I am pleased to have this opportunity to review with you the current status of Ruedi Reservoir and the formulation of plans for the use of Ruedi Reservoir.

As you are probably aware, construction of Ruedi Reservoir is essentially complete. The 100,000 acre-foot capacity reservoir is now storing water at the rate of about 500 acre-feet per day. Yesterday, we had about 35,000 acre-feet of water in storage. (Above figures need to be verified.)

Ruedi Reservoir has been built primarily to furnish replacement water to the Western Slope so as to permit Fryingpan-Arkansas Project diversions to the Eastern Slope at times when such diversions could not otherwise be made because of simultaneous demands of senior diversions in Western Colorado existing at the time of the adoption of the Fryingpan-Arkansas Project operating principles. Ruedi Reservoir water not needed for replacement purposes will be available for sale for municipal and industrial purposes, particularly those associated with future oil
shale development, and for irrigation and other beneficial uses on the Western Slope. In addition, Ruedi Reservoir will make a substantial contribution to the economic development of the Western Slope by providing fish and wildlife enhancement, excellent recreational opportunities, and flood control.

Hydrology

We are all interested in learning the quantity of Ruedi Reservoir water expected to be available for beneficial use on the Colorado Western Slope. In order to get a valid estimate of that figure, it will be necessary to determine as objectively as possible the estimated water yield of Ruedi and to deduct therefrom the expected needs for replacement water at Ruedi Reservoir to compensate for Fryingpan-Arkansas Project diversions that otherwise would interfere with downstream diverters.
We have made several studies of this matter using monthly stream-flow data. We have concluded, however, that none of these monthly studies reflect the conditions of daily rates of flow and the daily exercise of water rights essential to determining the water available for regulation at Ruedi and the need for replacement water. A daily analysis will be required to realistically determine this.

One of the major factors involved in the replacement study is the determination of allowances to be made for conditional decrees senior to the Fryingpan-Arkansas that have been granted by the courts over the last decade or so for use of Colorado River water in Colorado. Many of these conditional water rights have not yet been exercised fully. Many have not yet been used at all. Examples are the Silt Project, West Divide, Dillon Reservoir and Roberts Tunnel, Homestake Project and many others. Full use of water by these decrees is not reflected in the historical records. Hence, adjustments for these future uses must be made. Also, many existing vested rights have not been fully utilized and determination will have to be made as to any possible expansions which should be considered.
The large number of criteria involved plus the necessity of using
daily streamflow data is most adaptable and is being programmed for a
computer. Our basic concept in developing this computer analysis is
much the same as is currently being used in our replacement accounting
procedures with which you are familiar. These procedures, of course,
will have to be expanded to encompass the additional uses of water in
the future. We have already completed that segment of the study which
deals with the daily water supply available for diversion by the
Fryingpan-Arkansas Project under the operating principles. We are
currently working on the rest of the program.

As you will appreciate, a study of daily rates of flow over an
adequate time period and involving such a large number of diversions
is complex and time-consuming. The study is about 20 percent complete
but we will need to establish firm criteria for future uses of water
before we can proceed much farther. Our time table indicates that
this study should be completed as soon as possible and certainly not
later than next spring.
Cost Allocations and Water Charges

Upon completion of the hydrology study identifying the quantity of replacement water required and the amount of water remaining for Western Slope use, we shall be able to match up these data with the Ruedi Reservoir costs for supplying the two water uses. It should be pointed out that the total cost of Ruedi has yet to be determined.

In addition to the cost of completing some minor construction work yet to be done, there are some unresolved questions between the United States and the contractor. When the total cost of Ruedi is known, the costs will be allocated among the non-reimbursable purposes of fish and wildlife, recreation, and flood control and the reimbursable purposes of replacement water supply, and Western Slope municipal, industrial and irrigation uses. The method of allocating the costs among these various purposes will be the so-called "separable cost-remaining benefit" method which for several years all Federal water resource development agencies have been required to use. In making the cost allocation by this method, it is essential that reasonable firm
information be available regarding the extent to which the various
purposes are to be served. This is necessary because the amount of
benefit (measured in dollars) associated with each purpose varies
widely depending on the nature of the use (for example, whether municipal
and industrial or irrigation or recreation). Likewise, the cost of
providing benefits of the same magnitude by some alternative means
is an important factor in determining how costs are allocated. After
the costs and the quantity of water allocated to each water use is
known, it will be possible to establish a price per acre-foot of water
for each purpose.

The form of water user contract will also have a bearing on the
price. If the contract assures repayment in full of the allocated
construction cost, the actual cost may be expected to govern. On
the other hand, if the water user contract is a water service type
under which payment is made on an acre-foot basis only for the actual
quantity of water used during the current year, the price per acre-
foot may reasonably be expected to be higher since the water user
will have made only a limited financial commitment which does not
assure the return of the full construction cost.
This portion of our determination, although it must necessarily await some hydrology and total cost quantities, should also be completed next spring or early summer.

Summary

As you will appreciate, there is considerable work to be done before it can be determined how much water Ruedi Reservoir may be expected to yield as a firm supply for future Western Slope development, and what the cost for such water will be to the water user.

I pointed out two problem areas to be resolved. They are:

1. In finishing the computer study of replacement water requirements, what assumptions should be made with regard to the future exercise of existing Colorado River Basin water rights for West and East Slope uses?

2. After Ruedi Reservoir has fulfilled its primary purpose of furnishing replacement water to compensate for Fryingpan-Arkansas Project diversions that would otherwise interfere with Western Slope water users, to what uses is the remaining yield of Ruedi to be committed?
We solicit your advice and counsel with regard to these questions.

We also intend to solicit the suggestions and recommendations of the Fryingpan-Arkansas Project Commission created by the Project "Operating Principles." Since the commission membership consists of representatives of the major interests concerned -- namely: The Colorado River Water Conservation District, the Southeastern Colorado Water Conservancy District, the State of Colorado, and the United States -- the Commission may be the logical forum in which these questions should be discussed and guidelines developed.