

VIII. Major Reservoirs and Restricted Dams

The South Platte River and Alluvial Aquifer

HB 1278 South Platte Groundwater Study



List of Maps

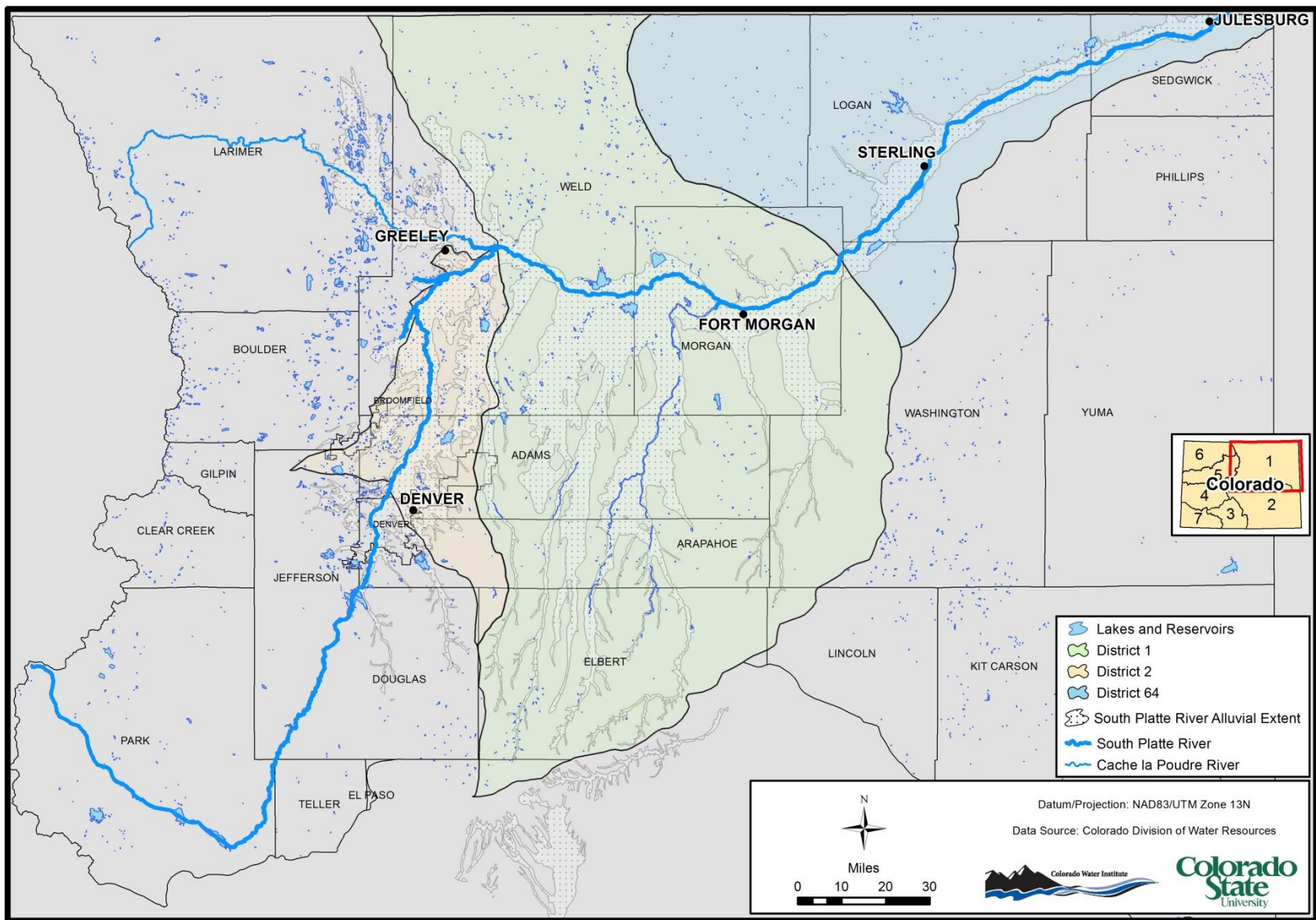
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Table 8.1. Summary Table by Water District in Division 1, South Platte Basin.

Water District	Approx. Storage Capacity	Approx. Decreed Volume Absolute	Total Volume Lost from Dam Restrictions of Major Reservoirs
	Acre-Feet		
WD 1	161,828	332,511	0
WD 2	67,243	100,732	0
WD 3	490,223	344,454	2,650
WD 4	216,173	214,925	0
WD 5	150,365	87,785	0
WD 6	79,472	104,428	0
WD 7	42,734	41,565	0
WD 8	620,770	50,365	0
WD 9	23,100	19,995	0
WD 23	296,873	403,725	6,500
WD 64	108,768	124,657	9,495
WD 80	87,227	158,128	0
TOTAL	2,344,776	1,983,270	18,645



Map 8.1. Division 1 Lakes and Reservoirs.

Table 8.2. Major Reservoirs in Division 1, South Platte Basin.

Major Reservoirs in Division 1, South Platte Basin.

Reservoir Name	Water District #	Owner/Operating Entity	Storage Capacity* (AF)	Restricted Dam Hazard Class	Volume Lost (AF)
Bijou Reservoir 2	1	Bijou Irrigation Company			
Empire Reservoir	1	Bijou Irrigation Company	34,483		
Jackson Lake Reservoir	1	Jackson Lake Reservoir & Irrigation Company shareholders (Fort Morgan Reservoir & Irrigation Co. has majority ownership)	34,937		
Riverside Reservoir	1	Riverside Irrigation District	65,008	1	0
Vancil Reservoir	1		7,000		
Horse Creek Reservoir	1	Henrylyn Irrigation District	15,000		
Prospect Reservoir	1	Henrylyn Irrigation District	5,400		
Barr Lake	2	Farmers Reservoir & Irrigation Company (FRICO)	32,000		
Lower Latham Reservoir	2	Lower Latham Ditch Reservoir Company	6,212		
Milton Lake	2	Farmers Reservoir & Irrigation Company (FRICO) - Milton Division	29,031		
Chambers Lake Reservoir	3	Water Supply & Storage Company	8,824		
Long Draw Reservoir (aka Grand River Reservoir)	3	Water Supply & Storage Company	11,310		
Rocky Ridge Lake (aka WSSC Reservoir No. 1)	3	Water Supply & Storage Company			
Water Supply & Storage Company Reservoir No. 2&3	3	Water Supply & Storage Company			
Water Supply & Storage Company Reservoir No. 4	3	Water Supply & Storage Company			
Kluver Reservoir	3	Water Supply & Storage Company			
Long Pond (aka WSSC Reservoir No. 5)	3	Water Supply & Storage Company			
Lindenmeir Lake	3	Water Supply & Storage Company			
Black Hollow Reservoir	3	Water Supply & Storage Company	9,300	1	999
Richards Lake (aka WSSC Reservoir No. 6)	3	Water Supply & Storage Company			
Curtis Lake Reservoir	3	Water Supply & Storage Company		2	397
Cache La Poudre Reservoir	3	Cache La Poudre Irrigation Company	10,700		

Major Reservoirs in Division 1, South Platte Basin.

Reservoir Name	Water District #	Owner/Operating Entity	Storage Capacity* (AF)	Restricted Dam Hazard Class	Volume Lost (AF)
Worster Reservoir (aka Eaton Reservoir)	3	Divide Reservoir & Canal Company (affiliate of Larimer Weld Irrigation Company)	3,750		
Cobb Lake Reservoir	3	Larimer Weld Irrigation Company/Windsor Reservoir & Canal Company	22,300		
Douglas Reservoir	3	Larimer Weld Irrigation Company/Windsor Reservoir & Canal Company	8,834		
Reservoir No. 8 (in Poudre Valley Canal Reservoir System)	3	Windsor Reservoir & Canal Company	9,884		
Annex No. 8 (in Poudre Valley Canal Reservoir System)	3	Windsor Reservoir & Canal Company	3,657		
Elder Reservoir	3	Larimer Weld Irrigation Company/Windsor Reservoir & Canal Company	666		
Larimer Weld Reservoir (aka Terry Lake)	3	Larimer Weld Irrigation Company	8,028		
Windsor Reservoir (aka Big Windsor Reservoir)	3	Larimer Weld Irrigation Company/Windsor Reservoir & Canal Company	17,689		
Halligan Reservoir (aka North Poudre Reservoir No. 16)	3	North Poudre Irrigation Company	6,428		
Park Creek Reservoir	3	North Poudre Irrigation Company	7,320		
North Poudre Reservoir 15	3	North Poudre Irrigation Company	5,517		
Boxelder Reservoir 1	3	North Poudre Irrigation Company	154		
Boxelder Reservoir 2	3	North Poudre Irrigation Company	106	3	49
North Poudre Reservoir 1 (aka Miner Lake)	3	North Poudre Irrigation Company	535		
North Poudre Reservoir 2 (aka Demmel Lake)	3	North Poudre Irrigation Company	3,910		
North Poudre Reservoir 3 (aka Hackel Lake/Wellington Reservoir)	3	North Poudre Irrigation Company	3,441		
North Poudre Reservoir 4 (aka Smith Lake)	3	North Poudre Irrigation Company	1,669	2	562
North Poudre Reservoir 5 (Bee Lake)	3	North Poudre Irrigation Company	8,398		
North Poudre Reservoir 6	3	North Poudre Irrigation Company	9,968		

Major Reservoirs in Division 1, South Platte Basin.

Reservoir Name	Water District #	Owner/Operating Entity	Storage Capacity* (AF)	Restricted Dam Hazard Class	Volume Lost (AF)
North Poudre Reservoir 13 (Upper Coal Creek Reservoir/ Clarks Lake)	3	North Poudre Irrigation Company	871		
Mountain Supply Reservoir 8	3	North Poudre Irrigation Company	482	3	643
Mountain Supply Reservoir 9 (aka North Poudre #9)	3	North Poudre Irrigation Company	686		
Mountain Supply Reservoir 10 (aka North Poudre #10)	3	North Poudre Irrigation Company	776		
Mountain Supply Reservoir 16 (aka Indian Creek Reservoir)	3	North Poudre Irrigation Company	1,702		
Fossil Creek Reservoir	3	North Poudre Irrigation Company	11,100		
Milton Seaman Reservoir	3	City of Greeley	5,008		
Barnes Meadow Reservoir	3	City of Greeley	2,349		
Comanche Reservoir	3	City of Greeley			
Hourglass Reservoir (aka Big Beaver Reservoir)	3	City of Greeley			
Twin Lakes Reservoir	3	City of Greeley Owns & USBR Operates	141,000		
Peterson Lake	3	City of Greeley			
Joe Wright Reservoir (aka Mountain Supply Reservoir 20)	3	NPIC through 1970; Fort Collins 1971-Present	7,161		
Horsetooth Reservoir	3	NCWCD	156,700		
Carter Lake Reservoir	4	NCWCD	112,200		
Loveland Greeley Reservoir (aka Lake Loveland)	4	Greeley Loveland Irrigation Company	12,736		
Horseshoe Reservoir	4	Seven Lakes Company Owns & Greeley Loveland Irrigation Company Operates	7,796		
Boyd Lake	4	Boyd Lake Reservoir Company	49,048		
Green Ridge Glade Reservoir (aka Loveland Municipal Reservoir)	4	City of Loveland	6,838		
Boulder Larimer Reservoir (aka Ish Reservoir)	4	Boulder Larimer Ditch Company(3,449 ac ft); New Ish Ditch Company (3,612 ac ft)	7,128		
Lone Tree Reservoir	4	Consolidated Home Supply Ditch Company	9,268		
Mariano Reservoir	4	Consolidated Home Supply Ditch Company	5,851		
Lon Hagler Reservoir	4	Consolidated Home Supply Ditch Company	5,308		

Major Reservoirs in Division 1, South Platte Basin.

Reservoir Name	Water District #	Owner/Operating Entity	Storage Capacity* (AF)	Restricted Dam Hazard Class	Volume Lost (AF)
Ralph Price Reservoir (Button Rock Reservoir)	5	Town of Lyons (300 ac ft); Brandt Family (100 ac ft); Longmont (15,767 ac ft)	16,197		
Union Reservoir	5	Longmont (10,853 ac ft); remainder to shareholders (1,915 ac ft)	12,768	2	0
Highland Reservoir No. 1	5	Highland Ditch Company	4,613		
Highland Reservoir No. 2	5	Highland Ditch Company	980		
Highland Reservoir No. 3	5	Highland Ditch Company	1,670		
Foothills Reservoir	5	Highland Ditch Company	4,350		
McIntosh Lake	5	Highland Ditch Company	2,460		
Beaver Park Reservoir	5	Larry Sieckman	2,161		
Left Hand Valley Reservoir	5	Left Hand Ditch Company	1,624		
Allens Lake	5	Left Hand Ditch Company	704		
Left Hand Park Reservoir	5	Left Hand Ditch Company	1,499		
Isabelle Lake	5	Left Hand Ditch Company			
Gold Lake	5	Left Hand Ditch Company	454		
Boulder Reservoir	5	Northern Colorado Water Conservancy District	13,100		
Barker Meadow Reservoir	6	City of Boulder	11,700		
Silver Lake	6	City of Boulder			
Albion Lake	6	City of Boulder			
Island Lake	6	City of Boulder			
Green Lake Reservoir No. 1	6	City of Boulder			
Green Lake Reservoir No. 2	6	City of Boulder			
Green Lake Reservoir No. 3	6	City of Boulder			
Lakewood Reservoir	6	City of Boulder			
Marshall Lake	6	Farmers Reservoir & Irrigation Company (FRICO) - Marshall Division	9,952		
McKay Lake	6	Farmers Reservoir & Irrigation Company (FRICO) - Marshall Division			
Section 19 Reservoir	6	Farmers Reservoir & Irrigation Company (FRICO)			
Gross Reservoir	6	Denver Water Board	41,920		
Ralston Creek Reservoir	6	Denver Water Board	15,900		
Standley Lake	7	Farmers Reservoir & Irrigation Company (FRICO) - Standley Division	42,734		
Chatfield Reservoir	8	MT Carbon Metro District	355,000		
Cherry Creek Reservoir	8	US Corps of Engineers	265,770		

Major Reservoirs in Division 1, South Platte Basin.

Reservoir Name	Water District #	Owner/Operating Entity	Storage Capacity* (AF)	Restricted Dam Hazard Class	Volume Lost (AF)
Marston Reservoir	9	Denver Water Board	21,100		
Bear Creek Lake	9	US Corps of Engineers	2,000		
Antero Reservoir	23	Denver Water Board	115,000	1	6,500
Eleven Mile Reservoir	23	Denver Water Board	128,000		
Spinney Mountain Reservoir	23	City of Aurora	53,873		
Julesburg Reservoir (aka Jumbo Reservoir)	64	Julesburg Irrigation District	28,178	1	
				1	
				1	
				1	
				1	6,964
North Sterling Reservoir	64	North Sterling Irrigation District	80,590	1	
Prewitt Reservoir	64	Logan Irrigation District, Iliff Irrigation District & Morgan Prewitt Reservoir Company	32,164 (34,960 reservoir refill)	1	2,531
Cheesman Reservoir	80	Denver Water Board	87,227		
DIVISION 1 TOTALS			2,344,776		18,645

Table 8.3. Restricted Dams in Division 1, South Platte Basin.

Restricted Dams in Division 1, South Platte Basin.

Division	Structure Name	Reason for Restriction	Hazard Class	Volume Lost (AF)
1	D.A. Lord #4	Inadequate Spillway	3	400
1	Riverside	No spillway; 33.65 is max decree	1	0
1	Howards Lake	Erosion of Dam & Crest	3	50
1	NO NAME 1-1 #1	Scour of D/S Slope Due to Failure of Outlet	3	100
1	Jolly John	Scour Hole from Outlet	3	297
1	Carlin	No Spillway	3	0
1	Cole	Poor Condition	3	95
1	Havana Street Dam	No Spillway	3	0
1	Lower Church Lake	Inadequate Spillway	3	0
1	North Star	Sinkhole on Downstream Slope	3	
1	Signal #1	Concentrated Seepage Areas & Questionable Condition of Outlet	2	60
1	Nissen #2	Relaxed to Allow Water Storage through Winter	2	50
1	Thompson	Inadequate Freeboard, Generally Poor Condition	3	30
1	Black Hollow	Inadequate Spillway	1	999
1	Boc Elder #2	Excessive Seepage	3	49
1	Curtis Lake	Crest, Slope, Ext. Seepage Area Below D/S Toe	2	397
1	Dry Creek	Outlet Deterioration, Seepage, Inadequate Spillway	3	150
1	Easton - Law	Excessive Seepage	2	180
1	Gray #3	Sinkhole Over Outlet	2	100
1	Law, John	Inadequate Spillway & Freeboard	3	45
1	Mattingly	Erosion/3-5 FT Scarp on U/S Face	3	99
1	Mountain Supply # 2	Poor Condition	3	300
1	Mountain Supply # 1	Poor Condition	3	500
1	Mountain Supply # 6	No Spillway	3	120
1	Mountain Supply # 8	Poor Condition	3	643
1	North Gray	Deteriorated Spillway Pipe & Inoperable Outlet	2	120
1	North Poudre # 4	Poor U/S Face, General Condition	2	562
1	Park Creek #2	Inoperable Outlet - Dam Breached by Owner	3	97
1	Rist Canyon	Seepage, Inadequate Spillway	3	33
1	Ide & Starbird #1	Poor MN, Eroded U/S Face, Questionable Spillway	3	0
1	Akers & Tarr	Slide on D/S Slope, Seepage in Area of Aband OTL	2	34
1	Knouth	Never Completed Dam	3	204

Restricted Dams in Division 1, South Platte Basin.

Division	Structure Name	Reason for Restriction	Hazard Class	Volume Lost (AF)
1	Little Gem	Erosion on U/S Slope & Crest, Trees on U/S Slope	3	60
1	Union	Spillway Design Based on GH = 28.0	2	0
1	Highland	No Spillway Outlet	3	0
1	Swede	Piping of Embankment Along Outlet	3	151
1	Hodgson-Harris	Continual Deterioration	3	119
1	Lake Manchester	Poor Condition of Dam & Lack of Maintenance	3	36
1	Dewey No. 1	Poor Condition	2	15
1	Smith	Seepage	1	200
1	Allis	Sloughing, Seepage	3	50
1	Baird #1	Severe Beaver Activity, Plugged Outlet	3	25
1	Rainbow Falls #5	Inadequate Spillway	3	25
1	Wakeman	Spillway Erosion	3	110
1	Cantrill	No Spillway, Inoperable Outlet	4	37
1	Quick	No Spillway, Inoperable Outlet	4	64
1	Skeel	Poor Condition, Seepage	1	75
1	Frederickson Lake	Continual Deterioration of Dam & Structures	3	5
1	Gerlits	Dam Partially Breached Due to Overtopping	3	10
1	Harriman	Excessive Seepage	2	300
1	Willow Springs #1	Return to Previously Restricted Storage	1	16
1	Anterp	Stab. Berm Const. & New Instr. Monitoring	1	6,500
1	Wind	Saturated D/S Slope	3	3
1	Johnson	Erosion on U/S Face, Improper FB, Seepage D/S Toe	3	68
1	Julesburg #4	Condition of Outlet, Excessive Seepage	1	6,964
1	Julesburg #1	Excessive Seepage	1	
1	Julesburg #1A	Excessive Seepage	1	
1	Julesburg #2	Excessive Seepage	1	
1	Julesburg #3	Excessive Seepage	1	
1	Prewitt	No Spillway & Excessive Seepage	1	2,531
1	Hanshaw	Seepage, Slide, Overall Poor	3	12
1	Duck	Narrow Crest, Steep Slopes	3	15
1	Green Valley Rentention	Scarping at Outlet, Poor Condition, Inoperable Gate	3	10
1	Lindies Lake	Provide Minimum Freeboard	3	0
1	Bijou #2 Dam #1	Scarping, Seepage, No Spillway	2	2,400
1	Adams & Bunker #3	Inadequate Freeboard, Seepage	3	150
1	Dover	Poor Condition	3	60
TOTAL VOLUME LOST FOR D1 DAM RESTRICTIONS				25,725

Action Type Description

C = Conditions of the dam have changed since the restriction was imposed, but the restriction remains the same

I = Restriction was first imposed

R = Restriction has been revised due to modifications or repairs to the dam

L = Restriction has been lifted

Hazard Classes	1 = High hazard: failure would loss of human life	2 = Significant hazard: failure would cause extensive property damage but is not expected to cause loss of human life	3 = Low hazard: failure would cause little damage beyond the loss of the dam structure itself
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Key reservoirs were identified based on decreed storage capacity >10,000 ac-ft and those facilities identified by Water Commissioners as key to administration in Water Districts (source:
ftp://dwrftp.state.co.us/cdss/swm/tm/SPDSSTask%205_20070122.pdf)

Restricted dam information from State Engineer's 27th Annual Report on Dam Safety to the Colorado General Assembly Water Years 2010-11 and 2011-12
(http://water.state.co.us/DWRIPub/DWR%20Annual%20Reports/27th_Annual_Report_on_Dam_Safety_WY10-12.pdf)

Source: SPDSS Task 5 Key Structures Summary &/or SPDSS Task 5 Key Structures (by Reservoir/System Name) documents from Laserfiche Weblink.