ROY ROMER
*Governor*

JERIS A. DANIELSON
*State Engineer*

**DIVISION OF WATER RESOURCES**
**DARIES C. LILE, P.E.**
**DIVISION WATER ENGINEER**
**DIVISION 7**
**1474 E. Main, P.O. Box 1880**
**Durango, Colorado 81302-1880**
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January 10, 1991

Dr. Jeris A. Danielson
State Engineer
818 Centennial Building
1313 Sherman St.
Denver, Colorado 80203

Dear Dr. Danielson:

Enclosed is the 1990 I.Y.R. Division Engineer's Report for Division 7. We have included those items that you outlined and have added additional information in the appendix which was used in preparing the report.

Sincerely,

Daries C. Lile
Division Engineer

DCL:alf
enclosure

# Index

# I N D E X

Water Admin.

## I. WATER ADMINISTRATION

### A. CURRENT WATER YEAR

The year 1990 was perhaps one of the most unusual water years that we have experienced in Division 7. The weather patterns for the past two and one-half years have resulted in below normal precipitation, and particularly the winter months of 1989-90 were at only 40% of normal. The dry winter, coupled with the previous two years of less than average water supplies, plunged southwest Colorado into a severe drought.

Lack of moisture had caused a depletion of reservoir storage and ground water supplies. The base flows on all of the streams were below those of the 1976-77 record lows. The Animas River was flowing less than 100 c.f.s. in March. Runoff forecast for all streams were in the 40% or below range.

There were numerous requests to drill replacement wells for domestic use. The ground water table was being depleted, particularly in the marginal aquifers in the Rafter J, Grandview, and the alluvial aquifer in Junction Creek.

Irrigators were analyzing their supplies on a weekly basis. Meetings were held with several groups to develop plans for the short supply. Users were encouraged to not place a call for direct irrigation from the streams until it was absolutely essential to irrigate, in hopes of filling the reservoirs to their maximum potential. Considerable planning and projecting of water needs were made by not only irrigators, but municipalities. Durango had a plan for water restrictions if necessary which was based on the percentage of available storage in their reservoir on College Hill.

Precipitation for the months of April and May improved the situation, but the forecast did not project more than a 60% supply for any of the streams. The soil moisture in most areas was very low and crop requirements were high due to the extremely warm June temperatures. With water supplies low and hot weather crop production, particularly for the first cutting of irrigated hay, is estimated to be 50% of normal. The dry land hay crop was virtually nonexistent.

We were fortunate, however, to receive a late April storm which enhanced the snow pack greater than the forecast reflected and projected amounts were greatly exceeded. Vallecito Reservoir filled, but Lemon, McPhee, Groundhog, and Jackson Gulch Reservoirs did not.

Controversy developed over fish flow releases below McPhee Reservoir. The projected runoff did not allow for an adequate supply for both farmers, municipalities, and fish flows. The Definite Plan Report for the Dolores Project provides that when limited supplies are available, the flows below McPhee were reduced to 20 c.f.s. The fishery was placed in stress and Trout

Unlimited became very active in applying pressure to the U. S. Bureau of Reclamation to increase the releases. Releases were increased to 50 c. f. s. but this amount still did not meet the fishery needs in the opinion of Trout Unlimited and the Colorado Division of Wildlife.

It was not until the first week of July that a change in the weather pattern developed. At that time we began to receive extremely high amounts of rainfall. Precipitation for July in Durango was 3. 45 inches, which was 200% of normal, and in August 3. 11 inches occurred which was in excess of 130% of normal.

Once the rains began, the water administrative workload decreased and everyone in southwestern Colorado breathed a sigh of relief. The drought cycle had affected irrigators, cities, well owners, and recreational uses including fishing, skiing, rafting and boating. The importance of water was well understood.

The short supply caused curtailment of water users on the Pine, Florida, Mancos, LaPlata, and Dolores Rivers. McElmo Creek was regulated for the first time since 1977. Other streams including the Little Blanco, Elbert Creek, Four Mile Creek and Junction Creek also required daily regulation. The calling period on most of the streams began with the reservoir owners invoking their filling rights in March and continued into September. Even though rains eased the crop demands, base flows in the streams did not adequately meet all the users' requirements.

B. U. S. BUREAU OF RECLAMATION PROJECTS

The Dolores Project remains on schedule; the first phase of the Towaoc Canal has been completed and contracts have been approved for the second phase. Water has been delivered to the M. V. I. System and 14, 200 acres of new irrigated lands in the Cahone and Pleasant View areas.

The law suit concerning farmers who did not want to be held to their irrigation contracts has been settled. The Dolores Conservancy District agreed to drop their lands from the project, and make the water available to other Project users.

The major controversy surrounding the Project at the present time is the bypass flows for the trout fishery below McPhee Dam. The Project Definite Plan Report calls for a variable release for fish flows depending on the water supply for the Project. The plan sets levels for a low, average, and high year, depending on the forecasted runoff. The releases for the last several years have been at 150 c. f. s. to 70 c. f. s., and a very excellent trout fishery has developed. When the District reduced the flows to 20 c. f. s., fishermen in the area became quite concerned. Trout Unlimited lead an effort to have the flows increased, and they were successful in accomplishing this by applying pressure through the Commissioner of Reclamation in Washington, D. C. Consequently the flows were increased by the U. S. Bureau of Reclamation without the Dolores Conservancy District's approval. This caused a severe strain in relations between the Bureau and the District. As a result a

committee has been formed representing fishermen, the Dolores District, U. S. B. R., Colorado Division of Wildlife, fish biologists, and hydrologists to analyze the available water supplies and to develop a long term solution

The Animas-La Plata Project was scheduled for a construction start in April of 1990. However, an endangered fish has put a hold on the Project. The U. S. Fish and Wildlife Service issued a jeopardy opinion concerning the Colorado River Squaw Fish. They have found 27 fish including young of the year, and this reversed their 1979 opinion of non-jeopardy. The U. S. Fish and Wildlife biologists' opinion has resulted in no further development on the San Juan River and its tributaries not only in Colorado, but also New Mexico. The shut down of development has created problems for the Navajo Indian Irrigation Project, the Jicarilla Apaches, the two Colorado Ute Tribes, the cities of Farmington and Durango, and both the states of Colorado and New Mexico.

A compromise is being worked out which will allow for construction of Ridges Basin Reservoir and the Pumping Station while studies are being made concerning the Squaw Fish, and a recovery program is being developed.

The San Juan-Chama Project is still in the forefront of the minds of the Blanco River water users. The problems with loss of fish habitat, and silt from the diversion structure continues. The advisory group that was formed to work on the problem was successful in obtaining funding from the Southwestern Water Conservation Board, U. S. Bureau of Reclamation, and the Rio Blanco Homeowners for a study as to the potential for reclaiming the fishery. Each entity granted $1,000 for the study which was coordinated by the U. S. Forest Service. The preliminary results indicate that major habitat structures need to be placed in the river along with increased stream flows and reduction of the silt load before the fishery can be greatly improved. Portions of the stream may never support a true cold water fishery since temperature data collected by the Water Commissioner, particularly on the lower reaches, reflect water temperatures in excess of 70° F. during the summer months. The Advisory Committee will be meeting in January 1991 to evaluate the data collected this summer and to make a decision on how to proceed.

C. INDIAN WATER RIGHTS SETTLEMENT

The Division office has completed the very detailed and time consuming inventory of existing uses on both the Southern Ute and Ute Mountain Ute Reservations. There were over 1,000 structures consisting of small springs, stock tanks and ponds, domestic and livestock wells, and small irrigated parcels. The field work was done primarily by retired Water Commissioner Bill Lynn, through a contract with the Attorney General's Office, and was compiled and computerized by Ken Beegles, Assistant Division Engineer.

Once the inventory work was completed the Attorney General's Office was able to prepare the stipulated decrees for submission to the Division 7 water court. Case W-1603B-76 for the San Juan River has been submitted to the water court. However, the remaining cases have not been signed off on by the Indians, and the Department of Justice. The problems concerning endangered species on the San Juan River has raised doubts as to the eventual and timely

construction of the Animas-La Plata Project which is an integral part of the Settlement Agreement, and it appears that the Tribes are being cautious about signing the stipulated decrees until they are confident that the Project will be constructed..

The Colorado Indian Water Rights Settlement Agreement has been the subject of presentations made in both the states of Wyoming and New Mexico by the Division Engineer, and at the American Society of Civil Engineers National Conference. The Agreement is generating interest, particularly with regard to the State administrative procedures agreed to by the Indian tribes.

The state of Wyoming is presently having very serious problems on the Wind River Reservation, and control and regulation of water on the reservation are at the center of the controversy. Unlike Colorado, the state of Wyoming litigated the Indian claims and the tribes were successful in obtaining their water rights from the United States Supreme Court. The issues of state jurisdiction and change of uses were not resolved and consequently, a conflict has resulted between Indians and non-Indians on the reservation as to entitlements. The past water year was also quite dry in Wyoming and non-Indian users were curtailed to meet the senior Indian claims. The entities have returned to court to resolve the jurisdictional issue.

D. INTERSTATE COMPACTS

The La Plata River Compact was operated as required this past year with very little problems between the states of Colorado and New Mexico. It was a particularly difficult year to administer the river since there were such extreme variances in weather conditions. During the early part of the season deliveries were affected by very dry and hot weather conditions, and during the late summer they were influenced by cooler weather and rains. These fluctuations in stream flows and conditions affected the workload and made it quite difficult to meet the interstate deliveries on a twenty-four hour basis. There were instances when a futile situation developed until the rains began in July.

There was more controversy than normal among the La Plata River users within Colorado due in part to the daily changing hydrological conditions and their concerns for administration of the water to New Mexico. It is always difficult to explain futile call situations, and for the Colorado water user to understand the need for regulation of the stream is not always a simple matter. The Water Commissioner certainly had to devote many hours this past summer and he did an excellent job of meeting the Compact while balancing the needs of Colorado users.

The San Juan-Chama supplied 71,620 acre feet of water to New Mexico as a portion of Colorado's delivery to New Mexico under the Project's authorizing legislation, and the Upper Colorado River Basin Compact. Problems still remain with the operation of the Project by the U.S. Bureau of Reclamation. These problems revolve around silting and minimum flow requirements. The Bureau needs to analyze the diversion requirements, minimum flows, and diversion structures to reduce the effects on the stream in Colorado while

supplying the water needs in New Mexico. It seems that only a minimal effort is being made to address the operational problems.

### E. DAM SAFETY PROGRAM

The dam safety field engineer has been extremely active this past year and several improvements have been made to reservoirs in the Division.

The rehabilitation of Bauer Reservoir No. 1 was completed this summer and fall with minor grading of the embankment being the only construction work necessary that was not completed the previous year. Keeler Reservoir on Elbert Creek was drained, and the outlet pipe was slip lined and grouted with a new headgate being installed. This was a major construction effort, but it was well engineered and planned. The slip lining of the outlet conduit prevented the need for a complete breaching of the dam to install a new outlet pipe.

Having a full-time field engineer concentrating on dam safety issues has enhanced the overall safety of dams in Division 7. The presence of an engineer and having him available to assist the owners on day-to-day general maintenance problems, and his ability to gain the cooperation of dam owners has improved the safety of most of our dams while reducing the number of dams being restricted.

### F. ABANDONMENT LIST

The 1990 Division 7 Abandonment List was prepared and published as required. There have been twenty-six formal objections to date. A total of one hundred sixty-two rights were placed on the list. Owners have until June 30, 1991 to file an objection with the Division Engineer. We have had one letter supporting the abandonment of a water right that was placed on the list. At the present time all objections have been acknowledged, but no formal actions have been taken to remove water rights from the list.

## II. UPCOMING WATER YEAR

The upcoming water year will hopefully be wetter than the 1989-90 season. The fall months of October, November and December have produced better than average precipitation and carryover reservoir storage is above normal, and in most instances is double the amount in storage a year ago. This will perhaps reduce the conflicts over water during 1991.

The Division staff will continue to work with the water users on the Blanco River toward a resolution of the problems associated with the San Juan-Chama Project. There will be assistance provided as required on the bypass flow studies on the Dolores River, and any information and data that can assist the Animas-La Plata Board will be provided.

Resolution of protests to the Abandonment List will be made if possible for those rights which have evidence to support non-intent to abandon.

Budget restrictions will affect the day-to-day travel of the Water Commissioners and Division staff. There has been an increase in the cost of gasoline and consequently, there will need to be a reduction in travel. This will probably impact the water users during May and June. All staff members have been given a travel allocation for the months of December, January, February and March in an effort to save funds for use during the spring administrative period.

The focus on environmental issues will affect the Division in the coming year and will probably have an impact on the workload for the next several years. Water quality issues including the effects from oil and gas exploration in the San Juan Basin are already requiring staff time to investigate contamination from cathodic protection holes. The implementation of S. B. 181 with regard to water quality is just beginning to be developed and meetings were held with water users to define our agency's role in water quality issues. Additionally, endangered species, particularly fish, and the stream flows that are necessary to support them will impact the method of operations of reservoirs and the amount of water that can be developed in a given basin.

The relationship between water use and water quality, although not clearly defined by statute, will become directly related and the environmental effects of division from one basin to another will need to be analyzed, as well as change in water rights from agriculture to municipal uses. Historically only the impact on other water rights have been mitigated. However, the environmental aspects and social concerns are becoming a major factor in the changing of uses. Legislation concerning these issues will be introduced in this legislative session and although it is not known in what form or if the legislation will be passed, in the near future environmental concerns will have an impact on water administration.

# Statistic Info

TRANSMOUNTAIN DIVERSION SUMMARY DIVISION 7

| SOURCE | | 1990 WATER YEAR | | 1989 WATER YEAR | | DESTINATION | |
|---|---|---|---|---|---|---|---|
| DISTRICT NAME | RIVER | ACRE-FEET DIVERTED | # OF DAYS DIVERTED | ACRE-FEET DIVERTED | # OF DAYS DIVERTED | WATER DISTRICT | RIVER |
| TREASURE PASS DITCH | SAN JUAN RIVER | 53 | 29 | 172 | 47 | 20 | RIO GRANDE RIVER |
| CARBON LAKE DITCH | ANIMAS RIVER | 78 | 95 | 98 | 46 | 68 | UNCOMPAHGRE RIVER |
| MINERAL POINT DITCH | ANIMAS RIVER | DITCH WASHED OUT | | 99 | 84 | 68 | UNCOMPAHGRE RIVER |
| RED MOUNTAIN DITCH | ANIMAS RIVER | 36 | 45 | 107 | 113 | 68 | UNCOMPAHGRE RIVER |
| PINE RIVER-WEMINUCHE PASS D. | PINE RIVER | 451 | 86 | 460 | 37 | 20 | RIO GRANDE RIVER |
| WEMINUCHE PASS DITCH | PINE RIVER | 962 | 104 | 692 | 30 | 20 | RIO GRANDE RIVER |
| WILLIAMS CREEK-SQUAW PASS D. | PIEDRA RIVER | 205 | 37 | 238 | 75 | 20 | RIO GRANDE RIVER |
| DON LA FONT #1 (S RIVER PEAK) | PIEDRA RIVER | 32 | 41 | 58 | 81 | 20 | RIO GRANDE RIVER |
| DON LA FONT #2 (PIEDRA PASS D.) | PIEDRA RIVER | 106 | 75 | 244 | 95 | 20 | RIO GRANDE RIVER |

## RESERVOIR STORAGE SUMMARIES

| 'ER 'RICT | RESERVOIR NAME | SOURCE STREAM | IRRIGATION YEAR 1990 BEGINNING IRRIGATION YEAR STORAGE | % | IRRIGATION YEAR 1990 BEGINNING IRRIGATION SEASON STORAGE | % | IRRIGATION YEAR 1990 END OF IRRIGATION YEAR STORAGE | IRRIGATION YEAR 1989 BEGINNING IRRIGATION YEAR STORAGE | % | IRRIGATION YEAR 1989 BEGINNING IRRIGATION SEASON STORAGE | % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ECHO CANYON RESERVOIR | ECHO CREEK | 2149 | 100 | 2149 | 100 | 2149 | 2149 | 100 | 2149 | 100 |
| | HARRIS BROS. & BOONE #2 | RIO BLANCO | 114 | 55 | 141 | 68 | 71 | 114 | 55 | 206 | 100 |
| | | TOTALS | 2263 | | 2290 | | 2220 | 2263 | | 2355 | |
| | CASCADE RESERVOIR | CASCADE CREEK | 20739 | 89 | 15756 | 67 | 21477 | 21890 | 94 | 9212 | 39 |
| | DURANGO REGULATORY | FLORIDA RIVER | 227 | 98 | 227 | 98 | 227 | 227 | 98 | 227 | 98 |
| | JOHNSON RESERVOIR | LIGHTNER/LA PLATA | 764 | 67 | 915 | 81 | 837 | 889 | 78 | 1136 | 100 |
| | LEMON RESERVOIR | FLORIDA RIVER | 10381 | 26 | 32086 | 80 | 22232 | 30173 | 75 | 37968 | 95 |
| | | TOTALS | 32111 | | 48984 | | 44773 | 53179 | | 48543 | |
| | VALLECITO RESERVOIR | PINE RIVER | 42735 | 33 | 125799 | 97 | 82987 | 74000 | 57 | 112362 | 87 |
| | WOMMER RESERVOIR | BEAR CREEK | 208 | 100 | 208 | 100 | 208 | 208 | 100 | 208 | 100 |
| | | TOTALS | 42943 | | 126007 | | 83195 | 74208 | | 112570 | |
| | A.M.PUETT RESERVOIR | DOLORES RIVER | 622 | 26 | 1556 | 65 | 658 | 423 | 18 | 2402 | 100 |
| | NARRAGUINNEP RESERVOIR | DOLORES RIVER | 9940 | 52 | 18960 | 100 | 14575 | 14575 | 77 | 18960 | 100 |
| | TOTTEN RESERVOIR | DOLORES RIVER | 2832 | 86 | 3302 | 100 | 2832 | 2384 | 72 | 3064 | 93 |
| | | TOTALS | 13394 | | 23818 | | 18065 | 17382 | | 24426 | |

## RESERVOIR STORAGE SUMMARIES

| :R :ICT | RESERVOIR NAME | SOURCE STREAM | IRRIGATION YEAR 1990 BEGINNING IRRIGATION YEAR STORAGE | % | BEGINNING IRRIGATION SEASON STORAGE | % | END OF IRRIGATION YEAR STORAGE | IRRIGATION YEAR 1989 BEGINNING IRRIGATION YEAR STORAGE | % | BEGINNING IRRIGATION SEASON STORAGE | % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | RED MESA WARD RESERVOIR | LA PLATA RIVER | 76 | 6 | 569 | 48 | 296 | 0 | 0 | 1176 | 100 |
| | | TOTALS | 76 | | 569 | | 296 | 0 | | 1176 | |
| | BAUER RESERVOIR # 1 | CRYSTAL CREEK | 0 | 0 | 115 | 33 | 33 | 98 | 28 | 202 | 58 |
| | BAUER RESERVOIR # 2 | CRYSTAL CREEK | 324 | 21 | 966 | 63 | 324 | 966 | 63 | 1533 | 100 |
| | JACKSON GULCH RESERVOIR | MANCOS RIVER | 2756 | 28 | 8409 | 84 | 3912 | 7276 | 73 | 9948 | 100 |
| | SELLARS & McCLANE RESV. | MUD CREEK | 24 | 46 | 24 | 46 | 2 | 24 | 46 | 52 | 100 |
| | WEBER RESERVOIR | MIDDLE MANCOS R | 66 | 15 | 442 | 100 | 158 | 200 | 45 | 442 | 100 |
| | | TOTALS | 3170 | | 9956 | | 4429 | 8564 | | 12177 | |
| | BELMAR LAKE RESERVOIR | RINCONE CREEK | 0 | 0 | 326 | 70 | 300 | 0 | 0 | 326 | 70 |
| | MORRISON RESERVOIR | MORRISON CREEK | 100 | 86 | 116 | 100 | 90 | 100 | 86 | 116 | 100 |
| | | TOTALS | 100 | | 442 | | 390 | 100 | | 442 | |
| | BIG PINE RESERVOIR | LOST CANYON CREEK | 36 | 8 | 209 | 45 | 21 | 159 | 35 | 209 | 45 |
| | GROUNDHOG RESERVOIR | GROUNDHOG CREEK | 13740 | 63 | 21358 | 98 | 13740 | 10300 | 47 | 21358 | 98 |
| | SUMMIT RESERVOIR | LOST CANYON CREEK | 714 | 12 | 4795 | 81 | 714 | 1505 | 25 | 4795 | 81 |
| | MCPHEE RESERVOIR | DOLORES RIVER | 324755 | 85 | 381206 | 100 | 321628 | 324956 | 85 | 381206 | 100 |
| | | TOTALS | 339245 | | 407568 | | 336103 | 336920 | | 407568 | |

| R ICT | RESERVOIR NAME | SOURCE STREAM | IRRIGATION YEAR 1990 BEGINNING IRRIGATION YEAR STORAGE | % | BEGINNING IRRIGATION SEASON STORAGE | % | END OF IRRIGATION YEAR STORAGE | IRRIGATION YEAR 1989 BEGINNING IRRIGATION YEAR STORAGE | % | BEGINNING IRRIGATION SEASON STORAGE | % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SAPPINGTON RESERVOIR | COYOTE CREEK | 254 | 77 | 330 | 99 | 256 | 185 | 56 | 332 | 100 |
| | SPENCE RESERVOIR | COYOTE CREEK | 322 | 73 | 370 | 84 | 310 | 208 | 47 | 409 | 93 |
| | | TOTALS | 576 | | 700 | | 566 | 393 | | 741 | |
| | G.S. HATCHER RESERVOIR | STOLLSTEIMER CR. | 1285 | 74 | 1735 | 100 | 1311 | 1500 | 86 | 1735 | 100 |
| | LAKE FOREST RESERVOIR | STOLLSTEIMER CR. | 347 | 75 | 465 | 100 | 375 | 216 | 46 | 465 | 100 |
| | LINN & CLARK RESERVOIR | DUTTON CREEK | 924 | 72 | 1230 | 96 | 1202 | 1175 | 92 | 1230 | 96 |
| | PARGIN RESERVOIR | STOLLSTEIMER CR. | 500 | 93 | 540 | 100 | 500 | 506 | 94 | 540 | 100 |
| | STEVENS RESERVOIR | DUTTON CREEK | 635 | 100 | 635 | 100 | 635 | 635 | 100 | 635 | 100 |
| | TOWN CENTER RESERVOIR | STOLLSTEIMER CR. | 437 | 62 | 600 | 86 | 430 | 360 | 51 | 600 | 86 |
| | WILLIAMS CR. RESERVOIR | WILLIAMS CREEK | 10084 | 100 | 10084 | 100 | 10084 | 10084 | 100 | 10084 | 100 |
| | | TOTALS | 14212 | | 15289 | | 14537 | 14476 | | 15289 | |

## 1990 IRRIGATION YEAR WATER DIVERSION SUMMARIES BY DISTRICT

| DIST | TOTAL STRUCTURES REPORTING: ACTIVE WA | ACTIVE NWA | INACTIVE NU | INACTIVE NR | ESTIMATED NUMBER OF VISITATIONS | TOTAL DIVERSIONS (ACRE-FEET) | TOTAL DIVERSIONS TO STORAGE (ACRE-FEET) | TOTAL DIVERSIONS TO IRRIGATION (ACRE-FEET) | TOTAL ACRES IRRIGATED | AVERAGE ACRE-FEET PER ACRE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 224 | 10 | 67 | 11 | 4,335 | 102,544 | 92 | 56,130 | 12,732 | 4.41 |
| | 845 | 25 | 291 | 0 | 8,239 | 256,823 | 38,858 | 156,757 | 32,557 | 4.81 |
| | 348 | 9 | 80 | 0 | 4,989 | 260,433 | 92,806 | 214,375 | 55,511 | 3.86 |
| | 238 | 13 | 54 | 2 | 4,449 | 48,230 | 0 | 207,636 [1/] | 55,911 | 3.71 |
| | 118 | 30 | 17 | 2 | 4,113 | 19,719 | 569 | 16,807 | 6,752 | 2.49 |
| | 83 | 13 | 7 | 2 | 1,260 | 32,508 | 7,569 | 27,941 [2/] | 10,408 | 2.68 |
| | 40 | 0 | 6 | 0 | 586 | 6,079 | 0 | 4,707 | 1,070 | 4.40 |
| | 27 | 3 | 9 | 2 | 131 | 4,342 | 123 | 3,246 | 1,459 | 2.22 |
| | 117 | 24 | 57 | 3 | 2,138 | 157,089 | 44,503 | 7,257 | 1,474 | 4.92 |
| | 90 | 0 | 30 | 0 | 2,217 | 59,042 | 642 | 18,901 | 3,095 | 6.11 |
| | 132 | 7 | 43 | 1 | 2,188 | 30,334 | 2,176 | 22,862 | 6,567 | 3.48 |
| | 2,262 | 134 | 661 | 23 | 34,645 | 977,143 | 187,338 | 736,619 | 187,536 | 3.93 |

Total deliveries from transbasin (Dist. 71) 172,545 A.F., of which 147,494 A.F. were for irrigation.

Total deliveries from transbasin (Dist. 71) 260 A.F., of which 260 A.F. were for irrigation.

1990 WATER YEAR DIVERSION SUMMARIES BY DISTRICT IN ACRE-FEET

| :R :ICT | TRANS-MOUNTAIN OUTFLOW | TRANS-BASIN OUTFLOW | STOCK | MUNICIPAL | DOMESTIC | INDUSTRIAL | RECREATION | FISH | COMMERCIAL | OTHER | INTER-STATE/ COMPACT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 53 | 1,918 | 4,411 | 477 | 24 | 0 | 0 | 1,232 | 1,712 | 0 | 37,634 1/ |
| | 114 | 0 | 9,778 | 4,603 | 195 | 30,171 | 3 | 11,885 | 756 | 64 | 7,046 |
| | 1,413 | 0 | 172 | 813 | 64 | 0 | 67 | 1,667 | 19 | 0 | 0 |
| | 0 | 0 | 4,137 | 4,639 2/ | 14 | 0 | 0 | 0 | 5 | 0 | 0 |
| | 0 | 751 | 1,948 | 0 | 26 | 0 | 0 | 0 | 4 | 1 | 1,130 3/ |
| | 0 | 0 | 3,000 | 1,045 | 13 | 0 | 83 | 0 | 6 | 0 | 0 |
| | 0 | 0 | 12 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1,356 4/ |
| | 0 | 0 | 1,127 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 172,248 5/ | 302 | 351 | 37 | 0 | 10 | 3,649 | 8 | 7 | 0 |
| | 0 | 0 | 923 | 0 | 14 | 1 | 0 | 5,310 | 2 | 0 | 33,985 1/ |
| | 343 | 0 | 1,113 | 551 | 11 | 0 | 0 | 5,880 | 4 | 0 | 0 |
| | 1,923 | 174,917 | 26,923 | 12,479 | 402 | 30,172 | 163 | 29,623 | 2,516 | 72 | 81,151 |

Diverted through San Juan-Chama Project to New Mexico

4,505 A.F. delivered from transbasin - District 71

Total diverted by Enterprise and Pioneer Ditches only to New Mexico

Water delivered to New Mexico as provided in Pine River Irrigation Project

Diverted to Districts 34 and 32

LA PLATA RIVER COMPACT MONTHLY ADMINSTRATIVE SUMMARY IN ACRE FEET

| H | HESPERUS STATION | LA PLATA & CHERRY CR. DITCH | PINE RIDGE DITCH | HESPERUS TOTAL | STATE LINE STATION | ENTERPRISE DITCH (NEW MEXICO) | PIONEER DITCH | DELIVERED STATE LINE TOTAL | REQUIRED TOTAL (1/2 HESPERUS) |
|---|---|---|---|---|---|---|---|---|---|
| BER | 229 | 0 | 0 | 229 | 245 | 0 | 0 | 245 | --- |
| RY | 178 | 0 | 0 | 178 | 293 | 0 | 0 | 293 | --- |
| ARY | 170 | 0 | 0 | 170 | 421 | 0 | 0 | 421 | --- |
| | 359 | 0 | 0 | 359 | 587 | 23 | 7 | 617 | 147 |
| | 1290 | 153 | 123 | 1566 | 720 | 23 | 17 | 760 | 745 |
| | 5290 | 891 | 566 | 6747 | 3060 | 127 | 154 | 3341 | 3312 |
| | 3450 | 1231 | 146 | 4827 | 2090 | 140 | 187 | 2417 | 2473 |
| | 1920 | 133 | 29 | 2082 | 790 | 114 | 139 | 1043 | 1049 |
| T | 1120 | 58 | 0 | 1178 | 229 | 67 | 60 | 356 | 593 |
| MBER | 1130 | 0 | 38 | 1168 | 546 | 32 | 0 | 578 | 547 |
| ER | 1210 | 124 | 171 | 1505 | 673 | 40 | 7 | 720 | 772 |
| BER | 770 | 0 | 27 | 797 | 321 | 126 | 0 | 447 | 402 |
| S * | 16539 | 2590 | 1100 | 20229 | 9016 | 692 | 571 | 10279 | 10040 |

: NEW MEXICO REQUESTED REQUIRED AMOUNT UP TO 90 CFS, MARCH 7, 1990

BEGINNING JULY 1, COLORADO DIVERTED ALL STREAM FLOWS AT HESPERUS LEAVING LOWER LA PLATA FLOWS FOR NEW MEXICO

DUE TO HEAVY RAINS JULY 5 & 6, COLORADO RETURNED TO NORMAL RIVER DIVERSION

RIVER FLOWS AGAIN DROPPED AND COLORADO DIVERTED ALL FLOWS AT HESPERUS LEAVING LOWER LA PLATA FLOWS FOR NEW MEXICO JULY 24,1990

DUE TO RAINFALL AUG 16-18, COLORADO ATTEMPTED TO DELIVER 1/2 OF HESPERUS FLOWS TO STATELINE FROM AUG. 18 TO AUG. 27,1990

RIVER FLOWS AGAIN DROPPED AND COLORADO DIVERTED ALL FLOWS AT HESPERUS LEAVING LOWER LA PLATA FLOWS FOR NEW MEXICO AUG. 27, 1990

* ALL TOTALS ARE FOR PERIOD OF COMPACT CALL

UPPER BASIN COMPACT
SAN JUAN-CHAMA DIVERSIONS

| WATER YEAR | RIO BLANCO DIVERSION | LITTLE OSO DIVERSION | OSO DIVERSION | TOTAL COLO. DIVERSION | AZOTEA TUNNEL USGS BOOKS | TEN-YEAR TOTALS (USGS) |
|---|---|---|---|---|---|---|
| 1971 | 25190 | 1340 | 24980 | 51510 | 59980 | |
| 1972 | 28290 | 1120 | 24310 | 53720 | 58070 | |
| 1973 | 70900 | 9720 | 79810 | 160430 | 153300 | |
| 1974 | 25290 | 1070 | 18700 | 45060 | 47230 | |
| 1975 | 58780 | 8120 | 69200 | 136100 | 145100 | |
| 1976 | 41000 | 2420 | 36950 | 80370 | 85230 | |
| 1977 | 13450 | 37 | 3930 | 17417 | 19390 | |
| 1978 | 44010 | 2820 | 50310 | 97140 | 104200 | |
| 1979 | 60150 | 8980 | 87730 | 156860 | 164200 | |
| 1980 | 57760 | 6970 | 72460 | 137190 | 143600 | 980300 |
| 1981 | 25690 | 1640 | 22260 | 49590 | 53960 | 974280 |
| 1982 | 48340 | 6860 | 63810 | 119010 | 127100 | 1043310 |
| 1983 | 46960 | 8110 | 69680 | 124750 | 134300 | 1024310 |
| 1984 | 45180 | 6070 | 55220 | 106470 | 113600 | 1090680 |
| 1985 | 32700 | 9630 | 44630 | 86960 | 91800 | 1037380 |
| 1986 | 35520 | 4720 | 43620 | 83860 | 89180 | 1041330 |
| 1987 | 32120 | 4380 | 42360 | 78860 | 83050 | 1104990 |
| 1988 | 29200 | 972 | 29780 | 59952 | 63530 | 1064320 |
| 1989 | 20400 | 672 | 26630 | 47702 | 48570 | 948690 |
| 1990 | 37630 | 1480 | 32510 | 71620 | | |
| AVG. | 38,928 | 4,357 | 44,944 | 88,229 | 93,968 | 1,030,959 |

LIMITS: 1,350,000 ACRE-FEET IN TEN CONSECUTIVE YEARS
270,000 ACRE-FEET IN ANY ONE YEAR

WATER DIVISION NO. 7

# PLANS FOR AUMENTATION

1990

| Water Court Case # | Name | Water Dist. | Stream | Amount of Water to be Released (AF or cfs) | Time of Release | Brief Statement of Plan |
|---|---|---|---|---|---|---|
| 90CW60 | Noland Pit Pond | 34 | Mancos River | 4.16 A.F. | | Tail water from the Henry Bolen Ditch for storage under approved substitute supply plan, for irrigation when call is placed on the river. |
| 90CW61 | Pioneer Ditch | 30 | Florida R. | 1.50 c.f.s. | | For use in Mountain Valley Subdivision. Plan calls for change of water right, alternate points for 27 wells, surface, storage, underground, and appropriative right of substitution and exchange. |

WATER DIVISION NO. 7

ACTIVITY SUMMARY FY 1990

| ACTIVITY | TOTALS |
|---|---|
| NUMBER OF PROFESSIONAL AND TECHNICAL STAFF | 4 |
| NUMBER OF CLERICAL STAFF | 1 |
| NUMBER OF WATER COMMISSIONER FTE ASSIGNED | 13 |
| NUMBER OF DECREED SURFACE RIGHTS | 120 |
| NUMBER OF SURFACE RIGHTS ADMINISTERED/OBSERVATIONS | 26,675 |
| NUMBER OF WELLS | 896 |
| NUMBER OF PLANS FOR AUGMENTATION | 1 |
| NUMBER OF CONSULTATIONS WITH REFEREE | 95 |
| NUMBER OF WATER COURT APPEARANCES | 8 |
| NUMBER OF MEETINGS WITH WATER USERS | 146 |
| NUMBER OF MEETINGS TO RESOLVE WATER RELATED DISPUTES | 41 |
| NUMBER OF CONTACTS TO GIVE PUBLIC ASSISTANCE ON WATER MATTERS | 16,359 |

# WATER COURT ACTIVITIES

## CALENDAR YEAR 1990

| | |
|---|---|
| NUMBER OF APPLICATIONS FOR DECREES | 80 |
| NUMBER OF CONSULTATIONS WITH REFEREE | 73 |
| NUMBER OF DECREES ISSUED BY WATER COURT | 132 |
| TYPE OF DECREE: | |
| SURFACE WATER | 77 |
| GROUND WATER | 32 |
| RESERVOIRS | 23 |
| TRANSFER | 4 |
| ALTERNATE POINT | 4 |
| CHANGE IN USE | 0 |
| PLANS FOR AUGMENTATION | 3 |
| IN-STREAM FLOW | 0 |
| OTHER | 50 |
| NUMBER OF STRUCTURES IN DECREES: | |
| TYPES OF STRUCTURES: | |
| DITCHES | 38 |
| RESERVOIRS | 23 |
| WELLS | 33 |
| OTHER (SPRINGS, PIPELINES, PUMPS, ETC.) | 43 |
| TOTAL STRUCTURES | 607 |

2 Cases Dismissed

## OFFICE ADMINISTRATION FYR 1990

| NAME | POSITION | FISCAL YEAR MONTHS BUDGETED/ WORKED | | FISCAL YEAR MILEAGE |
|---|---|---|---|---|
| DARIES C. LILE | DIVISION ENGINEER | 12 | 12 | 3,982 P |
| KENNETH A. BEEGLES | ASS'T. DIVISION ENGINEER | 12 | 12 | 2,367 P |
| | | | | 9,359 S* |
| SCOTT D. BRINTON | HYDROGRAPHER, W.R.E. | 12 | 12 | 1,144 P |
| | | | | 13,245 S |
| FRANK J. KUGEL | DAM SAFETY INSPECTOR, SR. PROFESSIONAL ENGINEER | 12** | 12 | |
| ANN-LOUISE FAUTH | SENIOR SECRETARY | 12 | 12 | |

FULL TIME EMPLOYEES IN FIELD

| NAME | POSITION | DISTRICT | | | |
|---|---|---|---|---|---|
| WILLIAM E. BAKER | W. C. C | 32 | 12 | 12 | 10,793 P |
| RICHARD G. BALTZELL | W. C. C | 30-Florida | 12 | 12 | 9,938 P |
| GLEN E. HUMISTON | SR. W. C. | 32, 34, 69, 71 | 12 | 12 | 190 P |
| | | | | | 16,503 S |
| J. RUSSELL KENNEDY | SR. W. C. | 33 | 12 | 12 | 3,709 P |
| | | | | | 12,882 S |
| DAVID A. NELSON (1) | W. C. C | 30-Animas | 12 | 12 | 12,229 P |
| HAL M. PIERCE (2) | W. C. C | 31, 46 | 12 | 12 | 12,727 P |
| JOHN E. VALENTINE | W. C. B | 29, 77, 78 | 12 | 12 | 9,709 P |

PERMANENT PART TIME EMPLOYEES IN FIELD

| | | | | | |
|---|---|---|---|---|---|
| HAROLD L. BAXSTROM | W. C. A | 29, 78 | 5.0 | 5.0 | 7,620 P |
| ROBERT R. BECKER | W. C. B | 69, 71 | 8.0 | 8.0 | 6,133 P |
| ROBERT E. DANIELS | W. C. A | 31, 46 | 5.0 | 5.0 | 7,102 P |
| MATTHEW A. SCHMITT | W. C. A | 33 | 4.0 | 4.0 | 3,397 P |
| SHERRY L. SCHUTZ | W. C. B | 77 | 7.0 | 7.0 | 9,208 P |
| JOHN J. TAYLOR | W. C. B | 78 | 5.0 | 5.0 | 4,164 P |
| | | TOTALS | 34.0 | 34.0 | 51,989 S |
| | | TOTAL FTE | 14.8 | 14.8 | 104,987 P |
| | TOTAL MILES DRIVEN | | | | 156,976 |

(1) Received W.C. "C", 7/1/90
(2) Received W.C. "C", 12/1/89
*Vehicle used by D.E. and A.D.E.
**Mileage, etc., transferred to Div. 7 cost center 7/1/90

# DIVISION 7 BUDGET PROJECTIONS

| MONTH | FY88-89 TOTAL | PROJECTED FY89-90 | EST CUMULATIVE EXPENDITURES | ACTUAL FY89-90 | ACTUAL CUMULATIVE |
|---|---|---|---|---|---|
| JULY | 4,882 | 5,000 | 5,000 | 5,000 | 5,000 |
| AUGUST | 4,356 | 5,000 | 10,000 | 5,325 | 10,325 |
| SEPTEMBER | 3,245 | 3,000 | 13,000 | 3,824 | 14,149 |
| OCTOBER | 3,267 | 3,000 | 16,000 | 3,386 | 17,535 |
| NOVEMBER | 2,495 | 2,500 | 18,500 | 1,957 | 19,492 |
| DECEMBER | 2,755 | 2,200 | 20,700 | 1,985 | 21,477 |
| JANUARY | 3,738 | 2,200 | 22,900 | 1,140 | 22,617 |
| FEBRUARY | 2,154 | 2,200 | 25,100 | 1,829 | 24,446 |
| MARCH | 1,764 | 2,500 | 27,600 | 1,955 | 26,401 |
| APRIL | 4,978 | 4,000 | 31,600 | 2,921 | 29,322 |
| MAY | 5,132 | 4,950 | 36,550 | 4,563 | 33,885 |
| JUNE | 4,936 | 5,000 | 41,550 | 8,175 | 42,060 |
| TOTAL | 43,702 | 42,346 | | $42,060 | 99.3 |
| REMAINING AMOUNT | | | | $286 | |

Original budget was for $41,550 before dam safety allocation

# 1990 RIVER CALLS

| .D. | RIVER | INITIAL CALLING STRUCTURE | PRIORITY | DATE ON CALL | MOST SENIOR CURTAILED STRUCTURE | PRIORITY | DATE OFF CALL | DURATION |
|---|---|---|---|---|---|---|---|---|
| 29 | FOUR MILE CREEK | Mesa Ditch | #58 | 07/02/90 | Mesa Ditch | #3 | 08/17/90 | 46 days |
| 29 | LITTLE BLANCO R. | Mees Ditch | #7 | 06/26/90 | Echo Ditch | #12 | 10/13/90 | 3mo., 18 days |
| 30 | FLORIDA RIVER | Florida Farmers D. | F-68 | 05/13/90 | Florida Canal | 23 | 10/05/90 | 145 days |
| 30 | JUNCTION CREEK | Animas City Ditch | J-2 | 03/25/90 | Animas City Ditch | J-2 | 04/22/90 | 29 days |
| 31 | PINE RIVER | Schroder Ditch | P-38 | 06/26/90 | Various P-26 Prior. | P-26 | 07/05/90 | 9 days |
| 31 | PINE RIVER | Vallecito Res. | 65-R1 | 05/10/90* | Vallecito Reservoir | 65-R1 | 06/10/90 | 31 days |
| 32 | MC ELMO CREEK | | | 04/16/1990 | Wilson Ditch | #5 | 05/11/90 | 26 days |
| 33 | LA PLATA RIVER | Enterprise Ditch | #46 | 03/25/90 1/ | Hay Gulch Ditch | #9 | 10/31/90 | 7 mo., 6 days |
| 34 | MANCOS RIVER | Webber Ditch | M-36 | 06/01/90 | Lee & Burke Ditch | M-4 | 09/14/90 | 3 mo., 14 days |
| 71 | DOLORES RIVER | M. V. I. | D-16 | 06/26/90 | M. V. I. | #16 | 10/01/90 | 97 days |

* Vallecito Reservoir offered to make up shortages in ditches on 07/16/90

1/ Red Mesa Reservoir took water whenever possible the entire year

# Appendix

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 29--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 56,129 |
| STORAGE | 92 |
| STOCKWATER | 4,411 |
| MUNICIPAL | 472 |
| DOMESTIC | 24 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| FISH | 1,232 |
| OTHER: COMMERCIAL | 712 |
| TRANSMOUNTAIN-TRANSBASIN | 1,838 |
| INTERSTATE | 37,634 |
| TOTAL DIVERSIONS..... | 102,544 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 1 |
| DOMESTIC | 0 |
| MUNICIPAL | 5 |
| STOCK | 0 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| TRANSBASIN-TRANSMOUNTAIN | 156 |
| OTHER: FISH | 0 |
| TOTAL DIVERSIONS..... | 162 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 0 |
| STORAGE | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 0 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 56,130 |
| ACRES IRRIGATED | 12,732 |
| ACRE-FEET DIVERTED PER ACRE | 4.41 |
| NUMBER OF STRUCTURES OBSERVED | 312 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 176 |
| -INFREQUENT STRUCTURES | 48 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 10 |
| -NOT USED (A,C,D, CODES) | 67 |
| -NO INFORMATION AVAILABLE (F CODE) | 11 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 268 |
| NUMBER OF RESERVOIRS | 56 |
| NUMBER OF WELLS | 67 |
| NUMBER OF OBSERVATIONS | 4,335 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 30--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 138,567 |
| STORAGE | 38,858 |
| STOCKWATER | 9,778 |
| MUNICIPAL | 4,603 |
| DOMESTIC | 194 |
| INDUSTRIAL | 17,924 |
| RECREATION | 3 |
| FISH | 11,885 |
| OTHER: COMMERCIAL, RECHARGE, EVAP etc. | 820 |
| TRANSMOUNTAIN-TRANSBASIN | 114 |
| INTERSTATE | 7,046 |
| TOTAL DIVERSIONS..... | 229,792 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 17,404 |
| DOMESTIC | 1 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| INDUSTRIAL | 12,247 |
| RECREATION | 0 |
| TRANSBASIN-TRANSMOUNTAIN | 0 |
| OTHER: FISH, COMMERCIAL, etc. | 79 |
| SNOWMAKING | 82 |
| TOTAL DIVERSIONS..... | 29,813 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 786 |
| STORAGE | 73 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 859 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 156,757 |
| ACRES IRRIGATED | 32,557 |
| ACRE-FEET DIVERTED PER ACRE | 4.81 |
| NUMBER OF STRUCTURES OBSERVED | 845 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 269 |
| -INFREQUENT STRUCTURES | 576 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 25 |
| -NOT USED (A,C,D, CODES) | 291 |
| -NO INFORMATION AVAILABLE (F CODE) | 0 |
| NUMBER OF DITCHES | 636 |
| NUMBER OF RESERVOIRS | 98 |
| NUMBER OF WELLS | 370 |
| NUMBER OF OBSERVATIONS | 8,239 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 31--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 163,619 |
| STORAGE | 92,806 |
| STOCKWATER | 172 |
| MUNICIPAL | 636 |
| DOMESTIC | 34 |
| INDUSTRIAL | 0 |
| RECREATION | 67 |
| FISH | 1,667 |
| OTHER: COMMERCIAL | 19 |
| TRANSMOUNTAIN-TRANSBASIN | 1,413 |
| TOTAL DIVERSIONS..... | 260,433 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 50,756 |
| DOMESTIC | 30 |
| MUNICIPAL | 177 |
| STOCK | 0 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| TRANSBASIN-TRANSMOUNTAIN | 0 |
| OTHER: EVAPORATION | 2,550 |
| TOTAL DIVERSIONS..... | 53,513 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 0 |
| STORAGE | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 0 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 214,375 |
| ACRES IRRIGATED | 55,511 |
| ACRE-FEET DIVERTED PER ACRE | 3.86 |
| NUMBER OF STRUCTURES OBSERVED | 437 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 120 |
| -INFREQUENT STRUCTURES | 228 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 9 |
| -NOT USED (A,C,D, CODES) | 80 |
| -NO INFORMATION AVAILABLE (F CODE) | 0 |
| NUMBER OF DITCHES, OTHER SURFACE RIGHTS | 244 |
| NUMBER OF RESERVOIRS | 62 |
| NUMBER OF WELLS | 145 |
| NUMBER OF OBSERVATIONS | 4,989 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 32--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 47,901 |
| STORAGE | 0 |
| STOCKWATER | 176 |
| MUNICIPAL | 134 |
| DOMESTIC | 14 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| FISH | 0 |
| OTHER:COMMERCIAL | 5 |
| TRANSMOUNTAIN-TRANSBASIN | 0 |
| TOTAL DIVERSIONS..... | 48,230 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 12,241 |
| DOMESTIC | 0 |
| MUNICIPAL | 0 |
| STOCK | 1,386 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| TRANSBASIN-TRANSMOUNTAIN | 0 |
| OTHER:FISH | 0 |
| TOTAL DIVERSIONS..... | 13,627 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 147,494 |
| STORAGE | 17,971 |
| MUNICIPAL | 4,505 |
| STOCK | 2,575 |
| TOTAL FROM TRANSBASIN..... | 172,545 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 207,636 |
| ACRES IRRIGATED | 55,911 |
| ACRE-FEET DIVERTED PER ACRE | 3.71 |
| NUMBER OF STRUCTURES OBSERVED | 307 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 171 |
| -INFREQUENT STRUCTURES | 67 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 13 |
| -NOT USED (A,C,D, CODES) | 54 |
| -NO INFORMATION AVAILABLE (F CODE) | 2 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 275 |
| NUMBER OF RESERVOIRS | 15 |
| NUMBER OF WELLS | 20 |
| NUMBER OF OBSERVATIONS | 4,449 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 33--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 16,427 |
| STORAGE | 569 |
| STOCKWATER | 1,943 |
| MUNICIPAL | 0 |
| DOMESTIC | 25 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| FISH | 0 |
| OTHER:COMMERCIAL | 4 |
| TRANSMOUNTAIN-TRANSBASIN | 751 |
| INTERSTATE | 1,130 |
| TOTAL DIVERSIONS..... | 19,719 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 380 |
| DOMESTIC | 1 |
| MUNICIPAL | 0 |
| STOCK | 5 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| TRANSBASIN-TRANSMOUNTAIN | 0 |
| OTHER: | 1 |
| TOTAL DIVERSIONS..... | 387 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 0 |
| STORAGE | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 0 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 16,807 |
| ACRES IRRIGATED | 6,752 |
| ACRE-FEET DIVERTED PER ACRE | 2.49 |
| NUMBER OF STRUCTURES OBSERVED | 157 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 49 |
| -INFREQUENT STRUCTURES | 59 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 30 |
| -NOT USED (A,C,D, CODES) | 17 |
| -NO INFORMATION AVAILABLE (F CODE) | 2 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 100 |
| NUMBER OF RESERVOIRS | 10 |
| NUMBER OF WELLS | 30 |
| NUMBER OF OBSERVATIONS | 4,113 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 34--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 21,098 |
| STORAGE | 7,569 |
| STOCKWATER | 3,000 |
| MUNICIPAL | 828 |
| DOMESTIC | 13 |
| RECREATION | 0 |
| FISH | 0 |
| OTHER:COMMERCIAL | 0 |
| TOTAL DIVERSIONS..... | 32,508 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 6,583 |
| DOMESTIC | 0 |
| MUNICIPAL | 217 |
| STOCK | 0 |
| INDUSTRIAL | 0 |
| RECREATION | 83 |
| OTHER:COMMERCIAL | 6 |
| TOTAL DIVERSIONS..... | 6,889 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 260 |
| STORAGE | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 260 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 27,941 |
| ACRES IRRIGATED | 10,408 |
| ACRE-FEET DIVERTED PER ACRE | 2.68 |
| NUMBER OF STRUCTURES OBSERVED | 105 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 62 |
| -INFREQUENT STRUCTURES | 21 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 13 |
| -NOT USED (A,C,D, CODES) | 7 |
| -NO INFORMATION AVAILABLE (F CODE) | 2 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 102 |
| NUMBER OF RESERVOIRS | 11 |
| NUMBER OF WELLS | 8 |
| NUMBER OF OBSERVATIONS | 1,260 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 46--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 4,707 |
| STORAGE | 0 |
| STOCKWATER | 12 |
| MUNICIPAL | 0 |
| DOMESTIC | 4 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| FISH | 0 |
| OTHER: COMMERCIAL | 0 |
| INTERSTATE | 1,356 |
| TOTAL DIVERSIONS..... | 6,079 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 0 |
| DOMESTIC | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| OTHER: FISH | |
| TOTAL DIVERSIONS..... | 0 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 0 |
| STORAGE | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 0 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 4,707 |
| ACRES IRRIGATED | 1,070 |
| ACRE-FEET DIVERTED PER ACRE | 4.40 |
| NUMBER OF STRUCTURES OBSERVED | 46 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 37 |
| -INFREQUENT STRUCTURES | 3 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 0 |
| -NOT USED (A,C,D, CODES) | 6 |
| -NO INFORMATION AVAILABLE (F CODE) | 0 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 42 |
| NUMBER OF RESERVOIRS | 2 |
| NUMBER OF WELLS | 0 |
| NUMBER OF OBSERVATIONS | 586 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 69--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 3,096 |
| STORAGE | 123 |
| STOCKWATER | 1,123 |
| MUNICIPAL | 0 |
| DOMESTIC | 0 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| FISH | 0 |
| OTHER: COMMERCIAL | 0 |
| TOTAL DIVERSIONS..... | 4,342 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 150 |
| DOMESTIC | 0 |
| MUNICIPAL | 0 |
| STOCK | 4 |
| OTHER: FISH | 0 |
| TOTAL DIVERSIONS..... | 154 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 0 |
| STORAGE | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 0 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 3,246 |
| ACRES IRRIGATED | 1,459 |
| ACRE-FEET DIVERTED PER ACRE | 2.22 |
| NUMBER OF STRUCTURES OBSERVED | 41 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 14 |
| -INFREQUENT STRUCTURES | 13 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 3 |
| -NOT USED (A,C,D, CODES) | 9 |
| -NO INFORMATION AVAILABLE (F CODE) | 2 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 31 |
| NUMBER OF RESERVOIRS | 8 |
| NUMBER OF WELLS | 1 |
| NUMBER OF OBSERVATIONS | 131 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 71--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 7,257 |
| STORAGE | 44,503 |
| STOCKWATER | 302 |
| MUNICIPAL | 351 |
| DOMESTIC | 37 |
| INDUSTRIAL | 0 |
| RECREATION | 10 |
| FISH | 3,649 |
| OTHER:COMMERCIAL | 8 |
| TRANSMOUNTAIN-TRANSBASIN | 100,972 |
| TOTAL DIVERSIONS..... | 157,089 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 0 |
| DOMESTIC | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| TRANSBASIN-TRANSMOUNTAIN | 71,276 |
| OTHER:AUGMENTATION | 7 |
| TOTAL DIVERSIONS..... | 71,283 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 0 |
| STORAGE | 0 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 0 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 7,257 |
| ACRES IRRIGATED | 1,474 |
| ACRE-FEET DIVERTED PER ACRE | 4.92 |
| NUMBER OF STRUCTURES OBSERVED | 201 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 50 |
| -INFREQUENT STRUCTURES | 67 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 24 |
| -NOT USED (A,C,D, CODES) | 57 |
| -NO INFORMATION AVAILABLE (F CODE) | 3 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 135 |
| NUMBER OF RESERVOIRS | 16 |
| NUMBER OF WELLS | 46 |
| NUMBER OF OBSERVATIONS | 2,138 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 77--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 18,359 |
| STORAGE | 448 |
| STOCKWATER | 923 |
| MUNICIPAL | 0 |
| DOMESTIC | 14 |
| INDUSTRIAL | 1 |
| RECREATION | 0 |
| FISH | 5,310 |
| OTHER:COMMERCIAL | 2 |
| INTERSTATE | 33,985 |
| TOTAL DIVERSIONS..... | 59,042 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 299 |
| DOMESTIC | 0 |
| STOCK | 0 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| OTHER:FISH | 0 |
| TOTAL DIVERSIONS..... | 299 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 243 |
| STORAGE | 194 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 437 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 18,901 |
| ACRES IRRIGATED | 3,095 |
| ACRE-FEET DIVERTED PER ACRE | 6.11 |
| NUMBER OF STRUCTURES OBSERVED | 118 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 73 |
| -INFREQUENT STRUCTURES | 17 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 0 |
| -NOT USED (A,C,D, CODES) | 30 |
| -NO INFORMATION AVAILABLE (F CODE) | 0 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 88 |
| NUMBER OF RESERVOIRS | 17 |
| NUMBER OF WELLS | 13 |
| NUMBER OF OBSERVATIONS | 2,217 |

WATER COMMISSIONER DISTRICT SUMMARY
DISTRICT 78--1990

| | 1990 ACRE-FEET |
|---|---|
| DIRECT DIVERSIONS | |
| IRRIGATION | 21,119 |
| STORAGE | 1,864 |
| STOCKWATER | 1,113 |
| MUNICIPAL | 0 |
| DOMESTIC | 11 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| FISH | 5,880 |
| OTHER: COMMERCIAL | 4 |
| TRANSMOUNTAIN-TRANSBASIN | 343 |
| TOTAL DIVERSIONS..... | 30,334 |
| DELIVERIES FROM STORAGE | |
| IRRIGATION | 752 |
| DOMESTIC | 0 |
| MUNICIPAL | 551 |
| STOCK | 0 |
| INDUSTRIAL | 0 |
| RECREATION | 0 |
| TRANSBASIN-TRANSMOUNTAIN | 0 |
| OTHER: FISH | 0 |
| TOTAL DIVERSIONS..... | 1,303 |
| DELIVERIES FROM TRANSBASIN | |
| IRRIGATION | 991 |
| STORAGE | 312 |
| MUNICIPAL | 0 |
| STOCK | 0 |
| TOTAL FROM TRANSBASIN..... | 1,303 |
| DUTY OF WATER: | |
| TOTAL TO IRRIGATION | 22,862 |
| ACRES IRRIGATED | 6,567 |
| ACRE-FEET DIVERTED PER ACRE | 3.48 |
| NUMBER OF STRUCTURES OBSERVED | 183 |
| WATER RUN-NO INFORMATION AVAILABLE (E CODE) | 0 |
| ACTIVE DIVERSIONS-DAILY | 86 |
| -INFREQUENT STRUCTURES | 46 |
| INACTIVE DIVERSIONS-NO WATER AVAILABLE (B CODE) | 7 |
| -NOT USED (A,C,D, CODES) | 43 |
| -NO INFORMATION AVAILABLE (F CODE) | 1 |
| NUMBER OF DITCHES, SURFACE RIGHTS | 148 |
| NUMBER OF RESERVOIRS | 30 |
| NUMBER OF WELLS | 17 |