



Project Design Advance

Project Number: 49001-001
December 2015

Republic of Fiji: Urban Water Supply and Wastewater Management Project

This document is being disclosed to the public in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 31 October 2015)

Currency unit	–	Fiji dollar/s (F\$)
F\$1.00	=	\$0.489
\$1.00	=	F\$2.04

ABBREVIATIONS

ADB	–	Asian Development Bank
GSA	–	greater Suva area
PDA	–	project design advance
WAF	–	Water Authority of Fiji

NOTES

In this report, "\$" refers to US dollars unless otherwise stated.

Vice-President	S. Groff, Operations 2
Director General	X. Yao, Pacific Department (PARD)
Director	R. Jauncey, Pacific Subregional Office, PARD
Team leader	M. Paniagua, Unit Head, Project Administration, PARD
Team members	S. Blaik, Principal Urban Development Specialist, PARD C. Damandl, Senior Counsel, Office of the General Counsel (OGC) T. Faletau, Safeguards Officer, PARD G. King, Senior Project Officer (Financial Management), PARD S. Lee, Principal Social Development Specialist, PARD A. Morel, Procurement Specialist, Operations Services Financial Management Department B. Puamau, Operations Assistant, PARD H. Uusimaa, Climate Change Specialist, PARD A. Woodruff, Urban Development Specialist, PARD
Peer reviewer	S. Rau, Urban Development Specialist, East Asia Department

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

CONTENTS

	Page
I. THE PROPOSED PROJECT	1
II. ACTIVITIES TO BE FINANCED BY THE PROJECT DESIGN ADVANCE	3
III. COST ESTIMATES AND FINANCING ARRANGEMENTS	3
IV. IMPLEMENTATION ARRANGEMENTS	4
V. SAFEGUARDS	4
VI. DECISION	5

I. THE PROPOSED PROJECT

1. The proposed Urban Water Supply and Wastewater Management Project will increase the capacity of the Water Authority of Fiji (WAF) to provide safe water and sewerage services to the urban population of the greater Suva area (GSA). The Government of Fiji requested project design advance (PDA) financing in the form of a loan to support detailed design and policy and regulatory reform activities for the project (as discussed in section II).¹ The total indicative project amount, including the ensuing loan is \$220 million. The Asian Development Bank (ADB) has approved the advance recruitment of the consulting services to be financed under the PDA and consulting services contracts are expected to be awarded by February 2016.

2. Fiji has a population of approximately 868,000, of whom 57% reside in the GSA.² The GSA accounts for 40% of the country's gross domestic product, but despite its economic importance, urban infrastructure and services have not kept pace with growth. This is contributing to environmental degradation and increased health risks, and acts as a binding constraint on social and economic development. The improved delivery of urban water supply and sanitation services is a high priority of government.³ ADB has assisted the Government of Fiji in rehabilitating water supply and wastewater treatment infrastructure in the Suva–Nausori area.⁴ However, rapid urban growth requires expansion of existing capacity and improvement of the water and sewerage service delivery and wastewater regulatory framework. In April 2014 ADB approved capacity development technical assistance of \$1.15 million to support the Government of Fiji to develop an urban master plan for the GSA,⁵ as well as to support WAF to prepare a project built on priority investments based on the WAF draft water supply and sewerage master plan 2013–2033.⁶ The following priorities and outputs have been identified for the proposed project:

3. **Output 1.** WAF increases access to reliable and safe water supply in the GSA through (i) increasing production by at least 30,000 cubic meters per day by designing and constructing a new water supply source in the Rewa River, a water treatment plant, a pumping station, and a reservoir to serve the GSA water supply system; and (ii) reducing nonrevenue water due to technical losses and nontechnical losses by replacing meters, improving leak detection and repairs, establishing district metering and demand management areas, and establishing pressure management systems. This will address the existing shortfall in bulk water supply and

¹ The PDA financing is in the country operations business plan for 2016–2018 (ADB. 2014. Country Operations Business Plan: Fiji, 2015–2017. Manila). The government formally requested a PDA on 27 November 2015.

² United Nations Statistics Division. Country Profile: Fiji. <http://data.un.org/CountryProfile.aspx?crName=FIJI> (accessed 20 September 2013)

³ Government of Fiji. 2009. *Roadmap for Democracy and Sustainable Socio-Economic Development, 2010–2014*. Suva; and Government of Fiji. 2014. *A Green Growth Framework for Fiji: Restoring the Balance in Development that is Sustainable for our Future*. Suva.

⁴ ADB. 2003. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Fiji Islands for the Suva-Nausori Water Supply and Sewerage Project*. Manila; ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Fiji Islands for the Suva-Nausori Water Supply and Sewerage Project (Supplementary)*. Manila.

⁵ ADB. 2013. *Technical Assistance to Fiji for Urban Development Planning and Institutional Capacity Building*. Manila.

⁶ The master planning exercise was carried out by WAF with technical support from ADB. Identification of growth areas and development of population growth scenarios were carried out in close collaboration with the Department of Town and Country Planning, and were based on the draft Urban Growth Master Plan for GSA. 2013–2033. It is important to note that these documents are projected from 2013 employing the existing state of infrastructure from 2013 as the baseline. The water supply and sewerage master plan, 2013–2033 remains in draft form pending completion of consultation and endorsement by the WAF board and pertinent government authorities.

water treatment during peak dry weather periods, therefore improving water supply reliability and continuity across the GSA water supply system. It will also provide additional bulk water supply and water treatment capacity to allow the servicing of areas not currently supplied by the system as well as to service future growth in the GSA.

4. **Output 2:** WAF increases sewer coverage capacity and reliability of wastewater treatment processes in the GSA through (i) increasing the wastewater treatment capacity of Kinoya to approximately 277,000 population-equivalent by designing and building new treatment facilities—two primary sedimentation tanks and a digester—and upgrading a dewatering plant; (ii) upgrading around 31 existing wastewater pumping stations to allow more flow to the treatment plant; (iii) replacing around 18 kilometers of wastewater trunk mains and relining around 18 kilometers of wastewater trunk mains that are reaching the end of their asset life; and (iv) designing and constructing new wastewater infrastructure to service an additional 15% of the households in backlog areas and new development areas (servicing approximately 4,500 new lots). This will improve overall effluent quality and help to minimize the incidents of treatment plant bypassing, thereby improving water quality downstream in receiving waters. More importantly, it will enable the servicing of backlog sewerage areas and allow future growth within the Suva-Nausori wastewater system.

5. **Output 3:** WAF management and sustainable service delivery capacity will be improved through:

- (i) supporting WAF with the implementation of a water demand management program, nonrevenue water program, and the national liquid trade waste program;⁷
- (ii) supporting the Department of Environment with a review of the environmental regulatory framework for municipal wastewater treatment discharge as well as sludge treatment and disposal practices and standards, and with monitoring and enforcement of these regulations;
- (iii) assisting the government and WAF with completing the corporatization of WAF, including transfer of assets, governance arrangements, greater financial sustainability, and the retention of revenue within WAF;
- (iv) assisting the Ministry of Local Government, Housing and Environment and WAF with formulating a catchment plan to protect the quantity and quality of the water at the intakes for all the water sources in the project area;
- (v) reviewing policies used by WAF in financial reporting and supporting the implementation of changes to WAF accounting policies and financial management, including the provision of accounting training;
- (vi) carrying out a study on options for long-term alternatives to reduce energy consumption of the GSA wastewater treatment system in the GSA; and
- (vii) supporting the promotion of gender equity within WAF business practices.

6. As a result of the proposed project, residents of Fiji's most densely populated areas will have improved access to safe piped water and an environmentally friendly sewerage system. The outcome will be improved access to sustainable water supply and sewerage services.

⁷ The PDA will assist Fiji to develop a new national liquid trade waste program to reduce the discharge of untreated or inadequately treated commercial and industrial wastewater into the sewerage system. This will include the introduction and enforcement of new regulations. The improved national liquid trade waste program is part of Fiji's overall Liquid Waste Management Strategy approved in 2006.

II. ACTIVITIES TO BE FINANCED BY THE PROJECT DESIGN ADVANCE

7. The PDA will support the government to deliver the concept design for design–build–operate, conceptual and detailed engineering designs for wastewater treatment expansion and sewerage works, and bidding documents for all works, and support the technical evaluation of bid proposals, as well as other project preparatory work for the project including (i) initial environmental assessments; (ii) a land acquisition and resettlement plan; (iii) a consultation and communication strategy for the project; (iv) technical review and support to the Government of Fiji for the approval of a national liquid trade waste program; (v) support for the development and approval of a road map for the corporatization of WAF; and (vi) a strategy to improve WAF accounting practices and financial management, and commence implementation. The PDA will allow the government to complete detailed engineering design and preliminary designs before the proposed project becomes effective.

III. COST ESTIMATES AND FINANCING ARRANGEMENTS

8. The total cost of the PDA project is estimated at \$9,350,000 (Table 1). The government requested a PDA in the amount of \$2,650,000, to be financed by a loan from ADB's ordinary capital resources. The loan will have an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility. The estimated refinancing date for the PDA loan is 15 February 2017.⁸

Table 1: Investment and Financing Plan for the Project Design Advance^a
(\$ million)

Item	Cost ^b	ADB	Government
A. Base Cost^c			
1. Project preparatory work	3.80	0.77	3.03
2. Concept design Rewa WSS and Kinoya WTP	1.81	0.61	1.20
3. Detailed design for sewerage extension	3.07	1.03	2.03
Subtotal (A)	8.68	2.42	6.26
B. Contingencies^d	0.67	0.23	0.44
Total (A+B)	9.35	2.65	6.70

ADB = Asian Development Bank, WSS = water supply scheme, WTP = waste treatment plant.

Note: Numbers may not sum precisely because of rounding.

^a The PDA loan carries interest and commitment charges, where applicable. The payment of these charges will be deferred until the PDA is repaid from the ensuing financing or other repayment terms take effect. Commitment charges are waived for a period of 2 years from PDA signing. If the ensuing financing does not become effective within that period, commitment charges of 0.15% per year will accrue thereafter.

^b Includes cost of land acquisition and resettlement of \$1.50 million and taxes and duties of \$0.04 million to be financed from government resources (with taxes and duties in the form of government exemptions).

^c In mid-2015 prices.

^d Contingencies computed at 10% for consulting services.

Source: Asian Development Bank estimates.

⁸ If the PDA will not be refinanced and the amount disbursed was more than \$50,000, the government will be required to repay the PDA and the accrued interest and other charges, as applicable upon notice by ADB, in 10 equal semiannual installments over 5 years after the refinancing date. However, if the disbursed amount was \$50,000 or less, the government will be required to repay it within 60 days after ADB's notice.

IV. IMPLEMENTATION ARRANGEMENTS

9. The implementation arrangements are summarized in Table 2 and described in detail in the PDA project administration manual.

Table 2: Implementation Arrangements for Project Design Advance

Aspects	Arrangements		
PDA implementation period	January 2016–March 2017		
Estimated PDA completion date	March 2017		
Management			
(i) Oversight body	Project Preparatory Coordination Committee: Ministry of Finance (chair), Water Authority of Fiji, Ministry of Infrastructure; Ministry of Foreign Affairs; Ministry of Local Government Housing and Environment (Department of Environment and Department of Town and Country Planning); Ministry of Lands and Mineral Resources; i-Taukei Land Trust Board; Fiji Commerce Commission (members); and ADB.		
(ii) Executing agency	Ministry of Finance		
(iii) Implementing agency	Water Authority of Fiji		
Consulting services ^a	Package	Person-Months	Estimated Cost
	1. Project preparatory work	115.5	\$2,530,000
	2. Design Rewa WSS and Kinoya WTP	38.0	\$1,991,000
	3. Detailed design for sewerage extension	79.0	\$3,330,000
Advance contracting	Project preparatory work and engineering design		
Disbursement	Disbursements under the PDA will be made in accordance with ADB's <i>Loan Disbursement Handbook</i> (2015, as amended from time to time).		

ADB = Asian Development Bank, PDA = project design advance, WSS = water supply system, WTP = waste treatment plant.

^a The implementing agency will recruit the consulting firms using the quality- and cost-based method with a quality–cost ratio of 80:20 with full technical proposal. The recruitment of consultants will be done in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).

Source: Asian Development Bank.

V. SAFEGUARDS

10. The PDA finances only consulting services for detailed design and project preparatory work and is categorized C for environment, involuntary resettlement, and indigenous peoples. Preliminary draft initial environmental examination and land acquisition and resettlement plans have been carried out for the ensuing project and it is categorized B for involuntary resettlement and environment and categorized C for indigenous peoples. The PDA-financed consultants will update and finalize the initial environmental examination, environmental management plan, and land acquisition and resettlement plans for the proposed project, in compliance with ADB's Safeguard Policy Statement (2009). A climate risk and vulnerability assessment has been carried out for the project, and the detailed designs will consider climate risks by incorporating priority adaptation measures.

VI. DECISION

11. Management has approved the provision of a loan not exceeding \$2,650,000 to the Republic of Fiji from ADB's ordinary capital resources, in the form of a project design advance (PDA) for the Urban Water Supply and Wastewater Management Project, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; and the President hereby reports this action to the Board.