

Should Upper Basin depletions occur at a faster rate than projected, it would be necessary to bring the initial units of the augmenting desalting works into operation at an earlier date. Otherwise there would be no significant effect on the augmentation study.

Water quality.—The introduction of from 2.0 to 2.5 m.a.f. of pure water annually into the lower Colorado River would have a significantly beneficial effect on water quality. The greatest benefits would be obtained by thorough mixing of this pure water with natural river flows above the points of use. In fact, to avoid wide fluctuations in water quality, which could be highly undesirable, it might well be necessary to discharge desalted water into the river upstream from the point of all major Lower Basin uses. For this reason Lake Mead was selected as the point in this study to receive desalted water.

There are other possibilities for obtaining a satisfactory mix of desalted and natural waters. One such scheme would involve construction of a large reservoir on the Bill Williams River which would act as a regulating depository for desalted water to be fed into Lake Havasu at rates necessary to obtain desired mixes. If such a scheme proved feasible, it would reduce the costs of the desalted water conveyance system appreciably, particularly if a route from the Gulf of California proved feasible.

Mexican Treaty delivery obligation.—Legislation is pending which provides that the costs of measures to satisfy the obligations of the Mexican Water Treaty from the Colorado River plus losses of water associated with delivery of water under that treaty would be treated as a national obligation and be non-reimbursable. The water delivery obligation under the Treaty is 1.5 m.a.f. per year. The losses associated with that delivery are functions of the magnitude of the water losses on the lower river. Based on Bureau of Reclamation estimates, the total net losses on the Colorado River below Lee Ferry after all water salvage measures are in effect will average about 1,550,000 acre-feet per year. The pro rata share of losses associated with the Mexican water delivery, weighted as to point of delivery, is 300,000 acre-feet. Thus, of the 2.0 m.a.f. which the Bureau of Reclamation estimates to be necessary to augment the Colorado River to assure 7.5 m.a.f. for the Lower Basin, 1.8 m.a.f. would be associated with delivery of water to Mexico.

Should the losses prove to be greater and 2.5 m.a.f. augmentation be necessary, the pro rata share associated with the Mexican water delivery would also be greater. In this event, it is estimated the associated losses would be 430,000 acre-feet, for a total of 1.93 m.a.f., identified with the Mexican water delivery.

Financial

The financial feasibility of the augmentation plan presented herein looks, in large measure, to the enactment of provisions in pending Colorado River Basin Project legislation.

Mexican Treaty obligation.—Pending legislation, as embodied in H.R. 3300 and similar bills, declares that the satisfaction of the requirements of the Mexican Water Treaty constitutes a national obligation. Accordingly, such legislation provides that costs of construction, operation, and maintenance allocated to the replenishment of depleted Colorado River flows occasioned by compliance with the Mexican Water Treaty shall be nonreimbursable. The replenishment would include losses in transit, evaporation from regulatory reservoirs, and regulatory losses at the Mexican boundary incurred in the transportation, storage, and delivery of water in discharge of the obligations of that treaty.

As discussed previously, the amount of augmentation necessary to satisfy the Mexican Water Treaty will vary with the magnitude of water losses on the lower Colorado River. For the plan requiring 2.0 m.a.f. augmentation, 1.8 m.a.f. is identified with Mexican water deliveries. For the plan requiring 2.5 m.a.f. augmentation, 1.93 m.a.f. is identified with Mexican water deliveries. The costs of the augmentation works are split between reimbursable and nonreimbursable, essentially on a pro rata basis.

Lower Colorado River Basin Development Fund.—Pending legislation (S. 1004, H.R. 3000, and similar bills) provides also for establishment of a Lower Colorado River Basin Development Fund which would be a source of financial assistance to return the reimbursable costs of augmentation works. For the purposes of this report, it is assumed that the following revenues accruing to the Development Fund would be available to apply toward the reimbursable costs of the augmentation plan: (1) the surplus revenues from the operation of the Boulder Canyon and Parker-Davis projects after payout of these projects and after ad-