CHAPTER 3
IMPREMENTATION PLAN

CHAPTER 3 IMPLEMENTATION PLAN

3.1 Implementation Plan for the Selected Areas

3.1.1 Implementation Concept

(1) Implementing Organization

The Present Project shall be implemented through the procedures of the Japan's Grant Aid. An implementing agency at PA side is PWA. WBWD, with responsibility on technical matters, shall supervise and inspect the works by the contractor. WBWD shall also coordinate with Mekorot for construction of connections and installation of bulk water meters, etc.

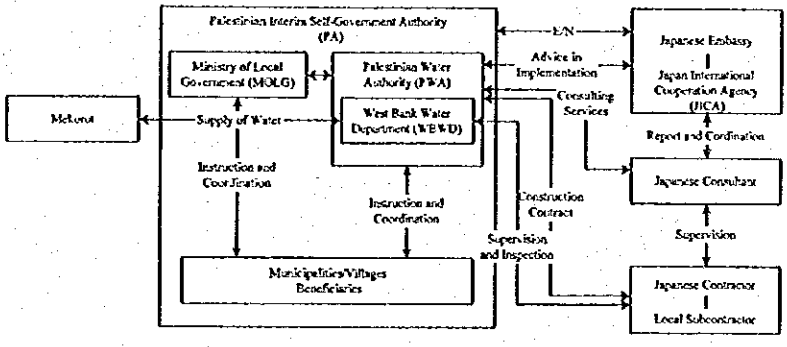

Fig. 3.1 IMPLEMENTATION ORGANIZATION

A Japanese consultant and PWA shall enter into an agreement on consulting services for detailed design and supervision of construction work. The consultant shall supervise a Japanese contractor on its construction of facilities and provision of material. The consultant shall also prepare tender documents for selection of a constructing contractor, undertake qualification of contractors and tendering procedures on behalf of the implementing agency, and further stay throughout the implementing period at a position to report to and coordinate with the related agencies at Japanese side such as Japanese Embassy, JICA and so on.

A Japanese contractor to be selected will be required to complete in a short period of time the construction works that include laying of approximately 230 km of pipe, 15 distribution reservoirs and 4 booster pumping stations. The contractor, therefore, needs to be familiar with local conditions such as labor market, construction environment, etc. When the construction period is overlapped with that of the phase 1 project, the contractor's formation of supervision should be planned to avoid the unnecessary expenses considering that the contractor for the first phase may work for the second phase, too.

(2) Necessity to Dispatch Technicians

A rigger and a form worker will be considered to be sent to the site for instructing the local laborers in their respective specialties in order to facilitate such works in construction.

3.1.2 Implementation Conditions

<Underground Structures>

In the Project areas, there are many buried underground structures, such as the existing waterworks, telephone lines, electricity transmission lines of high voltage (10 to 20kV), etc.

Since these structures, particularly, in Jenin are most proliferated along the transmission route, every care in the construction work must be taken to avoid any hindrance to normal life of residents. While existence of the underground structures have been confirmed in the basic design survey, their accurate locations and extensions have not yet been identified. It is therefore necessary to undertake underground structure surveys and prepare accurate plans wherever required at the detailed design stage for the purpose of the determining final pipeline routes.

<Precautions for Safety>

As most of works at every Project area are to be undertaken in the densely built-up areas and the narrow and winding streets, every safety measure should be taken to ensure safe access and transportation of residents and to avoid damages to neighboring houses and public infrastructures like electric poles, etc.

<Consideration on Local Residents>

Adequate briefing regarding components and length of the construction work should be given to the local residents to seek for their understanding and cooperation. Construction machines with the minimum vibration and noise and methods of construction and temporary structure with the least possible damages should be carefully selected to avoid hindrances to the locality. Distribution pipes should be located such a way that costs of house connections can be reduced.

3.1.3 Scope of Works

Undertakings of PA side and Japanese side are shown in the table.

Undertakings of Japanese and PA Sides

Undertakings	Japanese Side	PA Side
1. Construction of Transmission and Distribution Pipelines	O	
2. Reservoirs		
2.1 Land Preparation for Reservoir Construction		O
2.2 Preparation of Access Roads		O
2.3 Construction of Reservoirs	O	
2.4 Construction of Inspection Roads and Pavement	O	
2.5 Construction of Fences and Gates		O
2.6 Preparation of Drainage		O
3. Booster Pump Stations		
3.1 Land Preparation of Booster Pump Stations		O
3.2 Preparation of Access Roads		O
3.3 Construction of Booster Pump Stations and Installation of Pumping Equipment, etc.	O	
3.4 Construction of Inspection Roads and Pavement	O	
3.5 Construction of Fences and Gates		O
3.6 Preparation of Drainage		O
3.7 Installation of Electric Power Lines to the Station Yards		O
4. Reconnection of House Connection		
4.1 Procurement and Installation of Materials for Secondary Pipes from Distribution Pipes more than 100 mm dia.	O	
4.2 Procurement of Materials for Secondary Pipes from Distribution Pipes of 50 mm dia.	O	
4.3 Installation of Secondary Pipes Provided under the above Item 4.2		O
4.4 Procurement and Installation of House Connection (Service Pipes)		O

3.1.4 Consultant Supervision

Stages of detailed design and supervision of construction should be proceeded based on the following guidelines:

(1) Detailed Design Stage

- Site surveys shall be made on pipeline route by walking, detailed surveys on underground structures, surface obstacles (electric poles, aerial cables, etc.) and existing pipes, specific surveys to locate and restore existing distribution pipes and branches, and excavations.
- The basic design shall be reviewed on the basis of the site surveys.
- Regarding pipeline routes, comparison of alternative construction methods, structures and temporary structures shall be made to finalize detailed construction program.
- Structural design shall be made including temporary works.
- Location plans, plan and profile drawings and drawings indicating details shall be prepared.
- All the quantities shall be calculated and bill of quantities shall be prepared.
- Confirmation of basic conditions and alternative comparisons, verification of designs, calculations and drawings and detailed inspection of calculations shall be made, and all the designed components shall be examined.
- Cost estimates at the basic design stage shall be reviewed on the basis of the scales and quantities of facilities fixed at the detailed design stage.
- Tender documents shall be prepared in accordance with guidelines for the Japan's Grant Aid.
- Throughout procedures to select a contractor, the consultant shall assist PWA to ensure tendering process according to the above guidelines.

(2) Construction Supervision Stage

- Close communication shall be maintained with the related agencies and officials from PA side and Japanese side, and timely completion of works according to the construction schedule shall be sought for.
- Timely and adequate advice and guidance shall be given to those related to the construction work in order to bring about the facilities as designed.
- Technology transfer shall be made as far as feasible within framework of the On-the-Job training so that the maximum results of the Grant Aid project can be achieved.
- Adequate guidance and advice regarding operation and maintenance of the completed and transferred facilities shall be given to nourish suitable operation of the facilities.
- The Project facilities run mostly parallel with the existing ones. Close coordination, therefore, shall be maintained throughout pipe-laying works to minimize undesirable results like interruption of water supply.
- To bring about the Project benefits at the earliest timing and to the designed capacity, the consultant shall maintain close contact with progress of installation of house connections to be undertaken by PA side, and cooperate for its earlier completion whenever necessary.
- The consultant shall prepare a comprehensive operation and maintenance manual for facilities like wells, pump station and pipelines. As manuals for individual equipment and device are to be provided by the contractor and manufacturers, the comprehensive system operation and maintenance manual shall be finalized by the consultant.

The consultant's supervision services include (1) construction supervision and quality control (approval of equipment and material used, inspection of imported equipment and material, inspection at every progressed work), (2) inspection and approval of measurement and quantity for completed works, and (3) examination of design alteration and provision of change order, whenever necessary, to the contractor. The consultant also prepare and submit the required reports such as monthly progress reports, authorization to pay and final report.

The services above referred are required continuously from the commencement to the completion and transfer of the construction work. The services for supervision of construction therefore requires continuously resident engineer. Necessary specialists shall be strategically assigned and a resident engineer shall be assigned among from those well experienced in the overall supervision services.

3.1.5 Procurement Plan

As mentioned in the procurement conditions described below, the construction materials which shall be used in the project (Cement, Sand, Gravels, Reinforcing bar, forming materials of wood etc. common construction materials and water supply pipes) are readily available in the West Bank, therefore these materials shall be procured from the local market. However, booster pumps that are not available on the local market shall be procured from Japan or third countries such as European country etc.

<Common Construction Materials>

Cement (made of Israel or Jordan), Reinforcing bar (Israel or Palestine), Sand (Israel) Gravels, forming materials of wood etc., the common construction materials are well circulated in the West Bank, and shall be procured from local construction companies or material dealers. Ready mixed concrete and asphalt mixture plants are located in the suburbs of main cities of the north West Bank (Ramallah, Nablus, Jenin and Tulkarem) to procure materials for the whole area of the north West Bank. Accordingly, common construction materials shall be procured from the local market.

<Water Supply Pipes>

On the project, steel pipes for welding (inside cement lining and outside polyethylene coating) shall be used for the water supply pipes not less than 100mm diameters and high-density polyethylene pipes for not more than 75mm diameters. The both kinds of pipes are well circulated in the local market (the both are Israeli product), and available to be procured from local dealers. However, procurement of water supply pipes from third countries shall be considered because of the following reasons, since the number of manufacturer of both kinds of water supply pipes are limited in Israel (only two companies respectively available for each kind of pipe).

- Two Israeli manufacturers of water supply pipes are monopolizing water supply pipes market in Israel and Palestine. Consequently, it is possible that the proper price competition shall be disturbed by concentration of Japanese assistance including the phase 1 project.

- It's possible that water supply pipes producing capacity of these two companies shall cover the demand of the project including phase 1. However, procurement of water supply pipes from third countries shall be considered in order to overcome unexpected situations such as blockage of the area.

The procurement classification of main construction materials for the project is as follows.

Procurement Classification of Main Construction Materials

Name of materials	Local	Japan or third country	Remarks
Cement	◎		
Reinforcing bar	◎		
Ready mixed concrete	◎		
Gravels	◎		
Wood for form	◎		
Asphalt	◎		
Steel pipe	◎	O	More than 100mm
Polyethylene pipe	◎	O	Less than 75mm
Fittings, valves	◎	O	
Booster pump		◎	

Note: ◎: First Priority O: Second Priority

3.1.6 Implementation Schedule

The implementation schedule includes two stages as shown below.

- Detailed Design Stage: Preparation of detailed design and tender documents including specifications, tender and award of contract
- Stage for Construction work: Construction of facilities and procurement of equipment and material

Table 3.1 shows the implementation schedule of the Project.

3.1.7 Undertaking by PA Side

In the implementation of the Project, PA side shall undertake and implement the following:

- Obtaining sites for distribution reservoirs and booster pumping stations, preparation thereof and access thereto,
- Obtaining and provision of stockyards for equipment and material and sites for temporary works during construction works,
- Provision of material and information required for the detailed design,
- Obtaining permission for excavation necessary for the underground structure surveys and other permissions in regard to services required in implementation of the Project,
- Presence at site and confirmation by the related agencies in protection work of underground structure,
- Measures required in obtaining cooperation by the local residents and the transportation control,
- Provision of disposal sites for debris and wastewater to be generated in the construction

works,

- Installation and changeover of house connections synchronized to the progress of the work,
- Necessary formalities for installing electric power supply facilities at the booster pump stations and execution of installation works
- Implementation of auxiliary works such as erection of fence and drainage channels for distribution reservoirs and booster pumping stations,
- Provision of procedures for custom clearance and exemption from duties and taxes of the equipment and material to be imported for the Project,
- Provision of assistance to obain permits of entry and stay in the PA area of Japanese nationals to be engaged in the services required for the Project,
- Implementation of suitable utilization, operation and maintenance of facilities constructed and equipment procured under the Japan's Grant Aid, and
- Provision of funds for all the costs that are not included in the Japan's Grant Aid but are required for implementation of the Present Project.

3.2 Project Cost Shouldered by PA Side

The PA side will be responsible for the costs estimated at US$ 754,000 with the breakdown as stated follows:

- Works for the of house connection water supply pipes:	US$ 629,000
- Incidental works for the water reservoirs and booster pump stations: (Fence, Gate etc.)	US$27,000
- Ground leveling and access road construction for the water reservoirs and booster pump stations:	US$93,000
- Construction works for drainage:	US$5,000
Total:	US$754,000

Excepting the above-mentioned items, the following expenses shall be paid by the PA side.

- Fee for the Banking Arrangement
- Charge for the Authorization to pay

3.3 Operation and Maintenance Program

(1) Maintenance of Water Supply Facilities

<Operation and Maintenance of Facilities>

Uninterrupted and sustainable operation of water supply facilities requires daily operation and control, periodic inspection and maintenance with replacement of consumables, optimal countermeasures suited for unexpected troubles and accidents, and replacement of facilities within their life period. For this purpose, it is needed to assign operation personnel and train them on technical capacity. Secondly required is to establish standardized routines for the operation and maintenance methodologies and to prepare manuals thereof and various forms of the operation logs and records. Finally it is also needed to institute technical linkage and financial capacity to be ready for the unexpected mechanical troubles and accidents and the regular replacement of the facilities. Technical part of the Operation and Maintenance Program,

therefore, should consist of the following:

- Assignment and training of operation personnel
- Preparation of the operation and maintenance manuals including forms of daily and monthly logs, records of regular inspections and maintenance, accident and trouble reports, etc.
- Institution to deal with troubles and accidents including linkages with local engineer/technician and retailer of electro-mechanics, and cooperation with West Bank Water Department
- Funding of the personnel cost and reserves for the repair and replacement costs

< Continuity of Water Supply Service>

The continuous operation and maintenance as aforementioned will require collection of water charges by establishing appropriate tariff rates and maintenance of financial basis by reasonable and transparent accounting. To improve rate of accounted-for water, periodic inspection of water meters and introduction of elevated tariff rates will be needed. To reduce leakage from the system, volume of water supply should be monitored at strategic points in the transmission and distribution networks. Business accounting should be applied for the purpose of cost control and comprehensible disclosure to the residents by separating water service account from the general account of the municipality or village. For this purpose, it is required to assign and train meter reader/tariff collector and accountant. Manuals and forms of records for inspection of water meter, tariff setting, cost control and business accounting should be established. Managerial part of the Operation and Maintenance Program, therefore, should consist of the following:

- Assignment and training of meter reader/tariff collector and accountant
- Preparation of manuals for standardized cost calculation including reserves for repair and replacement costs
- Preparation of guidelines for setting of tariff rates compatible to the actual service costs
- Preparation of manuals for business accounting including standardized forms of records, ledgers, journals, etc.
- Preparation of manuals for water meter inspection and leakage control
- Instituting of auditing functions at municipalities, villages and Ministry of Local Government to monitor financial and operational soundness of the water supply services

(2) Operation and Maintenance Program

Taking into consideration the fact that subsidies from the Palestinian Authority are not expected in the foreseeable future, municipalities and villages are required to recover the costs and to balance revenues and expenditures for the water supply services. Where scale of the service or business is inadequate because of insufficient number of population or households, expansion of the business scale should be sought for by organizing joint water council with adjacent municipalities and villages. To undertake the aforementioned maintenance of facilities reliably, it is also needed to strengthen the capacity of the water supply service entities such as the water divisions of municipalities and the joint water councils by human resource development programs. Ministry of Local Government, therefore, shall formulate and implement a "Joint Water Council Promotion Program" and a "Operation and Maintenance Program" at municipalities and villages under the present Project. The Joint Water Council Promotion

Program shall consist of guidance to village/municipal councils, legal status of the councils and their employees, capacity building programs of specific disciplines for the council members and employees and periodic monitoring, evaluation and provision of required advice. The Operation and Maintenance Program shall consist of pricing policy, billing and collection system, business accounting procedures and facility maintenance procedures with suitable training and follow-up arrangements.

(3) Personnel Required for Operation and Maintenance

The following table shows personnel required in the joint water council or water division of municipality.

Required Personnel at Water Division or Joint Water Council

Area	Present Personnel	Number of Households in 2005	Required Personnel	Remarks
Jenin	62	8,433	Same as present personnel	
Burqa	1.5	788	Meter Reader 1 Network M. 1	JWC with Bazariya and Silat e-Dhahr
Hiwara	2	964	Meter Reader 1 Network M. 1	JWC with Eniabus
Attil	2	1,672	Meter Reader 2, Operator 1 Network M. 1	
Qaffin	2	1,409	Meter Reader 2 Network M. 1	
Baqa Al Sharkiya	0	694	Meter Reader 1 Network M. 1	JWC is desirable if possible.
Rantis	0	387	Meter Reader 0.5 Network M. 0.5	JWC with E-Luban al Gharbi

Meter readers in collaboration with accountant of joint water council or municipality shall undertake billing and collection of tariff, accounting, cost control and other business activities. Rantis, whose council staff is absent, is required to operate the water supply service by part timers alone, owing to inappropriate scales of the service and therefore business.

(4) Balance of Revenue and Expenditure

Table 2.2 shows projected balance sheets and required tariff of the water supply services under the present Project at the target year of 2005. The balance sheet, however, does not assume organization of joint water councils with municipalities and villages that are not included in the present Project. Annual operation and maintenance costs of each area are tabulated below, and the cost consists of the expense for operation and maintenance staff and the chemical cost for treatment at source wells and springs.

Annual Operation and Maintenance Costs of Selected 7 Areas

Area	Jenin	Bruqa	Hiwara	Attil	Baqa Al Sharkya	Qaffin	Rantis
Annual O & M Costs (1,000 NIS)	374	142	106	244	82	206	62

To project the average unit tariff of water per cubic meter and the average water charge per

household per month, it is assumed that the rate of accounted-for water should universally be 80 percent. Periods of depreciation are also assumed as shown in the table.

Depreciation Period

Category of Facility	Period
Pipelines	40 years
Elevated reservoirs	40
Grounded reservoirs	60
Civil engineering structures at booster stations	60
Electro-mechanics	15

(5) Affordability to Pay

Average monthly expenditures of households in the northern area of West Bank was JD 492 according to surveys for "Palestinian Expenditure and Consumption Levels" undertaken during 12 months in 1998 by Palestinian Central Bureau of Statistics. This amount of NIS 2,628 is considered to be approximate incomes of the average households. 5 % of this amount, NIS 131, is set for the limit of affordability, and it is found that the assumed water charge per household is affordable in all the areas.

Table 3.1 Implementation Schedule

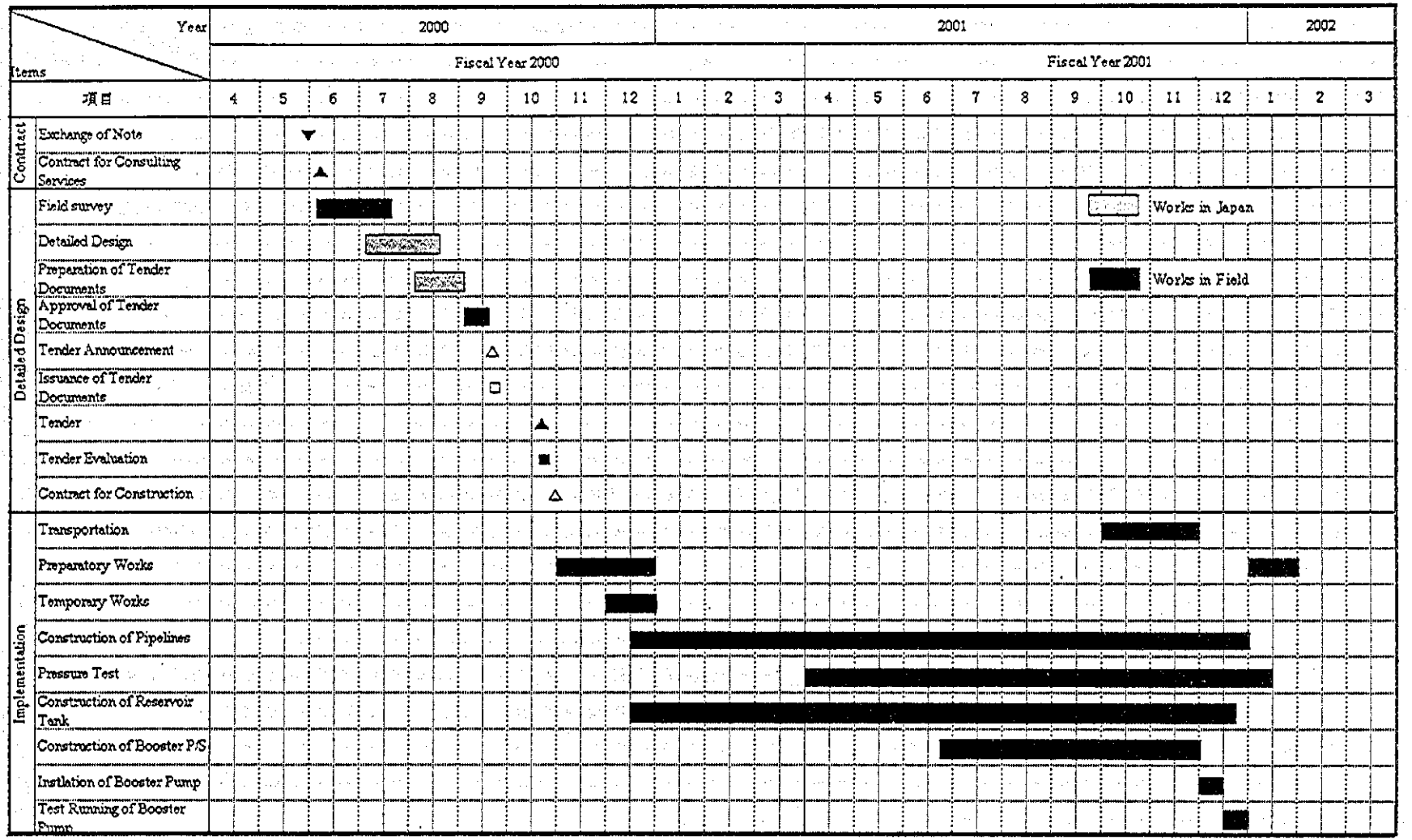

Table 3.2 Projected Balance Sheets at the Target Year

Area (Class of Municipality)	Jenin (A)	Burqa Village	Hiwara (D)	Attil (C)	Baqa Al Sharkya (C)	Kaffin (C)	Rantis Village
Population at 2005	7,910	3,909	5,622	10,075	3,965	8,468	2,657
Households at 2005	1,438	788	964	1,672	694	1,409	387
Annual Water Supply (m^3)	277,166	136,971	196,995	353,028	138,934	296,649	93,101
Unit Cost of Water (NIS/m^3)	0 / 2.38	0 / 2.38	2.38	1.0	0.7	0	2.38
Cost of Water (NIS)	219,885	104,317	468,848	353,028	97,254	0	221,580
Operation & Maintenance Cost (NIS/year)	373,956	142,125	105,709	243,746	81,653	205,604	61,782
Cost of Depreciation (NIS)	102,339	203,202	177,919	363,043	121,087	276,849	128,649
Annual Cost (NIS)	696,180	449,644	752,476	959,817	299,994	482,453	412,011
Average Tariff (NIS/m^3)	3.14	4.10	4.77	3.40	2.70	2.03	5.53
Annual Revenue (NIS)	696,180	449,644	752,476	959,817	299,994	482,453	412,011
Water Charge per Household (NIS/month)	50.43	59.44	81.31	59.80	45.01	35.67	110.90
Cost of Water per Household (NIS/month)	12.74	11.03	40.53	17.60	11.67	0.00	47.71
Op.&Maint. Cost per Household (NIS/month)	21.67	15.03	9.14	12.15	9.80	12.16	13.30
Deprec. Cost per Household (NIS/month)	5.93	21.49	15.38	18.09	14.53	16.37	27.70

(Note) *: Unaccounted water of 20 % is not considered.

CHAPTER 4
PROJECT EVALUATION AND RECOMMENDATION

CHAPTER 4 PROJECT EVALUATION AND RECOMMENDATION

4.1 Project Effect

The following direct and indirect effects are expected by implementing the Project.

(1) Direct Effects

1) Increase of Water Supply Volume and Improvement of Service Ratio

The future population estimated at 42,606 for 2005 will be served by the improved water distribution system. In the Baqa Al Sharkya area where all of the people gets the water carried by water tanker, the service ratio of the facility will be 100 %, and in the other six (6) areas where the present system is planned to be improved, the present service ratio of about 98 % will be increased to be 100 %. As a result, the present service ratio of about 90 % will reach 100 % for all seven (7) areas with implementing whole the project.

2) Decrease of Unaccounted Water

The present unaccounted water volume due to leakage, etc. is considered within a range between 20 and 50 l/day/capita. Due to the improvement and rehabilitation of the existing transmission and distribution pipelines, such leakage will be remarkably reduced, and as a result, the volume of unaccounted water volume will be decreased to be about 20 % only.

3) Improvement of Daily Water Supply per Capita

The present daily water supply per capita is as low as 20 - 50 l/capita only, and this volume is considered quite low comparing with that actually demanded by the people in the area as well as that recommended by WHO. This is considered to be caused by intermittent supply due to large leakage and low water pressure. Such low water supply per capita will be increased to be 96 l/day/capita with solving these causes by implementing the Project.

4) Stable and Qualified Water Supply Service

Increase of supply volume and decrease of unaccounted water cause the improvement of daily water supply per capita, resulting increase of income of water supply. If the water supply income is increased, it will become possible to assure the allocation budget for operation and maintenance of the facilities, and sustainable management will be realized. Consequently, the stable water supply services will be provided to each household and its quality will be quite improved.

(2) Indirect Effects

1) Improvement of Living Standard

The water conveyed by a water tanker has to be once stored in the reservoir constructed in the back yard of each household, but they will be able to receive the water at any time as they need when the 24 hours water supply realized by project implementation. Their life style will be substantially improved raising their living standard.

2) Improvement of Sanitary Condition

When 24 hour water supply is realized, they do not need to store the water in their private reservoirs resulting preventing from water borne diseases and improvement of sanitary condition.

3) Impact to the Other Similar Projects

The grade of water supply facility will be improved and effective operation and maintenance services will be made as a result. Then, sustainable management of the water supply will be realized, which is expected to give a strong positive impacts to the other on-going and planned projects as a model project.

4) Improvement of Water Supply Technology

Through the on-the-job training during the project implementation, plenty of technology transfer will be made, and operation and maintenance specialists will be grown in the area. These staff will make further technology transfer to the other candidates in the future new projects resulting in the improvement of water supply technology in the West Bank.

4.2 Recommendation

In order to enable the village and city councils to provide the stable water supply service and to maintain the sustainable management of the project, it is indispensable to considered the following aspects.

(1) Water Quality Control of Raw Water

Out of the selected seven (7) areas, five (5) areas have their own wells as their water sources, which are controlled by PWA. The water quality of these wells are controlled and analyzed periodically by the Ministry of Health. However, since the irrigation requirement is considered quite large comparing water supply demand, the groundwater extraction by such irrigation wells may easily exceed the limitation stipulated on their license resulting in introducing contaminated water. The results of water quality analyses conducted in the field survey do not indicate any intrusion of contaminated water to the source aquifer. If, in the future, the extraction exceeds such limitation, it may be possible to face problems caused by such exceeding extraction. Therefore, it is necessary to conduct periodical sampling and analyses for the parameters indicated in the Palestinian guidelines continuously to avoid such contamination caused by exceeding extraction. As for the volume of extraction, it is also important to observe the extracted volume so as to avoid the extraction the volume permitted in the extraction license has to be strictly kept.

(2) Increase of Accounted Water

The present rate of unaccounted water is considered as high as 40 - 60 %. This is considered to be caused not only by large leakage from transmission and distribution pipelines but also by failure in collecting water charge due to damages and break of water meters. In the management of the improved and rehabilitated water distribution facilities, it is necessary to assign the proper number of collection staff as well as to set the most appropriate collection system in order to avoid such failure in collecting water charge and to establish fair collection system. It is also important to enlighten the beneficiaries to pay properly the charges according to the volume of water they used. It is indispensable for MOLG as well as PWA and WBWD to positively participate in assisting the council to give them proper supervision and guidance, because the council needs the assistance not only in technical matters also in institutional establishment.

(3) Independence of Water Account and Establishment of Transparent Accounting System

In the present system of accounting applied for the most villages and municipalities, the account

of water supply is not separated from that of whole village or municipality, and it is difficult to grasp the exact status of account. Under these situation it is impossible to maintain proper management of the water supply project as well as proper water charge collection with clear understanding of the beneficiaries. Therefore, in order to realize the sustainable management of water supply project, it is important to make such account independent from the whole village or municipality account and to establish the transparent system of account which all the beneficiaries understand easily. For these aspects, it is indispensable for MOLG to positively participate in supporting and giving guidance to the village or municipality councils in the most appropriate way.

APPENDICES

Appendix 1 Member List of the Survey Team

(1) Member List of the Basic Design Study

1.	Mr. Katsuo Shoji	Team Leader	First Project Management Div., Grant Aid Management Dept., JICA
2.	Mr. Hiroshi Tsujihara	Technical Advisor	International Cooperation, International Affairs Div., Ministry of Health and Welfare
3.	Mr. Takuya Sugawara	Project Coordinator	Administration Div., Partnership Promotion Dept. JICA
4.	Mr. Soichiro Yumoto	Chief Consultant/ Water Supply Planner	Pacific Consultants International
5.	Mr. Hiromasa Minakami	Operation and Maintenance Planner	Pacific Consultants International
6.	Mr. Kiyoshi Nakahara	Water Supply Facility Planner/Distribution Network Planner 1	Pacific Consultants International
7.	Mr. Osamu Yamamoto	Distribution Network Planner 2	Pacific Consultants International
8.	Mr. Hironori Honma	Procurement Specialist	Pacific Consultants International

(2) Member List of Explanation Team for the Draft Basic Design

1.	Mr. Hisanao Noda	Team Leader	First Project Management Div., Grant Aid Management Dept., JICA
2.	Mr. Soichiro Yumoto	Chief Consultant/ Water Supply Planer	Pacific Consultants International
3.	Mr. Kiyoshi Nakahara	Distribution Network Planner 1	Pacific Consultants International

Appendix 2 Itinerary of Study Team

(1) Itinerary of the Basic Design Study

No.	Date		Activities		
			Shoji/Tsujihara	Sugawara/Yumoto/Nakahara /Minakami	Yamamoto/Honma
1	10/28	T	(Phase I)	Narita - Hongkong	
2	29	F	Internal Meeting	Hongkong - Tel Aviv	
3	30	S	Greeting to JICA Office, Embassy of Japan, PWA & WBWD		
4	31	S	Explanation of Inception Report in WBWD		
5	11/1	M	Explanation of Inception Report in WBWD, Preparation of M/D		
6	2	T	Discussion on M/D in WBWD		
7	3	W	Signing M/D, Report to JICA Office and Embassy of Japan		
8	4	T		Site Survey	
9	5	F	Dep. for Narita (Shoji, Thujihara & Sugawara)	Internal Meeting	
10	6	S		Preparation for Site Survey	
11	7	S		Preparation for Site Survey	Narita - Hongkong
12	8	M		Site Survey (Hiwara)	Hongkong - Tel Aviv
13	9	T		Site Survey (Rantis), Meeting with WBWD & PWA	
14	10	W		Site Survey (Brukin, Kafr Ed Deek & Burin)	
15	11	T		Site survey (Burin),	
16	12	F		Internal Meeting	
17	13	S		Site Survey (Brukin, Kafr ed deek, Jenin)	
18	14	S		Site Survey (Qaffin, Attil)	
19	15	M		Data Collection (UNDP)	
20	16	T		Site Survey (Rantis, Jenin, Attil)	
21	17	W		Site Survey (Hiwara,Qaffin,Baqa Al Syrqia,Nablus)	
22	18	T		Topographic survey, Site Survey (Daba'a,Ras Tirah)	
23	19	F		Topographic Survey (Jenin), Internal Meeting	
24	20	S		Discussion (WBWD), Site Survey (Izebet, Daba'a)	
25	21	S		Discussion (WBWD), Site Survey (Burqin/K.E.D)	
26	22	M		Site Survey (Burin Group)	
27	23	T		Site Survey (Burin Group), Price Survey (Ramallah)	
28	24	W		Site Survey (Jenin), Price Survey (Nablus)	
29	25	T		Data Collection (WBWD)	
30	26	F		Report to JICA Office, Data Collection	
31	27	S		Data Collection (WBWD), Price Survey	
32	28	S		Site Survey (Burin Group), Data Collection	
33	29	M		Site Survey (Burin Group), Data Collection	
34	30	T		Site Survey (Burin Group), Site Visit On-going USAID Project.	
35	12/1	W		Data Collection (WBWD)	
36	2	T		Site Survey (Burin Group), Data Collection (WBWD)	
37	3	F		Data Arrangement	
38	4	S		Discussions (WBWD)	
39	5	S		Data Collection (WBWD), Factory Investigation	
40	6	M		Reporting	
41	7	T		Reporting, Discussions (WBWD)	
42	8	W		Reporting, Discussions (WBWD)	
43	9	T		Signing Technical Note (PWA)	
44	10	F		Report to JICA Office and Embassy of Japan	
45	11	S		Report to MOPIC	
46	12	S		Discussions (PWA, WBWD)	
47	13	M		Tel Aviv - Bangkok	

No.	Date		Activities		
			Shoji/Tsujihara	Sugawara/Yumoto/Nakahara /Minakami	Yamamoto/Honma
48	14	T		Dept. Bangkok to Narita	
49	15	W		Arrive in Narita	

(2) Itinerary of Explanation for the Draft Basic Design

No.	Date		Activities	
			Noda	Yumoto/Nakahara
1	4/8	S		Naria - Bangkok
2	9	S	Dept. for Tel Aviv	Bangkok - Tel Aviv, Prep. of Additional Water Quality Analyses
3	10	M	Arr. in Tel Aviv	Prep. of Additional Water Quality Analyses
			Discussion in JICA Office and Embassy of Japan	
4	11	T	Visit MOPIC, Internal Meeting	
5	12	W	Discussion in PWA, Explanation on Draft Basic Design	
6	13	T	Site Visit (Hebron)	Additional Water Quality Analyses
7	14	F	Internal Meeting	
8	15	S	Signing M/D	
9	16	S	Visit PWA, WBWD, MOLG	
			Ramallah - Tel Aviv	Site survey (Hiwara)
10	17	M	Dept. for Narita	Discussion (WBWD)
11	18	T		Dept. for Bangkok
12	19	W	Arr. in Narita	Arr. in Bangkok
13	20	T	-	Bangkok - Narita

Appendix 3 List of Officials Concerned

(1) Officials of Japan

1.	Embassy of Japan	Kenji Okada	Minister
		Katsuyoshi Hayashi	Councilor
		Kohei Sato	Second Secretary
2.	JICA Office in Gaza	Shigeru Okamoto	Resident Representative
		Toshiya Abe	Assistant Resident Representative

(2) Officials of Palestinian Organization

1.	Palestinian Water Authority (PWA)	Fadel Kawash	Deputy Head
		Ihab Isam Barghouthi	Economic Advisor
		Iyad Al-Rammal	Administrative Consultant
		Ahmed Al Hendi	Head, Admn. Dept.
		Ziad Fuqaha	Head, Accounting Section
		Hazem K. Kittani	Head, Technical Dept.
		Omar M.S. Awwad	
		Eng. Ahmad M. Ja'as	Technical Dept.
		Fadia Daibes	Eeputy Program Director
		Mahmoud S. Ibrahim	Mechanical Eng. Technical Dept.
2.	West Bank Water Department (WBWD)	Taher N. Nassereddin	General Director
		Mohammd Jaas	Director of Planning Division
		Ali Odeh	Manager of Planning Division
		Raed Yacoub	Civil Engineer, Planning Div.
		Amjad A. Quraish	Civil Engineer, Planning Div.
		Taysir H. Samara	Director, Admn. Div.
		Mohammad Ramadan	Accountant
3.	Ministry of Planning and International Cooperation	Waleed A. Siam	Director General, Asian Affairs Bureau
		Bader Abu Zahrer	Physical Planning
		Khalil Nijem	
		Bashar Gh. Juma'a	GIS Department
4.	Ministry of Local Government	Ahmed Ghnaim	Deputy Assistant, West Bank
		Ali Barakat	Director General, Urban Planning Dept.
		Nizar Zyoud	Director, Environmental Dept.
		Siham Barghouthi	Director, Rural Development Dept.
		Bashir Barghouthi	Rural Development Dept.
		Jalal Hillan	Technical Unit
		Husuin Sabra	Technical Unit
		Awni Abdul Kader	Manager, Qalqiliya District
		Hilal Sinono	
5.	Palestinian Legislative Council	Firas Yaghi	Adm. Officer, Office of Speaker
6.	Palestinian Legislative Council	Bassim Barhoum	Director General, Information Dept.
7.	Palestinian Central Bureau of Statistics	Sahar A. Natsheh	Head, User Service Div.
8.	Ministry of Environmental Affairs	Arwa A. Tamimi	Legal Advisor
9.	Hiwara Municipality	Tawfeek Odeh	Mayor
		Khaled Audeh	Engineer
		Mustafr El-Haj Ah	
10.	Burin Village Council	Irsan Ibrahim Najjar	Head
		Abdul Salam M. Emran	Accountant
11.	Madama Village Council	Ayad Kamal Kott	Head
		Imad Hafez Nasser	Accountant
12.	Iraq Burin Village Council	Abdulrahim Ahmad Kados	Head
		Isam A'ahed	Financial Committee
		Ibrahim Fariz	Financial Committee
		Walid Kadoos	Financial Committee
13.	Till Village Council	Imad Yasin	Head
		Naef Omar Rechan	Accountant
14.	Sarra Village Council	Abdul Halim Hassan Turrabi	Head

		Hafen Ahmed Turabi	Accountant
15.	Asira Al Qibliya Village Council	Mohammad Marouf Asaireh	Head
		Haj Husni Salih	Accountant
16.	Uriff Village Council	Fakhri Safadi	Head
		Ahmed Sabah	Deputy Head
		Ali Kaid Sabah	Accountant
17.	Burqa Village Council	Ahmad Yousef Abu Omer	Head
		Iyad Abu Omar	Accountant
18.	Attil Municipality	Jamal Abu-Hajjah	Mayor
		Jamal M. Said	Member of Counsil
		Mohammed Abu-Madi	Technician
		Jalal Avedul Karim Ajami	Accountant
19.	Qaffin Municipality	Abdallha Kittaneh	Mayor
		Ibrahim Mohamad Kittanih	Secretary/accountant
20.	Jenin Municipality	Waleed M. Abu Mwais	Mayor
		Zuhdiraja Al-Mansour	Director General
21.	Jenin Municipality	Labadi Waddah	Head of Water Department
		Mazen Shawahni	Deputy head of Water Dept.
		Nabil Jammal	Financial Manager
		S. Abu Hammad	Manager, Computer Center
22.	Baqa Al Sharqiya Municipality	Moniad Huseen	Head
		Ammar Khamis	Engineer
23.	Bruqin Village Council	Mustafa Ahmad Bakr	Head
24.	Kafr El Deek Municipality	Tayseer T. Saied	Mayor
		Nimer I. Saied	Deputy Head
25.	Rantis Village Council	Abdlraheem Fareed	Deputy Head
		Shoker Yousef	
26.	Izbet Al Tabeeb Village Council	Bayain Tabib	Head
		Risa Tabib	
		Hamid Ibrahim	
27.	Daba'a Village Council	Zahran Marra'beh	Head
		Omar Dawod Odeh	Member
28.	Ras Tirah Village Council	Moaad abh	Head
		Nitham Salih Mara'abeh	Member of Council
29.	Ra s Atiya Village Council	Samara Marabi	Head

(3) Officials of International Organization

1.	United Nation Development Program (UNDP)	Reo Hosch	Program Officer
		Youil Anastas	Local National Officer
		Lana Abu Hijleh	Head, Water, Environment & Employment Generation Unit
		Naser M. Aker	Project Engineer
		Musa El Khatib	Project Engineer
		Ignacio Artaza	Program Management Officer

Appendix 4 Minutes of Discussions

MINUTES OF DISCUSSIONS
BASIC DESIGN STUDY
ON
THE PROJECT
FOR
IMPROVEMENT OF WATER DISTRIBUTION FACILITIES
IN
THE NORTHERN DISTRICTS OF THE WEST BANK, PHASE 2

In response to a request from the Palestinian Interim Self-Government Authority (hereinafter referred to as "PA"), the Government of Japan decided to conduct a basic design study on the Project for Improvement of Water Distribution Facilities in the Northern Districts of the West Bank, Phase 2 (hereinafter referred to as "the Project") and entrusted the study to Japan International Cooperation Agency (JICA).

JICA has sent to PA a study team, headed by Mr. Katsuo SHOJI, Deputy Director, First Project Management Division, Grant Aid Management Department, JICA, and scheduled to stay in PA from October 23 to November 5, 1999.

The Team held discussions with the officials concerned of PA, and conducted field surveys at the study areas.

In the course of the discussions and field surveys, both parties have confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study report.

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Ramallah-El Bireh, November 5, 1999

Mr. Katsuo SHOJI
Leader
Basic Design Study Team
JICA

Mr. Fadel Kawash
Deputy Head
The Palestinian Water Authority

Mr. Hussein El A'raj
Deputy Minister
Ministry of Local Government

(Witness)

Mr. Waleed A. Siam
Director General of International Cooperation
Ministry of Planning and International Cooperation

ATTACHMENT

1. Objective

The objective of the Project is to improve the water supply condition of the northern districts of the West Bank by the rehabilitation and expansion of the existing water distribution facilities

2. Project Sites

The Project sites are the municipalities and villages in the northern districts of the West Bank as shown in Annex-I.

3. Responsible and Implementing Agencies

(1) Coordinating organization	:	Ministry of Planning and International Cooperation
(2) Responsible organization	:	The Palestinian Water Authority
(3) Implementing organization	:	The Palestinian Water Authority with coordination of Ministry of Local Government

4. Items requested by the Palestinian Authority

After a series of discussions with the Team, PA requested the items shown in Annex-II. However, final items to be executed under Japan's Grant Aid will be decided after further studies in Japan.

5. Japan's Grant Aid System

(1) PA side has understood Japan's Grant Aid system explained by the Team, as described in Annex-III.

(2) PA side will take necessary measures, as described in Annex-IV, for smooth implementation of the Project, on condition that the Grant Aid Assistance by the Government of Japan is extended to the Project.

6. Schedule of the Study

(1) The consultant of the Team will proceed to further studies in PA until December 13, 1999.

(2) Based on the Minutes of Discussions and technical examination of the study results, JICA will prepare a draft report in English and dispatch a mission to PA in order to explain its contents around the middle of March, 2000.

(3) In case that the contents of the draft report are accepted in principal by PA, JICA will complete the final report and send it to PA by the middle of May, 2000.

7. Other Relevant Issues

The following issues have been discussed and confirmed by both parties.

(1) Basic concepts of the phase 2 study

Since this phase 2 study is to be conducted succeeding to the previous phase 1 study for the same objectives, those methods, procedures, criteria and frameworks applied for the previous study are considered to be basically applied for this study, but subject to the results of further field survey.

(2) Approval of the requested projects by JWC

PA side explained to the Team that the requested projects have already been approved by Joint Water Committee (JWC) and submitted documentary evidences to the Team except for those of the followings villages and municipalities.

- Burqa
- Burin group of villages

It was agreed that the documentary evidences for the above villages and municipalities should be submitted by December 13, 1999. Otherwise, the site shall be excluded.

(3) Procedures for re-approval from JWC for the modification of the project contents

PA side agreed that in case the contents of the Project are modified as a result of the Basic Design Study and thereby re-approval from JWC is required, PA side will secure the re-approval from JWC by the time when the draft report explanation team arrives in PA around the middle of March, 2000. The Team will inform the contents of the modification, if any, to PA side around the middle of January, 2000.

(4) Necessary preparatory procedures for the execution of construction works

The Team confirmed that PA takes necessary preparatory procedures including construction permission to be required for the execution of the construction work by the end of February 2000 and provides the Team with documentary evidence as required. The following items are agreed to be included in those to be taken as preparatory procedures but not limited.

- Construction of temporary access roads to the reservoir sites and the pipeline routes.
- Construction of the water outlets from the Mekorot transmission.

As for the outlets from the Mekorot, both sides agreed that the PA side should submit to the Team before the end of February the documents to assure that the Mekorot will provide the necessary outlets in time before the commencement of the construction. Otherwise, the site shall be excluded.

(5) Ownership of the water distribution facilities

PA side agreed that in case any portions of the existing water supply facilities in the Project Site are found to be the property which is not owned by PA or not owned by any authority under PA, the rehabilitation of those portions shall be excluded from the components of the Project.

(6) Ownership of the water distribution facilities constructed in the Project

The Team confirmed that the ownership of the water distribution facilities constructed in the Project shall belong to the concerned municipalities and villages. The Palestinian Water Authority and Ministry of Local Government shall be responsible for implementing the undertakings of PA side, and supervising the proper and continuous operation and maintenance of the facilities by the concerned municipalities and villages.

(7) Securing the water extraction and bulk water supply volume for the Project

The Team has confirmed that PA side has already verified the existence of groundwater recharge to cover the required water supply for the Project. In this connection, the Team will need to confirm by documentary evidence that licenses and agreements on the use of water are effected. The PA side agreed that the documentary evidences of licensees and/or agreements on the use of water are to be submitted to the Team by November 15, 1999. The site shall be excluded where such evidences are not submitted.

(8) Planning Framework

The Team confirmed to conduct the Study based on the data regarding the water supply source obtained in item (6) above. In addition, the Team proposed and PA side agreed that the Study shall be done in accordance with the planning frameworks as follows, on condition that the required water supply volume is secured.

- Target year of the plan	:	the year 2005
- Population growth rate	:	3.0 % per year till 2000 and 3.5 % after 2001
- Basic water supply volume per capita	:	35 m3/year (agreed figure in JWC)

(9) Requested Facilities

Both parties agreed that the sizes, dimensions and locations of the requested facilities should be reviewed in the basic design in order to achieve maximum accomplishments of the project with the available resources. As a result, the sizes and scales of some facilities may be changed or reduced.

(10) Water Quality

PA side agreed to take necessary measures for the improvement of potable water quality in the Project sites, if required.

(11)Construction cost estimation for the Project

The Team confirmed that PWA will support the Team by providing necessary information to conduct construction cost estimation for the Project appropriately.

(12) House connection

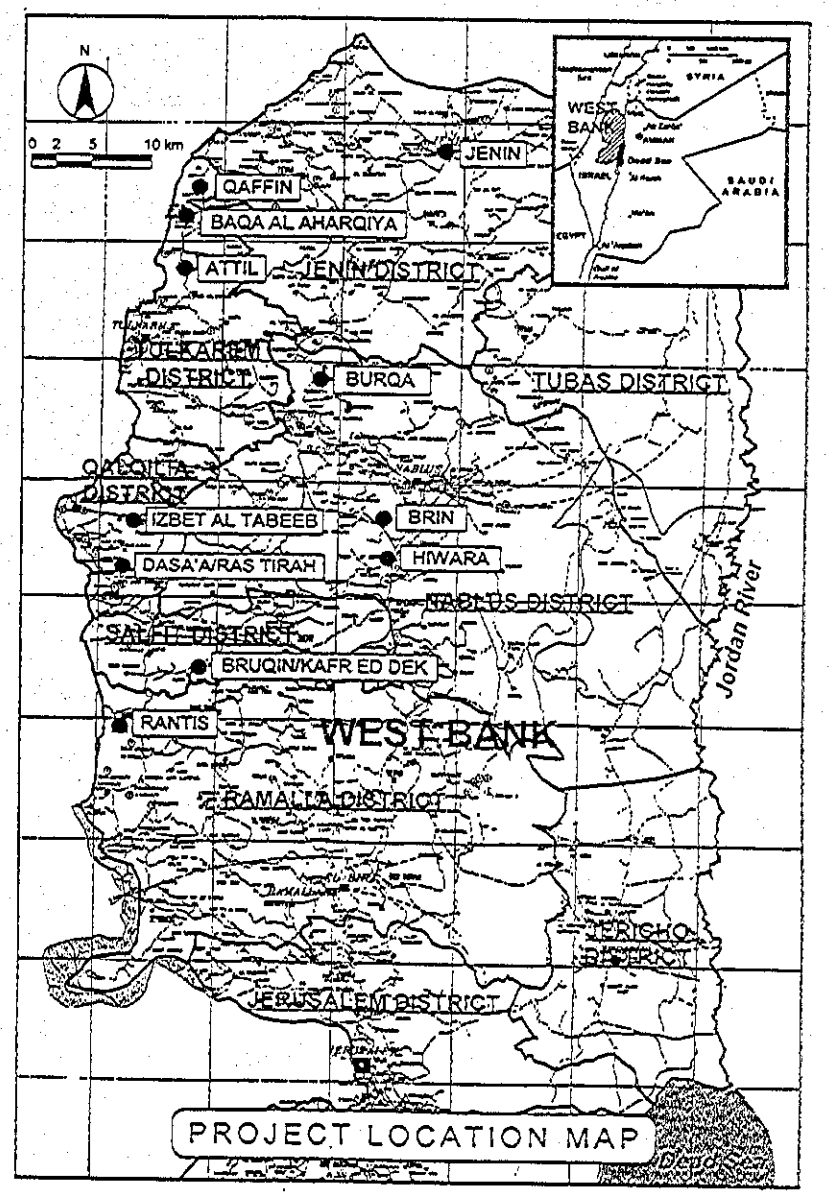
The Team has confirmed that the material supply and construction for new connection and re-connection of he service pipe to each household shall be the undertaking of PA side. Other undertakings of PA side shall be determined after the further study.

(13) Details of distribution networks in Burin group villages

Both sides agreed that the details of the distribution networks of each village shall be submitted by November 20, 1999. Otherwise the village shall be excluded.

A-9

Annex I

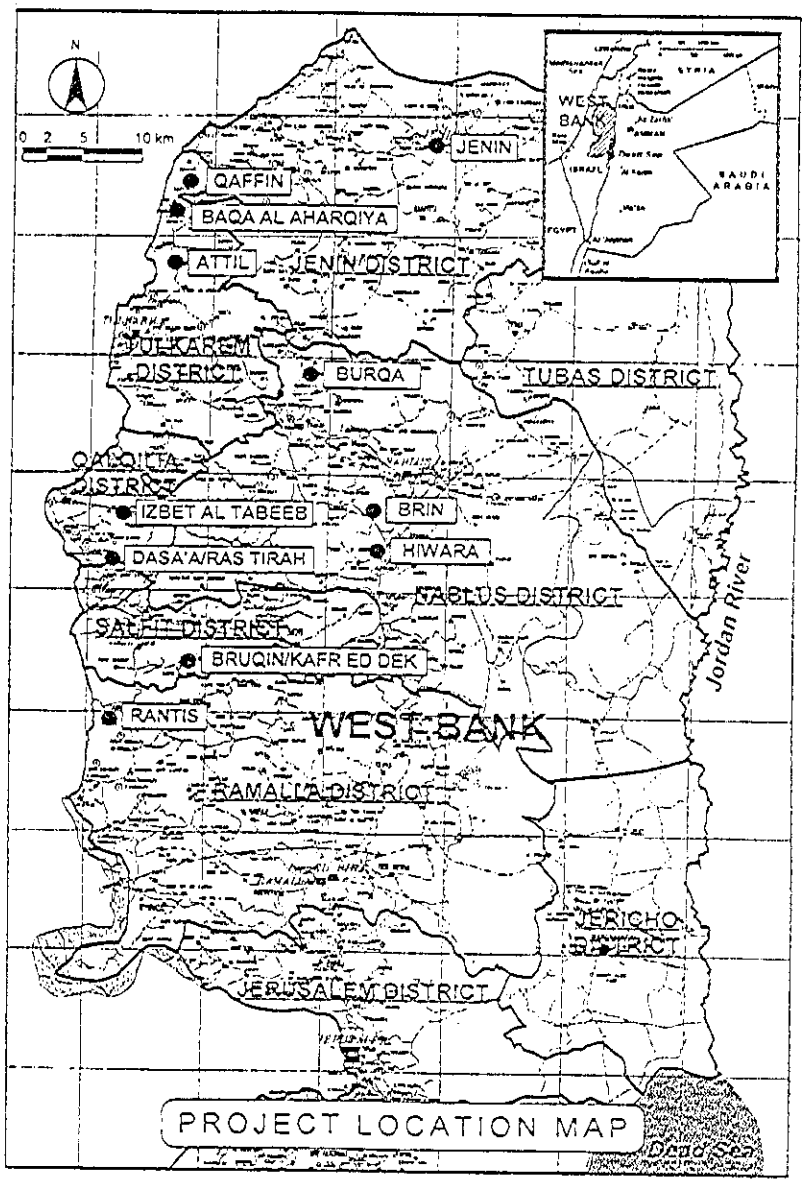


(13) Details of distribution networks in Burin group villages

Both sides agreed that the details of the distribution networks of each village shall be submitted by November 20, 1999. Otherwise the village shall be excluded.

6 - V

Annex I



Annex II

Items Requested by PA

District	Municipality/ Village**	Requested Items: Construction of Water Transmission and Distribution Pipelines – Diameter (mm)	Construction of Water Transmission and Distribution Pipelines – Distance (m)	Construction of Water Reservoir (Nos.)*	Construction of Booster Station (Nos.)
Jenin	Jenin (M)	50 - 150	8,450	-	-
Nablus	Burqa (V)	50 - 150	10,090	-	-
	Hiwara (M)	50 - 150	19,750	500m³ (G) x 1	-
	Burin (V)***	100 - 200	24,000	200m³ (E) x 2 300m³ (G) x 4 500m³ (G) x 1	2
Tulkarem	Attil (M)	50 - 200	26,600	500m³ (E) x 1	1
	Qaffin (M)	50 - 200	13,120	-	-
	Baqa Al Sharqiya (M)		10,500	300m³ (E) x 1	-
Salfit	Bruqin (V)/ Kafr Ed Deek (M)	50 - 150	26,120	300m³ (G) x 1 500m³ (E) x 1	-
Qalqilia	Daba'a (V)/ Ras Tirah (V)	50 - 150	5,400	200m³ (E) x 1	1
	Izbet Al Tabeeb (V)	50 - 75	2,000	-	-
Ramalla	Rantis (V)	50 - 100	11,300	200m³ (E) x 1	-

Note: *: E: Elevated type water reservoir, G: Ground type water reservoir
**: V: Village, M: Municipality
***: The distances of distribution pipes in each village are not included and depend on the results of basic design.

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Annex III

JAPAN'S GRANT AID

1. Japan's Grant Aid System

(1) Grant Aid Procedures

1) Japan's Grant Aid Program is executed through the following procedures:

- Application (Request made by a recipient county)
- Study (Basic Design Study conducted by JICA)
- Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)
- Determination of Implementation (The Notes exchanged between the Governments of Japan and the recipient country)
- Implementation (Implementation of the Project)

2) Firstly, the application or a request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it eligible for Japan's Grand Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

(2) Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereafter referred to as "the Study") conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

i) Confirmation of the background, objectives, and benefits of the requested Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation,
ii) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economical point of view,
iii) Confirmation of items agreed on by both parties concerning the basic concept of the Project,

iv) Preparation of a basic design of the Project,
v) Estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants
For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the Study is (are) recommended by JICA to the recipient country to also work in the Project's implementation after the Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay in implementation should the selection process be repeated.

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(3) Japan's Grant Aid Scheme
1) What is Grant Aid?
The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

2) Exchange of Notes (E/N)
Japan's Grant Aid is extended in accordance with the Notes exchanged by two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

3) "The period of the Grant Aid" means the one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However the prime contractors, namely, consulting, constructing, and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

5) Necessity of the "Verification"
The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

6) Undertakings required of the Government of the Recipient Country
In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the followings:

i) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.

ii) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.

iii) To secure buildings prior to the procurement in case the installation of the equipment.

iv) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.

v) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.

vi) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

vii) "Proper Use"
The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

viii)"Re-export"

The products purchased under the Grant Aid should not be re-exported from the recipient country.

ix) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

2. Grant Aid Procedure

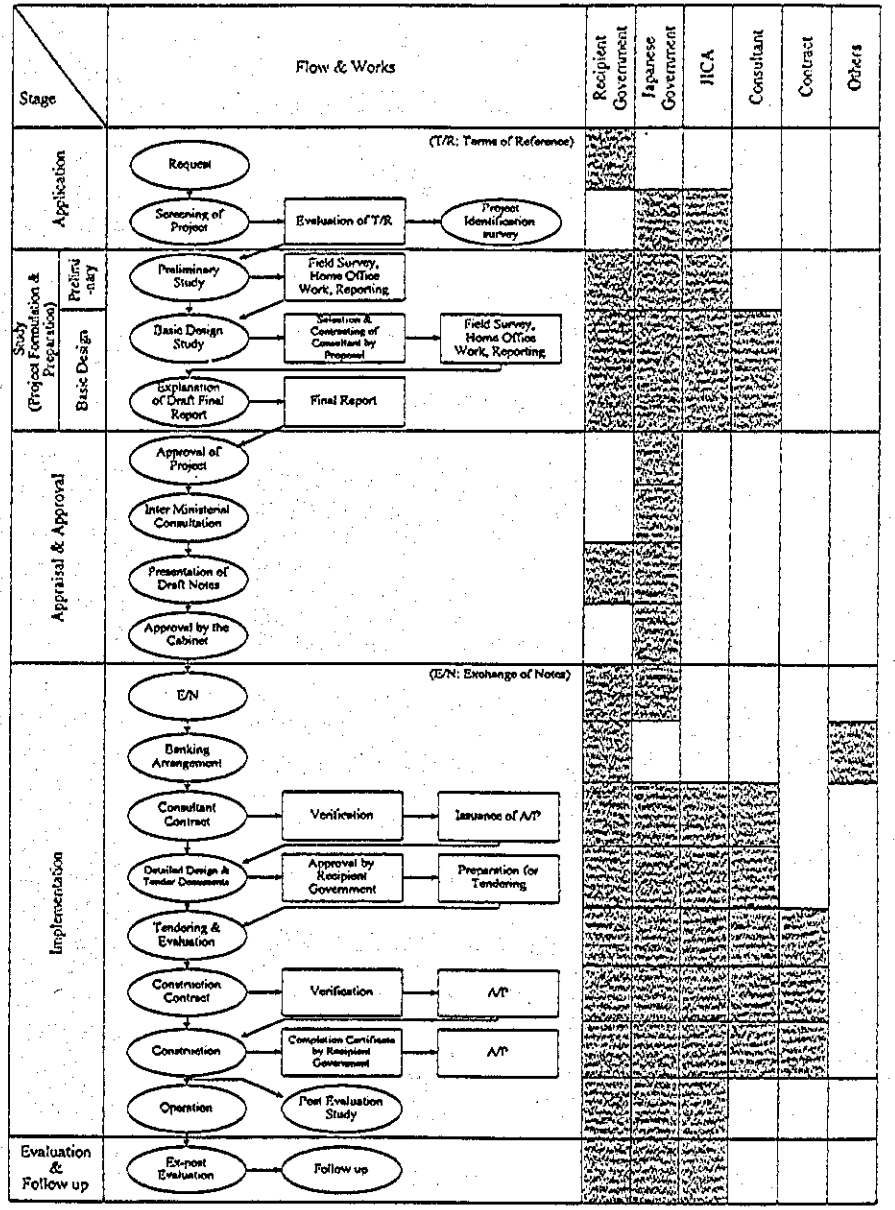
(1) Flowchart of Japan's Grant Aid Procedures

Refer to Attachment 1.

(2) Major Undertaking to be taken by Each Government

Refer to Attachment 2.

Flowchart of Japan's Grant Aid Procedure



Attachment 2

Major Undertakings to be Taken by Each Governments

No.	Items	To be Covered by Grant Aid	To be Covered by Recipient Side
1	To secure land		○
2	To clear, level and reclaim the site when needed		○
3	To construct gates and fences in and around the site		○
4	To construct a parking lot	●	
5	To construct roads		
	1) Within the site	●	
	2) Outside the site		○
6	To construct the buildings		○
7	To provide facilities for the distribution of electricity, water supply , drainage and other incidental facilities		
	1) Electricity		
	a. The distributing line to the site		○
	b. The drop wiring and internal wiring within the site	●	
	c. The main circuit breaker and transformer	●	
	2) Water Supply		
	a. The city water distribution main to the site		○
	b. The supply system within the site (receiving and elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm, sewer and others) to the site		○
	b. The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	●	
	4) Gas Supply		
	a. The city gas main to the site		○
	b. The gas supply system to the site	●	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		○
	b. The MDF and the extension after the frame/panel	●	
	6) Furniture and Equipment		
	a. General furniture		○
	b. Project equipment	●	
8	To bear the following commissions to the Japanese foreign exchange bank for the banking services based upon the B/A		
	1) Advising commission of A/P		○
	2) Payment commission		○
9	To ensure unloading and customs clearance at port of disembarkation in the recipient country		
	1) Marine (Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		○
	3) Internal transportation from the port of disembarkation to the project site		○
10	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contact such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		○
11	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts		○
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant		○
13	To bear all the expenses, other than those to be borne by the Grant, necessary for construction of the facilities as well as for the transportation and installation of the equipment		○

B/A : Banking Arrangement
A/P : Authorization to Pay

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Annex IV

Necessary Measures to be Taken by PA on Condition that Japan's Grant Aid is Extended

1. To secure and provide cleared, embanked and leveled land as well as access road for the new water reservoirs, prior to the commencement of the construction for the Project.

2. To support prompt execution for customs clearance of the construction materials and equipment imported to PA under the Grant Aid.

3. To accord Japanese nationals whose services may be required in connection with the supply of products and services under the verified contracts such facilities as may be necessary for their entry into PA and stay therein for the execution of their work.

5. To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in PA with respect to the supply of the products and services under the verified contracts.

5. To maintain and use the facilities constructed under the Grant Aid properly and effectively and to assign the staff necessary for operation and maintenance for the facilities.

6. To bear all the expenses other than those to be borne by the Grant Aid necessary for the execution of the Project.

7. To bear advising commissions for Authorization to Pay and payment commission to a Japanese bank for the banking services based upon the banking arrangement.

MIMUTES OF DISCUSSIONS
BASIC DESIGN STUDY
ON
THE PROJECT
FOR
IMPROVEMENT OF WATER DISTRIBUTION FACILITIES
IN
THE NORTHERN DISTRICTS OF THE WEST BANK (PHASE-II)
(EXPLANATION ON DRAFT REPORT)

In October 1999, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study Team on the Project for Improvement of Water Distribution Facilities in the Northern Districts of the West Bank (Phase-II) (hereinafter referred to as "the Project") to the Palestinian Interim Self-Government Authority (hereinafter referred to as "PA"), and through discussions, field survey, and technical examination of the results in Japan, JICA has prepared the draft report of the Study.

In order to explain and to consult PA side on components of the draft report, JICA sent to PA a study team, which is headed by Mr. Hisanao Noda, First Project Management Division, Grant Aid Management Department, JICA (hereinafter referred to as "the Team"), and is scheduled to stay in PA from April 10 to 16, 2000.

As a result of discussions, both sides confirmed the main items described on the attached sheets.

Ramallah-El Bireh, April 15, 2000

Hisanao Noda
Leader
Basic Design Study Team
JICA

Fadel Kawash
Deputy Head
The Palestinian Water Authority

Hussein El A'raj
Deputy Minister
Ministry of Local Government

(Witness)

Waleed A. Siam
Director General of International Cooperation
Ministry of Planning and International
Cooperation

1. Components of the Draft Report

PA side agreed and accepted in principle the components of the Draft Report proposed by the Team.

2. Project Sites

Both sides agreed that the Project Sites are the municipalities and villages in the northern districts of the West Bank as attached Annex-I.

3. Japan's Grant Aid Scheme

PA side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by PA side as explained by the Team and described in Annex-III and Annex-IV of the Minutes of Discussion signed by both sides on November 3, 1999.

The Team confirmed that Palestinian Water Authority (PWA) and Ministry of Local Government (MOLG) are responsible for implementing the undertakings by PA side.

4. Further Schedule

The Team will make the final report in accordance with the confirmed items, and send it to PA side by the end of May 2000.

5. Other Relevant Issues

(1) Approval of JWC

PA side explained to the Team that the project sites selected for the implementation have already been approved by Joint Water Committee (JWC) and submitted documentary evidences to the Team except for Burqa area, which was approved in the meeting held on January 3, 2000.

Both sides agreed that the documentary evidence for Burqa area should be submitted to the Team as soon as the minutes of the said meeting is issued.

(2) Preparation for Implementation of the Project

Both sides agreed that the following measures should be taken by PA side prior to the commencement of construction works by the Japanese side.

a) Land acquisition necessary for constructing the reservoirs, booster pump station and pipeline routes.
b) Preparation of temporary access roads to the reservoir sites and pipeline routes.

(3) House Connection

The Team requested PA side to secure the budget for installation of the piping materials to be procured under the Project for facilitating the connection of service pipes with the new distribution pipelines and the budget for connection of service pipes from

the house to sluice valves.

PA side agreed on that.

(4) Ownership, Operation and Management of the Facilities

The Team confirmed that the ownership of the water distribution facilities constructed under the Project should belong to the concerned municipalities and villages. The Team emphasized the importance of proper operation and maintenance of the facilities by each municipality or village.

Both sides also confirmed the Palestinian Water Authority (PWA), the West Bank Water Department (WBWD) and the Ministry of Local Government (MOLG) should be responsible for supervising and securing the proper and sustainable operation and maintenance of the facilities by the concerned organization of municipalities and villages.

Special attention shall be paid to the Baqa Al Sharkiya area that introduces new water supply systems under the Project, and the PWA and the MOLG shall give any possible instruction and help to them to secure proper operation and management as summarized in Annex-II.

Annex-I

Sites Selected for the Implementation of the Project

Area		Lengths of Pipelines (m)			Reservoirs (Nos.)	Booster Pump Station (Nos.)
		Cat.	Sub-total	Total		
Jenin	Jenin	Trans.	-	8,570	-	-
		Dist.	8,570			
Nablus	Burqa	Trans.	-	10,342	-	-
		Dist.	10,342			
	Hiwara	Trans.	660	21,055	1	-
		Dist.	20,395			
Tulkarem	Attil	Trans.	4,601	27,164	1	1
		Dist.	22,563			
	Qaffin	Trans.	-	16,166	-	-
		Dist.	16,166			
	Baqa Al Sharkiya	Trans.	1,158	10,197	1	-
		Dist.	9,039			
Ramallah	Rantis	Trans.	2,843	11,933	1	-
		Dist.	9,090			
Total			-	105,427	4	1

Necessary Actions to be Taken by the Concerned Agencies for Organizing New Water Sections

Actions	MOLG	PWA (WBWD)
- Assist the villages and municipalities in assigning the staff necessary for establishing the new water section	x	x
- Give proper training and lectures to the assigned personnel in order to set up the independent, transparent and fair management of the water supply system including preparation of income statement and balance sheet, and increasing of accounted water, etc.	x	
- Give technical training and lectures to technical staff in order to enable regular and periodical operation and maintenance services		x
- Assist the assigned personnel in establishing the most appropriate tariff and collection systems	x	x
- Assist the municipality or village council in establishing by-law for operation and management within the service area	x	x