

RAINWATER HARVESTING IN THE U.S. VIRGIN ISLANDS

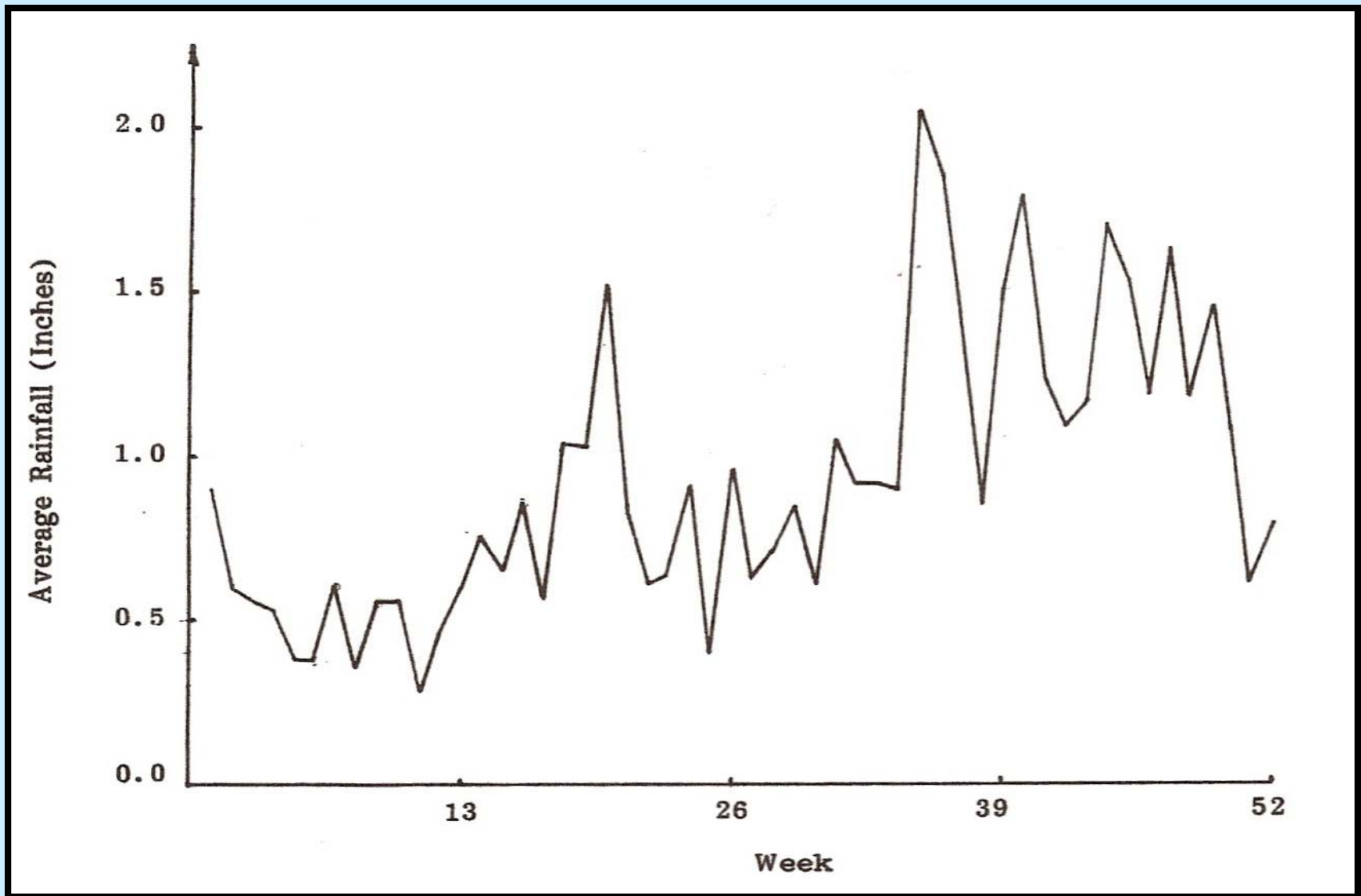
By: Henry H. Smith
University of the Virgin Islands



GENERAL BACKGROUND

Month	Mean Monthly Rainfall (Inches)		
	Cayman Is.	St. Croix	Koror
January	1.49	2.63	10.91
February	0.96	1.89	7.95
March	0.69	2.07	8.39
April	1.90	2.99	10.15
May	7.48	4.72	13.23
June	5.07	2.88	14.76
July	3.93	3.23	16.35
August	6.50	5.02	15.37
September	8.28	6.10	13.12
October	9.08	6.05	13.84
November	4.19	5.89	11.04
December	2.85	4.42	13.06
Annual Mean	52.42	47.89	148.17
Monthly Mean	4.37	3.99	12.35
Standard Deviation	2.93	1.56	2.67
Coefficient of Variation	0.67	0.40	0.20

Monthly Rainfall Averages in St. Croix, Cayman Islands and Belau



Weekly Rainfall Averages at Sprat Hole



47294-29





SURFACE WATER











GROUND WATER











RAINWATER HARVESTING









































SEA WATER









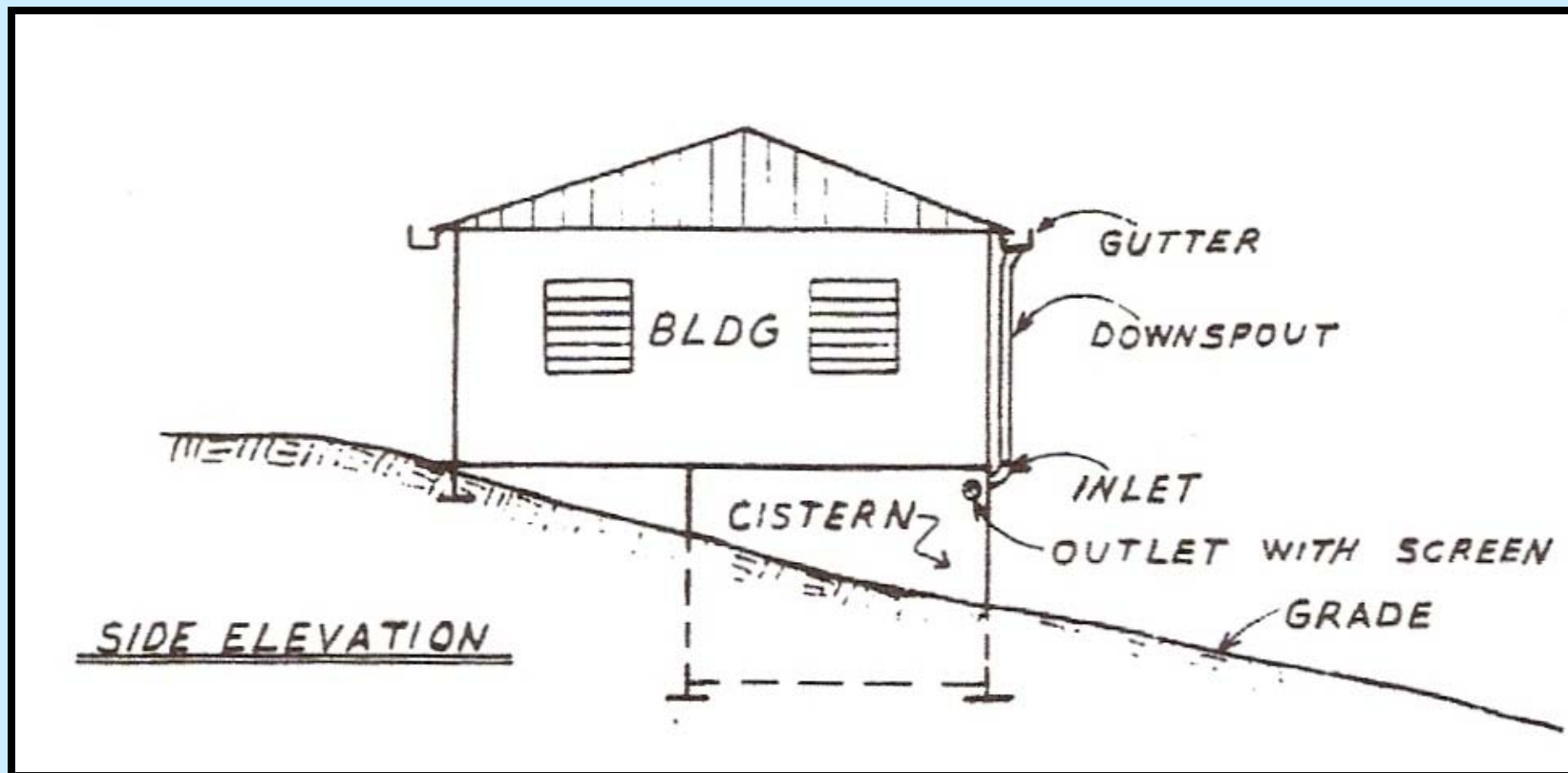
DESALINATION



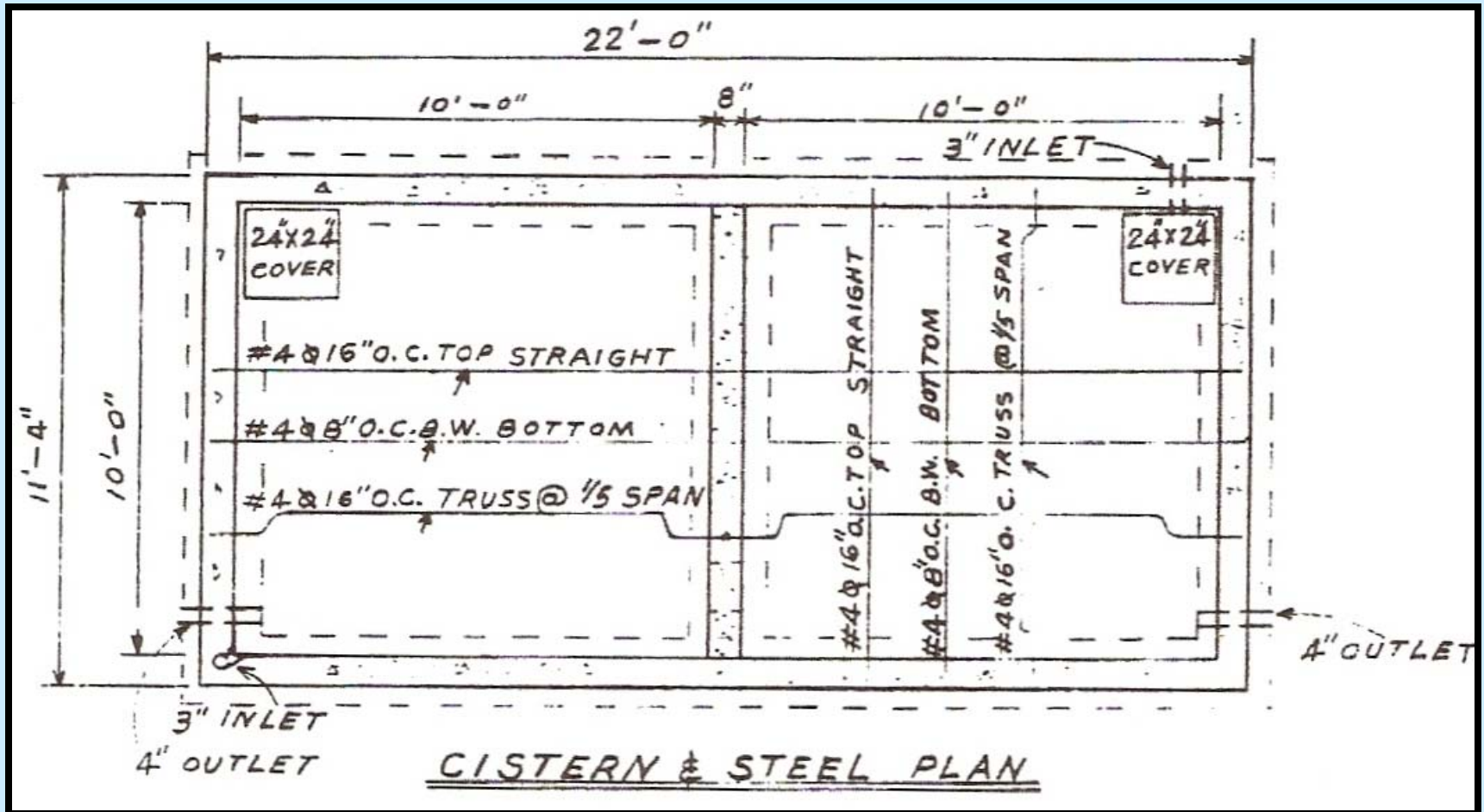








Typical Cistern in USVI



Typical Cistern in USVI

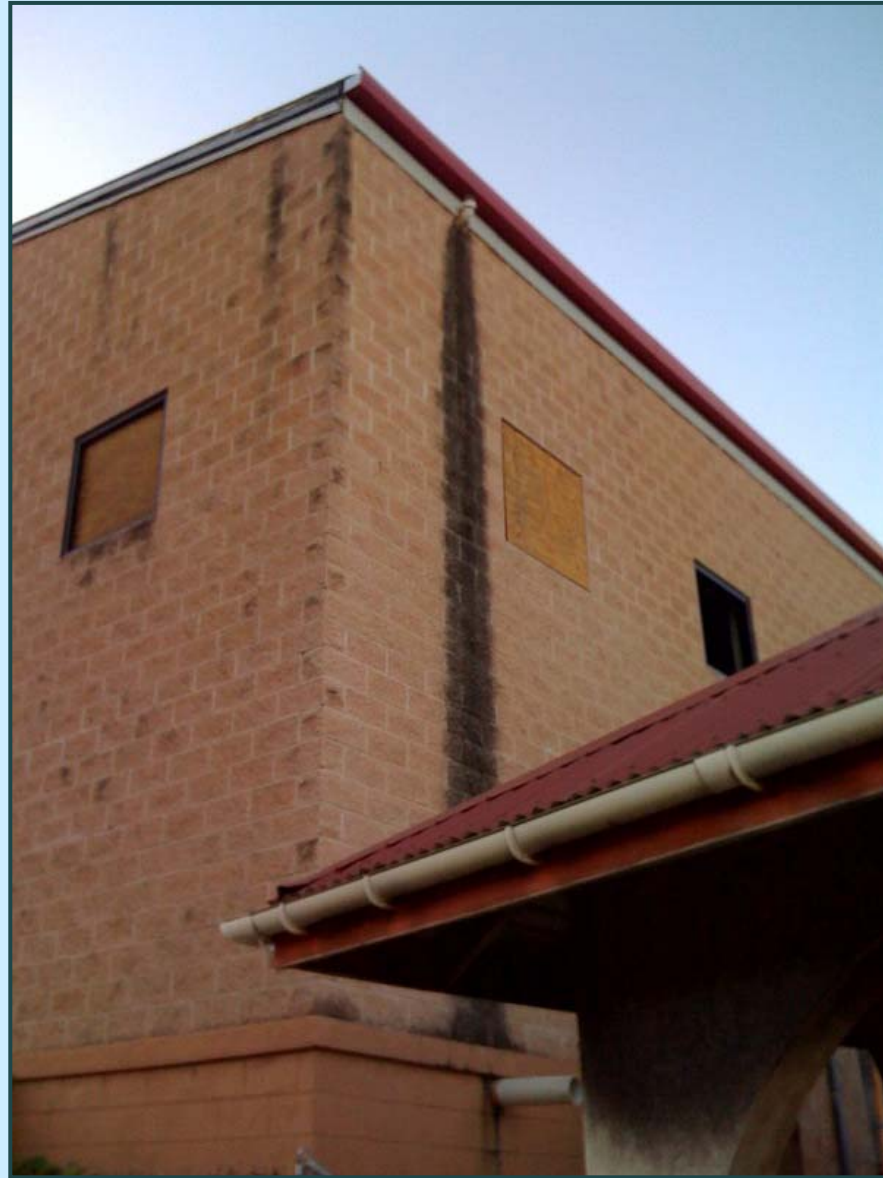








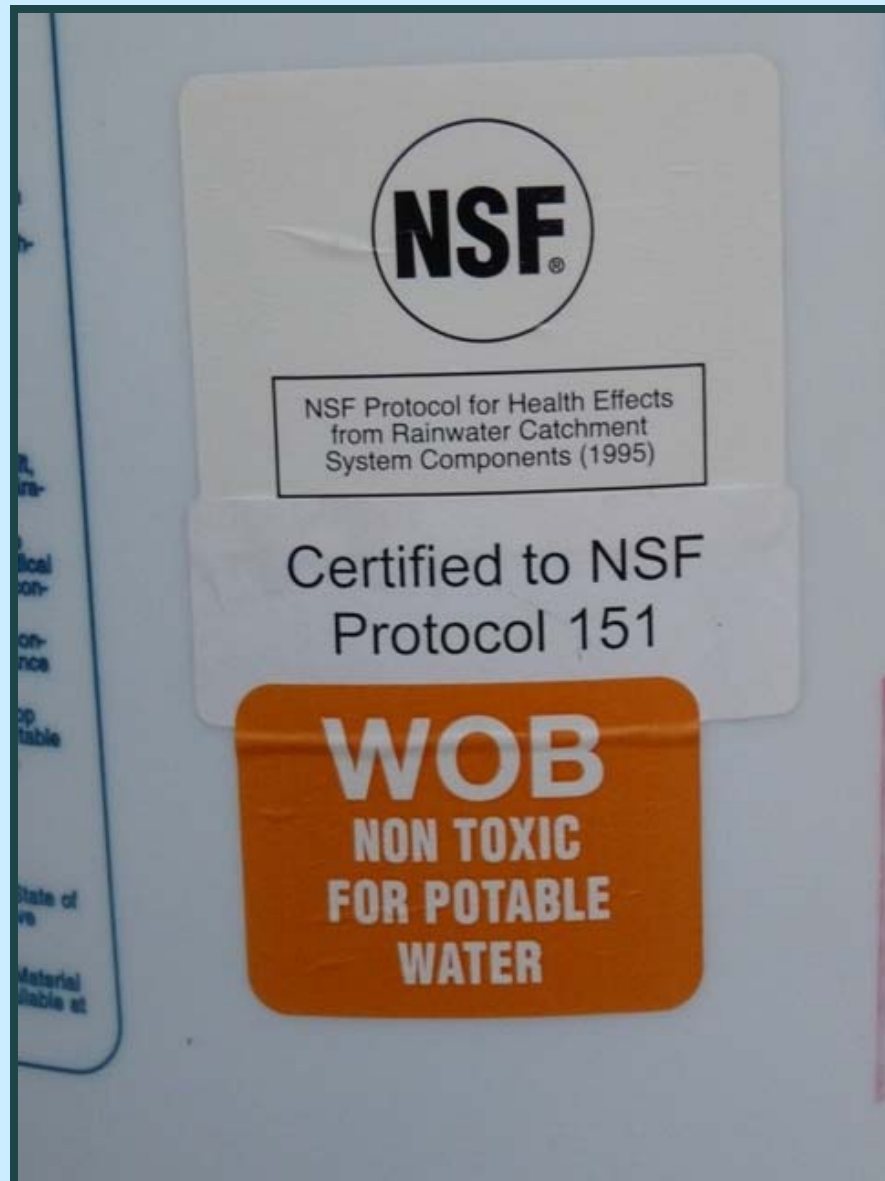
RAINWATER – QUALITY CONSIDERATIONS





























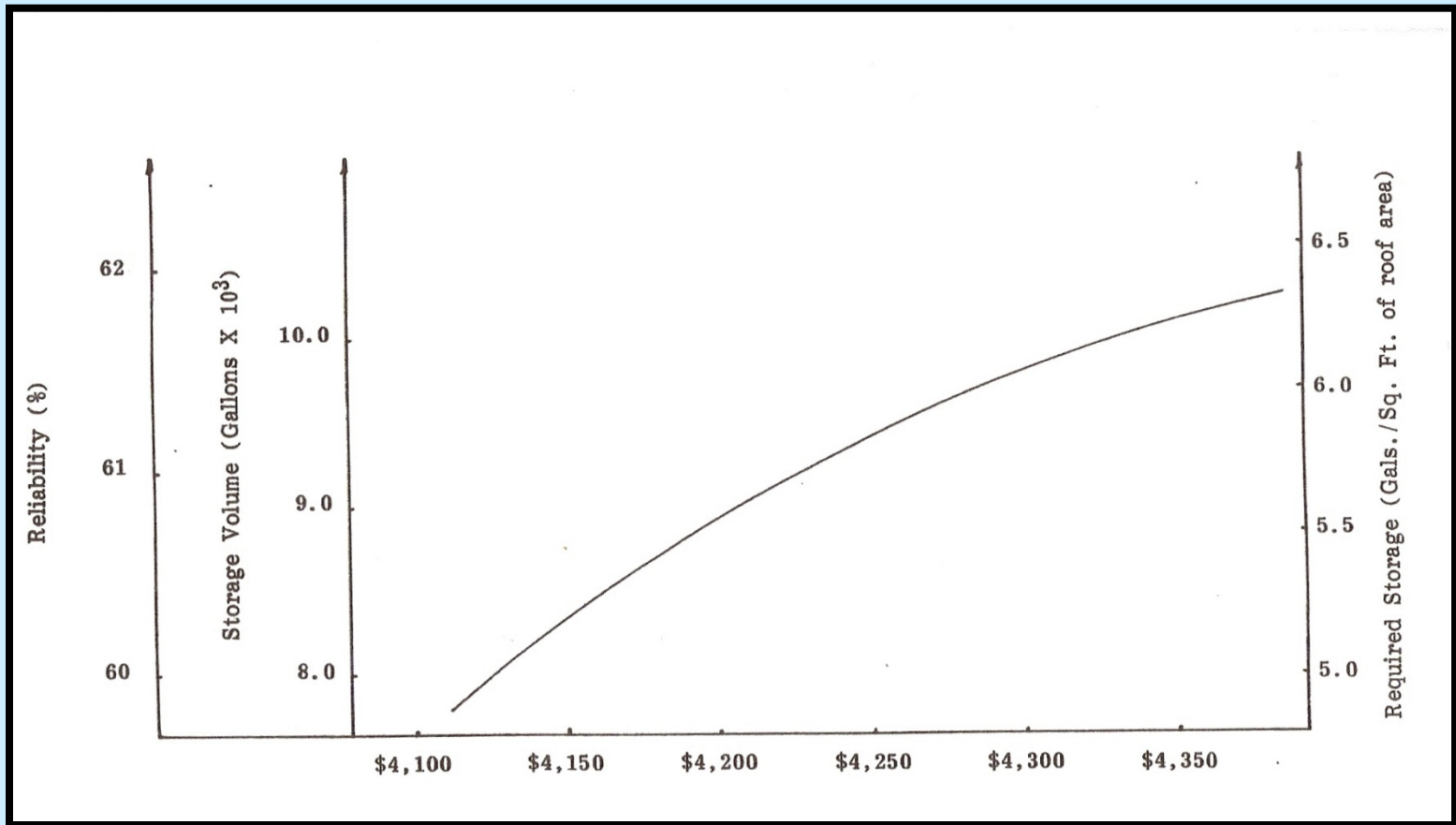




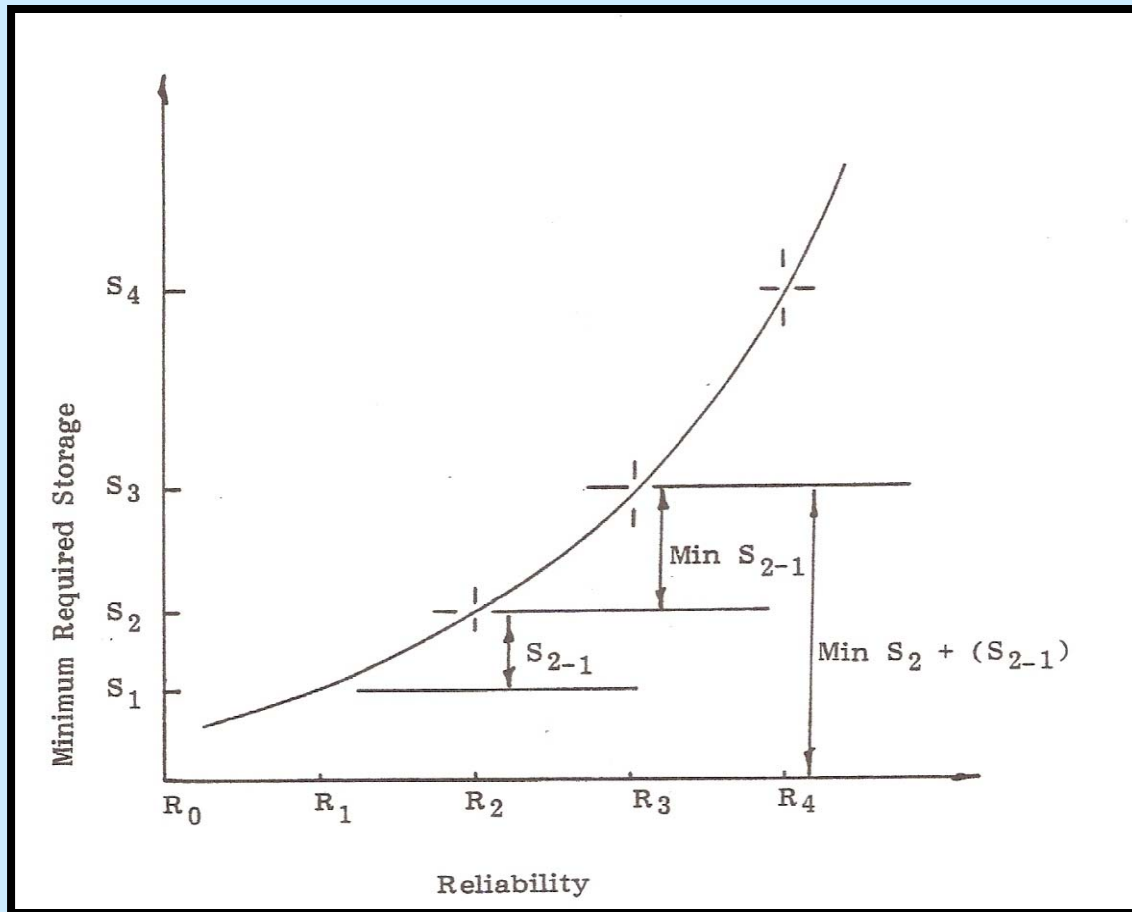
RAINWATER – QUANTITY

CONSIDERATIONS





Materials Costs for Construction



Computation of Minimum Feasible Required Storage

Annual Mean	52.42	47.89	148.17
Monthly Mean	4.37	3.99	12.35
Standard Deviation	2.93	1.56	2.67
Coefficient of Variation	0.67	0.40	0.20

Monthly Rainfall in Cayman Islands, St. Croix and Belau

Reliability (%)	2000 Gal./Mth. Demand		3000 Gal./Mth. Demand		4000 Gal./Mth. Demand	
	Cayman Is.	St. Croix	Cayman Is.	St. Croix	Cayman Is.	St. Croix
50					0.5	2.0
55				0.5	1.5	4.0
60			1.0	1.0	2.5	7.0
65	0.5		2.0	1.5	3.5	10.0
70	1.0		3.0	2.0	4.5	b
75	1.0	0.5	4.0	2.5	5.5	b
80	1.5	1.0	5.0	3.0	7.0	b
85	2.0	1.0	6.0	4.0	10.0	b
90	3.0	1.5	7.0	5.0	18.0	b
95	4.0	2.0	8.0	b	b	b

Required Storage for Various Monthly Demands in the Cayman Islands and St. Croix

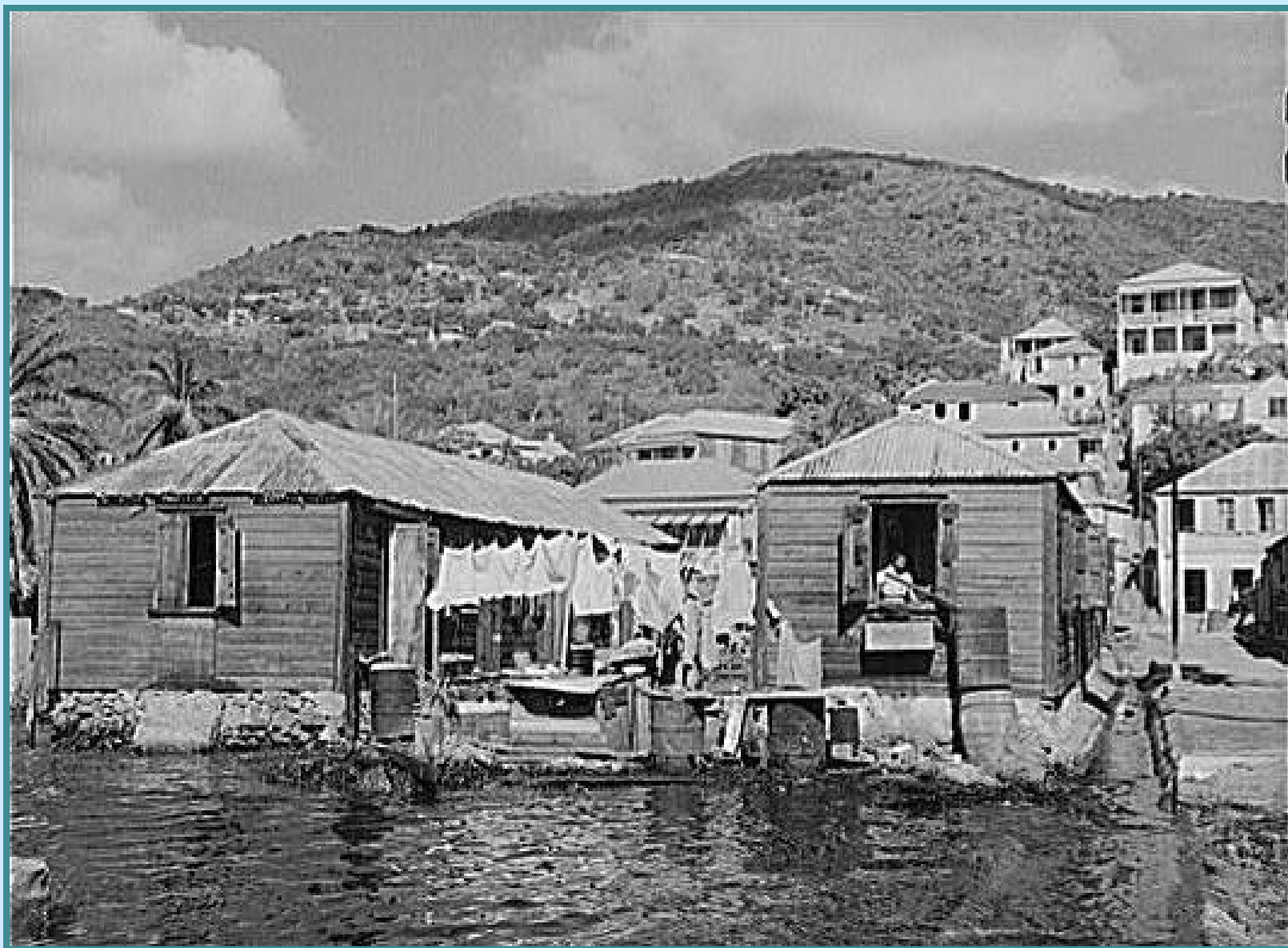
Harold's Cistern Water Gauges



Do you know
how much water
is in your cistern?

Accurate * Easy * Attractive

For Retailers: Call 776-1111





Thank you!