

Determination of Required Storage

Problem 1: From the following record of average monthly stream flows:

Month	Flow($m^3 \times 10^6$)	Month	Flow($m^3 \times 10^6$)	Month	Flow($m^3 \times 10^6$)
1	0.18	8	0.08	15	1.01
2	1.02	9	0.07		
3	1.32	10	0.04		
4	0.51	11	0.1		
5	0.87	12	0.26		
6	0.67	13	0.2		
7	0.19	14	1.10		

Determine the required reservoir size to provide a uniform flow (draft) of $11000 \text{ m}^3/\text{day}$

33,000 m^3/day

X axis Month	(m ³ × 10 ⁶) Flow per month	Y axis m ³ × 10 ⁶ Accumulated flow	Y axis × 10 ⁶ m ³ Draft / month	Y axis Accumulated Draft
1	0.13	0.13	0.33	0.33
2	1.02	1.2	"	0.66
3	1.32	2.52	"	0.99
4	0.51	3.03	"	1.32
5	0.87	3.9	"	1.65
6	0.67	4.57	"	1.98
7	0.19	4.76	"	2.31
8	0.08	4.84	"	2.64
9	0.07	4.91	"	2.97
10	0.04	4.95	"	3.3
11	0.1	5.05	"	3.63
12	0.26	5.31	"	3.96
13	0.2	5.51	"	4.29
14	0.1	6.61	"	4.62
15	1.01	7.62	"	4.95

Determination of Required Storage

