Aspinall Unit Operation Coordination Meeting
August 20, 2002

Participation: This meeting was held at the Elk Creek Visitor Center on Blue Mesa Reservoir. Attendees are noted on the distribution list.

Purpose of Meeting: The purpose of these meetings-- held in January, April, and August-- is to gather input for determining upcoming operations for Blue Mesa, Morrow Point, and Crystal Reservoirs. This input is used in Reclamation's development of an overall 24-month study for operation of Reclamation projects in the Upper Colorado River Basin, which includes plans for Glen Canyon, Flaming Gorge, and Navajo Units as well as the Aspinall Unit. Operation of the Aspinall Unit considers projected inflows to its reservoirs, flood control needs, existing water rights, minimum instream flows, target elevations for reservoirs, flow needs for endangered fish and other resources, recreation, hydropower needs and other factors. In addition, the meetings are used to coordinate activities and exchange information among agencies, water users, and other interested parties concerning the Gunnison River.

Handouts provided included data on April-August operations; projected inflows to the reservoirs; and potential operation plans under maximum, most, and minimum probable water supply forecasts.

Activities related to long-term operation planning were also discussed at the meeting. Field studies leading to flow recommendations to help recover downstream endangered fish and to quantify a Federal reserved water right for the Black Canyon of the Gunnison National Park have been completed. The Fish and Wildlife Service draft flow recommendations for endangered fish were also discussed. These operation meetings will be used more in the future to discuss proposals for long-term operation plans to address these and related resource management issues.

Operations:

General: Blue Mesa Reservoir capacities were explained. The reservoir holds 940,700 acre-feet. Active capacity is 748,400; inactive capacity is 81,100 and dead storage is 111,200. Live capacity is the active plus inactive, which total 829,500. Discussions during operation meetings use live capacity.

April-August 2002 Operations: Forecasted inflows to the Unit declined steadily from January through July. January forecasts were 69 percent, while actual April through July inflow was 22 percent, a record low for the Unit. Very little storage occurred in Blue Mesa this year; although limited storage was permitted in June when the call by the downstream senior Gunnison Tunnel was off.

Senior water rights and the 2002 agreement related to the Redlands Fish Ladder contract largely controlled summer operations. The Redlands agreement calls for the Redlands Diversion to limit their call to 600 cfs rather than 750 cfs; the Colorado River Water Conservancy District compensates Redlands for lost power revenues; Xcel Energy cooperates with rate adjustments;

the Fish and Wildlife Service agrees to reduce endangered fish flows downstream from the Redlands; and the Aspinall Unit maintains the 600 cfs for the Redlands and also endangered fish flows downstream (200 cfs in June, 250 in July and August, and 100 in September). The agreement worked reasonably well through the summer, although water travel time from Crystal, high losses between Crystal and the Redlands (evapotranspiration?), and other factors made exactly meeting flows difficult. Flows through the Black Canyon ranged from around 350 cfs in the early spring to 500-700 cfs in July and August.

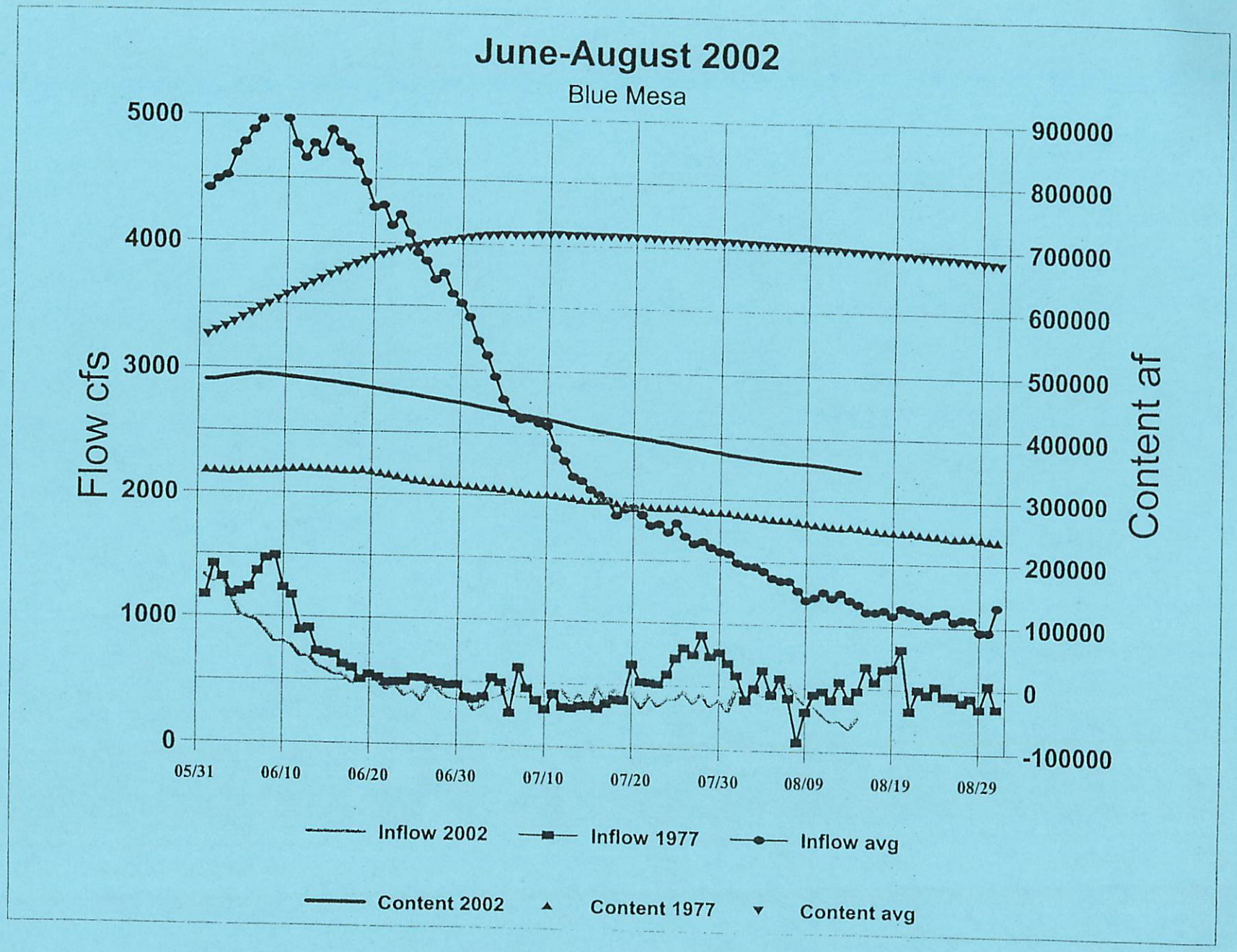
August-January 2002 Operation: In September, target flows below the Redlands will be reduced to 100 cfs and Gunnison Tunnel demands will decline, so releases from the Unit will decrease. Flows through the Black Canyon will probably be in the 300-400 cfs range, more toward 300 later in the fall. A flow of 200 cfs is possible due to the severe drought conditions. Blue Mesa Reservoir levels will continue to decline to around 7427 feet, 92 feet from full. There is some difficulty in predicting operations this fall and winter: the Redlands senior water right diverts water year-round and this right may pull inflow through the Unit and reduce the potential to store water at Blue Mesa and at other basin reservoirs. The Colorado River Water Conservation District, Redlands Water and Power, and others are studying potential solutions to this problem. Under most probable forecasts Blue Mesa would not fill next year (12 feet short). Most probable conditions are based on the assumption that present dry conditions will occur at the beginning of the period and gradually improve to average conditions by next July.

Aspinall Unit Maintenance Work: Don Phillips reviewed the Morrow Point trash rack cleaning program. The reservoir level is being lowered and will reach 7129 feet in early September. Divers can then clean the trash racks. To date there have been no problems with turbidity or landslides; both are being monitored by Reclamation.

Agency/Organization Activities and Discussion of Related Activities:

Fish and Wildlife Service – The Redlands fish ladder has been used by endangered fish this summer under the lower than normal flow conditions. Seven pikeminnow and one razorback sucker have used the ladder this summer. Flow recommendations are still being reviewed and discussed by the Recovery Program Biology Committee.

Colorado Division of Wildlife - CDOW continued to emphasize the importance of the kokanee salmon fishery at Blue Mesa–the kokanee run has started and at lower flows there are more impediments for the fish swimming to the Roaring Judy Hatchery. They have asked people to voluntarily release kokanee caught in the river downstream from the Lake City Bridge (upstream of that point, fish must be released). Under normal conditions the river downstream from the bridge is part of Blue Mesa Reservoir. CDOW is monitoring water temperatures—in the Basin there have been temperatures of concern in major tributaries such as the Lake Fork and East. Mainstem Gunnison temperatures have remained adequate for trout. Concerning the Taylor River, a winter flow of 100 cfs is best; however, 50 cfs is adequate.


June-August 2002
Blue Mesa
Flow cfs
Content af
5000
4000
3000
2000
1000
0
900000
800000
700000
600000
500000
400000
300000
200000
100000
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Annual Volumes

Water Year	Gunnison Tunnel Demand, KAF	NPS request KAF	Gunnison Tunnel + NPS request, KAF	Total Computed Regulated Aspinall Inflow KAF	% of Aspinall Inflow	Difference KAF
1975	326	626	952	1334	71%	382
1976	393	379	772	886	87%	114
1977	356	224	580	415	140%	-165
1978	341	586	927	1229	75%	302
1979	300	794	1094	1383	79%	289
1980	376	700	1076	1379	78%	303
1981	385	233	618	612	101%	-6
1982	330	537	867	1253	69%	386
1983	291	445	736	1637	45%	901
1984	276	927	1203	2332	52%	1129
1985	272	561	833	1809	46%	976
1986	347	626	973	1686	58%	713
1987	376	439	815	1395	58%	580
1988	399	346	745	795	94%	50
1989	423	300	723	805	90%	82
1990	415	286	701	704	100%	3
1991	348	398	746	1116	67%	370
1992	371	364	735	919	80%	184
1993	336	643	979	1611	61%	632
1994	374	371	745	935	80%	190
1995	292	589	881	2055	43%	1174
1996	381	571	952	1404	68%	452
1997	280	626	906	1729	52%	823
1998	362	445	807	1102	73%	295
1999	388	398	786	1219	64%	433
2000	387	368	755	938	80%	183
Average	351	492	843	1257	74%	414

Gunnison Tunnel Demand is the USBR base case Gunnison Tunnel Demand being used in their model.

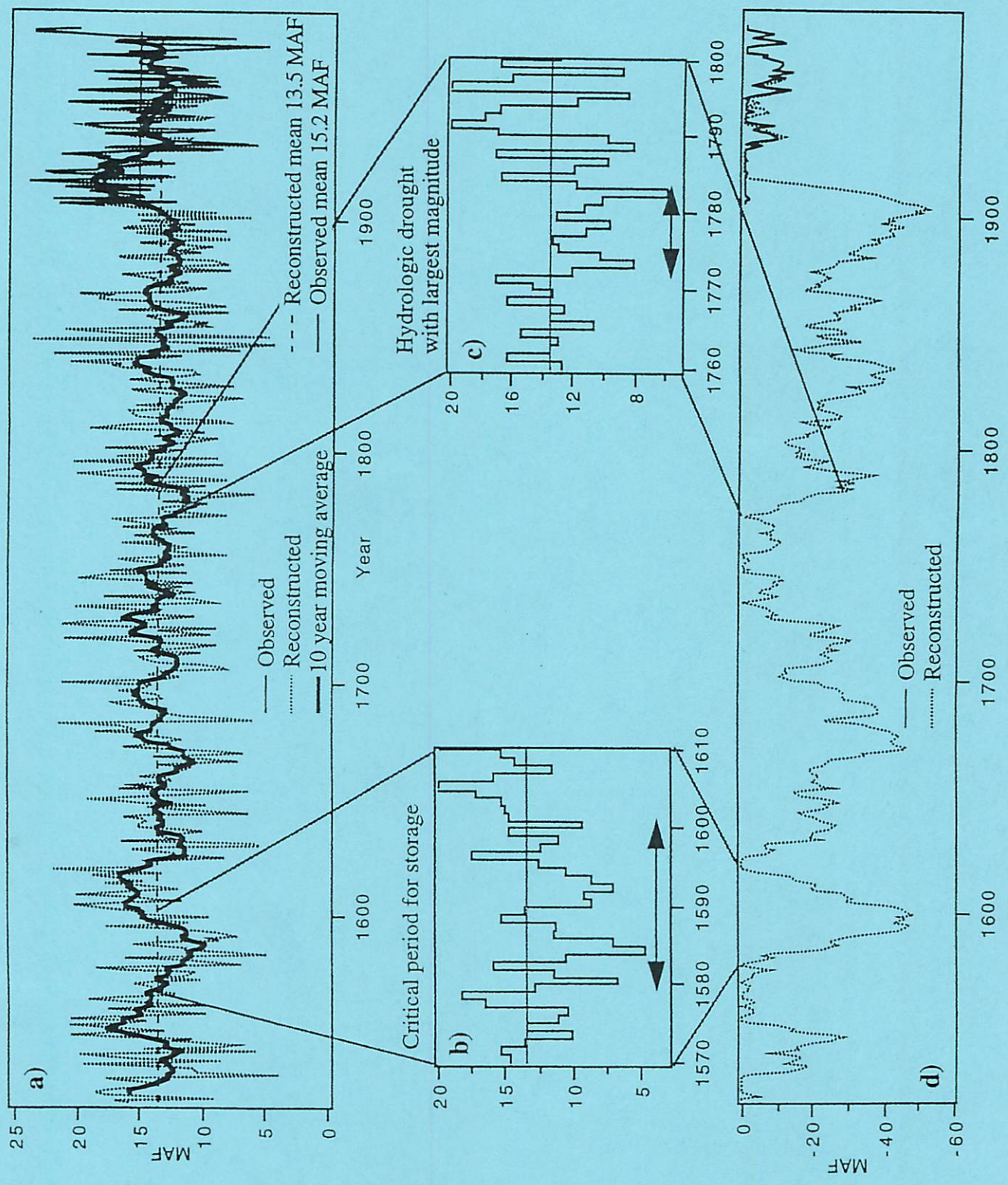

Figure 5. Colorado River at Lees Ferry Drought Identification: a) Streamflow, Annual, and Ten-Year Moving Average; b) Critical Period for Storage; c) Hydrologic Drought With Largest Deficit Magnitude; and d) Storage Deficit With Annual Yield of 13.26 MAF (98 percent of tree-ring reconstruction mean).

Source: The Powell Consortium (1995) Severe Sustained Drought: Managing The Colorado River in Times of Water Shortage, Arizona Water Resources Center, University of Arizona, Tucson, Arizona, multiple sections

Lake Powell

		Unreg Inflow 1000 Ac-Ft	Regulated Inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	Power Release 1000 Ac-Ft	Bypass Release 1000 Ac-Ft	Total Release 1000 Ac-Ft	Reservoir Elevation EOM Feet	Bank Storage 1000 Ac-Ft	EOM Storage 1000 Ac-Ft
*	Sep 2001	206	350	71	453	0	453	3664.84	18650	19135
	WY 2001	6955	6815	543	8236	1	8237			
H	Oct 2001	244	377	41	602	0	602	3662.35	18715	18802
I	Nov 2001	336	384	35	606	0	606	3660.14	18750	18511
S	Dec 2001	280	333	31	801	0	801	3656.17	18767	17996
T	Jan 2002	263	318	21	805	0	805	3652.33	18747	17508
O	Feb 2002	239	293	23	601	0	601	3649.79	18735	17190
R	Mar 2002	296	338	21	602	0	602	3647.67	18713	16927
I	Apr 2002	380	386	30	602	0	602	3645.85	18690	16705
C	May 2002	312	445	39	590	0	590	3644.46	18674	16536
A	Jun 2002	363	422	53	748	0	748	3640.91	18720	16111
L	Jul 2002	60	200	54	897	0	897	3634.24	18748	15333
*	Aug 2002	12	191	59	893	0	893	3627.45	18750	14569
	Sep 2002	250	359	46	482	0	482	3626.03	18863	14413
	WY 2002	3035	4046	453	8229	0	8229			
	Oct 2002	220	290	41	492	0	492	3623.96	18845	14188
	Nov 2002	220	273	34	476	0	476	3621.93	18827	13968
	Dec 2002	208	266	28	600	0	600	3618.77	18800	13633
	Jan 2003	224	273	21	840	0	840	3613.53	18757	13089
	Feb 2003	264	286	19	800	0	800	3608.65	18717	12595
	Mar 2003	466	416	23	600	0	600	3606.73	18702	12404
	Apr 2003	765	611	26	600	0	600	3606.59	18701	12390
	May 2003	1961	1541	36	650	0	650	3614.43	18764	13181
	Jun 2003	2851	2167	44	800	0	800	3625.97	18862	14407
	Jul 2003	1557	1333	52	850	0	850	3629.58	18894	14806
	Aug 2003	613	658	53	850	0	850	3627.54	18876	14579
	Sep 2003	475	566	46	672	0	672	3626.27	18865	14439
	WY 2003	9824	8680	423	8230	0	8230			
	Oct 2003	548	583	41	600	0	600	3625.78	18860	14385
	Nov 2003	543	561	34	600	0	600	3625.15	18855	14317
	Dec 2003	434	491	28	800	0	800	3622.26	18830	14005
	Jan 2004	405	485	21	800	0	800	3619.34	18805	13693
	Feb 2004	421	487	19	800	0	800	3616.40	18780	13385
	Mar 2004	663	639	24	650	0	650	3616.09	18778	13353
	Apr 2004	985	840	28	600	0	600	3617.97	18794	13549
	May 2004	2303	1942	39	800	0	800	3627.46	18875	14571
	Jun 2004	3080	2489	47	900	0	900	3639.96	18990	15998

Jul 2004	1557	1380	55	1050	0	1050	3642.10	19010	16253
Aug 2004	613	700	57	1050	0	1050	3638.92	18980	15876