I. Project Context

Country Context

Most of the West Bank's water resources are found in three shared aquifers. All three of these aquifers derive most of their recharge from rainfall and snowmelt on the Palestinian side of the Green Line. Palestinians abstract about 20% of the estimated potential of the aquifers lying beneath the West Bank; Israel abstracts the balance, and in addition overdraws on the estimated potential by more than 50%. Although reliable numbers are hard to find, evidence is that over the years since the Oslo Accords, Palestinian abstractions in the West Bank have been in the range 113 MCM - 138 MCM, or about 17-20% of the estimated potential. The balance from the aquifers together with a substantial overdraft is abstracted by Israel, both within the West Bank and west of the Green Line. Israeli over-extraction is estimated to be 389 MCM (80%) more than the agreed Oslo allocation of 483 MCM.

Water withdrawals per capita for West Bank Palestinians are about one quarter of those for Israelis, and withdrawals have declined over the last decade. By 2007, the Palestinian population had access to only about one quarter of the water ration of their Israeli counterparts: West Bank Palestinians had about 123 liters per capita per day (lpcd), and Israelis about 544 lpcd. At the time of Oslo II, Palestinians were using 118 MCM from the West Bank aquifers. By 2007, this had decreased to 113 MCM, while the population had grown by about 50% over the same period. The West Bank is the last among Jordan Basin riparians in access to available water.

Despite water scarcity and a relatively small geographic scope, the Palestinian water sector in the West Bank is fragmented. The policy, planning and regulatory roles belong to an inter-ministerial body that has met only once, the National Water Council (NWC), and to the Palestinian Water Authority (PWA), along with the Ministry of Agriculture for matters relating to irrigation. On the service side, water production is carried out by the West Bank Water Department (WBWD) under the PWA, as well as by municipal and private well operators. Depending on the community, water distribution is managed by regional utilities (e.g. Jerusalem Water Undertaking, Water Supply and Sewerage Authority for Bethlehem region) and municipal utilities in urban areas, or by Village Council water departments and Joint Service Councils (JSCs) in rural areas. To varying degrees the bulk water supply of these fragmented, often low capacity operators is dependent on a single high capacity Israeli bulk water supply company (Mekorot) that provides bulk water supplies through interconnected systems.

Sewage and wastewater treatment have low coverage and safe reuse of treated wastewater is virtually non-existent. In the West Bank, only ten towns are served by sewer systems, of which four towns have treatment plants and none has a significant reuse scheme. According to Palestinian Central Bureau of Statistics (PCBS) surveys, about 69% of the West Bank population still relies on septic tanks. Of the remaining 31% of sewage that is collected by sewers, little is adequately treated. Existing plants at Hebron, Jenin, Ramallah and Tulkarem are performing well below design capacity; current efficiency is 10-30%, and effluent quality is poor. The failure to develop wastewater systems is the more damaging because under the Oslo Accords, water supply quantities, and hence wastewater quantities, have gone up. The environment and groundwater quality have both suffered as a result. It is estimated that a total of 25 MCM of untreated sewage is discharged to the environment each year at over 350 locations in the West Bank.

Bethlehem Governorate Water Strategy:
The Bethlehem District is located to the south of Jerusalem City, in the southern part of the West Bank. It is bounded by Hebron District to the south and south-west, the Dead Sea to the east and Israel to the west. The total population of the district is estimated to comprise about 188,880 Palestinians and about 50,000 Israeli settlers. The Climate of Bethlehem area is of the semi-arid Mediterranean type, characterized by a dry season and rainy season. The average annual rainfall in Bethlehem area is about 550 mm per year. To address the water sector issues in the region, the PWA worked with Bethlehem Governorate in 1998 to develop a Master Plan for Water Distribution in the Bethlehem area. The Plan addresses the geographic area under the jurisdiction of the Bethlehem Water Supply and Sewerage Authority, which does not include the rural communities that are proposed for support under the project described in this proposal.

The Project Area:
In the western rural areas of Bethlehem district, five villages, representing a population of around 25,000 people (Batllar, Husan, Nahhalin, Wadi Fukin, and Walajeh) are facing severe environmental and human health issues due to the pollution of springs by untreated wastewater. Recent media reports have identified spring water polluted by human waste as the source of contamination of agricultural products grown in the area, threatening the major source of livelihood of the villages. More broadly, studies have indicated that 50% of water pollution loadings in the West Bank can be traced to rural communities with inadequate wastewater management infrastructure. The water system in the five villages has also deteriorated. The internal networks were built in the 1970s, and were rehabilitated partially in the 1990s. Unaccounted for water now averages about 40%. The main source of water is from the Israeli bulk water supply company Mekorot, provided through the Palestinian West Bank Water Department.

Although common in West Bank rural areas, the situation in these communities is the more critical since, as a result of the Oslo Accords, the five villages are located in the Israeli jurisdiction area known as Area X for their non-urbanized part and in Area 1 for their built-up parts. The entire area is west of the future Israeli-planned barrier which raises sensitive political and security issues, in particular the need for approval from the Israeli Civil Administration (ICA) for all infrastructure to be constructed within Area C boundaries. ICA is committed to improve the sanitation situation. The water networks located in Area (B), where no permits from the ICA are needed, require approval from the Technical Joint Water Committee. The Project Area:

The mayors of 19 villages in West Bethlehem have joined together to organize a Joint Service Council for Planning and Development (JSCPD). Among these 19 villages, the five villages in this proposal have in their memorandum of understanding with the JSCPD specifically for the purpose of pursuing solutions for water pollution in the area. The JSCPD is well organized, staffed with a professional team and capable of managing this effort if supported by external consultants. Furthermore, the JSCPD is currently in the process of establishing a Water and Wastewater Unit (WWU) to plan and manage water and sanitation services for the communities under its jurisdiction.

Despite the critical socio-economic and environmental situations that the rural areas are facing in West Bank and Gaza generally, and more specifically in the proposed project area, the JSCPD has proved, since its establishment in 2001, to be able to provide basic services in its jurisdiction. An Italian Cooperation program (Palestinian Municipal Support Program PMS) implemented by the Ministry of Local Government (MLG) has supported the formation of the WWU by purchasing essential furniture and office equipment, and financing 30% of the running costs of the Unit, including salaries of 4 staff members for two years (until end of 2012).

The village leaders have held meetings facilitated by FoEME with both the Israeli and Palestinian authorities, including the Palestinian Water Authority, the Israeli Civil Administration and several donor agencies. To see this level of interest on the part of local leaders in addressing the issue of wastewater pollution and in establishing Palestinian-Israeli relations for that purpose is still somewhat rare and makes the West Bethlehem area a prime location to develop a demonstration project, as already established cooperation and relations increase the likelihood of the project being a success.

The JSCPD has asked for support from the Palestinian Water Authority to improve water and sanitation services in the project area and strengthen its capacity to manage them through the newly established WWU. PWA in turn has requested financial assistance from the Bank to support this demonstration project.

II. Sectoral and Institutional Context
At the Paris Pledging Conference on December 17, 2007, the PA presented a three-year Palestinian Reform and Development Plan (PRDP 2008-10) for assigning resources to PA’s priorities in Governance, Economic and Private Sector Development, Social Development and Infrastructure. PRDP, in its vision for a future Palestinian state, highlights the importance of building social capital and promoting solidarity through local governments that are responsive to citizens. Together with transport, the water & wastewater management sector is prioritized. Combined, both sectors represent $287 million of the total $364 million dedicated to infrastructure development over the Plan period.

The Palestinian Water Authority (PWA) is the Palestinian Authority’s central agency with responsibility for water sector development and services. PWA is currently leading a comprehensive water sector reform initiative that, inter alia, will redefine the water sector institutional framework. The development and management of water supply and sanitation services will progressively be delegated to local institutions, with PWA developing the capacity to regulate, monitor, and provide technical support to service providers. JSCPDs are expected to progressively take on greater and more formalized responsibilities for water and sanitation service provision in towns and rural areas. The project would model institutional innovations by supporting the establishment and building the capacity of the JSCPD’s Water and Wastewater Unit in accordance with the ongoing sector reforms, and provide experience to guide implementation of the reforms throughout rural communities in the West Bank and Gaza. PWA considers this project to be closely aligned with its institutional and infrastructure development vision.

The Bank is supporting the Water Sector Capacity Building Project (WSCCBP), the objective of which is to strengthen the capacity of PWA to more effectively plan, monitor, and regulate water sector development in the West Bank and Gaza. The core of WSCCBP is a Technical and Planning Advisory Team (TPAT) of consultants, which is now being mobilized to work together with PWA staff to build the capacity of the agency to implement Palestine’s reformed water and wastewater sector policy and strategy. The proposed Project will be in line with the water and
wastewater strategies to be supported by the TPAT. The wastewater feasibility study will be carried out in close cooperation with the wastewater specialist working with the TPAT, to ensure the consistency of the sector development and structural vision as articulated in the sector review reform report and the TPAT outcome.

This project will provide an opportunity for PWA to test and refine strategies for improving the provision of water and wastewater management services in rural areas and in particular for conflict-affected communities (Areas C and B). The steering committee established for the WSCBP will review the feasibility study and ensure that the project approach coincides with the newly reformed sector policies and strategies.

Fit with the World Bank’s Interim Strategy for the West Bank and Gaza:
The Bank’s current Interim Strategy for the West Bank and Gaza includes improved access to safe water and sanitation as the fourth and largest component of the grant portfolio. In line with the PRDP, an update of the Interim Strategy now under preparation will consider increasing investment in the water and wastewater sector. To help reach PRDP’s vision of the future, the Bank is financing the Village and Neighborhood Development Project (VNDP) to support the PA’s efforts to promote social solidarity and empower communities to manage their own development process. VNDP aims to establish a model for community development in villages, marginalized urban neighborhoods and refugee camps.

The proposed project will complement VNDP by testing the model in conflict-affected villages located west of the Separation Barrier in Areas B and C. The proposed feasibility study is expected to provide a potential framework for expanded Bank investment in other rural communities to improve water and environmental sanitation conditions. The Bank’s funding for the West Bank and Gaza is limited and is dependent on IDA Special Grant Funds, which are fully committed. The project’s location in Area C presents risks which recommend the use of State and Peace-building Fund financing in lieu of the Trust Fund for Gaza and the West Bank for this initiative.

III. Project Development Objectives
The project development objective is to improve, through a pilot project, the delivery of water and the planning of wastewater services in targeted rural communities that are marginalized due to mobility restrictions in West Bethlehem region. The project is expected to achieve the following results:

1. A completed feasibility study for wastewater management and reuse in the project area acceptable to the project beneficiaries, the Palestinian Water Authority, and the World Bank;
2. A costed project concept for investment in wastewater management and reuse infrastructure;
3. Improved reliability of piped water supply for the four villages of Battir, Nahhalin, Husan and Wadi Fukin resulting in 24 Hr. supply throughout the year;
4. Improved capacity of the Water and Wastewater Department within the JSCPD to plan, manage, operate, and maintain water and wastewater services, as measured by the preparation of a business plan, a tariff structure that aims at full recovery of O&M costs, and a tariff collection rate of at least 80%.

IV. Project Description
Component Name
Feasibility Study for wastewater management
Detailed design for water supply system rehabilitation
Project management
Rehabilitation and improvement of the drinking water supply networks
Capacity building

V. Financing (in USD Million)

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VI. Implementation
The proposed project would provide financing to (i) determine, through a comprehensive feasibility and design study the optimal solution for sustainably managing the wastewater and wastewater reuse in five Palestinian communities in the western rural area of Bethlehem District in the West Bank, (ii) finance the replacement of the severely deteriorated pipe network for water supplies in the four communities and the construction of reservoirs to improve the water supplies for two of these communities (Battir and Nahhalin), and (iii) develop the capacity of local institutions (principally the Joint Services Council and village councils) within the project area to plan and manage improved water supply and sanitation infrastructure, including safe reuse of treated wastewater for agricultural purposes.

The project will contribute to mitigating Palestinian economic and governance fragility by building the capacity of local institutions for managing basic services (water supply and sanitation), reducing environmental health risks by improving the quality of drinking water supplies and providing a plan for reducing ground and surface water pollution from human waste, and contribute to improving agricultural productivity through providing a plan for safe wastewater reuse for agriculture production. The area contains rich agricultural land and is well-known for vegetable production in the region, but production is constrained by limited access to water resources. Currently, human waste is disposed of in poorly designed and dysfunctional septic tanks and cesspits (infiltration pits), which are contributing to surface and groundwater pollution and wastewater is not reused. Furthermore, poor sanitation contributes to social tension in these communities when waste from overflowing or leaking septic tanks spills onto a neighbor’s property. The wastewater management feasibility study will provide a long-term solution for the
area that would improve the public health, environment and socio-economic situations in the area. A public awareness campaign program will address environmental impacts of the usage of the cesspits and septic tanks and focus on mitigating measures that individuals and households can take to meet minimum environmental standards.

The existing piped water network, which distributes water purchased from the Israeli bulk water utility Mekorot, is old and suffers from extensive leakage. Water losses in the network are in excess of 40%. Furthermore, population growth in the communities since the water system was first constructed (1970’s) has been considerable and the storage capacity is now inadequate. Water pressure is low and there are regular outages in higher elevation neighborhoods in the summer months. The project would focus on improving water pressure and consistency of supply in the two most critically affected communities, - Nahhalin and Battir, and reduce water losses through network rehabilitation for the entire system.

Five rural communities are proposed to be included in the project. These communities are in an area adjacent to the Green Line and there are also Israeli settlements in the West Bank that are nearby. There are therefore sensitivities about how wastewater is managed, both as a pollutant and as a resource for irrigation. The support of the NGO Friends of the Earth Middle East (FOEME) should help mitigate this risk. The project concept originates from FOEME’s ongoing Good Water Neighbor program (GWN). As such, the project has and will continue to receive facilitation support from FOEME to ensure effective cooperation from neighboring communities, settlements and the Israeli Civil Administration. The Civil Administration has confirmed that construction permits will be issued and they have provided a letter of support in principle for the sanitation feasibility study. The Project would help to assess and then build the capacity of the JSCPD to plan and manage water and sanitation services. JSCPD is an effective local institution that the PWA and the MLG are supporting to manage water and wastewater services in rural communities. By implementing this project, ties between the five communities may be strengthened and thereby help facilitate administrative amalgamation more broadly. Amalgamation is a goal that was set by the MLG to reduce the number of local authorities and village councils to ensure the viability and sustainability of these local government institutions.

The capacity building initiative would begin with an assessment of the current capabilities and needs of the JSCPD and in particular its nascent water and wastewater unit with respect to its ability to sustainably manage water and sanitation services. Based on that assessment a program of training activities will be developed that can be financed with the resources that the project will make available. The project will also finance for two years the costs of two engineers that the JSCPD will employ within the WWU. To support cost recovery, a public awareness campaign will be designed and implemented to explain to the project beneficiaries the service improvements that the project will bring and encourage prompt and full payment of tariffs.

VII. Safeguard Policies (including public consultation)

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VIII. Contact point

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