

## SUPPLEMENTARY FILES-2

### Supplementary Files for Article Entitled: “*Impact of Sedimentation on Water Seepage Capacity in Lake Nakuru*”

#### 2.1. Weight-Volume Properties for Soil Sediment from Location P1

	LABORATORY TEST DATA SHEET															
	Weight-Volume Relationships for Soil Sediment															
	Scope: Determination of Water Content, Porosity, Void Ratio and Unity Weight of Sediment Specimen															
	Description of soil: ( <i>sediment</i> )					Sampling Location: P1										
	Location: <i>L. Nakuru</i> (00°21'33"S, 36°05'41"E)					Water Density, $\gamma_w$ (g/cm³): 1										
	Tested by: IRADUKUNDA Parfait					Date: 1 July 2019										
Items	Test Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Sub-sample on the core, (cm)	0 - 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80
Specific gravity of solids, G <sub>s</sub>	2.07	1.65	1.62	1.66	1.92	2.05	2.26	1.81	1.94	2.01	2	1.78	1.71	1.67	1.63	1.77
Length of specimen, L (cm)	1.5	1.5	1.5	1.2	1.2	1.2	1.5	1.5	1.5	1.1	1.2	1.2	1.1	0.6	0.6	0.6
Dpecimen Diameter, D (cm)	4.9	4.9	4.9	5.1	5.1	5.1	4.9	4.9	4.9	5.4	5.1	5.1	5.4	5.25	5.25	5.25
Volume of specimen, V (cm³)	28.29	28.29	18.86	20.43	20.43	20.43	18.86	18.86	18.86	22.90	20.43	20.43	22.90	21.65	21.65	21.65
Mass of empty can, W <sub>1</sub> (g)	17.2	17.12	17.46	17.02	17.12	17.28	17.18	17.38	17.52	4.62	16.96	17.04	4.72	10.22	10.24	10.19
Mass of can + wet soil, W <sub>2</sub> (g)	46.26	47.5	43.62	42.08	47.5	44.78	48.86	49.08	47.92	31.54	43.42	41.88	33.78	26.78	26.94	27.68
Mass of can + dry soil, W <sub>3</sub> (g)	20.36	22.1	23.74	24.36	28.3	25.18	26.84	27.72	25.88	11.96	24.52	23.64	11.94	14.62	14.4	14.42
Mass of water in the soil (g)	25.9	25.4	19.88	17.72	19.2	19.6	22.02	21.36	22.04	19.58	18.9	18.24	21.84	12.16	12.54	13.26
Mass of dry soil (g)	3.16	4.98	6.28	7.34	11.18	7.9	9.66	10.34	8.36	7.34	7.56	6.6	7.22	4.4	4.16	4.23
MEASUREMENTS AND CALCULATIONS																
The moisture content, w (%)	819.6	510.0	316.6	241.4	171.7	248.1	228.0	206.6	263.6	266.8	250.0	276.4	302.5	276.4	301.4	313.5
Dry density of soil, $\gamma_d$ (g/cm³)	0.11	0.18	0.33	0.36	0.55	0.39	0.51	0.55	0.44	0.32	0.37	0.32	0.32	0.20	0.19	0.20
Void ratio of specimen, e	17.53	8.37	3.86	3.62	2.51	4.30	3.41	2.30	3.38	5.27	4.40	4.51	4.42	7.22	7.48	8.06
Bulk density of soil, $\gamma_b$ (g/cm³)	1.03	1.07	1.39	1.23	1.49	1.35	1.68	1.68	1.61	1.18	1.30	1.22	1.27	0.76	0.77	0.81
Porosity, n (%)	94.60	89.33	79.44	78.35	71.50	81.14	77.33	69.71	77.15	84.06	81.50	81.85	81.56	87.83	88.21	88.96

## SUPPLEMENTARY FILES-2

### Supplementary Files for Article Entitled: “*Impact of Sedimentation on Water Seepage Capacity in Lake Nakuru*”

#### 2.2. Weight-Volume Properties for Soil Sediment from Location P2

	LABORATORY TEST DATA SHEET											
	Weight-Volume Relationships for Soil Sediment											
	Scope: Determination of Water Content, Porosity, Void Ratio and Saturation of Sediment Specimen											
	Description of soil: (sediment)				Sampling Location: P2							
	Location: Lake Nakuru (00°20'22"S, 36°04'54"E)				Water Density, $\gamma_w$ (g/cm³): 1							
	Tested by: IRADUKUNDA Parfait				Date: 19 July 2019							
Items		Test Number										
		1	2	3	4	5	6	7	8	9	10	11
Sub-sample on the core, (cm)		0 - 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55
Specific gravity of solids, Gs		2.34	2.25	2.27	2.17	2.2	2.21	2.19	2.28	2.09	2.09	2.39
Length of specimen, L (cm)		1.5	1.5	1.5	1.2	1.2	1.2	1.5	1.5	1.5	1.1	1.2
Specimen Diameter, D (cm)		4.9	4.9	4.9	5.1	5.1	5.1	4.9	4.9	4.9	5.4	5.1
Volume of specimen, V (cm³)		28.29	28.29	18.86	20.43	20.43	20.43	18.86	18.86	18.86	22.90	20.43
Mass of empty can, W <sub>1</sub> (g)		17.65	17.55	17.92	17.46	17.59	17.74	17.62	17.83	17.96	4.74	17.38
Mass of can + wet soil, W <sub>2</sub> (g)		57.22	58.15	54.24	52.29	53.14	57.1	55.41	61.66	60.99	49.92	60.07
Mass of can + dry soil, W <sub>3</sub> (g)		41.37	47.94	46.84	45.45	45.57	47.44	47.74	52.49	51.11	40.92	53.39
Mass of water in the soil (g)		15.85	10.21	7.4	6.84	7.57	9.66	7.67	9.17	9.88	9	6.68
Mass of dry soil (g)		23.72	30.39	28.92	27.99	27.98	29.7	30.12	34.66	33.15	36.18	36.01
MEASUREMENTS AND CALCULATIONS												
The moisture content, w (%)		66.82	33.60	25.59	24.44	27.06	32.53	25.46	26.46	29.80	24.88	18.55
Dry density of soil, $\gamma_d$ (g/cm³)		0.84	1.07	1.53	1.37	1.37	1.45	1.60	1.84	1.76	1.58	1.76
Void ratio of specimen, e		1.79	1.09	0.48	0.58	0.61	0.52	0.37	0.24	0.19	0.32	0.36
Bulk density of soil, $\gamma_b$ (g/cm³)		1.40	1.44	1.93	1.70	1.74	1.93	2.00	2.32	2.28	1.97	2.09
Porosity, n (%)		64.16	52.25	32.44	36.86	37.74	34.21	27.07	19.39	15.89	24.41	26.24

## SUPPLEMENTARY FILES

Supplementary Files for Article Entitled: “*Impact of Sedimentation on Water Seepage Capacity in Lake Nakuru*”

### 2.3. Moisture Content, Porosity and Unity Weight for Sediment from Location P1&P2 Along with The Core Depth

