

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Risk Assessment	Mitigation Measures or Risk Management Plan
<p>Financial Management PPUC does not earn sufficient revenue from its water and wastewater operations to permit full cost recovery by the end of FY2015.</p>	High	<p>(i) The legal framework for full cost recovery is in place and is appropriate; (ii) tariffs are affordable; (iii) fee for service policies, disconnection policies, and tariff collection targets improved fiscal sustainability; (iv) 100% metering, bulk supply management, and leak detection and repair will halve non-revenue water to 25% by the end of FY2015, improving efficiency; and (iv) the improved sewage network will substantially reduce the operating costs.</p>
<p>Customer relations/customer service is poor and leads to perception of poor service delivery and reluctance to pay tariffs</p>	Medium	<p>WWO has developed and is implementing a customer relations plan. WWO is implementing a customer relations training program for its staff with the assistance of the Hawaii Rural Water Authority.</p>
<p>Institutional Capacity The skills base required to effectively manage and operate WWO sewage systems is limited and there is currently no succession planning for key personnel.</p>	High	<p>The Water Sector Improvement Program provides 35 person-months of consultant support for core management positions; (ii) the project provides 250 person-months of consultant inputs to help PPUC design and implement the project works; and (iii) a twinning arrangement to support focused capacity building in areas of identified weakness.</p> <p>WWO and the Palau Community College will develop a training program to support asset management and occupational health and safety best practices at the WWO which will be available to WWO staff and the public. WWO has prepared and is implementing in-service training programs for staff in the WWO by 31 March 2014.</p>
<p>WWO skills development programs developed during project implementation are not maintained after project completion.</p>	Medium	<p>In-service capacity development plans are identified in the PPUC corporate plan, PPUC capital investment and asset management plans and are updated annually and endorsed by the PPUC Board.</p> <p>The Palau Community College training program to support asset management and occupational health and safety good practices at the WWO will be maintained.</p>
<p>WWO does not prioritize institutional continuous improvement after project completion.</p>	Medium	<p>The PPUC regulations require periodic updating of PPUC corporate plans including performance targets, and systems improvements and asset management plans to enhance financial and technical sustainability.</p>

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<p>Institutional Management Poor asset management leads to: (i) Ad hoc sewerage system improvements reducing service levels; (ii) poor planning and design outcomes; and (iii) inappropriate investment and management decisions.</p>	High	The following will be undertaken: (i) create and maintain an asset register; (ii) create and maintain a sewerage system network model; (iii) sewer flow gauging; and (iv) preparation of asset management plans.
<p>Operations and Maintenance Maintenance of the sewerage system is deferred and systems operations and maintenance remains reactive.</p>	High	(i) Asset management plans to guide corporate planning, capital investments and planned maintenance have been developed and are being implemented, (ii) management contract for 5 years for all sewage treatment plants, (iii) increased budgetary provisions for maintenance in the tariff structure.
No improvement in reporting, managing, and cleaning up overflows.	Medium	WVO is required to monitor and report sewage overflows and to clean up overflows to Palau's Environmental Quality Protection Board standards.
Poor control of infiltration / inflow of storm water into sewers increases the risk of sewage overflows.	Medium	The project will provide an infiltration / inflow investigation and develop a long term program to minimize infiltration and inflow.
Limited knowledge of sewer loading characteristics and the technical aspects of gravity and pressure sewer systems results in ineffective and inefficient technical solutions.	Medium	The project will provide a log-term sewage flows program to assess the sewer loading characteristics of the sewer system and will develop appropriate sewer design criteria.
Overall	Medium	

CEO = Chief Executive Officer, CIP = Capital Improvement Program Office, O&M = operation and maintenance, PSC = project steering committee, PMU = project monitoring unit, PPUC = Palau Public Utilities Corporation; WVO = Palau Public Utilities Corporation Water and Wastewater Operations, WSIP = Water sector improvement program.
 Source: Asian Development Bank.