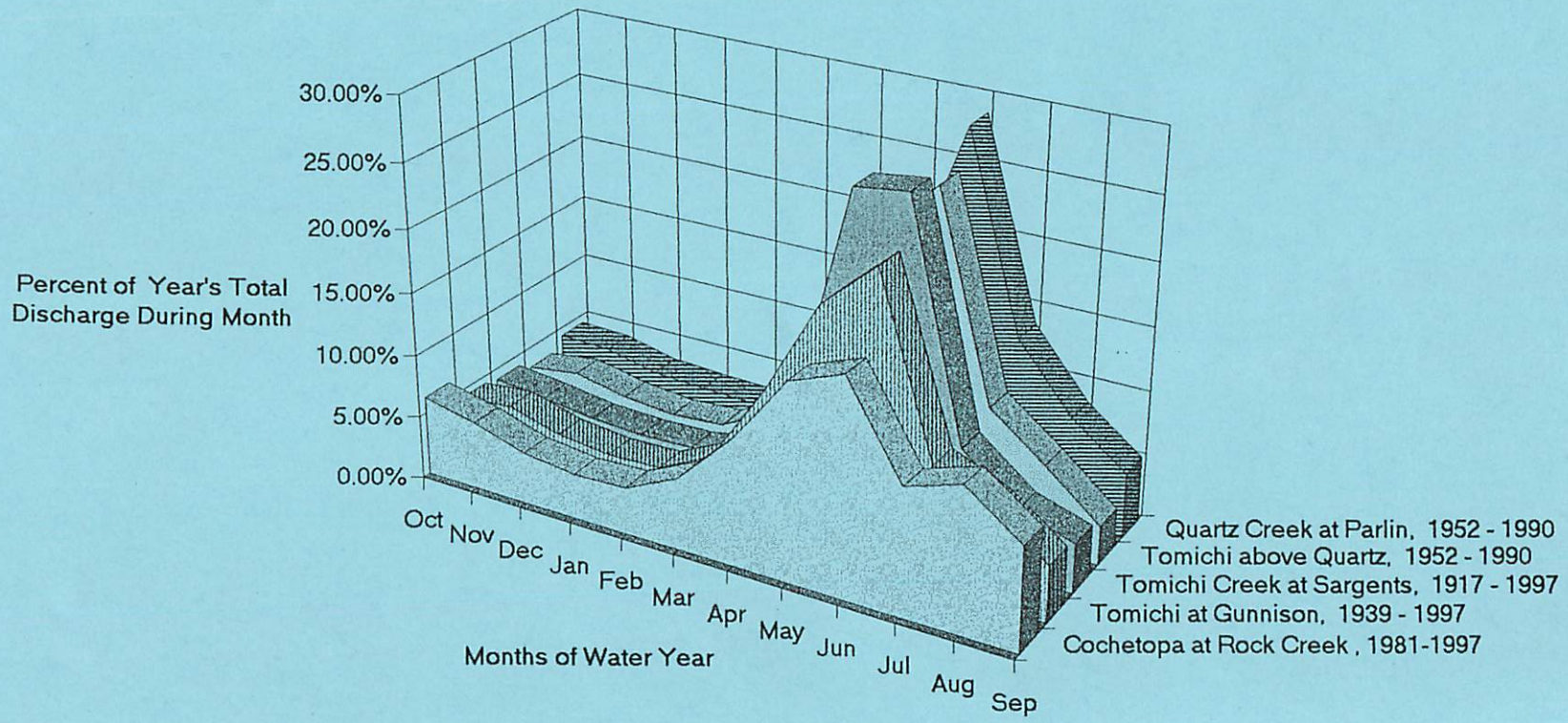
AVERAGE WATER FLOW PATTERNS REPORTED FOR UPPER GUNNISON RIVER BASIN
Tomichi Creek Basin

Data sources: U.S. Geological Survey (1998) Water Resources Data - Colorado, Water Year 1997, Water-Data Report CO-97-2, Denver, Colorado. Records from gaging stations.
Hydrosphere Resource Consultants (1993) Gunnison Basin Planning Model - beta release version 0.9, Boulder, Colorado. These are calculated as flows before diversions and depletions.

	Cochetopa C. at Rock Creek 1981 - 1997 USGS	Tomichi Creek near Gunnison 1939 - 1997 USGS	Quartz Creek at Parlin 1952 - 1990 Hydros. (see note above about flows)	Tomich C. abv. Quartz Creek 1952 - 1990 Hydros.	Tomichi Creek at Sargents 1917 - 1997 USGS
Months of Water Year	Monthly average discharge flow in cubic feet per second (cfs)				
Oct	35.50	93.70	30.82	30.78	31.50
Nov	30.20	102.00	29.94	35.93	27.90
Dec	22.90	76.80	22.85	27.82	23.40
Jan	20.10	66.60	21.02	23.73	21.70
Feb	20.80	69.40	20.03	26.22	22.30
Mar	31.80	112.00	24.23	46.92	28.00
Apr	55.30	246.00	45.93	110.92	68.70
May	86.80	407.00	121.35	203.25	202.00
Jun	95.80	488.00	204.38	238.20	206.00
Jul	55.70	199.00	96.20	91.53	66.70
Aug	63.30	160.00	59.51	60.80	39.90
Sep	45.50	92.70	36.15	27.92	29.50
Average cfs	46.98	176.10	59.37	77.00	63.97
Total in cfs months	563.70	2,113.20	712.41	924.02	767.60
Total in acre-feet	34,010	127,496	42,982	55,749	46,312
	Percent of year's total discharge during month				
Oct	6.30%	4.43%	4.33%	3.33%	4.10%
Nov	5.36%	4.83%	4.20%	3.89%	3.63%
Dec	4.06%	3.63%	3.21%	3.01%	3.05%
Jan	3.57%	3.15%	2.95%	2.57%	2.83%
Feb	3.69%	3.28%	2.81%	2.84%	2.91%
Mar	5.64%	5.30%	3.40%	5.08%	3.65%
Apr	9.81%	11.64%	6.45%	12.00%	8.95%
May	15.40%	19.26%	17.03%	22.00%	26.32%
Jun	16.99%	23.09%	28.69%	25.78%	26.84%
Jul	9.88%	9.42%	13.50%	9.91%	8.69%
Aug	11.23%	7.57%	8.35%	6.58%	5.20%
Sep	8.07%	4.39%	5.07%	3.02%	3.84%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

COMPARISON OF WATER FLOW PATTERNS
Tomichi Creek Basin

from monthly mean average data reported by U.S.G.S. and Hydrosphere



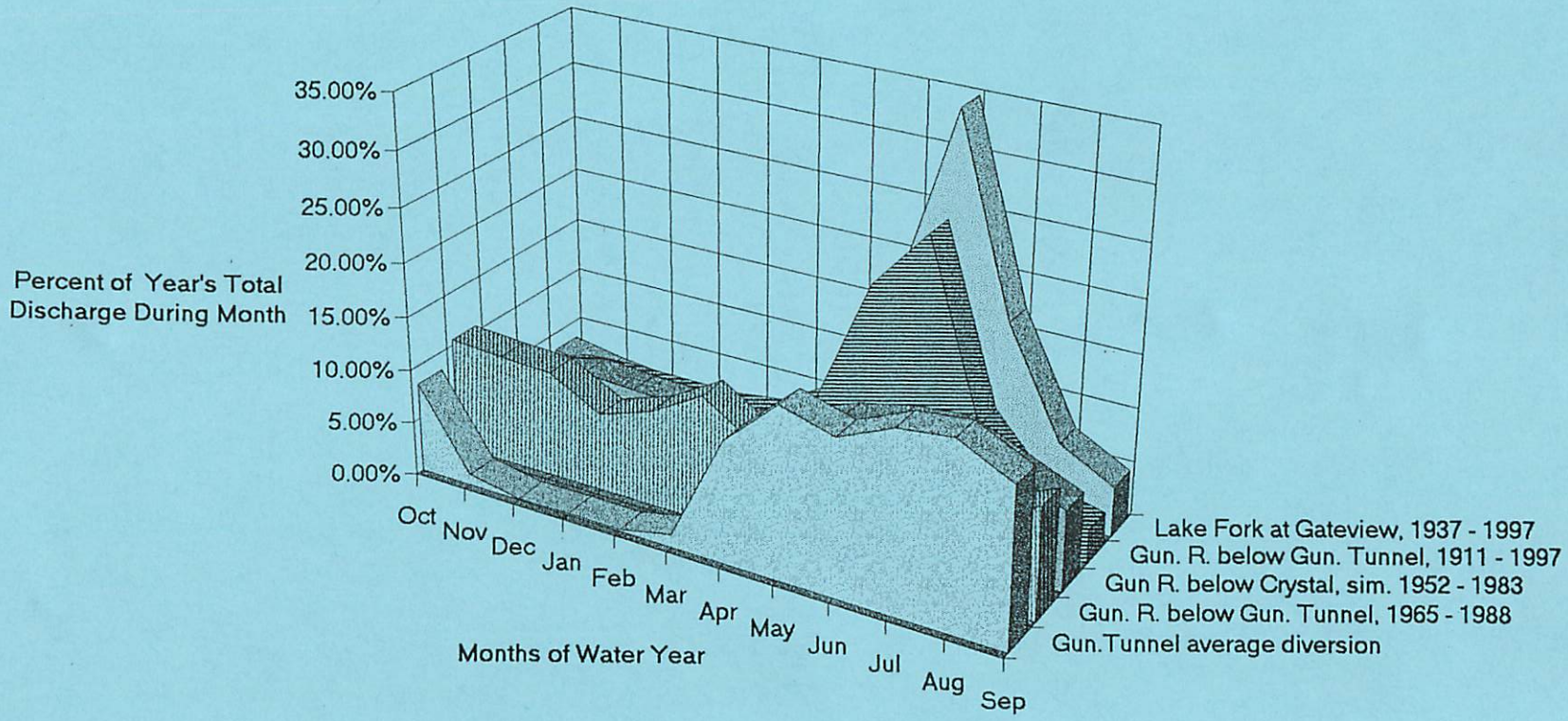
AVERAGE WATER FLOW PATTERNS REPORTED FOR UPPER GUNNISON RIVER BASIN
Gunnison River Basin above Gunnison, Colorado

Data sources: U.S. Geological Survey (1998) Water Resources Data - Colorado, Water Year 1997, Water-Data Report CO-97-2, Denver, Colorado. Breaks in the continunity of gaging for Slate River and East River above Cement Creek.

	Taylor River at Almont 1910 - 1997 USGS	Slate R. near Crested Butte 1940 - 1997 USGS	East R. near Cement Creek 1964 - 1997 USGS	East River at Almont 1911 -1997 USGS	Gunnison R. at Gunnison 1911 - 1997 USGS
Months of Water Year	Monthly average discharge flow in cubic feet per second (cfs)				
Oct	246.00	30.20	115.00	117.00	404.00
Nov	156.00	23.30	88.20	95.50	300.00
Dec	121.00	16.20	70.10	73.20	237.00
Jan	109.00	12.60	61.60	62.20	211.00
Feb	108.00	11.40	58.10	59.50	204.00
Mar	134.00	17.10	67.50	67.80	252.00
Apr	249.00	125.00	236.00	249.00	616.00
May	609.00	547.00	1,042.00	1034.00	1860.00
Jun	936.00	628.00	1,408.00	1396.00	2547.00
Jul	577.00	223.00	608.00	573.00	1301.00
Aug	417.00	57.30	223.00	237.00	747.00
Sep	396.00	27.30	142.00	130.00	552.00
Average cfs	338.17	143.20	343.29	341.18	769.25
Total in cfs months	4,058.00	1,718.40	4,119.50	4,094.20	9,231.00
Total in acre-feet	244,833	103,677	248,543	247,017	556,937
	Percent of year's total discharge during month				
Oct	6.06%	1.76%	2.79%	2.86%	4.38%
Nov	3.84%	1.36%	2.14%	2.33%	3.25%
Dec	2.98%	0.94%	1.70%	1.79%	2.57%
Jan	2.69%	0.73%	1.50%	1.52%	2.29%
Feb	2.66%	0.66%	1.41%	1.45%	2.21%
Mar	3.30%	1.00%	1.64%	1.66%	2.73%
Apr	6.14%	7.27%	5.73%	6.08%	6.67%
May	15.01%	31.83%	25.29%	25.26%	20.15%
Jun	23.07%	36.55%	34.18%	34.10%	27.59%
Jul	14.22%	12.98%	14.76%	14.00%	14.09%
Aug	10.28%	3.33%	5.41%	5.79%	8.09%
Sep	9.76%	1.59%	3.45%	3.18%	5.98%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

COMPARISON OF WATER FLOW PATTERNS
Gunnison Basin below Gunnison

from monthly mean average data reported by U.S.G.S and B. of Reclamation



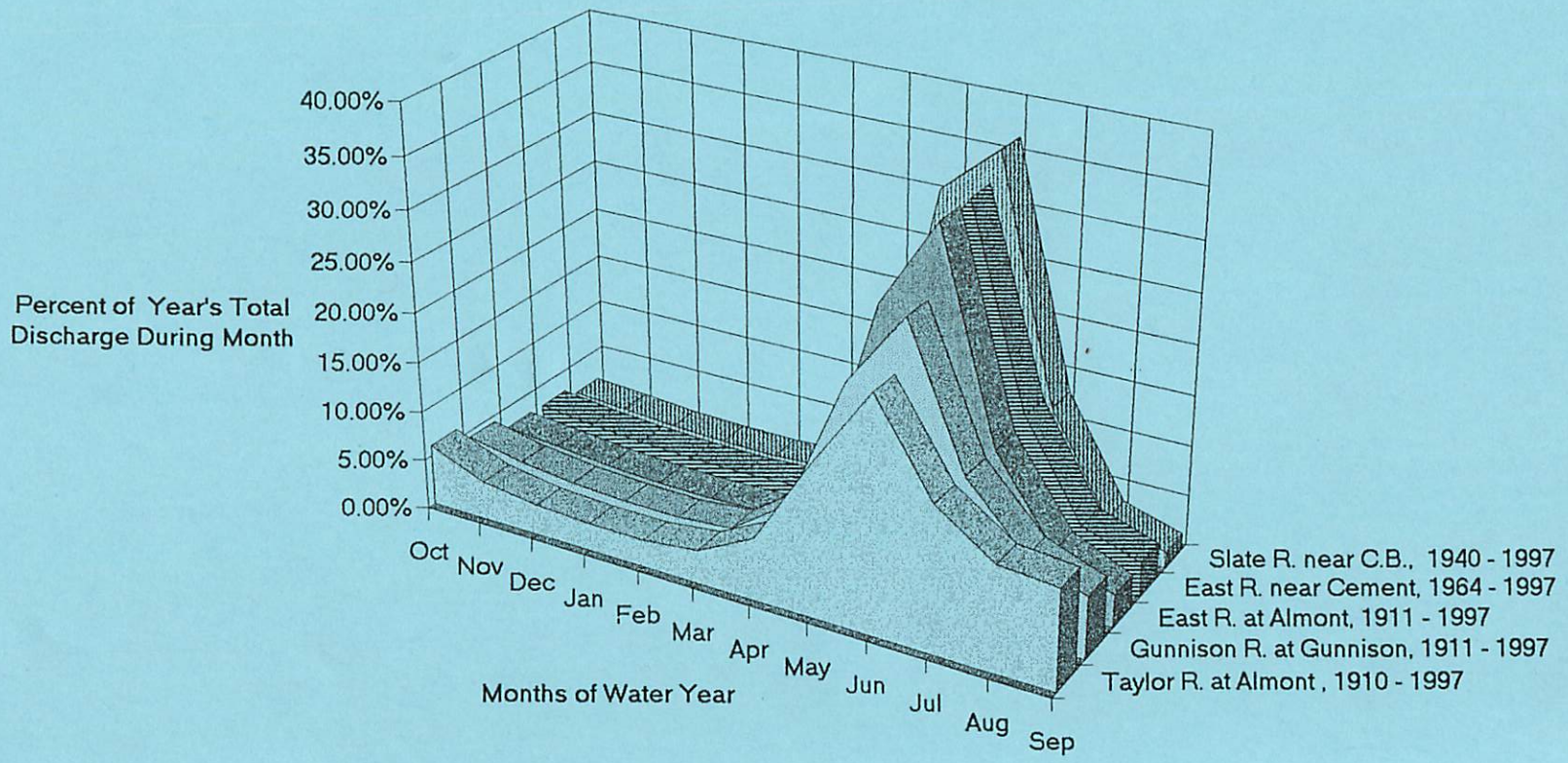
AVERAGE WATER FLOW PATTERNS REPORTED FOR UPPER GUNNISON RIVER BASIN
Gunnison River Basin below Gunnison, Colorado

Data sources: U.S. Geological Survey (1998) Water Resources Data - Colorado, Water Year 1997, Water-Data Report CO-97-2, Denver, Colorado.
Bureau of Reclamation (1990) AB lateral Hydropower Facility - Uncompahgre Valley Reclamation Project; FEIS, vol. 1, Salt Lake City, Utah. Flow pattern for Gunnison River below Crystal Reservoir is simulated to reflect operation of Aspinall Unit.

	Gun. Tunnel Diversions 1910 - 1997 BofRec.	Gun. R. below Gun.Tunnel 1965 - 1988 BofRec.	Gun. R. below Gun.Tunnel 1911 - 1997 USGS	Gun. R. below Crystal Res. 1952 - 1983 BofRec. simulated	Lake Fork at Gateview 1937 - 1997 USGS
Months of Water Year	Monthly average discharge flow in cubic feet per second (cfs)				
Oct	464.00	1,576.00	542.00	1275.00	94.00
Nov	56.00	1,520.00	748.00	1233.00	68.30
Dec	8.00	1,483.00	790.00	1459.00	52.20
Jan	11.00	1,086.00	780.00	1393.00	46.20
Feb	8.00	1,326.00	773.00	1346.00	43.70
Mar	66.00	1,744.00	878.00	1247.00	56.40
Apr	624.00	1,269.00	1,319.00	1545.00	133.00
May	875.00	745.00	3,223.00	1878.00	537.00
Jun	795.00	724.00	4,113.00	2082.00	993.00
Jul	914.00	773.00	1,562.00	2180.00	488.00
Aug	944.00	1,182.00	673.00	1788.00	206.00
Sep	803.00	1,517.00	488.00	1382.00	130.00
Average cfs	464.00	1,245.42	1,324.08	1,567.33	237.32
Total in cfs months	5,568.00	14,945.00	15,889.00	18,808.00	2,847.80
Total in acre-feet	335,936	901,682	958,636	1,134,749	171,817
	Percent of year's total discharge during month				
Oct	8.33%	10.55%	3.41%	6.78%	3.30%
Nov	1.01%	10.17%	4.71%	6.56%	2.40%
Dec	0.14%	9.92%	4.97%	7.76%	1.83%
Jan	0.20%	7.27%	4.91%	7.41%	1.62%
Feb	0.14%	8.87%	4.87%	7.16%	1.53%
Mar	1.19%	11.67%	5.53%	6.63%	1.98%
Apr	11.21%	8.49%	8.30%	8.21%	4.67%
May	15.71%	4.98%	20.28%	9.99%	18.86%
Jun	14.28%	4.84%	25.89%	11.07%	34.87%
Jul	16.42%	5.17%	9.83%	11.59%	17.14%
Aug	16.95%	7.91%	4.24%	9.51%	7.23%
Sep	14.42%	10.15%	3.07%	7.35%	4.56%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

COMPARISON OF WATER FLOW PATTERNS
Gunnison Basin above Gunnison

from monthly mean average data reported by U.S.G.S.



AVERAGE WATER FLOW PATTERNS REPORTED FOR UPPER GUNNISON RIVER BASIN

Representative Inflows and Releases from Blue Mesa Reservoir

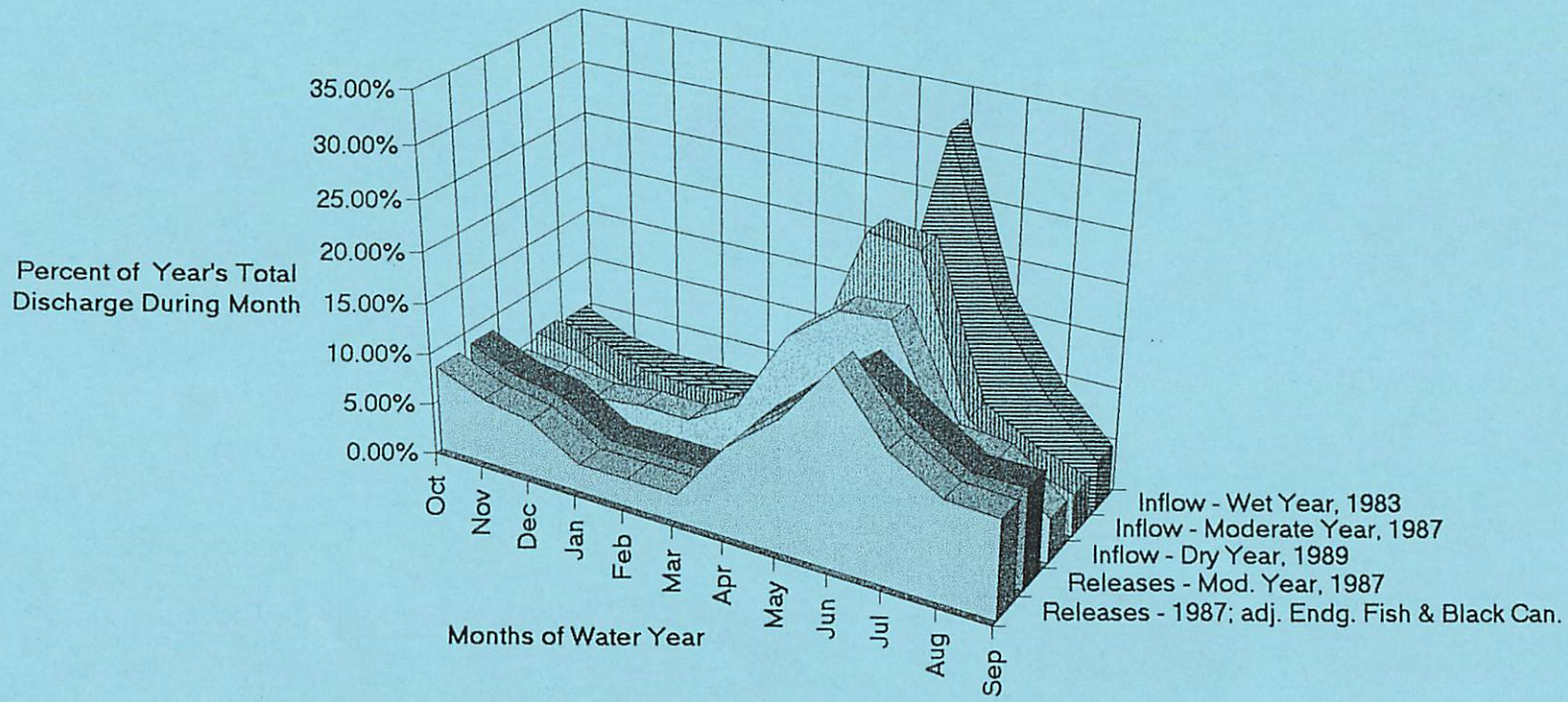
Data sources: Western Area Power Administration - US Dept. of Energy (1994) Salt Lake City Area Integrated Project Electrical Power Marketing, DEIS, vol. 4, Salt Lake City, Utah.
Clark R. E. III (1997) Assessment of Proposed AB Lateral - Average Year. Reflects some additional flows required for recovery of endangered fish and Black Canyon National Monument.

Evaporation from reservoir is about 10,000 acre-feet in a moderate or average year.

Months of Water Year	Dry Year 1989 inflows WAPA	Moderate Year 1987 inflows WAPA	Wet Year 1983 inflows WAPA	Moderate Year 1987 releases WAPA	Year 1987 with endangered fish and Black Canyon releases Clark
	Monthly average flow in cubic feet per second (cfs)				
Oct	492.00	1,017.00	1,046.00	1,570.00	1,570.00
Nov	448.00	862.00	616.00	1,200.00	1,200.00
Dec	385.00	497.00	475.00	1,050.00	1,050.00
Jan	439.00	452.00	477.00	500.00	500.00
Feb	431.00	517.00	468.00	510.00	510.00
Mar	729.00	903.00	689.00	500.00	500.00
Apr	1,622.00	2,114.00	978.00	1,600.00	1,630.50
May	2,033.00	4,415.00	2,676.00	2,370.00	2,370.00
Jun	2,077.00	4,299.00	6,702.00	3,050.00	3,514.40
Jul	968.00	1,581.00	3,554.00	2,350.00	2,350.00
Aug	915.00	1,051.00	2,010.00	1,750.00	1,802.40
Sep	469.00	745.00	975.00	1,750.00	1,753.20
Average cfs	917.33	1,537.75	1,722.17	1,516.67	1,562.54
Total in cfs months	11,008.00	18,453.00	20,666.00	18,200.00	18,750.50
Total in acre-feet	664,149	1,113,331	1,246,849	1,098,067	1,131,280
	Percent of year's total discharge during month				
Oct	4.47%	5.51%	5.06%	8.63%	8.37%
Nov	4.07%	4.67%	2.98%	6.59%	6.40%
Dec	3.50%	2.69%	2.30%	5.77%	5.60%
Jan	3.99%	2.45%	2.31%	2.75%	2.67%
Feb	3.92%	2.80%	2.26%	2.80%	2.72%
Mar	6.62%	4.89%	3.33%	2.75%	2.67%
Apr	14.73%	11.46%	4.73%	8.79%	8.70%
May	18.47%	23.93%	12.95%	13.02%	12.64%
Jun	18.87%	23.30%	32.43%	16.76%	18.74%
Jul	8.79%	8.57%	17.20%	12.91%	12.53%
Aug	8.31%	5.70%	9.73%	9.62%	9.61%
Sep	4.26%	4.04%	4.72%	9.62%	9.35%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

COMPARISON OF WATER FLOW PATTERNS
Blue Mesa Reservoir

from monthly mean average data reported by W.A.P.A. and Clark



RATIO COMPARISONS OF WATER RUNOFF AND WATER DEMANDS IN PORTIONS OF UPPER GUNNISON BASIN
R. E. Clark III - February, 1999

Flow of 1 cubic foot per second (cfs) for one month equals: 60.2 acre-feet (acft)

Assumptions: using larger of irrigated acreage given by USGS or GunMod Source:	Basic Data				Ratio Comparisons				
Major Basins	Area of basin in sq. miles (USGS)	Average Annual Runoff in acft (USGS)	Irrigated Land in acres (USGS/GunM)	Absolute Rights Senior to Up. Gunnison Project in cfs (GunMod)	Runoff acft per sq. mile	Runoff acft per irr. acre	Runoff acft per decreed cfs	Potential for Diversion in 3 months as acft per acre irrigated	Runoff in acft per decreed cfs as a percentage of Potential Diversion in acft
Tomichi Creek at Gunnison GunMod gives 22,310 acres	1,061	127,600	24,000	3,023.73	120.26	5.32	42.20	22.75	185%
East River at Almont GunMod gives 7,320 acres	289	247,770	7,400	939.00	857.34	33.48	263.87	22.92	1151%
Lake Fork at Gateview (6 miles abv. Blue Mesa) USGS is same as GunMod	334	172,200	1,600	570.13	515.57	107.63	302.04	64.35	469%
Cebolla Creek near Powderhorn GunMod; USGS gives no figure	248	45,400	4,600	404.26	183.06	9.87	112.30	15.87	708%
Gunnison River at Gunnison USGS gives 22,000	1,012	558,500	25,022	3,390.17	551.88	22.32	164.74	24.47	673%
Taylor River at Almont USGS gives 360 acres	477	245,800	460	106.94	515.30	534.35	2,298.49	41.99	5474%
Portions of Tomichi Creek Basin									
Quartz Creek (below Gold C. near Ohio City) USGS gives 900 acres.	106	39,170	1,833	238.89	369.53	21.37	163.97	23.54	697%
Tomichi Creek at Parlin (above Quartz C.) GunMod gives 10,348 acres	427	47,060	11,000	1,451.77	110.21	4.28	32.42	23.84	136%
Tomichi Creek at Sargents (below Marshall C.) USGS; GunMod gives no figure	149	46,420	1,900	154.41	311.54	24.43	300.63	14.68	2048%
Cochetopa Creek near Parlin GunMod; USGS gives no figure	334	34,210	5,720	598.09	102.43	5.98	57.20	18.88	303%
Portions of Ohio Creek Basin									
Ohio Creek at Baldwin (below Castle C.) GunMod gives 222 acres	48	32,870	1,580	222.85	684.79	20.80	147.50	25.47	579%
Ohio Creek near Baldwin (below Mill C.) GunMod gives 3,354 acres	184	64,940	3,850	613.23	352.93	16.87	105.90	28.77	368%

irrigated acreage between this gauge and Gunnison River receives diversions from Gunnison River

Data Sources:

U.S. Geological Survey (1970) Surface Water Supply of the United States 1961-65; Part 9 Colorado River Basin, vol. 1; Water Supply Paper 1924.
U.S. Geological Survey (1998) Water Resources Data, Colorado; Water Year 1997 - Colorado River Basin; vol. 2
Hydrosphere Resource Consultants (1993) Gunnison Basin Planning Model -- Draft, Beta 0.9, Boulder, Colorado

MEMORANDUM

TO: Upper Gunnison Watershed Coalition

FROM: David Baumgarten
Gunnison County Attorney

DATE: November 29, 1999

RE: Upper Gunnison Watershed Coalition; Gunnison County Position Statement Regarding Protection And Development Of Water Resources In Gunnison County And The Gunnison River Basin

Please find enclosed a copy of the "Gunnison County Position Statement: Protection And Development Of Water Resources In Gunnison County And The Gunnison River Basin."

The Position Statement was adopted by the Board of County Commissioners of Gunnison County in September, 1990. Over the last nine years, the Position Statement has been a most useful tool to help frame, inform and guide important water related decisions by the Board of County Commissioners. The Position Statement is being distributed to the members of the Upper Gunnison Watershed Coalition in the trust it will be of use in fostering valuable discussion.

Thank you.

cc: Board of County Commissioners/with mailing list

Gunnison County, Colorado

Board of
COUNTY COMMISSIONERS

GUNNISON, COLORADO 81230

GUNNISON COUNTY POSITION STATEMENT: PROTECTION AND DEVELOPMENT OF WATER RESOURCES IN GUNNISON COUNTY AND THE GUNNISON RIVER BASIN

INTRODUCTION:

The essence of Gunnison County's ability to survive and prosper historically has been, and will continue to be, its ability to have consistent, plentiful and clean water. Like many western communities, the county has experienced a series of economic cycles. Each time the cycle bottoms, the community assesses itself and its future. What has consistently emerged from these exercises has been the clear recognition that the area's natural environment is its most important asset.

The future of the County is directly dependent upon the community's ability to preserve and carefully build upon its natural resource assets. Its unique and fragile setting provides an environment that attracts recreationists and tourists, supports an excellent college and an historical and valuable agricultural industry.

If the natural environment is the heart of the economic and social well-being of Gunnison County, both now and in its future, water is its lifeblood.

It is upon these realities, and within the following policies, that Gunnison County establishes its position on water resources protection and development.

*****

INTERDEPENDENCE OF ECONOMIC DEVELOPMENT AND ENVIRONMENTAL PROTECTION IN GUNNISON COUNTY'S FUTURE:

It is the policy of Gunnison County to encourage the identification of opportunities for a stable and diverse economic

future for Gunnison County, and to support the protection and development of water resources for in-basin purposes which will realize those opportunities, and in a manner that is socially, environmentally and economically sound.

It is further the policy of Gunnison County:

* To encourage the development of water-based recreation programs which will return financial benefits to landowners who make their lands available for such activities.

* To support voluntary improvements in public access to streams on private lands through a variety of methods such as, at their discretion, landowners' providing free or compensated access on their own lands, granting short term leases, granting easements, or entering into outright sales agreements with public entities.

* To encourage the development of systems to manage fishing and rafting access to streams and address such issues as trespassing, collection of fees, litter, damage to property including livestock, and maintenance and improvements of access facilities.

* To encourage the development of recreation facilities in the county including campgrounds, picnic areas, trails, stream access, etc. which allow a variety of recreational experiences.

* To actively cooperate with other entities in regional and national marketing of recreation opportunities in the county.

* To support improvement and protection of water-based recreation and access on public lands.

PROTECTION OF WATER RESOURCES:

It is the policy of Gunnison County that land use and other activities carried out within the County should not adversely affect the availability or suitability of water for present or future uses in the county.

It is further the policy of Gunnison County:

* To encourage protection for economically important uses of water such as retaining or enhancing the productivity of agricultural lands, meeting municipal and domestic needs, and providing optimum instream flows and lake levels for fisheries and recreation within the county.

* To protect water resources for the purpose of maintaining the high quality of the water-dependent environment in the county.

* To encourage the protection and enhancement of riparian habitat because of the value of such habitat for benefitting water quality on-site and downstream.

* To encourage increased water use efficiency and the adoption of water saving measures by domestic water providers and users.

* To encourage the use of proven traditional, and non-traditional and innovative solutions, both structural and non-structural, to protect, retain and enhance water resources in the basin.

REGULATION OF WATER RESOURCES DEVELOPMENT:

It is the policy of Gunnison County to fully exercise its authority to insure that the net effect of development, management, and utilization of water resources is not to generate significant adverse environmental, social or economic impacts to the County.

It is further the policy of the County:

* To insure that water resource development will not cause a significantly adverse net effect to the existing quality and diversity of natural ecosystems within the county, including terrestrial and aquatic organisms and their habitats.

* To insure that water resource development will not cause a significantly adverse net effect to water quality, air quality, or soils and geologic conditions in the county.

* To insure that water resource development will not cause a significantly adverse net effect to areas of historical, archeological, geological, or ecological importance in the county.

* To insure that the citizens of Gunnison County will not experience a reduction in quality or availability of housing or public services and facilities as a result of water resource development in the county.

* To minimize conflicts and to regulate water resource development on the basis of impact of such development on other land uses.

* To insure that water resource development will not cause a significantly adverse net effect to any segment of the local economy or on opportunities to expand such segments of the economy in the future.

* To insure that any water resource development will not create an undue financial burden on residents of the county.

* To encourage development which will optimize existing water supply systems and wastewater facilities.

* To require that water supply systems and wastewater treatment facilities be designed, constructed, and maintained so as to permit efficient and economic provision of public services.

* To insure that Federal and state permit requirements for water resource management and development projects are finalized prior to, or in tandem with, local permits being issued.

PUBLIC INVOLVEMENT:

It is the policy of Gunnison County to encourage and assist citizens to increase their knowledge of and participation in water resource issues.

It is further the policy of Gunnison County:

* To encourage coordination among local citizens organizations which have an interest in water resource issues.

* To support public education concerning the statewide economic and environmental value of preserving the water resources of the county for use within the Gunnison basin.

* To support public education concerning increased water use efficiency.

* To establish a repository for information concerning water resource development and protection issues and to act as a clearinghouse for such information.

LOCAL GOVERNMENT ISSUES:

To support coordination and definition of roles and responsibilities among local government entities including local

municipalities and the Upper Gunnison River Water Conservancy District concerning water resource issues.

REGIONAL GOVERNMENT ISSUES:

It is the policy of Gunnison County to work cooperatively with governmental entities on a regional basis on common issues related to water.

It is further the policy of Gunnison County:

* To support cooperation among headwaters counties and other entities which share mutual interests concerning the future development of water resources in Colorado.

* To work cooperatively with West Slope water districts on state and local water issues of mutual concern and benefit.

* To support cooperation among public entities throughout the Gunnison basin to ensure that the basin's water resources are used in an economically and environmentally sound manner.

STATE GOVERNMENT ISSUES:

It is the policy of Gunnison County to participate in all forums affecting the provision of water to meet out-of-basin needs or which would interfere with the ability of the county's citizens to determine the manner and extent to which the county's water resources should be used to meet its own present and future goals.

It is further the policy of Gunnison County:

* To oppose new legislation and amendments to existing Colorado law which would in any way weaken the county's ability to regulate water resource development.

* To oppose any "basin-of-origin" or "compensatory storage" legislation which would in any way weaken county regulatory powers.

* To oppose any state water policies or planning which would place an undue burden on the Gunnison basin to provide water to meet out-of-basin needs.

* To encourage state rule making or legislation which will place the entire burden for mitigating water quality impacts resulting from the diversion or

impoundment of water resources upon the developer of such resources.

* To encourage water quality classification of streams, lakes, and reservoirs by the state which will have the effect of recognizing and protecting high quality waters in the county while not imposing an unreasonable economic burden on existing and future water users.

FEDERAL GOVERNMENT ISSUES:

It is the policy of Gunnison County to monitor and, when appropriate, participate in all federal legislation, regulations, policies or plans which could affect the Gunnison basin's ability to provide water necessary to meet Gunnison County's present and future needs.

It is further the policy of Gunnison County:

* To encourage the United States to fulfill its previous commitments to provide stream access and other measures to mitigate for the construction of the Aspinall Unit of the Colorado River Storage Project.

* To support water language in proposed wilderness or wild and scenic river legislation which will provide environmental protection for the wilderness or wild and scenic river to be designated, which will require that the water right be administered and enforced in Colorado Water Court, and which will not impair present and future uses of water in the basin.

* To oppose legislation which would create a Federal water right but not require such right to be adjudicated in Colorado Water Court.

* To encourage the exercise of Federal reserved water rights in the Black Canyon of the Gunnison National Monument in a manner that would not adversely impact the present and future uses of water in the basin including the recreational use of Blue Mesa Reservoir.

* To encourage water and hydroelectric power operations of the Aspinall unit of the CRSP which would not adversely impact the present and future uses of water in the basin, the recreational use of the Curecanti National Recreation Area, the purposes of the Black Canyon of the Gunnison National Monument, and the Gunnison Gorge.

* To oppose water sales from Blue Mesa Reservoir which would adversely impact the present and future uses of water in the county, including the recreational use of the Curecanti National Recreational Area, the purposes of the Black Canyon of the Gunnison National Monument, and the Gunnison Gorge.

* To support the recovery of endangered fish species in the Upper Colorado River Basin in a manner that does not place an unreasonable burden upon the present and future water users in the basin.

COUNTY PARTICIPATION IN OTHER WATER MANAGEMENT AND DEVELOPMENT ACTIVITIES:

It is the policy of Gunnison County to encourage and participate in the development of an in-basin water resource protection and development planning process that will insure that the economic, social and environmental goals of the County are furthered.

Adopted, this 25th day of September, 1990
By the Board of Commissioners of Gunnison County, Colorado

David Leinsdorf, Chairman

Fred Field, Vice Chairman

Mario Petri, Commissioner

Letter

Water law misses big picture

To the Editor:

What has changed about water? The structure of Colorado's water law was built in the mid-1800s. Then water was expected to be lawfully used in just a few ways and out of the stream - primarily for mining, agriculture, and perhaps a little drinking (whiskey was generally safer). To decide who got how much water and when, Colorado adopted a principle of the informal miners' code - first in time is first in right. This is now called the appropriation doctrine. Other western states copied Colorado but most kept their laws more up to date with changes. If Colorado's water law was a venerable old building, it requires reconstruction - not remodeling. Why? To better cope with changes and tougher problems ahead. Consider:

Water was treated like land. Since the mid-1800s water was appropriated - taken or claimed lawfully from public ownership by appropriation. New settlers forgot about others "owning" the water before they arrived. One change is that the earlier owners - Indian Tribes and Mexican settlers now say they actually did get there first and want their water.

Like land, water is treated as property. Some changes come from recognizing that unlike land, water is used and reused; it moves and can be moved. Water's quality is now as important as its quantity to most users. In many places water can be worth much more left in streams than taken out. Many say the rising value of property rights to use water should be taxed, like the value of land property is taxed.

Water is essential to sustaining human life but it also sustains the major human waste disposal system. Clean water is demanded, then used and forgotten about. A change is the belated understanding of just how essential water, both its quantity and quality, is to other lives on the planet and just how important their well being is to humans.

Climate change means changes in where precipitation occurs, when, and how much.

People began storing water behind dams some 4,000 or more years ago. Only recently has come recognition of how many and how severe are the problems this creates - salinity, flooding, sediment accumulation, disease, and loss of habitat. Changes come from lessons learned by experience.

Because water is so essential, control over it has become an objective of international finance. This isn't "water flowing towards money" within Colorado. Global control is sought over both the market and water resources by a few giant multinational corporations, not Front Range cities. It was an issue to be addressed at the meeting in Seattle on world trade.

All that has happened and is happening in a watershed becomes reflected in the water flowing from it. Colorado's water law deals with one or two issues separately from everything else and without attention to the "big picture." The exclusionary process simply creates tougher, more tangled, and more expensive problems to be dealt with later. The change is, later has become now.

Ralph "Butch" Clark

Gunnison DUI's

continued from page 1

former Gunnison County prosecutor, is convinced his formula for sentencing the drinking drivers helps to deliver the desired effects of protecting the public, emphasizing the seriousness of

prescribe jail time to first-time offenders because of lack of space and perhaps a different philosophy.

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AGRICULTURE
Irrigation

Purpose	Need and Economic Value	Location	Reference	Notes
Pasture and hay in Upper Gunnison Basin	Diversion requirement: 3.92 to 4.25 af/ac Consumption requirement .94 to 1.02 af/ac	The larger amounts are needed in Gunnison and Lake Fork sub-basins	HDR (1989); p. 8-30	
Pasture and hay in Upper Gunnison Basin	Diversion requirement: 4.00 af/ac for existing land and 5.00 ac/ft for new land	Consumptive use for hay grass and pasture: 1.21 af/ac; Return lag of water not consumed assumed as 15 days	Slattery (20Jul1998), p. 4 citing BoRec report on Gunnison River Project (1951)	
General irrigation of crops from Horse-tooth Res.	Delivery requirement: 3.0 af/ac; Consumptive use: 1.6 af/ac; Economic value is $45 per acre-foot based on average water application	Colorado Big Thompson Project lands near Fort Collins, CO	BoR (25May2000), pp. 26 - 27; citing CSU Extension farm budgets and Doanes Ref. Manual and interviews.	
General irrigation for new irrigation on 4000 acres	Delivery requirement of 8,000 af; economic value is purchase price of $250 per af per year	New lands in Montezuma and Dolores Counties by Dolores WCD	Mimaga (15Jul2000), no page	

Hay and pasture	Gross diversion requirement: 3.28 af/ac for flood irrigation with annual on-site cost to user of $1.50 per acre. Diversion req. with gravity sprinkler pressured water is 2.1 af/ac with annual on-site cost to user of $1.00 per acre. Consumptive use: 50% of diversion requirement or 1.64 af/ac	For Pine River Basin - 45,000 acres irrigated Reliability - assume limit to 50% of demand in dry years; and discussionof firm yield concept BoR ALP, 2-54	BoR (14Jul2000), pp. 2-50, 2-53, 2-63	
Hay, pasture, and crops	with "state-of-art" lined canal and pressure pile laterals the diversion requirement for Dove Creek Area 1.95 af/ac and 96% efficiency in use of delivered water; for Towaoc Area delivery requirement: 3.05 af/ac	Dove Creek area is higher and has 55 fewer frost-free days than the Towaoc Area. Both areas have sprinkler irrigation and no apparent opportunities for additional water savings.	BoR (14Jul2000), pp. 2-50, 2-53, 2-63 Dove Creek area is higher and	
Hay and pasture	Consumptive use: Colorado Irrigation Guide gives maximum for alfalfa as 1.6 af/ac and for pasture grass as 1.3 af/ac with 1.5 af/ac is used for modeling as average historical conditions and is amount assumed as transferable.		BoR (14Jul2000), p. 2-28	

DRAFT #3

Hay and pasture	Diversion requirement: supply to meet 98% of diversion requirement of lands for comprehensive development in Upper Gunnison Basin would be estimated at 157,000 acre-feet or an average of 3.46 af/ac. "With late-season water available from project operation, the water users would be expected to make curtailments in their excessive diversions in order to obtain improvements in crop varieties and yield."	Upper Gunnison Basin	Bo R (1964), p. 21 - 22	
Hay and pasture	Consumptive use: average seasonal use in Gunnison CO, in inches of water for alfalfa - 17.99 inches per acre (1.49 af/ac) over growing season of 4/16 - 9/7) and for pasture grass - 17.12 per acre (1.42 af/ac) over growing season of 4/16 - 10/8.	Lower Gunnison Basin	Colorado Irrigation Guide (1988) Subpart F - Table CO683.50m	
Hay and pasture	Diversion practice: average diversion of 7.9 af/ac over 17 years of record by larger ditches. The figure for diversion of 3.92 af/ac given in Phase 1 Study is noted as being "inconsistent" with practice. Consumptive use: .94 af/ac	East and Slate Rive sub-basins of Upper Gunnison Basin	Bureau of Reclamation (1996), pp. 53, 64	

General irrigation	Irrigation consumes approx. 460,000 af/year on about 233,000 acres irrigated or 1.97 af/ac irrigated.	Whole of Gunnison River Basin	Kuhn 2000, p. 36 and Crowfoot et al. 1998, p. 318	
Change from pasture to ponds	Consumptive use of 1.52 acft/ac; and dry up of .76 acres per .50 surface acre of pond.	San Miguel River	CO Water Court Division 4 - Case No. 98CW171; Nov. 1998	
Change from pasture to domestic	.75 acres consumes 1.13 acft or 1.50 acft/ac change for supply at 100 gpdc per persons with at 3.5 person household.	Leroux Creek, North Fork of Gunnison River	CO Water Court Division 4 - Case No. 98CW185; Jan. 1999	
Change from pasture to domestic and golf course	214.5 ac irrigated with rights totaling 20.83 cfs. In house use assumed at 300 gpd with depletions of 5%. Pond surfave evaporation (7.02 acft on 2.28 acres) 3.07 acft /ac of pond surface.	Dolores Creek trib. to Uncompahgre R; with additional aug. from Blue Mesa Res.	CO Water Court Division 4 - Case No. 98CW192; Jan. 1999	
Pasture	3.0 cfs for irrigation of 60 acres; 5.5 cfs for irrigation of 80 acres; .5 cfs for irrigation of 60 acres	Upper Cochetopa Creek	CO Water Court Division 4 - Case No. 98CW199; Jan. 1999	

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B Chronicle

; one damn drop 9/20/91

OWER gears up for all out fight to stop Rocky Point

by Marija B. Vader

"Our forefathers fought awful hard r freedom, and we'll need to continue hi."

— Bruce Cranor

"Destruction of a pristine area runk drivers would result from ,000 megawatt Rocky Point electric project proposed for r Park," said Bruce Cranor, r of the Taylor Park Trading

Cranor addressed members of ER (People Opposing Water t Raids) at its annual meeting day night.

The Rocky Point project, osed by Natural Energy urces Company's (NECO's) Miller, would be the second t hydroelectric generating plant U.S. The plan proposes to use electricity to pump water from r Reservoir to a planned oir on Matchless Mountain, Point Reservoir. Then, when mand and cost is at its ater would rush down rating electricity ct's owners.

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The evening meeting, intended primarily for gathering public input, will be from 7 to 10 p.m. at the Gunnison High School Auditorium.

"FERC should write a comprehensive river-wide plan," commented Butch Clark, chair of POWER. "Normally they don't. There are too many projects planned for the Taylor Park area. They should also look for alternatives such as conversation."

Clark also speculated that the power generated by Rocky Point is intended for the southern California area, and if that is true, the power plant should be built in southern California. "It's just not the right place or time for the project," he said.

Cranor cited a project built several years ago similar in size and scope to the Rocky Point Project.

"A lot of the people think they're going to make a lot of money, but the only people who made money were the bar owners," he said.

The construction equipment, in addition to the workers, engineers and support people will put a tremendous impact on already crowded roads. Steel towers hoisting power lines as large as anything in Colorado would carry the power out of the Taylor Park area.

Cranor also questioned the destruction of Taylor Park's ecosystem. The flushing of the water alone will stir up 50 years of silt in Taylor Reservoir.

"The flushing will eliminate the vegetation on shore that the fish depend on," Cranor said. "We'll lose the deep spawners, and a percentage of the trout will be killed."

The mountain [illegible]

may lose a primary habitat. "There's getting to be fewer and fewer places for elk to go to calve," Cranor added.

"We need to rally the community like it's never been rallied before," said Gerald Lain, POWER Steering Committee member. "The Boston Tea Party is nothing compared to what we should be doing to fight this project.

"We've got to care more. If we don't determine what our future will be, we will have no future," Lain said.

Duane Vandenbusche, professor of history at Western State College and ardent supporter of POWER, told the group his "truisms" regarding water, one of which is that the Colorado River is the most important river in the United States.

"The Colorado is the sixth largest river in the U.S. but it's the most important river in the U.S. — because it contains the only water in the southwest," Vandenbusche said.

The economy will determine the cost of water and where the people will live, and that factor will close growth in California, he predicted. Water fights will become all-out wars with states fighting each other and with themselves.

"These conflicts will make cowboys and Indians look like a Sunday picnic," Vandenbusche said.

He added that the water buffaloes along the Front Range are becoming frustrated due to the losses in court and their pocketbooks, and he called the Rocky Point proposal a "ridiculous blatant speculative effort."

"If we can win the fight here, we can win it elsewhere," he said. "Not one compromise; not one damn drop through the mountains.

"There was a time when the Western Slope was exploited by the Front Range, when the adage was 'what's mine is mine, and what's yours is negotiable,'" he said. "But that time is coming to an end, and Gunnison Country residents can win the fight."

HDR Engineering Phase I

1.3 STUDY OBJECTIVE

The objective of this Study is to identify and evaluate water resource management plans to enhance the water-based economy of the Study Area in an environmentally sound manner. Both structural and non-structural components have been examined. The purpose of the structural measures (such as dams, pipelines, and tunnels) is to develop additional water supplies consistent with the in-basin needs and the State's compact entitlements. The purpose of non-structural measures (such as enhanced water management through water exchange, reuse, and conservation) is to obtain greater environmental and economic benefits from the existing resource base.

One of the primary goals of this Study is to improve fisheries and recreational opportunities and to enhance public access to these activities. Other important goals are to provide for future agricultural, municipal, and industrial water demands and to provide additional flood protection within the Study Area.

Given the apparent inability of recreational and agricultural water users to pay for additional water development, other sources of revenue, including hydropower generation and potential out-of-basin water sales, were evaluated. This was done to identify very general options which, when combined with the preferred in-basin development plan, would result in a more comprehensive project with enhanced financial attractiveness. These options may require participation from electrical power entities or east slope water suppliers. This study has not speculated on the specific institutional relationships that might be involved. If these entities pursue a cooperative approach to project development, further study would be required to arrive at an equitable sharing of project costs and benefits.

More specifically, the Study objectives are as follows:

1. To identify in-basin opportunities for streamflow enhancement, such as low flow or late-season flow augmentation to improve existing fisheries;

2. To examine the physical and legal availability of water in the Study Area as well as future in-basin water demands (including water for streamflow enhancement);

3. To examine potential water and hydropower components in the Study Area;

4. To determine annual water yield, cost, and technical feasibility of both structural and non-structural alternatives available for development;

5. To make a preliminary assessment of the economic and financial feasibility of water development alternatives;

6. To examine the technical and financial feasibility of using hydropower and potential out-of-basin sale of water (that is, in excess of in-basin demands) to enhance the financial feasibility of in-basin water development components of the project; and

7. To select alternative in-basin water development plans for Phase II investigation.

The planning and design process for the entire project is carried out in phases, each phase culminating in a decision as to whether or not the particular component should continue on to the next phase. The present study consists of a Phase I Feasibility Study (prefeasibility) evaluation and is the first step in a complex process leading to construction of a water resource project. The steps in this process are illustrated in Figure 1.2 for a project which includes a storage reservoir. The Study has been conducted in sufficient detail to distinguish the major differences among alternative plans

and to assess, on a preliminary level, the viability of each alternative. Using the findings of this Study, critical aspects of the alternative plans can be selected for further investigation, including additional cycles of screening, public evaluation, and reformulation. Then, if the results warrant it, a more detailed study can be carried out to determine the economic and technical feasibility of the preferred plan(s).

Although delays arising from such factors as political controversy, financial obstacles, environmental considerations, or bureaucratic procedures are not entirely avoidable, the approach outlined above helps to streamline the process. It defers expensive detailed environmental evaluations, including certain requirements of the National Environmental Policy Act (NEPA) process, and design work until there is some degree of confidence that a component is technically, economically, and politically feasible. A key goal in this approach is to balance water resources development with environmental protection and recreational benefits.

1.4 STUDY PROCESS

This Phase I Feasibility Study is composed of 16 tasks, defined in Table 1.1 and shown as they interrelate in Figure 1.3. These tasks comprise more than 45 subtasks and cover the technical, public involvement, and management aspects of the Study.

The Study has been performed under the direction of the Authority, assisted by an Advisory Committee (AC) composed of 21 individuals representing a wide variety of interest groups, and by a Technical Steering Committee (TSC).

Dy

Upper Gunnison River Water Conservancy District

M E M O R A N D U M

TO: Board Members,
Upper Gunnison River Water Conservancy District

FROM: Tyler Martineau TM

DATE: October 27, 1992

SUBJECT: Results of October 26, 1992 Worksession.

Enclosed for the Board's review are the minutes for the board's worksession on October 26, 1992. Also enclosed is a copy of the proposed goals for planning the future of water development in the Upper Gunnison basin which were identified at the meeting.

275 S. Spruce Street • Gunnison, Colorado, 81230 • (303) 641-6065

WORKSESSION

October 26, 1992

The Board of Directors of the Upper Gunnison River Water Conservancy District conducted a worksession on October 26, 1992 in the Multi-Purpose Building at the Rodeo Grounds, Gunnison, CO 81230.

Board members present were: Robert Arnold, Ralph E. Clark, III, Susan Lohr, Ramon Reed, Mark Schumacher, Peter Smith, Doyle Templeton, William S. Trampe, and Pervis Vickers.

Others present were Tyler Martineau, Gary Tomsic, Lucy High, Paul Vadar, Kay Schipper, Chuck Brown, Steve Glazer, Marsha Julio, Richard Harris, and Laura Anderson.

1. Call to Order.

President Trampe called the meeting to order at approximately 1:15 p.m.

President Trampe asked the board members present how they wished to make decisions and handle record keeping during board worksessions. The board members agreed that the board would not make formal decisions, and would conduct its affairs solely by consensus during worksessions. The consensus of the board members present was that the board should make tape recordings of worksessions. The tapes should not become part of the official records of the district but should be used solely by staff to prepare written summary minutes of the worksession.

Ralph Clark suggested that the board maintain a list of interested parties who would like to be mailed copies of minutes of board worksessions.

2. Discussion of How to Plan the Future of Water Development in the Upper Gunnison Basin.

President Trampe suggested that the discussion of planning the future of water development in the Upper Gunnison Basin begin with consideration of "wet water" needs throughout the District.

Ramon Reed stated that a statement of purpose including goals is needed before discussing plan specifics. He also stated that a cooperative decision making process which involves the counties and towns in the basin is needed.

Susan Lohr said that an assessment of existing realities and limitations on water development is needed. There is no point in setting goals that can't be reached for some reason. She said we also need to determine what our legal needs and responsibilities are, *i.e.*, with respect to diligence.

President Trampe asked the meeting participants to suggest items which should be included in a statement of goals.

Ramon Reed stated that one goal should be the development of a basin wide plan. Ralph Clark agreed, stating that a comprehensive plan includes everything that you want

to do with water resources. Several meeting participants agreed that basic data on water use and ownership is needed and should be included in the comprehensive plan.

Ralph Clark stated that a goal should be to do whatever is necessary to keep water here in the basin. An additional goal would be to keep the options of the district open and not take any action which would foreclose future opportunities for the basin.

Susan Lohr asked what would be the scope of the plan, would it just cover Upper Gunnison District rights, or cover all water resources. Several meeting participants indicated that the scope of the plan should be broad, comprehensive, and should get everybody in the basin involved. Ms. Lohr suggested that a goal should be to not exclude any water resources or water user from the plan. Pervis Vickers stated that a goal should be to fight to hold and protect water within the basin.

Steve Glazer suggested that we would not be starting at ground zero with a new plan. The Phase 1 study has a lot of useful information that can be used. He said people not be blinded by the controversial aspects of that study. He stated that the district should be especially mindful of the costs to the community of perfecting decrees.

Mark Schumacher said that the board should look at how to perfect the Upper Gunnison decrees based upon a continuation of the Phase 1 study, and should focus on site-specific issues. Ramon Reed stated that the Phase 1 study is a useful tool but the district needs a comprehensive plan before a reservoir could be developed on Tomichi Creek, for example.

Susan Lohr said the district should be careful about creating future obligations for taxpayers. She also said the district needs to know what the legal alternatives are for protecting the district's water rights. Tyler Martineau stated that one of the most valuable assets of the district is the conditional storage and direct flow decrees that the district holds. As a part of any plan the district needs to determine all the possible avenues that are available for the perfection of those rights.

Ralph Clark stated that the district needs to address how to protect any excess water that may have been decreed to other water users in the basin.

Ramon Reed stated that a goal of the district should be to protect water resources for in-basin use. Ralph Clark suggested that the board look at in-stream flow issues, including recreation and navigation.

Susan Lohr stated that a goal associated with water development should be to minimize adverse impacts on others.

Ramon Reed stated that recognition of the public interest in water should be included as a goal.

Ralph Clark suggested that a goal should be to facilitate in-basin water transfers, so that it is easier for water users to get the water they need.

Gary Tomsic commented that the district should consider what kind of future the community wants to see developed in the area. The comprehensive plan should then strive to enhance that future. Ralph Clark suggested gathering up statements made by other entities to see what community policies and directions are.

Laura Anderson stated that a goal should be to perfect the conditional part of the refill water rights in Taylor Park Reservoir.

Steve Glazer suggested that the district should make new water rights applications in the East River valley, rather than waiting for someone else to file on the water first. He also stated that environmental needs as defined by the public interest need to be analyzed including wetland issues. A discussion ensued among Peter Smith, Susan Lohr, and several other meeting participants as to whether wetlands should be a factor in determining land uses and development. Bill Trampe said that there are members of the community who feel that private property rights are very important and should not be infringed upon.

Ralph Clark suggested the following goals: That no groundwater mining should occur, and groundwater quality should be protected. He stated that implementation of any water use or development measures should not provide a financial windfall or unfair cost to any resident of the basin. He said that direct beneficiaries of any project should pay the full load of the costs of development.

Steve Glazer stated that board members for the district should be elected.

Doyle Templeton stated that a goal should be to protect the greenbelt in the Gunnison valley.

Ramon Reed suggested and several other participants agreed that a list of the goals discussed should be put together and shared with other agencies and entities for their input. Tyler Martineau said that he would summarize the comments and provide them to the board members before the next scheduled meeting of the board for their review.

Mark Schumacher stated that the board should focus on proceeding with diligence on the district's decrees.

Several board members indicated that there is a need for basic information about water rights, water needs, and uses in the basin. The board discussed some approaches that might be used to gather data from water users in the basin. It was suggested that a goal of the district should be to keep ahead of water rights abandonment issues in the basin.

The meeting participants suggested that the next worksession be scheduled for November 30, 1992.

3. Adjournment.

President Bill Trampe adjourned the meeting at 3:40 p.m.

DRAFT 10/27/92

PROPOSED GOALS FOR PLANNING THE FUTURE OF WATER DEVELOPMENT IN THE UPPER GUNNISON BASIN

The following goals for planning the future of water development in the Upper Gunnison basin were identified at a worksession conducted by the Board of Directors of the Upper Gunnison River Water Conservancy District on October 26, 1992:

* To develop a comprehensive basin-wide plan for water resource management and development in the Upper Gunnison basin.

* To establish a broad scope for water resource planning efforts. To not exclude any water resources or water user from any plan that is developed.

* To determine what kind of future the community wants to see developed in the area. To develop a comprehensive plan which will strive to enhance that future.

* To develop a good water resource data base including information on water rights, water use, water quantity, and water quality.

* To develop a planning process that recognizes the legal, and economic realities present in the basin.

* To determine what the legal alternatives are for protecting the district's water rights.

* To identify water needs throughout the basin.

* To keep water here in the basin. To fight to hold and protect water within the basin. To protect water resources for in-basin use.

* To facilitate in-basin water transfers, so that it is easier for in-basin water users to get the water they need.

* To keep the options of the district open and not take any action which would foreclose future opportunities for the basin.

* To minimize adverse impacts on others which could result from water resource management and development activities.

* To perfect the Upper Gunnison District's water rights based upon a continuation of the Phase 1 study. To focus on site-specific water development issues.

* To perfect the conditional part of the refill water rights in Taylor Park Reservoir.

* To recognize the public interest in water.

* To protect the greenbelt in the Gunnison valley.

* To recognize the dependency of many persons and organizations on their private property rights in land and water in order to make a living.

* To be cautious about creating future obligations for taxpayers.

* To avoid a financial windfall or unfair cost occurring to any resident of the basin as a result of water resource management or development.

* To require the direct beneficiaries of any project to pay the full load of the costs of development.

* To protect groundwater from groundwater mining.

* To protect groundwater quality.

* To protect any excess water that may have been decreed to other water users in the basin.

* To protect water rights from abandonment in the basin.

REGIONAL WATER PLANNING HANDBOOK

New Mexico Interstate Stream Commission

DECEMBER, 1994

I.
PURPOSE OF REGIONAL WATER PLANS

Water planning, the budgeting of an essential and finite resource, is of course valuable in itself. In addition, these regional water plans may have specific applications which will affect how they are developed.

As has been done in other western states, New Mexico may decide to use the regional water plans as a basis for a state water plan, which can in turn influence litigation, water development, and legislation. Thus, the plans need to be written so that they can be merged into one document. To fulfill this purpose, the plans should have a uniform approach to the extent possible.

The Commission strongly encourages regions to negotiate solutions to local water problems.

The State Engineer's mandate is to supervise the measurement, appropriation and distribution of the state's waters. The State Engineer's mandate includes considering the public welfare of the state.[1] Public welfare and conservation considerations may differ depending upon local conditions and factors, as well as impacts state wide.

Elements of regional water plans may contain relevant and substantive elements for use by the State Engineer in "public welfare" and "conservation" determinations in actions before the State Engineer within the regional planning area or affecting the area. These elements in a regional water plan would not necessarily be determinative but rather part of a larger set of considerations that are applicable to a given action.

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1 N.M. Stat. Ann. §72-5-5.1, §72-5-6, §72-5-7, §72-5-23, §72-12-3, and §72-12B-1

Broad public participation is necessary in the development of regional water plans to enhance their acceptance locally and to increase their potential contribution to state decision making in regard to "public welfare" and "conservation" determinations.

The regional water plans should not be considered substitutes for local zoning and platting decisions made by the appropriate governmental authority. Local zoning decisions shall be given due consideration in regional water planning in determining what "public welfare" interests are for each particular jurisdiction.

New Mexico statutes provide that, for a state to prefer its own citizens over an out-of-state appropriator, there must be a showing of need within the state and the feasibility of supplying that need from particular sources.[2] Water planning by region may well be used as evidence on such issues. Planners should be aware that assertions of need and feasibility of supply may be tested in a court setting, and should therefore be reliable, specific, technically sound, and based on generally acceptable hydrologic and engineering principles. Bare or vague claims of growing water use, or unsupported allegations of rights to, or hopes for, new supply for the region are not useful for sound water planning.

Assessment, as used herein for regional water planning purposes, is best defined by the following:

1 inventory of quantity and quality of water resources;

2 population projections and other water resource demands under a range of conditions;

3 determination of the manner in which water requirements for the projected demands might be met with management and conservation of water supplies available to the region under existing rights, water supplies, interstate agreements, and court decrees.

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2 N.M. Stat. Ann. §72-12B-1 (1985 Repl. Pamp.)

II.
REQUIRED ASSUMPTIONS

All planning shall be done within the following parameters. Exceptions to this are possible, but if an exception is to be made, regional water planners must set forth facts and justification sufficient to indicate that conditions exist within the region to consider such an exception.

1. An adequate plan for public participation shall be a prerequisite for regional water planning.
2. Plans shall be written on the assumption that New Mexico and federal water law will not change.

   In the section entitled "Suggested Changes in New Mexico Law" regions are invited to propose changes to New Mexico water law. The more specific these proposed changes are, the more helpful they will be. Such proposed changes should not be relied upon in plan recommendations, although the reasons and effects of changes should be presented to justify the recommended change.
3. Plans shall presume all future water needs must be met by management of the water supply currently available to the region. If that is not feasible, as supported by analysis in the planning report, other sources of supply may be proposed if feasible in economic and engineering analysis.
4. Water conservation should be the first item considered among feasible water supply alternatives in the management of water to meet current and future water demands. Regional water plans should demonstrate what portion of the future water demand could be met from projections of conserved water. Regional water plans should outline the responsibilities and authorities of each local governing body.
5. Population projections shall be based on the Bureau of Business and Economic Research (BBER) model, with any deviations from that model justified. BBER projections and any exceptions shall be reviewed within the public participation program and with Commission staff.

6. Analysis of water use shall be broken out into the following categories:

   A. PUBLIC WATER SUPPLY:

   All water utilities, publicly or privately owned, which have at least 15 service connections or regularly serve an average of at least 25 individuals daily at least 60 days out of the year. (Safe Water Drinking Act, 1986.) Water used for the irrigation of self-supplied playing fields, golf courses and parks or to maintain the water level in ponds and lakes owned and operated by a municipality which is a public water supplier is also included in this category.

   B. DOMESTIC:

   Self-supplied residences which may be single family homes or multiple housing units with less than 25 occupants, where water is used for normal household purposes such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens supplied from a domestic source. Also includes water used by that segment of the population which is served by small community water systems for which reliable population and water use data are unavailable.

   C. IRRIGATED AGRICULTURE:

   All diversions of water for the irrigation of crops grown on farms and ranches.

   D. LIVESTOCK:

   Water used to raise livestock, maintain self-supplied livestock facilities, and provide for on-farm processing of poultry and dairy products, and evaporation from stock tanks.

   E. COMMERCIAL:

   Self-supplied businesses (e.g., motels, restaurants) and institutions (e.g., schools and hospitals), public or private, involved in the trade of goods or provision of services. Self-supplied greenhouses and nurseries primarily engaged in selling products to the general public which are produced on the same premises from which they are sold.

F. INDUSTRIAL:

Self-supplied enterprises engaged in the processing of raw materials (organic or inorganic solids, liquids, or gases) or the manufacturing of durable or nondurable goods. Water used for the construction of highways, subdivisions and other construction projects is also included.

G. MINING:

Self-supplied enterprises engaged in the extraction of minerals occurring naturally in the earth's crust; solids, such as coal and smelting ores; liquids, such as crude petroleum; and gases, such as natural gas. Water used for oil and gas well drilling, secondary recovery of oil, quarrying, milling (crushing, screening, washing, flotation, etc.) and other processing done at the mine site, or as part of a mining activity is included as well as water removed from underground excavations and stored in, and evaporated from, tailings ponds. Mining also includes water used to irrigate new vegetative covers at former mine sites which are being reclaimed. Mine dewatering is included as a use if said water is consumed in some manner such as evaporation ponds. It does not include the processing of raw materials such as smelting ores unless this activity occurs as an integral part of, and is physically contiguous with, a mining operation.

H. POWER:

All self-supplied power generating facilities.

I. RESERVOIR EVAPORATION:

Net evaporation from man-made reservoirs, not including stock tank evaporation.

J. FISH, WILDLIFE AND RECREATION:

All self-supplied playing fields, golf courses and parks, water needed to hold a minimum water level in reservoirs for recreation, fish and wildlife, water used for crops grown for wildlife consumption and self-supplied recreation parks, campgrounds and fish hatcheries.

III.
GENERAL GUIDELINES

In developing the regional water plan, and determining what information is relevant to what level of detail, planners should keep the following things in mind:

1. The heart of the exercise is for the region to provide enough information, analysis and documentation to answer the following questions.
   a. What is the region's available water supply?
   b. What is the region's future water demand?
   c. How will the region undertake to meet demand with supply?
2. Not all items of information in the Regional Water Planning Template apply in every region. Planners should not spend time and money including information that addresses matters that are not applicable to their region.
   For example, if a region does not include Tribal or Pueblo holdings, no information in categories related to such holdings would be included in the plan.
3. The amount of detail included in the plan concerning any category should be reasonably related to the importance of that factor to water planning.
   For example, the Regional Water Planning Template calls for information concerning the location of present water uses. That request does not require a full-fledged hydrographic survey, but does call for a compilation of existing data and documentation on that subject.
4. In assessing what categories are necessary and what should be included, planners shall focus on the following:
   a. Location, quality, and extent of the current water resource supply.
   b. Current water use, including specific categories of use (See II.6.).

c. Projections of future water use, quantified.

d. Impacts of conservation on water use, including i.) the suitability of conservation measures for each region, and, ii.) the projected water savings for each measure evaluated.

e. Source and quality of future water supply including i.) cost effectiveness, technical feasibility, and social and political issues of using the identified future water source, and ii.) potential for water supply contamination.

f. Current water rights status.

g. Methods used to solicit public involvement in developing the water plan.

The final report shall contain an executive summary that includes the information in items a. through g. above, any other summary information, and the conclusions and recommendations of the report.

5. In determining available water supply, planners must consider both hydrological and legal limitations.

For example, if water must be delivered downstream under an interstate compact, that water cannot be considered as supply available for the region.

6. All plans shall be developed in consultation with Commission staff.

7. A critical element of the regional water plan is public participation in the planning process. Planners must demonstrate that reasonable and diligent efforts have been made to reach the public so as to invite, value and reflect public comment. These efforts may be tailored in their specifics to fit the particular regions. All regional plans, however, must reflect:

a. Identification of stakeholders in the planning process, and efforts to make specific invitations to those stakeholders to participate. A list of these entities, together with any support or refusal letters from them, shall be part of the plan's documentation.

b. Public meetings of a number, time and place calculated to maximize the ability of the public to participate. Notice of these meetings must be widely disseminated, including specific notice to entities on the list generated under a., above. The public meetings shall occur while the plan is being developed.

c. Post-plan comment period. When a draft plan has been completed, it must be made available to all entities identified on the list. Copies of the draft plan must also be made available at public places, and notice of their availability promulgated. After a sufficient time of study of the draft, public meetings shall be held to receive comments on the draft.

LEGISLATIVE REQUIREMENTS FOR REGIONAL WATER PLANNING

Section 2 of the Act[3] provides as follows:

"C. The Commission is authorized to make grants or loans of funds for the purpose of regional water planning. Prior to approval of any proposal by a region for planning funds under this section, the Commission shall develop criteria for evaluating such proposals. These criteria at a minimum shall provide for:

(1) identification of the region requesting planning funds and why it is hydrologically and politically an appropriate applicant;

(2) use of an appropriate planning process including opportunities for participation by those Indian tribes located within the various regions of the state;

(3) reasonable proposed costs and time tables for completion of the planning process;

(4) appropriate provisions for notice, review and comment where applicable;

(5) adequate review of potential conflict with laws relating to impact on existing water rights;

(6) adequate review of water conservation and the effect on the public welfare; and

(7) identification of sources other than the Commission for funding of the proposed regional planning process.

D. A water planning region eligible for funding under this criteria is an area within the state that contains sufficient hydrological and political interests in common to make water planning feasible. The state as a whole shall not be considered a water planning region for purposes of this section.

E. No entity shall be made a part of a proposal for planning funds under this section without its consent.

F. No funds shall be granted under this act to any party or parties that are not within a water planning region. Whether a proposal for funding falls within a water planning region shall be determined on a case by case basis by the Commission after consultation with the state engineer and consideration of the following:

(1) whether the source of water and the potential place of use of the water are located within the same hydrologic basin; and

(2) if there is more than one party and the parties are requesting funds on a joint basis, whether the parties have demonstrated political and economic interests in common by entering into a binding intergovernmental agreement for carrying out the planning process."

---

3 N.M. Stat. Ann. §72-14-44 (1993 Cum. Sup.)

IV.
REGIONAL WATER PLANNING TEMPLATE

The template for a regional water plan was designed to provide uniformity in developing regional planning documents. The Commission expects to use the plans to ensure an adequate supply of water for each region of the state. This objective will be enhanced if plans are based on the same format and assumptions and are comparable to one another. The template contains a listing of the topic headings for consideration and, where applicable, addressed by every regional planning entity.

Also, a Regional Water Planning Checklist is available for planners upon request to the Interstate Stream Commission. The checklist is organized to correspond with the Regional Water Planning Template. The checklist is not intended as a list of requirements. Rather, it is intended as a tool to help planners ensure that all pertinent considerations are addressed.

Executive Summary

The Executive Summary is likely to be the part of the plan which will be most widely read and disseminated publicly. The summary should therefore be a brief, clearly presented short version of the findings and recommendations of the plan, which could be read and understood separately from the fully documented version. It should contain a statement on public participation efforts and results, statements on water supply and water demand and the plan's final recommendation to reconcile the two.

- Description of planning process
- Findings
  - Water supply
  - Water demand
- Water plan alternatives
- Recommended water plan for the region

Introduction

The introduction should provide the reader with the following:

- Individuals involved in water plan development
- Previous water planning in the region
- The water plan's contents

Documentation of public involvement in planning process

- Interstate Stream Commission-sponsored water workshop
- Background summary of region prepared for public dissemination
- List of stakeholders and participants

Strategy chosen to maximize public involvement

- Use of the media
- Press releases
- Outreach effort tailored to specific communities
- Project time table
- Public meetings

Background information

a. Description of the region

- Location, boundaries
- Geography, landscape
- Climate
- Natural resources
- Major surface and groundwater sources
- Demographics
- Economic picture
- Land ownership & land use

b. Historical overview of water use in region

Legal issues

a. Water laws relevant to region
- state
- federal
- tribal

b. Federal legal issues
- Federal reservations
  - Indian reservations or pueblos
  - Other federal enclaves
- Federal environmental law issues
- Treaties
- Federal water projects

c. Water quality standards
- Federal
- State
- Municipal
- Tribal or pueblo

d. Relevant lawsuits
- Court decrees
- Pending adjudications

e. Water rights administration policies specific to the region
- Duty and consumptive use figures
- Ground water basin criteria
- Compact obligations

f. Special districts

g. Legal issues needing resolution

h. Local conflicts

Water resources assessment for the planning region

a. Water supply

- Surface water
  - Precipitation data
  - Drainage basins and watersheds
  - Streamflow data
  - Evaporation data
  - Surface water yields
  - Storage reservoirs and conveyance canals
    - capacity
    - evaporation
    - useful life
- Ground water
  - Geologic data
  - Hydrogeology data by aquifer
  - Well field data
  - Ground water yields by aquifer
    - Sustainable yields
    - Drawdowns by level of development

b. Water quality issues

- Assess quality of water sources
- Identify sources of contamination
- Assess feasibility of water quality management plans
  - Improving water and land-use practices
  - Water treatment alternatives
  - Wastewater treatment

c. Summary of water supply considering legal limitations

Water demand

a. Present uses

- Type, location and ownership of water rights
- Water rights by category of use
- Water diversions by category of use
- Water depletions by category of use
- Public water supply systems data
- Irrigation practices
- Conveyance losses
- Return flows
- Lake evaporation
- Riparian uses/instream flows

b. Future water uses by 40 year planning horizon

- Projected future demographics
  - Population
  - Future land use
  - Economic growth and jobs
- Projected water demands by category of use
- Future sources of water supply
- Projected changes in water supplies in region
- Management alternatives to increase supply
  - Changes to existing works
  - Replacement of existing facilities
  - Water banking
- Emergency contingency plans
  - Drought considerations
  - Flood considerations

c. Water conservation

- Conservation measures
- Suitability of each measure assessed for region
- Amounts and timing of water saved
- Effect on return flows
- Difficulty (including costs) and timing of implementation

d. Summary of present and future water demand

Water plan alternatives

a. Each proposed alternative should include a description of specific and practical means by which the supply of the region may be reconciled with the present and future demands of the region, as analyzed above. Alternatives should contain:

- Management component
- Water conservation component
- Water development component
- Infrastructure development component
- Water quality management plan

b. Each alternative should be analyzed on the following bases:

- Social issues and evaluation (public welfare)
- Political issues and evaluation
- Institutional evaluation

Evaluations

a. Each proposed alternative must be evaluated in accordance with the standards below:

- Technical feasibility
- Political feasibility
- Social and cultural impacts
- Financial feasibility
- Implementation schedule
- Physical, hydrological and environmental impacts

MONTROSE MORNING SUN
Montrose, CO
(Montrose County)
Weekly

Colorado Press
Clipping Service
CO 80204

An answer to the recent letter from Mark Schumacher appearing in the Gunnison Country Times and Crested Butte Chronicle.

Ralph E. Clark III 26/2/00

! Up front

Editorial 8D

The politics of water

The petition deadline for ballot initiatives in Colorado passed with little fanfare and one proposal that would have generated a great deal of debate and mudslinging was one that would have required the election of members of water boards, rather than the current appointive system that makes Boris Yeltsin look like a poster child of democracy.

Backers of the election push believe water boards are composed of good ol' boy water buffaloes who are unaccountable to the public they purportedly serve. Those opposing the idea of elections believe that water work is so technical and convoluted that demonstrated expertise is a prerequisite for serving. Both sides have good points.

O'piñon

By Ellen Miller

The recent upheaval at the Colorado River Conservation District was a long time in coming. Rolly Fischer, for all his talents and expertise, had been on the throne of secretary-engineer for 28 years, an almost unbelievable tenure given the highly political atmosphere in which he operated. He'd also grown accustomed to running his own show without having to explain what he was doing. Rolly did have his excesses and they went unquestioned by the board for years. But, eventually, egged on by a well-reported expose of river district activities by the *Grand Junction Daily Sentinel*, the board ousted him.

The Board of the district consists of 15 people, one from each of the 15 Western Slope counties that make up the district. Each is appointed by the county commissioners in each county. Some members serve a very long time, winning reappointment after reappointment to their three-year terms. Other counties will appoint somebody new every six years or so. Others, perhaps with a newly-elected commissioner who wants to change everything and everybody no matter what, switch directors around like musical chairs.

Conservancy district boards, on the other hand, are appointed by district judges who review applications from interested parties. Few applications are submitted, so candidates recruited by the sitting board and already in tune with the existing agenda usually are selected. Again, there's no public involvement. After all, the water policy is boredom punctuated only by tedium so who in her or his right mind would even want the job?

But the issue of elect or appoint isn't the burning question. Water boards almost always operate in a shroud of secrecy, retreating into "executive sessions" whenever a member of the public, or God forbid, a reporter, shows up to a meeting. They love to use the litigation exception to the state open meetings law as justification for this, and it's a big enough hole to drive a water tender through.

Elected boards don't act much better. School boards, elected everyplace, meet in secret almost as much as water boards do. Touting personnel or litigation, which conceivably could cover just about any subject, the boards slam the door on accountability. When the heat gets turned up, it isn't the board that pays. Nope. It's the city manager or county manager or water secretary-engineer who takes the fall. Business returns to normal, with the public still shut out.

Colorado's legislators need to put some real teeth into the opening meetings laws and provide for recall of offending boards. The method of board selection doesn't matter so much as conducting the public's business in public. What a concept. And if they don't, get out the recall petitions and toss a few of the offending boards out. Sooner, rathe than later, they'd get the point. A recall election is a good slap upside the head.

And that's life in the West.

Ensuring the Common for the Goose: Implementing Effective Watershed Policies

Hanna J. Cortner[1] and Margaret A. Moote[2]

Abstract.—Addressing public and scientific concerns about human impacts on long-term ecological sustainability will require new approaches to resource management. These new approaches, which place considerable emphasis on management on the landscape or watershed scale, stress holistic and integrated science, meaningful public involvement to reflect changing social goals and objectives, collaborative decisionmaking, and flexible and adaptable institutions. New policies that incorporate ecological understanding as well as promote democratic ideals will be required. Five guidelines can assist in designing an effective policy framework in which watershed management makes a significant contribution to the goal of long-term ecological sustainability. They include: integrate the political from the outset, build bridges to citizens, reexamine laws, rights, and responsibilities, strengthen administrative capacity, and look beyond the watershed.

Introduction

> The law locks up both man and woman
> Who steals the goose from the common
> Buts lets the greater felon loose
> Who steals the common from the goose
>
> —Anonymous English poem

Public and scientific concerns about human impacts on long-term ecological sustainability have prompted serious scientific and political reconsideration of the requirements for effective natural resource management. It is increasingly recognized that not only must we focus on the potential harm that can be done unintendedly to discrete ecological units, but we must also focus on issues surrounding the integrity and stability of the larger common; the landscape, ecosystem, or watershed. Politically this means designing more effective policies that incorporate ecological understanding as well as promote democratic ideals of equality, liberty, popular sovereignty, and equity.

Many of our traditional approaches to natural resource management are no longer adequate to meet tomorrow's challenges, and these approaches have come under severe criticism. In the United States, for example, implementation of current regulatory regimes for clean air and water are said to have created a "pathological cycle of regulatory failure, crisis, and controversy" (Lazarus 1991, p. 146). Natural resource policies are said to be characterized by a "pathology of natural resource management" (Holling and Meffe 1996). Many water, timber, grazing, and mining policies have been termed the "lords of yesterday," i.e, policies that while outmoded continue to exert tremendous influence (Wilkinson 1992). These policies have often had quite devastating effects not only upon the landscape, but upon democracy as well (Cortner and Moote 1999; Ingram and Wallace 1997; Klyza 1996). Thus, new approaches to natural resource management are increasingly being formulated and applied.

A central goal of new ecological approaches is usually long-term ecological sustainability, i.e., maintaining ecological attributes and functions into perpetuity, therefore ensuring that future societies enjoy the same ecosystem values that we do today. Unlike traditional resource management, the first priority of ecosystem management is conserving ecological sustainability; long-term maintenance of ecosystem integrity, productivity, and resilience; levels of commodity outputs are adjusted to meet that goal (Christensen 1996; Grumbine 1994; Wood 1994). Commodity production is considered a secondary byproduct, much like interest on capital (Brooks and Grant 1992). Ecosystem management stresses holistic, integrated science, meaningful public involvement to reflect changing social goals and objectives, collaborative decisionmaking, and flexible and adaptable institutions (Cortner and Moote 1999).

Watersheds play an important role in ecosystem management, and the search for new management paradigms has brought a resurgence of interest in watersheds and watershed management, broadly defined. Watersheds, it is argued, are natural, logical organizing units for land use planning and ecosystem analysis. In many areas of the United States watershed-based organizations are experimenting with collaborative and inclusive decisionmaking processes as part of an ecosystem approach (Natural Resources Law Center 1996; Yaffee et al. 1996; Toupal and Johnson 1998; Weber 1999). Watershed-scale management recognizes the interconnections of upstream and downstream areas, not only in terms of hydrology and

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IGURE 4.1 Areas studied by the committee.

hese cases illustrate not only a diversity of participants and effects, ut also greatly varying political and social environments. In exam- ıing the cases the committee used the evaluation system described arlier in this chapter and summarized in Table 4.1.

To gather information and stimulate discussion, the committee ıet informally at each case study site with representatives selected ·om a range of interests—agriculture, water agencies, urban plan- ers, environmental groups, local tribal populations, and other mi- ority interests as appropriate (see Appendix B). The committee ncouraged its guests to participate in frank discussions about the eal and potential effects of water transfers on the people of their tates and regions, with the goal of developing an accurate impres-

TABLE 4.1 Factors to Consider When Assessing Potential Water Transfers

Type of Transfer

Change in ownership
Change in point of diversion
Change in use
Change in systems operation
Out-of-basin diversion

Primary Process for Transfer

Voluntary
Involuntary

Primary Market Forces for Transfer

Government
- Local
- State
  - Executive
  - Legislative
  - Judicial
- Federal
  - Executive
  - Legislative
  - Judicial

Affected Parties

Rural communities
- Support services
- Erosion of tax base
- Loss of natural resource base

Agriculture
- Remaining water users
- Reallocation of rights

Ethnic communities and Indian tribes
- Ethnic communities
- Indian communities
- Agricultural maintenance and expansion
- Other

Environment
- Instream flows
  - Recreation uses
  - Fish and wildlife
  - Hydroelectric power
- Water quality
  - Damages to water users
  - Human health
  - Ecosystem effects
- Ecosystem protection
  - Endangered species
  - Wetlands
  - Riparian habitat
- Estuaries

Urban interests
- Intrastate transfer constraints
- Tax-exempt status changes

Federal taxpayers
- National economic concerns
- Windfall profits

Other water rights holders
- Junior rights
- Senior rights
- Loss of flexibility

Nature of Effects

Economic (national/regional)
- Lost revenue
- Lost opportunities
- New revenue

Environmental
- Instream/fish and wildlife
- Recreation
- Water quality
- Wetlands

Social
- Rural communities
- Municipalities
- Other

sion of the various scenarios. The committee supplemented its interviews with reviews of the appropriate literature and the expertise of individual committee members. The case study approach has both strengths and flaws. Its greatest strength is the honesty of the discussions; its main weakness is a necessary brevity and lack of depth.

Table 6.1 Development of Criteria for Evaluation

Sectors	Criteria	Indicator Impacts
Ft. Lyon System Operations	Shareholders' costs and property values, timing of deliveries, property rights of potential sellers, water quality.	1. Number of irrigated acres 2. Water value 3. Operation cost
Regional Economy	Finances of local governments, economic opportunity, local business.	1. Property tax/sales tax revenue 2. Local income/spending 3. Employment
Regional Population and Communities	Effects on institutions, consideration of conflict, political acceptability, out-migration effects.	1. Loss of population segments 2. Internal conflict 3. Stress related behavior
The Natural Physical Environment	Endangered species, wetlands, value of resources, recreation resources.	1. T and E, wetlands, habitats* 2. Recreation opportunities 3. On-farm lands
Legal Considerations	Arkansas River Compact, no injury to water rights, water quality standards, costs of litigation.	1. Return flows 2. Water quality changes 3. Transaction costs
State and Local Administration	Practical implementation and management scheme, off-setting mitigations, local self-determination, local infrastructure	1. Government implementation costs 2. Local control 3. Impacts on infrastructure

*T and E: threatened and endangered species

Ft. Lyon Study

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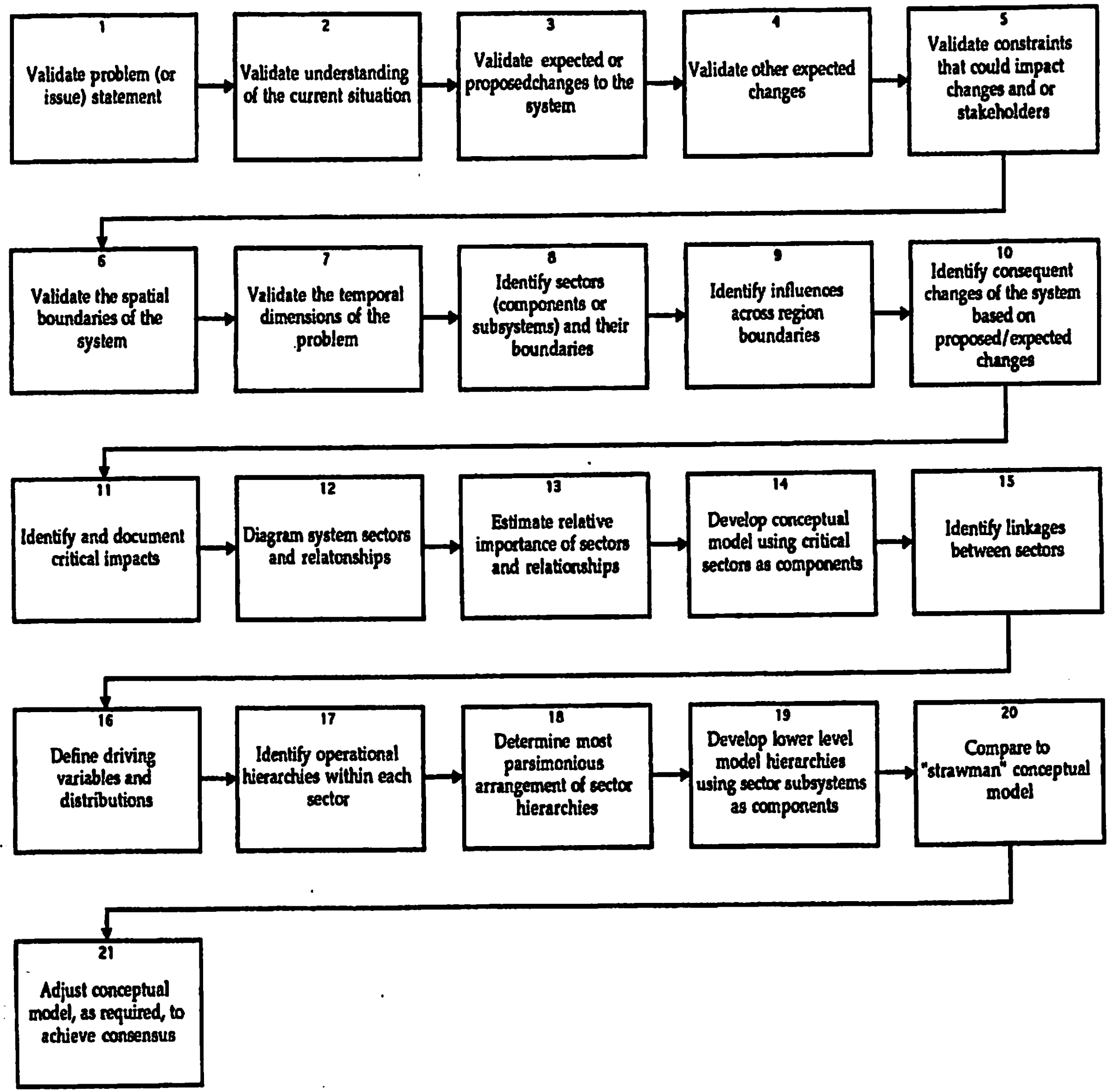

Blue Book

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2001 Crop Wheat, Barley and Oats Loan Rates

2001 LOAN RATES FOR MONTROSE COUNTY:

WHEAT:	$2.58 per bushel
BARLEY:	$1.90 per bushel
OATS:	$1.29 per bushel
CORN:	$2.21 per bushel

DEADLINES: March 31, 2002 Wheat, Barley, and Oat Loans
May 31, 2002 Corn and Grain Sorghum Loans

Spouse Signature Requirements

A husband and wife may sign for each other unless written modification to the contrary has been filed in our office. Exception to this rule is that a spouse may not execute a power of attorney for the other party.

Payment for Grazed 2001 Wheat, Barley, or Oats (Graze-Out)

The Agricultural Risk Protection Act of 2000 (ARPA) provides for GRAZE-OUT payments instead of loan deficiency payments (LDPs) for the 2001 crop year. Only eligible producers who elect to use acreage planted to wheat, barley, or oats for the grazing by livestock and agree to forgo any other harvesting of the commodity on this acreage during the 2001 crop year.

Eligible producers are those producers who are eligible for marketing assistance loans and LDPs. Producers in the AMTA program.

Application for GRAZE-OUT begins on the first day of mechanical harvest as determined by COC and ends on August 31, 2001.

Deadlines for AMTA Programs

AMTA provisions include various signature deadlines and other requirements that producers must meet to receive program benefits. Failure to comply results in the loss of benefits for a fiscal year. When producers fail to timely enroll farms or acreage into PFC following a farm reconstitution or CRP-1 expiration, PFC or CAB acreage is permanently reduced to zero. August 1, 2001 is the deadline to sign PFC contracts and all other documents necessary.

LDPs for Contract Commodities Only

The Agricultural Risk Protection Act of 2000 provided LDPs to producers who produced a 2000 crop contract commodity on a farm not covered by PFC. That authorization was for the year **2000 ONLY.**

Designation by Landowner Method of Division

Whenever cropland on a farm changes ownership either by sale or gift, the seller and buyer (transferor and transferee) may request to designate where the Production Flexibility Contract acres will end up. Any such request must be in writing, signed by both parties to the land transaction, and filed with the Farm Service Agency office before the farm reconstitution is approved. If no request for a designation is made, we will divide the PFC acres as they are presently carried in our farm and tract records. If the designation by landowner method interests you, be sure to mention it when you report your land ownership changes to us.

2001 Acreage Reports

July 15, 2001 is the deadline to report your 2001 planted acreage. A crop acreage report is required to be filed by producers who:

* **want to be eligible to receive a commodity loan or LDP**
* have a CRP contract
* have planted a fruit or vegetable (FAV) crop on farms with a PFC contract
* want to be eligible to receive NAP benefits and/or possible disaster program benefits in the event of a natural disaster

An acreage report can be filed by an owner or operator. The producer's shares must be recorded the way the crop is actually shared.

Producers who submit a crop acreage report for a crop after the July 15 crop reporting deadline are subject to the late-filed acreage reporting provisions. Visual evidence of crop residue is required and a $20 fee.

Lamb Meat Adjustment Assistance Program

Farmers are eligible for payments under LMAAP when feeder and slaughter lambs sold or slaughtered between August 21, 2000 and July 31, 2002 are owned for at least 30 days prior to being marketed. LMAAP pays $3 per head for feeder lambs and $5 a head for slaughter lambs. Payments have been made. If you did not receive a payment, please contact this office to find out why. If you have receipts that have not been submitted, please do so at this office.

July 31, 2001 is the deadline for Year 2 LMAAP sign-up.

2000 Crop Disaster Program

The Crop Disaster Program provides financial assistance to farmers who are eligible for compensation for crop losses directly attributed to adverse weather and related conditions. Producers who have suffered a 35% loss of any crop because of adverse weather and related conditions could qualify. Please call this office with any questions and for more information.

USDA Farm Service Agency

"A Partnership in Conservation"

Measuring Services Available

Measurement service is available from FSA at a fee of $20 for the first hour and $5 for each additional half-hour. Field acreages as well as bin amounts can be measured. Exact acreages are important, especially when considering there is no tolerance on the planting of fruits and vegetables.

Direct Deposit

The Debt Collection Improvement Act of 1966 (DCIA) requires that federal payments to a recipient who becomes eligible for the type of payment on or after July 26, 1996, shall be made by Electronic Funds Transfer (EFT) direct deposit.

FSA mails out a notice of the payment made.

Producers are reminded to notify the Farm Service Agency of any changes in banks, bank accounts, or addresses so the payments are not lost.

Farm and Producer Changes

Producers must notify the Farm Service Agency office of any changes in interest within 30 days of the change. These changes include change of ownership or interest in farm ground, change in operator and change in land use.

Changes in shares for the AMTA contracts must also be reported to this office each year.

USDA Natural Resources Conservation Service

"A Partnership in Conservation"

USDA Provides $30 Million Dollars to Protect Farmland

Lakewood, CO—Former Agriculture Secretary Dan Glickman made available $30 million to help communities purchase conservation easements to protect precious farmland. Provisions in the Agriculture Risk Protection Act of 2000 provided all of the monies used to fund this Farmland Protection Program's (FPP) sign-up. *NRCS is accepting requests for proposals until March 8, 2001 and should be sent to 655 Parfet Street, Room E200C, Lakewood, CO 80215 c/o State Conservationist.*

"We must treat the land as our most precious commodity," said Glickman. *"As our cities continue to grow into neighboring rural areas, more farmland is in danger. Once developed, productive farmland with rich topsoil will be lost forever."*

"This money was much needed," said Dennis Alexander, Assistant State Conservationist and FPP Program Manager. *"It's common knowledge that development is rampant across the country, and Colorado is no different.* The latest National Resources Inventory reveals that in Colorado more than 112,400 acres of land has been developed (converted from non-urban to urban) between 1992 and 1997 *(a substantial amount of land converted to development, urban, in Colorado is due to an increase in small ranchettes and other developments, where only a portion of the land is classified as urban using NRI criteria).* This is equivalent to 22,480 acres per year.

To participate in USDA's Farmland Protection Program, landowners agree to limit the use of their land for nonagricultural purposes and have pending offers for acquisition of agricultural conservation easements.

For additional information regarding the FFP program, please contact your local NRCS office, located in the USDA service center that serves your county.

USDA Receives more than $300 Million in Requests for the Farmland Protection Program

Lakewood, CO—The Natural Resources Conservation Service (NRCS) in Colorado ended its sign-up period for the Farmland Protection Program (FPP) on March 8. Colorado received eight proposals for ten farms totaling some $3.8 million. Of all the states requesting FPP funding, Colorado submitted to the Department the third largest number of proposals. *It's always been a popular program for Colorado,"* said Dennis Alexander, FPP Program Manager. *"We have a lot of people who want to preserve the natural resources within the state and want to protect them from development. This program is perfect for them."* Although USDA received more than $300 million in requests for the program, there is only $17.5 million available.

FPP is a program designed to help purchase conservation easements to protect important farmland. To participate in USDA's Farmland Protection Program, landowners agree to limit the use of their land from nonagricultural purposes, and they must have pending offers for acquisition of agricultural conservation easements.

Colorado's proposals seek funding to protect ten agricultural properties, totaling 2,915 acres and target areas including the west slope, the Gunnison and San Luis Valleys and land along the front range. *"These proposals exemplify the high levels of collaboration among public and private sector groups for successful farmland protection,"* said Gary Finstad, Resource Conservationist, Lakewood, CO.

Proposals will be ranked before they are sent to NHQ for final funding selections. An announcement is expected by mid-June. Colorado's proposals seek a total of $1.5 million.

USDA Releases Revised National Land-use Trends Analysis

Lakeview, CO—The U.S. Department of Agriculture

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USDA Natural Resources Conservation Service *"A Partnership in Conservation"*

recently released a revised National Resource Inventory (NRI) that outlines our nation's land-use trends. NRI is a statistically based survey that has been designed and implemented using scientific principles to assess conditions and trends of soil, water, and related resources on non-Federal land in the United States.

NRI data is tracked, gathered, and categorized annually while trend analysis is published every five years. *"We've been producing NRI reports since 1982 and have released five reports,"* said Cameron Loerch, NRCS State Soil Scientist, Colorado. *"The information we get from these reports are vital to land-use planning."*

Information available through the inventory describes the rate land is being developed across the country. The pace of development is estimated at 2.2 million acres a year in the five-year period between 1992 and 1997, more than 1-1/2 times that of the previous ten-year period, 1982-92 (1.4 million acres a year).

The revised 1997 NRI also includes additional information on wetlands. It indicates that 101,000 acres of wetlands were lost each year nationally, on the average, from 1992-97, and nearly 69,000 acres were gained for an overall average annual net loss of 32,600 acres per year due to all causes, including conversion for development, agriculture, and forestland.

The report not only provides national statistics but also statewide figures. It cites that in Colorado, more than 112,400 acres of land has been developed (converted from non-urban to urban) between 1992 and 1997 *(a substantial amount of land converted to development in Colorado is due to an increase in small ranchettes and other developments where only a portion of the land is classified as urban using NRI criteria).*

"This information is vital," says Stephen Black, NRCS State Conservationist, Colorado. *"It allows us to track our progress, predict future outcomes, and strategies for desired results."*

The revised report also shows that over the last 15 years (1982-1997) the average soil erosion in Colorado has dropped 21 percent, but there is still a desperate need for conservation practices. *"As an average this is good,"* Black goes on to say. *"Colorado farmers and ranches deserve a lot of credit for the decrease. The sound conservation practices they implement are working. Excessive erosion due to wind, however, continues to be a serious problem, so there is work yet to be done."*

Other figures the report cites are that approximately 34% of the cropland in Colorado is irrigated, and 42% of the pastureland is irrigated. The total land in Colorado that is irrigated is 3,458,800 acres.

The Natural Resources Conservation Service in cooperation with the Iowa State University Statistical Laboratory conducts the NRI, using more than 800,000 scientifically selected nationwide sample sites. It provides data on land cover and use, soil erosion, prime farmland soils, wetlands, habitat diversity, selected conservation practices, and related resource attributes.

Data collected in 1997 enable an analysis of trends extending over 15 years. NRCS is currently working cooperatively with Iowa State University to provide new NRI data that will cover the period 1982-2000. These results will be announced in early 2002. The agency is implementing an annual inventory process as well as working to develop a multi-agency integrated inventory approach.

Shavano Soil Conservation District *"A Partnership in Conservation"*

Board Elects New Officers

The Shavano Soil Conservation District recently accepted board member Tom Grett's resignation from the office of Vice President. To complete the terms of office Fred Miller was elected to remain President, Larry Denham was elected to Vice President, and Steve Hale as Secretary-Treasurer.

Work Experience for Girls

Where were your daughters on April 26, 2001? Hopefully, they were experiencing a working environment like my daughter, Georgianna, was.

The fourth Thursday of April has officially been marked as "Take Your Daughter to Work Day." It was created by the Ms. Foundation for women after two years of research in hopes to help girls realize their potential, build self-esteem and see their value in the work place. For the last few years Shavano Soil Conservation District and NRCS have supported this valuable education experience.

Cyndee Feske's daughter Georgianna Radwell stuffing packets for the fourth grade Water Festival.

The Ninth Annual Children's *Water Festival* Educates Fourth Graders

The Ninth Annual Children's Water Festival was held Tuesday, May 8, 2001 at Baldridge Park. Fourth graders from Montrose and Olathe (including home schoolers) gathered to spend a day learning about water resources. The Shavano Soil Conservation District sponsored the event in cooperation with the Montrose County School District RE-1J, Over 430 students attended along with approximately 60 presenters, volunteers, and staff including 17 FFA students who help with setup and guiding the students throughout the day.

Barb Cencich, Soil Conservationist of NRCS and Cyndee Feske, Education Coordinator of Shavano Soil Conservation District, conduct classroom presentations two weeks prior to the festival to give students an idea of what to expect and help familiarize them with terms used by the present ers. The Water Festival is held every year to help educate kids on one our most precious resources—WATER. There were 16 stations that represented fourteen companies. Two stations were geared as break stations yet had the kids actively learning. One break station "Water Wizard," was a test of knowledge on water conservation with rewards of skittles and lemonade. This station was led by Mike Johnson, Janelle McEnanz, Achley Simpson, and Christy Fisher of the National Parks Service. The other break station was led by Bill Head of NRCS, who showed the students various ways to create bubbles with different objects.

Each station had a different lesson to learn. "How High Is the Water Smarty?", led by Jerry Thrush of Colorado Division of Water Resources and Dennis Murphy of Bureau of Land Management, taught the kids how water is measured while it is flowing down the river. The kids actually used the equipment to measure how fast objects flowed down the park ditch.

Steve Woodis, Wildlife Biologist of NRCS, and Claudette Nicolas of Shavano SCD, presented "Learning to Look." It was a fascinating collection of aquatic life consisting of a variety of bugs in different stages. Some were in jars large enough to be seen by the eye; others were looked at through microscopes.

Fred Waldman of Project 7 Water Treatment Plant demonstrated how Project 7 makes our water drinkable. He used a model that started with the muddy water from the Gunnison River, the water then went through two different filtering systems before it could be considered drinkable. Mr. Waldman also spoke about the chemicals that are added to our water. The kids were fascinated to see the muddy water become clear.

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NRCS Soil Scientist Dave Dearstyne presented "Soils and Water." The students dug right into the soil, getting their hands dirty. They learned what water does in different types of soils.

"Selenium Plinko," was a game created by Karl Brown of the Colorado State University Cooperative Extension, Montrose. The idea of the game was to make the kids aware of the effects of selenium on our land. The kids were divided into two teams, the developers, and the ranchers. Each student dropped a disc down a board in hopes to land in a slot that did not give them points, for example: bad irrigation, too much selenium, birds and fish were not producing, 5 points.

Jo Marie Stewart, Erma Pulver, and Teresa Calhoun of Cattlewomen Association presented "Would You Share Your Water?" The students learned that our water is recycled water from the dinosaur era, the amount of freshwater on each and how cattlemen and women care for this precious resource.

Carl Zimmerman of the State Soil Conservation Board and Robert Molacek of Delta SCD presented "A River Runs Through It." A trailer containing a miniature river was displayed to teach the students how the river functions to drain the watershed and transport sediment. The students were able to see how important a river can change the landscape.

Bob Hoshide, Fred Wyngarden, and Paul Miller of the Retired Senior Volunteer Program demonstrated how different pollutants affect the groundwater in "Waste Water Flows."

Swelling crystals and sediment control with polymer was demonstrated by Becky Garner of Stockhausen. It showed the students many uses of polymers and the effects on water use and quality.

"Water Safety" dealth with the basics of how to help someone in distress while in the water. The kids practiced throwing a ring buoy at floating targets in the water. This important safety item was presneted by Kristi Drexler and Kirstin Shier of Ridgway Sate Park.

Forests and Water were presented by Peter Barth of the Colorado State Forest Service and Chris James of the US Forest Service. They showed the importance of having trees and vegetation by having the students run water over two spearate plots of ground–one with vegetation and one with bare soil.

The flow of irrigation water measurement and distribution was demonstrated by Marc Catlin and Ken McCracken of the Uncompahgre Valley Water Users Association. The students had a lesson on canal safety and the water necessities of our agricultural community. They also provided a large demonstration of irrigation equipment.

At the booth "How Clean Is Your Water?" the kids got a hands-on experience with water penetrating the mancos shale, demonstrated by Kelli Clark and Dan Champion of Colorado State University Cooperative Extension.

"Shoots & Ladders" was a game introduced by the Division of Wildlife. The kids were divided into salmon and various obstacles that salmon entail on their journey upstream. This game showed the kids how difficult it is for the salmon to complete their journey and how many actually make it.

Some of the responses from the kids regarding the Water Festival were as follows:

What station did you like best?.....Station #5, Reach, Throw & Go. They taught me how to use my mental and physical skills.....The Waste Water Flow Models told me why you shouldn't leave trash around.....My favorite station was where they showed how mancos shale puts salt in the water.

What did you learn at the Water Festival you did not know before?.....If you dump out on the ground it will go into the water under the earth and will pollute it.....I learned what an aquifer is.....I learned that most of the water on earth is undrinkable.....That selenium is salt.....that pollution kills fish.

Why do you think learning about water is important?.....So that you won't waste water that other people need.....Because we drink it.....For animals and humans to be able to live and have a good life.....Because water is life and you can't waste it.

The Water Festival is an excellent educational experience for our students. This event would not be possible without the cooperation of various business and volunteers. The Shavano Soil Conservation District would like to thank everyone involved for their help and support in making the Ninth Annual Water Festival a great success.