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The World Bank

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Report No: PAD958

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL GRANT

IN THE AMOUNT OF SDR 52.7 MILLION  
(US\$80 MILLION EQUIVALENT)

TO

BURKINA FASO

FOR THE

URBAN WATER SECTOR PROJECT

October 21, 2014

**Urban Development & Services Practice 2  
Africa Region**

This document is being made publicly available prior to Board consideration. This does not imply a presumed outcome. This document may be updated following Board consideration and the updated document will be made publicly available in accordance with the Bank's policy on Access to Information.

## CURRENCY EQUIVALENTS

(Exchange Rate Effective August 31, 2014)

Currency Unit = CFAF  
CFAF 514 = US\$1  
US\$0.65859666 = SDR 1

## FISCAL YEAR

January 1 – December 31

## ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
CFAF	African Financial Community Franc ( <i>Franc de la Communauté financière africaine</i> )
CPS	Country Partnership Strategy
DPAEP	ONEA's Ouagadougou Works Department ( <i>Direction du Projet Alimentation en Eau Potable de Ouagadougou</i> )
DN	Nominal Diameter
ESIA	Environmental and Social Impact Assessment
EIRR	Economic Internal Rate of Return
EOPT	End-of-Project Target
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
FA	Financing Agreement
FIRR	Financial Internal Rate of Return
FM	Financial Management
ICB	International Competitive Bidding
IDA	International Development Association
IFR	Interim Financial Report
lpcd	Liter per capita per day
LTMC	Long-Term Marginal Cost
M&E	Monitoring and Evaluation
MTR	Mid-Term Review
NPV	Net Present Value
ONEA	National Water and Sanitation Agency ( <i>Office National de l'Eau et de l'Assainissement</i> )
PA	Project Agreement
PEHD	Polyethylene High Density
PPP	Public-Private Partnership
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
VAT	Value added Tax
WSP-AF	Water and Sanitation Program – Africa
WTP	Willingness-to-Pay

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Senior Global Practice Director:	Junaid Kamal Ahmad
Practice Manager:	Alexander E. Bakalian
Task Team Leader:	Matar Fall

## BURKINA FASO

### Urban Water Sector Project - Additional Financing (P149556)

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## ADDITIONAL FINANCING DATA SHEET

*Burkina Faso*

*Urban Water Sector Project - Additional Financing (P149556)*

AFRICA

GWADR

Basic Information – Parent									
Parent Project ID:	P106909	Original EA Category: B - Partial Assessment							
Current Closing Date:	30-Jun-2015								
Basic Information – Additional Financing (AF)									
Project ID:	P149556	Additional Financing Type (from AUS):		Scale Up					
Acting Regional Vice President:	Sri Mulyani Indrawati	Proposed EA Category:		B - Partial Assessment					
Country Director:	Ousmane Diagana	Expected Effectiveness Date:		15-Dec-2014					
Sector Director:	Junaid Kamal Ahmad	Expected Closing Date:		31-Dec-2018					
Practice Manager:	Alexander E. Bakalian	Report No:		PAD958					
Team Leader:	Matar Fall								
Borrower									
Organization Name	Contact	Title	Telephone	Email					
ONEA	Harouna Ouibiga	Managing Director	+226 50 43 19 00	<a href="mailto:oneadg@fasonet.bf">oneadg@fasonet.bf</a>					
Project Financing Data – Parent ( Urban Water Sector Project-P106909 )									
Key Dates									
Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date		
P106909	IDA-H4820	Effective	28-May-2009	09-Jun-2009	05-Oct-2009	30-Jun-2015	31-Dec-2018		
Disbursements									
Project	Ln/Cr/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P106909	IDA-H4820	Effective	XDR	53.50	53.50	0.00	41.2	12.3	77
Project Financing Data – Additional Financing Urban Water Sector Project - Additional Financing (P149556)									
<input type="checkbox"/>	Loan	<input type="checkbox"/>	Grant	<input checked="" type="checkbox"/>	IDA Grant				
<input type="checkbox"/>	Credit	<input type="checkbox"/>	Guarantee	<input type="checkbox"/>	Other				

Total Project Cost:	80.00	Total Bank Financing:	80.00
Financing Gap:	0.00		
<b>Financing Source – Additional Financing (AF)</b>			<b>Amount</b>
BORROWER/RECIPIENT			0.00
IDA Grant			80.00
Total			80.00
<b>Policy Waivers</b>			
Does the project depart from the CAS in content or in other significant respects?			No
Explanation			
Does the project require any policy waiver(s)?			No
Explanation			
<b>Team Composition</b>			
<b>Bank Staff</b>			
<b>Name</b>	<b>Title</b>	<b>Specialization</b>	<b>Unit</b>
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Elisabeth Marie Bambara	Program Assistant		AFMBF
Maimouna M. Fam	Sr Financial Management Specialist		AFCF2

<b>Non Bank Staff</b>					
<b>Name</b>	<b>Title</b>	<b>Office Phone</b>	<b>City</b>		
<b>Locations</b>					
<b>Country</b>	<b>First Administrative Division</b>	<b>Location</b>	<b>Planned</b>	<b>Actual</b>	<b>Comments</b>
Burkina Faso	Centre	Ouagadougou	X		
<b>Institutional Data</b>					
<b>Parent ( Urban Water Sector Project-P106909 )</b>					
<b>Sector Board</b>					
Water					
<b>Sectors / Climate Change</b>					
Sector (Maximum 5 and total % must equal 100)					
<b>Major Sector</b>	<b>Sector</b>	<b>%</b>	<b>Adaptation Co-benefits %</b>	<b>Mitigation Co-benefits %</b>	
Water, sanitation and flood protection	Water supply	60			
Water, sanitation and flood protection	Sanitation	30			
Public Administration, Law, and Justice	Public administration- Water, sanitation and flood protection	10			
Total		100			
<b>Themes</b>					
Theme (Maximum 5 and total % must equal 100)					
<b>Major theme</b>	<b>Theme</b>	<b>%</b>			
Urban development	Urban services and housing for the poor	100			
Total		100			
<b>Additional Financing Urban Water Sector Project - Additional Financing ( P149556 )</b>					
<b>Sector Board</b>					
Water					
<b>Sectors / Climate Change</b>					
Sector (Maximum 5 and total % must equal 100)					
<b>Major Sector</b>	<b>Sector</b>	<b>%</b>	<b>Adaptation Co-benefits %</b>	<b>Mitigation Co-benefits %</b>	
Water, sanitation and flood protection	Water supply	100			

Total		100
<input checked="" type="checkbox"/> I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.		
<b>Themes</b>		
Theme (Maximum 5 and total % must equal 100)		
Major theme	Theme	%
Urban development	Urban services and housing for the poor	100
Total		100



## **I. Introduction**

1. This Project Paper seeks the approval of the Executive Directors to provide an additional grant in an amount of US\$80 million to Burkina Faso for the Urban Water Sector Project (P106909) – (Grant IDA-H4820).
2. The proposed additional grant would help finance the costs associated with scaled-up activities to enhance the impact of a well-performing project. The proposal also includes a request to extend the closing date of the original project from June 30, 2015 to December 31, 2018.
3. The scope of proposed activities is fully aligned with the current Project Development Objective (PDO) to *increase access to sustainable water and sanitation services in selected urban areas*, including Ouagadougou, the capital city of Burkina Faso. The additional financing (AF) will focus on Ouagadougou and reinforce original project outcomes in terms of increased access to improved water sources. An implementation period of four years will be required to implement the proposed activities and achieve the PDO.
4. The proposed activities follow up the execution of an interim investment program that was executed by the National Water and Sanitation Agency (*Office National de l'Eau et de l'Assainissement*, ONEA) to *inter alia* increase the water production capacity in Ouagadougou.

## **II. Background and Rationale for Additional Financing in the amount of \$80 million**

### ***High level objectives to which the project contributes***

5. **The proposed AF is consistent with the Country Partnership Strategy (CPS).** The current CPS, covering the period FY13 – FY16, was adopted in August 2013, and supports the Government's Strategy for Accelerated Growth and Sustainable Development and the World Bank Group's twin goals of reducing poverty and increasing shared prosperity. The proposed activities are fully aligned with the second pillar of the CPS aiming at improving access by the poor to quality basic services, by providing social water connections at subsidized costs and public standposts in low-income peri-urban areas of Ouagadougou.

### ***Parent Project Features and Performances***

6. An IDA grant in the amount of SDR 53.5 million (US\$80 million equivalent) for the Burkina Faso Urban Water Sector Project (UWSP) was approved on May 28, 2009. The Financing Agreement was signed on June 9, 2009 and became effective on October 5, 2009. As mentioned above, the PDO was to increase access to sustainable water and sanitation services in selected urban areas (Ouagadougou, Bobo-Dioulasso, Dedougou and Koudougou), which would be achieved through: (a) facilitating access to services through programs for constructing social water service connections, public standpipes and on-site sanitation facilities; and (b) consolidating the achievements of the reform of the urban water supply sub-sector and strengthening capacities to deliver and manage services. The project included four components: (i) Urban water supply (US\$52.8 million); (ii) Urban sanitation (US\$35.6 million);

(iii) Institutional support and capacity building (US\$3.9 million); and (iv) Environmental and social management (US\$0.6 million).

7. Following recommendations of the mid-term-review (MTR) carried out in February 2013, a Level 2 restructuring of the project was approved on August 30, 2013, to reallocate the grant proceeds and reorganize the project performance indicators, as follows:

- (a) Reallocation of grant proceeds: As most of the large civil works contracts initially planned had been awarded at MTR, the resulting uncommitted balance of the grant was reallocated to finance additional water supply activities, including water production works in secondary centers and the extension of water distribution networks to peri-urban informal settlements in Ouagadougou and Bobo-Dioulasso.
- (b) Re-classification of project performance indicators: As recommended by a regional M&E review, the project outcome indicators expressed in terms of "percentage of people served", were replaced with the equivalent mandatory Core Indicators expressed in terms of "number of people provided with access under the project". Likewise, the "financial equilibrium of the urban water sector" indicator was upgraded from output level to PDO level, to emphasize the impact of financial sustainability. These changes were reflected in the revised result framework, as well as the increase of the outcome target for access to onsite sanitation resulting from cost savings under that component.

8. The UWSP has been consistently rated "Satisfactory" or better on both Development Objective (DO) and Implementation Progress (IP) since effectiveness. As of August 31, 2014, 434,000 additional people, representing 82% of the end-of-project target (EOPT), have gained access to piped water and 403,000 additional people (115% of the EOPT) have gained access to improved sanitation services as a result of the project implementation. The urban water sector reform supported by the project is also being successfully implemented. The financial equilibrium of the sector has been maintained since project inception, as demonstrated by ONEA's net positive cash balance of US\$6 million in December 2013. The sector's operational management capacity has substantially improved and ONEA is today ranked among the top performing water utilities in Sub-Saharan Africa with a staff productivity of 3.4 staff per 1,000 connections and a bill collection ratio of 97.5%. The satisfactory IP rating of the project is based on: (i) a satisfactory disbursement ratio of 77% by end of August 2014, in line with initial forecasts; (ii) an effective procurement which resulted in committing 91% of the credit a year and a half before the closing date; (iii) full compliance with fiduciary requirements and legal covenants and; (iv) effective risk mitigation (the project overall risk rating remains low). The overall safeguard compliance (Environmental Assessment OP/BP 4.01 and Involuntary Resettlement OP/BP 4.12) has been rated Satisfactory since effectiveness.

### ***Rationale for requesting the Additional Financing***

9. The accelerated pace of urbanization in the capital city requires a timely expansion of water infrastructure, without which the urban poor would be excluded from basic services. The population of Ouagadougou has increased at a higher rate than anticipated (6.3 percent) and the urbanized areas are growing at an even faster rate, as the mostly low-income newcomers tend to

spread over the fringes of the city. The accelerated urbanization thus creates serious challenges for the development of water services, particularly to avoid water shortages, maintain the quality of services and offer equitable access throughout the city. Addressing these challenges requires sustained and timely capital expenditures and specific pro-poor policies by ONEA for developing access and ensuring that services remain affordable. The proposed Additional Financing aims to complement efforts already underway by ONEA to increase water production capacity by expanding the spatial coverage of the distribution system (including transmission mains and associated water storage facilities and pumping stations). It will also help implement ONEA's pro-poor policies to facilitate access to services through water connections and public standposts in peri-urban areas and to address the specific challenges of access to services in informal settlements.

#### ONEA's Pro-Poor Policies for Equitable Access

ONEA has developed and implemented commercial and tariff policies, combined with new technical approaches to meet the needs of the ever-increasing urban population and particularly those of its poorest strata in the expansion areas of the cities. These policies aim at providing the same access and quality of services to the poor and ensuring that they will be able to afford access costs as well as the cost of water consumption.

Since 2005, ONEA has been promoting social water connections at a price (CFAF 30,500 or US\$61) that is subsidized by the water rates, and is much lower than the actual cost (CFAF 100,000 or US\$200). Subsidizing connections enables beneficiaries to benefit from a higher quality and quantity of water services, thus maximizing the health impact. The social connections policy targets the peri-urban neighborhoods, which are likely to accommodate the poor. Social connection programs, which were supported by most of the sector donors (IDA, AFD, EIB) resulted in increasing the countrywide connection rate from 22 percent in 2005 to the current 59 percent (33 percent and 79 percent, respectively, in Ouagadougou). They are complemented by the construction of standposts in areas where the population density does not warrant the installation of distribution networks.

The water tariff schedule is designed to enable the small consumers to benefit from affordable rates. A rate of CFAF 188 per m<sup>3</sup> (US\$0.38 per m<sup>3</sup>) is applicable to the first block (monthly consumption lower than 8 m<sup>3</sup> per month) and to standposts, whereas the average tariff amounts to CFAF 418 per m<sup>3</sup> (US\$0.83 per m<sup>3</sup>). In addition, the tariff revisions that are required to maintain ONEA's financial equilibrium are designed to minimize their impact on the small consumers.

Starting in 2009, ONEA developed innovative arrangements to provide sustainable access to water services in informal settlements. These settlements face particular challenges: (i) the absence of official delimitation of streets and properties prevents laying conventional distribution networks and providing water service connections; and (ii) household incomes are unlikely to be regular enough to enable them to set aside the amount of a monthly water bill. ONEA, with the assistance of Water and Sanitation Program (WSP), thus set up public-private partnerships (PPP) with local neighborhood operators, which implement adapted technical solutions (simplified networks built using Polyethylene High Density (PEHD) pipes) and contracts with end-users. The latter may benefit from social connections and are billed in accordance with ONEA rates by the local operators at an agreed frequency in line with their revenue stream. To date, five PPPs have been signed in Ouagadougou, which serves about 70,000 people, of which 40 percent are through service connections.

10. The AF is the preferred financing mechanism as it will save time in the project preparation process while maintaining positive momentum of results achieved to date. The AF will capitalize on the current effective implementation arrangements and capacities of existing departments inside ONEA which have generated satisfactory results under the ongoing project. The AF did not consider a scaling-up of the sanitation component, as several donors already provided funds to replicate the successful on-site sanitation programs that were carried out in Ouagadougou and Bobo-Dioulasso under the original project.

### III. Proposed Changes

<b>Summary of Proposed Changes</b>	
<p>11. The Project Development Objective of the proposed AF will remain unchanged and will continue to “increase access to sustainable water and sanitation services in selected urban areas.” The proposed AF will finance activities to maximize the development impact of the original project by: (i) developing the water distribution system in Ouagadougou to improve the quality of services and make water available to previously unserved areas; (ii) providing access to water services through social water connections and standposts; and (iii) strengthening the financial viability of the urban water supply sector with increased water revenues and improved staff efficiency.</p>	
<p>12. The project description and project components, as stated in the Financing Agreement of Grant H4820 will be expanded to include the following additional parts for the city of Ouagadougou:</p> <ul style="list-style-type: none"> <li>(a) Supply and installation of water transmission mains;</li> <li>(b) Expansion of the water storage capacity and construction of water pumping stations; and</li> <li>(c) Expansion of the secondary and tertiary water distribution networks, installation of household connections and public standpipes, and supply of water connections kits; and</li> </ul> <p>In addition, the description of Component 3 will be expanded to include the provision of support to develop technical studies on water supply and institutional development.</p>	
<p>13. While the outcome and intermediate indicators will remain the same, the Results Framework will need adjustments of the EOPT of the indicators impacted by the proposed AF.</p>	
Change in Implementing Agency	Yes [ <input type="checkbox"/> ] No [ <input checked="" type="checkbox"/> ]
Change in Project's Development Objectives	Yes [ <input type="checkbox"/> ] No [ <input checked="" type="checkbox"/> ]
Change in Results Framework	Yes [ <input checked="" type="checkbox"/> ] No [ <input type="checkbox"/> ]
Change in Safeguard Policies Triggered	Yes [ <input type="checkbox"/> ] No [ <input checked="" type="checkbox"/> ]
Change of EA category	Yes [ <input type="checkbox"/> ] No [ <input checked="" type="checkbox"/> ]
Other Changes to Safeguards	Yes [ <input type="checkbox"/> ] No [ <input checked="" type="checkbox"/> ]
Change in Legal Covenants	Yes [ <input checked="" type="checkbox"/> ] No [ <input type="checkbox"/> ]

Change in Loan Closing Date(s)	Yes [ X ] No [ ]
Cancellations Proposed	Yes [ ] No [ X ]
Change in Disbursement Arrangements	Yes [ X ] No [ ]
Reallocation between Disbursement Categories	Yes [ ] No [ X ]
Change in Disbursement Estimates	Yes [ X ] No [ ]
Change to Components and Cost	Yes [ X ] No [ ]
Change in Institutional Arrangements	Yes [ ] No [ X ]
Change in Financial Management	Yes [ ] No [ X ]
Change in Procurement	Yes [ X ] No [ ]
Change in Implementation Schedule	Yes [ X ] No [ ]
Other Change(s)	Yes [ ] No [ X ]

**Development Objective/Results**

**Project's Development Objectives**

Original PDO

The overall objective of the project is to" increase access to sustainable water and sanitation services in selected urban areas."

**Change in Results Framework**

Explanation:

14. While the PDO outcome and intermediate indicators remain the same, the EOPT of some of them will be adjusted to reflect the impact of the AF, namely:

- (a) The EOPT of the core indicator of people provided with access to improved water supply sources will increase from 527,000 to 759,000;
- (b) The EOPT of the core indicator of direct beneficiaries will increase from 878,600 to 1,110,600 people;
- (c) The EOPT of the core indicator of the number of new piped household water connections that are resulting from the project intervention will increase from 56,170 to 82,170; and
- (d) The EOPT of the core indicator of the number of improved community water points (standposts) constructed or rehabilitated under the project will increase from 106 to 186.

15. In addition, the EOPT of two intermediate indicators will be adjusted to reflect the current level of operational performances:

(a) The EOPT of the indicator of the number of ONEA employees per 1,000 water connections will decrease from 3.5 to 3.4; and

(b) The EOPT of the indicator of the bill collection ratio of private water customers will increase from 97 percent to 97.5 percent.

**Compliance**

**Covenants - Additional Financing ( Urban Water Sector Project - Additional Financing - P149556 )**

Source of Funds	Finance Agreement Reference	Description of Covenants	Date Due	Recurrent	Frequency	Action
				<input type="checkbox"/>		

**Covenants - Parent ( Urban Water Sector Project - P106909 )**

Ln/Cr/TF	Finance Agreement Reference	Description of Covenants	Date Due	Status	Recurrent	Frequency	Action
IDA-H4820	PA Sc. II, B.3	ONEA has appointed an external auditor on the basis of terms of reference, and with qualification and experience satisfactory to the Association	05-Jan-2010	Complied with	<input type="checkbox"/>		No Change
IDA-H4820	PA Sc. II, Section I, B.1	The Recipient shall take all necessary measures, including		Complied with	<input checked="" type="checkbox"/>	Annual	No Change

		any necessary water supply and sanitation tariffs revisions, to allow the Project Implementing Entity to maintain Financial Equilibrium in the urban water and sanitation sub-sector.					
<b>Conditions - Additional Financing ( Urban Water Sector Project - Additional Financing - P149556 )</b>							
<b>Source Of Fund</b>							
IDAT		Name			Type		
IDAT		Subsidiary Agreement			Effectiveness		
<b>Description of Condition</b>							
<p>The Additional Condition of Effectiveness consists of the following, namely that the Subsidiary Agreement entered into between the Ministry of Finance of the Recipient and Project Implementing Entity has been amended, in accordance with terms and conditions satisfactory to the Association, to cover the execution of the additional activities to be carried out under the Project.</p> <p>The Additional Legal Matter consists of the following namely that the amendment to the Subsidiary Agreement has been duly authorized or ratified by the Recipient and the Project Implementing Entity and is legally binding upon the Recipient and the Project Implementing Entity in accordance with its terms.</p>							
<b>Finance</b>							
<b>Loan Closing Date - Additional Financing (Urban Water Sector Project - Additional Financing - P149556 )</b>							
<b>Source of Funds</b>				<b>Proposed Additional Financing Loan Closing Date</b>			

IDA Grant		31-Dec-2018			
<b>Loan Closing Date(s) - Parent ( Urban Water Sector Project - P106909 )</b>					
Explanation:					
16. The closing date of the original project will be aligned with the closing date of the AF, as requested by the Recipient, to ensure a satisfactory completion and subsequent operation of the sanitation works (particularly the sludge treatment facilities).					
Ln/Cr/TF	Status	Original Closing Date	Current Closing Date	Proposed Closing Date	Previous Closing Date(s)
IDA-H4820	Effective	30-Jun-2015	30-Jun-2015	31-Dec-2018	30-Jun-2015
<b>Change in Disbursement Arrangements</b>					
Explanation:					
17. A separate Designated Account will be established for the Additional Financing activities.					
<b>Change in Disbursement Estimates (including all sources of Financing)</b>					
Explanation:					
18. Disbursement estimates will change to reflect the inclusion of additional activities, as shown below.					
<b>Expected Disbursements (in USD Million) (including all Sources of Financing)</b>					
Fiscal Year	2015	2016	2017	2018	2019
Annual	2.00	10.00	30.00	30.00	8.00
Cumulative	2.00	12.00	42.00	72.00	80.00
<b>Allocations - Additional Financing ( Urban Water Sector Project - Additional Financing - P149556 )</b>					
Source of	Currency	Category of	Allocation	Disbursement %(Type	



Fund		Expenditure		Total)
			Proposed	Proposed
IDAT	XDR	(1) Goods, works and consultants' services for Parts 1.2 and 3(c) of the Project	52,700,000.00	100.00
		<b>Total:</b>	52,700,000.00	

### Components

#### Change to Components and Cost

Explanation:

19. The project components are not modified. The cost of Component 1 (Urban Water Supply) and Component 3 (Strengthening of Capacities) will increase by US\$78.56 million and US\$1.44 million, respectively, to reflect the additional activities. The cost of the other components will not change. The detailed description and costs of the additional activities are given in Annexes 3 and 4.

Current Component Name	Proposed Component Name	Current Cost (US\$M)	Proposed Cost (US\$M)	Action
Urban Water	Urban Water Supply	58.47	137.03	Revised
Access to Sanitation	Urban Sanitation	18.09	18.09	No Change
Institutional Support and Capacity Building	Institutional Support and Capacity Building	3.14	4.58	Revised
Environmental and Social Management	Environmental and Social Management	0.30	0.30	No Change
	<b>Total:</b>	80.00	160.00	

### Other Change(s)

#### Change in Procurement

Explanation:

20. The current Guidelines (Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011 and

revised July 2014, and Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011 and revised July 2014) will apply and replace the Guidelines referred to in the FA of Grant H4820 (Guidelines dated May 2004 and revised October 2006).

21. An updated procurement plan, including updated thresholds for applicable procurement methods and prior reviews, dated September 16, 2014 has been finalized and agreed at negotiations.

22. Two procurement specialists recently left ONEA, which requires recruiting one new procurement specialist to maintain its implementation capacities. The recruitment is being processed and will be completed before end of October 2014.

#### **Change in Implementation Schedule**

Explanation:

23. The implementation schedule will reflect activities for 2015-2018.

### **IV. Appraisal Summary**

#### **Economic and Financial Analysis**

Explanation:

##### ***Economic Analysis***

24. ***Rationale for Public Sector Intervention.*** The past performances of ONEA, as public provider of urban water and sanitation services, as well as the entity responsible for managing investments for their development, amply justify the option taken by the Government in 2001 to keep the utility in the public sector. ONEA's operating performances and its transparency compare favorably with all public and private operators in Sub-Saharan Africa. ONEA's relationship with the Government has been immune from interference with investment decisions and human resources management. The framework agreements (*contrats-plans*) between ONEA and the Government have been satisfactorily executed and the rate-setting decisions have been endorsed without problems, on the basis of the recommendations stemming from the financial model. In addition, ONEA has demonstrated its capacity to innovate to achieve its mandate to equitably serve the poorest strata of the urban population, by contracting local private operators. The AF will support this pro-poor strategy.

25. ***World Bank's Value Added.*** The Bank's dialogue with ONEA and the Government has been instrumental in deepening the reform of the water and sanitation sector under the previous IDA-financed projects. The Bank is now in a unique position to help ONEA to meet the challenges of the development of urban water services in the capital city. The Bank's value added

has been substantial in bringing specific expertise in the development of social connections programs and of alternative solutions for serving informal settlements. Value added will be also high at the implementation stage, with a Bank team highly knowledgeable about the sector challenges and the supervision of large water investments.

26. The cost-benefit analysis of the water supply components of the original project has been updated to assess the impact of the additional activities on the Economic Internal Rate of Return (EIRR) and the Net Present Value (NPV). The analysis took into account the impact of the reallocation of grant proceeds that took place after the MTR and the actual project outcome in terms of development of water services. The PAD assumptions and methodology remain the same, with the exception of the discount rate, which has been adjusted to better reflect the current practice for water supply projects and the cost of capital. Project benefits include the increased water consumption and the consumer surplus accruing to beneficiaries shifting from other water sources to water service connections or standposts. Project costs include investment costs (adjusted as needed to eliminate the impact of longer-term design of transmission facilities), incremental operating costs, and renewal costs.

27. The results of the updated analysis are summarized in the table below, which shows the results both for the overall water supply component of the project and for Ouagadougou.

**Summary of Economic Analysis**

	Unit	Original Project	Original Project and AF
NPV @ 10%:			
Ouagadougou	US\$ M	16.5	18.4
Overall Project		19.1	4.4
EIRR:			
Ouagadougou	%	31.8%	17.7%
Overall Project		16.8%	10.9%

28. The AF exclusively focuses on Ouagadougou. The EIRR of the Ouagadougou works, including the AF, is close to 18 percent, which is satisfactory. The difference with the value computed for the original project is attributable to the fact that the original project consisted only of distribution works –which have an immediate impact on water sales–, whereas the additional activities include a large portion (70 percent) of transmission reinforcements. The latter are essential to maintain the continuity and quality of water services in Ouagadougou for both the customers already served and for the new customers. In hindsight, these reinforcements should have been foreseen in the economic analysis of the original project, which would have led to a lower initial EIRR. The updated NPV of Ouagadougou works is higher than in the original project.

29. The decrease of the NPV of the updated overall project is largely independent of the additional activities and is linked to the actual execution of the original project. It is mostly attributable to: (i) the two to three years delay observed in the actual construction of the connections of the original project in Ouagadougou, Kedougou and Dedougou; and (ii) the substantial reduction of the demand for service connections that was observed in Bobo-Dioulasso, and strongly impacted the EIRR of the local works. The overall results remain, however,

satisfactory.

### ***Financial Analysis***

30. *Financial viability of ONEA.* Since the project's start, ONEA has maintained financial equilibrium and a satisfactory working ratio (cash operating expenditures/operating revenues), as shown below. This was achieved through improvements of ONEA's operating performances, and without revising the water rates (the last revision occurred in July 2008).

**Selected Financial Indicators – 2009-2013**

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Net Cash Balance (CFAF M)	8,481	6,425	5,994	6,509	9,451
Working ratio (%)	67.4%	68.4%	64.0%	66.1%	67.4%
Debt service coverage (times)	2.5	1.2	1.4	1.6	1.7

31. ONEA's financial model and the recent (November 2013) tariff study demonstrated that a modest (4 percent) increase of the water rates, spread over 2014-2017, would enable ONEA to maintain its financial equilibrium until 2018. A tariff revision was agreed by the Government in March 2014 and is applicable to the July 2014 water bills. The agreed changes of the rate schedule are socially acceptable, as the rates applicable to standposts and to the first block of the domestic consumption will not be modified.

32. The tariff study and the financial model also point out that the financial equilibrium is quite sensitive to the financing conditions of the investment programs. This is acknowledged in the 2013-2015 Performance Contract, under which the Government is expected to on-lend the proceeds of external financing at conditions similar to the original financing, while ONEA is expected to borrow exclusively at concessional terms. The proceeds of the AF will thus be made available to ONEA as a grant.

33. *Financial impact of the proposed AF.* The financial impact of the water supply components of the original project and of the additional activities is measured by the Financial Internal Rate of Return (FIRR), which amounts now to 8.4 percent. The FIRR was estimated in the PAD at 13.6 percent. The reasons for the decrease are similar to the ones of the EIRR.

### **Technical Analysis**

Explanation:

34. The water distribution system in Ouagadougou needs to be reinforced, as the urbanized areas are expanding at an even faster pace than the urban population. The proposed new transmission lines, water storage tanks and pumping stations are designed to make water available throughout the city, particularly in fringe areas, improve the quality of service (water pressure) and reduce energy costs. The proposed expansion of secondary and tertiary distribution networks will be carried out in parallel with the execution of the new social water connections. In that respect, ONEA has amply demonstrated its capacity to program and manage expansion works in close coordination with the identification of connection beneficiaries. No major technical issues

are expected from the AF since technologies considered for water supply systems are proven and well established.

35. Detailed design studies of the water storage and transmission facilities have been completed and are being reviewed by the Bank. Additional technical studies will define the exact location and technical specifications of the secondary and tertiary water distribution networks.

### **Social Analysis**

Explanation:

36. The project will continue to rely on pro-poor policies for access and tariffs, including social water connections and public standpipes programs. The eligibility criteria of the programs are based on the characteristics of the diverse urban neighborhoods. In addition, the proposed AF will seek to reduce the access bias between formal and informal settlements where, until recently, ONEA did not provide water services. The new approach developed with the support of the Water and Sanitation Program, which consists of effective PPP arrangements with private operators to manage small decentralized water supply systems, will be replicated in two informal settlements of Ouagadougou under the AF.

37. The ONEA environmental unit performed satisfactorily in implementing the social safeguard measures of the original project. In compliance with the approved Resettlement Policy Framework (RPF), resettlement action plans (RAP) of six sub-projects (secondary water distribution networks in Bobo-Dioulasso, Dedougou and Koudougou; boreholes in Bobo-Dioulasso and Dedougou; and transmission line in Koudougou) that triggered compensations as of the screening, were prepared and executed though no physical displacement has occurred. The Resettlement Policy Framework (RPF) of the original project has been updated to reflect the impact of the AF, approved and re-disclosed in country and at the Bank Info Shop on June 5, 2014. During implementation, and whenever the case arises, a Resettlement Action Plan (RAP) will be prepared and executed before commencement of the related civil works.

### **Environmental Analysis**

Explanation:

38. The safeguard responsibility of the original project was transferred to the sector unit. The overall implementation of the safeguard measures has been rated satisfactory by the implementation support missions carried out by the Bank. ONEA has set up a permanent environmental and social unit staffed by two competent senior specialists, and almost all the due diligences have been completed, namely: (i) the regular screening of activities; (ii) the preparation, processing and execution of environmental assessment reports of the six above-mentioned sub-projects; (iii) the transmission of periodic environmental and social safeguard monitoring reports to the Bank; and (iv) adequate documenting of the safeguard track records including the title of lands where stations and boreholes are built. Further, the ONEA endeavored to mainstream sustainability in its own strategies and operations, as evidenced by the ongoing

process of quality-safety-environment (QSE) certification.

39. The proposed additional activities are of the same nature as the water works included in the original project. Thus, the AF does not trigger any new safeguard policies and the environmental category is the same as the original project (category B). However, the Environmental and Social Management Framework (ESMF) has been updated, approved and re-disclosed in country and at the Bank Info Shop on June 5, 2014. The Environmental and social aspects of the additional activities will be dealt with in the same manner as for the works completed under the original project; for any subproject or activity subject to environmental impact evaluation as a result of the screening, the appropriate document will be prepared in consultation with the relevant stakeholders, and get approved by the National Bureau of Environmental Assessments, then implemented and evaluated.

**Risk**

Explanation:

40. The Operational Risk Assessment Framework (ORAF) presents the risks and mitigation measures as stated in the original project, together with a re-assessment of these risks in view of: (i) the present conditions of implementation; and (ii) the scaled-up activities.

41. The overall implementation risk is rated low as all instruments related to the mitigation of sector and capacity risks are in place and drew on lessons learned from the ongoing project and previous operations in the sector.

**Annex 1: Revised Results Framework and Monitoring Indicators**  
**Burkina Faso: Urban Water Sector Project - Additional Financing (P149556)**

**A. Summary of Results Framework Changes**

<b>Revisions to the Results Framework</b>		<b>Comments/ Rationale for Change</b>
<b>PDO</b>		
<i>Current (PAD)</i>	<i>Proposed</i>	
To increase access to sustainable water and sanitation services in selected urban areas.	Continued	
<b>PDO indicators</b>		
<i>Current (PAD)</i>	<i>Proposed change*</i>	
Number of additional people provided with access to “Improved Water Sources” under the project	Change in the end-of-project-target (EOPT) value: increased from 527,000 to 759,000 additional people served.	Outcome impact of the AF
Number of additional people provided with access to “Improved Sanitation” under the project	Continued	
Number of additional students provided with access to appropriate sanitation facilities in their schools under the project	Continued	
Direct project beneficiaries, of which female (%)	Change in the EOPT value: increased from 878,600 to 1,110,600 beneficiaries	Outcome impact of the AF
Financial equilibrium of the urban sector maintained with the agreed tariff policy based on cost recovery	Continued	
<b>Intermediate Results indicators</b>		
<i>Current (PAD)</i>	<i>Proposed change*</i>	
ONEA’s water employees per 1,000 water connections	Change in the EOPT value: decreased from 3.5 to 3.4	To reflect actual current performance
Bill collection ratio of private water customers (% of bills collected)	Change in the EOPT value: increased from 97 percent to 97.5 percent	To reflect actual current performance
New piped household water connections that are resulting from the project intervention	Change in the EOPT value: increased from 56,170 to 82,170 additional water connections	Impact of the AF activities
Improved community water points constructed or rehabilitated under the project	Change in the EOPT value: increased from 106 to 186 additional community water points	Impact of the AF activities
Improved latrines constructed under the project	Continued	

## B. Revised Framework Matrix

**Project Development Objective (PDO):** To increase access to sustainable water and sanitation services in selected urban areas.

[Click here to enter the revised PDO of your operation](#)

PDO Level Results Indicators	Core	UOM	Baseline Original Project Start (2009)	Progress To Date (August 2014)	Cumulative Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
					2015	2016	2017	2018				
1. Number of additional people provided with access to “Improved Water Sources” under the project	<input checked="" type="checkbox"/>	Number	-	434,000	527,000	527,000	643,000	759,000	Bi-annual reports	Calculations based on the number of water connections and standpipes built	ONEA Supervision Committee of the PNAEPA	Calculated on the basis of : (i) 8.8 people per water household connection constructed under the Parent Project and of 8 people per connection constructed under the AF; and (ii) 300 people per standpost
2. Number of additional people provided with access to “Improved Sanitation” under the project	<input checked="" type="checkbox"/>	Number	-	403,000	351,600	351,600	351,600	351,600	Bi-annual reports	Calculations based on the number of sanitation facilities built	ONEA Supervision Committee of the PNAEPA	Calculated on the basis of 8.8 people per latrine constructed
3. Number of additional students provided with access to appropriate sanitation facilities in their schools under the project	<input type="checkbox"/>	Number	-	102,800	120,000	120,000	120,000	120,000	Bi-annual reports	Calculations based on the number of sanitation facilities built	ONEA Supervision Committee of the PNAEPA	
4. Financial equilibrium of the urban sector maintained with the agreed tariff policy based on cost recovery	<input type="checkbox"/>	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Annual Report	Updated financial model and technical audits	ONEA/Consultants/ IDA supervision missions	
<b>Beneficiaries</b>												
Project beneficiaries,	<input checked="" type="checkbox"/>	Number	-	837,000	878,600	878,600	994,600	1,110,600		= sum (1) + (2)	ONEA Supervision Committee of the PNAEPA	
Of which female (beneficiaries)	<input checked="" type="checkbox"/>	Number	50%	50%	50%	50%	50%	50%				



### Intermediate Results and Indicators

Intermediate Results Indicators	Core	Unit of Measurement	Baseline Original Project Start (2009)	Progress To Date (August 2014)	Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
					2015	2016	2017	2018				
<b>Intermediate Result 1: <a href="#">Click here to enter the Revised Intermediate Results Statement 1</a></b>												
1. ONEA's water employees per 1,000 water connections	<input type="checkbox"/>	Number	4.3	3.4	3.4	3.4	3.4	3.4	Annual report	ONEA Activity report	ONEA	Indicator to be reviewed and validated by Technical Auditor
2. Bill collection ratio of private water customers (% of bills collected)	<input type="checkbox"/>	Percent	95	97.5	97.5	97.5	97.5	97.5	Annual report	ONEA Activity report	ONEA	Indicator to be reviewed and validated by Technical Auditor
3. New piped household water connections that are resulting from the project intervention	<input checked="" type="checkbox"/>	Number	-	43,934	56,170	56,170	79,170	82,170	Bi-annual reports	ONEA Progress reports	ONEA	
4. Improved community water points constructed or rehabilitated under the project	<input checked="" type="checkbox"/>	Number	-	158	106	106	146	186	Bi-annual reports	ONEA Progress reports	ONEA	
5. Improved latrines constructed under the project	<input checked="" type="checkbox"/>	Number	-	45,838	40,000	40,000	40,000	40,000	Bi-annual reports	ONEA Progress reports	ONEA	

## Annex 2: Operational Risk Assessment Framework (ORAF)

### Burkina Faso: Urban Water Sector Project - Additional Financing (P149556)

#### Risks

##### Project Stakeholder Risks

Stakeholder Risk	Rating	Low				
<p><b>Risk Description:</b>  <i>Sustainability of expansion of access to poorer strata of urban population:</i> Poorer segments of the urban population benefiting from subsidized water household connections may not be able to afford the costs of monthly water bills and revert to previous (unsafe) sources of supply.</p>	<p><b>Risk Management:</b>  <i>Original Project:</i>                      Effective use of water connections will be monitored (number of inactive connections); and alternative modes of supply (simplified networks, neighborhood connections) are being tested and will be implemented</p> <p><i>Current Assessment:</i> The proportion of inactive connections has decreased since 2008. ONEA found that most of inactive connections are located in properties under construction and are not related to bill payment problems. Alternative modes of supply through neighborhood PPPs with local operators have been successfully tested and will be replicated under the AF.</p>					
	Resp: Client	Stage: Imp	Recurrent: Y	Due Date:	Frequency: Continuous	Status: Not Yet Due

##### Implementing Agency (IA) Risks (including Fiduciary Risks)

Capacity	Rating	Low				
<p><b>Risk Description:</b>  <i>Financial management:</i> The use of interim financial reports (IFRs) for disbursement will imply the risk of not timely providing reliable IFRs.</p>	<p><b>Risk Management:</b>  <i>Original Project:</i>                      (i) Customization of the accounting software and appropriate training to provide timely and reliable financial statements including IFRs.                      (ii) Training in Bank procurement procedures for members of concerned departments and strengthening of</p>					

<p><i>Procurement:</i> ONEA had satisfactorily implemented the Ziga Project with respect to procurement, but the proposed project will involve several departments of ONEA that have limited experience with Bank procurement.</p>	<p>procurement department and recruitment of one additional procurement specialist.</p> <p><i>Current Assessment:</i> The procurement performance and the financial management performance of the original project have been consistently rated as satisfactory during implementation. IFRs have been produced on time. However, two procurement specialists have recently left ONEA and one procurement specialist is being recruited (October 2014) to maintain procurement capacities.</p>					
	Resp: Client	Stage: Imp	Recurrent: Y	Due Date:	Frequency: Continuous	Status: Not Yet Due
<b>Governance</b>	<b>Rating</b>	<b>Moderate</b>				
<p><b>Risk Description:</b></p> <p>The current methodology of the Internal Audit Department may not be sufficient to adequately cover the project and ensure adequate governance.</p>	<p><b>Risk Management:</b></p> <p><i>Original Project:</i> Strengthening Internal Audit Department (IAD) and Audit Committee members' capacities by setting up a risk-based methodology to improve corporate governance and risk management.</p> <p><i>Current Assessment:</i> The methodology has been developed and applied in 2012 by the IAD. However, the evaluation of risks is not fully mastered. The external Technical Auditor will monitor the effective use of the methodology. In addition, the IAD should carry out ex-post reviews of the UWSP and follow up the implementation of the key recommendations to strengthen the control environment.</p>					
	Resp: Client	Stage: Imp	Recurrent: Y	Due Date:	Frequency: Continuous	Status: Not Yet Due
<b>Project Risks</b>						
<b>Design</b>	<b>Rating</b>	<b>Low</b>				
<p><b>Risk Description:</b></p> <p>(No risk considered for the water supply components of the original project)</p>	<p><b>Risk Management:</b></p> <p><i>Current assessment:</i> No design risks are expected to occur under the AF since technical solutions considered for water supply systems are proven and well established.</p>					
	Resp:	Stage:	Recurrent:	Due Date:	Frequency:	Status:
<b>Social and Environmental</b>	<b>Rating</b>	<b>Low</b>				
<p><b>Risk Description:</b></p> <p>Rights of way for the distribution network and</p>	<p><b>Risk Management:</b></p> <p><i>Original Project:</i> Safeguard policies related to Environmental Assessment and Involuntary Resettlement apply to</p>					

minimal land acquisition for water production, distribution and sanitation facilities may involve compensation in certain cases.	the proposed project. Since specific sites and areas of intervention could not be confirmed prior to appraisal, the Recipient prepared an ESMF and a RPF.					
	<i>Current assessment:</i> The overall implementation of the safeguard measures of the original project was rated satisfactory by the implementation support missions carried out by the Bank. The ESMF and the RPF have been updated, approved and re-disclosed in country and at the Bank InfoShop on June 5, 2014.					
	Resp: Client	Stage: Prep	Recurrent:	Due Date:	Frequency:	Status: completed
Program and Donor	Rating					
Risk Description: <i>(Not considered in Original Project)</i>	Risk Management:					
	Resp:	Stage:	Recurrent:	Due Date:	Frequency:	Status:
<b>Delivery Monitoring and Sustainability</b>	<b>Rating</b>	<b>Low</b>				
<b>Risk Description:</b> <i>Sustainability</i> The financial equilibrium that was achieved in 2006 may be jeopardized by the increasing debt service requirements and to a lesser extent by the payment arrears from public customers  <i>Delivery Monitoring</i> <i>(Not considered in Original Project)</i>	<b>Risk Management:</b> <i>Original Project:</i> (i) Financial equilibrium will be continuously monitored through the financial model that will be updated to assist in regulatory decisions (revision of water and sanitation rates and choice of investments and financing conditions); (ii) Central Government users are making timely payment of water bills; other public users are subject to standard procedures, including cut-off of services and negotiated terms of payment of arrears.  <i>Current Assessment:</i> The financial equilibrium has been maintained. The financial model has been adequately used to assess the proposed revision of water rates for the period 2014-2018 (approved and applied to July 2014 water bills) and to propose a modification of on-lending conditions. Government users are current on their water bills. ONEA's monitoring of delivery performances is quite satisfactory and stands out as a best practice for water utilities in SSA, with an effective validation of performances by external technical auditors.					
	Resp: Client	Stage: Imp	Recurrent: Y	Due Date:	Frequency: Continuous	Status: Not Yet Due
<b>Overall Risk</b>						
			Overall Implementation Risk: Low			

	<p>Risk Description:</p> <p>Instruments related to the mitigation of sector and capacity risks are in place and drew on lessons learned from the ongoing project and previous operations in the sector. Effective implementation arrangements are already in place. Detailed design studies of the water storage and transmission facilities are under preparation.</p>
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### Annex 3: Detailed Description of Additional Activities

#### Burkina Faso: Urban Water Sector Project - Additional Financing (P149556)

1. This Annex reviews how the existing challenges facing urban water services in Ouagadougou and the project development objective are addressed by the proposed Additional Financing (AF) and then provides a detailed description of the activities financed under the AF.

2. The table below shows the progress – from the year preceding the inception of the UWSP to the year 2013 – of access to urban water services throughout the country, together with selected indicators of ONEA performances. All data and indicators are verified and validated by external technical auditors.

**Selected parameters of the urban water services in Burkina Faso (2008-2013)**

Indicator	Unit	2008	2013	Variation
Urban centers served by ONEA	Number	43	50	+7
Population of the served urban centers	Million	3.34	4.36	+30.5%
Water production	Million m <sup>3</sup> per year	52.7	74.5	+41.4%
	m <sup>3</sup> per day	144,000	204,000	
Water distributed	Million m <sup>3</sup> per year	43.1	61.8	+43.4%
Unaccounted-for-water (UFW)	%	18.2%	17.0%	-1.2
Access rate to piped water (global)	%	75%	86% †	+11
• through household connections	%	52%	59%	+7
• through standposts	%	23%	27%	+4
Service connections	Number	174,800	304,740	+74.3%
Number of staff (ONEA)	Number	680	906	+33.2%
Staff Productivity	No. of staff per 1,000 connections	4.4	3.4	-1.0
Average water tariff (excluding taxes)	CFAF per m <sup>3</sup>	478	486	+1.7%
Bill collection ratio	%	95.0	97.5%	+2.5

† The MDG target is 87% (for 2015)

Source: ONEA Activity Reports and Technical Audits

3. The progress of access and the improvement of ONEA performances are remarkable, as the initial values were already among the best registered in Sub-Saharan Africa. However, the urban development of Ouagadougou creates specific challenges for the development and sustainability of water services.

#### Access and Sustainability Challenges in Ouagadougou

4. Before 2004, the situation of the water services in Ouagadougou, which represents more than 50% of the urban water activity in Burkina Faso, was particularly difficult and the capital city faced chronic water shortages due to the insufficient production capacity (40,800 m<sup>3</sup> per day). The situation improved in October 2004 with the construction of the first phase of the Ziga water treatment plan (60,000 m<sup>3</sup> per day), which was reinforced with a second module of 30,000 m<sup>3</sup> per day commissioned in 2011, then enabling 24/7 water service in the capital city.

5. The annual growth rate of Ouagadougou's population in recent years (over 6.5 percent) has, however, substantially exceeded the assumptions made in the design of Ziga treatment

facilities. In addition, newcomers tend to spread over peri-urban areas, occupying even more space than the previous city residents. The urbanized areas of Ouagadougou have grown to more than 310 km<sup>2</sup>. The urban growth of Ouagadougou thus led to the following challenges for the water services:

- ✓ The higher than anticipated population generates a water demand that already exceeds the production capacity in peak months (February-June);
- ✓ The urbanization is essentially horizontal, with single-story housing, which increases the costs of expanding water distribution networks. This is compounded by the need to reinforce primary networks and feeders and to add storage capacity dictated by the topography (Ouagadougou terrain is deprived of high points), to ensure adequate service conditions;
- ✓ Most of the newcomers are low-income people who settle in informal peri-urban areas. Providing acceptable water services to those people requires the development of affordable technical solutions while at the same time, maintaining the financial equilibrium of the urban water sector.

6. ONEA developed in 2012 a strategy to address the above challenges by:

- (a) designing and executing an interim investment program to increase quickly the production capacity by 29,300 m<sup>3</sup> per day through the rehabilitation of water treatment facilities and the drilling of boreholes within the city;
- (b) developing new solutions to serve informal settlements through public-private partnerships (PPP) with local operators<sup>1</sup> that were successfully tested; and
- (c) identifying a longer-term solution to ensure sustainable water supply for Ouagadougou.

### **Relationship between Additional Activities, PDO and Challenges**

7. The proposed AF will not change the PDO of the original project which is “*to increase access to sustainable water and sanitation services in selected urban areas*”. This will be achieved through: (i) expanding water transmission, storage and distribution capacities and (ii) facilitating access to services through programs for constructing social water connections and public standpipes.

8. The AF activities will address the above-mentioned access challenges and improve the quality of water services in Ouagadougou. The construction of water transmission mains will make the water produced by the recently built/rehabilitated facilities available to the water distribution networks. The transmission mains are also designed to convey water produced by the longer-term solution. The construction of additional water storage tanks combined with new pumping stations will ensure adequate water pressure in the water distribution networks. The development of access will be pursued through the expansion of the secondary and tertiary water

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<sup>1</sup> Local private operators are in charge of delivering services within a specific informal settlement where they install standposts and household connections. End users are billed at ONEA rates and may benefit from social connections. The operators are selected after competitive bidding, on the basis of the price they offer to pay for water delivered by ONEA at a point of entry in the settlement (usually close to the price currently paid by standpost vendors, i.e. about CFAF 200 per m<sup>3</sup>). Five operators are currently active in Ouagadougou and serve about 70,000 people.

distribution networks and the construction of social connections and standposts in peri-urban areas, and also through the replication of PPP arrangements in informal settlements.

### **Detailed Project Activities**

9. The detailed project activities, together with their costs (including contingencies but excluding taxes) are listed below.

***Water transmission mains (US\$56.30 million).*** Works will help build a 23.7-km ductile cast iron (DCI) pipe with a 1,600 mm nominal diameter (*diamètre nominal*, DN) to which the following feeders will be connected:

- (a) a 8.1-km DCI gravity pipe (DN 1,400 mm) to supply the South branch of the water distribution network;
- (b) a 10-km DCI gravity pipe (DN 1,200 mm) to supply the North branch of the water distribution network.

***Water storage and pumping stations (US\$7.88 million).*** Works will include the following activities:

- (a) Increasing water storage capacity by 6,000 m<sup>3</sup> (US\$3.19 million):
  - (i) Construction of two ground tanks (2 x 2,000 m<sup>3</sup>) upstream of pumping stations;
  - (ii) Construction of one elevated tank (2,000 m<sup>3</sup>) at a strategic position of the water distribution system;
- (b) Pumping stations (US\$4.69 million): to build and connect to the grid (also equipped with standby generators) four pumping stations in different locations of the water distribution network to ensure adequate water pressure in the system.

***Water Distribution (US\$12.88 million).*** Works will include the following activities:

- (a) *Expansion of water distribution networks (US\$5.93 million)*, to help construct about 344 km of secondary and tertiary water distribution pipes;
- (b) *Construction of Social Water Connections (US\$2.48 million)*, to help build about 26,000 water service connections;
- (c) *Construction of public standposts (US\$0.17 million)*, to help build about 80 standposts, in areas where the density of population does not warrant the construction of social connections, including two autonomous water systems in selected informal settlements that will be managed by local private operators;
- (d) *Supply of 52,000 water connection kits (US\$4.30 million).*

***Consultant services for the supervision of works (US\$2.94 million).*** This sub-component will finance consulting services: (i) to supervise the execution of above mentioned civil works (US\$1.50 million); and (ii) technical and institutional studies (US\$1.44 million).



### Annex 4: Detailed Costs of Additional Activities

#### Burkina Faso: Urban Water Sector Project - Additional Financing (P149556)

Proposed Activities/Location	Unit	Quantity	Unit Price (US \$)	Cost (US\$ M)
<b>Transmission lines</b>				<b>56.30</b>
Boudtenga-RC feeder (DN 1600 mm)	km	23.7	1,575,900	37.27
Boudtenga-RC feeder (South branch - DN 1400 mm)	km	8.1	1,228,400	9.95
SP3 bis-RB feeder (North branch - DN 1200 mm)	km	10.0	908,000	9.08
<b>Storage and pumping stations</b>				<b>7.88</b>
<b>RB Site (North branch)</b>				<b>2.41</b>
Ground storage tank RB (2,000 m <sup>3</sup> )	Number	1	960,000	0.96
Pumping station RB3 Flow rate: 2,600 m <sup>3</sup> /h - Head: 30 m	Number	1	1,450,000	1.45
<b>RI Site</b>				<b>3.19</b>
Ground storage tank RI (2,000 m <sup>3</sup> )	Number	1	960,000	0.96
Booster pumping station RI	Number	1	560,000	0.56
Elevated storage tank CE-RI (2,000 m <sup>3</sup> )	Number	1	1,670,000	1.67
<b>RC Site (South branch)</b>				<b>1.97</b>
Pumping station RC-RE (existing pump house) Flow rate: 3,000 m <sup>3</sup> /h - Head: 55 m	Number	1	1,970,000	1.97
<b>R11AD Site</b>				<b>0.31</b>
Pumping station R11AD (existing pump house) Flow rate: 430 m <sup>3</sup> /h - Head: 30 m	Number	1	310,000	0.31
<b>Distribution</b>				<b>12.88</b>
Secondary and tertiary networks	km	344	Lump sum	5.93
Standposts	Number	80	2,125	0.17
Service connections (laying)	Number	26,000	95	2.48
Kits for service connections (supply parts)	Number	52,000	82	4.30
<b>Consulting services</b>				<b>2.94</b>
Control and supervision				1.50
Technical and institutional studies				1.44
<b>Total</b>				<b>80.00</b>

## **Annex 5: Economic and Financial Analysis**

### **Burkina Faso: Urban Water Sector Project - Additional Financing (P149556)**

1. The Economic Analysis Section aims to update the costs- benefits analysis carried out for the original project by taking into account the impact of the activities proposed in the Additional Financing. The original costs-benefits analysis focused on the urban water supply activities, the benefits of which are quantifiable. The sanitation activities of the original project, the benefits of which are certain but not readily quantifiable were subjected to a cost-effectiveness analysis. The latter will not be updated as the AF does not include a sanitation component.
2. The Financial Analysis Section of this Annex aims to: (i) update the financial assessment of the viability of ONEA as a whole, on the basis of its recent financial performance and the results of the financial model, and (ii) assess the impact of the AF's activities on the financial position of ONEA.
3. These assessments show: (i) that ONEA will maintain its financial equilibrium, subject to socially-acceptable tariff revisions and to the recourse to concessional lending; (ii) that the original project and the AF generate satisfactory financial and economic rates of return; and (iii) that the project activities in Ouagadougou will generate cash-flows that will support the development of WSS services in other urban centers throughout the country.

#### **Economic Analysis**

4. The cost-benefit analysis has been updated to assess the impact of the additional activities on the Economic Internal Rate of Return (EIRR) and the Net Present Value (NPV). The PAD assumptions and methodology remain the same. However, the discount rate has been adjusted from 12 percent to 10 percent to better reflect the current practice for water supply projects and the decrease of the opportunity cost of capital. Project benefits include the increased water consumption and the consumer surplus accruing to beneficiaries shifting from other water sources to water service connections or standposts.
5. The updated analysis takes into account the impact of the reallocation of grant proceeds that took place after the MTR and the actual project outcome in terms of development of water services. Project costs include investment costs, incremental operating costs, and renewal costs. The investment costs of the AF have been adjusted to eliminate the impact of longer-term design of transmission facilities. In fact, the transmission lines are designed to accommodate yields that are twice as high as the ones that would be sufficient to convey the volumes required by the new service connections scheduled in the AF. Therefore the costs of the transmission lines are reduced by 30 percent in the economic analysis (this reduction does not apply to the calculations of the FIRR).
6. The results of the updated analysis are summarized in the table below, which shows the results for the overall water supply component of the project and for each of the urban centers covered in the original project.

### Results of the Updated Economic Analysis

	Unit	Original Project	Original Project and AF
NPV @10%:			
Ouagadougou	US\$ M	16.5	18.4
Bobo-Dioulasso		8.3	-8.5
Koudougou		-3.7	-4.0
Dedougou		-2.0	-1.5
<b>Overall</b>		<b>19.1</b>	<b>4.4</b>
EIRR:			
Ouagadougou	%	31.8%	17.7%
Bobo-Dioulasso		13.5%	6.0%
Koudougou		8.0%	3.5%
Dedougou		3.7%	2.4%
<b>Overall Project</b>		<b>16.8%</b>	<b>10.9%</b>

7. The AF exclusively focuses on Ouagadougou. The EIRR of the Ouagadougou works, including the AF, is close to 18 percent, which is satisfactory. The difference with the value computed for the original project is attributable to the fact that the original project consisted only of distribution works –which have an immediate impact on water sales–, whereas the additional activities include a large portion (70 percent) of transmission reinforcements. The latter are essential to maintain the continuity and quality of water services in Ouagadougou for both the customers already served and for the new customers. In hindsight, these reinforcements should have been foreseen in the economic analysis of the original project, which would have led to a lower initial EIRR. The updated NPV of Ouagadougou works is higher than in the original project.

8. The decrease of the NPV of the updated overall project is largely independent of the additional activities and is linked to the actual execution of the original project. It is mostly attributable to: (i) the two to three years delay observed in the actual construction of the connections of the original project in Ouagadougou, Kedougou and Dedougou; and (ii) the substantial reduction of the demand for service connections that was observed in Bobo-Dioulasso, and strongly impacted the EIRR of the local works. The overall results remain, however, satisfactory.

### Financial Analysis

9. **Financial viability of ONEA.** Since the project’s start, ONEA has maintained financial equilibrium and a satisfactory working ratio (cash operating expenditures/operating revenues), as shown below. This was achieved through improvements of ONEA’s operating performances, and without revising the water rates (the last revision occurred in July 2008).

#### Selected Financial Indicators – 2009-2013

	2009	2010	2011	2012	2013
Net Cash Balance (CFAF M)	8,481	6,425	5,994	6,509	9,451
Working ratio (%)	67.4%	68.4%	64.0%	66.1%	67.4%
Debt service coverage (times)	2.5	1.2	1.4	1.6	1.7

10. ONEA's financial model and the recent (November 2013) tariff study demonstrated that a modest (4 percent) increase of the water rates, spread over 2014-2017, would enable ONEA to maintain its financial equilibrium until 2018. A tariff revision was agreed by the Government in March 2014 and is applicable to the July 2014 water bills. The agreed changes of the rate schedule are socially acceptable, as the rates applicable to standposts and to the first block of the domestic consumption will not be modified.

11. The tariff study and the financial model also point out that the financial equilibrium is quite sensitive to the financing conditions of the investment programs. This is acknowledged in the 2013-2015 Performance Contract, under which the Government is expected to on-lend the proceeds of external financing at conditions similar to the original financing, while ONEA is expected to borrow exclusively at concessional terms. The proceeds of the AF will thus be made available to ONEA as a grant.

12. **Financial impact of the proposed AF.** The financial impact of the water supply components of the original project and of the additional activities is measured by the Financial Internal Rate of Return (FIRR), which amounts now to 8.4 percent. The FIRR was estimated in the PAD at 13.6 percent. The reasons for the decrease are similar to the ones encountered for the EIRR.

## Annex 6: Implementation Arrangements

### Burkina Faso: Urban Water Sector Project - Additional Financing (P149556)

1. **The implementation arrangements under the AF will remain unchanged.** The following gives an update on the existing implementation arrangements, and provides updated information on fiduciary aspects and monitoring and evaluation.
2. ONEA will remain the executing agency under the AF. Due to the diverse nature of the components of the original project, several departments of ONEA were involved in implementation. As the additional activities focus on water supply in Ouagadougou, they will be implemented exclusively by the Ouagadougou Works Department (DPAEP, formerly DMOZ), which will plan activities, manage procurement, control execution and prepare the progress reports.
3. **Financial Management.** Activities funded through the Additional Financing will be subjected to the same arrangements for financial management as the original Grant. The un-audited Interim Financial Report (IFR) format of the original project has been updated to include the new elements introduced under additional financing. In addition, in order to maintain the continuous security and reliability of information produced by ONEA and the safeguard of the assets and funds, the internal audit department should be more involved in the risk analysis of the projects, carry out ex-post reviews of the UWSP and follow up the implementation of the key recommendations to strengthen the control environment. Financial auditors have been contracted to review ONEA's financial statements over the period 2013-2015.
4. **Disbursements.** A separate designated account (DA) will be established to deposit the Additional Financing proceeds separately from the proceeds of the original Grant. The DA will be opened at the Central Bank in Ouagadougou and will receive funds on the basis of the project cash needs. The DA will be used as a transit account and as such, funds will be transferred from the DA to a transactions account, which will be opened at a commercial bank.
5. **Procurement.** Taking into account lessons learned from the original project, the following recommendations will be considered to improve procurement: (i) to upgrade post-qualification requirements for large civil works contracts, with regard to the limited capacity of local entrepreneurs to carry out simultaneously more than one or two contracts; (ii) exclude from the bidding process the non performing entrepreneurs whose contracts have been terminated under the ongoing UWSP; and (iii) conduct due diligence on technical /financial capacities of better ranked candidates before contract awarding. Also, two procurement specialists have left ONEA since 2011 and the procurement unit that is responsible for all activities financed by external funds is understaffed with only one specialist with limited experience in Bank procurement procedures. Therefore, ONEA is recruiting an experienced procurement specialist, who will be operational before end of October 2014 to strengthen the procurement unit.
6. The Procurement Plan of the Additional Financing has been prepared on the basis of the current Guidelines. It was reviewed during project appraisal and agreed at negotiations.
7. **Monitoring and Evaluation (M&E).** The M&E arrangements of the original project will continue to apply. ONEA's management information system stands out as a best practice in Sub-

Saharan Africa, with regular external verification of data and indicators and public disclosure of the utility performances on ONEA's website.