satisfied) Average	
Relatively unsatisfied Very unsatisfied	
2.5 Reason of dissatisfaction	]
Low discharging capability Sewage overflow Others	
(Foul odors) (High sanitation service tariff	1
3. Water consumption and demand Other water source(s) if any	
3.1 Monthly water charges of your household	
Water bill including sewage: 2,000, \$/month	·
$\frac{\text{Watch off mental mg sewage. } \circ $	
Others: \$/month_for	
3.2 Monthly payment for other utilities services	
JPS: 4,500 \$/month	
Cooking gas: Size of cylinder: 30 lbs Price: \ 950 \$ How long does it last: 2 mor	<u>thes</u>
Others: \$/month	

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

\$/month

\$/month

- (i) Monthly sewage charges:
- \$600/month
   \$800/month
   \$1,000/month

   \$1,200/month
   \$1,400/month
   \$1,600/month

   \$ $5 \circ 0 \circ 0$  \$

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

## 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- $\frac{e_{ng_{1n}eec.}}{22}$  E M

6.2 Head of the Household

Occupation:

- Age:
- Sex:

1	Banker	
	50	

M

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Please circle the appropr	iate responses and	d answer all questions to	the best of your abili	ity.
1. Present status of wa	ater supply			
1.1 Is your house connect	eted to water supp	oly system?		
Yes	<u>No</u>			
1.2 Is your water connec	tion metered?			
Yes	<u>No</u>			
1.3 Use of other water s	upply sources:			
<u>Communal tap</u>	<u>Well</u> <u>Rai</u>	nwater Bottled w	vater	
2. Present status of wa	astewater treatm	ient		
2.1 Is your house conne	cted to sewer coll	ection network?		
Yes	( <u>No</u> )			
2.2 If "No" to Q2.1, wha	at is the wastewat	er treatment at your hous	e?	
Septic tank	( <u>Soakaway (p</u>	it latrine)		
2.3 Does your house hav	ve indoor toilet(s)	?		
Yes	<u>No</u>			
2.4 How do you evaluat	e the current sewa	age services at your hom	e?	
Very satisfied	<u> </u>	atively satisfied	<u>Average</u>	
Relatively unsa	atisfied	Very unsa	atisfied	
2.5 Reason of dissatisfa	ction $\mathcal{N}\mathcal{R}$			
Low dischargin	ng capability	Sewage overflow	<u>Others</u>	
Foul odors		High sewage charge	e	
3. Water consumption	ı and demand	Other wa	ater source(s) if any	[
3.1 Monthly water charg	ges of your house	hold		
Water bill inclu	iding sewage:	\$2000, \$/n	<u>10nth</u>	
Drainage eg. se	eptic tank / cess p	ool: N/- \$/m	<u>ionth</u>	
Others:		N14 \$/11	<u>10nth</u> for	
3.2 Monthly payment for	•			
	\$ 8 0 0 0			
		1. Au D' ACA	O How long dog	e it last 12 months
Cooking gas: S	Size of cylinder:	/ <mark>SO lbs Price: \$G Ø4</mark> ). <u>\$/month</u> for	. How long use	$\frac{1}{3}$ it last. $1 \sim $ months

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# [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$ <u></u>	(one	-time payment)

persons

\$/month

\$/month

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Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

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- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

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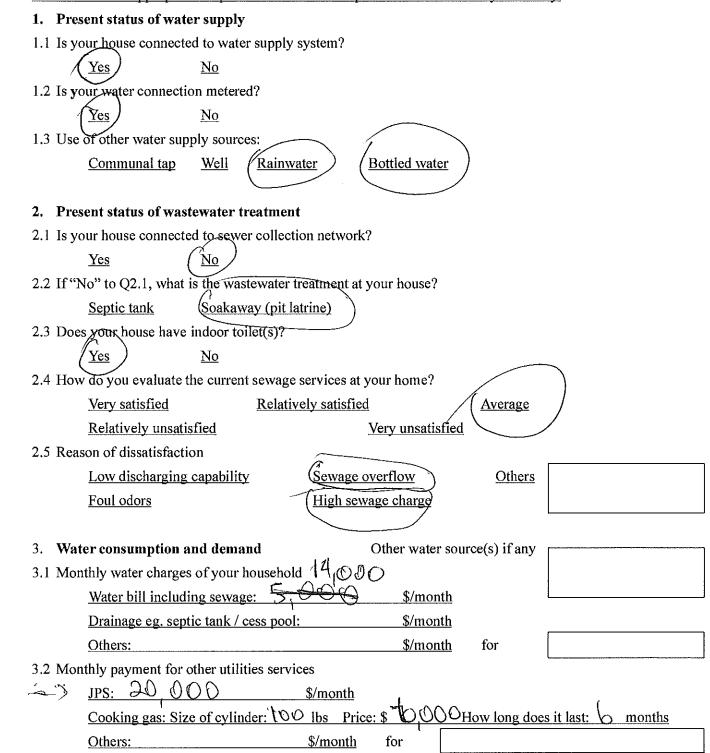
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7. Please feel free to write any opinion about sewage.

Please circle the appropriate responses and answer all questions to the best of your ability.

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# [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

(i) Monthly sewage charges:

( <u>\$600/month</u> )	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ 500	(one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

- 5. Profile of your household
- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

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Housend	ale.

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7. Please feel free to write any opinion about sewage.

It is a good thing to get rid of the Pit system. The smell of the pit causes

Bottled water

Please circle the appropriate responses and answer all questions to the best of your ability.

# 1. Present status of water supply

1.1 Is your house connected to water supply system?

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

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Communal tap Well Rainwater

<u>No</u>

# 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

- 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? <u>Septic tank</u> <u>Soakaway (pit latrine)</u>
- 2.3 Does your house have indoor toilet(s)?

Yes

Yes

2.4 How do you evaluate the current sewage services at your home?

No

	Very satisfied	Relatively satisfied	Average	
	Relatively unsatisfied	Very unsatisfie	ed	
2.5	Reason of dissatisfaction			. e
	Low discharging capabil	ity <u>Sewage overflow</u>	Others	
	Foul odors	High sewage charge		
3.	Water consumption and dem	Λ	ource(s) if any	Para 2000 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100
3.1	Monthly water charges of you	rhousehold strata		
	Water bill including sewa	age: 2500 \$/month		
	Drainage eg. septic tank	/ cess pool: \$/month		
	Others:	\$/month	for	
3.2	Monthly payment for other uti	lities services		
	JPS: 5000	\$/month		1
	Cooking gas: Size of cyl	inder: Ibs Price: \$ 2000	How long doe	s it last: 15 months

Others: 10000 · \$/month

# [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	\$1,600/month
\$		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

- 5. Profile of your household
- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- 6. Profile of interviewee and household leader
- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:

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- Sex:

persons 2000 \$/month 5000 \$/month Sharhood mants

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7. Please feel free to write any opinion about sewage.

efficient sewage chun system is cessarie. We would come the up groof

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Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
(Yes) <u>No</u>
1.2 Is your water connection metered?
Yes No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
(Yes) <u>No</u>
2.2 1f "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied (Average)
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage:
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month_for
3.2 Monthly payment for other utilities services
JPS: $3600$ \$/month
Cooking gas: Size of cylinder: 100 lbs Price: \$6,500 How long does it last: 3 months
Others: \$5000 \$/month
Phone

# [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# 6 persons D 1120, 000 \$/month ? \$/month CAYMANAS GARDENS (SITED)

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: <u>BUSINESS</u> CONSULTANT - Age: <u>57 YEARS</u> - Sex: <u>F</u><u>M</u> 6.2 Head of the Household - Occupation: <u>BUSINESS</u> CONSULTANT - Age: <u>57 YEARS</u> - Sex: <u>F</u><u>M</u>

# 7. Please feel free to write any opinion about sewage.



Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your-house connected to water supply system? . Ýes No 1.2 Is your water connection metered? Yes No 1.3 Use of other water supply sources: Bottled water Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? Yes <u>No</u> 2.4 How do you evaluate the current sewage services at your home? **Relatively** satisfied <u>Average</u> Very satisfied Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Low discharging capability Others High sewage charge Foul odors Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household Water bill including sewage: 2000 \$/month \$/month Drainage eg. septic tank / cess pool: \$/month for Others: 3.2 Monthly payment for other utilities services JPS: 3,500 \$/month 6-7 ... Cooking gas: Size of cylinder: 25 lbs Price: \$ \800 How long does it last: \_\_\_\_\_\$/month -> Phone Bill Others: 2000

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# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

# 5. Profile of your household

5.1 Household size: 5.2 Monthly income: 4000 \$/month 5.3 Monthly saving: 4000 \$/month 5.4 Area of Residence: 1000 \$/month

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation:  $\frac{E \left[ e e t_{F} \left( e e t_{F} \right) \right]}{55}$  Age:  $F \left( M \right)$ 6.2 Head of the Household
   Occupation: Same- Age: F M

# 7. Please feel free to write any opinion about sewage.

idea. think it is a good

Please circle the appropriate responses and answer all questions to the best of your ability.

1. Present status of water supply 1.1 Is your house connected to water supply system? Ye No 1.2 Is your water connection metered? No 1.3 Use of other water supply sources: Bottled water-Well Rainwater Communal tap 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? No 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Average Very satisfied Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household Water bill including sewage: 3,000 \$/month 3000 \$/month Drainage eg. septic tank / cess pool: \$/month for Others: 3.2 Monthly payment for other utilities services JPS: 🐧 00 () \$/month Cooking gas: Size of cylinder: /OR Price: \$ 6000 How long does it last: months <u>Others: 3,000</u> \$/month

# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

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# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- <u>R</u>persons <u>R</u>\$/month <u>R</u>\$/month <u>Havnitton Gasdon</u> S

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:

Sex:

<u>M</u>

### 7. Please feel free to write any opinion about sewage.

F

Please circle the appropriate responses and answer all questions to the best of your ability.	
1. Present status of water supply	
1.1 Is your house connected to water supply system?	
Yes No	
1.2 Is your water connection metered?	
$\left( \underline{Yes} \right) \underline{No}$	
1.3 Use of other water supply sources:	
Communal tap Well Rainwater Bottled water	
2. Present status of wastewater treatment	
2.1 Is your house connected to sewer collection network?	
(Yes) <u>No</u>	
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?	
Septic tank Soakaway (pit latrine)	
2.3 Does your house have indoor toilet(s)?	
<u>Yes</u> <u>No</u>	
2.4 How do you evaluate the current sewage services at your home?	
Very satisfied Relatively satisfied Average	
Relatively unsatisfied Very unsatisfied	
2.5 Reason of dissatisfaction	
Low discharging capability (Sewage overflow) Others	
(Foul odors) High sewage charge	
3. Water consumption and demand Other water source(s) if any	
3.1 Monthly water charges of your household $600$	
Water bill including sewage: \$/month	
Drainage eg. septic tank / cess pool: \$/month	
Others: \$/month_for	
3.2 Monthly payment for other utilities services	
JPS: $5000$ \$/month	15
Cooking gas: Size of cylinder: 100 lbs Price: \$ 6,000 How long does it last	t: 🔾 months
Others: \$/month	

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# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

# 5. Profile of your household

5.1 Household size: persons 5.2 Monthly income: \$/month \$/month 5.3 Monthly saving: Garden Hamilt 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: Age: Sex: -6.2 Head of the Household Samp Occupation: -
  - Age: <u>M</u>
  - Sex: Ē

# 7. Please feel free to write any opinion about sewage.



Please circle the appropriate responses and answer all questions to the best of your ability.

# 1. Present status of water supply

Yes

Yes

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1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater

Bottled water

for

# 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

<u>No</u>

2.3 Does your house have indoor toilet(s)?

2.4 How do you evaluate the current sewage services at your home?

 Very satisfied
 Relatively satisfied
 Average

 Relatively unsatisfied
 Very unsatisfied

 2.5 Reason of dissatisfaction
 Sewage overflow

 Low discharging capability
 Sewage overflow

 Foul odors
 High sewage charge

 3. Water consumption and demand
 Other water source(s) if any

 3.1 Monthly water charges of your household
 Image: Charge source sour

Others: \$/month

# 3.2 Monthly payment for other utilities services

->	JPS: 12000	<u>\$/month</u>	
-	Cooking gas: Size of cylinder: 30	b lbs Price: \$ 2,000 How long does it last:	months
	Others:	<u>\$/month</u> for	

# [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$400/month
 \$400/month

Please note that these payments would be in addition to your current monthly household expenditures.

\_persons \$/month

OOØ \$/month

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### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: - Age: - Sex: E M6.2 Head of the Household - Occupation: Age: 55 E M Source F
  - Age:
    - Sex: <u>F</u>

7. Please feel free to write any opinion about sewage.

<u>M</u>

the Plan that is in place. Love



Please circle the appropriate responses and answer all questions to the best of your ability.

# 1. Present status of water supply

Yes

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1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

2. Present status of wastewater treatment

1.3 Use of other water supply sources:

Communal tap Well Rainwater

Bottled water

N/A

2.1 Is your house connected to sewer collection network?
(Yes) <u>No</u>
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes <u>No</u>
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors (High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 400 5/month
Drainage eg. septic tank / cess pool:\$/month
Others: \$/month_for
3.2 Monthly payment for other utilities services
$\rightarrow$ JPS: $+$ $000$ $$/month$
Cooking gas: Size of cylinder: SS lbs Price: \$ 2,000 How long does it last: 1_months
$\underline{Others:} \qquad \bigcirc $

# [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
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Please note that these payments would be in addition to your current monthly household expenditures.

persons \_\$/month

000 \$/month

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: A@- Age: A@- Sex: FM6.2 Head of the Household - Occupation: BMC- Age: EM

# 7. Please feel free to write any opinion about sewage.

I think its okay for the community

v

1. Present status of wat	er supply				
1.1 Is your house connected	ed to water s	upply system	1?		
Ves	<u>No</u>				
1.2 Is your water connecti	on metered?				
Yes	<u>No</u>				
1.3 Use of other water sup	ply sources:				
<u>Communal tap</u>	<u>Well</u>	<u>Rainwater</u>	Bottled water		
2. Present status of was	tewater trea	atment			
2.1 Is your house connected	ed to sewer o	collection net	work?		
Yes	<u>No</u>				
2.2 If "No" to Q2.1, what	is the waster	water treatme	nt at your house?		
Septic tank	<u>Soakaway</u>	<u>(pit latrine)</u>			
2.3 Does your house have	indoor toile	t(s)?			
<u>Mes</u>	<u>No</u>				
2.4 How do you evaluate t	he current se	ewage service	es at your home?		
Very satisfied	]	Relatively sat	isfied	Average	
Relatively unsati	sfied		Very unsatisf	ied	
2.5 Reason of dissatisfacti	on				
Low discharging	capability	Sew	age overflow	Others	
Foul odors		<u>Hig</u> l	h sewage charge		
3. Water consumption a	nd demand	l	Other water s	source(s) if any	
3.1 Monthly water charges	s of your ho	usehold			
Water bill includ	ing sewage:	4	3,000 \$/month	<u>1</u>	
Drainage eg. sep	tic tank / ces	*/	\$/month		
Others:			\$/month	<u>1</u> for	
3.2 Monthly payment for	other utilities	s services			
JPS:		000. \$/moi	nth		
Cooking gas: Siz	e of cylinder	r: 25 lbs	Price: \$ 04 000	How long does	it last: / month

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# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- <u>4</u> persons <u>0</u> \$/month <u>0</u> \$/month Namilfon Johns,

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: <u>House Wefe</u> - Age: <u>51</u> - Sex: (F) (M) 6.2 Head of the Household - Occupation: <u>Some</u>.
  - Age:
    - Sex:

### 7. Please feel free to write any opinion about sewage.

F

M

good idea one morning the Sewage System.

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Please circle the appropriate responses and answer all questions to the best of your ability.

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	1. Present status of wat	er supply			
	1.1 Is your house connected	ed to water supply	system?		
	$\left(\underline{\text{Yes}}\right)$	<u>No</u>			
	1.2 Is your water connecti	on metered?			
	(Yes)	<u>No</u>			
	1.3 Use of other water sup	ply sources:		<	
	<u>Communal tap</u>	Well Rainw	vater (Bottled water		
(					
	2. Present status of was	tewater treatmen	ıt		
	2.1 Is your house connected	d to sewer collect	tion network?		
	$\left(\underline{\underline{Y}es}\right)$	<u>No</u>			
	2.2 If "No" to Q2.1, what	is the wastewater	treatment at your house?		
	Septic tank	<u>Soakaway (pit l</u>	atrine)		
	2.3 Does your house have	indoor toilet(s)?			
	Yes	No			
	2.4 How do you evaluate t	he current sewage	services at your home?		
	Very satisfied	Relati	vely satisfied	Average	
	Relatively unsati	sfied	Very unsatisfie	<u>d</u>	
	2.5 Reason of dissatisfacti	on			
	Low discharging	<u>capability</u>	Sewage overflow	Others	
(	Foul odors		High sewage charge		
$\sim$				Lungara and	
Ň	3. Water consumption a	nd demand	Other water so	ource(s) if any	· .
Y	3.1 Monthly water charges	of your househol	d		
	Water bill includi	<u>ng sewage:</u> Д	(0.0.6) \$/month		
	Drainage eg. sept	ic tank / cess pool	l: \$/month		
	Others:		\$/month	for	
	3.2 Monthly payment for o	ther utilities servi	ices		
	<u> JPS: 7,00</u>	0	<u>\$/month</u>		_
	Cooking gas: Siz	e of cylinder: 30	<u>) Ibs Price: \$2,001</u>	How long does it la	<u>st: A months</u>
	Others:		\$/month		

# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

persons

\$/month

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# : <u>Passage fort</u>

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:
- (F) M hold <u>Room Assistan</u> <u>SO</u> (F) M

# 7. Please feel free to write any opinion about sewage.

a good idea, because it will get rid of SMQ

1. Present status of water supply 1.1 Is your house connected to water supply system? <u>No</u> Yes 1.2 Is your water connection metered?  $(\underline{\text{Yes}})$ <u>No</u> 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes <u>No</u> 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes No 2.4 How do you evaluate the current sewage services at your home? Very satisfied **Relatively** satisfied Average Relatively unsatisfied Very unsatisfied

Please circle the appropriate responses and answer all questions to the best of your ability.

2.5 Reason of dissatisfaction

Low discharging capability

Sewage overflow High sewage charge

Others

.

3.	Water consumption and demand	(	Other water sou	rce(s) if any	[	]
<b>3.</b> 1	Monthly water charges of your household Water bill including sewage:	FDT	> \$/month			
	Drainage eg. septic tank / cess pool:	•	\$/month			
	Others:		\$/month	for		
3.2	Monthly payment for other utilities services					
	JPS: <u>3000</u> \$/m	onth				
	Cooking gas: Size of cylinder: 21 Ibs	Price	:\$1700 H	ow long doe	s it last:	/ months
	Others: \$/m	nonth	for			
	KOO 2100 phone CABR	<sup>∼</sup> 1				

# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons \$/month

### 6. Profile of interviewee and household leader (Retired)

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:
- \_\_\_\_
- 7. Please feel free to write any opinion about sewage.

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	iate responses and answer al	I questions to the be	st of your admity.
I. Present status of wa			
1.1 Is your house conne	cted to water supply system?	,	
Yes	<u>No</u>		
1.2 Is your water connec	ction metered?		
<u>Yes</u>	<u>No</u>		
1.3 Use of other water s	upply sources:		NN
<u>Communal tap</u>	Well Rainwater	Bottled water	
2. Present status of w	astewater treatment		
2.1 Is your house conne	cted to sewer collection netw	vork?	
(Yes)	No		
2.2 If "No" to Q2.1, wh	at is the wastewater treatment	nt at your house?	
Septic tank	Soakaway (pit latrine)		
2.3 Does your house ha	ve indoor toilet(s)?		
Yes	No		
2.4 How do you evaluat	te the current sewage service	s at your home?	
Very satisfied	Relatively sati		( <u>Average</u> )
Relatively uns	atisfied	Very unsatisfied	d
2.5 Reason of dissatisfa			
Low dischargi		age overflow	Others
Foul odors		sewage charge	
			L
3. Water consumptio	n and demand	Other water so	purce(s) if any
3.1 Monthly water char			
Water bill incl	uding sewage: STOC	3 500\$/month	
Drainage eg. s	eptic tank / cess pool:	\$/month	
Others:		\$/month	for
3.2 Monthly payment f	or other utilities services		<u> </u>
<u>^</u>	0 0 S/mo	<u>nth</u>	
Cooking gas:	Size of cylinder: 30 lbs	Price: \$ 2,100	How long does it last: months
<u> </u>		nth -> Ca	

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# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

persons

\$/month

\$/month

SQAC

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:

Sex:

- <u>F</u><u>M</u>
- 7. Please feel free to write any opinion about sewage.

<u>M</u>

a good idea to implement. 15

Please circle the appropriate the propriet of	iate responses and answer a	Il questions to the best of your at	<u>oility.</u>
1. Present status of wa	ater supply		
1.1 Is your house conne	cted to water supply system	?	
Yes	<u>No</u>		
1.2 Is your water connect	tion metered?		
Yes	No		
1.3 Use of other water s	upply sources:		
Communal tap	Well Rainwater	Bottled water	
2. Present status of wa	astewater treatment		
2.1 Is your house conne	cted to sewer collection netw	vork?	
<u>Yes</u>	<u>No</u>		
2.2 If "No" to Q2.1, what	at is the wastewater treatment	nt at your house?	
Septic tank	<u>Soakaway (pit latrine)</u>		
2.3 Does your house hav	ve indoor toilet(s)?		
Yes	<u>No</u>		
2.4 How do you evaluat	e the current sewage service	s at your home?	
Very satisfied	Relatively sati	sfied Average	/
Relatively unsa	<u>itisfied</u>	Very unsatisfied	
2.5 Reason of dissatisfac	etion		
Low discharging	ig capability Sewa	age overflow Others	
Foul odors	<u>High</u>	sewage charge	
3. Water consumption	and demand	Other water source(s) if any	
3.1 Monthly water charg	•		43000
Water bill inclu	ding sewage: 3,000	\$/month	f > ~ ~ ~
Drainage eg. se	ptic tank / cess pool:	\$/month	·
Others:		\$/month for	
3.2 Monthly payment fo	r other utilities services		
JPS:	\$/mon	<u>ith</u>	
Cooking gas: S	ize of cylinder: lbs	Price: \$ How long doe	es it last: months
Others:	\$/mor	<u>nth</u>	

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# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

persons

<u>passaje Soft</u>

Home Maker

Salesman.

\_\$/month \$/month

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex: <u>F</u>
- 7. Please feel free to write any opinion about sewage.

F∕ M

<u>M</u>,

he smell is a problem, and should 60 removed.

Ć

(

Please circle the appropriat	e responses and answer	all questions to the bes	<u>st of your ability.</u>	
1. Present status of wate	r supply			
1.1 Is your house connecte	d to water supply system	n?		
(Yes)	No			
1.2 Is your water connection	on metered?			
(Yes)	<u>No</u>			
1.3 Use of other water supp	bly sources:			
<u>Communal tap</u>	<u>Well</u> <u>Rainwater</u>	(Bottled water)		
2. Present status of wast	ewater treatment			
2.1 Is your house connecte	d to sewer collection ne	twork?		
Yes	No			
2.2 If "No" to Q2.1, what i	s the wastewater treatme	ent at your house?		
Septic tank	Soakaway (pit latrine)	NA		
2.3 Does your house have i	ndoor toilet(s)?			
(Yes)	<u>No</u>			
2.4 How do you evaluate the	ne current sewage servic	es at your home?		
(Very satisfied)	Relatively sa	tisfied	<u>Average</u>	
Relatively unsatis	fied	Very unsatisfied		
2.5 Reason of dissatisfaction	m NA			
Low discharging	capability Sev	vage overflow	<u>Others</u>	
Foul odors	Hig	h sewage charge		
3. Water consumption as		Other water sou	rce(s) if any	-
3.1 Monthly water charges	-	A.		
Water bill includi	5 5	7 2000 \$/month	L	
,	c tank / cess pool:	<u>\$/month</u>		
Others:		<u>\$/month</u>	for	
3.2 Monthly payment for o	1			
i i i i i i i i i i i i i i i i i i i	DOD 6,000s/ma			este
Cooking gas: Size	of cylinder: 30 lbs	/	ow long does it last:	Z months
Others: L	1000 \$/m	onth		

# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

# 5. Profile of your household

- 5.1 Household size: <u>S</u>persons
- 5.2 Monthly income: \_\_\_\_\_\$/mont
- 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month \_\_\_\_\$/month \_\_ Start Parts Arecory Park

# 6. Profile of interviewee and household leader

6.1 Interviewee

	-	Occupation:	<u>_</u> ()	m - employed
	-	Age:		· V
	-	Sex: (	Ê	M
6.2	Hea	d of the Household		Same
	-	Occupation:		( <sub>11</sub> 12)
	-	Age:		
	-	Sex:	<u>F</u>	M

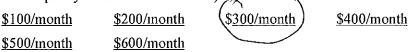
# 7. Please feel free to write any opinion abont sewage.

Please circle the appropriate responses and answer all questions to the best of your ability.

# 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection metered? No Yes 1.3 Use of other water supply sources: Bottled water Communal tap Well **Rainwater** 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? Yes No 2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Others Low-discharging capability Foul odors High sewage charge Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household ()())Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month \$/month for Others: 3.2 Monthly payment for other utilities services <u>JPS: 7,000</u> \$/month Cooking gas: Size of cylinder: 25 lbs Price: \$1,750 How long does it last: 1 months Others: 1000 \$/month -> Cable

# [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)



Please note that these payments would be in addition to your current monthly household expenditures.

\_\_\_persons

\$/month

Jer (P

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex: \_
- <u>xelf-Employ</u>ed <u>33</u> (M)

15,000\_\$/month

- 6.2 Head of the Household
  - Occupation: -
  - Age: \_

# Self Employed

Sex:

### 7. Please feel free to write any opinion about sewage.

<u>M</u>

I would like too see them implement a energy p system from the sewage.

Please circle the appropriate responses and answer all questions to the best of your ability.					
1. Present status of water supply					
1.1 Is your house connected to water supply system?					
Yes No					
1.2 Is your water connection metered?					
(Yes) No					
1.3 Use of other water supply sources:					
Communal tap Well Rainwater (Bottled water)					
2. Present status of wastewater treatment					
2.1 Is your house connected to sewer collection network?					
<u>Ves</u> <u>No</u>					
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?					
Septic tank Soakaway (pit latrine)					
2.3 Does your house have indoor toilet(s)?					
<u>Yes</u> <u>No</u>					
2.4 How do you evaluate the current sewage-services at your home?					
Very satisfied (Relatively satisfied) Average					
Relatively unsatisfied Very unsatisfied					
2.5 Reason of dissatisfaction					
Low discharging capability Sewage overflow Others					
Foul odors     High sewage charge					
3. Water consumption and demand Other water source(s) if any					
3.1 Monthly water charges of your household $(1 - 1)$					
Water bill including sewage: $A_0 O O$ , $\$/month$					
Drainage eg. septic tank / cess pool: \$/month					
Others: \$/month_for					
3.2 Monthly payment for other utilities services					
JPS: A, OO' \$/month					
Cooking gas: Size of cylinder: 25 lbs Price: \$1, 1 50 How long does it last: month					
$\underline{Others: } (100                                 $					

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# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$400/month

 \$500/month
 \$600/month
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

persons

\$/month

appenter Sub-Contractor

 $OO_{\mbox{month}}$ 

36

S.MP

M

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
    - Sex: F
- 7. Please feel free to write any opinion about sewage.

F

It is a good idea to apgrade the system to sait the growing population.

Please circle the appropriate responses and answer all questions to the best of your ability.

Rainwater

# 1. Present status of water supply

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well

Bottled water

 $N/\Lambda$ 

<u>Others</u>

# 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

No

2.3 Does your house have indoor toilet(s)?

2.4 How do you evaluate the current sewage services at your home?

Very satisfiedRelatively satisfiedAverageRelatively unsatisfiedVery unsatisfied

Sewage overflow

High sewage charge

2.5 Reason of dissatisfaction

Yes

Low discharging capability Foul odors

# 3. Water consumption and demand

3.1 Monthly water charges of your household

Other water source(s) if any

 $\mathcal{L}()$ Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month Others: \$/month for

# 3.2 Monthly payment for other utilities services

 JPS:
 10,00.
 \$/month

 Cooking gas:
 Size of cylinder:
 0
 lbs
 Price:
 \$\$`000How long does it last:
 4 months

 Others:
 7,000
 \$/month

# [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

# 5. Profile of your household

5.1 Household size:

5.2 Monthly income:

- 5.3 Monthly saving:
- 5.4 Area of Residence:
- \_\_\_\_\_persons \_\_\_\_\_\_\$/month \_\_\_\_\_\_\$/month \_\_\_\_\_\_Jndependence C17

Retinee 73

SOMB

# 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

7. Please feel free to write any opinion about sewage.

F

Μ

I think it is a progressive venture.

### Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

Yes

Yes

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater

## 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

<u>No</u>

2.3 Does your house have indoor toilet(s)?

2.4 How do you evaluate the current sewage services at your home?

 Very satisfied
 Relatively satisfied
 Average

 Relatively unsatisfied
 Very unsatisfied

2.5 Reason of dissatisfaction

(

Low discharging capability Foul odors Very unsatisfied Very unsatisf Sewage overflow High sewage charge

Bottled water

Others

3.	Water consumption and demand	Other water source(s) if any	
3.1	Monthly water charges of your household		
	Water bill including sewage: 2,200	\$/month	
	Drainage eg. septic tank / cess pool:	\$/month	
	Others:	<u>\$/month_for</u>	
3.2	Monthly payment for other utilities services		<b>L</b>
	IPS: \$ OOO \$/month		

JPS: $\chi_0 O O$ \$/monthCooking gas: Size of cylinder:2S lbsPrice: $\chi_1 O O$  How long does it last: $\chi$  monthsOthers: $\chi_0 O O$  $\chi_month$  $2C_{MO}/4$ 

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

(\$200/month) \$100/month \$300/month \$400/month \$600/month \$500/month

Please note that these payments would be in addition to your current monthly household expenditures.

persons

\$/month

A B.

Gardens

#### 5. Profile of your household

- 5.1 Household size:
- \$/month 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Housewife Occupation: 48 Age: -M
  - Sex: \_
- 6.2 Head of the Household
  - Occupation: -
  - Age:
  - Sex:

#### 7. Please feel free to write any opinion about sewage.

F

 $\underline{M}$ 

It would be nice. The too sewage are always backed up. 1, Vez

ST ST

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# 89

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropriate responses and answer all questions to the best of your ability.					
1. Present status of water supply					
1.1 Is your house connected to water supply system?					
( <u>Ves</u> ) <u>No</u>					
1.2 Is your water connection metered?					
( <u>Yes</u> ) <u>No</u>					
1.3 Use of other water supply sources:					
Communal tap Well Rainwater Bottled water					
2. Present status of wastewater treatment					
2.1 Is your house connected to sewer collection network?					
(Yes) <u>No</u>					
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?					
Septic tank Soakaway (pit latrine)					
2.3 Does your house have indoor toilet(s)?					
(Yes) No					
2.4 How do you evaluate the current sewage services at your home?					
Very satisfied Relatively satisfied Average					
Relatively unsatisfied Very unsatisfied					
2.5 Reason of dissatisfaction					
Low discharging capability Sewage overflow Others					
Foul odors     High sewage charge					
3. Water consumption and demand Other water source(s) if any					
3.1 Monthly water charges of your household					
Water bill including sewage: $4000$ \$/month					
Drainage eg. septic tank / cess pool: \$/month					
Others: \$/month_for					
3.2 Monthly payment for other utilities services					
$\underline{JPS: 4 0 0 0} \frac{\$/month}{0}$					
Cooking gas: Size of cylinder: 25 Ibs Price: \$ 2000 How long does it last: months					
Others: $2,000$ \$/month $\rightarrow C_{a} > C_{a}$					
-					

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$200/month</u> \$400/month \$100/month \$300/month \$600/month \$500/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:

5.4 Area of Residence:

persons \$/month \$/month umberland

Belf-Employed

ome (

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: -
  - Age: ....
  - Sex: \_
- F 6.2 Head of the Household
  - Occupation: \_
  - Age:
  - Sex:

7. Please feel free to write any opinion about sewage.

F

M

better idea. shoald  $\bigcirc$ pe 1+

### Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? No 1.2 Is your water connection metered? <u>No</u> Yes 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? (Yes) <u>No</u> 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes No 2.4 How do you evaluate the current sewage services at your home? Very satisfied **Relatively** satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow <u>Others</u> Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household 91500 Water bill including sewage: (\$/mont Drainage eg. septic tank / cess pool: \$/month Others: \$/month for 3.2 Monthly payment for other utilities services JPS: \$/month 3 months Cooking gas: Size of cylinder: 25 lbs Price: \$ How long does it last: Others: \$/month for

#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u> \$200/month

\$500/month \$600/month

\$<u>300/month</u>

\$400/month

Please note that these payments would be in addition to your current monthly household expenditures.

 $\mathbb{Z}_{\text{persons}}$ 

<u>ZO 00</u>\$9 month

N/M\_\_\$/month

umberlana

Business Man 49

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:
- <u>Theatre Attendant</u> <u>31</u> (F) M

#### 7. Please feel free to write any opinion about sewage.

F

Not willing to pay any more for seconde not enough Money right nom.

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circ	ele the appropriate	e responses and answer all questions to the best of your ability.
1. Prese	nt status of wate	r supply
1.1 Is you	r house connected	d to water supply system?
(	Yes	No
1.2 Is you	ir water connectio	on metered?
(*	Yes	No
I.3 Use of	f other water supp	ply sources:
<u>(</u>	<u>Communal tap</u>	Well Rainwater Bottled water
2. Prese	nt status of wast	ewater treatment
2.1 Is you	r house connecte	d to sewer collection network?
(	Yes	No
2.2 If "No	o" to Q2.1, what i	is the wastewater treatment at your house?
1	<u>Septic tank</u>	Soakaway (pit latrine)
2,3 Does	your house have	indoor toilet(s)?
(	Ŷes)	No
2.4 How	do you evaluate t	he current sewage services at your home?
-	Very satisfied	Relatively satisfied Average
-	Relatively unsatis	sfied Very unsatisfied
2.5 Reaso	on of dissatisfaction	on
	Low discharging	capability Sewage overflow Others
(	Foul odors	(High sewage charge)
	and the second	
3. Wate	r consumption a	Ind demand Other water source(s) if any
3.1 Mont	hly water charges	s of your household
	Water bill includi	ing sewage: 4, 000.00 \$/month
	Drainage eg. sept	tic tank / cess pool: \$/month
	Others:	\$/month for
3.2 Mont	hly payment for o	other utilities services
	•	2, 800. 00 \$/month
		e of cylinder: 100 lbs Price: \$ 5, 200 How long does it last: 8 months
		6,000.00 \$/month for Phone, internet & cakle

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u> <u>\$200/month</u>

\$<u>300/month</u>

<u>\$500/month</u> <u>\$600/month</u>

(\$400/month)

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	<u> </u>
5.2 Monthly income:	250, 000 <sup>-</sup> \$/month
5.3 Monthly saving:	40,000 \$/month
5.4 Area of Residence:	Bridge port
	01-

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation: <u>Monagen</u> - Age: <u>30</u>
- Sex:  $(\underline{F}) \underline{M}$

6.2 Head of the Household

- Occupation: Mlonagen- Age: <u>30</u> - Sex: <u>F(M)</u>

#### 7. Please feel free to write any opinion about sewage.

Does not understand why sewage nate us 100% of water bill and service us not 100% good

 $\mathbf{2}$ 

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropriate	te responses and a	<u>nswer all qu</u>	estions to the	best of your abil	<u>ity.</u>
1. Present status of wate	er supply				
1.1 Is your house connecte	ed to water supply	system?			
(Yes)	No				
1.2 Is your water connection	on metered?			r**	
(Yes)	<u>No</u>				
1.3 Use of other water sup	ply sources:				
<u>Communal tap</u>	<u>Well</u> Rainw	ater -	Bottled water		
2. Present status of was	tewater treatmen	t		3. 1	
2.1 Is your house connected	ed to sewer collect	ion networl	<b>k</b> ?		
Yes	<u>No</u>				
2.2 If "No" to Q2.1, what	is the wastewater	reatment at	your house?		
Septic tank	<u>Soakaway (pit la</u>	atrine)			
2.3 Does your house have	indoor toilet(s)?				
(Yes)	No			<b>X</b> -2	
2.4 How do you evaluate	the current sewage	services at	your home?		
Very satisfied	Relativ	vely satisfic	d	Average	
Relatively unsati	sfied	anterna anterna de la construcción	Very unsatisf	fied	
2.5 Reason of dissatisfact	on			· .	
Low discharging	capability	Sewage	overflow	<u>Others</u>	When it round
Foul odors		High sev	wage charge		
3. Water consumption a	and demand		Other water	source(s) if any	
3.1 Monthly water charge		d			
• -	ing sewage:		· \$/mont	th	
	tic tank / cess pool	•	\$/mont	th	
Others:	·		\$/mont		
3.2 Monthly payment for	other utilities serv	ices			
	200.00	\$/month			
	ze of cylinder: 10		<u>ce: \$ 4,800</u>	How long does	s it last: <b>B</b> months
	4,000·00	\$/month	for	Phone	3,000.00 Cable.

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/inonth \$400/month (\$600/month) \$500/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	persons
5.2 Monthly income:	300,000 \$/month
5.3 Monthly saving:	<u> </u>
5.4 Area of Residence:	Bridge port
	01

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- 1 Donior Monogen 30 Occupation: \_ Age: Μ Sex: 6.2 Head of the Household <u>- Employed</u> Occupation:
  - Age:
    - Sex:

#### 7. Please feel free to write any opinion about sewage.

F

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

<u>Please cir</u>	cle the appropriate	e responses	and answer all q	uestions to the	best of your abil	<u>ity.</u>
1. Prese	ent status of wate	r supply				
1.1 Is you	ir house connected	d to water su	pply system?			
Ć	Yes	<u>No</u>				
1.2 Is you	ir water connectio	n metered?				
(	Yes	<u>No</u>				
1.3 Use o	f other water supp	ly sources:				
<u>(</u>	<u>Communal tap</u>	<u>Well</u> R	ainwater	Bottled water	0	
2. Prese	ent status of waste	ewater trea	tment			
2.1 Is you	ir house connected	d to sewer c	ollection networ	k?		
(	Yes	<u>No</u>				
2.2 If "No	o" to Q2.1, what is	s the wastev	ater treatment a	t your house?		
į	Septic tank	<u>Soakaway</u>	(pit latrine)			
2.3 Does	your house have i	ndoor toilet	(s)?			
(	Yes	No				
2.4 How	do you evaluate th	e current se	wage services a	t your home?		
	Very satisfied	(F	elatively satisfi	<u>ed</u>	Average	
-	Relatively unsatis	fied	NUMATING CONTRACTOR OF THE OWNER	Very unsatisf	ied	
2.5 Reaso	on of dissatisfactic	n				
]	Low discharging of	apability	Sewage	overflow	Others	No problems
-	Foul odors		<u>High se</u>	wage charge		·
3. Wate	r consumption a	1d demand		Other water	source(s) if any	
3.1 Mont	hly water charges	of your hou	sehold			
	Water bill includir	ng sewage:	2, 800.	00 \$/mont	<u>h</u>	
-	Drainage eg. septi	c tank / cess	pool:	\$/mont	<u>h</u>	
Į	Others:			\$/mont	<u>h</u> for	
3.2 Month	hly payment for o	ther utilities	services			<b>L</b> eenen
<u>.</u>	JPS: 2,	000 DC	\$/month			
9	Cooking gas: Size	of cylinder	ころ lbs Pri	ice: \$ 2,000	How long does	<u>it last: 6 months</u>
ļ	Others:		\$/month	for		
				L		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	persons
5.2 Monthly income:	50,000 00\$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	Portmore (Cedar Give)

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

	-	Occupation:	/	Salar hop.
	-	Age:		40 '
	-	Sex:	<u>F</u>	M
6.2	Hea	nd of the Household		0
	•	Occupation:		Same
	-	Age:		

- Sex: <u>F</u>

#### 7. Please feel free to write any opinion about sewage.

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### Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

Please circle the appropriate responses and answer all questions to the best of your ability.

1. Present status of water supply 1.1 Is your house connected to water supply system? No Yes 1.2 Is your water connection metered? No Yes 1.3 Use of other water supply sources: Well Rainwate Communal tap Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes No) 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Søakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? No Yes 2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied verag Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow **Others** Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household Water bill including sewage: 1,800 \$/month Drainage eg. septic tank / cess pool: \$/month Others: \$/month for 3.2 Monthly payment for other utilities services JPS: 1,600 \$/month Cooking gas: Size of cylinder: 25 lbs Price: \$ 1,800 How long does it last: 2- months \$/month for Others:

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

	6600	month	<u>\$800/month</u>	<u>\$1,000/month</u>	
	<u>\$1,20</u>	0/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
on	\$	600.0	O (one	e-time payment)	

(ii) Initial payment for connection \$\_\_\_\_\_\_\_

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

 5.1 Household size:
 25 persons

 5.2 Monthly income:
 24,000 \$/month

 5.3 Monthly saving:
 0 \$/month

 5.4 Area of Residence:
 Meadoulotook

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(F)

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#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

- Occupation: <u>Save</u>
- Age:
- Sex:

## 7. Please feel free to write any opinion about sewage.

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### Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

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Please circle the appropria	te responses a	nd answer all	questio	ns to the be	est of your abil	<u>ity.</u>	
1. Present status of wat	er supply						
1.1 Is your house connected	ed to water sup	ply system?					
(Yes)	<u>No</u>						
1.2 Is your water connecti	on metered?						
Yes	<u>No</u>						
1.3 Use of other water sup	ply sources:						
<u>Communal tap</u>	<u>Well</u> <u>Ra</u>	inwater	<u>Bott</u>	led water			
2. Present status of was	tewater treati	nent					
2.1 Is your house connect	ed to sewer co	llection netw	ork?				
Yes	No						
2.2 If "No" to Q2.1, what	is the wastewa	ater treatment	t <mark>at y</mark> our	house?			
Septic tank	<u>Soakaway (</u>	<u>pit latrine)</u>					
2.3 Does your house have	indoor toilet(s	;)?					
Tes	<u>No</u>						
2.4 How do you evaluate	the current sev	vage services	at your	home?			
Very satisfied	<u>Re</u>	latively satis	fied		Average		
Relatively unsat	sfied		Very	<u>v unsatisfie</u>	: <u>d</u>		
2.5 Reason of dissatisfact	ion						
Low discharging	<u>capability</u>	<u>Sewa</u>	ge overf	<u>low</u>	<u>Others</u>		
Foul odors		<u>High</u>	sewage	<u>charge</u>			
3. Water consumption	and demand		Oth	er water so	ource(s) if any		
3.1 Monthly water charge	s of your hous	ehold				*	~
Water bill includ	ing sewage:	2,0	00	\$/month			J
Drainage eg. sep	tic tank / cess	pool:		\$/month		······	
Others:				\$/month	for		
3.2 Monthly payment for	other utilities s	services					
JPS:	2.000	\$/mont	<u>th</u>				٨
Cooking gas: Siz	ze of cylinder:	25 lbs ]	Price: \$	1,800	How long do	es it last: 4	months
Others:		\$/mon	<u>th</u> f	or			

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$ <u>5,000</u>	(one	-time payment)

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- - Sex: (F)

6.2 Head of the Household

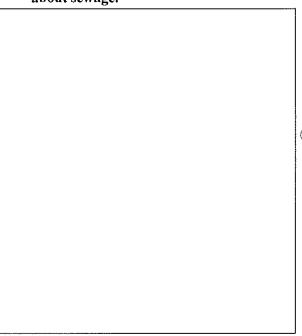
- Occupation:
- Age:
- Sex:

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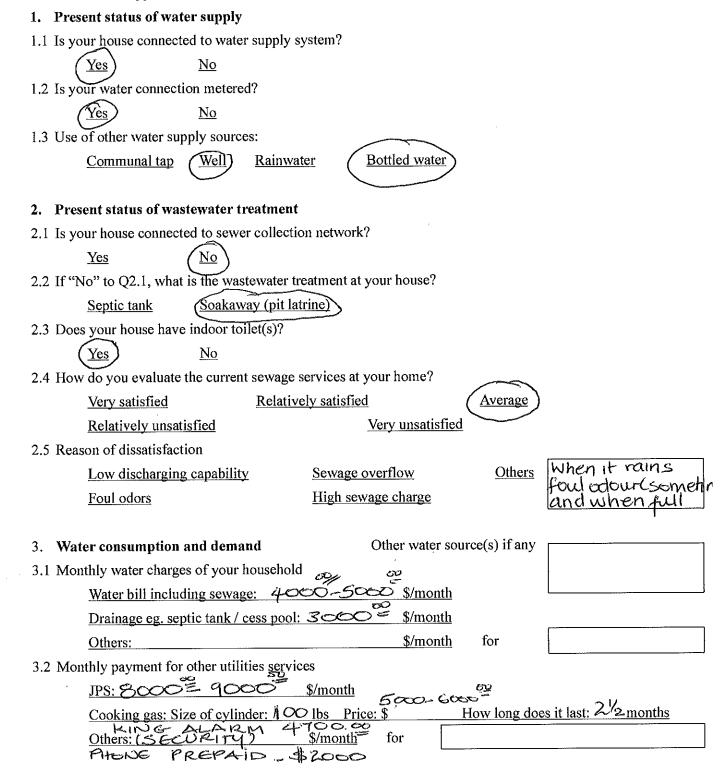
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## 7. Please feel free to write any opinion about sewage.



### Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

Please circle the appropriate responses and answer all questions to the best of your ability.



#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

\_\_\_persons

MEADOWBROOK

\$/month

\$/month

(i) Monthly sewage charges:

\$600/month	\$800/month	<u>\$1,000/month</u>
<u>\$1,200/month</u>	\$1,400/month	<u>\$1,600/month</u>
\$ <u>1500 <sup>G</sup></u>	• (one	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation: HOUSEWIFE
  - Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

Μ MKTG. MANAGER

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7. Please feel free to write any opinion about sewage.

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### Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Present status of	water supply				
1.1 Is your house con	nected to water s	supply system?			
(Yes)	<u>No</u>				
1.2 Is your water con	nection metered?	2			
Yes	<u>No</u>				
1.3 Use of other wate	r supply sources	:	and the second second		
Communal t	ap <u>Well</u>	<u>Rainwater</u>	Bottled water		
2. Present status of	wastewater tre	atment			
2.1 Is your house con	nected to sewer	collection netwo	ork?		
Yes	No				
2.2 If "No" to Q2.1, v	vhat is the waste	water treatment	at your house?		
Septic tank	Soakaway	(pit latrine)			
2.3 Does your house	have indoor toile	et(s)?			
<u>(Yes</u> ع	<u>No</u>				
2.4 How do you evalu	late the current s	ewage services	at your home?	August and a second	
Very satisfie	<u>d</u>	Relatively satis	fied	Average	
<u>Relatively u</u>	<u>nsatisfied</u>		Very unsatisfie	<u>d</u>	
2.5 Reason of dissatis	sfaction				<b></b> ]
Low dischar	ging capability	Seway	ge overflow	Others	
Foul odors		<u>High</u>	sewage charge		
3. Water consumpt	ion and deman	1	Other water so	ource(s) if any	
3.1 Monthly water ch	arges of your ho	usehold			
<u>Water bill in</u>	cluding sewage:	4,000	OO \$/month		
<u>Drainage eg</u>	<u>. septic tank / ce</u>	ss pool: 📿 🤇	> \$/month		
Others:	0		\$/month	for	
3.2 Monthly payment	t for other utilitie	s services			
<u>JPS:</u>	11,000	<u>00 \$/mont</u>	<u>h</u>		
Cooking gas	•	4	Price: \$ 2, 800		· · · · · · · · · · · · · · · · · · ·
Others:	13,000 00	<u>&gt; phone\$/mon</u>	<u>th</u> for	Phone /	internet / cable

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

Interior Decorator

Sales Marager 46

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	\$1,000/month
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ 15,00	00 00 (one	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

320,000 \$/month \$/month O Meadpubloop

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about sewage.

7. Please feel free to write any opinion

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

Please circle the appropri-	ate responses and	<u>l answer all qu</u>	estions to the be	<u>est of your abil</u>	ity.
1. Present status of wa	ter supply				
1.1 Is your house connect	ed to water supp	ly system?			
Yes	<u>No</u>				
1.2 Is your water connect	ion metered?				
Yes	<u>No</u>				
1.3 Use of other water su	pply sources:				
Communal tap	<u>Well</u> <u>Rain</u>	nyvater	Bottled water		
2. Present status of wa	stewater treatm	ent			
2.1 Is your house connect	ed to sewer colle	ection network	?		
Yes	NO				
2.2 If "No" to Q2.1, what	is the wastewate	er treatment at	your house?		
Septic tank	<u>Soakaway (pi</u>	t latrine)			
2.3 Does your house have	e indoor toilet(s)	?			
Yes	<u>No</u>				
2.4 How do you evaluate	the current sewa	ge services at	your home?		
Very satisfied	Rela	tively satisfied	<u>1</u>	<u>Average</u>	
Relatively unsat	isfied	,	Very unsatisfied	<u>d</u>	
2.5 Reason of dissatisfact	ion				
Low discharging	g capability	Sewage of	overflow	Others	
Foul odors		<u>High sew</u>	age charge/		
3. Water consumption	and demand		Other water so	urce(s) if any	
3.1 Monthly water charge	s of your househ	old			
Water bill inclue	ling sewage: 4	- 5,000	\$/month		
Drainage eg. ser	otic tank / cess po	ool: 🔄 🛁	\$/month		
Others:			\$/month	for	
3.2 Monthly payment for	other utilities set	vices			
JPS: C	000.00	\$/month			
Cooking gas: Si	ze of cylinder:	100 lbs Pric	e: \$ 5,200	How long doe	<u>s it last: 6 months</u>
Others:	1 settationgenations	\$/month	for		

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#### [Nortb Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

DirMon

180,000 \$/month

50,000 \$/month

Meadowbrook

(i) Monthly	sewage	charges:
(I) monency	0 V II I	enter Beel

\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ 10,000	<u>) (one</u>	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

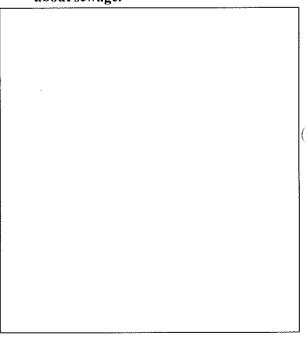
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## 7. Please feel free to write any opinion about sewage.



## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

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Please	e circle the app	ropriate respons	ses and answer a	<u>ıll questi</u>	ons to the b	est of your abili	i <u>ty.</u>
1. Pı	resent status o	of water supply					
1.1 Is	your house co	nnected to wate	r supply system	?			
	(Yes)	<u>No</u>					
1.2 Is	your water co	nnection metere	d?				
	Yes	<u>No</u>					
1.3 Us	se of other wat	er supply sourc	es:		Summer of the second		
	<u>Communal</u>	tap <u>Well</u>	<u>Rainwater</u>	Bo	ttled water	>	
2. Pı	resent status o	of wastewater t	reatment				
2.1 Is	your house co	nnected to sewe	er collection net	work?			
	Yes	No					
2.2 If	"No" to Q2.1,		tewater treatme	-	r house?		
	Septic tank	<u>(Soakay</u>	<u>ay (pit latrine)</u>	)			
2.3 Do	oes your house	e have indoor to	ilet(s)?				
	(Yes)	<u>No</u>					
2.4 He	ow do you eva	luate the curren	t sewage service	es at you	r home?		
	<u>Very satisf</u>	ied	<u>Relatively sat</u>	isfied		Average	
	<u>Relatively</u>			Ve	ry unsatisfie	ed	
2.5 Re	eason of dissat						ſ <u>~~~~~~~~~~~~~~~~~~~~~</u>
		arging capabilit		age over		<u>Others</u>	
	Foul odors	)	Hig	h sewage	e charge		
	-	otion and dema		Ot	her water so	ource(s) if any	
3.1 M	•	harges of your		2~~	<b>.</b>		
		including sewag	*	$\frac{2}{2}$	<u>\$/month</u>		
	-	<u>g. septic tank / </u>	cess pool:		<u>\$/month</u>		[
	Others:				\$/month	for	
3.2 M		t for other utili $\frac{1}{2}$		.1			
	JPS:	<u> </u>	<u>\$/mo</u>		6000	TT 1 1	
		_			_	How long doe	s it last: 6 months
	Others:	8 1000	<u>\$/100</u>	<u>nth</u>	for	Phone	

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	\$1,000/month
	\$1,200/month	<u>\$1,400/month</u>	\$1,600/month
i) Initial payment for connection	\$ <u>iD</u> , S	000 (one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

5.1 Household size:

(i)

- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age: -
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

80,000\$/month

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10 000\$/month	
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persons

#### 7. Please feel free to write any opinion about sewage.

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## 101

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

Please circle the appropriat	e responses and answer all questions to the best of your ability.
1. Present status of wate	r supply
1.1 Is your house connecte	d to water supply system?
Yes	No
1.2 Is your water connection	on metered?
Yes	No
1.3 Use of other water supp	bly sources:
Communal tap	Well Rainwater Bottled water
2. Present status of wast	ewater treatment
2.1 Is your house connected	d to sewer collection network?
Jest (	No
2.2 If "No" to Q2.1, what i	s the wastewater treatment at your house?
Septic tank	Soakaway (pit latrine)
2.3 Does your house have i	ndoor toilet(s)?
Yes	No
2.4 How do you evaluate the	ne current sewage services at your home?
Very satisfied	Relatively satisfied Average
Relatively unsatis	fied Very unsatisfied
2.5 Reason of dissatisfaction	m
Low discharging of	capability Sewage overflow Others
Foul odors	High sewage charge
3. Water consumption a	nd demand Other water source(s) if any
3.1 Monthly water charges	of your household
Water bill including	ng sewage: 2,800 \$/month
<u>Drainage eg. septi</u>	c tank / cess pool: \$/month
Others:	\$/month for
3.2 Monthly payment for o	ther utilities services
JPS:	<u>3,200 \$/month</u>
Cooking gas: Size	of cylinder: 100 lbs Price: \$ 5,000 How long does it last: 10 months
Others:	3,000 \$/month for Phone.

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	<u>\$ 600 C</u>	00 (one	-time payment)

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

 5.1 Household size:
 2 persons

 5.2 Monthly income:
 2.5,000 \$/month

 5.3 Monthly saving:
 0 \$/month

 5.4 Area of Residence:
 Meadowb Apph

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## 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

7. Please feel free to write any opinion

about sewage.				
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## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

	e circle the approp resent status of w		and answer all	questions to the l	best of your ability.	
			un n les assataments			
1.1 IS	your house conne		upply system?			
101	Yes	No				
1.2 Is	your water conne					
	Yes	No				
1.3 U	se of other water s	<i>ز</i>				
	<u>Communal tar</u>	<u>o Well</u> (]	Rainwater	Bottled water		
2. Pi	resent status of w	astewater tre	atment			
2.1 Is	your house conne	ected to sewer a	collection netw	ork?		
	Yes	No				
2.2 If	"No" to Q2.1, wh	at is the waste	water treatmen	t at your house?		
	Septic tank	Soakaway	(pit latrine)			
2.3 D	oes your house ha	ve indoor toile	t(s)?			
	Yes	<u>No</u>				
2.4 H	ow do you evalua	te the current s	ewage services	at your home?		
	Very satisfied		Relatively satis		Average	
	Relatively uns	atisfied	•	Very unsatisfi	ed	
2.5 R	eason of dissatisfa	ection				
	Low dischargi	ng capability	Sewa	ge overflow	Others	
	Foul odors		<u>High</u>	sewage charge		
3. W	ater consumptio	n and demand	I	Other water s	ource(s) if any	
	Ionthly water char					
				0. 00 \$/month	. L	
			1		2 years ago	•
	Others:		- 1	\$/month	for	Anala ( adama da ana ana ana ( and a an ( an ( an (
3.2 M	lonthly payment for	or other utilitie	s services			
		1,000,00	\$/mont	<u>h</u>		
		•		_	How long does it l	ast: 6 mo
	Others:			· · · · · · · · · · · · · · · · · · ·	Phone	
					11000	

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>

(ii) Initial payment for connection  $\frac{1}{00000}$  (one-time payment) Please note that these payments would be in addition to your current monthly household expenditures but

your current expenses for sanitation services other than by NWC would be replaced by them.

persons

\$/month

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and honsehold leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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Meador	sbrook

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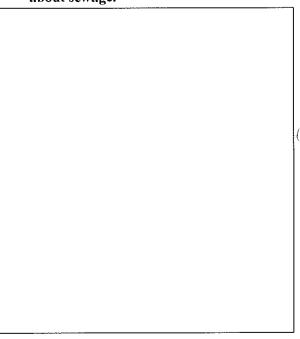
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7. Please feel free to write any opinion about sewage.



# 102

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

<u>Please circle the appropriate responses and answer all questions to the best of your ability.</u>
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes No
1.2 Is your water connection metered?
<u>Yes</u> <u>No</u>
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
<u>Yes</u> $(No)$
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors     High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 2, 800 \$/month
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month for
3.2 Monthly payment for other utilities services
$\underline{JPS:}  \underline{3}  \underline{\mathcal{O}}  \underline{\mathcal{O}}  \underline{\mathcal{O}}  \underline{\mathcal{S}}  \underline{\mathcal{M}}  \underline{\mathcal{O}}  \underline{\mathcal{O}}  \underline{\mathcal{S}}  \underline{\mathcal{O}}  \underline{\mathcal{O}}  \underline{\mathcal{O}}  \underline{\mathcal{S}}  \underline{\mathcal{O}}  \underline{\mathcal{O}}$
Cooking gas: Size of cylinder: 100 lbs Price: \$ 5,000 How long does it last: 10 months
Others: 4,000 00 \$/month for Phone.

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	\$1,000/month
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ <u> </u>	0.00 (one	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

5.1 Household size: <u>3</u> persons
5.2 Monthly income: <u>40,000.00</u>\$/month
5.3 Monthly saving: <u>0</u> \$/month
5.4 Area of Residence: <u>Hope Part men</u>
6. Profile of interviewee and household leader
6.1 Interviewee

Occupation: <u>Hour Dresser</u>

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- Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

## 7. Please feel free to write any opinion about sewage.

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## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropria	te responses	s and answer all c	uestions to the l	pest of your abi	<u>lity.</u>
1. Present status of wat	er supply				·
1.1 Is your house connected	ed to water s	supply system?			
Yes					
1.2 Is your water connecti	on metered?	?			
Yes	<u>No</u>				
1.3 Use of other water sup	ply sources:	•	-1		
Communal tap	Well	<u>Rainwater</u>	Bottled water		
2. Present status of was	tewater trea	atment			
2.1 Is your house connected	ed to sewer o	collection networ	k?		
Yes	<u>No</u>				
2.2 If "No" to Q2.1, what	is the waster	water treatment a	t your house?		
Septic tank	<u>Soakaway</u>	v (pit latrine)			
2.3 Does your house have	indoor toile	t(s)?			
Yes	<u>No</u>				
2.4 How do you evaluate t	he current se	ewage services at	your home?		
Very satisfied		Relatively satisfic	<u>ed</u>	Average	
Relatively unsatis			Very unsatisfic	<u>ed</u>	
2.5 Reason of dissatisfaction					<b>*</b> ****
Low discharging	<u>capability</u>	<i>c</i>	overflow	Others	
Foul odors		High se	wage charge		
3. Water consumption a	nd demand		Other water so	ource(s) if any	
3.1 (Monthly water charges	of your hou	ısehold		•	
) <u>Water bill includi</u>	ng sewage:	\$ 300	<i>⊙</i> \$/month		
Drainage eg. sept	ic tank / ces	s pool:	\$/month		
Others:	entrones	REERO_	\$/month	for	
3.2 Monthly payment for c	ther utilities	services			
JPS: \$ 600	0	\$/month			
Cooking gas: Size	e of cylinder	:: Jolbs Pri	ce: \$2100	How long does	it last: 2-4 months
Others: 300	<u>0</u>	\$/month	-> Tele	by aut	,
				<b>\</b>	

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$300/month \$400/month (\$100/month) \$200/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size: 5.2 Monthly income: \_\$/month 5.3 Monthly saving:
- 5.4 Area of Residence:

\$/month Panage Thout

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Computer Dechnision Occupation: Age: (M)F

(M)

- Sex:
- 6.2 Head of the Household Occupation: Age:
  - Sex:
- 7. Please feel free to write any opinion about sewage.

F

Change right about now, I really think in

# 104

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropr	ate responses and answer all questions to the best of your ability.
1. Present status of wa	ter supply
1.1 Is your house connect	ted to water supply system?
Yes	No
1.2 Is your water connec	ion metered?
Yes	No
1.3 Use of other water su	pply sources:
<u>Communal tap</u>	Well Rainwater Bottled water
2. Present status of wa	stewater treatment
2.1 Is your house connec	ed to sewer collection network?
Yes	No
2.2 If "No" to Q2.1, wha	is the wastewater treatment at your house?
Septic tank	Soakaway (pit latrine)
2.3 Does your house hav	indoor toilet(s)?
Yes	No
2.4 How do you evaluate	the current sewage services at your home?
Very satisfied	Relatively satisfied <u>Average</u>
Relatively unsat	sfied Very unsatisfied
2.5 Reason of dissatisfact	on
Low discharging	capability Sewage overflow Others
Foul odors	High sewage charge
3. Water cousumption	and demand Other water source(s) if any
3.1 Monthly water charge	s of your household
Water bill includ	ing sewage: 7,000\$/month
Drainage eg. ser	tic tank / cess pool: \$/month
Others:	\$/month for
3.2 Monthly payment for	other utilities services
JPS:	143000\$/month
Cooking gas: Si	e of cylinder: low lbs Price: \$ 6,000 How long does it last: from months
	913/15 3,400\$/month for

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$400/month
 \$400/month

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Please note that these payments would be in addition to your current monthly household expenditures.

\$/month

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#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income: \_\_\_\_\_\$/month
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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#### 7. Please feel free to write any opinion about sewage.

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- Would LIKE TO SEE Some IMPROVE MENT IN THE SYSTEM

## Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Pleas	se circle the appropria	te respon	ses and answer al	l questions to the be	est of your abil	<u>ity.</u>
1. I	Present status of wat	er supply	7			
1.1 I	s your house connect	ed to wate	er supply system?			
	(Yes)	<u>No</u>				
1.2 I	s your water connecti	ion metere	ed?			
	Yes	No				
1.3 U	Jse of other water sup	ply sourc	es:			
	<u>Communal tap</u>	Well	<u>Rainwater</u>	Bottled water	NIA.	
<b>2.</b> F	Present status of was	tewater t	reatment			
2.1 I	s your house connecte	ed to sewe	er collection netw	ork?		
	(Yes)	<u>No</u>				
2.2 I	f "No" to Q2.1, what	is the was	stewater treatmen	t at your house?		
	Septic tank	<u>Soakaw</u>	vay (pit latrine)			
2.3 I	Does your house have	indoor to	ilet(s)?			
	(Yes)	<u>No</u>				
2.4 H	Iow do you evaluate t	the curren	t sewage_services	at your home?		
	Very satisfied		(Relatively satis	fied	Average	
	Relatively unsati	sfied		Very unsatisfied	1	
2.5 R	Reason of dissatisfacti	on				
	Low discharging capability		y <u>Sewa</u>	Sewage overflow		
	Foul odors		High	sewage charge		
3. V	Water consumption a	and dema	nd	Other water sou	urce(s) if any	
3.1 N	Aonthly water charges	•		_		
	Water bill includ	ing sewag	e: 3,001	S \$/month		
	Drainage eg. sep	<u>tic tank / o</u>	cess pool:	\$/month		J
	Others:			\$/month	for	
3.2 N	Aonthly payment for					
	JPS: 3,0					1
	Cooking gas: Siz	e of cylin	der: VOO <sub>lbs</sub>	$\frac{Price: \$ 6,000H}{2}$	low long does	it last: 6 months
			\$/mon			

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#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
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Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size: \_\_\_\_\_pers
- 5.2 Monthly income: \_\_\_\_\_\_ \$
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons \$/month Ø \$/inonth Passagefort

- 6. Profile of interviewee and household leader
- 6.1 Interviewee
- Occupation: - Age: - Sex: (F) M6.2 Head of the Household - Occupation: - Age: - Age: - Sex: (F) M

#### 7. Please feel free to write any opinion about sewage.

Its a good idea, and we expect to to be better than the present system

1. Present status o	propriate responses and answer all questions to the best of your ability. of water supply
	ennected to water supply system?
Yes	No
1.2 Is your water con	nnection metered?
Yes	No
1.3 Use of other wat	ter supply sources:
Communal	<u>I tap Well Rainwater Bottled water</u> N
2. Present status o	of wastewater treatment
2.1 Is your house co	nnected to sewer collection network?
Yes V	No
2.2 If "No" to Q2.1,	what is the wastewater treatment at your house?
Septic tank	<u>Soakaway (pit latrine)</u> $N \int A$
2.3 Does your house	e have indoor toilet(s)?
<u>Yes</u> V	<u>No</u>
2.4 How do you eva	luate the current sewage services at your home?
Very satisfi	ied <u>Relatively satisfied</u> <u>Average</u>
Relatively	unsatisfied Very unsatisfied
2.5 Reason of dissati	isfaction
Low discha	arging capability Sewage overflow Others
Foul odors	High sewage charge yes
	otion and demand Other water source(s) if any
-	harges of your household
	ncluding sewage: 1000 + \$/month
	g. septic tank / cess pool: \$/month
Others:	<u>\$/month</u> for
	nt for other utilities services
JPS:	5000 \$/month
	as: Size of cylinder: 50 lbs Price: \$ 2000 How long does it last: 2 months
Others:	2000 \$/month for
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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 Please note that these payments would be in addition to your current monthly household expenditures.

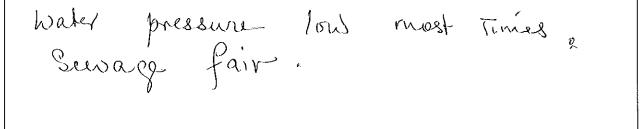
#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

# <u>retire</u> \$/month Civil Servard - Health. <u>\$/month</u> <u>Passage</u> Fort

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: - Age: - Sex: E M6.2 Head of the Household - Occupation: - Age: - Sex: F M



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Please circle the appropriate responses and answer all questions to the best of your ability.				
1. Present status of water supply				
1.1 Is your house connected to water supply system?				
Yes No				
1.2 Is your water connection metered?				
Yes No				
1.3 Use of other water supply sources:				
Communal tap Well Rainwater Bottled water W/A				
2. Present status of wastewater treatment				
2.1 Is your house connected to sewer collection network?				
Yes No				
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?				
Septic tank Soakaway (pit latrine)				
2.3 Does your house have indoor toilet(s)?				
Yes No				
2.4 How do you evaluate the current sewage services at your home?				
Very satisfied Relatively satisfied Average				
Relatively unsatisfied Very unsatisfied				
2.5 Reason of dissatisfaction				
Low discharging capability Sewage overflow Others				
Foul odors High sewage charge				
3. Water consumption and demand Other water source(s) if any				
3.1 Monthly water charges of your household				
Water bill including sewage: \$/month \$ 1.000				
Drainage eg. septic tank / cess pool: \$/month				
Others: \$/month for				
3.2 Monthly payment for other utilities services				
JPS: 5 (.000 \$/month				
Cooking gas: Size of cylinder: ころ Ibs Price: \$ 1気の How long does it last: S months				
Others: Colby Bill Slovos/month for				

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month 2\$500/month \$600/month

\_\_\_\_\_\_\$/month

page for wat

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- <u>ONC</u> persons 5.1 Household size: 9.000 \$/month 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

6.1 Interviewee

-

- 5kta Driver Occupation: -<u>34</u> M Age: F Sex: \_ 6.2 Head of the Household Da me
  - Age: -M
  - Sex: F

Occupation:

I think the servage werd a cot of morte

<ol> <li>Present status of wate</li> <li>1.1 Is your-house connected</li> </ol>	•	nlv system?			
(Yes)	<u>No</u>	ny system:			
1.2 Is your water connecti					
(Yes)	<u>No</u>				
1.3 Use of other water sup					
<u>Communal tap</u>		nwater	Bottled wat	<u>er</u>	
2. Present status of was	tewater treatm	ent			
2.1 Is your house connected	d to sewer coll	ection netwo	ork?		
Yes	No				
2.2 If "No" to Q2.1, what	is the wastewat	er treatment	at your house?		
Septic tank	(Soakaway (p	it latrine)			
2.3 Does your house have	indoor toilet(s)	?			
Yes	<u>No</u>				
2.4 How do you evaluate t	he current sewa	age services	at your home?		
Very satisfied	) <u>Rel</u>	atively satist	fied	Average	
Relatively unsati	sfied		Very unsati	sfied	
2.5 Reason of dissatisfacti	on				
Low discharging	<u>capability</u>	Sewag	e overflow	<u>Others</u>	
Foul odors		<u>High s</u>	sewage charge		
3. Water consumption a	nd demand		Other wate	r source(s) if any	
3.1 Monthly water charges	of your housel	iold X	. 15		(already paying)
Water bill includi	ng sewage?	50	ODU \$/mor	<u>nth</u>	Sewage Fill
Drainage eg. sept	ic tank / cess p	<u>ool:</u>	\$/mor	<u>ith</u>	v
Others:			\$/mor	<u>nth</u> for	
3.2 Monthly payment, for a	other utilities se	rvices			
JPS:	DDD	\$/mont	h		
Cooking gas: Siz	e of cylinder:	lbs P	rice: \$	How long doe	es it last: months
Others: 420	572	\$/mont	<u>h</u> for		
	OD C	nt:		-	

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

\$/month

(i) Monthly sewage charges: /	<u>\$60</u>	0/month	<u>\$800/mon</u>	<u>ith</u>	<u>\$1,000/month</u>		
	<u>\$1,</u>	200/month	<u>\$1,400/m</u>	onth	<u>\$1,600/month</u>	)	,
(ii) Initial payment for connection	`\$	200,	070	_ (one	-time payment)	$\leftarrow$	estimate

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

Retired	
50 ×	

oacobsive could or combined Hy bill over

Please circle the appropria	te responses and a	nswer all questions to the	e best of your abi	<u>lity.</u>
1. Present status of wat	er supply			
1.1 Is your house connected	ed to water supply	system?		
(Yes	<u>No</u>			
1.2 Is your water connecti	on metered?			
$\left(\frac{Yes}{Yes}\right)$	<u>No</u>			
1.3 Use of other water sup	ply sources:			
Communal tap	<u>Well</u> <u>Rainw</u>	ater Bottled wate	<u>er</u>	
	None			
2. Present status of was	tewater treatmen	t		
2.1 Is your house connected	ed to sewer collect	ion network?		
Yes	(No			
2.2 If "No" to Q2.1, what	is the wastewater	treatment at your house?		
Septic tank	Soakaway (pit la	atrine)		
2.3 Does your house have	indoor toilet(s)?			
( <u>Yes</u>	<u>No</u>			
2.4 How do you evaluate t	he current sewage	services at your home?		
( <u>Very satisfied</u> )	Relativ	vely satisfied	<u>Average</u>	
Relatively unsati	sfied	Very unsatis	fied	
2.5 Reason of dissatisfacti	on			
Low discharging	capability	Sewage overflow	<u>Others</u>	
Foul odors		High sewage charge		
3. Water consumption a	nd demand	Other water	source(s) if any	(alion 1. Dulona)
3.1 Monthly water charges	s of your househol			(alliandy puying)
Water bill includi	ng sewage:	2,570.00\$/mon	<u>th</u> -	Seulage bill /
Drainage eg. sept	ic tank / cess pool			
Others:		\$/mon	<u>th</u> for	
3.2 Monthly payment for a	other utilities servi	ces		
JPS:	40000	,		
Cooking gas: Siz	e of cylinder: 10	<u>0 lbs Price: \$ 6000-0</u>	?o How long doe	<u>es it last: 3 months</u>
	\$\$ 2000.00	<u>\$/month</u> for		
Cable	\$ 4,000.06			

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$	(one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

5.1 Household size:	persons
5.2 Monthly income:	<u>50,000</u> \$/month
5.3 Monthly saving:	<u> </u>
5.4 Area of Residence:	Mona

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

Civil	Servant
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Since Mona had no Central Sewage Lystens, we should not be charged for it. Central Sewarge Systems is a good idea.

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<u>Ple</u>	ease circle the appropriate responses and answer all questions to the best of your ability.
1.	Present status of water supply
1.1	1 Is your house connected to water supply system?
	<u>Yes</u> <u>No</u>
1.2	2 Is your water connection metered?
	<u>Yes</u> <u>No</u>
1.3	3 Use of other water supply sources:
	Communal tap Well Rainwater Bottled water
2.	Present status of wastewater treatment
2.1	I Is your house connected to sewer collection network?
	Yes (No)
2.2	2 If "No" to Q2.1, what is the wastewater treatment at your house?
	Septic tank (Soakaway (pit latrine))
2.3	B Does your house have indoor toilet(s)?
	Yes <u>No</u>
2.4	How do you evaluate the current sewage services at your home?
	Very satisfied Relatively satisfied Average
	Relatively unsatisfied Very unsatisfied
2.5	5 Reason of dissatisfaction
	Low discharging capability (Sewage overflow) Others
	Foul odors, High sewage charge
3.	Water consumption and demand       Other water source(s) if any
3.1	Monthly water charges of your household
	Water bill including sewage: $3000-3000$ [month]
	Drainage eg. septic tank / cess pool: \$/month Not For Syears
	Others: \$/month for
3.2	2 Monthly payment for other utilities services
	JPS: $\sqrt{3}$ OO(), $\frac{\text{month}}{100}$
	Cooking gas: Size of cylinder: 100 lbs Price: \$ 6000 How long does it last: 4 months
	Others: @ 2000 \$/month for Telephener
	t2000 Internet.
	$\sim$ .

#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ <u>500</u>	() (one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

persons ) $\bigcirc$ ()  $\$ month \$/month

(M) €

Lwould really like to see it happen.

Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
(Yes) No
1.2 Is your water connection metered?
(Yes) No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
Yes (No)
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank (Soakaway (pit latrine))
2.3 Does your house have indoor toilet(s)?
Yes) No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: #3000.00 \$/month
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month for
3.2 Monthly payment for other utilities services
JPS: <b>\$6000.00</b> \$/month
Cooking gas: Size of cylinder: 25 lbs Price: \$ 1800. D How long does it last: 1 months
Others: \$/month for

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	( <u>\$800/month</u> )	<u>\$1,000/month</u>
<u>\$1,200/month</u>	\$1,400/month	<u>\$1,600/month</u>
\$ <u>2000.0</u>	D (one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

# 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

F

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

<u> </u>	persons
\$35000.	<sup>61&gt;</sup> \$/month
\$ 2000	\$/month
Pembroke	Hall
	••••(

lect RICIOn

7. Please feel free to write any opinion about sewage.

9 would Appreciate this, service as son As possible because 9 would benefit from it in more ways than one so I'm for it.

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Please circle the appropriate responses and answer all questions to the	he best of your ability.
1. Present status of water supply	
1.1 Is your house connected to water supply system?	
(Yes) No	
1.2 Is your water connection metered?	
(Yes) <u>No</u>	
1.3 Use of other water supply sources:	
Communal tap Well Rainwater Bottled wa	iter
2. Present status of wastewater treatment	
2.1 Is your house connected to sewer collection network?	(individual connection) 2 years ago
Yes No	(2 years ago /
2.2 If "No" to Q2.1, what is the wastewater treatment at your house	?
Septic tank Soakaway (pit latrine) N(R,	
2.3 Does your house have indoor toilet(s)?	
Yes No	
2.4 How do you evaluate the current sewage services at your home?	?
Very satisfied Relatively satisfied	Average
( <u>Relatively unsatisfied</u> <u>Very unsat</u>	isfied
2.5 Reason of dissatisfaction	. []
Low discharging capability (Sewage overflow)	Others
Foul odors High sewage charge	
3. Water consumption and demand Other water	er source(s) if any
3.1 Monthly water charges of your household	
Water bill including sewage: \$/mc	
Drainage eg. septic tank / cess pool: \$/mo	
Others: \$/mc	onth for
3.2 Monthly payment for other utilities services	
JPS: \$/month	
Cooking gas: Size of cylinder: Ibs Price: \$	How long does it last: months
Others: \$/month for	

#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

(

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

persons

<u>\_\_</u>\$/month ン*r*ロソピ

#### 5. Profile of your household

- 5.1 Household size: <u>3</u>
- 5.2 Monthly income: \_\_\_\_\_\$/month
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- ecre for Occupation: Age: \_ Sex: \_  $\mathbf{F}$ Μ 6.2 Head of the Household Lame Occupation: -Age: Sex: F M

Jom not comfortable presently with the Sewage in My area, reason why the manhold in My yard Keep Fulling up and thowe keep sending money to Eleor it.

Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection metered? Yes No 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes No 2.4 How do you evaluate the current sewage services at your home? (Relatively satisfied-Very satisfied Average **Relatively unsatisfied** Very unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Low discharging capability Others Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household Water bill including sewage: \$/month \$ 1000 Drainage eg. septic tank / cess pool: \$/month Others: \$/month for 3.2 Monthly payment for other utilities services JPS: <u>10K \$/month</u> Cooking gas: Size of cylinder: 100lbs Price: \$ 6500 How long does it last: months Cappe / Telophone France \$/month for Others:

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$200/month \$300/month \$100/month \$400/month <u>\$500/m</u>onth \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size: persons 5.2 Monthly income: \$/month \$/month 5.3 Monthly saving: and 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: ---
  - Age:
  - Sex: ----
- 6.2 Head of the Household

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-

Occupation:

- Age:
- Sex:

#### 7. Please feel free to write any opinion about sewage.

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# 114

# Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Pres	ent status of wate	r supply				
1.1 Is yo	ur house connecte	d to water supply	system?			
	Yes 🗸	<u>No</u>				
1.2 Is yo	ur water connectio	on metered?				
	Yes	<u>No</u>				
1.3 Use (	of other water sup	ply sources:				
	Communal tap	Well Rainwa	ater	Bottled water		
	ent status of wast			2	L.	
2.1 Is yo	our house connecte	<u>No</u>		.:	The state	
0.0 TE (1)	<u>res</u> Io" to Q2.1, what i		reatment at	vour house?		
2.2 H "N	Septic tank	<u>Soakaway (pit la</u>		your nouse?		
2 2 Doe	s your house have		<u>aano j</u>			
2.5 D0es	Yes	No				
24 How	do you evaluate t		services at	your home?		
2,4 1100	<u>Very satisfied</u>		vely satisfie		Average	
	Relatively unsati			- Very unsatisfied	1 1	
2.5 Reas	son of dissatisfacti					
•	Low discharging		Sewage	overflow	Others	
	Foul odors		<u>High sev</u>	vage charge		
3. Wat	er consumption a	and demand		Other water so	urce(s) if any	
3.1 Mon	thly water charges					
	Water bill includ	ing sewage: S	31452	-, 77 \$/month		
		tic tank / cess poo		\$/month		
	Others:			\$/month	for	
3.2 Mor	tily payment for	other utilities serv	ices			
	<u>JPS: \$4</u>		\$/month			
	Cooking gas: Siz	e of cylinder: அ	<u>S lbs Pri</u>	ce: \$ 1 950 I	How long does	it last: <u>2 months</u>
	Others:		\$/month	for		

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

\$ 30,000 \$/month \$ 5,000 \$/month Caymanas yrd. Site D

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

6.2 Head of the Household  $\checkmark$ 

- Occupation:
- Age:
- Canten Warker 54

Canteen Warker

- Sex:

#### 7. Please feel free to write any opinion about sewage.

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Please circle the appropri	ate respon	ses and answer a	Il questions to	the best of your ability.	
1. Present status of wa	ter supply	,			
1.1 Is your house connect	ted to wate	er supply system	?		
res	<u>No</u>				
1.2 Is your water connect	ion metere	ed?			
Yes	<u>No</u>				
1.3 Use of other water su	pply sourc	es:			
<u>Communal tap</u>	<u>Well</u>	<u>Rainwater</u>	Bottled w	<u>vater</u>	
2. Present status of wa	stewater t	reatment			
2.1 Is your house connec	ted to sew	er collection net	work?		
(Ves)	<u>No</u>				
2.2 If "No" to Q2.1, what	t is the wa	stewater treatme	nt at your hous	se?	
Septic tank	Soakay	<u>vay (pit latrine)</u>			
2.3 Does your house have	e indoor to	oilet(s)?			
Yes	<u>No</u>				
2.4 How do you evaluate	the currer	nt sewage service	es at your hom	e?	
Very satisfied		Relatively sat	isfied	Average	
Relatively unsat	tisfied		Very unsa	atisfied	
2.5 Reason of dissatisfac	tion		م مسمور بالم		
Low dischargin	<u>g capabilit</u>	y Sew	age overflow)	Others	
Foul odors		Hig	h sewage charg	<u>ge</u>	
2 Weter commention	and dom	md	Other w	ater source(s) if any	
3. Water consumption					
3.1 Monthly water charge	ding cover	household Four	Thomas A	x (as	
	ntie tente /	and hoch	<u>е/</u>	ionth	
Diamage eg. se	plic tank /		φ/H		
Others:			\$/II	nonth for	
3.2 Monthly payment for JPS\$3,000	Λ	ties services	nth		
······································				How long does it last	months
Cooking gas: Si	ze of cylli		Price: \$	How long does it last:	monuis
Others:		<u>\$/mo</u>	onth for		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 $\frac{\$100/\text{month}}{\$500/\text{month}} \qquad \frac{\$200/\text{month}}{\$600/\text{month}} \qquad \frac{\$400/\text{month}}{100/\text{month}}$ Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	tour persons
5.2 Monthly income:	\$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	Caymanan gardens

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age: \_\_\_\_\_
  - Sex:  $\underline{F} \underline{M}$

6.2 Head of the Household

- Occupation:
- Age:
  - Sex: <u>F</u><u>M</u>

henever it is running over 9 can't ever apenny on 9 have to help in purchasing convert hid the

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Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes No
1.2 Is your water connection metered?
Yes No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
(Yes) No
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
(Yes) No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors     High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: <u>SOO \$/month</u>
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month for
3.2 Monthly payment for other utilities services $3.2 \text{ Monthly payment for other utilities services}$
JPS: <u>500</u> <u>\$/month</u> Cooking gas: Size of cylinder: 20 Ibs Price: \$ 1,350 How long does it last: 3KKmonths
Others: JUDO + 2000 \$/month for MORTUNGIE TELETHONE

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

5.	Profile of your household			0.( =0	
5.1	Household size:	4	_persons	ZADLINTS +	2 CHILLSRED
5.2	Monthly income:	16,000	\$/month		
5.3	Monthly saving:		\$/inonth		
5.4	Area of Residence:	Calmanas Gr	videns		

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

STUBENT 20 (F) M

6.2 Head of the Household

- Occupation:
- Age:

Sex:

Please circle the appropriat	te responses and answe	all questions to t	the best of your ability.	
1. Present status of wate	er supply			
1.1 Is your house connecte	d to water supply syste	m?		
Yes	<u>No</u>			
1.2 Is your water connection	on metered?			
Yes	<u>No</u>			
1.3 Use of other water sup	ply sources:			
Communal tap	Well Rainwater	Bottled wa	ater	
2. Present status of wast	tewater treatment			
2.1 Is your house connecte	d to sewer collection n	etwork?		
Yes	<u>No</u>	1		
2.2 If "No" to Q2.1, what i	is the wastewater treatm	ent at your house	?	114
Septic tank	Soakaway (pit latrine	)		
2.3 Does your house have	indoor toilet(s)?			
Yes	<u>No</u>		i	
2.4 How do you evaluate t	he current sewage servi	ces at your home	?	
Very satisfied	Relatively s	atisfied	Average	
Relatively unsatis	sfied	Very unsa	tisfied	
2.5 Reason of dissatisfaction	on			
Low discharging	capability Se	wage overflow	Others	
Foul odors	Hi	gh sewage charge	2	
3. Water consumption a	nd demand	Other wat	er source(s) if any	
3.1 Monthly water charges		~		
<u>Water bill includi</u>	ng sewage: 🖇	900, 00 \$/m	onth	
Drainage eg. sept	ic tank / cess pool:	\$/mo	onth	2
Others:		\$/m@	onth for	
3.2 Monthly payment for c	other utilities services			
JPS:	\$/m	onth		
Cooking gas: Size	e of cylinder: lbs	Price: \$	How long does it last:	months
Others:	\$/n	<u>nonth</u> for		

(

#### [Portmore - Sewage conveyor facility development by the project]

3

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

persons

CAYMANAS SAIDEN

1300, 00 \$/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income: المحكان في المحكان (المحكان المحكان المحكان المحكان المحكان المحكان المحكان المحكان المحالي محالي المحالي المحالي المحالي محالي مح
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

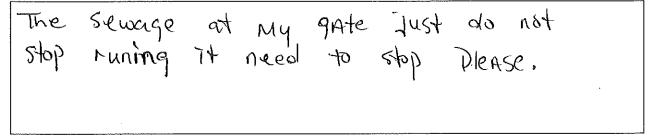
- 6.1 Interviewee
  - Occupation: Mitchine Oppiredor - Age: 40

Μ

- Sex:

6.2 Head of the Household

- Occupation: <u>DUCD MAN</u> - Age: <u>40</u>
- Sex:  $\underline{F}$



Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 1s your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

Yes

Yes

1.3 Use of other water supply sources:

Communal tap Well Rainwater Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

- 2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
  - Septie tank Soakaway (pit latrine)
- 2.3 Does your house have indoor toilet(s)?

Yes No

2.4 How do you evaluate the current sewage services at your home?

Very satisfiedRelatively satisfiedAverageRelatively unsatisfiedVery upsatisfied

2.5 Reason of dissatisfaction

Low discharging capability	Sewage overflow	Others	
Foul odors	High sewage charge		

3.	3. Water consumption and demand		er water so	urce(s) if any	
3.1	Monthly water charges of your household				
	Water bill including sewage:	500	\$/month		 
	Drainage eg. septic tank / cess pool:		\$/month		
	Others:		\$/month	for	
3.2	Monthly payment for other utilities servic	es			 
	JPS:	\$/month			

Cooking gas: Size of cylinder:25 lbsPrice: \$ 1/500 How long does it last:monthsOthers:\$/month

#### [Portmore - Sewage conveyor facility development by the project]

Caymanas

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u> <u>\$200/month</u> <u>\$300/month</u> \$500/month <u>\$600/month</u>

Please note that these payments would be in addition to your current monthly household expenditures.

\_persons \$/month

Gardens

I Would Like a better Sewage System

\$/month

#### 5. Profile of your household

5.1 Household size:

- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:
- 6. Profile of interviewee and household leader
- 6.1 Interviewee
  - Occupation:

7. Please feel free to write any opinion about sewage.

- Age: \_\_\_\_
- Sex:  $\underline{F} \quad \underline{M}$

6.2 Head of the Household

- Occupation:
- Age:
- Sex:  $\underline{F} \underline{M}$

Mother take Care of Everything

# 19

# Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropriate responses and answer all questions to the best of your ability.

(

(

1. Present status of water supply
1.1 Is your house connected to water supply system?
$\left( \underline{\text{Yes}} \right) \underline{\text{No}}$
1.2 Is your water connection metered?
(Yes No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
<u>Yes</u> <u>No</u>
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
(Septic tank) Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 2200.00 \$/month
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month_for
3.2 Monthly payment for other utilities services
JPS: \$/month
Cooking gas: Size of cylinder: lbs Price: \$ How long does it last: months

Others: \$/month

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$100/month
 Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size: \_\_\_\_\_\_ per 5.2 Monthly income: \_\_\_\_\_\_ \$/
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons \$/month \$/month oymanas malins

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

Pensines E M

M

6.2 Head of the Household

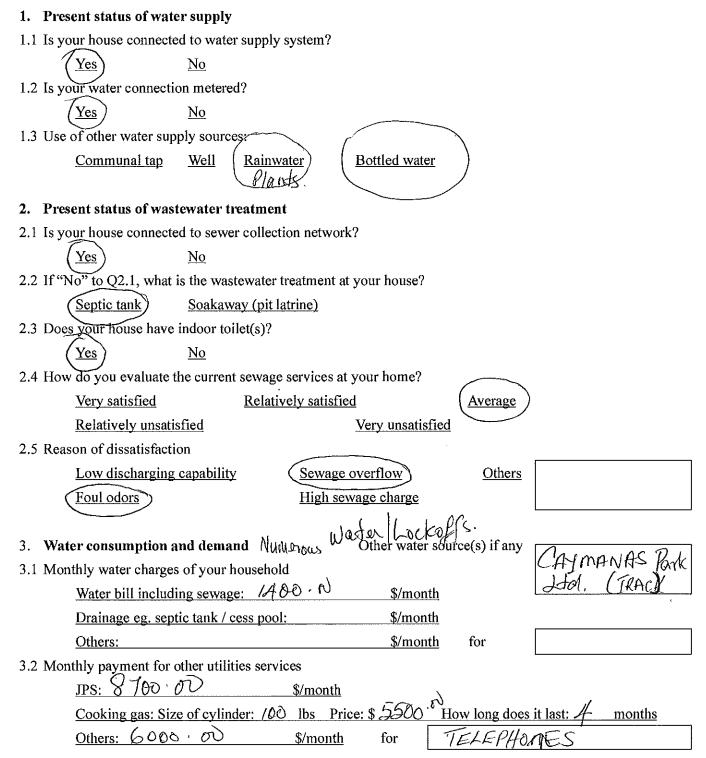
- Occupation:
- Age:

Sex:

- F
- 7. Please feel free to write any opinion about sewage.

onge

Please circle the appropriate responses and answer all questions to the best of your ability.



#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	persons
5.2 Monthly income:	\$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	CAYMANAS Jardens QUE L

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:

Hother: 57. F) M

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

Could N.WC. generaate their own ENERGY, There Should be a plan to recycle, Can we get the use of Bi Boodnets for Jertilizer." This is Not Sewage: - Have Dialogue with the people.

Please circle the	appropriate 1	responses and a	<u>nswer all q</u>	uestions to the	best of your abil	<u>ity.</u>
1. Present sta	tus of water :	supply				
1.1 Is your hous	e connected t	to water supply	system?			
<u>Yes</u>	Ī	No				
1.2 Is your wate	r connection	metered?				
<u>Yes</u>	Ī	No				
1.3 Use of othe	water supply	y sources:				
Comm	unal tap	Well Rainw	ater	Bottled water		
2. Present sta	tus of wastev	vater treatmen	t			
2.1 Is your hou	se connected	to sewer collect	ion networ	k?		
<u>Yes</u> 🗸	- <u>]</u>	<u>No</u>				
2.2 If "No" to (	)2.1, what is t	the wastewater	treatment a	t your house?		
Septic	tank S	<u>Soakaway (pit l</u>	<u>atrine)</u>			
2.3 Does your l	ouse have ind	door toilet(s)?				
Yes	]	<u>No</u>				
2.4 How do you	ı evaluate the	current sewage	services a	t your home?		
<u>Very s</u>	atisfied	<u>Relati</u>	vely satisfi	ed	Average K	<u>^</u>
<u>Relati</u>	vely unsatisfi	ed		Very unsatisf	ied	
2.5 Reason of c	issatisfaction	l				
Low c	lischarging ca	<u>ipability</u>	Sewage	e overflow	Others	
<u>Foul c</u>	odors		<u>High se</u>	wage charge		
3. Water cons	sumption and	d demand	) /	Other water	source(s) if any	
3.1 Monthly wa	ter charges o	f your househo				
Water	bill including	g sewage:	620	00 \$/mont	t <u>h</u>	
Drain	ige eg. septic	tank / cess poo	<u>l:</u>	\$/mont	<u>h</u>	
Other	3:			\$/mont	t <u>h for</u>	
3.2 Monthly pa	-	her utilities serv	ices			
JPS:	i	A8000	\$/month			
Cooki	ng gas: Size (	of cylinder: 3	<u> Ibs Pr</u>	ice: \$2000	How long does	<u>s it last: 2 months</u>
Other			\$/month			

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons 8.61 \$/month \$/month Laymanas Garden

Call Quality Analist

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
    - Sex:

6.2 Head of the Household

- Occupation:
- Age:
- 2-5
- Sex: <u>F</u>

#### 7. Please feel free to write any opinion about sewage.

F∕ M

Sales

Mи

ance Assistant

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Please circle the appropriate	responses and answer	all questions to the best of your abi	<u>lity.</u>
1. Present status of water	supply		
1.1 Is your house connected	to water supply system	m?	
Yes	No		
1.2 Is your water connection	n metered?		
Yes	No		
1.3 Use of other water supp	ly sources:		
<u>Communal tap</u>	Well Rainwater	Bottled water	
2. Present status of waste	water treatment		
2.1 Is your house connected	to sewer collection ne	etwork?	
Yes	No		
2.2 If "No" to Q2.1, what is	the wastewater treatm	ent at your house?	
Septic tank	Soakaway (pit latrine)	)	
2.3 Does your house have in	ndoor toilet(s)?		
(Yes)	No		
2.4 How do you evaluate th	e current sewage servi	ces at your home?	
Very satisfied	Relatively s	atisfied <u>Average</u>	
Relatively unsatisf	ied	Very unsatisfied	
2.5 Reason of dissatisfactio	n		
Low discharging c	apability <u>Se</u>	wage overflow Others	
Foul odors	<u>Hi</u>	gh sewage charge	
3. Water consumption an	d demand	Other water source(s) if any	
3.1 Monthly water charges	•	1	,
	g sewage: 2,14		
Drainage eg. septio	<b>1</b>	\$/month	[]
	<u>e 2963</u>	·58 \$/month_for	
3.2 Monthly payment for ot			
<u>JPS: <math>S/Sk</math></u>	\$/m	onth	107
Cooking gas: Size	of cylinder: 100 lbs	Price: \$ 6, 17777 How long does	s it last: w months
Others:	\$/m	<u>ionth</u>	

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 $\mathbf{v}^{t}$ 

\$100/month \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size: persons <u>3ಲ つひつ</u> \$/month 5.2 Monthly income: 5.3 Monthly saving: <u>002</u> \$/month aymanas Cardens
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: \_
  - Age:
  - Sex:
- 6.2 Head of the Household Occupation: 11100 Age: Sex: F

Dicpery

Μ

Please circle the	appropriate respons	ses and answer a	l questions to the best	of your ability.	
1. Present stat	us of water supply				
1.1 Is your hous	e connected to wate	r supply system?			
	<u>No</u>				
1.2 Is your wate	r connection metere	:d?			
Yes	<u>No</u>				
1.3 Use of other	water supply source	es:			
<u>Comm</u>	unal tap Well	<u>Rainwater</u>	Bottled water		
2. Present stat	us of wastewater t	reatment			
	e connected to sew		vork?		
Yes	No				
2.2 If "No" to Q	2.1, what is the was	stewater treatmer	nt at your house?		
Septic	tank <u>Soakav</u>	vay (pit latrine)			
2.3 Does your h	ouse have indoor to	ilet(s)?			
(Yes	No				
2.4 How do you	evaluate the currer	t sewage service	s at your home?		
Very s	ntisfied	Relatively sati	<u>sfied</u>	Average	
<u>Relativ</u>	ely unsatisfied		Very unsatisfied		
2.5 Reason of d	issatisfaction			And the second	
Low d	ischarging capabilit	y <u>Sewa</u>	nge overflow	<u>Others</u>	
<u>Foul o</u>	<u>dors</u>	High	sewage charge		
0 <b>11</b>	(† 11.		Otherseter	no(c) if only	`
	umption and dema tor charges of your		Other water sour		
•	ter charges of your bill including seway		S/month K	503.00	
	ge eg. septic tank /	-	\$/month		
Others	• • •	<u>cess pool.</u>	\$/month_f	for	
	ment for other util	ties services	<u> </u>		
JPS:	inent for other attr		nth / あみ あ		
	ng gas: Size of cylin	der: 39 lbs	<u>uth (</u> БД). DD Price: \$ <u>,</u> бД). #ДНс	ow long does it last: 1 months	
Others		\$/mo	/		
<u>ourors</u>	••••••••••••••••••••••••••••••••••••••	4.110			

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons DD #\$/month 1<u>3 DD. 18</u> \$/month

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: -

F

- Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

# <u>Pencione</u> 6044

Μ

(D) NRED A Worker at the puny House (D) Maintonance & Pump, House & Punp, very Poor

Please circle the appropriate responses and answer all questions to the best of your ability.				
1. Present status of water supply				
1.1 Is your house connected to water supply system?				
(Yes) No				
1.2 Is your water connection metered?				
Yes No				
I.3 Use of other water supply sources:				
Communal tap Well Rainwater Bottled water				
2. Present status of wastewater treatment				
2.1 Is your house connected to sewer collection network?				
(Yes) No				
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?				
Septic tank Soakaway (pit latrine)				
2.3 Does your house have indoor toilet(s)?				
Yes No				
2.4 How do you evaluate the current sewage services at your home?				
Very satisfied Relatively satisfied Average				
Relatively unsatisfied Very unsatisfied				
2.5 Reason of dissatisfaction				
Low discharging capability Sewage overflow Others				
Foul odors     High sewage charge				
3. Water consumption and demand Other water source(s) if any				
3.1 Monthly water charges of your household $(1/2)^2$				
Water bill including sewage: 1,413.00 \$/month				
Drainage eg. septic tank / cess pool: \$/month				
Others: \$/month for				
3.2 Monthly payment for other utilities services				
JPS: \$ 3, 900.00 \$/month				
Cooking gas: Size of cylinder: 101) lbs Price: \$6, 2010 How long does it last: 6 months				
Others: \$/month for				

(

### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 Please note that these payments would be in addition to your current monthly household expenditures.

month

persons

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:

Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:
- <u>Teacher</u> <u>AHAS-asabore</u> (E) M

mana

Teacher

Μ

### 7. Please feel free to write any opinion about sewage.

The Sewage overflows frequently causa foul odour.

Please circle the appropriate responses and answer all questions to the best of your ability.

(

( )

1. Present status of water supply
1.1 Is your house connected to water supply system?
<u>Yes</u> <u>No</u>
1.2 Is your water connection metered?
<u>(Yes)</u> <u>No</u>
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
(Yes) <u>No</u>
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied (Relatively satisfied) Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household <u>Water bill including sewage:</u> 4,000 \$/month
Drainage eg. septic tank / cess pool: \$/month
Others: <u>\$/month</u> for
3.2 Monthly payment for other utilities services
JPS: $3.2$ when the set trees JPS: $3.2 \circ 0.0 \circ 0.0$ \$/month
Cooking gas: Size of cylinder: 100 lbs Price: \$6000 How long does it last: 3 months
Others: 7,000 \$/month for (able + Inter et
Lancer Ch

### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

\$600/month \$800/month \$1,000/month \$1,200/month \$1,400/month \$1,600/month

(ii) Initial payment for connection  $\frac{50000}{30000}$  (one-time payment) Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

### 6.1 Interviewee

- Occupation:
- Age: -
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

persons
<u>300,000</u> \$/month
<u>80,000</u> \$/month
Mona

205%

Μ

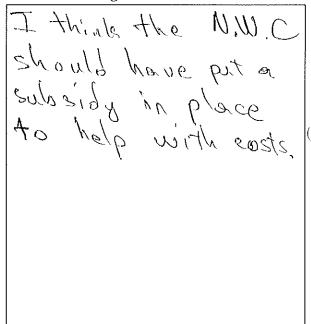
>1)

<u>M</u>

F

### 7. Please feel free to write any opinion

### about sewage.



>ervant

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Please circle the appropria	te responses and	answer all	questions to the l	best of your abil	ity.
1. Present status of wat	er supply				
1.1 Is your house connect	ed to water suppl	ly system?			
(Yes)	<u>No</u>				
1.2 Is your water connect	ion metered?				
Yes	<u>No</u>				
1.3 Use of other water sup	oply sources:				
<u>Communal tap</u>	<u>Well</u> Rain	water	Bottled water	>	
2. Present status of was	stewater treatmo	ent			
2.1 Is your house connect	ed to sewer colle	ction netwo	ork?		
Yes	No				
2.2 If "No" to Q2.1, what	is the wastewate	er treatment	t at your house?		
Septic tank	<u>Soakaway (pi</u>	t latrine)			
2.3 Does your house have	e indoor toilet(s)?	<b>)</b>			
Yes	<u>No</u>				
2.4 How do you evaluate	the current sewa	ge services	at your home?		
Very satisfied	Rela	tively satis	fied	<u>Average</u>	
Relatively unsat	isfied		Very unsatisf	ied	
2.5 Reason of dissatisfact	ion				<b>r</b>
Low discharging	<u>g capability</u>	Sewa	ge overflow)	<b>Others</b>	
Foul odors		High	sewage charge		
3. Water consumption	and demand		Other water s	source(s) if any	
3.1 Monthly water charge	es of your househ	old			
Water bill inclue	ling sewage:		\$/montl	h 2-3000	
<u>Drainage eg. ser</u>	otic tank / cess po	ool:	\$/montl	<u>h</u>	
Others:			\$/montl	<u>h for</u>	
3.2 Monthly payment for	other utilities set	rvices			
JPS:		\$/mon	th 6000		
Cooking gas: Si	ze of cylinder:	<i>i o o</i> lbs	Price: \$ 6000	How long doe	es it last: ろ months
Others:	<u></u>	\$/mon	<u>th</u>		

### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	(\$800/month)	<u>\$1,000/month</u>
(\$1,200/month)	\$1,400/month	<u>\$1,600/month</u>
S to cord	<u>~ \$5,000.0</u>	01

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

5.1 Household size:5persons5.2 Monthly income:70-100,000 \$/month5.3 Monthly saving:10,000 \$/month5.4 Area of Residence:Pembroke Itall

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(M)

### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:

Retired teacher

- Sex:

6.2 Head of the Household

- Occupation:
- Age:

Retired Teacher

- Age: Sex:
- <u>4'</u> M

Ple	ease circle the appropriate responses and answer all questions to the best of your ability.		
1.	Present status of water supply		
	Is your house connected to water supply system?		
	Yes No		
	Is your water connection metered?		
	<u>Yes</u> <u>No</u>		
	Use of other water supply sources: NA		
	Communal tap Well Rainwater Bottled water		
2.	Present status of wastewater treatment		
	Is your house connected to sewer collection network?		
	Yes (No.)		
	If "No" to Q2.1, what is the wastewater treatment at your house?		
	Septic tank Soakaway (pit latrine)		
	Does your house have indoor toilet(s)?		
	Yes No		
	How do you evaluate the current sewage services at your home?		
	Very satisfied <u>Relatively satisfied</u> <u>Average</u>		
	Relatively unsatisfied Very unsatisfied		
	Reason of dissatisfaction		
	Low discharging capability Sewage overflow Others		
	Foul odors High sewage charge		
3.	Water consumption and demand   Other water source(s) if any		
	Monthly water charges of your household		
	Water bill including sewage: 3,000 \$/month		
	Drainage eg. septic tank / cess pool: \$/month		
	Others: \$/month_for		
	Monthly payment for other utilities services		
	JPS: 10,500 \$/month		
	Cooking gas: Size of cylinder: 100 lbs Price: \$ 5,800 How long does it last: 3 months		
	Others: \$/month		

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### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
n	\$ <u>5000.</u>	FU	

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(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

Household size:	persons
Monthly income:	80,000 \$/month
Monthly saving:	10,000 \$/month
Area of Residence:	pembrace Hall

### 6. Profile of interviewee and household leader

Interviewee

- Occupation:
- Age:
- Sex:

Head of the Household

- Occupation:
- Age:
- Sex:

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Manager	
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<u>Manager</u>

	ase circle the appropriate responses and answer all questions to the best of your ability.
1.	Present status of water supply
	Is your house connected to water supply system?
	(Yes) No
	Is your water connection metered?
	<u>Yes</u> <u>No</u>
	Use of other water supply sources:
	Communal tap Well Rainwater Bottled water
2.	Present status of wastewater treatment
	Is your house connected to sewer collection network?
	Yes (No)
	If "No" to Q2.1, what is the wastewater treatment at your house?
	Septic tank Soakaway (pit latrine)
	Does your house have indoor toilet(s)?
	Yes No
	How do you evaluate the current sewage services at your home?
	Very satisfied (Relatively satisfied) Average
	Relatively unsatisfied Very unsatisfied
	Reason of dissatisfaction
	Low discharging capability Sewage overflow Others
	Foul odors High sewage charge
3.	Water consumption and demand Other water source(s) if any
	Monthly water charges of your household
	Water bill including sewage: \$/month
	Drainage eg. septic tank / cess pool: \$/month
	Others: \$/month_for
	Monthly payment for other utilities services
	JPS: \$/month
	Cooking gas: Size of cylinder: $100$ lbs Price: $\frac{1}{0000}$ How long does it last: $\frac{4}{1000}$ months
	Others: \$/month

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### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
	\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

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### 5. Profile of your household

Household size:	
Monthly income:	<u>8,000</u> \$/month
Monthly saving:	\$/month
Area of Residence:	Penbrohe Hall

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#### $\hat{\mathbb{C}}_{2}$ 6. Profile of interviewee and household leader

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Interviewee

- Occupation:
- Age: -

Sex:

Head of the Household

- Occupation:
- Age:
- Sex:

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<u>Ple</u>	ease circle the appropriate responses and answer all questions to the best of your ability.							
1.	Present status of water supply							
Is your house connected to water supply system?								
	Yes No							
Is your water connection metered?								
	(Yes) <u>No</u>							
	Use of other water supply sources:							
	Communal tap Well Rainwater Bottled water							
2.	Present status of wastewater treatment							
	Is your house connected to sewer collection network?							
	$\underline{\text{Yes}}$ $(\underline{\text{No}})$							
	If "No" to Q2.1, what is the wastewater treatment at your house?							
	Septic tank Soakaway (pit latrine)							
	Does your house have indoor toilet(s)?							
	Yes No							
	How do you evaluate the current sewage services at your home?							
	Very satisfied Relatively satisfied Average							
	Relatively unsatisfied Very unsatisfied							
	Reason of dissatisfaction							
	Low discharging capability Sewage overflow Others							
	Foul odors High sewage charge							
3.	Water consumption and demand Other water source(s) if any							
	Water bill including sewage: \$/month							
	Drainage eg. septic tank / cess pool: \$ 1 200 \$/month							
	Others: \$/month for 0/14							
	Monthly payment for other utilities services							
	JPS: \$15 month							
	Cooking gas: Size of cylinder: 100 lbs Price: \$ 6 2 00 How long does it last: 3 months							
	$\frac{Others:}{M/M} = \frac{M/M}{M} = \frac{M/M}{M}$							

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### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$600		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

Household size:	persons		
Monthly income:	\$/month		
Monthly saving:	\$/month		
Area of Residence:	325.1610 Sq. meters	Ltembrolie	the U_

### 6. Profile of interviewee and household leader

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Interviewee

Sex:

- Occupation:
- Age:
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Head of the Household

- Occupation:
- Age:
- Sex:

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<u>Ple</u>	ease circle the appropriate responses and answer all questions to the best of your ability.					
1.	Present status of water supply					
	Is your house connected to water supply system?					
	(Yes No					
	Is your water connection metered?					
	(Yes) <u>No</u>					
	Use of other water supply sources:					
	Communal tap Well Rainwater Bottled water					
2.	Present status of wastewater treatment					
	Is your house connected to sewer collection network?					
	Yes No					
	If "No" to Q2.1, what is the wastewater treatment at your house?					
	Septic tank Soakaway (pit latrine)					
• •	Does your house have indoor toilet(s)?					
	Ýes <u>No</u>					
	How do you evaluate the current sewage services at your home?					
	Very satisfied (Relatively satisfied) Average					
	Relatively unsatisfied Very unsatisfied					
	Réason of dissatisfaction					
	Low discharging capability Sewage overflow Others					
	Foul odors High sewage charge					
3.	Water consumption and demand Other water source(s) if any					
	Monthly water charges of your household					
	Water bill including sewage: \$16000 \$/month					
	Drainage eg. septic tank / cess pool:\$/month					
	Others:\$/month_for					
	Monthly payment for other utilities services					
	JPS: \$6'000 \$/month					
	Cooking gas: Size of cylinder: 25 lbs Price: \$ 1 900 How long does it last: 1 months					
	Others: Phone -3800 \$/month					

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### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

Household size:	persons
Monthly income:	\$/month
Monthly saving:	\$/month
Area of Residence:	Pembroke Hall

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### 6. Profile of interviewee and household leader

Interviewee

- Occupation:
- Age: \_\_\_\_\_
- Sex:  $\underline{F} \underline{M}$

Head of the Household

- Occupation:
- Age: \_\_\_\_\_
- Sex:  $\underline{F} \underline{M}$

# B

# Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

Please circ	ele the appropriate	e responses ar	id answer all c	uestions to the	best of your abili	<u>ty.</u>	
1. Prese	nt status of wate	r supply					
1.1 Is you	r house connected	d to water sup	ply system?				
1	Yes /	<u>No</u>					
1.2 Is you	r water connectio	on metered?					
2	Yes i	<u>No</u>					
1.3 Use of	f other water supp	oly sources:					
<u>(</u>	Communal tap	<u>Well</u> <u>Ra</u>	inwater	Bottled wate	r C		
2. Prese	nt status of wast	ewater treatr	nent				
2.1 Is you	r house connected	d to sewer col	lection netwo	rk?			
2	Yes	<u>No</u>					
2.2 If "No	o" to Q2.1, what i	s the wastewa	ter treatment a	at your house?			
<u>.</u>	Septic tank	<u>Soakaway (j</u>	<u>pit latrine)</u> V	e <sup>e</sup>			
2.3 Does	your house have i	indoor toilet(s	)?				
-	Yes L	<u>No</u>					
2.4 How o	do you evaluate tl	he current sew	age services a	at your home?			
-	Very satisfied	Re	latively satisf	ied	<u>Average</u>		
J	Relatively unsatis	fied		Very unsatis	<u>fied</u>		
2.5 Reaso	n of dissatisfactio	on					·····
ļ	Low discharging	<u>capability</u>	Sewage	e overflow	<u>Others</u>		
]	Foul odors		<u>High s</u>	ewage charge			
3. Wate	r consumption a	nd demand		Other water	source(s) if any	[	
3.1 Month	nly water charges	of your house	ehold				
2	Water bill includi	ng sewage:	3400	\$/mon	<u>th</u>	L	
J	<u>Drainage eg. sept</u>	ic tank / cess	pool:	\$/mon	<u>th</u>		
<u>(</u>	Others:			\$/mon	<u>th</u> for		
3.2 Montl	hly payment for c	other utilities s	ervices				
	IPS: 100	ar	\$/month	L			
9	Cooking gas: Size	e of cylinder:	lbs P	rice: \$	How long doe	<u>s it last:</u>	months
(	Others:		\$/montl	<u>1</u> for			

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### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

\$/month

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(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>	
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
(ii) Initial payment for connection	\$ 7-000	(one-time payment)		

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

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### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

### - Occupation:

- · Age:
- Sex:

7. Please feel free to write any opinion about sewage.

Present status of water supply
 1.1 Is your house connected to water supply system?

 Yes
 No

 1.2 Is your water connection metered?

 Yes
 No

Please circle the appropriate responses and answer all questions to the best of your ability.

1.3 Use of other water supply sources:

Communal tap Well Rainwater

### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

Yes No

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank (Soakaway (pit latring)

No

2.3 Does your house have indoor toilet(s)?

Yes

2.4 How do you evaluate the current sewage services at your home?

Very satisfied Relatively satisfied Average

Relatively unsatisfied Very unsatisfied

2.5 Reason of dissatisfaction

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Low discharging capabilitySewage overflowOthersFoul odorsHigh sewage charge

Bottled water

3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household

Water bill including sewage:
\$/month
Drainage eg. septic tank / cess pool:
\$/month
Others:
\$/month for

3.2 Monthly payment for other utilities services

JPS:
\$10,8%/month

Cooking gas: Size of cylinder:	<u>25 lbs</u> Price	:\$ 1.150	How long does it last:	/ months
Others:	\$/month	for		

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### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	(\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>	
	\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
(ii) Initial payment for connection	\$	(one-time payment)		

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

5.1 Household size: persons <u> Zerre</u>\$/month 5.2 Monthly income: 5.3 Monthly saving: \$/month H-D 5.4 Area of Residence: 6. Profile of interviewee and household leader 6.1 Interviewee Occupation: Age: Sex: 6.2 Head of the Household Occupation: Age: 20

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- Age.
- Sex:

7. Please feel free to write any opinion about sewage.

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		1
		1
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Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection inetered? <u>No</u> Yes 1.3 Use of other water supply sources: Bottled water Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? No Yes 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes No 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Average Very satisfied Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Low discharging capability Others High sewage charge Foul odors Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household \$/month 36 00 (Water bill)including sewage: Drainage eg. septic tank / cess pool: \$/month \$/month for Others: 3.2 Monthly payment for other utilities services A 10 19 \$/month JPS: Ibs Price: \$13600 How long does it last: Size of cylinder: months Cooking gas: Others: \$/month for

### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$ <u></u>	(one	-time payment)

persons

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\$/month

\$/month

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

### 6.1 Interviewee

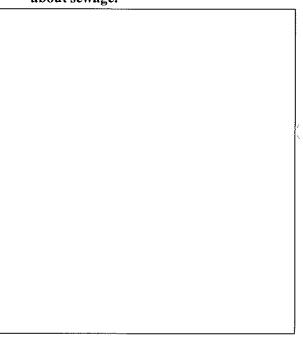
- Occupation:

<u>F</u>

M

- Age: \_\_\_\_\_
- Sex: <u>F</u><u>M</u>
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

# 7. Please feel free to write any opinion about sewage.



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Please circle the appropria	te responses and a	answer all qu	estions to the	best of your abil	ity.	
1. Present status of wat	er supply					
1.1 Is your house connected	ed to water supply	v system?				
Yes	<u>No</u>					
1.2 Is your water connecti	on metered?					
Yes	<u>No</u>					
1.3 Use of other water sup	ply sources:					
<u>Communal tap</u>	<u>Well</u> <u>Rainv</u>	vater	Bottled wate	<u>r</u>		
2. Present status of was	tewater treatme	nt				
2.1 Is your house connected	ed to sewer collec	tion network	:?			
Yes	No					
2.2 lf "No" to Q2.1, what	is the wastewater	treatment at	your house?			
Septic tank	Soakaway (pit	latrine)				
2.3 Does your house have	indoor toilet(s)?					
(Yes)	No					
2.4 How do you evaluate	the current sewage	e services at	your home?			
Very satisfied	Relati	vely satisfie	<u>d</u> )	Average		
Relatively unsati	sfied		Very unsatis	fied		
2.5 Reason of dissatisfacti	ion					
Low discharging	capability	Sewage	overflow	Others		
Foul odors		<u>High sev</u>	vage charge			
3. Water consumption a	and demand		Other water	source(s) if any		****
3.1 Monthly water charge	s of your househo	ld				
Water bill includ			\$/mon	<u>th</u> 3500		
Drainage eg. sep	tic tank / cess poc	ol:	\$/mon			
Others:	-		\$/inon	<u>th</u> for		
3.2 Monthly payment for	other utilities serv	vices			L	····
JPS: 92	900	\$/month				
Cooking gas: Siz	e of cylinder:	lhs Prid	xe: \$ <b>-</b> 8600	How long doe	es it last:	months
		100 110	$\nabla \cdot \psi = \partial \varphi - \nabla \nabla$	110 A long doe		

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### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one	-time payment)

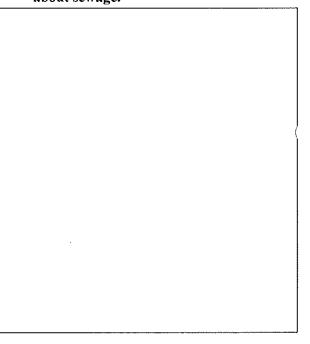
Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

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5.1 Household size: persons 5.2 Monthly income: \$/month 5.3 Monthly saving: \$/month Revolve Hall 5.4 Area of Residence: 6. Profile of interviewee and household leader 6.1 Interviewee Occupation: -\_ Age: Sex: F Μ 6.2 Head of the Household Occupation: -Age: Sex: <u>F</u> M

# 7. Please feel free to write any opinion about sewage.



Please circle the appropri	ate responses and a	nswer all ques	tions to the best	<u>t of your abili</u>	<u>ty.</u>	
1. Present status of wa	ter supply					
1.1 Is your house connec	ted to water supply	system?				
(Yes)	No					
1.2 Is your water connect	tion metered?					
Yes	No					
1.3 Use of other water su	pply sources:					
Communal tap	Well Rainv	vater <u>B</u>	ottled water			
2. Present status of wa	stewater treatme	nt				
2.1 Is your house connec	ted to sewer collec	tion network?				
Yes	No					
2.2 If "No" to Q2.1, wha	t is the wastewater	treatment at yo	our house?			
(Septic tank)	<u>Soakaway (pit</u>	latrine)				
2.3 Does your house hav	e indoor toilet(s)?					
Yes	<u>No</u>					
2.4 How do you evaluate	the current sewag	e services at yo	our home?			
Very satisfied	<u>Relat</u>	vely satisfied		<u>Average</u>		
Relatively unsa	<u>tisfied</u>	Q	ery unsatisfied	)		
2.5 Reason of dissatisfac	tion				<b></b>	
Low dischargin	<u>g capability</u>	Sewage ov	erflow	Others		
Foul odors		High seway	ge charge			
3. Water consumption	and demand	C	Other water sou	rce(s) if any	F	]
3.1 Monthly water charg	-	-				
Water bill inclu	ding sewage:	2000	<u>\$/month</u>		L	
Drainage eg. se	ptic tank / cess poo	ol:	\$/month		ſ	
Others:			<u>\$/month</u>	for		
3.2 Monthly payment fo JPS: $\$$ 5	r other utilities serv	vices <u>\$/month</u>				
Cooking gas: S	ize of cylinder: 16	D lbs Price:	\$5100 1	<u>How long doe</u>	<u>s it last:</u> Ġ	months
Others:	-	\$/month	for			

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### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one	-time payment)

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

5.1	Household size:	<u>4</u>	_persons
5.2	Monthly income:	PENSIONKR	\$/month
5.3	Monthly saving:	NIL	\$/month
5.4	Area of Residence	: PEMBROKK	HALL

RETIRED

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### 6. Profile of interviewee and household leader

### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

- Occupation:

F

- Age:
- Sex:

# 7. Please feel free to write any opinion about sewage.

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Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes No
1.2 Is your water connection metered?
(Yes) <u>No</u>
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
(No t)
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied <u>Relatively satisfied</u> <u>Average</u>
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors     High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household 1500
Water bill including sewage: 1599\$/month
Drainage eg. septic tank / cess pool: \$/month
Others: <u>for \$/month</u> for
3.2 Monthly payment for other utilities services
JPS: (9) \$/month
Cooking gas: Size of cylinder: 2-5 lbs Price: \$ 10 How long does it last: 1 months
Others: \$/month for

### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one	-time payment)

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

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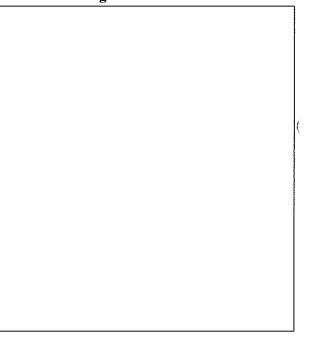
### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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		]	persons	
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# 7. Please feel free to write any opinion about sewage.

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Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection metered? Yes 1 No 1.3 Use of other water supply sources: Bottled water Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? No N Yes 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway/(pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? Yes No 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Average Very satisfied Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others High sewage charge Foul odors Other water source(s) if any 3. Water consumption aud demand 3.1 Monthly water charges of your household 00.00 <u>\$/mo</u>nth Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month for Others: 3.2 Monthly payment for other utilities services 3.800 JPS: \$/month Cooking gas: Size of cylinder: 25 lbs Price: \$ 1,700 How long does it last: 5 months \$/month for Others:

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### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>	
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
(ii) Initial payment for connection	\$	(one	-time payment)	

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons 00 \$/month 2 0000 \$/month

6. Profile of interviewee and household leader

### 6.1 Interviewee

Land seah

45. Age: 25 Sex: m-

6.2 Head of the Household

Occupation:

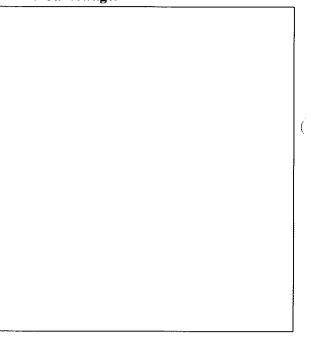
- Occupation:  $\angle 45$  - Age: 2-5

Sex: m.


<u>F</u> <u>M</u>

<u>F</u>.<u>M</u>~

# 7. Please feel free to write any opinion about sewage.



Please	e circle the appropria	te respons	es and answer a	Il questions to the b	<u>est of your abi</u>	<u>lity.</u>
1. Pi	resent status of wat	er supply				
1.1 Is	your house connect	ed to wate	r supply system	?		
	(Yes)	<u>No</u>				
1.2 Is	your water connecti	on metere	d?			
	Yes	<u>No</u>				
1 <b>.3</b> U	se of other water sup	ply sourc	es:			
	<u>Communal tap</u>	<u>Well</u>	<u>Rainwater</u>	Bottled water		
2. Pi	resent status of was	tewater t	reatment			
2.1 Is	your house connect	ed to sewe	r collection net	work?		
	Yes	No				
2.2 If	"No" to Q2.1, what	is the was	tewater treatme	nt at your house?		
	Septic tank	<u>Soakaw</u>	ay (pit latrine)			
2.3 D	oes your house have	indoor to	llet(s)?			
	(Yes)	<u>No</u>				
2.4 H	ow do you evaluate	the curren	t sewage service	es at your home?		
	Very satisfied		Relatively sat	isfied	<u>Average</u>	
	Relatively unsati	<u>sfied</u>		Very unsatisfie	<u>ed</u>	
2.5 Re	eason of dissatisfacti	on				
	Low discharging	capability	<u>Sew</u>	age overflow	Others	SIZE OF SEPTIC
	Foul odors		High	<u>ı sewage charge</u>		SIZE OF SEPTIC MANK
3. W	ater consumption a	ind dema	nd	Other water so	ource(s) if any	
3.1 M	onthly water charge	s of your l	ousehold			
			• -	ひいの \$/month		
	Drainage eg. sep	tic tank / o	ess pool: 🛛 🔗	branon \$/month		
	Others:			\$/month	for	
3.2 M	onthly payment for	other utilit	ies services			
	JPS:	\$ 650	ం రాప \$/mor	<u>nth</u>		
	Cooking gas: Siz	e of cylin	ler: 100 lbs	Price: \$ 5 ROD.C	PHow long doe	es it last: 6 months
	Others:		\$/mo	nth		

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### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>

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(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

5.1	Household size:	2	persons

- 5.2 Monthly income: \_\_\_\_\_\$/month
- 5.3 Monthly saving: \_\_\_\_\_\$/month
- 5.4 Area of Residence: <u>*LEMEROKE*</u>

### 6. Profile of interviewee and household leader

### 6.1 Interviewee

- Occupation: <u>Retires</u> A
- Age: \_\_\_\_\_\_ - Sex: F (M)
- 6.2 Head of the Household
  - Occupation: <u>*RETINGD*</u> - Age: <u>*82* 445</u>

(M)

- Sex: <u>F</u>

<u>Ple</u>	ase circle the appropriat	e responses and a	nswer all q	uestions to the	best of your abilit	<u>y.</u>	
1.	Present status of wate	er supply					
1.1	Is your house connecte	d to water supply	system?				
	(Yes)	<u>No</u>					
1.2	Is your water connection	on metered?					
	$\left(\underline{Yes}\right)$	No					
1,3	Use of other water sup	ply sources:					
	Communal tap	<u>Well</u> <u>Rainw</u>	ater	Bottled wate	<u>r</u>		
2.	Present status of was	tewater treatmen	t				
2.1	Is your house connected	d to sewer collect	ion netwo	k?			
	Yes	$(\underline{No})$					
2.2	If "No" to Q2.1, what	is the wastewater	treatment a	at your house?			
	Septic tank	Soakaway (pit ]	<u>atrine)</u>				
2.3	Does your house have	indoor toilet(s)?					
	Yes	<u>No</u>					
2.4	How do you evaluate t	he current sewage	e services a	t your home?			
	Very satisfied	Relati	vely satisf		<u>Average</u>		
	Relatively unsati	sfied		Very unsatis	fied		
2.5	Reason of dissatisfacti	on				[	
	Low discharging	capability	Sewage	e overflow	<u>Others</u>		
	<u>Foul odors</u>		<u>High s</u>	ewage charge			m
3.	Water consumption a	and demand		Other water	source(s) if any		
3.1	Monthly water charge	s of your househo	ld				
	Water bill includ	ing sewage:		\$/mon	<u>th</u>		
	Drainage eg. sep	tic tank / cess poc	ol:	<u>\$/mon</u>	<u>th</u>	r	
	Others:			\$/mon	<u>th</u> for		
3.2	2 Monthly payment for	other utilities serv	vices				
	JPS:		\$/month				
	Cooking gas: Siz	ze of cylinder:	lbs P	rice: \$	How long doe	s it last:	<u>months</u>
	Others:		\$/mont	<u>n</u> for			

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### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month \$/month

Hall

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>		
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>		
\$	(one-time payment)			

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of yonr household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

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### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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7. Please feel free to write any opinion about sewage.

Thus that this connected will be appridable So that if all house hold Can be connected will be able \$ do so.

Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? No Yes 1.2 Is your water connection metered? No 7es 1.3 Use of other water supply sources: Communal tap Well <u>Rainwater</u> Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? No 🗸 Yes 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? No Yes 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Very satisfied werage Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Others Low discharging capability Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household Water bill including sewage: ... 400 \$/month Drainage eg. septic tank / cess pool: \$/month Others: <u>\$/month</u> for 3.2 Monthly payment for other utilities services JPS: 6500 \$/month <u>OOHow long does it last:</u> Cooking gas: Size of cylinder: 2( lbs Price: \$ months Others: 20 \$/month

### [North Kingston Area – Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

\$/month

(i) Monthly sewage charges:

( <u>\$600/month</u> )	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

- 5. Profile of your household
- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

### 6. Profile of interviewee and household leader

### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:

Age:

- Sex:

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Please circle the appropriate responses and answer all questions to the best of your ability.						
1. Present status of water supply						
1.1 Is your house connected to water supply system?						
(Yes) No						
1.2 Is your water connection metered?						
(Yes) No						
1.3 Use of other water supply sources:						
Communal tap Well Rainwater Bottled water						
2. Present status of wastewater treatment						
2.1 Is your house connected to sewer collection network?						
Yes (No						
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?						
Septic tank Soakaway (pit latrine)						
2.3 Does your house have indoor toilet(s)?						
Yes No						
2.4 How do you evaluate the current sewage services at your home?						
Very satisfied Relatively satisfied Average						
Relatively unsatisfied Very unsatisfied						
2.5 Reason of dissatisfaction						
Low discharging capability Sewage overflow Others Current						
Foul odors High sewage charge Corporation						
3. Water consumption and demand Other water source(s) if any						
3.1 Monthly water charges of your household						
Water bill including sewage: \$/month						
"Drainage eg. septic tank / cess pool: \$/month						
Others: \$/month_for						
3.2 Monthly payment for other utilities services						
JPS: \$10000 Co Average \$/month						
Cooking gas: Size of cylinder: 100 lbs Price: \$ ちんん) * How long does it last: 4- months						
Others: \$/month						

### [North Kingston Area - Street sewer development by the project]

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(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>

\$

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an the Name of

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

### 5. Profile of your household

5.1 Household size:	persons	
5.2 Monthly income:	\$/month	
5.3 Monthly saving:	\$/month	
5.4 Area of Residence:	Penbroke Hall	* * * *

#### 6. Profile of interviewee and household leader

### 6.1 Interviewee

- Occupation:
- Age: \_\_\_\_\_
- Sex:  $\underline{F} \underline{M}$

6.2 Head of the Household

- Occupation:
- Age: \_\_\_\_\_
- Sex:  $\underline{F} \quad \underline{M}$

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Well Communal tap Rainwater

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

<u>No</u>

2.3 Does your house have indoor toilet(s)?

Yes)

2.4 How do you evaluate the current sewage services at your home?

Very satisfied	(Relatively satisfied)	<u>Average</u>	
Relatively unsatisfied	Very unsatisfied		
Reason of dissatisfaction			
Low discharging capability	<u>Sewage overflow</u>	Others	

Bottled water

2.5

Others:

Low discharging capability	
Foul odors	

Sewage overflow High sewage charge

CAPACITY

3.	Water consumption and demand	Other water source(s) if any	
3.1	Monthly water charges of your household	1	
	Water bill including sewage:	\$/month	
	Drainage eg. septic tank Less pool:	> \$\$,000. ~\$/month	
	Others:	\$/month_for	
3.2	Monthly payment for other utilities service	ces	L
	<u>IPS: \$9,100.00.</u>	\$/month	
	Cooking gas: Size of cylinder: 100	Ibs Price: \$5260 - wHow long doe	s it last: Z months

\$/month

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

<u>\$600/month</u>	<u>\$800/inonth</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>

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(ii) Initial payment for connection

(i) Monthly sewage charges:

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

\$

#### 5. Profile of your household

5.1 Household size:	$\varphi$	persons
5.2 Monthly income:		\$/month

- 5.3 Monthly saving: \_\_\_\_\_\$/month
- 5.4 Area of Residence: 1/Entrance Hall

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age: \_\_\_\_\_
- Sex:  $\underline{F} \underline{M}$

6.2 Head of the Household

- Occupation:
- Age: \_\_\_\_\_
- Sex: <u>F</u><u>M</u>

Please circle the appropriate responses and answer all questions to the best of your ability.

Rainwater

#### 1. Present status of water supply

Yes)

Yes

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

Yes <u>No</u>

1.3 Use of other water supply sources:

Communal tap Well Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network? (N)

- 2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
  - (Soakaway (pit latrine) Septic tank

No

2.3 Does your house have indoor toilet(s)?

Yes

2.4 How do you evaluate the current sewage services at your home?

(Very satisfied) **Relatively satisfied** <u>Average</u> Relatively unsatisfied Very unsatisfied

2.5 Reason of dissatisfaction

Low discharging capability	Sewage overflow	Others	
Foul odors	High sewage charge		

3. Water consumption and demand	Other water source(s) if any	
3.1 Monthly water charges of your household		
Water bill including sewage: 2000	\$/month	L
Drainage eg. septic tank / cess pool:	\$/month	
Others:	<u>\$/month</u> for	
3.2 Monthly payment for other utilities services		
<u>JPS: 5000 \$/month</u>		
Cooking gas: Size of cylinder: 25 lbs Pri	ce: \$ 2000 How long doe	<u>s it last: 3 months</u>
A D D D D		

Others: & O O O\$/month for

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons \$/month

(i) Monthly sewage charges:

<u>\$600/month</u>	(\$800/month)	<u>\$1,000/month</u>
<u>\$1,200/month</u>	\$1,400/month	<u>\$1,600/month</u>
\$	(one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area

5.4	Area of Residence:	KM WONLHall
6.	Profile of interviewee	and household leader
6.1	Interviewee	T.T. Quimant
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- Occupation:
- Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

7. Please feel free to write any opinion about sewage.

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1. Present status of wat	èr supply				
1.1 Is your house connected	ed to water sup	ply system?			
<u>Yes</u>	<u>No</u>				
1.2 Is your water connecti	on metered?				
Yes	<u>No</u>				
1.3 Use of other water sup	ply sources:	/			
<u>Communal tap</u>	<u>Well</u> <u>Ra</u>	inwater	Bottled water		
2. Present status of was	tewater treatm	nent			
2.1 Is your house connected	ed to sewer col	lection netwo	ork?		
Yes	<u>No</u>				
2.2 If "No" to Q2.1, what	is the wastewa	ter treatment	at your house?		
Septic tank	r-Soakaway (j	oit latrine)			
2.3 Does your house have	indoor toilet(s	)?			
Yes	<u>No</u>				
2.4 How do you evaluate	the current sew	age services	at your home?		
Very satisfied	Re	latively satist	fied	<u>Average</u>	
Relatively unsati	sfied		Very unsatisfied		
2.5 Reason of dissatisfact	on				
Low discharging	capability	Sewag	<u>e overflow</u>	Others	
Foul odors		<u>High s</u>	sewage charge		
3. Water consumption a	and demand		Other water sou	rce(s) if any	
3.1 Monthly water charge	s of your house	ehold			
Water bill includ	ing sewage:	\$3000	\$/month		
Drainage eg. sep	tic tank / cess	pool:	\$/month		
Others:			\$/month	for	
3.2 Monthly payment for	other utilities s	ervices		L	
<u>JPS: \$</u>	9,000	\$/mont	<u>h</u>		
Cooking gas: Siz	ze of cylinder:	30 lbs F	rice: \$ 1,500	How long does it last: 3 mo	<u>nths</u>
Others:	_	\$/mont		· · · · · · · · · · · · · · · · · · ·	

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#### [North Kingston Area - Street sewer development by the project]

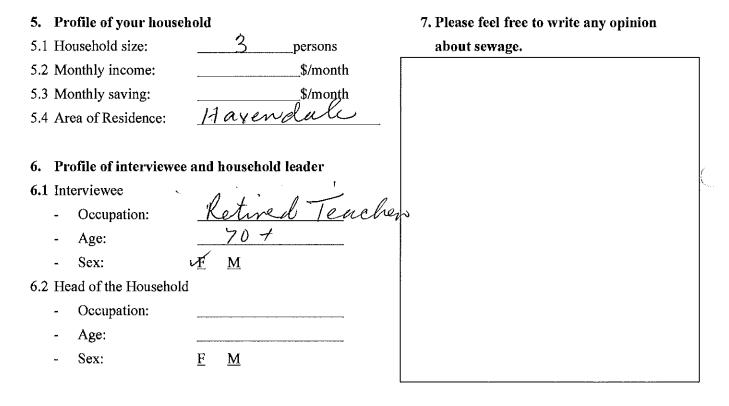
A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one-time paymer	

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.



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Please cir	cle the appropriate responses and answer all questions to the best of your ability.	
1. Prese	ent status of water supply	
1.1 Is yo	ur house connected to water supply system?	
	Yes (No)	
1.2 Is yo	ur water connection metered?	
(	Yes <u>No</u>	
1.3 Use o	of other water supply sources:	
	Communal tap Well Rainwater Bottled water	
2. Pres	ent status of wastewater treatment	
2.1 Is yo	ur house connected to sewer collection network?	
	Yes No	
2.2 If "N	o" to Q2.1, what is the wastewater treatment at your house?	
	Septic tank (Soakaway (pit latrine)	
2.3 Does	your house have indoor toilet(s)?	
(	Yes X No	
2.4 How	do you evaluate the current sewage services at your home?	
	Very satisfied <u>Relatively satisfied</u> <u>Average</u>	
	Relatively unsatisfied (Very unsatisfied)	
2.5 Reas	on of dissatisfaction	
	Low discharging capability Sewage overflow Others	
	Foul odors High sewage charge	
3. Wat	er consumption and demand Other water source(s) if any	
3.1 Mon	thly water charges of your household	
	Water bill including sewage: 1700. 00 \$/month	
	Drainage eg. septic tank / cess pool: \$/month	
	Others: \$/month for	
3.2 Mon	thly payment for other utilities services	
	JPS: 3000 - 00 \$/month	-
	Cooking gas: Size of cylinder: 100 lbs Price: \$ 6000. How long does it last:	<u>3 months</u>
	Others: 100000 Phone \$/month for	

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

(i) Monthly sewage charges:

\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>				
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>				
\$	(one-time payment)					

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

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- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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7. Please feel free to write any opinion about sewage.

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l. Pre	esent status of wat	er supply					
1.1 Is y	our house connect	ed to water supp	ly system?				
V	Yes	<u>No</u>					
2 Is y	our water connect	ion metered?					
8A	Yes	<u>No</u>					
l.3 Use	e of other water su	oply sources:					
	<u>Communal tap</u>	<u>Well</u> <u>Rair</u>	<u>iwater</u>	Bottled water			
2. Pre	esent status of was	stewater treatm	ent				
2.1 Is y	our house connect	ed to sewer colle	ection netwo	ork?			
	Yes	<u>No</u> 🗸					
2.2 If"	No" to Q2.1, what	is the wastewate	er treatment	at your house?			
	Septic tank	⊾ <u>Soakaway (p</u> i	<u>t latrine)</u>				
2.3 Do	es your house have	e indoor toilet(s)	?-				
	Yes	No					
2.4 Ho	w do you evaluate	the current sewa	ge services	at your home?			
,	Very satisfied	Rela	atively satis	fied	<u>Average</u>		
	Relatively unsat	isfied		Very unsatisfic	<u>ed</u>		
2.5 Rea	ason of dissatisfact	ion					
	Low discharging	g capability	Sewa	<u>ge overflow</u>	Others		
	Foul odors		<u>High</u>	sewage charge			
3. Wa	ter consumption	and demand		Other water se	ource(s) if any	<b>.</b>	1
3.1 Mo	onthly water charge	es of your housel	nold				
	Water bill inclue	ling sewage:		Z OVS/month			
	Drainage eg. sej	otic tank / cess pe	ool:	· \$/month			
	Others:			\$/month	for		
3.2 Mo	onthly payment for	other utilities se	rvices				
	JPS: \$6-19	600	\$/mont	: <u>h</u>			
	Cooking gas: Si	ze of cylinder: {	ØØlbs I	Price: \$ 10 000	How long do	es it last:	months
	Others:		\$/mon	· · · · · · · · · · · · · · · · · · ·			

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

\$/month

Havendale

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$	(one	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size: 2 persons
- 5.2 Monthly income: \$/month
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- \_ Occupation:
- Age: ....
- Sex: -
- 6.2 Head of the Household
  - Occupation: \_
  - Age:
  - Sex:

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about sewage.

7. Please feel free to write any opinion

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

Yes <u>No</u>

1.3 Use of other water supply sources:

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Communal tap Well Rainwater Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

2.2 If "No" to Q2.1, what is the wastewater treatment at your house?

Septic tank Soakaway (pit latrine)

2.3 Does your house have indoor toilet(s)?

Yes <u>No</u>

2.4 How do you evaluate the current sewage services at your home?

Very satisfiedRelatively satisfiedAverageRelatively unsatisfiedVery unsatisfied

2.5 Reason of dissatisfaction

Low discharging capability	Sewage overflow	Others	
Foul odors	High sewage charge		

3.	Water consumption and demand		Other w	water so	ource(s) if any		
3.1	Monthly water charges of your household	đ					
	Water bill including sewage:		\$	/month			
	Drainage eg. septic tank / cess pool	в	\$	/month			
	Others:		\$	/month	for		
3.2	Monthly payment for other utilities service	ces					
	JPS:	\$/month					
	Cooking gas: Size of cylinder:	lbs Pri	ce: \$		How long doe	<u>s it last:</u>	inonths
	Others:	\$/month	for				

#### [North Kingston Area – Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

\$/month

\$/month

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>			
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>			
\$	(one-time payment)				

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

5.2 Monthly income:

5.3 Monthly saving:

5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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6.1 Interviewee

- Occupation:
- Age:
- Sex:

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6.2 Head of the Household

- Occupation:
- Age:
- Sex:

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### 7. Please feel free to write any opinion about sewage.

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Please circle the appropria	te responses and a	answer all qu	estions to the	e best of your abil	<u>ity.</u>	
1. Present status of wate	er supply					
1.1 Is your house connected	ed to water supply	v system?				
Yes	<u>No</u>					
1.2 Is your water connecti	on metered?					
Yes	No					
1.3 Use of other water sup	ply sources:					
<u>Communal tap</u>	<u>Well</u> <u>Rainv</u>	vater	Bottled wate	<u>sr</u>		
2. Present status of was	tewater treatmer	ıt				
2.1 Is your house connected	ed to sewer collec	tion networl	c?			
Yes	No					
2.2 If "No" to Q2.1, what	is the wastewater	treatment at	your house?			
Septic tank	<u>Soakaway (pit</u>	latrine)				
2.3 Does your house have	indoor toilet(s)?					
Yes	No					
2.4 How do you evaluate t	he current sewage	e services at	your home?			
Very satisfied (	Relati	ively satisfie	d	<u>Average</u>		
Relatively unsati	sfied		Very unsatis	fied		
2.5 Reason of dissatisfacti	on					
Low discharging	capability	<u>Sewage</u>	<u>overflow</u>	Others		
Foul odors		<u>High sev</u>	vage charge			
3. Water consumption a	and demand		Other water	source(s) if any		
3.1 Monthly water charges	s of your househo	ld Smr	)			
Water bill includ	ing sewage: 🗜	2000	/mon	<u>th</u>	Į	
Drainage eg. sep	<u>tic tank / cess poo</u>	<u>d:</u>	<u>\$/mon</u>	<u>th</u>	· · · · · · · · · · · · · · · · · · ·	
Others:			\$/mon	<u>th</u> for		
3.2 Monthly payment for	other utilities serv		A . 1 . C	ISI NOTI	FA	
JPS:		\$/month	CANR	Kh to L	$\sum$	
Cooking gas: Siz	e of cylinder:	lbs Prie	ce: \$	How long doe	<u>s it last:</u>	months
Others:		\$/month	for			

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one-time payment	

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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#### 6.1 Interviewee

- Occupation:
- Age: \_
- Sex:
- 6.2 Head of the Household
  - Occupation: \_
  - Age:
  - Sex:

	persons
<u>\$ 10000</u>	D_\$/month
NIL.	\$/month
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#### 7. Please feel free to write any opinion about sewage.

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	Please circle the appropriate responses and answer all questions to the best of your ability.
	1. Present status of water supply
	1.1 Is your house connected to water supply system?
	(Yes) No
	1.2 Is your water connection metered?
	Yes No
	1.3 Use of other water supply sources:
(	Communal tap Well Rainwater Bottled water
	2. Present status of wastewater treatment
	2.1 Is your house connected to sewer collection network?
	$\frac{\sqrt{\text{res}}}{\sqrt{1-\frac{1}{2}}} \frac{N_0}{\sqrt{1-\frac{1}{2}}}$
	2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
	Septic tank (Soakaway (pit latrine))
	2.3 Does your house have indoor toilet(s)?
	Yes
	2.4 How do you evaluate the current sewage services at your home?
	Very satisfied Relatively satisfied Average
	Relatively unsatisfied Very unsatisfied
	2.5 Reason of dissatisfaction
( )	Low discharging capability Sewage overflow Others
Υ.	Foul odors     High sewage charge
	3. Water consumption and demand Other water source(s) if any
	3.1 Monthly water charges of your household
	Water bill including sewage: 4 50 07 \$/month
	Drainage eg. septic tank / cess pool: \$/month
	Others: , \$/month for
	3.2 Monthly payment for other utilities services
	JPS: \$/month
	Cooking gas: Size of cylinder: 100 (Ibs Price: \$5, CW How long does it last: months
	Others: \$/month for Quer 6 months.

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

\$/month

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$	(one	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age: 🎸 🗸
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

ee a	and	household leader
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7. Please feel free to write any opinion about sewage.

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Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Pres	sent status of wat	er supply					
1.1 Is yo	our house connecte	ed to water suppl	ly system?				
	Yes V	<u>No</u>					
1.2 Is yo	our water connecti	on metered?					
	Yes /	<u>No</u>					
1.3 Use	of other water sup	ply sources:					
	Communal tap	Well Rain	water	Bottled wate	<u>r</u>		
<b>1</b> D		4 4 4 4					
	sent status of was			antel			
2.1 IS YO	our house connect		ction netwo	OFK ?			
2.2.1699	<u>Yes</u> $1 - 2 + 2 = 2 + 2 = 2 + 2 = 2 + 2 = 2 + 2 = 2 + 2 +$	No V		ot your house?			
Z,Z 11 T	No" to Q2.1, what Septic tank			at your nouse?			
22 Dec	-						
2.3 Doe	s your house have	No					
2 4 How			ro comisoa	at your homo?			
2.4 100	v do you evaluate		tively satis	-	Avoraça		
	Very satisfied		tively saus	Very unsatist	<u>Average</u>		
25 Baa	<u>Relatively unsati</u> son of dissatisfact			very unsaus	<u>neu</u>		
2.3 Kea			Souvo	ge overflow	Others		
	Low discharging	capaointy	-	sewage charge	<u>Others</u>		
	Foul odors		<u>rugu :</u>	sewage charge			
3. Wat	ter consumption a	and demand		Other water	source(s) if any	· · ·	
	thly water charge		old				
	Water bill includ			\$/mont	<u>th</u>		
	Drainage eg. sep	tic tank / cess pc	ol:	\$/mont	<u>th</u>		
	Others:	_		\$/mon	<u>th</u> for		
3.2 Mor	thly payment for	other utilities ser	vices			L	
	JPS:	······································	\$/mont	<u>h</u>			
	Cooking gas: Siz	ze of cylinder:	lbs H	Price: \$	How long doe	s it last:	months
	Others:		\$/mont	<u>th</u> for			
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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	urges: <u>\$600/month</u> <u>\$8</u>		<u>\$1,000/month</u>	
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>	
(ii) Initial payment for connection	\$	(one-time payment)		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

\$/month

\$/month

#### 5. Profile of your household

- 5.1 Household size: persons
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and housebold leader

- 6.1 Interviewee
  - Occupation:
  - Age: -
  - Sex: F
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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7. Please feel free to write any opinion about sewage.

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Please c	ircle the appropriat	e responses and a	nswer all q	uestions to the	best of your abili	<u>ty.</u>	
1. Pres	sent status of wate	er supply					
1.1 Is ye	our house connecte	d to water supply	system?				
	Yes	<u>No</u> 1					
1.2 Is y	our water connection	on metered?					
	Yes V	No	-				
1.3 Use	of other water sup	ply sources: N@	シ				
	<u>Communal tap</u>	<u>Well</u> <u>Rainw</u>	ater	Bottled wate	<u>r</u>		
2. Pres	sent status of wast	iewater treatmen	t				
2.1 Is y	our house connecte	d to sewer collect	ion networ	k? NO			
	Yes	<u>No</u>					
2.2 If"1	No" to Q2.1, what	is the wastewater	treatment a	t your house?			
	Septic tank	<u>Soakaway (pit l</u>	<u>atrine)</u>				
2.3 Doe	es your house have	indoor toilet(s)?	•				
	Yes V	No			en de la companya de La companya de la comp		
2.4 Hov	w do you evaluate t	he current sewage	e services a	t your home?			
	Very satisfied	<u>Relati</u>	vely satisfi	ed v	<u>Average</u>		
	Relatively unsati	sfied		Very unsatis	fied		
2.5 Rea	son of dissatisfacti	on					
	Low discharging	capability	<u>Sewage</u>	e overflow	<u>Others</u>		
	Foul odors		<u>High se</u>	wage charge			
					2		
3. Wa	ter consumption a	ind demand		Other water	source(s) if any		
3.1 Mo	nthly water charges	s of your househo	d				
	Water bill includi	ing sewage:		<u>\$/mon</u>	<u>th</u>		
	Drainage eg. sept	ic tank / cess poo	<u>l:</u>	\$/mon	<u>th</u>		
	Others:			<u>\$/mon</u>	<u>th</u> for		
3.2 Mo	nthly payment for a	other utilities serv	ices				
	JPS:		\$/month				
	Cooking gas: Siz	e of cylinder:	lbs Pr	ice: \$	How long doe	s it last:	months
	Others:		\$/month	for			

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#### [North Kingston Area – Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

\$/month

\$/month

(1) Monthly sewage charges.	ly sewage charges:
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<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$	(one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size: persons
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

F

6.2 Head of the Household

Occupation:

- Age:
- Sex:

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7. Please feel free to write any opinion about sewage.

Please circle the appropriate responses and answer all questions to the best of your ability.

1. Present status of water supply

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1.1 Is your house connected to water supply system? No Yes 1.2 Is your water connection metered? No Yes. 1.3 Use of other water supply sources: Bottled water Well <u>Rainwater</u> Communal tap 2. Present status of wastewater treatment 2.1 Is your house connected to-sewer collection network? No Yes 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic pit) Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? Yes No 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Average (Very satisfied) Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction N/4Low discharging capability Others Sewage overflow Foul odors High sewage charge Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household \$/month Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month for Others: 3.2 Monthly payment for other utilities services JPS: \$/month Cooking gas: Size of cylinder: lbs Price: \$ How long does it last: months \$/month for Others:

#### [North Kingston Area – Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u> <u>\$1,000/mont</u>	
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one-time payment)	

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size: persons
- 5.2 Monthly income: \$/month
- 5.3 Monthly saving: \$/month Havendale
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

6.1 Interviewee

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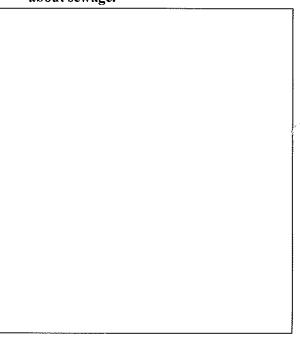
Occupation:

<u>F</u>

M

- Age: -
- Sex: F Μ
- 6.2 Head of the Household
  - Occupation:
    - Age:
  - Sex:

#### 7. Please feel free to write any opinion about sewage.



# (52)

#### Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

	encie de approprie	ate respon	ses and answer a	I questions to the b	est of your aon	<u>ny.</u>
1. Pre	esent status of wat	ter supply	7			
1.1 Is y	our house connect	ed to wate	er supply system?	)		
	Yes	<u>No</u>				
1.2 Is y	our water connect	ion metere	ed?			
	Yes	<u>No</u>				
1.3 Use	e of other water sup	pply sourc	es:			
	<u>Communal tap</u>	<u>Well</u>	<u>Rainwater</u>	Bottled water		
2. Pro	esent status of was	stewater t	reatment			
2.1 Is y	our house connect	ed to sew	er collection netw	vork?		
	Yes	<u>No</u>				
2.2 If"	No" to Q2.1, what	is the wa	stewater treatmer	it at your house?		
	Septic tank	<u>Soakav</u>	<u>vay (pit latrine)</u>			
2.3 Do	es your house have	e indoor to	oilet(s)?			
	Yes	<u>No</u>				
2.4 Ho	w do you evaluate	the curren	nt sewage service	s at your home?		
	Very satisfied V	/	Relatively sati	sfied	<u>Average</u>	
	Relatively unsat			Very unsatisfie	<u>ed</u>	
2.5 Re	ason of dissatisfact	ion				
	Low discharging	g capabilit	y <u>Sewa</u>	age overflow	Others	
	Foul odors		High	sewage charge		
3. Wa	ater consumption	and dema	and	Other water so	ource(s) if any	<b></b>
3.1 Mc	onthly water charge	es of your	household			
	Water bill includ	ling sewa	ge: 21	<u> () () () () () () () () () () () () () </u>		
	Drainage eg. ser	otic tank /	cess pool:	\$/month		
	Others:			\$/month	for	
3.2 Mo	onthly payment for	other utili	ities services			
	JPS: 100	00	\$/mon	<u>uth</u>		
	Cooking gas: Si	ze of cylir	nder: 100 lbs	Price: \$6,000	How long doe	es it last: <u>3 months</u>
	Others: 3 (				Telepho	

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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

\$/month

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$	(one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and honsehold leader

#### 6.1 Interviewee

- Occupation:
- Age: ·
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

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7. Please feel free to write any opinion about sewage.

I don't have a problem with the current system.

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Please circle the approp	riate responses and a	nswer all que	stions to the best	of your abili	<u>ty.</u>
1. Present status of w	ater supply				
1.1 Is your house conne	ected to water supply	system?			
Yes	No				
1.2 Is your water conne	ction metered?				
(Yes)	<u>No</u>				
1.3 Use of other water	supply sources:				
<u>Communal ta</u>	p <u>Well</u> Rainw	ater <u>I</u>	Bottled water		
2. Present status of v					
2.1 Is your house conn	ected to sewer collect	ion network?			
Yes	No				
2.2 If "No" to Q2.1, w		1	our house?		
Septic tank	Soakaway (pit la	atrine)			
2.3 Does your house h	ave indoor toilet(s)?				
(Yes)	<u>No</u>				
2.4 How do you evaluate			our home?		
Very satisfied	<u> </u>	vely satisfied		<u>Average</u>	
<u>Relatively un</u>		-	Very unsatisfied		
2.5 Reason of dissatisf				0.1	
	ing capability	Sewage o		<u>Others</u>	
Foul odors		<u>High sew</u>	age charge		
3. Water consumption			Other water sour	rce(s) if any	
3.1 Monthly water cha					
	luding sewage:		\$/month		L
<u>Drainage eg.</u>	septic tank / cess poo	1:	\$/month	-	
Others:			\$/month	for	l
	5020.00	\$/month			
Cooking gas	Size of cylinder: ル のン・ふつ	<mark>⊘ lbs Pric</mark> \$/month	e: \$500 - 1 for P	How long doe	s it last: <u>months</u>
		φrinonti		vone	

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

7:1	Mandida		.1
(1)	Monthly	sewage	charges:

\$600/month	<u>\$800/month</u>	<u>\$1,000/month</u>
\$1,200/month	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$ 20,000	a) (one	-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:

6.2 Head of the Household

- Occupation:
- Age:
- Sex:

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gso,au	\$/month
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# 7. Please feel free to write any opinion about sewage.

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Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes <u>No</u> 1.2 Is your water connection metered? Yes No N/A 1.3 Use of other water supply sources: Bottled water Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes <u>No</u> 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) (Septic tank) 2.3 Does your house have indoor toilet(s)? Yes. <u>No</u> 2.4 How do you evaluate the current sewage services at your home? Very satisfied Relatively satisfied <u>Average</u> Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction NIA Low discharging capability Sewage overflow Others High sewage charge Foul odors Other water source(s) if any 3. Water consumption and demand NIP 3.1 Monthly water charges of your household \$month Water bill including sewage: Drainage eg. septic tank / cess pool: \$/month \$/month for Others:

3.2 Monthly payment for other utilities services

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JPS: 10,000	\$/month		
Cooking gas: Size of cylinder:	Dibs Price: \$	SUCO How long does it last:	months
Others:	<u>\$/month</u> fo	n	

#### [North Kingston Area - Street sewer development by the project]

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How much would you agree to pay for these expenses? (Choose one or specify amount in between)

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$	(one	e-time payment)

(ii) Initial payment for connection

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#### 5. Profile of your household

# 6. Profile of interviewee and household leader 6.1 Interviewee Occupation: Age: Sex: F M 6.2 Head of the Household Occupation: Age: Age: Sex: F M

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7. Please feel free to write any opinion

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Please circle the appropria	te responses and	answer all qu	estions to the be	<u>st of your abili</u>	<u>ty.</u>
1. Present status of wate	er supply				
1.1 Is your house connected	ed to water supply	y system?			
( <u>Yes</u> )	<u>No</u>				
1.2 Is your water connecti	on metered?				
Yes	<u>No</u>				
1.3 Use of other water sup	ply sources:	Mj0-	}		
<u>Communal tap</u>	Well Rain	water	Bottled water		
2. Present status of was	tewater treatme	nt			
2.1 Is your house connected			:?		
Yes	No				
2.2 If "No" to Q2.1, what		r treatment at	your house?		
Septic tank	Soakaway (pit				
2.3 Does your house have	•	<u>,</u>			
Yes	No				
2.4 How do you evaluate 1		ge services at	your home?		
Very satisfied	-	tively satisfie	-	Average	
Relatively unsati	sfied		Very unsatisfied	<u>1</u>	
2.5 Reason of dissatisfacti	ion H(A	,	·		
Low discharging			overflow	<b>Others</b>	
Foul odors		<u>High sev</u>	vage charge		
					<u> </u>
3. Water consumption a	and demand		Other water so	urce(s) if any	
3.1 Monthly water charge	s of your househ	old			NUA
Water bill includ	ing sewage:	JSV	⊃.∽\$/month		
Drainage eg. sep	tic tank / cess po	ol:	\$/month		
Others:			\$/month	for	
3.2 Monthly payment for					
JPS:	0,000	\$/month	-		
Cooking gas: Siz	e of cylinder:	Do Ibs Prie	ce: \$ S උරො	How long doe	s it last: <u>/ months</u>
	NIP				

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#### [North Kingston Area - Street sewer development by the project]

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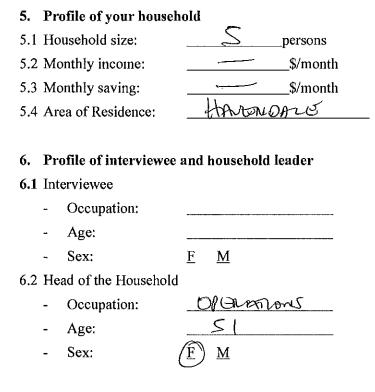
How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:
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<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
\$	(one	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.



about sewage.	

7. Please feel free to write any opinion

Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply

1.1 Is your house connected to water supply system?

<u>No</u>

1.2 Is your water connection metered?

1.3 Use of other water supply sources:

Communal tap Well Rainwater Bottled water

#### 2. Present status of wastewater treatment

2.1 Is your house connected to sewer collection network?

- 2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
  - <u>Septic tank</u> <u>Soakaway (pit latrine)</u>
- 2.3 Does your house have indoor toilet(s)?
  - Yes No
- 2.4 How do you evaluate the current sewage services at your home?
  - Very satisfiedRelatively satisfiedAverageRelatively unsatisfiedVery unsatisfied
- 2.5 Reason of dissatisfaction

Yes

Low discharging capability	Sewage overflow	Others	11.0
Foul odors	High sewage charge		AL A

3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household \$/month Water bill including sewage: Drainage eg. septic tank / cess pool: \$/month \$/month Others: for 3.2 Monthly payment for other utilities services \$ 5000. W JPS: \$/month Cooking gas: Size of cylinder: 10D lbs Price: \$ 4,5D How long does it last: months an ath Others: \$/month for \$400

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	√ <u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one-time payment)	

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Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

#### 6.1 Interviewee

- Occupation: ---
- Age:
- Sex: \_
- 6.2 Head of the Household
  - Occupation: -
  - Age: \_
  - Sex:

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7. Please feel free to write any opinion about sewage.

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Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes No
1.2 Is your water connection metered?
(Yes) No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
Yes (No)
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
<u>Yes</u> <u>No</u>
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average N/A
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household $\dot{N}$ $A$ .
Water bill including sewage: \$/month
Drainage eg. septic tank / cess pool: \$/month
$\underline{Others:} \qquad \qquad \$/month \qquad for \qquad \aleph(\&$
3.2 Monthly payment for other utilities services
JPS: $\sqrt{000.00}$ \$/month
Cooking gas: Size of cylinder: 100 lbs Price: \$ 30 000 How long does it last: 4 months
Others: KELETHONE \$20,000 \$/month for (ELEPHONE

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:

<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
<u>\$1,200/month</u>	<u>\$1,400/month</u>	\$1,600/month
\$	(on	e-time payment)

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

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#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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# 7. Please feel free to write any opinion about sewage.

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Please circle the appropria	te responses and answer	all questions to the	e best of your ability.	
1. Present status of wat	er supply			
1.1 Is your house connect	ed to water supply system	n?		
Yes	<u>No</u>			
1.2 Is your water connect	on metered?			
Yes	<u>No</u>			
1.3 Use of other water su	oply sources;			
Communal tap	Well Rainwater	Bottled wate	er	
2. Present status of was	tewater treatment			
2.1 1s your house connect	ed to sewer collection ne	twork?		
Yes	Ng			
2.2 If "No" to Q2.1, what	is the wastewater treatm	ent at your house?		
Septic tank	Soakaway (pit latrine)	2		
2.3 Does your house have	indoor toilet(s)?			
Yes				
2.4 How do you evaluate	the current sewage servi	ces at your home?		
Very satisfied	Relatively sa	atisfied	<u>Average</u>	
Relatively unsat	isfied	Very unsatis	sfied	
2.5 Reason of dissatisfact	ion			
Low discharging	<u>g capability</u> <u>Se</u>	wage overflow	<u>Others</u>	
Foul odors	<u>Hi</u>	gh sewage charge		
3. Water consumption	and demand	Other water	r source(s) if any	
3.1 Monthly water charge	es of your household			
Water bill incluc	ling sewage: 🕺 🎝 🖓	000, 200\$/mor	<u>nth</u>	
<u>Drainage eg. ser</u>	otic tank / cess pool:	\$/mon	<u>uth</u>	
Others:		\$/mor	<u>nth</u> for	
3.2 Monthly payment for	other utilities services			
JPS:	\$/m	<u>onth</u>		
Cooking gas: Si	ze of cylinder: lbs	Price: \$	How long does i	<u>t last: months</u>
Others:	\$/m	<u>10nth</u> for		
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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one-time payment)	

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size: persons 5.2 Monthly income: \$/month
- 5.3 Monthly saving: \$/month

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5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- etaved Occupation: -
- Age:
- Sex: F \_
- 6.2 Head of the Household
  - Occupation: -
  - Age: -
  - Sex:

#### 7. Please feel free to write any opinion about sewage.

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1. Present status of wat	er supply					
1.1 Is your house connect	ed to water suppl	y system?				
<u>Yes</u> $\smile$	No					
1.2 Is your water connect	ion metered?					
<u>Yes</u> ~	<u>No</u>					
1.3 Use of other water sup	pply sources:					
<u>Communal tap</u>	Well Rain	water	Bottled wate	<u>r</u>		
2. Present status of was	stewater treatme	nt				
2.1 Is your house connect	ed to sewer colle	ction networl	<b>c</b> ?			
Yes	<u>No</u> ~~					
2.2 If "No" to Q2.1, what	is the wastewater	r treatment at	your house?			
Septic tank	<u>Soakaway (pit</u>	latrine)				
2.3 Does your house have	indoor toilet(s)?					
Yesy	<u>No</u>					
2.4 How do you evaluate	the current sewag	ge services at	your home?			
Very satisfied	<u>Relat</u>	ively satisfie	<u>d</u>	Average		
Relatively unsat	isfied		Very unsatis	fied		
2.5 Reason of dissatisfact	ion					
Low discharging	<u>capability</u>	<u>Sewage</u>	overflow	Others		
Foul odors		<u>High sev</u>	wage charge			
3. Water consumption	and demand		Other water	source(s) if any	[	
3.1 Monthly water charge	s of your househo	old				
Water bill includ	ling sewage:		\$/mont	th	L	
Drainage eg. sep	tic tank / cess po	ol:	\$/mont	<u>th</u>		
Others:			\$/mont	<u>th</u> for		
3.2 Monthly payment for	other utilities ser-	vices				
JPS:		\$/month				
Cooking gas: Siz	ze of cylinder:	lbs Prie	ce: \$	How long doe	<u>s it last:</u>	months
Others:		\$/month	for			

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/inonth</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$	(one	-time payment)

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size: \_\_\_\_\_\_persons
- 5.2 Monthly income: \_\_\_\_\_\$/month
- 5.3 Monthly saving: \_\_\_\_\_\$/month
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

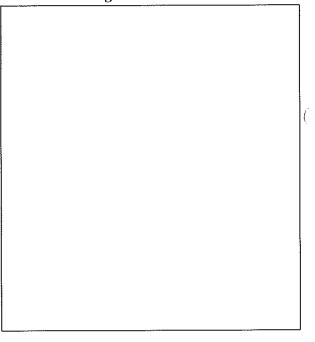
6.1 Interviewee

- Occupation:
- Age:
- LandLavel
- Sex:  $\underline{F}$
- 6.2 Head of the HouseholdOccupation:

- Age:
- Sex:

<u>F</u> <u>M</u>

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# 16/

# Preparatory Survey for Kingston Sewerage Development Project Questionnaire for North Kingston Area

Please of	circle the appropria	te responses and a	answer a	ll questions to the	ne best o	of your abili	ity.	
1. Pre	esent status of wate	er supply						
1.1 Is y	our house connected	ed to water supply	/ system	?				
	Yes V	<u>No</u>						
1.2 Is y	our water connecti	on metered?						
	Yes V	<u>No</u>						
1.3 Use	e of other water sup	ply sources:						
	<u>Communal tap</u>	<u>Well</u> Rainy	vater	Bottled wa	<u>ter</u>			
2. Pre	esent status of was	tewater treatme	nt					
2.1 Is y	our house connected	ed to sewer collec	tion netv	vork?				
	Yes	No v						
2.2 If "	'No" to Q2.1, what	is the wastewater	treatmen	nt at your house	?			
	Septic tank	<u>Soakaway (pit</u>	latrine)					
2.3 Do	es your house have	indoor toilet(s)?						
	Yes V	<u>No</u>						
2.4 Ho	w do you evaluate	the current sewag	e service	s at your home?	?			
	Very satisfied	Relat	ively sati	sfied		<u>Average</u>		
	Relatively unsati	sfied	$\langle \rangle$	Very unsat	isfied			
2.5 Re	ason of dissatisfacti	ion		\				
	Low discharging	capability	Sewa	age overflow	/	Others		
	Foul odors		<u>High</u>	n sewage charge	V			
3. Wa	ater consumption a	and demand		Other wat	er sourc	e(s) if any		····
3.1 Mo	onthly water charge	s of your househo	old					
$\cap$	Water bill includ	ing sewage:		\$/mc	<u>onth</u>			
	<u>Drainage eg. sep</u>	tic tank / cess poo	<u>ol:</u>	\$/mc	<u>onth</u>		p	
	Others:			\$/mc	<u>onth</u>	for		
3.2 Mo	onthly payment for	other utilities serv	vices					
	JPS:		\$/mor	<u>nth</u>				
	Cooking gas: Siz	ze of cylinder:	lbs	Price: \$	Ho	ow long doe	es it last:	months
l v	Others:		\$/mo	<u>nth</u> for				
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#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

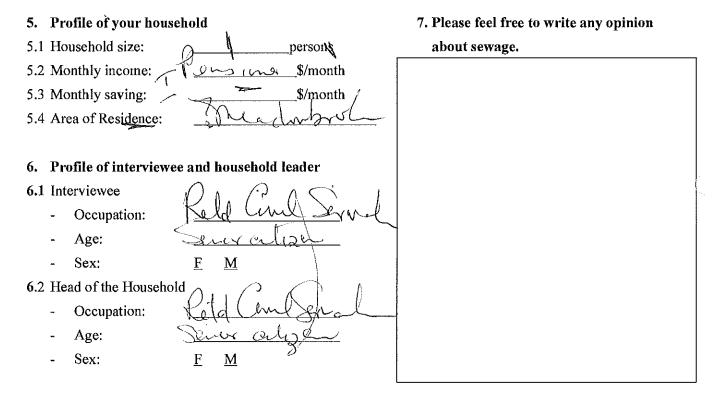
(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>

\$

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

(one-time payment)



Please circle the appropr	iate responses and	answer all que	stions to the be	<u>st of your abili</u>	ity.
1. Present status of wa	ter supply				
1.1 Is your house connect	ted to water supply	y system?			
Yes	No				
1.2 Is your water connect	tion metered?				
<u>Yes</u>	No				
1.3 Use of other water s	pply sources:				
<u>Communal tap</u>	<u>Well</u> <u>Rain</u>	water ]	Bottled water		
2. Present status of wa	astewater treatme	nt			
2.1 Is your house connect	eted to sewer collect	ction network?			
Yes V	No				
2.2 If "No" to Q2.1, what	it is the wastewate	treatment at y	our house?		
Septic tank	<u>Soakaway (pit</u>	<u>latrine)</u>			
2.3 Does your house hav	e indoor toilet(s)?				
Yes V	<u>No</u>				
2.4 How do you evaluat	e the current sewag	e services at y	our home?		
Very satisfied	<u>Relat</u>	ively satisfied	V/	<u>Average</u>	
Relatively unsa	tisfied	-	Very unsatisfied	L	
2.5 Reason of dissatisfac	ction				
Low discharging	ng capability	Sewage o	verflow	<u>Others</u>	
Foul odors		High sewa	age charge		
3. Water consumption	and demand		Other water sou	urce(s) if any	[]
3.1 Monthly water charg	•	6 1			
Water bill inclu	iding sewage:	1.200	\$/month		
Drainage eg. se	ptic tank / cess po	ol:	\$/month		
Others:			<u>\$/month</u>	for	
3.2 Monthly payment for	· · · · · · · · · · · · · · · · · · ·	vices			
JPS:	\$ 5.000	\$/month			, 1
Cooking gas: S	ize of cylinder: 🦻	O lbs Price	:\$ 1,000 H	Iow long does	it last: 15 months
Others:		<u>\$/month</u>	for		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

<u>2</u> persons

20.000 \$/month

 $N_{I} \leq \frac{1}{2}$  \$/month

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Please note that these payments would be in addition to your current monthly household expenditures.

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#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: <u>HOUSE MIFE</u> - Age: 63
  - Age: <u>63</u> - Sex: F∕M

6.2 Head of the Household

- Occupation: <u>MAIL CONTRACTOR</u> - Age: <u>67</u>
- Sex: F M

Please	circle the appropria	te responses ar	nd answer all	l questions to the b	<u>best of your ability.</u>
1. Pr	esent status of wat	er supply			
1.1 Is	your house connect	ed to water sup	ply system?		
	Yes	<u>Noje</u>			
1.2 Is	your water connect	on metered?			
	Yes	No			
1.3 Us	e of other water su	oply sources:			
	Communal tap	<u>Well</u> <u>Ra</u>	<u>inwater</u>	Bottled water	
2. Pr	resent status of was	tewater treatr	nent		
2.1 Is	your house connect	ed to sewer col	lection netw	ork?	
	<u>Yes</u>	<u>No</u>			
2.2 If '	"No" to Q2.1, what	is the wastewa	ter treatmen	t at your house?	
	Septic tank	<u>Soakaway (</u>	<u>pit latrine)</u>		
2.3 Do	oes your house have	indoor toilet(s	;)?		
	Yes	<u>No</u>			
2.4 Ho	ow do you evaluate	the current sew	age services	s at your home?	
	Very satisfied	Re	latively satis	sfied a	Average
	Relatively unsat	isfied		Very unsatisfic	ed
2.5 Re	eason of dissatisfact	ion			
	Low discharging	<u>g capability</u>	Sewa	ge overflow	Others
	Foul odors		<u>High</u>	sewage charge	
3. W	ater consumption	and demand		Other water s	ource(s) if any
3.1 M	onthly water charge	s of your hous	ehold		
	Water bill inclue	ling sewage:	2	BB OS/month	<u>l</u>
	Drainage eg. sej	otic tank / cess	pool:	\$/month	1
	Others:			\$/month	<u>n</u> for
3.2 M	onthly payment for	other utilities	services		
	JPS:	2001	\$/mon	<u>th</u>	
/	<u>Cooking gas: Si</u>			Price: \$	How long does it last: 6 months
	_	ناصب المراجع	い <sub>\$/mor</sub>		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

persons

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NON \$/month

MOK \$/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- Not Working
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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# 164

# Preparatory Survey for Kingston Sewerage Development Project Questionnaire for Portmore Area

Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes No
1.2 Is your water connection metered?
Yes No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
Yes No
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors     High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 253646. U\$/month
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month for
3.2 Monthly payment for other utilities services
JPS: 6,567 5D \$/month
Cooking gas: Size of cylinder: 25 lbs Price: \$ / 770. How long does it last: 15 months
Others: \$/month for

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#### [Portmore – Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$200/month \$100/month \$300/month \$400/month \$600/month \$500/month

Please note that these payments would be in addition to your current monthly household expenditures.

persons

\$/month \$/month

Geriative Care-Giver

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: \_
  - Age:
  - Sex: \_
- SY yord SY yord SY M September , Core file SU 6.2 Head of the Household
  - Age: -
  - Sex:

Occupation:

Please circle the appropriat	e responses and an	swer all questior	ns to the be	<u>st of your abili</u>	<u>ty.</u>
1. Present status of wate	er supply				
1.1 Is your house connecte	d to water supply s	system?			
K <u>Yes</u> )	No				
1.2 Is your water connection	on metered?				
Yes	No				
1.3 Use of other water sup	ply sources:				
Communal tap	Well Rainwa	ter <u>Bottl</u>	ed water	Y.	
2. Present status of wast	tewater treatment				
2.1 Is your house connecte	d to sewer collecti	on network?			
(Yes)	<u>No</u>	$(r, t) \in \mathcal{T}_{r-1}$	<i>r</i> }		
2.2 If "No" to Q2.1, what	is the wastewater to	eatment at your	house?		
Septic tank	<u>Soakaway (pit la</u>	<u>trine)</u>			
2.3 Does your house have	indoor toilet(s)?				
Yes	<u>No</u>				
2.4 How do you evaluate t	he current sewage	services at your l	home?		
Very satisfied	Relativ	ely satisfied		<u>Average</u>	
(Relatively unsatis	sfied)	Very	unsatisfied	<u>1</u>	
2.5 Reason of dissatisfacti	on				r
Low discharging	capability	Sewage overfl	ow	Others	
Foul odors		<u>High sewage c</u>	<u>charge</u>		
3. Water consumption a	and demand	Othe	er water sou	urce(s) if any	
3.1 Monthly water charges	•				
Water bill includi	ing sewage: 🍃	,150.	\$/month		
Drainage eg. sept	tic tank / cess pool:		\$/month		
Others:			\$/month	for	
3.2 Monthly payment for a	other utilities servio	ces			
JPS: 20	33 <i>0</i> ·	\$/month			. /
Cooking gas: Siz	e of cylinder: 🦘	lbs Price: \$	1770 F	How long does	it last: 12/months
Others:		<u>\$/month</u>	for		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month \$600/month \$500/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	<u> </u>
5.2 Monthly income:	\$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	Hamlton Gradon

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: ---

Occupation:

- Age:
- Sex: -
- 55 6.2 Head of the Household

 $\zeta \prec$ 

Age:

-

- Sex:
- M F

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Please circle the appropr	iate responses	and answer a	l questions to the	best of your abili	<u>ity.</u>
1. Present status of wa	ater supply				
1.1 Is your house connec	ted to water s	upply system?	>		
( <u>Yes</u> )	<u>No</u>				
1.2 Is your water connec	tion metered?				
(Yes)	<u>No</u>				
1.3 Use of other water su	upply sources:				
<u>Communal tap</u>	Well	<u>Rainwater</u>	Bottled wate	<u>r</u>	
2. Present status of wa	astewater trea	atment			
2.1 Is your house connec	eted to sewer	collection netv	vork?		
Yes	<u>No</u>			le e se	
2.2 If "No" to Q2.1, wha	at is the waste	water treatmen	nt at your house?		
Septic tank	<u>Soakaway</u>	<u>(pit latrine)</u>			
2.3 Does your house hav	ve indoor toile	t(s)?			
Yes	<u>No</u>				
2.4 How do you evaluate	e the current s	ewage service	s at your home?		
Very satisfied		Relatively sati	sfied	Average	
Relatively unsa	ntisfied		Very unsatis	fied	
2.5 Reason of dissatisfac	ction				
Low discharging	ng capability	Sewa	nge overflow	Others <b>Others</b>	
Foul odors		<u>High</u>	sewage charge		
3. Water consumption	and demand	1	Other water	source(s) if any	
3.1 Monthly water charg	· •	~			
Water bill inclu	iding sewage:	#30	<del>ک کر (mon</del>	<u>th</u>	
Drainage eg. se	-	-		<u>th</u>	
Others: 1-20	me \$5	500.00	\$/mon	<u>th</u> for	
3.2 Monthly payment fo	r other utilitie	s services			
<u>JPS: 7,07</u>	50.00	\$/mor	<u>ith</u>		
<u>Cooking gas: S</u>	lize of cylinde	<u>r: 100 lbs</u>	Price: \$ 65°00	How long does	it last: 5 months
Others: Mono	$\beta \leq m$	12 S/ma	nth for		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

{

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:3 persons5.2 Monthly income:40,000 \$/month5.3 Monthly saving:5.4 Area of Residence:4 Area of Residence:4 Area 4 Area

#### 6. Profile of interviewee and household leader

6.1 Interviewee

	-	Occupation:	N/A
	-	Age:	
	-	Sex:	Ē M
6.2	Hea	d of the Household	
	-	Occupation:	Driva
	-	Age:	
	-	Sex:	E M

Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? No Yes V 1.2 Is your water connection metered? Yes Y <u>No</u> 1.3 Use of other water supply sources: Bottled water Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes V No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Septic tank Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes L No 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied 1 Very satisfied <u>Average</u> Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Foul odors Some Trutol High sewage charge Others Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household \$/month Water bill including sewage: Drainage eg. septic tank / cess pool: \$/month \$/month for Others: 3.2 Monthly payment for other utilities services L OV S/month JPS: Cooking gas: Size of cylinder: 25 lbs Price: \$17 HD How long does it last: months Week \$/month for Others:

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size: $\sim$  persons5.2 Monthly income:1400 \$/month5.3 Monthly saving:2000 \$/month5.4 Area of Residence:Apunll top Relay

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- F MV

6.2 Head of the Household

- Occupation:
- Age:
  - Sex:  $\underline{F} \underline{M}$
- 7. Please feel free to write any opinion about sewage.

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J 160

<ul> <li>1. Present status of water supply</li> <li>1.1 Is your house connected to water supply system? <ul> <li>Is your water connection metered?</li> <li>Is your water connection metered?</li> <li>Is your water supply sources:</li> <li>Is your house of other water supply sources:</li> <li>Is your house connected to sever collection network?</li> <li>Yes</li> <li>No</li> </ul> </li> <li>2. Present status of wastewater treatment</li> <li>2.1 Is your house connected to sever collection network?</li> <li>Yes</li> <li>No</li> <li>2.2 If "No" to Q2.1, what is the wastewater treatment at your house?</li> <li>Septic tank Soakaway (pit latrine)</li> <li>2.3 Does your house have indoor toilet(s)?</li> </ul>
Yes       No         1.2 Is your water connection metered?         Yes       No         1.3 Use of other water supply sources:         Communal tap       Well         Rainwater       Bottled water         2. Present status of wastewater treatment         2.1 Is your house connected to sewer collection network?         Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?
<ul> <li>1.2 Is your water connection metered? </li> <li>Yes No </li> <li>1.3 Use of other water supply sources: </li> <li>Communal tap Well Rainwater Bottled water </li> <li>2. Present status of wastewater treatment </li> <li>2.1 Is your house connected to sewer collection network? </li> <li>Yes No </li> <li>2.2 If "No" to Q2.1, what is the wastewater treatment at your house? </li> <li>Septic tank Soakaway (pit latrine) </li> <li>2.3 Does your house have indoor toilet(s)? </li> </ul>
Yes       No         1.3 Use of other water supply sources:       Communal tap         Communal tap       Well       Rainwater       Bottled water         2. Present status of wastewater treatment       2.1 Is your house connected to sewer collection network?       Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?       Soakaway (pit latrine)       2.3 Does your house have indoor toilet(s)?
<ul> <li>1.3 Use of other water supply sources:</li> <li><u>Communal tap</u> <u>Well</u> <u>Rainwater</u> <u>Bottled water</u></li> <li><b>2. Present status of wastewater treatment</b></li> <li>2.1 Is your house connected to sewer collection network?</li> <li><u>Yes</u> <u>No</u></li> <li>2.2 If "No" to Q2.1, what is the wastewater treatment at your house?</li> <li><u>Septic tank</u> <u>Soakaway (pit latrine)</u></li> <li>2.3 Does your house have indoor toilet(s)?</li> </ul>
Communal tap       Well       Rainwater       Bottled water         2. Present status of wastewater treatment       2.1 Is your house connected to sewer collection network?       Yes       No         2.1 Is your house connected to sewer collection network?       No       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?       Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?       Soakaway (pit latrine)       Soakaway (pit latrine)
<ul> <li>2. Present status of wastewater treatment</li> <li>2.1 Is your house connected to sewer collection network? <ul> <li>Yes</li> <li>No</li> </ul> </li> <li>2.2 If "No" to Q2.1, what is the wastewater treatment at your house? <ul> <li>Septic tank</li> <li>Soakaway (pit latrine)</li> </ul> </li> <li>2.3 Does your house have indoor toilet(s)?</li> </ul>
<ul> <li>2.1 Is your house connected to sewer collection network?</li> <li>Yes No</li> <li>2.2 If "No" to Q2.1, what is the wastewater treatment at your house?</li> <li>Septic tank Soakaway (pit latrine)</li> <li>2.3 Does your house have indoor toilet(s)?</li> </ul>
Yes       No         2.2 If "No" to Q2.1, what is the wastewater treatment at your house?         Septic tank       Soakaway (pit latrine)         2.3 Does your house have indoor toilet(s)?
<ul> <li>2.2 If "No" to Q2.1, what is the wastewater treatment at your house?</li> <li><u>Septic tank</u> <u>Soakaway (pit latrine)</u></li> <li>2.3 Does your house have indoor toilet(s)?</li> </ul>
<u>Septic tank</u> <u>Soakaway (pit latrine)</u> 2.3 Does your house have indoor toilet(s)?
2.3 Does your house have indoor toilet(s)?
ATT ATT
(Yes) No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: \$4, 500 \$/month
Drainage eg. septic tank / cess pool: 4. 4. 2,0-75 \$/month
Others: \$/month for
3.2 Monthly payment for other utilities services
JPS: Secon op\$/month
Cooking gas: Size of cylinder: , , bo lbs Price: \$ Good How long does it last: for months
Others: \$/month for
Others: \$/month for

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

aliene

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

<u>4</u> persons <u>\$150 000</u> \$/month <u>\_\_\_\_\_</u>\$/month <u>30 on</u> \$/month multen Jarolens, Portmone

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: <u>Coccurs selos</u> - Age: <u>Coc</u> - Sex: (F) M

as

6.2 Head of the Household

- Occupation:
- Age:
  - Sex: <u>F</u><u>M</u>

many bills are cotomated Teo

Please circle the appropri	ate responses an	d answer all o	uestions to the b	<u>est of your abi</u>	<u>lity.</u>
1. Present status of wa	ter supply				
1.1 Is your house connec	ted to water supp	oly system?			
Yes	<u>No</u>				
1.2 Is your water connec	tion metered?				
Yes	<u>No</u>				
1.3 Use of other water su	pply sources:				
<u>Communal tap</u>	<u>Well</u> Rai	<u>nwater</u>	Bottled water		
2. Present status of wa	stewater treatm	ent			
2.1 Is your house connec	ted to sewer coll	ection netwo	·k?		
<u>Yes</u>	<u>No</u>				
2.2 If "No" to Q2.1, wha	t is the wastewat	er treatment a	at your house?		
Septic tank	<u>Soakaway (p</u>	<u>it latrine)</u>			
2.3 Does your house hav	e indoor toilet(s)	?			
Yes	<u>No</u>				
2.4 How do you evaluate		-	- /		
Very satisfied	Rel	atively satisfi	ed 🗸	Average	
Relatively unsa	tisfied		Very unsatisfie	<u>d</u>	
2.5 Reason of dissatisfac	tion				
Low dischargin	g capability	Sewage	overflow	<u>Others</u>	
Foul odors		<u>High se</u>	wage charge		
3. Water consumption	and demand		Other water so	ource(s) if any	
3.1 Monthly water charg	es of your housel	nold			
Water bill inclu	ding sewage:	42.5:	D \$/month		•
	ptic tank / cess p		\$/month		
Others:			\$/month	for	
3.2 Monthly payment for	other utilities se	rvices			
JPS:	3, 500,0	S \$/month			
Cooking gas: S	ze of cylinder:	lbs Pr	ice: \$ 2;000-1	How long does	<u>s it last: months</u>

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

# - Actived George

Please circle the appropriate responses and answer all questions to the best of your ability.

1. Present status of water supply 1.1 Is your house connected to water supply system? No Yes 1.2 Is your water connection metered? No 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? Yes <u>No</u> 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Very satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Sewage overflow Others Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household 2500 Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month Others: \$/month for 3.2 Monthly payment for other utilities services JPS: 2,000 \$/month Cooking gas: Size of cylinder: 30 lbs Price: \$ 2,300 How long does it last: Others: \$/month for

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

\$100/month \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

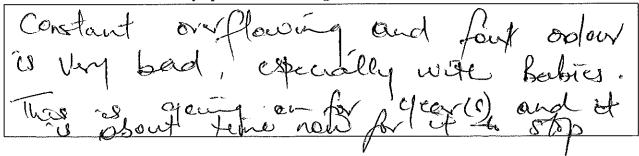
#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

persons \$/month \$/month mana

- 6. Profile of interviewee and household leader
- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:
- E (M)

M



Please circle the appropriate responses and answer all questions to the best of your ability.

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1. Present status of water supply 1.1 Is your house connected to water supply system? No (Yes 1.2 Is your water connection metered? No Yes 1.3 Use of other water supply sources: Bottled water) Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes) No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? (Septic tank) Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? Yes No 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Average Very satisfied Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction Low discharging capability Others Sewage overflow High sewage charge Foul odors Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household \$1000 \$/month too high Water bill including sewage: Drainage eg. septic tank / cess pool: \$/month <u>\$/month\_for</u> Others: 3.2 Monthly payment for other utilities services \$/month JPS: Cooking gas: Size of cylinder: lbs Price: \$ How long does it last: months \$/month Others:

#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size: <u>h</u> persons 5.2 Monthly income: <u>Varies</u> \$/month between \$30,000-\$40,000. 5.3 Monthly saving: <u>Nik</u> \$/month before deduction 5.4 Area of Residence: <u>Cayaman</u>

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation: <u>Pensioner</u> - Age: <u>58 mith</u> disability notable to work - Sex: <u>F</u> <u>M</u> <u>Chot able to speak propuly</u>, walk 6.2 Head of the Household - Occupation: <u>Pensioner</u> - Age: <u>65</u> - Sex: <u>F</u> <u>M</u>

There are times when for the entire muchs there is no weater in the pipe yet ne still get high bills. I bell that the servage and mater charges should not be the same, as and of the four only two people may be at home in the day, sometimes one person marking done on I day muchly base

Please circle the appropriate responses and answer all questions to the best of your ability.	
1. Present status of water supply	
1.1 Is your house connected to water supply system?	
Yes: <u>No</u>	
1.2 Is your water connection metered?	
Yes / No	
1.3 Use of other water supply sources:	
Communal tap Well Rainwater Bottled water	
2. Present status of wastewater treatment	
2.1 Is your house connected to sewer collection network?	
$\underline{Yes} \sim \underline{No}$	
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?	
Septic tank Soakaway (pit latrine)	
2.3 Does your house have indoor toilet(s)?	
Yes / No	
2.4 How do you evaluate the current sewage services at your home?	
Very satisfied Relatively satisfied Average	
Relatively unsatisfied Very unsatisfied	
2.5 Reason of dissatisfaction	
Low discharging capability Sewage overflow Others	
Foul odors High sewage charge	
3. Water consumption and demand Other water source(s) if any	
3.1 Monthly water charges of your household	
Water bill including sewage: 4 3, STD \$/month	
Drainage eg. septic tank / cess pool: \$/month	
Others: <u>\$/month_for</u>	
3.2 Monthly payment for other utilities services	
JPS: $B \leq 5,000$ \$/month	
Cooking gas: Size of cylinder: 25 lbs Price: \$ 1,800 How long does it last: / months	
Others: \$/month	

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u> <u>\$200/month</u> <u>\$400/month</u> <u>\$500/month</u>

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

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#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
  - Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:

Sex:

#### 7. Please feel free to write any opinion about sewage.

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Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes No
1.2 Is your water connection metered?
Yes No
1.3 Use of other water supply sources:
Communal tap Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
<u>Yes No</u>
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
VRelatively unsatisfiedVery unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow
Foul odors     High sewage charge
3. Water consumption and demand Other water source(s) if any
3.1 Monthly water charges of your household
Water bill including sewage: 5,000 \$/month
Drainage eg. septic tank / cess pool: \$/month
Others: \$/month for
3.2 Monthly payment for other utilities services
JPS: S,060 \$/month
Cooking gas: Size of cylinder: 25 % lbs Price: \$ 1,900 How long does it last: / months
Others: \$/month for

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
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 \$400/month

 \$500/month
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Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size: \_\_\_\_\_\_persons 5.2 Monthly income: \_\_\_\_\_\_ $U_1U00$  \$/month 5.3 Monthly saving: \_\_\_\_\_\_\_\_\$/200\_ \$/month 5.4 Area of Residence: \_\_\_\_\_\_\_\_\_\$/month Side Constant Side  $U_1U_2U_2U_2$ 

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Occupation:  $\underline{PACKER}$ - Age:  $\underline{30}$ - Sex:  $\underline{F} \underline{M}$ 6.2 Head of the Household
  - Occupation:Age:
  - Sex:
- Provinc for the House 50 E M

#### 7. Please feel free to write any opinion about sewage.

Well i beleave the Drains need to be Clean At lease 2 times per Month, then we would'othouse that problem.

<u>Please</u>	circle the appropria	ate response	s and answer all	questions to the be	<u>st of your abili</u>	<u>ty.</u>
1. Pr	esent status of wat	ter supply				
1.1 Is	your house connect	ed to water	supply system?			
	Yes 🗸	<u>No</u>				
1.2 Is	your water connect	ion metered	1?			
	Yes V	<u>No</u>				
1.3 Us	se of other water su	pply source	s:			
	<u>Communal tap</u>	<u>Well</u>	<u>Rainwater</u>	Bottled water	NA	
2. Pr	esent status of wa	stewater tr	eatment			
2.1 Is	your house connect	ted to sewe	collection netwo	ork?		
	Yes	<u>No</u>				
2.2 If	"No" to Q2.1, what	t is the was	ewater treatment	t at your house?		
	Septic tank	<u>Soakaw</u>	ay (pit latrine)			
2.3 De	oes your house have	e indoor toi	let(s)?			
	Yes	<u>No</u>				
2.4 He	ow do you evaluate	the current	sewage services	at your home?		
	Very satisfied		Relatively satis	fied	<u>Average</u>	
	Relatively unsa	tisfied		Very unsatisfie	<u>d</u>	
2.5 Re	eason of dissatisfac	tion				
	Low dischargin	g capability	Sewa	ge overflow	<u>Others</u>	
	<u>Foul odors</u>		<u>High</u>	sewage charge		
3. W	ater consumption	and dema	nd	Other water so	ource(s) if any	
3.1 M	lonthly water charg	es of your l	ousehold			
	Water bill inclu	<u>ding sewag</u>	e: 6,700.0	SO \$/month		
	<u>Drainage eg. se</u>	<u>ptic tank / c</u>	ess pool:	\$/month		
	Others:			\$/month	for	
3.2 M	lonthly payment for	r other utili	ies services			
	JPS: し,60	0.00	\$/mon	<u>th</u>		
	Cooking gas: S	ize of cylin	der: <u>3</u> cs lbs	Price: \$ 2,200	How long does	s it last: <u>months</u>
	Others:		\$/mon	<u>ith</u> for		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

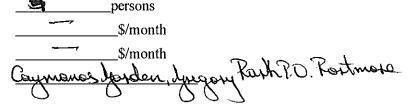
 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
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Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:



#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation: - Age: <u>59</u>
  - Sex:  $\underline{F} \sim \underline{M}$

6.2 Head of the Household

- Occupation:
- Age:
- Sex: <u>F</u><u>M</u>

Please circle the appropriate responses and answer all questions to the best of your ability. 1. Present status of water supply 1.1 Is your house connected to water supply system? No Yes 1.2 Is your water connection metered? No <u>Yes</u> \ 1.3 Use of other water supply sources: Bottled water Communal tap Well Rainwater 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? Yes No 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) 2.3 Does your house have indoor toilet(s)? No (Yes) 2.4 How do you evaluate the current sewage services at your home? Relatively satisfied Average Very satisfied Very unsatisfied Relatively unsatisfied 2.5 Reason of dissatisfaction (Sewage overflow) Others Low discharging capability High sewage charge Foul odors Other water source(s) if any 3. Water consumption and demand 3.1 Monthly water charges of your household 250<u>0</u> \$/month Water bill including sewage: \$/month Drainage eg. septic tank / cess pool: \$/month for Others: 3.2 Monthly payment for other utilities services 6000 JPS: \$/month Cooking gas: Size of cylinder: 30 lbs Price: \$ / 90X months How long does it last: \$/month for Others:

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

 \$100/month
 \$200/month
 \$300/month
 \$400/month

 \$500/month
 \$600/month
 \$
 \$

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	persons
5.2 Monthly income:	<u> </u>
5.3 Monthly saving:	00 \$/month
5.4 Area of Residence:	CayMarrad Barde

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
  - Occupation:
  - Age:
    - Sex:

Habbaly Som

M

6.2 Head of the Household

- Occupation: - Age: - Sex: (F) <u>M</u>

<u>Please cir</u>	cle the appropriate	e responses and	answer all q	uestions to the	best of your abili	<u>ty.</u>
1. Prese	ent status of water	r supply				
1.1 Is you	ar house connected	i to water suppl	ly system?			
1	Yes	<u>No</u>				
1.2 Is you	ir water connectio	n metered?				
Ć	Yes	<u>No</u>				
1.3 Use c	of other water supp	ly sources:				
	Communal tap	Well Rain	water	Bottled water		
2. Prese	ent status of waste	ewater treatme	ent			
2.1 ls you	ir house connected	to sewer colle	ction network	k?		
(	Yes	<u>No</u>				
2.2 If "N	o" to Q2.1, what is	s the wastewate	r treatment a	t your house?		
	Septic tank	Soakaway (pit	<u>t latrine)</u>			
2.3 Does	your house have i	ndoor toilet(s)?	•			
Ć	Yes	<u>No</u>				
2.4 How	do you evaluate th	e current sewa	ge services at	your home?		
	Very satisfied	Rela	tively satisfic	<u>ed</u>	<u>Average</u>	
7	Relatively unsatis	fied		Very unsatisfi	<u>ed</u>	
2.5 Reaso	on of dissatisfactio	n				· .
	Low discharging of	apability	Sewage	overflow	<u>Others</u>	
C	Foul odors		<u>High se</u>	wage charge		
3. Wate	r consumption ar	ıd demand		Other water s	source(s) if any	[
3.1 Mont	hly water charges	of your househ	£			
	Water bill includir	ng sewage:	\$70	<u>00 \$/month</u>	<u>1</u>	
	Drainage eg. septi	c tank / cess po	ol:	\$/month	1	F
	Others:			\$/month	<u>n</u> for	
3.2 Mont	hly payment for o	ther utilities ser	vices			
	JPS:	\$5000	\$/month			
	Cooking gas: Size	of cylinder:	<u> </u>	ce: \$ 1900_	How long does	it last: (1) months
	Others:		<u>\$/month</u>	for		

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u>	<u>\$200/month</u>	\$ <u>300/month</u>	<u>\$400/month</u>
<u>\$500/month</u>	<u>\$600/month</u>	none	
Please note that these payr	nents would be in	addition to your curr	ent monthly household expenditures.

#### 5. Profile of your household

5.1 Household size:	persons
5.2 Monthly income:	#_ <u>30.000</u> _\$/month
5.3 Monthly saving:	\$/month
5.4 Area of Residence:	<u>Caymonos Garden</u> Site. D.

# 6. Profile of interviewee and household leader

6.1 Int	erviewee Mil	ton Spencer
-	Occupation:	Sub-Contractor
-	Age:	25
-	Sex:	F (M)
6.2 He	ad of the Household	
-	Occupation:	Sub-Cantractor
-	Age:	25
-	Sex:	<u>F</u> ( <u>M</u> )

Please circle the appropriate responses and answer all questions to the best of your ability.
1. Present status of water supply
1.1 Is your house connected to water supply system?
Yes No
1.2 Is your water connection metered?
Yes No
1.3 Use of other water supply sources:
Communal tap, Well Rainwater Bottled water
2. Present status of wastewater treatment
2.1 Is your house connected to sewer collection network?
<u>Yes</u> <u>No</u>
2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
Septic tank Soakaway (pit latrine)
2.3 Does your house have indoor toilet(s)?
Yes No
2.4 How do you evaluate the current sewage services at your home?
Very satisfied Relatively satisfied Average
Relatively unsatisfied Very unsatisfied
2.5 Reason of dissatisfaction
Low discharging capability Sewage overflow Others
Foul odors     High sewage charge
3. Water consumption and demand Other water source(s) if any
3. Water consumption and demand       Other water source(s) if any         3.1 Monthly water charges of your household
$\frac{\text{Water bill including sewage:}}{\text{Water bill including sewage:}} $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$
Drainage eg. septic tank / cess pool:\$/month
Others: <u>\$/month</u> for 3.2 Monthly payment for other utilities services
• • •
JPS: S/month ダク, チロの Cooking gas: Size of cylinder: みら Ibs Price: \$ 1, See How long does it last: months
Others: <u>\$/month</u> for

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#### [Portmore - Sewage conveyor facility development by the project]

Currently, your household is connected to a sewerage system and you pay sewage charges to NWC. Assuming that the service you receive is not to your satisfaction, but could become so, by the upgrading of the already existing system, how much would you agree to pay in addition to the current sewage charges? (Choose one or specify an amount in between)

<u>\$100/month</u> \$200/month \$300/month \$400/month \$500/month \$600/month

Please note that these payments would be in addition to your current monthly household expenditures.

#### 5. Profile of your household

- 5.1 Household size:
- 18,000 155 \$/month 5.2 Monthly income:
- 5.3 Monthly saving:
- -NONE \$/month Portmore 5.4 Area of Residence:
  - Caymanas Gordos

<u>L1-</u>persons

#### 6. Profile of interviewee and household leader

- 6.1 Interviewee
- Colour Tec. Occupation: \_ Age: \_ Sex: M 6.2 Head of the Household K christie
  - Occupation: . Age: 24 Sex: М

Please circle the appropr	iate responses and answ	er all questions to the best of your abilit	<u>y.</u>
1. Present status of wa	ater supply		
1.1 Is your house connect	cted to water supply syst	em?	
Yes	No		
1.2 Is your water connect	ction metered?		
res	<u>No</u>		
1.3 Use of other water s	upply sources:		
<u>Communal tap</u>	Well Rainwater	Bottled water	
2. Present status of w			
2.1 Is your house conne	cted to sewer collection	network?	
Yes	No		
2.2 If "No" to Q2.1, wh	at is the wastewater trea	ment at your house?	
Septic tank	<u>Soakaway (pit latri</u>	<u>ue)</u>	
2.3 Does your house ha	ve indoor toilet(s)?		
(Yes)	<u>No</u>		
2.4 How do you evaluat	te the current sewage set	vices at your home?	
Very satisfied	Relatively	satisfied Average	
Relatively uns	atisfied	Very unsatisfied	
2.5 Reason of dissatisfa	oction		······································
Low dischargi	ng capability	Sewage overflow Others	
Foul odors	NI	High sewage charge	[
3. Water consumptio	n and demand	Other water source(s) if any	
3.1 Monthly water char		aa	
Water bill incl	luding sewage:	<u>3,500 · \$/month</u>	
Drainage eg. s	septic tank / cess pool:	<u>-o- \$/month</u>	· · · · · · · · · · · · · · · · · · ·
Others:		\$/month for	
3.2 Monthly payment f	or other utilities service		
	~	/	
<u>JPS:</u>	9,000 \$		
	Size of cylinder: 100	7	es it last: <u>3 months</u>

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#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between) I do Nt

(i) Monthly sewage charges: -o-	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>	want anot
	<u>\$1,200/month</u>	<u>\$1,400/month</u>		ill to add -
<ul><li>(ii) Initial payment for connection</li><li>Please note that these payments wo</li></ul>	\$	(one-	-time payment) 4	
Please note that these payments wo	uld be in addition	to your current m	onthly household	expenditures but
your current expenses for sanitation s	services other than	by NWC would be	replaced by them.	other b

#### 5. Profile of your household

5.1 Household size: 5.2 Monthly income: I do 5.3 Monthly saving: 5.4 Area of Residence: mish disclose. +06. Profile of interviewee and household leader 6.1 Interviewee

- Occupation:
- Age:
- Sex: ....
- 6.2 Head of the Household
  - Occupation: oman

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- Age:
- Sex:

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persons

\$/month

\$/month

7. Please feel free to write any opinion about sewage.

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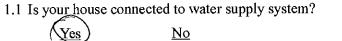
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Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply



<u>No</u>

1.2 Is your water connection metered?

'Yes

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No

1.3 Use of other water supply sources:

Rainwater Communal tap Well

<u>Bottled water</u> N/A

#### 2. Present status of wastewater treatment

- 2.1 Is your house connected to sewer collection network?
- <u>No</u> Yes 2.2 If "No" to Q2.1, what is the wastewater treatment at your house?
  - (Soakaway (pit latrine)) Septic tank
- 2.3 Does your house have indoor toilet(s)?

(Yes) No 2.4 How do you evaluate the current sewage services at your home?

Relatively satisfied Very satisfied Very unsatisfied

Relatively unsatisfied 2.5 Reason of dissatisfaction

Low discharging capability

Foul odors

for

Other water source(s) if any

<u>Average</u>

Others

3.1 Monthly water charges of your household

3. Water consumption and demand

Others:

3000 Water bill including sewage: \$/month

Drainage eg. septic tank / cess pool: \$/month

\$/month

3.2 Monthly payment for other utilities services

JPS: $(0,000)$ \$/month	
Cooking gas: Size of cylinder: \00 lbs Price	: \$ 6,000 How long does it last: 5. months
Others: 3 500 \$/month	for Telephone

Sewage overflow

High sewage charge

#### [North Kingston Area - Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

persons

\$/month

\$/month

(i) Monthly sewage charges:

	<u>\$600/month</u>	(\$800/month)	\$1,000/month	MAGARA	(
	\$1,200/month	\$1,400/month	<u>\$1,600/month</u>	AN FOR	
on	<u>\$ 2,50</u>	) (one-1	time payment)		

(ii) Initial payment for connection

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

#### 5. Profile of your household

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - Occupation:
  - Age:
  - Sex:

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Please circle the appropriate responses and answer all questions to the best of your ability.

#### 1. Present status of water supply 1.1 Is your house connected to water supply system? Yes No 1.2 Is your water connection metered? <u>No</u> 1.3 Use of other water supply sources: Communal tap Well Rainwater Bottled water 2. Present status of wastewater treatment 2.1 Is your house connected to sewer collection network? <u>No</u> <u>Yes</u> 2.2 If "No" to Q2.1, what is the wastewater treatment at your house? Soakaway (pit latrine) Septic tank 2.3 Does your house have indoor toilet(s)? No Yes 2.4 How do you evaluate the current sewage services at your home? Very satisfied **Relatively** satisfied Average Relatively unsatisfied Very unsatisfied 2.5 Reason of dissatisfaction Sewage overflow Low discharging capability Others Foul odors High sewage charge 3. Water consumption and demand Other water source(s) if any 3.1 Monthly water charges of your household Water bill including sewage: \$2500 -\$5000 \$/mont NIL Drainage eg. septic tank / cess pool \$/month Aseni NIL N. Oak Others: \$/month for 3.2 Monthly payment for other utilities services \$/month & INCREASING. \$ 7000 JPS: Cooking gas: Size of cylinder: Ibs Price: \$2600 How long does it last: 6 months Others: CABLE \$2600 P. Mit \$/month PHONSE \$8000 P. MITH. for

#### [North Kingston Area – Street sewer development by the project]

A street sewer network is developed in your area by NWC and your household becomes able to be connected to a centralized sewage system. With such a system, sewage is collected in a sanitary fashion from each household and transported to a safe place where the system has sufficient capacity to deal with increases in water due to rainfall etc. and does not overflow. Collected sewage is treated in a sanitary fashion until it reaches a level that is not problematic for the environment and then discharges into the natural environment properly.

Currently, your household is not connected to the system so you do not pay such charges to NWC. If you were to receive the satisfactory sewage service as explained above, you would have to make (i) new monthly sewage bill payment. Prior to that, you would have to make (ii) an initial payment for the individual connection work from the street sewer to your house.

How much would you agree to pay for these expenses? (Choose one or specify amount in between)

(i) Monthly sewage charges:	<u>\$600/mont</u>

(i) Monthly sewage charges:	<u>\$600/month</u>	<u>\$800/month</u>	<u>\$1,000/month</u>
	<u>\$1,200/month</u>	<u>\$1,400/month</u>	<u>\$1,600/month</u>
(ii) Initial payment for connection	\$ <u>50,000</u>	(one-time payment)	

Please note that these payments would be in addition to your current monthly household expenditures but your current expenses for sanitation services other than by NWC would be replaced by them.

1 Entr

#### 5. Profile of your household 2 ADDINS

- 5.1 Household size:
- 5.2 Monthly income:
- 5.3 Monthly saving:
- 5.4 Area of Residence:

#### 6. Profile of interviewee and household leader

F

#### 6.1 Interviewee

- Occupation:
- Age:
- Sex:
- 6.2 Head of the Household
  - \_ Occupation:
  - Age:
  - Sex:

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7. Please feel free to write any opinion

#### about sewage.

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