

WATER AND POWER RESOURCES SERVICE:
UPDATE ON CURRENT AND PROPOSED ACTIVITIES

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As most of you know by now, the Bureau of Reclamation has changed its name to the Water and Power Resources Service. This was accomplished in November, 1979, by order of the Secretary of Interior to more accurately reflect the continuing functions of the agency. In other words, our emphasis has now shifted from "reclamation" of the arid desert lands of the west through irrigation to water resource programs more oriented towards water supplies for a variety of purposes and related power developments. Since the formation of the Reclamation Service as an offshoot of the U.S. Geological Survey in 1902 through the change to Bureau of Reclamation we have been experts in the area of irrigation. However, with the advent of 1979 we will change our primary mission to technical service in the fields of water supply and power.

This change does not mean that we will seriously alter our organizational make-up or the technical capability of our staff. We will continue to be experts in all facets of water resource planning and construction in the 17 western states. In addition to water supply and power we will study related aspects such as flood control, recreation development, fish and wildlife enhancement, water quality and, if appropriate, irrigation development or improvements. I expect much of our irrigation work to be concentrated in Indian projects. I also believe many of our future

studies will be of a research nature, dealing perhaps with precipitation management, desalting, or alternative sources of power.

Now, for our current construction activities in New Mexico, I would like to refer to four projects. First is the Navajo Indian Irrigation Project which we are building as agents of the Bureau of Indian Affairs. We are trying to schedule development of one 10,000-acre block each year, requiring \$15 to \$30 million each year. The construction of Navajo Power Plant has been held up pending resolution of certain environmental concerns, and studies on those conditions are in progress now.

Construction of Brantly Dam on the Pecos River (and I include it in construction programs because it is authorized) is temporarily held up for a reauthorization process which involves raising the cost ceiling to about \$180 million at today's prices. We also continue to perform rehabilitation and betterment work for improvement of facilities at the Carlsbad Irrigation District.

I include also in construction status Hooker Dam on the Gila River, or an alternative. The feasibility studies are being conducted by our Phoenix Office, but I report it to you because the work is in New Mexico. Hooker Dam was authorized as part of the Central Arizona Project, but only recently were studies started on Hooker Dam. I would guess that they will take at least three more years.

Now for our planning programs in New Mexico. First in importance is the Gallup-Navajo Indian Water Supply Project, a \$200

million development of pipelines and pumping plants to bring water from the San Juan River to Gallup and perhaps 15 to 20 Navajo communities in New Mexico, Arizona, and Utah. Our current schedule calls for completion of all studies by this coming fall. In the meantime the Navajo Tribe has developed its own plan, which is a modification of ours. In an effort to resolve the differences, Senator Domenici has established a special task force to examine the issues and make a consensus recommendation to him. The task force hopes to complete its deliberations by May or June of this year.

We have already completed our water supply studies for the City of Raton and have recommended two alternative plans to them. In the meantime, Raton has hired its own consultant, Gordon Herkenhoff, to advise them on our plans and other related matters before they make a decision on how to proceed.

The Tularosa Basin Water Study was begun this year and is scheduled for three more years. It will not be oriented towards any specific projects or recommendations. Instead, the studies will inventory and identify the water resources of Tularosa Basin and suggest the various uses to which it can be put.

I will include here two Indian Projects which we are studying at the present time. One is on the Jicarilla-Apache Reservation, designed to develop uses for 26,000 acre-feet of water annually by diversion from the San Juan River. This concept has been agreed to between the State of New Mexico and the Secretary of Interior. The

other is a proposal to irrigate about 2,500 acres on the San Juan Pueblo by pumping water from either the Rio Grande or the Rio Chama.

With the support of the New Mexico State Engineer and the Santa Cruz Irrigation District, we are conducting a study of raising and rehabilitating Santa Cruz Dam. The objectives are not only to make the structure safe, but also to provide a larger irrigation supply. Several alternatives have been suggested for study. This investigation may take three more years, depending upon the level of funding provided.

At the request of Senator Domenici we are providing technical assistance to the State of New Mexico by making studies for rehabilitation of eight diversion dams and acequias on the Rio Grande below Velarde. These facilities are presently in a deteriorated condition and much study is needed to determine what should be done with them.

The last planning study I want to mention is our Llano Estacado Playa Lake Study. As many of you know, the Ogallala aquifer is the principal water resource of the Llano Estacado area of eastern New Mexico and western Texas. The aquifer is slowly declining in yield and water of the area. The Playa Lake Study is an investigation to determine if the water resources in those lakes could be used to augment or extend the water supply in the Ogallala formation.

Before I talk about future programs of the Water and Power Resources Service, I would like to read to you some definitions or priorities for water resource projects that we intend to follow:

1. Studies with emphasis on energy development at existing facilities with apparent favorable outcome and minimal environmental impact. Water and energy conservation measures and solar energy potentials, Indian water and resources, studies partially funded by states, nonstructural alternative studies, and municipal and industrial needs are included.
2. Similar to priority number 1, but includes studies at new facilities with same objectives as above and, in addition, emphasis on groundwater over-draft, waste water reuse, and water quality improvement.
3. Investigations with high potential for development, considerable support and minimal environmental impact. Investigations with any purpose mentioned in 5-year goals (refers to Service program goals).

Now it is not possible for me to be specific about future programs and projects in New Mexico because none of them have been administratively approved or authorized by Congress. However, a number of possibilities can be envisaged such as:

1. Small wind energy conversion systems wherever feasible throughout the state with energy production integrated with other sources of power.
2. Low-head hydro-energy generation wherever sufficient water supply is available and possibly using existing low-head structures.

3. Pump-back hydro-energy generation for peaking power at existing structures such as Heron, El Vado, and Elephant Butte Dams.
4. Conservation of water and improved management by all uses and users throughout the State.
5. Control and managements of salinity problems, particularly in the Canadian and Pecos River Basins.

In closing I want you to know that the Water and Power Resources Service is still a group of dedicated and competent scientific people here to serve you and to help solve water resource problems. Together, I think we can do it all.