

Title: Johnston Negotiations
Parties: Israel, Jordan, Syria, Lebanon
Basin: Jordan
Date: 12/31/1955

(Document written by Oliver Troxen, State of Johnston Mission, and distributed informally by Department at end of Johnston's negotiations)

The Jordan Valley Plan now under consideration by the Governments of Israel, Lebanon, Syria and Jordan is the product of twenty-four months of detailed and painstaking negotiation between representatives of these Governments and Ambassador Eric Johnston, personal representative of the President of the United States. In comparison, the plan originally proposed by Ambassador Johnston in November, 1955, was no more than an outline of an idea. Through many discussions with officials and technical experts of the Arab countries and Israel that original idea has been refined into a definite plan. Compromise and concessions have been made; suggestions offered by both sides have been accented on many points. The result has been the evolution of a development plan for the Jordan Valley which both sides regard as equitable, workable, and economically justifiable.

In September, 1955, Ambassador Johnston was informed that this plan, from the technical viewpoint, is acceptable to all four of the States concerned. The Arab Countries, however, have requested additional time to study the implications of the plan from the political point of view.

The main provision of the plan as it now stands may be summarized as follows:

1. Storage

A. The Maqarin Reservoir

The Plan envisions the construction of a dam 126 meters high on the Yarmuk River near Maqarin to impound 300 million cubic meters (mcm) of water for irrigation and make possible the generation of some 150 million kilowatt hours of electric energy a year.

Originally, a dam 47 meters high, capable of impounding 47 million cubic meters (mcm) of water, was proposed for the Yarmuk River at Jadi Khalid, on the assumption that as much as 550 mcms of Yarmuk water would be stored in Lake Tiberias. During the negotiations, however, it became apparent that this arrangement, while technically adequate for irrigation purposes, would not satisfy the requirements of the Arab countries for electric power or for secure storage of their irrigation reserve.

Particularly in the case of Syria, though also in the case of Jordan, the argument in behalf of a larger dam to permit the maximum possible development of electric power was a convincing one. So was the argument of the Arab countries that as much as possible of the water needed for Arab crops should be under direct Arab control. Taking these two considerations into account, engineers determined that the 128 meter dam on the Yarmuk, as now proposed, would be justifiable both from the standpoint of economic soundness and of practicality.

The Plan leaves it open for the Arab states to increase the height and capacity of the Maqarin Dam if they wish to do so at their own expense. The United States seriously questions the advisability or necessity of doing so; but it has been willing to agree that the privilege should be retained by the countries directly involved. In view of its own financial connection with the project, however, the United

States has felt obliged to insist that the Arab states make known their firm decision on this matter within the next five years, before installations involved in the use of Lake Tiberias are undertaken.

B. Lake Tiberias

Every plan advanced in recent years for the development of the Jordan Valley has recognized the utility of Lake Tiberias as a storage reservoir for the waters of the river system.

The Plan proposes to utilize these advantages to a limited extent for the storage of Yarmuk flood-flows which cannot be economically captured elsewhere. In flood years, the Yarmuk flow will greatly exceed the storage capacity of any reservoir that has yet been proposed at Maqarin or elsewhere on the stream. Unless this flood flow is caught and stored for use as needed during periods of low streamflow, millions of cubic meters of water will be lost. This water is absolutely essential for complete irrigation of Arab lands. The normal flows of the river are not sufficient; if flood waters are not impounded, the possibilities for Arab agriculture in the valley will be reduced.

Theoretically, it might be possible to construct a second dam on the Yarmuk below Maqarin to receive and hold these floodwaters. But the expense of building two reservoirs would push the project beyond the limits of economic practicality. The ratio between cost and benefit would be so unfavorable as to make the undertaking economically unjustifiable. This is especially true in view of the availability of adequate storage space in the natural reservoir of Lake Tiberias.

The Plan, therefore, contemplates the storage of Yarmuk floodflows in Lake Tiberias. Averaged out over a period of years, these flood flows will amount to approximately 80 million cubic meters a year. Allowing for variable annual streamflows and need for irrigation, it has been determined that storage space for about 300 million cubic meters will be required in Lake Tiberias. The Plan would assure the Arab states of space up to this amount when needed.

The Yarmuk flood flows spilling from the Maqarin dam would be diverted at Adasiya into a conduit leading to Lake Tiberias. They would be released, as needed for irrigation in the lower valley, through another conduit leading from the southern end of the Lake to an appropriate point on the East Ghor canal in Jordan.

The water deposited in the Lake to the credit of Jordan, so to speak, would be recorded by automatic gauges under the supervision of a neutral Watermaster. The total amount entering the Lake during any period of time would be precisely known. Withdrawals from this "account" would also be gauges automatically under the supervision of the Watermaster, and would be made in seasonal patterns pre-determined to meet the needs of the irrigation system in the lower valley. The full amount of water entering the Lake from the Yarmuk River over a period of years would thus be released to Jordan under neutral supervision as needed. No charge for evaporation or other losses would be made against the quantity of Yarmuk water stored in the Lake.

The plan thus proposes to provide the total storage space required for Jordan's irrigation needs through the construction of the 300 mcm Maqarin reservoir on the Yarmuk and through the utilization of approximately 300 mcms of storage capacity in Lake Tiberias. The remaining storage potential of the Lake -- approximately 700 mcms would be available to Israel.

C. Deferred Use of Tiberias

The Plan envisions a delay of five years, however, before Arab water is actually stored in Lake Tiberias. This is compatible with the normal “phasing” of the total development program and will involve no extra delay in the completion of the total plan.

At the end of this five year period, the neutral Engineering Board (see below) would determine the necessity of storing Yarmuk flood waters in Lake Tiberias or whether more feasible and economical storage might be found elsewhere. In making this determination, the Board would base its decision solely on irrigation requirements of lands in the lower Jordan valley. The decision would be final; and the Arab states and Israel would be committed in advance to accept.

D. The Hasbani

In recognition of Lebanon’s interest in increasing its irrigated lands, the plan provides for an immediate survey to obtain hydrologic and land-use data in the watershed of the Hasbani River in Lebanon. Funds for this survey in the amount of \$250,000 would be made available by the United States. The information thus obtained would be used to determine the necessity of constructing a storage dam on the Hasbani to assure that water allocated for Lebanese lands could actually be made available. The decision as to the kind and the size of the dam required would await the conclusion of the survey. Construction of the necessary facilities would then be undertaken as part of the overall Valley development program.

2. Distribution

Once stored, the waters of the Valley must be conveyed, under careful regulation, to the lands they are to irrigate. The Plan therefore contemplates the installation of the following main facilities:

- (a) A diversion dam near Adasiya to supply the East Ghor canal and, if necessary, to divert excess flood waters to Lake Tiberias for later delivery to Jordan;
- (b) A main canal net-work in Jordan, including:
 - (1) The East Ghor Canal running from Adasiya southward to the vicinity of the Dead Sea;
 - (2) A siphon or other structure for conveying water from the East Ghor to the West Ghor;
 - (3) The West Ghor canal in Jordan feeding from the siphon;
 - (4) A feeder canal from Lake Tiberias to a junction with the East Ghor Canal;
 - (5) A canal from Adasiya to Lake Tiberias, if necessary, to capture and store Yarmuk flood flows in the Lake.
- (c) A distribution system to convey waters from the main Ghor canals to the farm lands.
- (d) Pumping plants to raise water to lands above the main Ghor canals;
- (e) Small generating plants on the main canals to supply power for pumping. These power installations would not produce excess power for sale and are intended only to pump water to lands lying above the canal.
- (f) Main drainage facilities for removing excess water and salts from irrigated lands;
- (g) Regulating and control works on Lake Tiberias if the Lake is used to store Yarmuk flood flows.
- (h) A new diversion structure and canal from the Jordan River to Boteiha Farm in Syria, together with 50 K.W. of electric power to replace water power.
- (I) A diversion structure north of Lake Tiberias to permit Israeli withdrawals from the upper Jordan.
- (j) A main canal network from this upstream diversion to irrigable areas in the Galilee hills.
- (k) A short canal from Lake Tiberias down the west side of the river to serve irrigable lands in the Beisan area in Israel.

3. Division of Water

International law recognizes that each of the nations on an international river system has a right to a portion of the water. There is no single, generally accepted principle, however, on which the division of the water can be based.

In evolving the present plan, the basic principle was adopted of assuring to the Arab states enough water to meet the needs of all their lands that could feasibly be irrigated; and the division of water in the present plan accomplishes this objective.

In the original proposal offered for discussion two years ago, no specific provision was made for an allocation of water to Lebanon because of the lack of engineering data. The Arab Technical Committee provided information as to Lebanese needs, however, recommending an allocation of 35 mcm from the Hasbani River. This full amount has been accepted in the Plan.

The first estimates discussed did not take into consideration the possibility of expanding the irrigable area in the vicinity of Boteiha Farms in Syria, nor was adequate information available at that time as to irrigation prospects from the Banyas River and on the Yarmuk Plateau. The Arab Technical Committee recommended allocations for Syria of 20 mcm from the Banyas, 22 mcm from the Jordan for the Boteiha Farm area, and 90 mcm from the Yarmuk for Syrian lands on that stream. All of these allocations have been incorporated in the Plan.

The allocation to the Kingdom of Jordan is based on a comprehensive land classification survey and a scientific determination of the water required. Two well-known American engineering firms--Michael Baker, Jr., Inc., and the Harza Engineering Company--were employed by the Jordanian Government to make a complete survey of the 943,000 dunums of land in Jordan within the valley. Standards somewhat lower than are customary in the United States and other countries were applied in this survey in consideration of Jordan's pressing need for agricultural land and the historic ability of the Arab farmer to grow crops under adverse conditions. While this resulted in the inclusion of some land not normally considered to be adaptable for cultivation, it was found that about 520,000 dunums were arable.

From this gross figure of about 520,000 dunums, the Plan deducts 8 percent, as an allowance for land that would be used for roads, ditches, drains, houses, farm buildings, etc., and for lands not actually cropped at any given time for social reasons such as, the death or absence of the farmer, rotation, etc. Allowing for this deduction and computed on the basis of standard formulas and a reasonable cropping pattern, the total water requirement for Jordan became 720 mcm per year. Of this requirement, 243 mcm can be met from local wadis and wells. The Yarmuk River can supply 377 mcm after making due allowance for an allocation to Syria of 90 mcm on the upper Yarmuk, an allocation of 25 mcm to Israel for uses in the Jordan-Yarmuk triangle and allowing 14 mcm for evaporation and other losses from the Yarmuk reservoir. The remaining 100 mcm needed by Jordan will be derived from the upper Jordan River. The Plan would assure this amount.

In view of long established usage rights in the area known as the Jordan-Yarmuk triangle, Israel would receive an allocation of 25 mcms annually from the Yarmuk River.

Israel would receive in addition the total flow of the Jordan after the diversions indicated above for Lebanon and Syria and the delivery of 100 mcms annually to the Kingdom of Jordan.

On this basis, the three Arab states would receive approximately 61 percent, and Israel approximately 39 percent, of the total waters available in the River System.

A technical factor affecting the division of the water however is the need to assure that the quality of the water in the system as a whole is maintained at a usable standard of salinity and yet permit as much as possible of all the waters to be used. As Lebanon, Syria, and Israel use more and more of the natural flow of the upper Jordan River, the volume of water reaching Lake Tiberias will decrease. The Lake will then tend to become more salty, since it is fed, in part, by a number of saline springs and since some 300 mcm is lost annually through evaporation from the Lake surface. The Plan, therefore, contemplates the possibility that some of these springs around the edge of the Lake might be collected and prevented from flowing into the Lake as a means of keeping the salinity of the Lake within usable limits.

If conditions develop making this desirable, the Plan proposes that up to 15 mcm of this saline water so diverted be considered as part of the 100 mcm allocated to Jordan from the upper Jordan River. The increase in the salinity of Jordan's allocation would be negligible, while the loss of the 15 mcm to the system as a whole would be prevented.

4. Supervision

The Plan proposes the creation of an impartial Engineering Board together with a Watermaster for the purpose of supervising operation of the water system and compliance of the parties. The Engineering Board would consist of three eminent engineers who would be selected from a list prepared by the Secretary General of the United Nations. One of the engineers would be selected by Israel. Being selected from the proposed list, these two engineers would be expected to perform their functions as engineers and not as spokesmen or representatives of the sides that chose them. The two engineers so selected would choose a third, who would serve as chairman. None of the members of the Engineering Board nor the Watermaster could be a national of any Arab state or of Israel, or be in their employ.

The Engineering Board would have certain functions which are stipulated in the Plan. It would review the engineering designs of the diversion structures and other project features comprising the total development program. This would be for the purpose of ensuring that the structures and project features would not be inconsistent with the implementation of the agreement on the diversion and distribution of water and on the operation of the Jordan River System within the accepted framework of the Plan. It would also establish patterns for withdrawals, releases and deliveries of the water of the river system.

The Engineering Board would appoint a Watermaster whose stipulated duties would include supervising the deliveries and withdrawals of water and all regulatory and gauging facilities. He would make the calculations required in connection with the releases of Jordan's water from Lake Tiberias. He would also keep the necessary records and make the necessary reports concerning the operation of the system. Most important of all, in the event of a violation or threat of a violation of the Plan, he would take such steps as might be necessary to enforce compliance or remedy the violation.

As indicated above, through the means of established fixed flow patterns and through regulatory and gauging facilities, it would be, in fact, quite easy to anticipate or detect a violation of the Plan. Since the Watermaster would have unimpeded access to all project features and all point on the water course, it would be impossible for any State to make an unauthorized or clandestine diversion of any substantial quantity of water. The proposed system for the delivery of water would also be to a large extent self-enforcing since any substantial or complete stoppage of water by Israel anywhere in the system could be countered by Jordanian stoppage of deliveries of water to the Yarmuk Triangle. Obviously the converse is true.

Given the erection of suitable diversion features and other necessary physical control mechanisms and given established flow patterns ensuring the prompt detection of violations, there would be no need for numerous and omnipresent supervisory personnel. With these enforcement procedures and with the Watermaster able to appeal to the United Nations as a last resort, the supervisory system as now proposed in the Plan would be efficient and economical, ensure the strictest impartiality, and impinge to the minimum possible extent upon the functions and authority of the governments concerned. The Plan proposes that the precise duties, rights and responsibilities of the Engineering Board and the Watermaster will be defined in detail through a subsidiary agreement to be negotiated with the Arab states on the one hand and with Israel on the other either by U.S. or some other appropriate intermediary. The supervisory system proposed in the Plan would obviate the need for direct contact or negotiation between the Arab states and Israel.

VARIANT OF THE JOHNSTON PLAN PROVIDED TO ISRAEL - JULY 5, 1955

July 5, 1955

1. From April to July of 1955, discussions were held in Washington between representatives of the Government of Israel and Ambassador Johnston relative to the development of the Jordan River Valley.
2. The purpose of this memorandum is to set forth the understanding of the two parties as to the basic provisions of a plan which, if presented to Israel, might be accepted. This formulation is subject to approval by the Government of Israel.
3. Nothing in this formulation is to be construed as an agreement on the part of the Israel Government or of Ambassador Johnston; it is not conclusive and is subject to further simplification (?) and qualification.
4. It is understood that this understanding is subject to the conclusion of mutually satisfactory financial arrangements.
5. Water of the Jordan and Yarmuk Rivers will be stored and regulated through reservoir facilities to be constructed on the Yarmuk River and through the operation of Lake Tiberias as a reservoir,
6. In order to determine more precisely the economic, engineering and operational feasibility of utilizing either Lake Tiberias or alternative sites outside Israel for the storage of Yarmuk flood flows, and the best use of potential storage facilities for these flows, final decision as to the use either of the Lake or of alternative sites is deferred. It is understood that the present 300 (?) million of live (?) storage capacity in Lake Tiberias represents Israel's estimated requirement for storage in the Lake, and that (?) its (?) decision regarding storage of Yarmuk water in the Lake will reduce this capacity unless Israel determines that its need for storage is less than 300 (?) million.
7. A final decision on this question will be made by the Engineering Board during the year 1960. In making its decision the board shall take into first six months account requirements and supplementary water supply within the Jordan Valley, and the economic feasibility of utilizing Lake Tiberias or alternative sites for storage of the Yarmuk flood flows. The board shall, within the context of the above considerations, consult Israel, Jordan and Syria and receive such comments (?) and considerations as they may wish to present.

8. Should the Engineering Board's determinations indicate the need for storage of Yarmuk water in Lake Tiberias, the Government of Israel will make available in the Lake such storage capacity as is determined by the Board, not exceeding 300 mem, and will cooperate in the implementation of the Board's decision.

9. A declaration will be included in the agreement with the United States to the effect that Israel, Lebanon, Syria and Jordan will not use any provisions of the agreement as a basis for territorial claims, claims for frontier corrections or adjustment, or claims for participating in the operation of or control over any elements of the Jordan River System within the territory of another participating state. This declaration, which will be without prejudices to any rights or obligations which the states named have assumed under a general armistice agreement, will also provide that the states named will refrain from invoking the provisions of either an armistice agreement or this agreement for the purposes of interfering with the operation of the other agreement.

SUPERVISION

10. An Engineering Board shall be established for the purpose of Performing the following functions:

(a) Review the engineering designs of the diversion structures and other project features on the Jordan River, the Yarmuk River, and Lake Tiberias, should the latter be used as a reservoir for storage of Yarmuk flood flows, with view to ensuring that each structure and other project features will not be inconsistent with the implementation of this agreement.

(b) Make the necessary studies and decisions under paragraph 7 hereof.

(c) Appoint a Watermaster as required by paragraph 11 hereof.

(d) In accordance with agreed procedures, establish the fixed flow patterns withdrawals, releases and deliveries as set forth in paragraph 13 hereof.

(e) Establish the procedures for calculating releases and determining fixed flow patterns from Lake Tiberias, should the Lake be used for storage of Yarmuk flood flows in accordance with paragraph 15 hereof.

(f) Perform such other functions as may be agreed upon.

The Engineering Board shall consist of three engineers, one of whom will be selected by Israel and one by the participating Arab states, from a list prepared by an agreed body. The two engineers so selected will choose the third who will serve as chairman.

If the parties desire and other arrangements are agreed for the appointment of Watermasters, the Board may be abolished on the completion of its duties.

11. A Watermaster shall be appointed and shall perform the following functions:

(a) Supervises the deliveries and withdrawals specified in paragraph 11 hereafter and all diversions, regulatory and gauging facilities required to effect such deliveries and withdrawals.

(b) In accordance with agreed procedures, make the calculations required in connection with the releases and fixed flow patterns from Lake Tiberias should the Lake be used for storage of Yarmuk waters.

(c) Prepare and maintain such records as may be agreed upon.

(d) Transmit to the participating states, at stipulated regular intervals, information based on the records relating to the operations of the Jordan River System.

(e) In the event of a violation or threatened violation, take such steps as may be necessary, in accordance with agreed procedures.

(f) Perform such other functions as may be agreed upon.

The participating governments will give the Watermaster full cooperation in carrying out his stipulated duties. He shall have unimpeded access in the performance of his duties to all project features on all points on the water source.

12. The precise duties, functions and prerogatives of the Engineering Board and the Watermaster, and details concerning remuneration, maintenance and administrative costs and requirements shall be set forth in an agreement to be negotiated with the participating states.

III - Division of the Water

13. The following annual withdrawals and releases of water are agreed:

a) From the Banyas: A withdrawal of up to 20 mcm by Syria.

b) From the Hasbani: A withdrawal of up to 3 5 mcm by Lebanon.

c) From the River Jordan: A delivery by Israel of up to 22 mcm to Syria for the area of Boteiha farms.

d) From Lake Tiberias: A delivery by Israel to the Kingdom of Jordan at a specified point south of Lake Tiberias of 100 mcm, of which 70 mcm would be of average Lake Tiberias salinity and the remaining 30 mcm being diverted at Israel's option from the diversion of saline springs around Lake Tiberias. The delivery of agreed quantity will be made at predetermined constant flows according to seasonal schedules determined by the Board under paragraph 10(c) and will be affected through structures to be approved by the Board.

e) From the Yarmuk: A withdrawal of up to 90 mcm by Syria, and a delivery by the Kingdom of Jordan of 40 mcm to Israel.

15. Should the Board require the storage of Yarmuk water in Lake Tiberias in accordance with paragraphs 6-8, Israel will deliver such water to the Kingdom of Jordan at an agreed point, except insofar as the agreed storage capacity has been exceeded. This delivery will be made in periodically predetermined flows according to procedures to be agreed upon.

16. The principal Israel diversion structures will be located at or near Banat Yahoov Bridge and the principal diversion structure of the Kingdom of Jordan will be located at or near Adasiya.

17. Israel agrees, as an additional but temporary undertaking, to make available for use in the Kingdom of Jordan on an annual basis an additional quantity of water not exceeding 75 mcm annually during the period between conclusion of final understanding between Ambassador Johnston and states concerned and December 31, 1960. Determination of the flow volumes of such deliveries would be made by the Engineering Board from year to year after consultation with Israel, should the Board establish that the water resources of the Kingdom of Jordan are insufficient for irrigation and (?????) purposes. These temporary deliveries will in no way prejudice agreed diversions as stipulated in the agreement.

It is understood that in any final agreement legal provisions satisfactory to Israel will be incorporated for the purpose of establishing the temporary character of the obligation in this paragraph and of safeguarding against any possible claims which might be made by Jordan for continuation of this obligation.

Notes:

Paragraphs 6 and 7 are simplified by a separate undertaking by the (?) Israel representatives (see Mr. Bames' memorandum of June 29, 1955).

The Israel representatives have also stated they wish to reach an understanding on finances (para. 4) in advance of Amb. Johnston's return.

The U.S. representatives have stated that they wish to resolve two issues in advance of Ambassador Johnston's return, and that they accordingly make the corresponding reservations in the above draft whether the Arabs may withdraw Yarmuk water from Tiberias as and when desired, and whether facilities will be constructed south of Tiberias, immediately on reaching understanding with the parties concerned adequate to serve the system when Tiberias is used to store Yarmuk water.

VARIANT OF THE JOHNSTON PLAN PROVIDED TO THE ARAB REPRESENTATIVES - OCTOBER 11, 1955

COPY THE JORDAN VALLEY PLAN OCTOBER 11, 1955

1 - Storage

1. The waters of the Jordan River will be regulated in Lake Tiberias. The waters of the Yarmuk River will be stored and regulated through a 300 mcm reservoir to be constructed on the Yarmuk River and also, if required, through lake Tiberias.

2. In order to determine more precisely the economic, engineering and operational feasibility of utilizing either Lake Tiberias or alternative sites for the storage of Yarmuk flood flows, the construction program will be phased in such a way as to defer actual storage of Yarmuk waters in Lake Tiberias for a period of five years.

3. A final decision on this question will be made by the Engineering Board during the first six months of the year 1960. In making its decision the board shall take into account requirements within the lower Jordan Valley, and the economic feasibility of utilizing Lake Tiberias or

alternative sites for the storage of Yarmuk flood flows. The Board shall, within the context of the above considerations, consult the Government of the States concerned and receive such comments and considerations as they may wish to present.

4. Should the Engineering Board's determinations indicate the need for storage of Yarmuk water in Lake Tiberias, the Government of Jordan will utilize such storage capacity in the Lake as is determined to be necessary by the board, not exceeding 300 mcm, and will cooperate in the implementation of the board's decision. However, if the Government of Jordan or the Governments of Jordan and Syria jointly should make firm arrangements to construct through its own means alternative storage which will insure against the wastage of water, the Engineering Board will acquiesce in the Government of Jordan's decision.

5. In order to conserve and utilize the waters of the Hasbani River allocated for the use of Lebanon, reservoir facilities to serve the irrigable lands of the Hasbani Valley in Lebanon will be constructed on the Hasbani River if, following a determination of the feasibility of and requirement for the construction of the reservoir facilities, the Government of Lebanon indicates that such construction is desired.

II-Supervision

6. An Engineering Board shall be established for the purpose of performing the following functions:

- (a) Review the engineering designs of the diversion structures and other project features on the Jordan River and tributaries, the Yarmuk River and Lake Tiberias, should the latter be used as a reservoir for the storage of Yarmuk flood flows, with a view to ensuring that such structures and other project features will not be inconsistent with the implementation of this Plan.
- (b) Make the necessary studies and decisions under paragraph 3 hereof.
- (c) Appoint of Water Master as required by paragraph 7 hereof.
- (d) In accordance with procedures to be agreed upon by the Engineering Board and the States concerned, establish the fixed flow patterns for withdrawals, releases and deliveries as set forth in paragraph 10 hereof.
- (e) Establish the procedures for calculating releases and determining fixed flow patterns in accordance with paragraph 11 hereof.
- (f) Perform such other functions as may be agreed upon.

The Engineering Board shall consist of three engineers, one of whom will be selected by the participating Arab States and one by Israel, from a list prepared by the Secretary General of the United Nations. The two engineers so selected will choose the third who will serve as a chairman. No member of the Board, or the Water Master, shall be a national or an employee of any of the states involved.

If the parties desire, and other arrangements are agreed upon for the appointment of Water Masters, the Board may be abolished on the completion of its duties.

7. The Water Master appointed in accordance with paragraph 6 (c) hereof shall perform the following functions:

- (a) Supervises the deliveries and withdrawals specified in paragraph 10 hereof and all diversion, regulatory and gauging facilities requires to affect such deliveries and withdrawals.
- (b) Make the calculations required in connection with the releases and fixed flow patterns from Lake Tiberias specified in paragraph 11 hereof, should the Lake be used for storage of Yarmuk waters.
- (c) Prepare and maintain such records as may be agreed upon in accordance with paragraph 8 hereof.
- (d) Transmit to the participating states, at regular intervals, information based on the records relating to the operation of the Jordan River System.
- (e) In the event of a violation or threatened violation, take such steps as may be necessary in accordance with the procedures agreed upon pursuant to paragraph 8 hereof.
- (f) Perform such other functions as may be agreed upon.

The participating governments will give the Water Master full cooperation in carrying out his stipulated duties. He shall have unimpeded access in the performance of his duties to all project features and all points on the water course. His responsibilities shall not, however, extend to locally developed water resources not contributing to the international water course.

8. The precise duties, functions and perogatives of the Engineering Board and the Water Master, and details concerning remuneration, maintenance and administrative costs and requirements will be set forth in an agreement supplementary to this Plan to be negotiated with the participating states.

9. None of the provisions of this plan, or any instrument pertaining thereto, shall serve as a basis for territorial claims, claims for frontier corrections or adjustments, or claims for participating in the operation of or control over any of the elements of the Jordan River system within the territory of another participating state. Without prejudice to any rights or obligations assumed under a general armistice, the governments concerned undertake to refrain from invoking the provisions of an armistice agreement for the purpose of interfering with the operation of this plan, or instrument pertaining thereof Conversely the provisions of this plan, or instrument pertaining thereof, may not be invoked for the purpose of interfering with the operation of a general armistice agreement.

III - Division of the water

10. The following annual withdrawals and releases of water are agreed:

- (a) From the Banyas: Up to 20 mcm to Syria

- (b) From the Hasbani: Up to 35 mcm to Lebanon
- (c) From the River Jordan: Up to 22 mcm to Syria for the area of Boteiha farms.
- (d) From Lake Tiberias: A delivery by Israel to the Kingdom of Jordan at a specified point South of Lake Tiberias of 100 mcm. The delivery of this agreed quantity will be made at predetermined constant flows according to seasonal schedules determined by the Engineering Board under paragraph 6 (d) and will be affected through structures to be approved by the Board. Eighty-five (85) mcm must be of the same general quality as exists in the lake under natural conditions of use. Fifteen (15) mcm may be derived from saline springs around Lake Tiberias, should it be necessary to utilize these springs to avoid the wastage of water. However, in no event shall this water contain more than 2500 parts per million of chlorine.
- (e) From the Yarmuk: Up to 90 mcm to Syria, and a delivery by the Kingdom of the Jordan of 25 mcm to Israel.

11. Should the Board recommend the storage of Yarmuk water in Lake Tiberias in accordance with paragraphs 2, 3, and 4, Israel will deliver such water to the Kingdom of Jordan at an agreed point. This delivery will be made under supervision of the Water Master in periodically predetermined flows to be agreed upon at the time of the Board's decision.

12. Except for the above withdrawals and deliveries, the waters of the Yarmuk River will be available for the unconditional use of the Kingdom of Jordan, and the waters of the Jordan will be available for the unconditional use of Israel.

IV - Diversion and Distribution Facilities

13. In order to affect the division, distribution and full utilization of the waters of the River System in accordance with the foregoing, storage, diversion, conveyance and other Facilities will be constructed for the benefit of the Arab States as follows:

- (a) Storage dam and irrigation works on the Hasbani needed to utilize 35 mcm of water, pursuant to provisions of paragraph 5.
- (b) New diversion structure and canal leading from the Jordan River to the Boteiha Farm area.
- (c) Replacement of existing water power facilities on the Boteiha Farm canal with generating facilities to supply 50 k.w. of electric power
- (d) Storage dam to create a 300 mcm capacity reservoir on the Yarmuk River for irrigation, electric power generation and security.
- (e) Diversion dam near Adasiya.

(f) Main canal net-work including:

(1) East Ghor Canal running from Adasiya southward to vicinity of Dead Sea.

(2) Siphon or other structure for conveying water across the Jordan River from the East Ghor to the West Ghor.

(3) West Ghor canal feeding from the siphon.

(4) Feeder canal from Lake Tiberias to junction with the East Ghor canal.

(5) Canal from Adasiya to Lake Tiberias, if necessary to capture and store Yarinuk flood waters in the Lake.

(g) Distribution system to convey waters from main Ghor canals to farm lands.

(h) Pumping plants to raise water to lands above the main Ghor canals.

(i) Generating plants on main canals and wadis to supply power for pumping.

(j) Main drainage facilities for removing excess water and salts from irrigated lands.

(k) Regulating and control (????) on Lake Tiberias if Lake is used to store Yarmuk River flood flows.