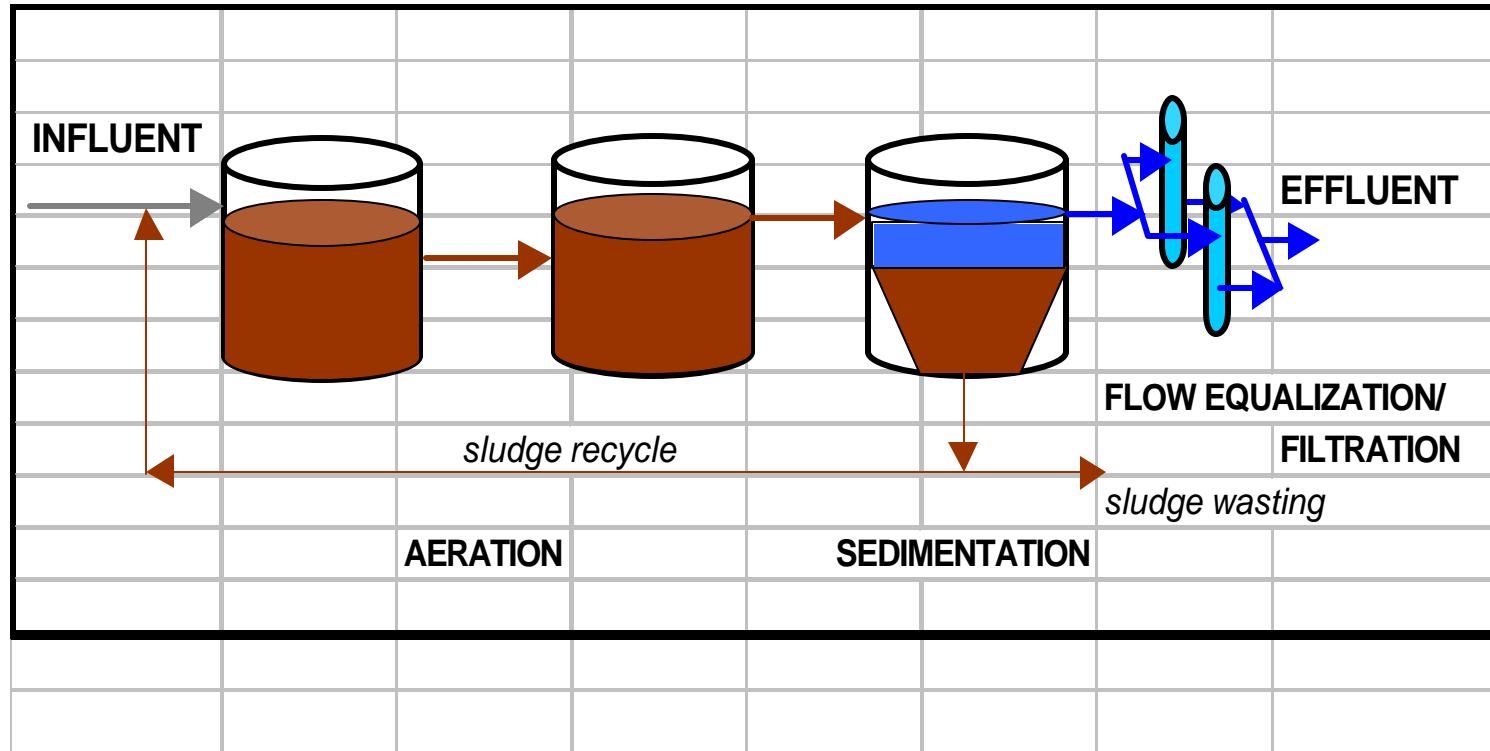


THE 20/20 SOLUTION



A modular, mobile, wastewater treatment plant

**Achieving a 20/20 Effluent from a Modular, Mobile
Wastewater Treatment Plant for Northern Camps
- 150 Days of Technology Demonstration -**



Treatment Plant Schematic

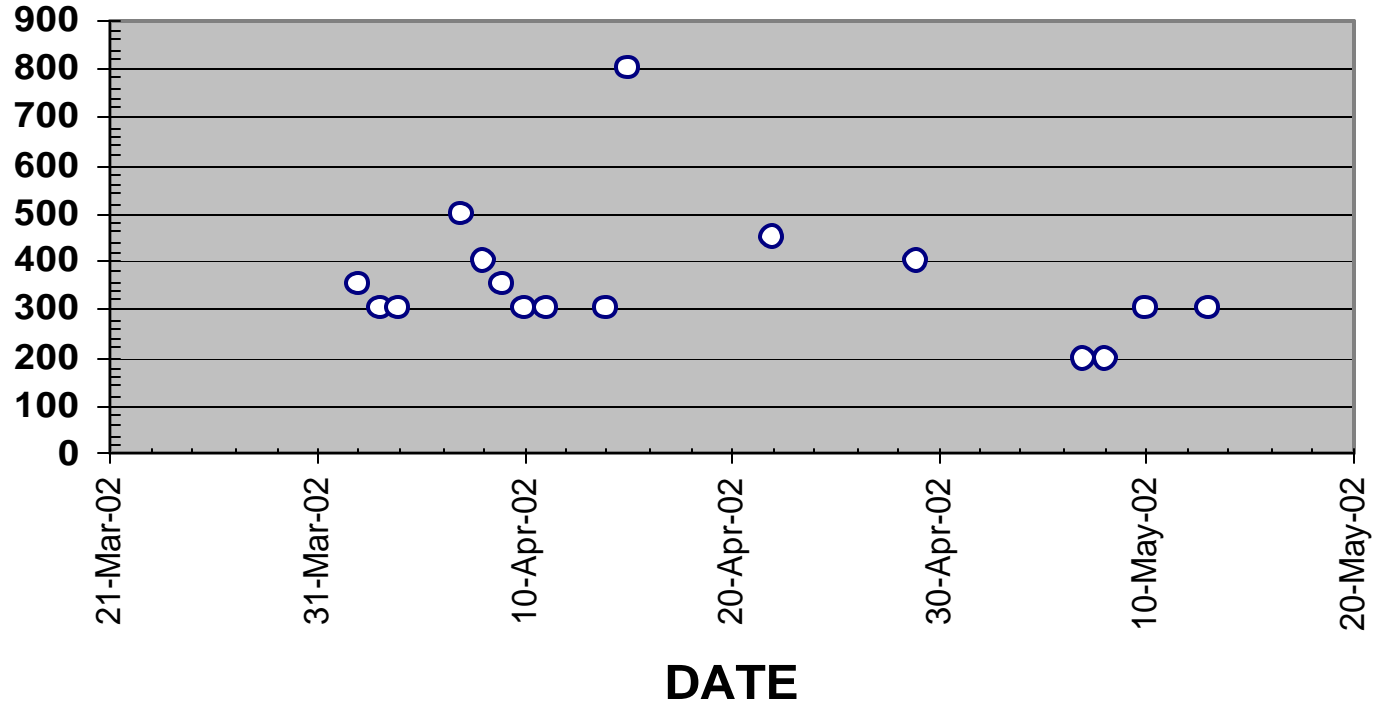
WASTEWATER TYPE	BOD ₅	SS	REFEREN CE	
	mg/L	mg/L		
Northern Camps				
	raw	404	484	Calculated TABLE 4
	pre-treated	277	223	Calculated TABLE 5
Edmonton Clover Bar		300	350	Actual TABLE 6

Influent Wastewater Characteristics

SLUDGE WASTING

SLUDGE VOLUME, US

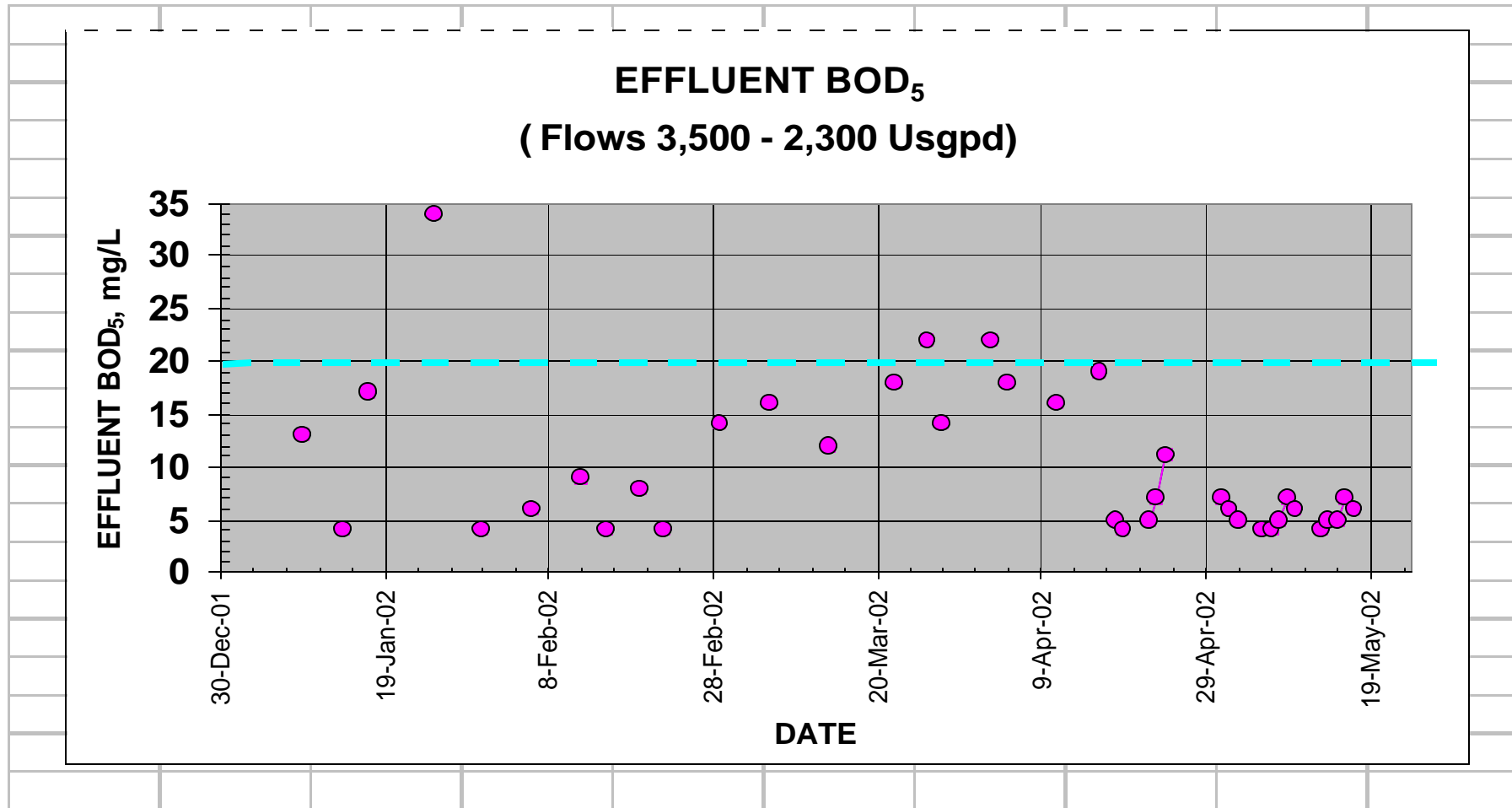
gallons



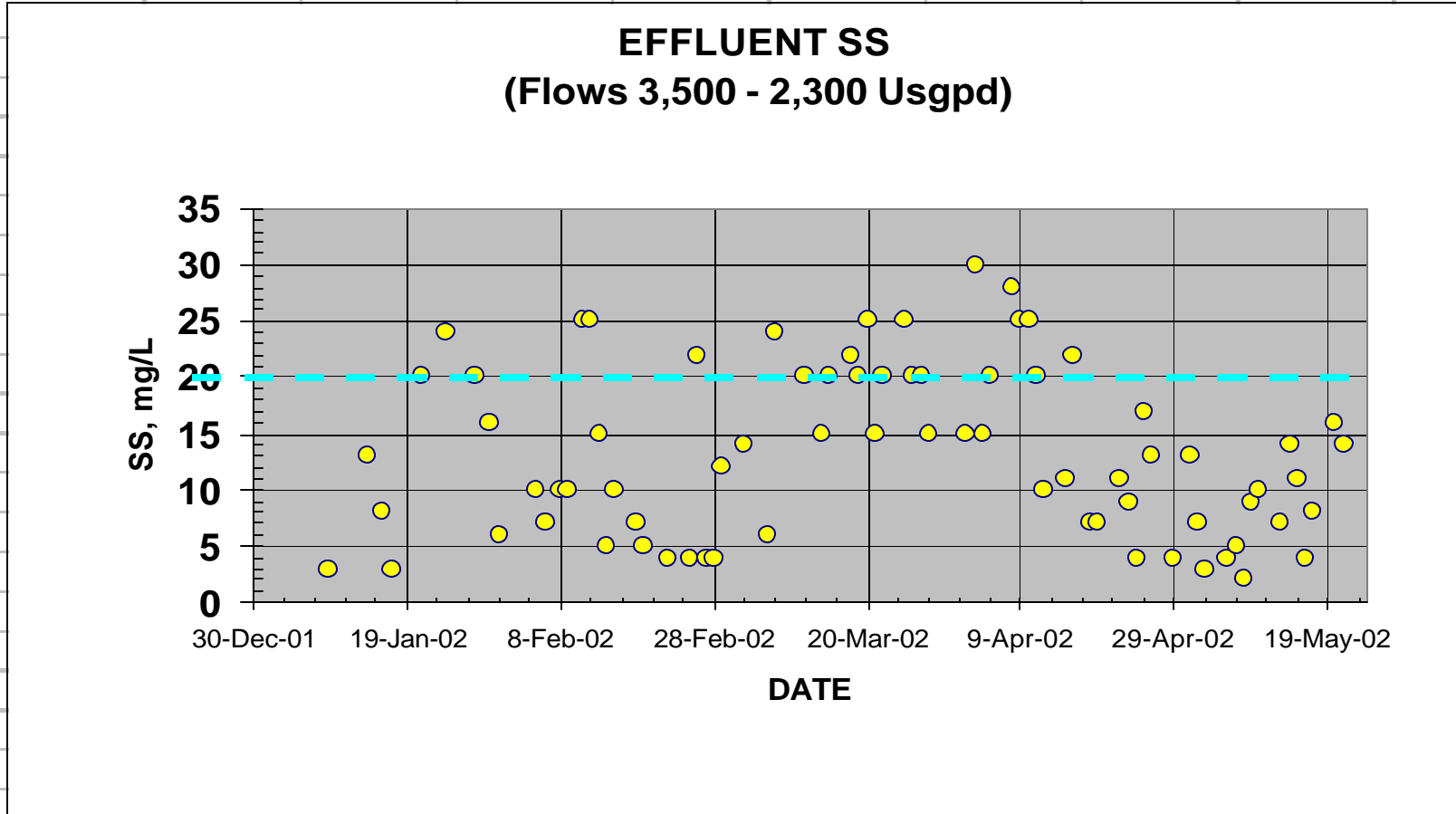
Sludge Wasting

DATE	PARAMETER			
	BOD ₅		SS	
	(mg/L)		(mg/L)	
	Accredited	TAL Lab	Accredited	TAL Lab
18-Apr-02	4	5	4	7
26-Apr-02	4	-	10	13
2-May-02	4	6	8	7

Analytical Comparison with Accredited Laboratory



Effluent BOD₅ at a Plant Loading of 3,500 to 2,300 US gpd



Effluent SS at Flow Rates 3,500 to 2,300 US gpd

MEDIAN EFFLUENT CONCENTRATIONS

n observations BOD₅/SS:

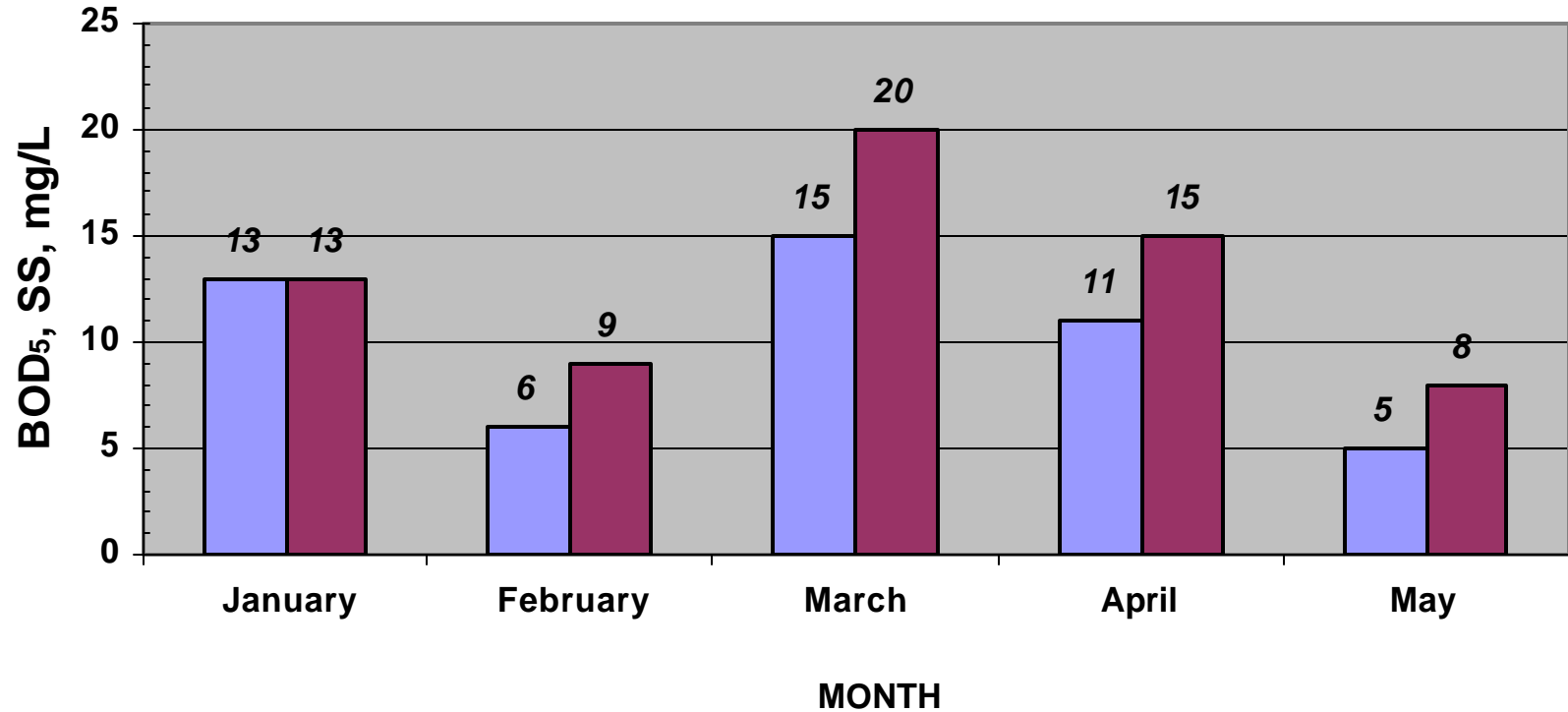
5 9

5 16

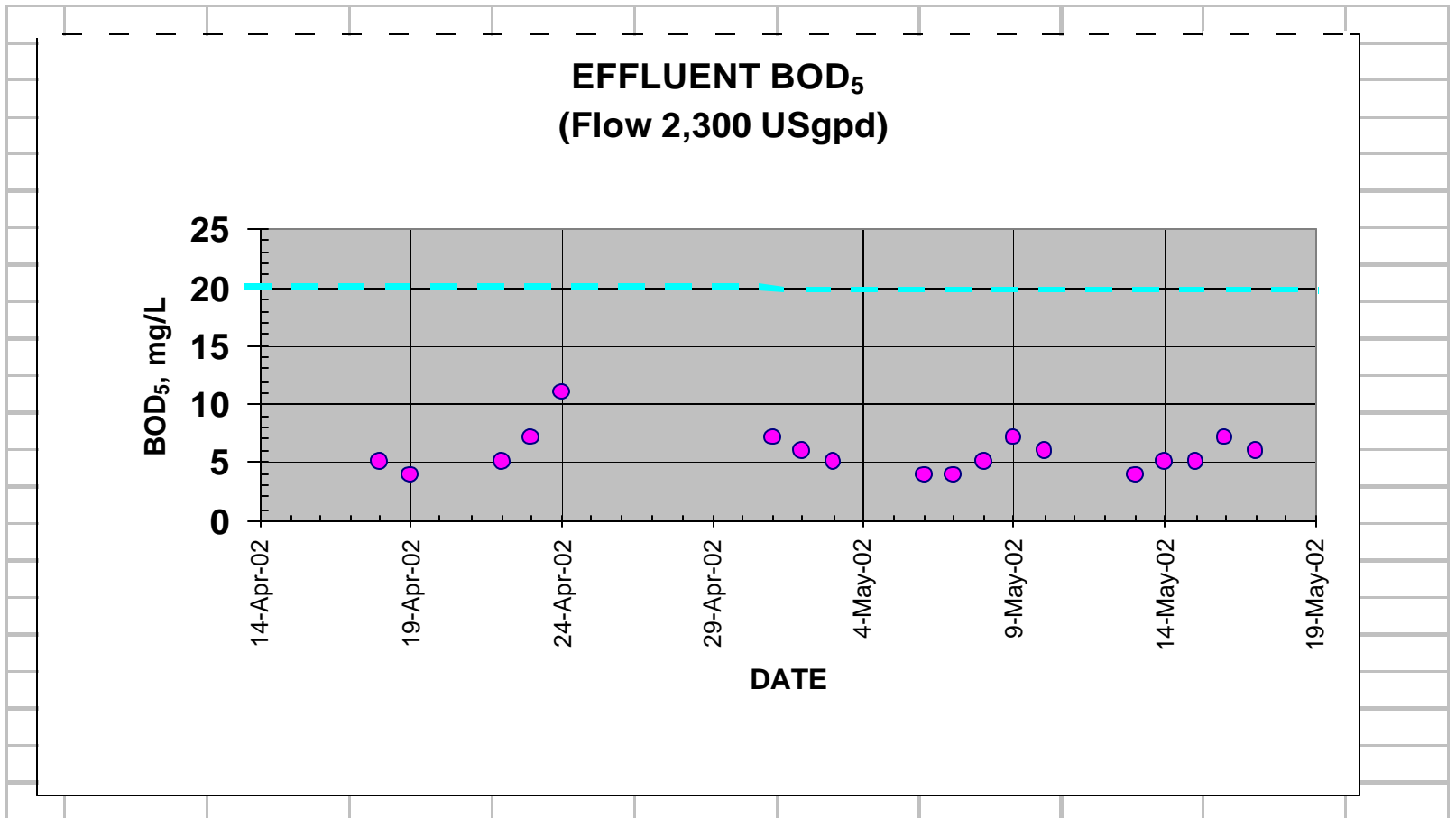
6 16

9 19

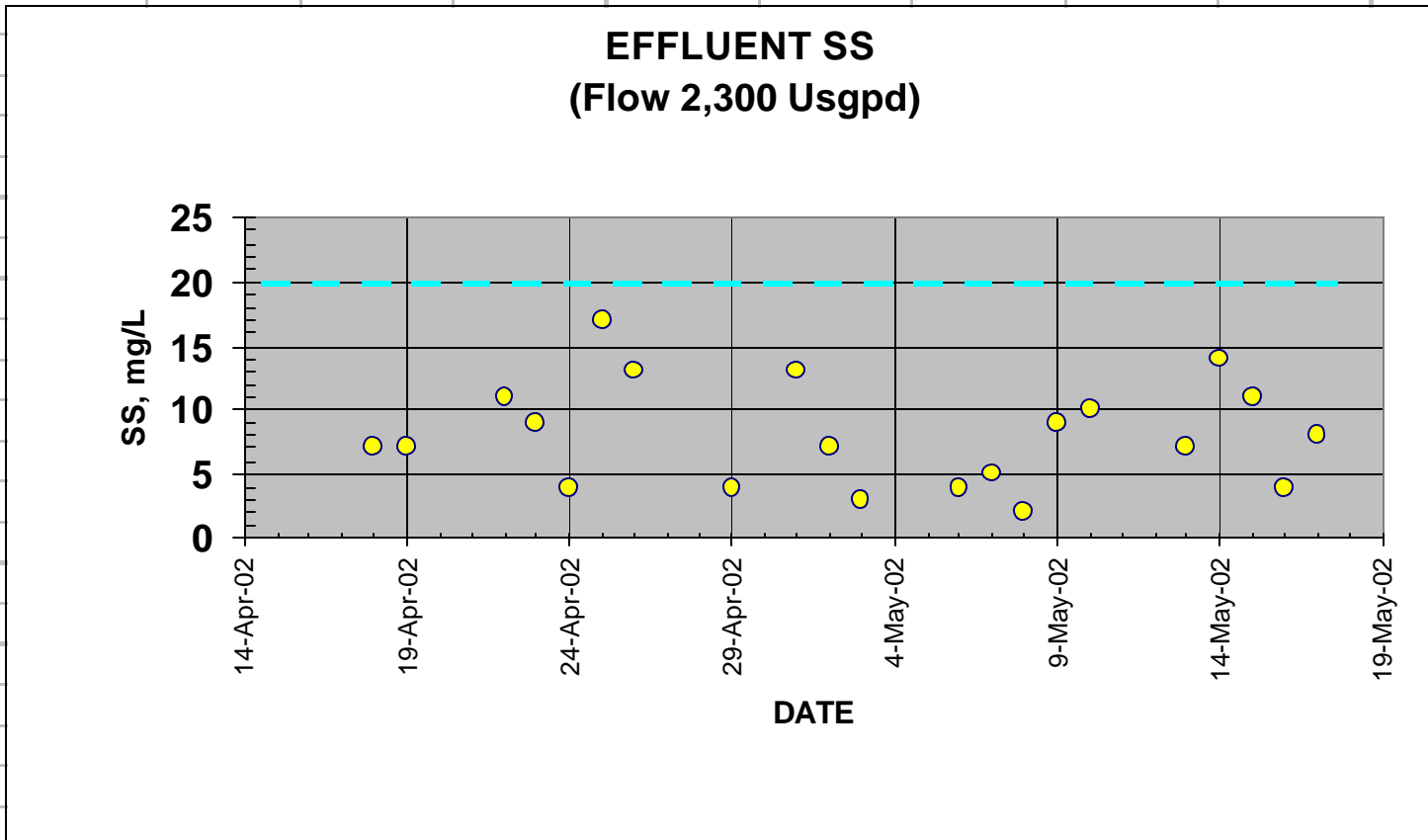
13 15



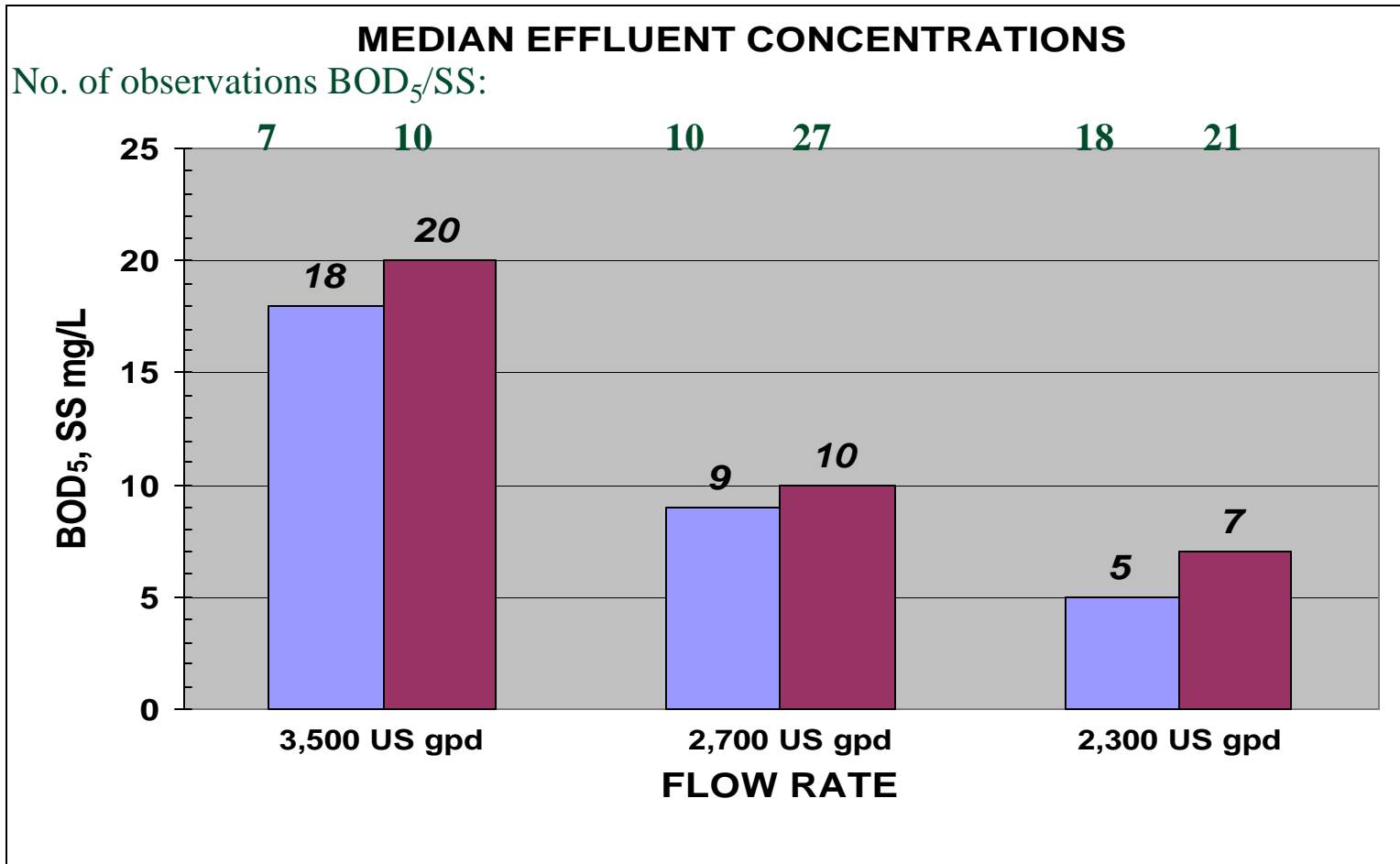
**Median Effluent BOD₅ and SS Concentrations
January to May 2002**



Effluent BOD₅ at Flow Rate of 2,300 US gpd



Effluent SS at Flow Rate of 2,300 US gpd



Median Effluent Concentrations for Various Flow Rates

SUMMARY and CONCLUSIONS:

1. Successful winter start-up in 6 weeks

2. Excellent Treatment Capability:

10 mg/L BOD₅ & 10 mg/L SS at 2,300 US gpd

15 mg/L BOD₅ & 15 mg/L SS at 2,700 US gpd

25 mg/L BOD₅ & 25 mg/L SS at 3,500 US gpd

3. Low sludge production:

0.16 kg SS/kg BOD₅ removed at 2,300 US gpd

0.26 kg SS/kg BOD₅ removed at 3,500 US gpd

4. Minimal operator attention