RESERVOIR REGULATION MANUAL

FOR

ALAMO RESERVOIR
COLORADO RIVER BASIN, BILL WILLIAMS RIVER, ARIZ.

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PERTINENT DATA
(Design)

Drainage area	sq. mi.	4,770
Reservoir (Original survey of March 1963):		
Elevation (From net area-capacity table) -		
Flood-control pool -		
Bottom	ft., m.s.l.	1,160.4
Top	ft., m.s.l.	1,235
Conservation pool -		
Bottom	ft., m.s.l.	1,070
Top	ft., m.s.l.	1,160.4
Recreation pool -		
Bottom	ft., m.s.l.	990
Top	ft., m.s.l.	1,070
Area -		
Spillway crest	ac.	13,300
Spillway design surcharge level	ac.	16,400
Top of dam	ac.	17,100
Capacity (Gross) -		
Spillway crest	ac.-ft.	1,043,000
Spillway design surcharge level	ac.-ft.	1,409,000
Top of dam	ac.-ft.	1,499,000
Storage allocation below spillway crest -		
Flood control	ac.-ft.	608,000
Conservation	ac.-ft.	230,000
Recreation	ac.-ft.	5,000
Sedimentation	ac.-ft.	200,000
Dam - type	Rolled	earthfill
Top elevation	ft., m.s.l.	1,265
Streambed	ft., m.s.l.	982
Height above original streambed	ft., m.s.l.	283
Crest length	ft.	975
Crest width	ft.	30
Freeboard	ft.	5.4
Spillway - type	Detached, broad-crested	
Crest elevation-	ft., m.s.l.	1,235
Crest length		110
Design surcharge level	ft., m.s.l.	1,259.6

PERTINENT DATA--Continued

Outlet works:	
Tunnel	
Length (including gate chamber and transition	1,290
Intake invert elevation ..... ft., m.s.l..	990
Outlet invert elevation ..... ft., m.s.l..	980
Discharge at spillway crest	8,700
Gates - type	Slide, tandem
Number and size -	
Service (downstream).....	3-5'Wx8.5'H
Emergency (upstream).....	3-5'Wx8.5'H
Low-flow bypass around gate No. 3 -	
Pipe size, I.D.....in..	18
Control valve -type	Butterfly
Maximum discharge capacity ..... c.f.s..	25
Water-surface elevation to initiate operation..ft.,m.s.l..	1,002.3
Standard project flood (Initial storage at top of conservation pool and net storage capacities):	
Duration .... days..	
Total volume .....ac.-ft..	422,000
Inflow peak ..... c.f.s..	317,000
Outflow peak ..... c.f.s..	7,000
Reduction in peak .... c.f.s..	310,000
Maximum water-surface elevation..... ft., m.s.l..	1,215.2
Drawdown time (from maximum water-surface elevation to top of conservation pool) .....days..	27
Maximum probable flood (Initial storage at elevation 1,200 ft., m.s.l. and net storage capacities):	
Duration ..... days..	3
Total volume..... ac.-ft..	893,000
Inflow peak.....	[illegible]
Outflow peak ..... c.f.s..	50,660
Reduction in peak ..... c.f.s..	529,340
Maximum water-surface elevation ..... ft., m.s.l..	1,259.6
Drawdown time (from maximum water-surface elevation to spillway crest) .....days..	12.5

PERTINENT DATA
(Existing capacities)

Reservoir (Original survey of March 1963 and bottom survey of May 1968):	
Elevation (From gross area-capacity table) -	
Flood-control pool -	
Bottom ..... ft., m.s.l..	1 , 1 7 4
T o p . . . . . ft., m.s.l..	1,235

PERTINENT DATA--Continued

Conservation pool -		
Bottom ..... ft.,	m.s.l..	1,046
Top..... ft.,	m.s.l..	1,174
Recreation pool -		
Bottom ..... ft.,	m.s.l..	990
Top..... ft.,	m.s.l..	1,046
Capacity(Gross) -		
Spillway crest	ac.-ft..	1,045,300
Spillway design surcharge level	ac.-ft..	1,410,800
Top of	ac.-ft..	1,501,300