

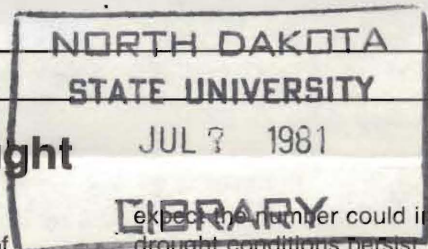
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basin bulletin

Vol. 8, No. 5

May-June 1981



Governors keep eyes on drought

Governors of every state in the Missouri River Basin are keeping a close watch on what could be the second year of severe water shortage for the region, members of the Missouri River Basin Commission were told at the 36th quarterly meeting May 5-6 in Omaha.

At least eight of the governors have activated task forces or other procedures to monitor conditions and find ways to help avoid major economic and human problems.

In a two-hour discussion of basinwide conditions, state members described the situation as "serious," "extreme" and "grim." Among basin states, North Dakota and South Dakota appeared to be most severely affected. North Dakota State Engineer Vernon Fahy said two-thirds of his state was in a drought situation with the remaining one-third of the state "in an extreme drought situation." North Dakota receives an average of only 16 inches of rainfall in a normal year, he said.

Fahy said the heads of state agencies concerned with the drought meet weekly with the governor to "work out, where we can, measures to mitigate the suffering of the human population."

"In North Dakota we have a problem not only with the lack of moisture," Fahy said, "we run into extreme fire hazard situations." In addition, one North Dakota community of 18,000 population is out of water in its principal reservoir and will have to recycle sewage treatment water for domestic use through the summer, he said.

South Dakota Member Warren R. Neufeld said the state of South Dakota lost \$300 million in agricultural income due to drought in 1980, and the outlook for 1981 is not optimistic. State and federal officials have identified one million acres damaged by erosion caused by low soil moisture. They

expected the number could increase to three million acres if drought conditions persist.

The amount of damage from prairie fires was three times greater than normal in the first four months of 1981, Neufeld said.

"Cattlemen are in a difficult situation," he said. "The foundation herd is being decimated," with ranchers forced to sell their cattle because pastures can't support grazing, stock ponds are low, and prices for grain or hay are prohibitively high.

Wyoming is helping drought victims with money from the Governor's Major Disaster Fund. Three counties in the state's northeast corner have been declared disaster areas eligible for the aid. Several other areas may soon be added to the list, Interstate Streams Engineer John Buyok reported.

Colorado and Montana traced their immediate problems to scarce snowfall in the mountains over the winter months. Colorado Governor Richard Lamm initiated a drought contingency planning program in February when mountain snowfall as of Feb. 1 was the lowest on record for that time of year.

"Usually through February, we receive 70 to 90 percent of our snowfall, whereas, this year it was only 40 percent," Colorado Member Fred Daubert reported.

Similarly, Montana reported one-third of the state recorded the lowest snowfall on record and the lowest moisture content by mid-April. Montana Member Jack Acord noted many streams were running 30 to 40 percent of normal, some 50 to 60 percent of normal. Eastern Montana was most seriously affected, he said. (Continued page 4)

INSIDE: Future uncertain — Commission approves continuation, close-out plans

Commission approves continuation, close-out plans

The Missouri River Basin Commission meeting in Omaha May 5-6 approved two organizational contingency plans and authorized a State Caucus committee to pursue a third. All three plans assume that there will be no federal funds appropriated for river basin commissions for FY 1982.

The action was a response to the elimination of all titles of the Water Resources Planning Act of 1965 (P.L. 89-80) from the Reagan Administration FY 1982 budget. River basin commissions authorized under title II of the act, along with the U.S. Water Resources Council, grants to states for water resources planning, and grants to water resources research institutes could all come to an end Sept. 30, 1981, if proposed appropriations are not reinstated.

Although bills in both houses of Congress (H.R. 3432 and S. 1095) propose continued authorization of river basin commissions with some revisions in duties, membership, and funding there is doubt whether either bill or a compromise package can be passed prior to Sept. 30.

The commission discussed the possibility of continuing activities beyond the Sept. 30 cut-off date by using about \$500,000 available as carryover funds from the FY 1981 budget.

Preliminary inquiries directed to Interior Department Secretary James Watt who serves as chairman of the Water Resources Council produced no clear assurance whether the commission could continue operating with the carryover funds. Acting Under Secretary for Water and Land Resources David Russell said in a letter May 5, he would recommend that unobligated funds and other assets of river basin commissions be "... transferred to the member states for their use in regional water resources planning. ..."

In March, Water Resources Council Director Gerald Seinwill requested a plan detailing the shutting down of commission operations by Sept. 30. The close-out proposal adopted by the commission May 5 was a response to that request.

The plan says, if no federal funds are available after Sept. 30, and if commission members elect not to continue operations past Sept. 30 (assuming P.L. 89-80 authorization is still in effect), staff work will continue on the Missouri River Basin Hydrology Study and the Lower Missouri River Flood Plain Study. Goals of both studies would be abbreviated. Staff would also complete water conservation workshops and a water user needs identification project under way and continue coordination efforts through Sept. 30.

Program activities would end Sept. 30, with a close-out period from Oct. 1 through Dec. 31 for printing and distributing final reports, fulfilling financial obligations, and disposing of materials and equipment. All funds remaining at that time would be disbursed among state members according to the existing dues formula.

MRBC leadership change announced

The Missouri River Basin Commission will have its second leadership change in five months on July 1 when a new vice chairman takes office.

George Christopulos, Wyoming state engineer and commission member, will succeed Warren R. Neufeld as vice chairman. According to commission procedures established in 1977, Christopulos will also become acting chairman at that time.



Christopulos



Neufeld

Former Chairman Millard W. Hall was dismissed by the Reagan administration in February. The vice chairman serves as acting chairman "... in the event of a prolonged absence of a Commission chairman. ..."

The vice chairman is selected annually from among state members, following a traditional alphabetical rotation system. Colorado Member Fred Daubert will serve a one-year term as vice-chairman-elect beginning July 1.

Another contingency plan for continuing MRBC activities into FY 1982 using carryover funds was also adopted. The plan is based on assumptions that P.L. 89-80 authorization would still be in force, that no new federal funds will be available, that unobligated funds in the MRBC account can be carried over, and that the members wish to continue operations at a reduced level of programming.

The plan calls for completion of the Missouri River Basin Hydrology Study according to the original study plan, continued state/federal coordination, further development of an issues-oriented long-range regional water management strategy, and completion of the Lower Missouri River Flood Plain Study. The continuation plan would extend program activities through Sept. 30, 1982.

The State Caucus appointed a committee of three states to investigate the possibility of forming an entirely new regional entity which could continue some of the functions of the commission beyond Sept. 30. Dayle Williamson, Nebraska, is committee chairman. Other members are Warren R. Neufeld, South Dakota, and Robert Dunkeson, Missouri.

The committee will also investigate whether such a new entity could be funded initially with funds remaining after the Missouri River Basin Commission has been disbanded. A report will be made to the State Caucus with a possible recommendation to the full commission at the 37th quarterly meeting Aug. 5-6 in Sioux City, Iowa.

MRBC Basin Bulletin
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The Missouri River Basin Commission is a state-federal body charged with coordination, planning and communication for water and related land resources in the 10-state region drained by the Missouri River, in accordance with Public Law 89-80. Ten states, ten federal agencies, and two interstate water compacts are represented on the commission. They are Colorado, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, and Wyoming; the U.S. Departments of Agriculture, Army, Energy, Health and Human Services, HUD, Interior and Transportation, and the Environmental Protection and Federal Emergency Management Agencies; and Big Blue River Compact Administration and Yellowstone River Compact Commission. Canada and the basin's Indian tribes are represented by an observer.

Warren R. Neufeld, South Dakota, Acting Chairman

The Basin Bulletin is published bimonthly and circulated to 4,500 subscribers. Address changes may be sent to the Missouri River Basin Commission, Suite 403, 10050 Regency Circle, Omaha, Neb. 68114. Telephone: (402) 397-5714. Elaine Larkin, editor; Lois Thomas, graphic artist; Mike Larkin, cartographer.

Budget cut curtails special studies

The proposed elimination of all titles of the Water Resources Planning Act of 1965 from the fiscal year 1982 federal budget would mean no more federal money for river basin commission special studies. Two such studies are now under way under Missouri River Basin Commission auspices.

The commission has directed staff to concentrate on completing portions of the studies which would provide useful products by the end of the current fiscal year. Donald L. Ohnstad, director of the three-year basinwide hydrology study begun in 1980, and Donald A. Becker, manager of a two-year flood plain study begun earlier this year, are both escalating efforts to complete selected technical activities before fiscal year 1981 ends Sept. 30.

Ohnstad said he expects the hydrology study will meet one of its primary objectives, that of establishing a data base of water use information for the Missouri River Basin that is agreeable to state and federal member agencies. He noted, however, that loss of key study staff who may be finding other jobs in the next few months could prevent that accomplishment.

Technical studies on surface water supply, ground water depletion, agricultural water use including identification of irrigated lands, and municipal, industrial, energy and rural-domestic water use are proceeding, Ohnstad said.

Data collected is being stored on computer memory. The entire system should be turned over to "an appropriate agency" to be designated by the commission if the agency is phased out, he said. By the end of fiscal year 1981, about

\$1.3 million in federal funds and \$400,000 in state contributions will have been spent on hydrology study technical efforts.

The second objective of the study was to have been the primary thrust of fiscal year 1982 activities. Using the data base, an accounting system would have been developed which would have included a query capability. This would have allowed water resources planners and managers to analyze what would happen to the water supply throughout the basin if specific proposals for water use were imposed. This query system may not now be developed, "at least, not by this commission," Ohnstad said.

Ohnstad is hopeful that the work of the past two years and the three years of coordination efforts preceding funding of the study will be carried forward even if the commission ceases to exist.

"The need for this information still exists, even if the future of the Commission is in doubt," he said.

Several technical data assessments for the flood plain study were just beginning when the revised administration budget was announced in March. Since then, Study Manager Don Becker and the study management group have been proceeding with three activities that they feel can be completed and could provide a basis for later efforts by other agencies pursuing the original goals of the full study.

The three technical activities are: (1) a study to determine the effect of channel accretion and encroachments on floodway carrying capacity; (2) an analysis of the flood protection capacity of existing levees; and (3) a cataloging of current uses of land and status of development in the Missouri River flood plain from Ponca, Nebr., to the mouth above St. Louis.

Becker said the land use study will yield a technical report and an atlas of over 100 maps. "A local entity could use the land use maps to guide them in developing their zoning regulations, for example," he said.

Other data generated by the technical studies will be compiled and made available to state and federal agencies with jurisdiction over flood plain management.

The sudden ending of federal dollars for the flood plain study would mean that a further analysis of environmental and developmental potential in the flood plain will not be undertaken. The plan of study calls for projection of development and environmental needs, creating compatible criteria for flood plain development, setting of standards for protecting environmental values, and analysis of institutional alternatives for implementing a flood plain management program.

The study was also expected to provide strategies for avoiding or alleviating flood hazards based on the data gathered through the technical activities. As a result of the funding cut, individual users of the data may be left to draw their own conclusions, Becker said.

Governors and drought (Continued)

Irrigation underway in Nebraska already in May and "the whole state...on the move through the air in the form of dust and blowing dirt" were the principal signs of drought cited by Jack Hart. Hart is a special assistant to Nebraska Governor Charles Thone and is assembling a Drought Preparedness Team at the governor's request.

"The state of Kansas is in a critical situation," according to Francine Neubauer, executive director of the Kansas Water Resources Board. About one-third of the state had been suffering drought conditions through the early spring.

Portions of Missouri are faced with current water shortages that "began with the extreme heat of last year," according to Robert Dunkeson, planning director, Missouri Department of Natural Resources. The heat increased municipal demand at the same time as surface evaporation increased, reducing storage reservoirs, he said.

The moisture deficit in Missouri was only slight compared to the state average, but Dunkeson said state officials are concerned about some individual supplies which could be in trouble. The Governor's Drought Emergency Task Force is meeting to coordinate agency efforts, he said.

Compared to the other eight states, Iowa and Minnesota are less widely affected by the low moisture. "Iowa has been in and out of drought conditions three times since January," according to James R. Webb, director of the Iowa Natural Resources Council. Major effects were limited to small areas of the central portion of the state, he said.

Minnesota has initiated a drought contingency planning effort according to Robert Arnold, director of federal-state basin commission planning for the Minnesota Water Planning Board.

After hearing the state reports, the commission declined to take any action in developing a regionwide drought management strategy. Most agreed with South Dakota Member Neufeld.

"The best way we could handle the effect of the drought on the state of South Dakota would be a continued, consistent program of water development that would insure and protect our economy against the cycles of rainfall," Neufeld said.

Drought affects Missouri River navigation

Conservation measures in the main stem reservoir system will affect the navigation season on the Missouri River. The season will be one month shorter this year in order to maintain adequate channel depth through the remainder of the season, the Army Corps of Engineers has announced.

Col. C.A. Selleck, Missouri River Division Engineer, said the system of dams and reservoirs on the Missouri River main stem above Sioux City, Iowa, was designed to store water to accommodate a variety of uses during multiple-year droughts.

"When we dip below a certain storage figure in any given year on the first of July, then our long range plans call for us to begin to conserve the resource in storage," Selleck said. Officials of the Corps' reservoir control center predict such a shortfall this summer.

Conservation measures not only protect the continued service capability of the reservoir system during multiple-year droughts, they shorten the time required to return to full carryover storage in the system, he said.

By shortening the navigation season by one month, the total amount of water released over the season will not deplete reservoir levels beyond conservation program requirements. "It is just a question of timing," Selleck said.

The navigation season which usually extends through the end of November will end in late October this year.

Drought update

A National Weather Service bulletin June 1 reported above normal precipitation in many areas of the Missouri River Basin for the month of May.

More than 50 percent of drainage basins in Wyoming had more than normal rainfall. However, the extreme northeast corner of the state was still being affected by the prolonged period of below normal precipitation.

Colorado's rafting industry was severely affected in May by continued below average precipitation. Ironically, cool temperatures in early May caused frost damage to corn, sugar beets, and alfalfa and too much moisture in other areas hampered crop development.

North Dakota and South Dakota continued to be critically affected by drought conditions through May. Fifty percent of North Dakota was described as suffering moderate to extreme drought. Critical shortages in top soil moisture and livestock water supplies continued in parts of South Dakota.

Rains in Kansas and Nebraska throughout May restored top soil moisture to acceptable levels, but agriculture in both states could suffer if subsoil moisture content is not increased.

Conditions remained extreme in some areas of Iowa. The weather service reports over 10 inches of precipitation would be needed to restore soil moisture in the west central portion of the state.

While drought conditions persisted through May in Missouri, municipal water supplies in four of the five most critically stricken counties have been restored to acceptable levels.

May rains in Minnesota relieved concerns in northwest and west central Minnesota. Top soil moisture was reported as sufficient with more subsoil moisture still needed.

Publications announced

The following publications are now available from the Missouri River Basin Commission:

Fiscal Year 1982 Water Project and Program Priorities — a listing of federal agency water projects and programs considered of high priority within the Missouri River Basin. The priority is assigned by MRBC to urge Congress to fund these proposals for fiscal year 1982 implementation or acceleration.

Fiscal Year 1983 Water Project and Program Priorities — a listing of federal agency water projects and programs considered of high priority for incorporation into federal agency budgets for fiscal year 1983. The listing cites regional priorities as determined and agreed by state and federal MRBC members.

Missouri River Basin Water Resources Management Plan and Final Environmental Impact Statement — a definitive and flexible guide for the development, conservation, preservation, and management of water and related land resources in the Missouri River Basin; adopted by MRBC as the comprehensive, coordinated joint plan for the region, May 1980.

Executive Summary: Missouri River Flood Plain Legal and Institutional Framework Study — an overview of federal and state laws and court decisions relating to flood plain management in South Dakota, Iowa, Nebraska, Kansas, and Missouri. (The full document, a 700-page analysis, is available from the commission through interlibrary loan.)

Review of Water and Related Land Resource Activities in the Missouri River Basin, FY 1981-1985 — a five-year outlook of water projects and programs scheduled to be conducted within the Missouri River Basin by federal, state and regional government entities.

Western Coal Planning Assistance Project Final Report — a description and review of four workshops held in the summer of 1980 to help local officials and planners cope with the impacts of coal development; the report also describes a four-volume reference system developed and published prior to the workshops.

Status of Electric Power in the Missouri River Basin — a report of electric generating capacity and institutional arrangements for meeting electric power needs in the Missouri River Basin (data current through 1979).

More irrigated acres than previously thought

There were 13.3 million acres of irrigated crop and pasture lands in the Missouri River Basin in 1978 according to preliminary figures of the agricultural work group compiling data for the Missouri River Basin Hydrology Study.

The total is 1.3 million acres or 10 percent greater than generally accepted estimates made prior to 1978. Study officials say the difference may be accounted for by increases in the number of irrigated acres as well as improvements in methods of estimating acreage.

The most frequently cited sources for years prior to 1978 are the National Water Assessment of 1975 conducted by the Water Resources Council and the Missouri River Basin Framework Study published in 1969 by the Missouri Basin Inter-Agency Committee.

Initial figures on irrigated acreage were obtained for the hydrology study from the Economics and Statistics Service of the U.S. Department of Agriculture. The figures were provided to state officials for their concurrence and then verified by Soil Conservation Service district conservationists in each of the 471 counties in the basin.

Before the total and individual county figures can be accepted as part of the data base for the hydrology study, each state must give final concurrence to the adjustments made locally by the Soil Conservation Service.

MRBC Director of Hydrologic Studies Donald L. Ohnstad said state concurrence is crucial because the data will be used in further computations to determine how much water was consumed by irrigation in each of 93 subbasins in the region in 1978.

Without concurrence at this point in the study process, a major study goal of an agreed-upon data base could be jeopardized, Ohnstad said. Agriculture work group members representing each of the states were asked to concur in writing before the end of June.

Total irrigated acreage by state is shown in the adjacent table. These totals include only portions of the state within Missouri River Basin boundaries.

**Preliminary Estimates of 1978 Irrigated Acreage
in the Missouri River Basin**

State	Acres*	Number of Counties Included
Colorado	1,558,491	24
Iowa	225,087	40
Kansas	1,070,007	65
Minnesota	4,585	6
Missouri	102,809	73
Montana	2,158,248	47
Nebraska	5,936,966	92
North Dakota	153,630	36
South Dakota	493,752	67
Wyoming	1,565,816	21
Total	13,269,391	471

*State totals represent only those portions of the state within the Missouri River Basin.

Water conservation is workshop theme

Three workshops acquainting community officials with water conservation alternatives in the urban setting will be held in the Missouri River Basin this August. Dates and locations are: Aug. 10, Ramada Inn, St. Joseph, Mo.; Aug. 12, Holiday Inn (Airport), Sioux Falls, S.D.; and Aug. 13, Ramada Inn, Billings, Mont.

The workshop format includes a case study of a hypothetical community facing a water shortage. By using a seven-step procedure, participants will devise conservation plans to alleviate or avoid serious problems.

Mayors, local water plant operators, public works superintendents and others immediately responsible for administering a community water supply are invited to attend.

The workshops are sponsored by the Missouri River Basin Commission and the U.S. Geological Survey, based on similar efforts successfully sponsored by the New England River Basins Commission last year. For registration materials, write: Missouri River Basin Commission, 10050 Regency Circle, Suite 403, Omaha, Neb. 68114. Attendance will be limited to 60 in each location on a first-come, first-served basis.

Hamon notes staff changes

Several changes in MRBC staff responsibilities have been announced by Carroll M. Hamon, staff director.

The comprehensive planning group, responsible for preparation of the regional plan and priorities reports, was disbanded in April. Personnel were reassigned to assist with the Missouri River Basin Hydrology Study and to fill vacancies created by resignations.

David K. Peterson, formerly director of comprehensive planning, was named director of administration and public affairs. He succeeds William C. Ramige who resigned in April to become owner/publisher of a weekly newspaper in Glencoe, Minn.

Gerald R. Zimmerman, formerly MRBC director of special studies, resigned June 5 to become an assistant to the executive director of the Upper Colorado River Basin Commission based in Salt Lake City. Planners in the special studies group now report to the staff director.

Robert G. Horner, hydrologist, resigned in May to take a hydrologist position with Phillips Coal Company based in Dallas. Other resignations over the past four months include Carol A. Barrow, secretary to the Chairman; Susan C. Krzycki, word processor; and Alan S. Hersch, senior water resources planner.

Basin notes

Former MRBC Chairman Millard W. Hall is now affiliated with Sage Murphy and Associates, a Denver-based consulting firm...The American Water Resources Association will hold symposia on two themes this fall in Atlanta: Oct. 4-7, "Waste Impact on Water"; and Oct. 6-7, "Unified River Basin Management Stage II"...The Army Corps of Engineers has appointed a new District Engineer for the Kansas City District. He is Gurney C. Gunter,

formerly deputy division engineer of the Middle East Region based in Riyadh, Saudi Arabia...The MRBC Basin Bulletin was not published for January-February or March-April 1981. With this issue, the Bulletin returns to its regular bi-monthly schedule...The 37th quarterly meeting of the Missouri River Basin Commission will be Aug. 5-6 at the Hilton Inn on the Plaza in Sioux City, Iowa. The agenda will be available two weeks prior to the meeting.



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