Comments on Findings of the Consultants W. F. Eysvogel and S. W. Dixon on Proposed Israeli Power Diversion Scheme, Jordan River, April 3rd, 1954.

The Consultants have come to the following conclusions relating to Israeli Power Diversion Scheme on the Jordan:

(1) "In the opinion of the Consultants, the Tabgha project is a power diversion scheme".

(2) At a later date pumps will be installed to pump Jordan water into the Battauf Reservoir. Within eight to nine years the pumps may be delivering a maximum of approximately 150 million m^3 per year".

(3) "The Consultants made independent estimates and arrived at a maximum of 157 million m^3 per year which could be diverted by the works proposed". This diversion refers of course, to diversion for irrigation, once it is decided to continue the power scheme and to construct the irrigation features involved.

(4) "So long as the proposed Tabgha project is operated solely for power generation, it will not have any adverse effect upon the salinity or the amounts of water available for use in or downstream from Lake Tiberias".

(5) "The Consultants conclude that the salinity of the Lower Jordan River at the Allenby Bridge in future even with the proposed Israeli diversion project, will not exceed 387 ppm salt, which is within the tolerable limits for irrigation use.

(6) ..."the amount of water to be made available by the Israelis for the Bteiha Farms be not less than

1.7 m^3/sec. during the winter months, nor less than 2.2 m^3/sec. during the spring, summer and fall months.

(7) "That other arrangements such as the internal arrangements to save water by replacing the wasteful mills in the Bteiha Farms and enlargement of its irrigated area be considered a Bteiha Farm problem which it may or may not choose to undertake".

(8) In the opinion of the Consultants, it is quite possible to provide a physical means of assuring that the Bteiha Farm water supply will have a first priority by by-passing the Israeli headworks.

So far the conclusions of the Consultants in short quotation from their findings.

In the light of the data available to us, the following comments are ventured:

(1) Though some of the canals may be of ancient origin, large-scale irrigation in the Bteiha area is of relatively recent origin. A report prepared by the Syrian Agricultural Company, Ltd., Damascus, in 1934, gives a figure of actual irrigation at that time of about 4000 dunams.

(2) Accepting the figures of the "Findings" as far as irrigable areas are concerned, it is not understood why an area of 17,600 - 18,700 dunams could possibly use beneficially a flow of 1.7 - 2.2 m^3/sec. or about 60 million cubic metres per annum for irrigation.

(3) If we apply the duty which is considered as sufficient in similar areas on the Israeli side, we arrive at a total necessary diversion not exceeding 22 million cubic metres per annum.

(4) During negotiations with the Special Ambassador of the President of the U.S.A. Mr. Eric Johnston and his group, the figure of 15 MCM per annum was quoted as the present use of the Bteiha Farms according to data supplied by the representative of the Government of Syria during the talks in Cairo of Ambassador Johnston in June 1954. According to the same source, additional 7 MCM would be required for the full development of the irrigation potential of the area. The total (22 MCM) checks well with the figure quoted under (3) above.

(5) It is well known that local perennial resources are available in the Bteiha area and it can be inferred from the layout of the canals that those local resources are being utilized. The size of the flow is not known to us. It appears equitable that those local resources should continue to serve the area through which they flow and the yield of these local resources be deducted from the flow to be allocated from the Jordan river.

(6) From the above, it is inferred the major portion of the proposed allocation (possibly 2/3 - 4/5) is intended for "power" use to drive the existing 11 mills; in other words, the Consultants propose that about 45 MCM per annum of water and about 25 million kWh per annum of hydro-electric power be wasted to drive 11 antiquitated mills which together need a few horsepowers during part of the year.

(7) Such a procedure appears to us appallingly wasteful; this waste is unjustified both from the legal and from the engineering point of view.

(8) According to the Electricity Concession Ordinance of October 16th 1927, the Palestine Electric Corporation, Ltd., has an exclusive concession for the utilization of the Jordan-Yarmuk flows for the purpose of generating power. The power generated in the proposed Jordan diversion falls therefore within the scope of this concession. If the Bteiha mills constitute a prior use, they might be entitled to damages but not to the continuation of the diversion - especially as at least part of the above mills is on Israeli territory.

(9) From the engineering angle there are three possibilities for the replacement of the mills:

(a) damages to be paid by Israel to the amount necessary to provide small Diesel engines to drive the mills and pay for the fuel for a specified period of time;

(b) an equivalent quantity of electric energy be made available to the mills;

(c) a small independent hydro-electric plant be constructed in Syria, fed from a small independent penstock; this plant could supply the power necessary to the mills.

CONCLUSIONS.

1. The Consultants have recognized that the power diversion would not prejudice downstream uses if the riparian rights of Bteiha Farms are secured. The Consultants have outlined the way to secure the rights of Bteiha Farms.

2. The Consultants have omitted to take into account local resources and have allocated an unproportion-

ally large quantity for the operations of the antiquitated mills at Bteiha Farms.

3. It is proposed to confine allocation of water to Bteiha Farms to the actual beneficial use of irrigation after due allowance is made for the possibility to use the local resources. It is proposed to indemnify the mills in one of the ways outlined above.