

**ASPINALL UNIT OPERATIONS: ASPINALL UNIT—
COLORADO RIVER STORAGE PROJECT GUNNISON RIVER,
COLORADO
Draft Environmental Impact Statement**

Cooperating Agencies:

U.S. Department of the Interior
Bureau of Reclamation (lead agency)
Fish and Wildlife Service
National Park Service
State of Colorado
Colorado Department of Natural Resources
Colorado Water Conservation Board
Colorado Division of Water Resources
Colorado Division of Wildlife
U.S. Department of Energy
Western Area Power Administration
Colorado River Water Conservation District
Southwestern Water Conservation District
Platte River Power Authority

Proposed Action

Reclamation proposes to operate the Aspinall Unit to avoid jeopardy to downstream endangered fish species while maintaining and continuing to meet all of the congressionally authorized purposes of the unit. Reclamation would implement the Proposed Action by modifying the operations of the Unit, to the extent possible, to help achieve river flows recommended by the Upper Colorado River Endangered Fish Recovery Program.

The Unit authorization calls for meeting a variety of purposes including:

- regulating the flow of the Colorado River;
- storing water for beneficial consumptive use, making it possible for the State of the Upper Basin to utilize, consistently with the provisions of the Colorado River Compact, the apportionments made to and among them in the Colorado River Compact and the Upper Colorado River Basin Compact, respectively;
- providing for the reclamation of arid and semi-arid land, for the control of floods, and for the generation of hydroelectric power, as an incident of the foregoing purposes.

Issues of Concern

Issues raised in the public meetings held in 2004, in written comments, from cooperating agencies, and from internal scoping are discussed in the EIS. Briefly, the major concerns centered on possible effects to the following:

- Effect on water rights, water administration
- Effect on water storage, future water use
- Effect on sport fisheries, endangered species, and recreation
- Effect on flood control
- Effect on hydropower
- Black Canyon of the Gunnison National Park water right-compatibility of reserved right and endangered fish plan, effect on Gunnison Gorge Conservation Area, Curecanti National Recreation Area
- Programmatic biological opinion

Process:

- Cooperating Agencies are currently reviewing advanced draft EIS and preliminary draft biological assessment
- Draft EIS prepared including final biological assessment
- Public review of Draft EIS
- Fish and Wildlife Service complete biological opinion
- Final EIS completed and Record of Decision signed

Alternatives:

- Risk of Spill alternative
- Downstream Target alternatives

Alternatives

Risk of Spill Alternative-Alternative A

Goals include filling Blue Mesa Reservoir and avoiding, to the extent possible, releases that bypass powerplants. Water in excess of these needs (termed risk of spill water) would be managed to provide a spring peak using various combinations of bypasses and powerplants. Base flows would also be provided.

Example-- Peak Determination for a Forecasted Bypass Volume Maximum 1-day Release:

Risk of Spill water	Release
>0 – 75,000 af	4,150 cfs from Crystal Dam
>75,000 – 300,000 af	5,000 cfs from Morrow Point Dam
>300,000 af	6,500 cfs from Morrow Point Dam

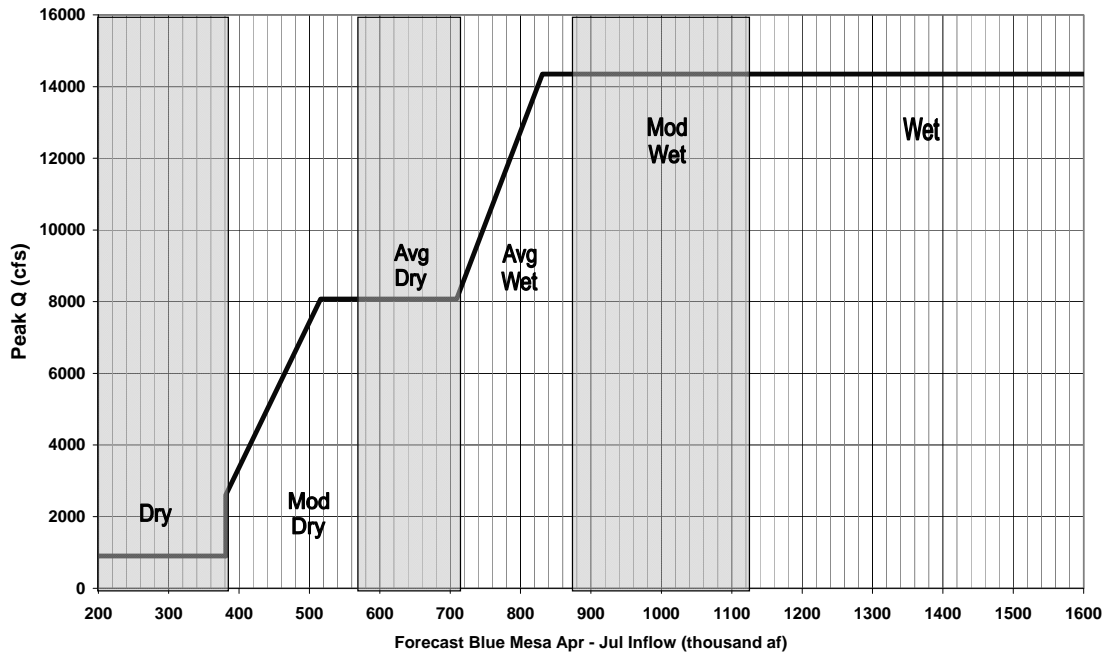
- An additional release of 10,000 cfs from Morrow Point will occur if North Fork of the Gunnison flows are less than 3,000 cfs and Morrow Point Dam's spillway release is greater than 1,000 cfs.

Meeting Downstream Target Alternatives-Alternatives B, C, & D

Goals include filling Blue Mesa Reservoir; however water could be managed in late winter to increase the elevation of Blue Mesa Reservoir and the volume of a spring peak. Targets could include spring peaks, duration, and/or base flows recommended for downstream endangered fish. Storage water could be used to increase the volume available for meeting downstream targets.

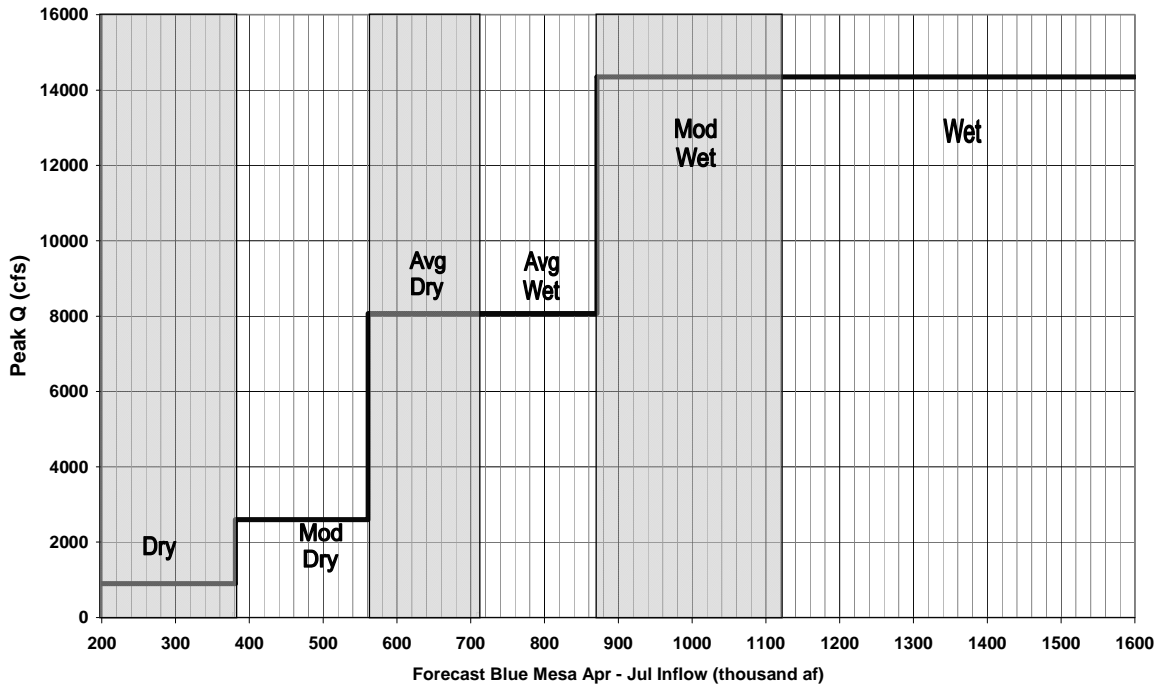
Examples: Determine peaks for B & C

Peak Flow Target at Whitewater



Examples: Determine peaks for D

Peak Flow Target at Whitewater



Duration targets-B and D

Blue Mesa Forecasted April-July Inflow Af	Duration of Half Bank (8,070 cfs) Days	Duration of Bankfull (14,350 cfs) Days
< 381,000	0	0
381,000 to 561,000	0	0
561,001 to 709,000	10	0
709,000 to 871,000	20	2
871,000 to 1,123,000	40	10
>1,123,000	60	15

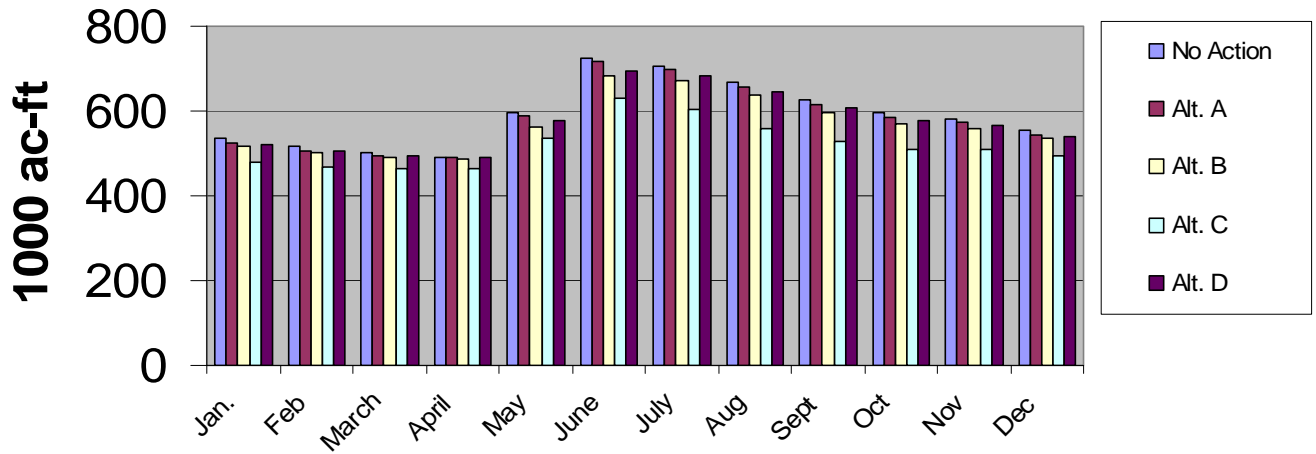
Duration targets C

Blue Mesa Forecasted Inflow Af	Duration of Half Bank (8,070 cfs) days	Duration of Bankfull (14,350 cfs) days
< 381,000	0	0
381,000 to 561,000	10	0
561,001 to 709,000	15	0
709,000 to 871,000	25	3
871,000 to 1,123,000	60	20
>1,123,000	100	25

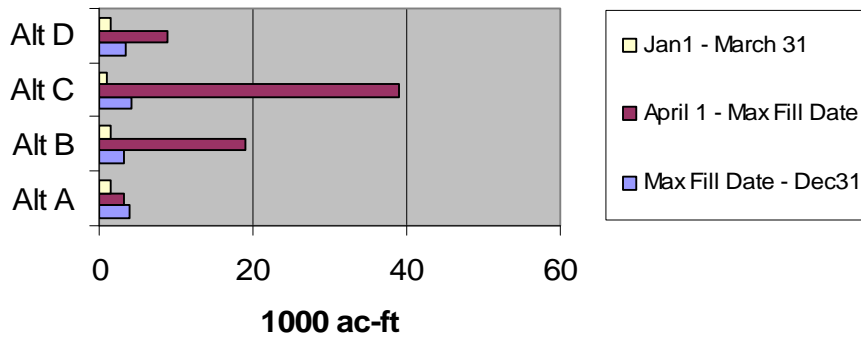
Base Flow Targets (cfs) at Whitewater Gage under all Action Alternatives.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wet	1050	1050	1050	1050	1050	1500	1500	1500	1050	1050	1050	1050
Mod Wet	1050	1050	1050	1050	1050	1500	1500	1500	1050	1050	1050	1050
Avg Wet	1050	1050	1050	1050	1050	1500	1500	1050	1050	1050	1050	1050
Avg Dry	1050	1050	1050	1050	1050	1500	1500	1050	1050	1050	1050	1050
Mod Dry*	750	750	750	750	750	1050	1050	1050	750	750	750	750
Dry*	750	750	750	750	750	1050	1050	750	750	750	750	750

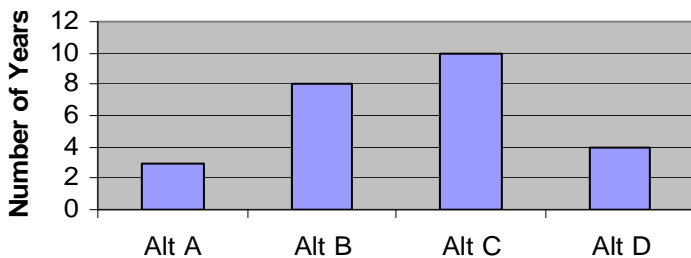
Blue Mesa Reservoir Ave End of Month Content

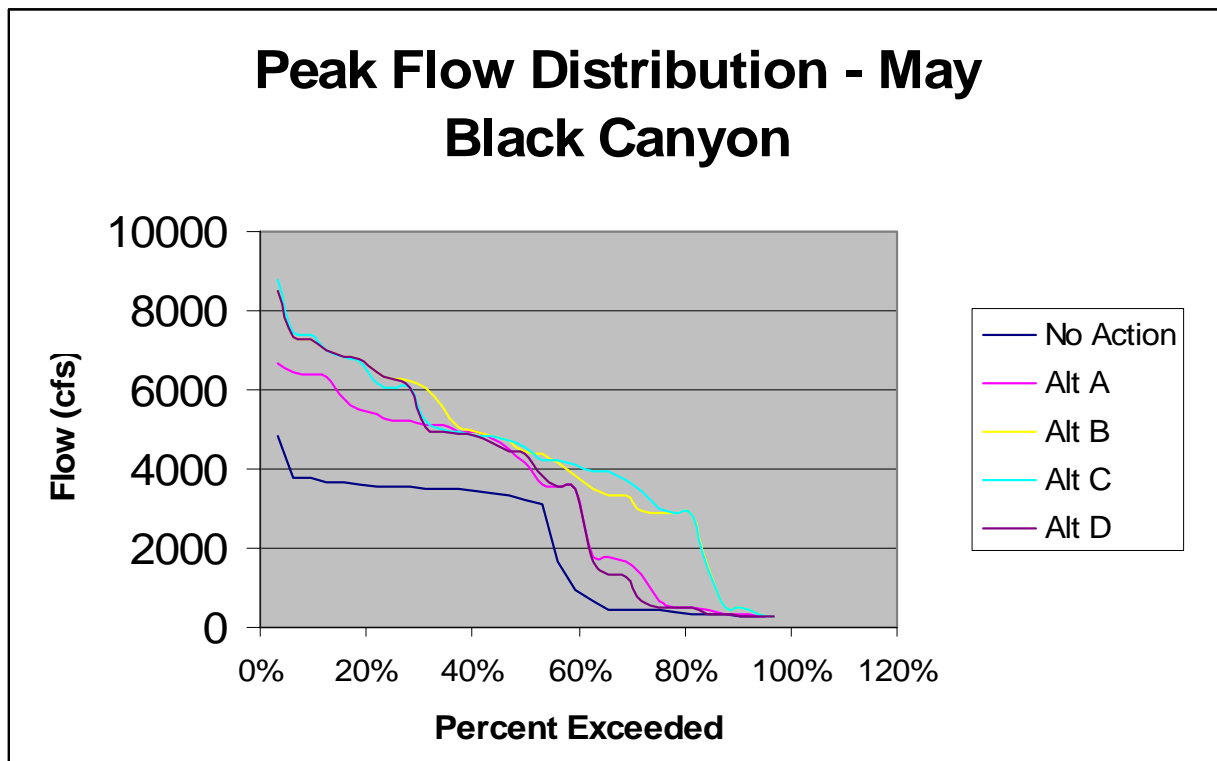
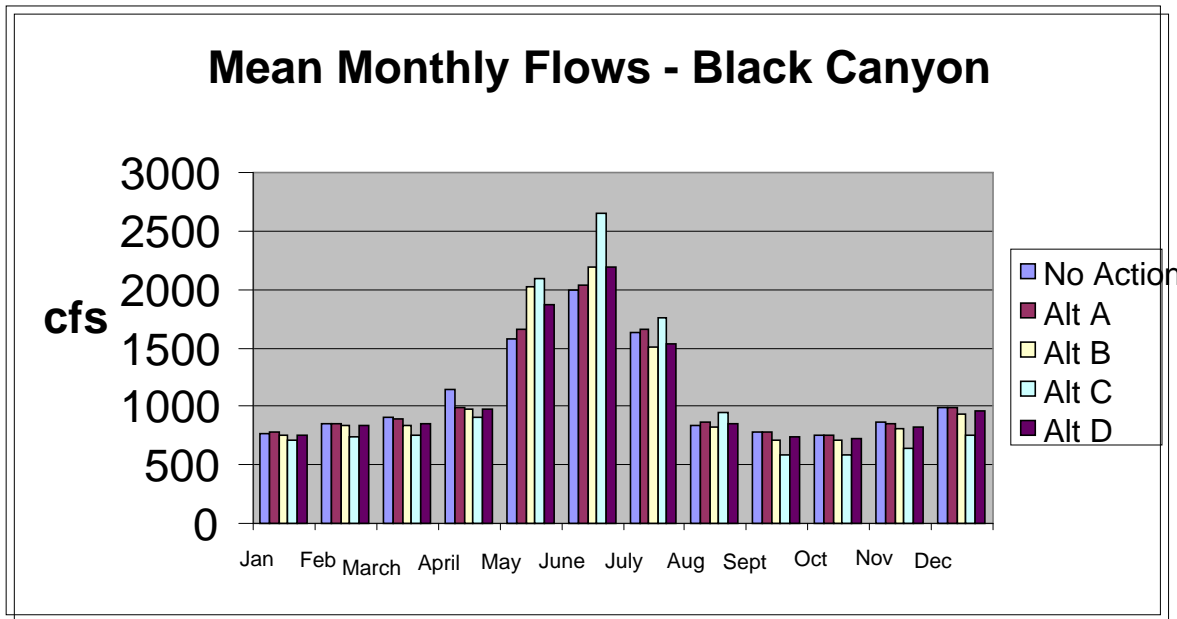


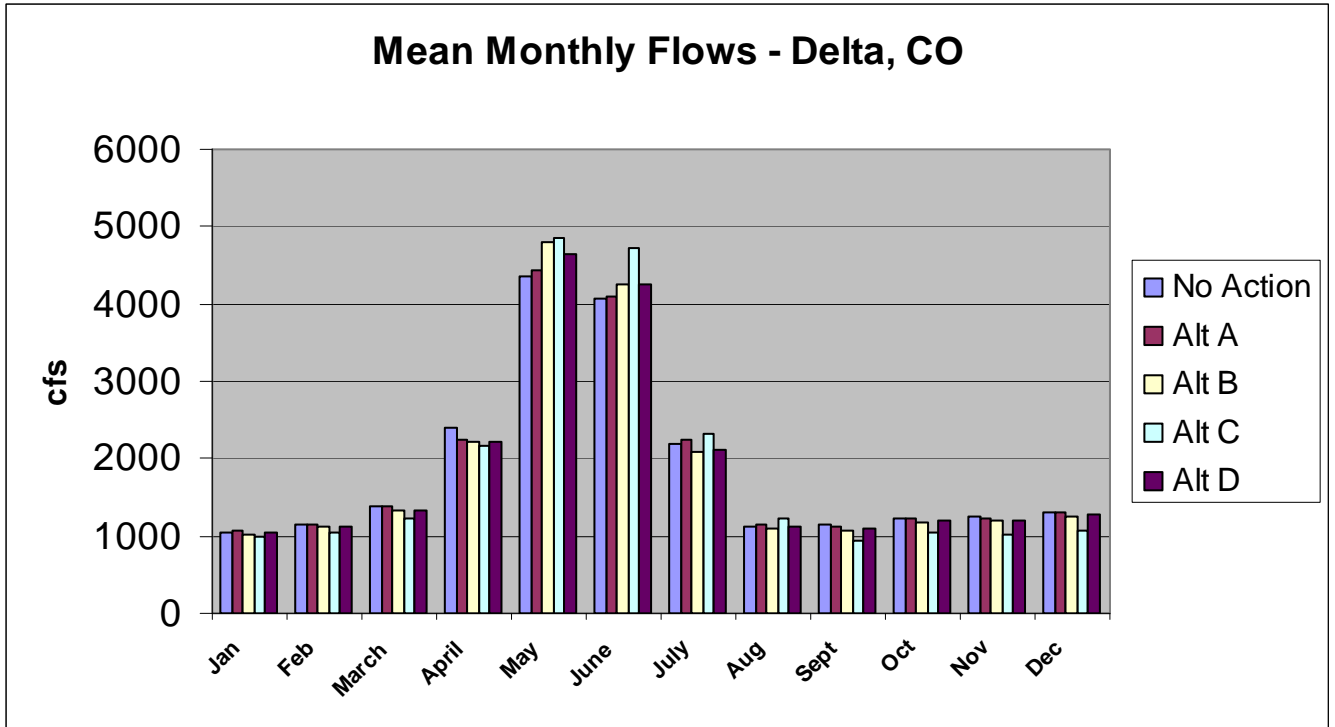
Additional Storage Used

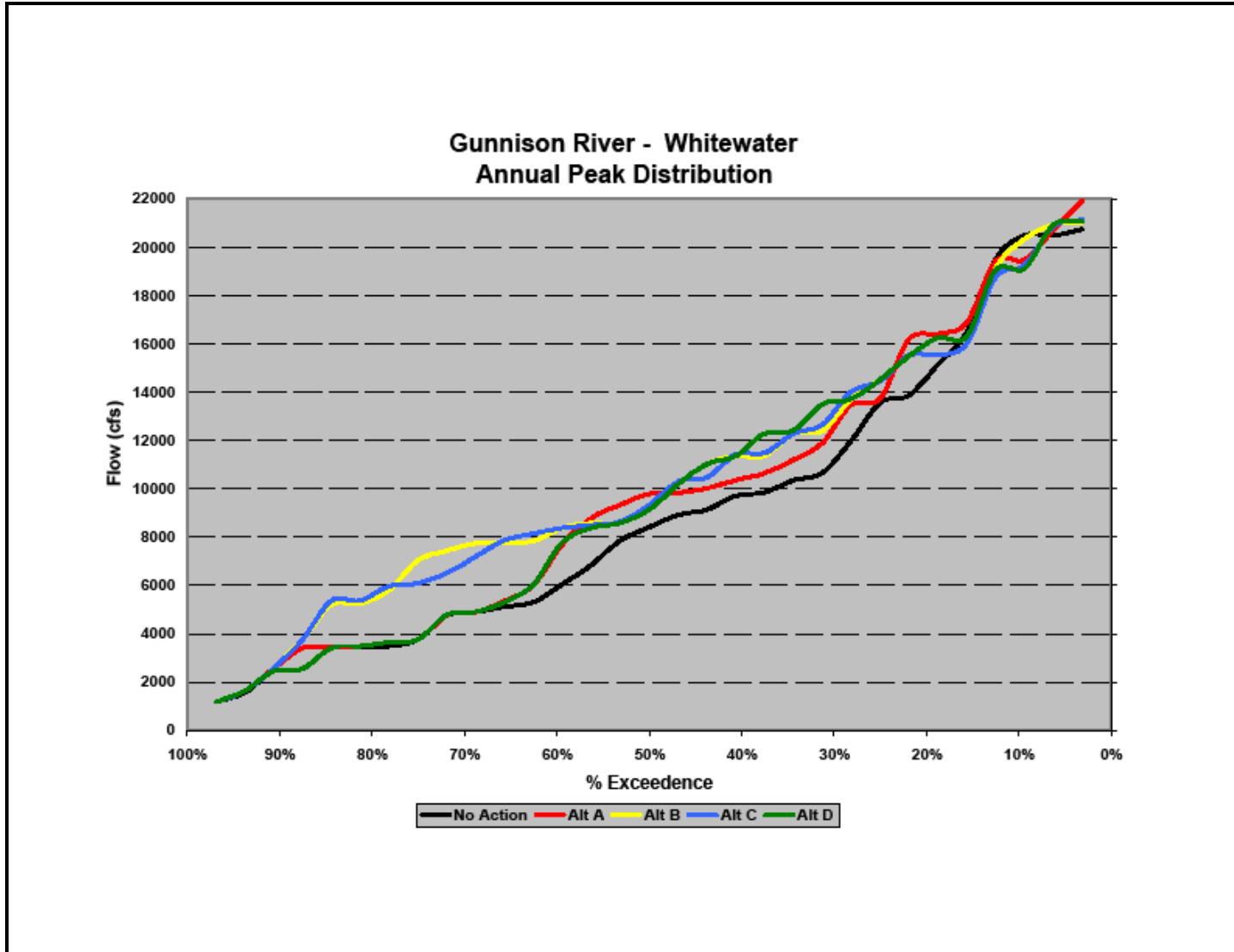


Increased Number of Years Above No Action Crystal Spills









Preliminary comparison of No Action and Action Alternatives selected for detailed analysis

Resource	No Action	Alt A	Alt B	Alt C	Alt D
		Risk of Spill	Fish Peak w/Duration	Peak w/Increased Duration	Fish Peak w/Revised Target
Qualitative Summary (range from +5 to -5)					
Blue Mesa Reservoir Content	Neutral	-1	-1	-2	-1
Hydropower	Neutral	-1	-1	-2	-1
Black Canyon NP	Neutral	+1	+2	+3	+2
Flood Control	Neutral	-2	-1	-1	-1
Endangered Species	Neutral	+1	+3	+3	+2
Recreation	Neutral	-1	-2	-3	-2
Water administration	Neutral	+1	+1	+1	+1
Quantitative Summary					
Blue Mesa Reservoir Avg. End of August Content (1,000 af)	668.9	657.2	635.9	558.6	645.2
Curecanti NRA Visits/Year (Mean for Study period)	948,038	-12,897	-64,183	-184,160	-44,807
Avg. Storage usage Jan-Mar (af)	NA	1,543	1,378	948	1,399
Avg. Storage usage Apr-Max fill date (af)	NA	3,252	19,130	39,074	8,889
Avg. Storage usage Max fill date-Dec 31 (af)	NA	4,033	3,220	4,301	3,372
Hydropower Avg. Annual Volume through Plants (1,000 af)	2,862.1	2,847.9	2,807.9	2,699.1	2,818.7
Hydropower Avg. Annual Economic Value (change)	NA	-0.07%	-1.38%	-4.53%	-0.99%
Avg. Annual Spillway Usage (days)					
Blue Mesa Dam	1.7	1.8	2.2	4.3	2.0
Morrow Point Dam	1.9	2.1	2.5	4.4	2.3
Crystal Dam	9.0	13.0	16.1	23.2	15.5
Black Canyon Percent of Years Peaks Exceed					
>10,000 cfs	12.9	12.9	9.6	9.6	6.4
> 8,000 cfs	12.9	12.9	16.1	16.1	12.9
> 5,000 cfs	25.8	42.9	54.8	48.4	45.2
Black Canyon Avg. Annual Days at 300 cfs (May-Sept)	23.1	23.6	28.7	33.9	26.7
Black Canyon Avg. Aug-Oct Flows (cfs)	794	801	753	708	771
Delta-Number of Days Flows >12,000 cfs for Study period	79	103	104	126	104

Resource	No Action	Alt A	Alt B	Alt C	Alt D
		Risk of Spill	Fish Peak w/Duration	Peak w/Increased Duration	Fish Peak w/Revised Target
Quantitative Summary (continued)					
Delta-Number of Days Flows >15,000 cfs for Study period	11	18	12	12	12
Critical Habitat Avg. Annual Days					
> 5,000 cfs	35.2	34.1	36.3	41.3	34.6
> 7,000 cfs	21.6	20.6	24.2	29.5	23.7
> 8,070 cfs	16.0	16.2	17.2	18.7	17.4
>10,000 cfs	8.6	9.4	10.9	12.0	10.9
>12,000 cfs	5.6	6.2	7.1	8.2	7.3
>14,350	2.8	3.3	3.0	3.1	3.0
Downstream from Redlands Diversion Dam Avg. Days Apr-Sept					
<300 cfs	28.5	28.3	32.2	35.5	30.2
<100 cfs	3.7	4.0	4.4	5.1	4.1
Water Users Avg. Number of Days/Yr Potential RWPC Call for Study period	25.5	15.3	16.2	17.6	15.5
Blue Mesa Reservoir Fishery % Change in End of Summer Surface Area	NA	-1%	-2%	-9%	-2%
Curecanti NRA Blue Mesa Reservoir Avg. Annual End of Aug Surface Area (acres)	8,225	8,137	8,011	7,457	8,069
Gunnison Gorge Avg. Annual Day Rafting/Fishing Flows in Desirable 700-1,000 cfs Range May-Sept	20.9	22.7	22.6	22.9	21.8
Gunnison Gorge Annual Days in Summer Recreation Season					
< 400 cfs	6.3	6.7	8.8	12.3	7.1
>3,000 cfs	17.2	16.0	19.8	27.2	19.1
Gunnison Gorge Trout Fishery (% of Years Adequate Recruitment Conditions)	87+%	87+%	95+%	87+%	95+%
Austin Trout Fishery (%Increase in Low Flow)	NA	8%	16%	43%	17%
Indian Trust Assets	No Change	No Change	No Change	No Change	No Change
Environmental Justice	No Change	No Change	No Change	No Change	No Change
Cultural Resources Max. Reservoir Basin Dewatered (acres)	4,252	4,249	4,252	4,250	4,250

