Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)
BASIC INFORMATION

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Project ID</th>
<th>Project Name</th>
<th>Parent Project ID (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iraq</td>
<td>P162094</td>
<td>Baghdad Water Supply and Sewerage Improvement Project</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Estimated Appraisal Date</th>
<th>Estimated Board Date</th>
<th>Practice Area (Lead)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIDDLE EAST AND NORTH AFRICA</td>
<td>18-Sep-2017</td>
<td>24-Oct-2017</td>
<td>Water</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing Instrument</th>
<th>Borrower(s)</th>
<th>Implementing Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Project Financing</td>
<td>REPUBLIC OF IRAQ</td>
<td>Mayoralty of Baghdad</td>
</tr>
</tbody>
</table>

Proposed Development Objective(s)

The Project Development Objective (PDO) is to improve the quality of drinking water supply and wastewater services in Baghdad.

Components

- Institutional strengthening for integrated urban water management and utility management, and creating an enabling environment for private sector engagement
- Investment in drinking water supply and wastewater infrastructure
- Project management, studies and M&E component

Financing (in USD Million)

<table>
<thead>
<tr>
<th>Financing Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Bank for Reconstruction and Development</td>
<td>210.00</td>
</tr>
<tr>
<td><strong>Total Project Cost</strong></td>
<td><strong>210.00</strong></td>
</tr>
</tbody>
</table>

Environmental Assessment Category

B - Partial Assessment

Decision

The review did authorize the preparation to continue
**B. Introduction and Context**

**Country Context**

1. In 2013, the population of the Republic of Iraq was estimated at around 33 million, of which 66 percent lived in urban areas. Currently the country has an estimated 3.3 million internally displaced people (IDPs). About 27 percent of the total urban population in Iraq resides in Baghdad, the largest city in the country with an estimated population of six million, not including an estimated 289,000 of IDPs. A 2012 household survey indicates that Iraq’s national poverty stood at 19 percent and that 20 percent of the population lived on less than US$2 a day, and 70 percent on less than US$4 a day. The poverty rate in 2012 in Baghdad was at 12 percent; this figure is likely to have risen significantly due to the recent conflict. Unemployment is high and labor force participation remains low, especially for women and youth. Official figures from 2011 have labor force participation and youth at 11 percent although actual levels, particularly among youth, were likely much higher.

2. The current government, in place since September 2014, has detailed a reform plan to build a more transparent state that delivers better services to the public, as articulated in the Prime Minister’s acceptance speech to Parliament. The main challenge for Iraq is the incremental and long-term rebuilding of state institutions that were systematically weakened over the last thirty years. Despite the complex political situation, the authorities are committed to implementing the government program for 2014-2018. The first strategic priority of the program is to reach security and stability by liberating cities and provinces controlled by terrorist groups, and by restoring the rule of law. On July 10, 2017 the Government of Iraq (GoI) declared the liberation of the second largest city Mosul, which had been occupied by ISIS for the past three years. The humanitarian crisis in Iraq is almost without precedent. The pace of displacement over the past three years has been enormous. The second strategic priority of the government program is to deliver public services and upgrade standards of living. This includes delivering water and electricity services, improving health and education sector performance, and reforming the social protection system.

3. The country’s ongoing security problems and the large role of the state in the economy, impede investment and inhibit private economic activity. Security threats and a fall in oil prices, the main revenue source for the Government of Iraq (GoI), have compounded economic decline and worsened the fiscal situation. The economy grew at 0.1 percent in 2014 and 2.9 percent in 2015, from a 4.2 percent growth in 2013. While oil production was increased over time despite low oil prices, non-oil-GDP contracted by 5.1 percent in 2014 and 13.9 percent in 2015. High dependence on the oil sector has led to structural weaknesses in the overall economy. State
owned enterprises (SOEs) and the public sector more broadly provide almost all formal jobs. Decades of state-driven economic policy have discouraged private sector growth. Limited access to finance, an underdeveloped financial sector dominated by a few state-owned banks, and weak financial regulations further compound the challenges. A vibrant private sector, however, is a necessary condition for stability and poverty reduction. Furthermore, moving from stabilization to long-term development will require diversification, with strong non-oil based economic activities also contributing to GDP.

Sectoral and Institutional Context

4. The GoI has recognized that its social contract with citizens is dependent on the improved provision of basic services. The recent constitutional reforms which give increased authority and responsibility to governorates for provision of services is intended to improve the targeting of development projects and expenditure by bringing government closer to citizens, promote greater involvement of the community in setting priorities, and strengthen direct accountability for public service provision to customers. Despite these benefits, decentralized service delivery has exposed challenges to the water and sanitation sector and few investments. Structurally weak local capacity, relatively limited progress on the devolution of financial and administrative authority, and regional divisions are serious obstacles to moving forward on the vision articulated in the constitution.

5. The incentives for the governorates to address sector issues in a comprehensive manner are not aligned with governorates new responsibilities. At present, central government resource allocations for ministerial expenditures are based largely on past staffing levels, and the transfer of oil and gas revenues to governorates through tied grants are based either on an equal per capita distribution or the volume of oil and gas produced in the governorate. There is no comparative assessment of the relative needs of the governorates and the flow of funds to them, irrespective of their performance or compliance with national requirements and targets. Fulfilling the vision of decentralized service delivery will require significant attention to address political, administrative, technical, and capacity constraints.

6. As discussed in the previous section, there is currently no private sector involvement and PPP (build-operate-transfer or concessions) in the water sector. Private participation in water infrastructure investments are impeded by the sector’s long tenures and limited capacity to structure bankable projects. Most water infrastructure is built for a service period of around 20 years. PPPs in water infrastructure therefore depend on very long-term government commitments in the form of off-taker agreements, regulatory enforceability or government contributions. Substantial government support through public financing of capital investments and operating subsidies or capacity payments (under a long-term off-take agreement) would be required over the course of any PPP contract. Moreover, fundamental improvements in
performance and institutional strengthening are needed to meet minimum levels of commercial performance. In the short term the GoI will need to work within its existing structures to reduce losses of treated water; improve revenue flows, collection rates that allow for cost-recovery and an appropriate return on investment; and improved management and financial information systems. These actions need to take place to create a “cascade” enabling environment of private sector participation. The Bank’s “Doing Business” report of 2016 ranked Iraq as very low in “ease of doing business”, with a regulatory environment that is still not favorable to the private sector. Moreover, a perception of high risk among investors, inherent in fragile, conflict and violence (FCV) countries like Iraq, will likely hinder PPP development in Iraq’s water sector for the time being.

7. The municipal water and sanitation sector is predominately managed by two ministries, namely the Ministry of Water Resources (bulk water supply), and the Ministry of Construction, Housing, Municipalities and Public Works (MoCHMPW). There is scope for improving coordination across central government ministries. Although the MoCHMPW is in charge of the planning and development of many of the municipal water and sanitation projects, the final approval for such projects is given by the Ministry of Planning, while the Ministry of Finance has to approve the budget. Greater coordination between national and provincial planning processes, especially with regard to annual budget formulation is necessary to improve service delivery. The governorates need to be included in the decision-making process and this is understood to be happening as part of the current decentralization processes. Technical assistance could be introduced to harmonize budget procedures, and to align procurement, disbursement, and project monitoring procedures. The transition from a central to a decentralized structure remains a work in progress. The new governorate structure is still under preparation by the governorates. It will be reviewed by the Provincial Council and then submitted to the Council of Ministers and the Council of Representatives.

8. The Mayoralty of Baghdad (MoB) has its own status and is empowered to prepare and implement plans for municipal and water projects. Law number 16 of 1995 provides for the organization of the Mayoralty of Baghdad, which manages the Baghdad Water Authority (BWA) and the Baghdad Sewage Authority (BSA). The first article of the law states that the Mayoralty shall provide the municipal services in Baghdad. Three Deputy Mayors support the Mayor in his duties. Article 8 states that the water supply system for Baghdad city shall be managed and operated by the BWA.

Baghdad Water and Sewerage Services

9. The city of Baghdad and its suburbs cover 950 km² and are administered by the MoB. Baghdad is divided into 14 municipalities. The water and wastewater services are administered centrally by the BWA and the BSA, which are responsible for all infrastructure assets. As far as water supply and sewerage are concerned, the municipalities’ role is limited to installing house connections and to maintaining neighborhood networks (pipes under 200 mm diameter). The
planning and implementation of investment projects in the municipalities is the responsibility of the MoB.

10. The Tigris is the only source of drinking water in Baghdad. The average flow is 21.2 billion cubic meters. The BWA operates 11 water treatment plants which produce an estimated 3.5 million cubic meters (MCM) per day (6 percent of the average annual flow of the Tigris) with a planned increase to 6 MCM by 2030. There are 13 reservoirs providing a total storage capacity of about 1,058,000 m³. About 53 percent of storage capacity is located on the Rasafa (east) side of the city, while 47 percent of storage capacity is located on the Karkh (west) side. The number of service reservoirs is inadequate and the present storage capacity is insufficient. The water supply system on the Rasafa side is facing particularly severe shortages.

11. The current use of groundwater is limited. The depth of the aquifer which is “unconfined” and of “recent deposits”, generally ranges between 15 and 18 meters. The groundwater quality is saline with a high total dissolved solids (TDS) concentration of above 1,500 mg/l. Fresh and slightly brackish groundwater occurs along the Tigris River. There have been no studies and assessments of the groundwater potential or strategies for treatment of brackish groundwater. The lack of alternative water resources other than the Tigris emphasizes the need to study groundwater, introduce water savings, water consumption reduction, and water losses reduction.

12. Flow meters at the point of discharge into the network are not available, or are malfunctioning. About 23 percent of the existing service connections are metered with functional water meters. Therefore, it is difficult to assess water losses precisely. Some studies have estimated unaccounted water/water losses in the range of percent.

13. The sewer system consists of a network which covers about 92 percent of the city area. Baghdad has two main wastewater treatment plants, one in Rasafa called “Rustomiya”, and another one in Karkh. The efficiency with which these wastewater treatment plants and the (old) pumping stations are operated has dropped significantly (by an estimated 30 to 50 percent). The waste-water treatment plants, therefore, are not operating effectively and are under-utilized. The bulk of the city’s sewage is discharged untreated and constitutes a major source of pollution to surface water and groundwater and a risk to public health.

14. The capital area is unable to maintain access to water supply and sewerage services in the context of rapid population growth including the inflow of internally displaced people (about 289,000, most of whom are staying in rented housing and with host families). About 18 percent of the population has to deal with daily service interruptions, and in the hot summer months, service interruptions are even more frequent. Leakage from sewer pipes is contaminating potable water networks and groundwater aquifers, which aggravates health and environmental problems.
15. Existing water tariffs are low and do not cover the cost of water and wastewater treatment. Residential water tariffs stand at IQD10 (Iraqi dinar) per cubic meter (US$0.0086) for the first 30 cubic meters of water per month. The tariff structure is an increasing block rate tariff with four blocks of each 30 cubic meters per month. Industrial and government water tariffs are at about IQD100 per cubic meter. The tariff for sewerage services is the same as water services. These rates are low, compared to the average operation and maintenance costs of the water services which were estimated at IQD155 per cubic meter in 2013 (US$0.13). Despite the low tariffs, a large part of the population does not pay their water bill, which may be linked to dissatisfaction with the quality of the services but is also linked to policies that do not allow the BWA and BSA to charge certain groups of residential consumers, and the high transaction costs of paying very small water bills in the absence of a well-functioning banking system in the country.

16. Data from a recently prepared Public Expenditure Review\(^1\) for the Water Sector in Iraq show that GoI funding to the MoB between 2007 and 2012 to the MoB can fluctuate yearly, with a rapid increase followed by a rapid decrease. The reason for these fluctuations need to be better understood and addressed.

17. **Climate change.** According to the Think Hazard profile for Iraq, the Baghdad area is at a high level of exposure to future river floods and at a medium level of exposure to water scarcity. In addition, the country is at risk of higher temperature and heat. Some recent examples of possible climate events that have affected the country have been: (a) the changes in the severity and frequency of drought and flood events such as in 2013 and 2015; (b) increases in temperature with heat wave temperatures above 50 C that resulted in a government shutdown in 2015; (c) decreases in water availability due to reduction in precipitation. Untreated wastewater in Baghdad has been leaking out of sewers and overflowing into the streets and into the Tigris (which is Baghdad’s only local source of fresh drinking water), which represents a public health risk in case of climate change-induced flooding of the Tigris.

18. The BWA and BSA need to take a long-term approach to climate change, which often requires supply-side measures as well as demand management. Adapting to these changes requires planning infrastructure to meet future demand in addition to protecting against potential scarcity or abundance of water. This could require investing in new raw water sources (such as groundwater) to diversify the resource base, expanding treatment facilities to accommodate larger flows, or using desalination, recycling or multi-purpose storage facilities. There is a need to take an integrated approach to planning that relies on flexible designs and the use of climate action plans to mitigate risk.

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\(^1\) WB report number 96309- IQ, November 2015
19. **Gender aspects.** The water sector in Baghdad has several gender gaps, of which, this project considers three – in jobs and in voice and agency. The water and sewerage utilities in Baghdad have historically had a strong representation of women, when compared to similar utilities in the Bank's other client countries. However, women in these utilities lack adequate opportunities for professional growth and development that would enable them to rise in the organizations. Second, while women in Baghdad are mostly educated and have a high level of awareness about their environment, they often lack the information and opportunities to resolve problems in water and sewerage service within their homes and communities. This is partly due to the fact that avenues for grievance redress and citizen engagement are few and those that exit are dominated by men.

C. Proposed Development Objective(s)

**Development Objective(s) (From PAD)**

The Project Development Objective (PDO) is to improve the quality of drinking water supply and wastewater services in Baghdad.

**Key Results**

20. The project will measure the following key indicators to reflect the achievements of the PDO:

- People benefiting from access to improved drinking water supply.
- People benefiting from access to improved sanitation.
- Continuity of water supply at a minimum pressure of 10m in Shaab and Rasheed municipalities (hours/day).

D. Project Description

21. **Component 1: Institutional strengthening for integrated urban water management and utility management, and creating an enabling environment for private sector engagement (US$11.48 million).** This component will support the MoB in operational and strategic decision making with regard to the city’s water security and water conservation. The focus will be on improving the institutional knowledge and preparedness with regard to all aspects of water security and urban water management, including resilience (climate change adaptation measures), sustainability of water use, the potential use of groundwater, the use of non-conventional water (reuse of wastewater) and storm water management.

22. This component will support the BWA and the BSA strengthening their revenue administration and financial management. This component aims to strengthen BWA and BSA revenue management through two main schemes: i) strengthening BWA and BSA's revenue administration through preparation of a revenue administration manual, business process re-engineering and training of staff, and ii) digitization of consumer records and computerization of billing and collection practices. At the same time, this component will be supporting BWA and BSA in strengthening their financial
management by improving their accounting and financial reporting, improving cost accounting of service delivery, and computerizing the asset register and adoption of modern asset management practices.

23. Under this component innovative private financing models will be explored and capacity building for structuring bankable projects and managing contracts will be conducted. Capacity in the areas of innovative financing, PPP procurement and contract management will be strengthened through a series of training courses and South-South Knowledge Exchanges in the form of study tours. Training courses will include private sector participation in service delivery; performance based contracts; financing options and risk-sharing instruments. Other aspects of institutional strengthening such as variability in budget allocations by the GoI to the MoB and the coordination issues across central ministries and between the central ministries and the MoB, will be studied and addressed during implementation.

24. Component 2: Investment in drinking water supply and wastewater infrastructure (US$188 million) will cover:

25. Construction of the “R2” reservoir (US$71 million). The main works will comprise: a twin-compartment concrete ground-level reservoir with a total capacity of 135,000 cubic meters; inlet and outlet works, reservoir overflow systems; pumps, piping system; and chlorination station. The reservoir will ensure improved quality and reliability of the water supply services in the area served by it, which is in the Shaab municipality and has a population of more than 550,000. The construction of the reservoir will help the city to manage its water supply better in case of climate-induced droughts.

26. Rehabilitation of pumping stations including main sewerage network (US$68 million). This will include rehabilitation of 29 sewerage pumping stations by replacing old pumps and associated electromechanical works. This will also include rehabilitation of the main trunk sewer system and manholes. The untreated wastewater is currently flowing out of sewers into the streets and the Tigris. The project will make sure this untreated wastewater reaches the underutilized waste water treatment plants, thus reducing the public health effects of untreated wastewater exposure in the event of Tigris flooding induced by climate change.

27. Non-Revenue Water reduction (US$39 million). This will include the creation of district metering areas and a Non-Revenue Water (NRW) management system and the reduction of physical losses by replacing about 13 km of water supply distribution network in Rasheed and Shaab municipalities. The distribution networks to be rehabilitated include trunk, primary and secondary pipes ranging from 100mm to 700mm in diameter which are old and are exhibiting frequent breaks with high leakage resulting in intermittent supplies of poor quality water. A Supervisory Control and Data Acquisition (SCADA) system will be established. This will provide BWA with the means to monitor and control the water supply system and to improve operational performance. Reducing non-revenue water will have energy efficiency gains. Reduced leakages will also improve the city’s ability to handle any future climate-related water shortages.

28. Engineering, construction supervision, and quality control (US$10 million). A multi-disciplinary engineering and management consulting firm will assist the PMU with the overall implementation of the project. Consultants support to the PMU will include support to engineering, construction supervision,
quality control, procurement, non-revenue water, environment and assistance with the monitoring of the physical and financial progress.

29. **Component 3: Project management, studies and M&E component (US$10 million).** This component will support the operation of the Project Management Unit in the MoB. The PMU has been well established and comprises staff from the BWA, BSA and MoB. The PMU will coordinate the overall planning, coordination, implementation and supervision of project activities including central procurement and management of funds.

30. The component will provide funding for: citizen engagement including the establishment and operation of a grievance redress mechanism, communication and water conservation awareness; environmental and social management plan; monitoring and evaluation (M&E), including carrying out a detailed baseline study, periodic monitoring during implementation, beneficiary satisfaction surveys; Mid-term review (MTR) in collaboration with IFC and MIGA and completion report. The component will also provide funding for preparation of four feasibility studies for the water treatment plant and the three sewerage systems. Finally, this component will finance capacity building activities targeted to female technical and managerial, staff in the MoB, BSA and BWA.

### E. Implementation

#### Institutional and Implementation Arrangements

31. MoB will be the Executing Agency. MoB according to Law number 16 of 1995 is vested with the responsibility for providing and managing water and wastewater services in Baghdad. MoB owns the water and wastewater infrastructure assets which are managed by the Baghdad Water Authority (BWA) and the Baghdad Sewage Authority (BSA). The PMU has been established. The PMU will be responsible for the day to day management of project implementation including procurement, contract management, financial management, disbursement, safeguards, and monitoring and evaluation.

32. A multi-disciplinary management and engineering consulting firm will assist the PMU with the overall implementation of the project. It will provide engineering support as well as construction supervision and quality control. Management support to PMU will include support to integrated urban water management, private sector participation, institutional strengthening, procurement, safeguards, and monitoring and evaluation.

33. The project would be implemented over a five-year period. Implementation readiness is well-advanced. A general procurement notice has been published on MoB and UNDB websites. Detailed designs are ready including contract specifications and bidding documents of the largest contract for the R2 reservoir. In addition detailed designs, bill of quantities and contract specification for most of the sewerage investment has been finalized. Environmental and Social Management plans are also finalized.
F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Project interventions are spread across Baghdad, the capital city. The identified areas include: (1) Dora area, located in Karkh side, south of Baghdad; (2) Rasheed, also located in the south of Baghdad; as well as (3) Dora, Habibiya and Rusafa, all located in the north of Baghdad. Additionally, the physical locations and site characteristics for the 25 sewerage pumping stations in Rusafa are detailed in the generic ESMP for that sub-component.

G. Environmental and Social Safeguards Specialists on the Team

Tracy Hart, Environmental Safeguards Specialist
Chaogang Wang, Social Safeguards Specialist
Ibrahim Ismail Mohammed Basalamah, Social Safeguards Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>This project is categorized as &quot;B&quot; due to potential adverse environmental and social impacts which are site-specific and reversible; thus easily remediable by applying appropriate mitigation measures. These potential adverse environmental impacts may include the following: air quality and noise; construction debris, including old piping and sewerage infrastructure requiring proper disposal; employee health and safety issues; vehicular and pedestrian traffic disruptions; disruptions in water supply; and risk of water contamination in the existing system. An ESIA/ESMP has each been prepared for R2 Water Reservoir; similarly an ESIA/ESMP has been prepared for Al Habibiya, Al Doura, and Al-Ghazaliya Sewerage Pumping Stations. Lastly, a generic ESMP has been prepared for 22 smaller sewerage pumping stations located in Rusafa. In addition to these safeguards documents to manage and mitigate specific construction interventions, the project will include an assessment of the cost recovery of the billing and collection practices. The assessment will include willingness...</td>
</tr>
</tbody>
</table>
and ability of the beneficiaries to pay for services provided and the preferred methods and also justifications for non-payment.

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Condition</th>
<th>Reason</th>
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<tbody>
<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td>No</td>
<td>This policy is not applicable.</td>
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<tr>
<td>Forests OP/BP 4.36</td>
<td>No</td>
<td>This policy is not applicable.</td>
</tr>
<tr>
<td>Pest Management OP 4.09</td>
<td>No</td>
<td>Although WWTPs can be attractors of pests, particularly flies and rodents, this project does not finance WWTP construction, rehabilitation, or operations. Therefore, this project will not finance any pesticides or other forms of pest management control.</td>
</tr>
<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
<td>No</td>
<td>The sewerage pumping stations to be rehabilitated, as well as the R2 reservoir to be constructed, are located in heavily urbanized parts of Baghdad City. The sites are highly unlikely to have any residual physical cultural resources left undisturbed.</td>
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<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
<td>No</td>
<td>There are no indigenous peoples in the service area.</td>
</tr>
<tr>
<td>Involuntary Resettlement OP/BP 4.12</td>
<td>Yes</td>
<td>There is no land acquisition or physical involuntary resettlement associated with this project. A generic Resettlement Policy Framework has been prepared as a precautionary measure should, during the course of project implementation, there be a temporary loss of income caused by construction blockage and/or traffic diversion.</td>
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<tr>
<td>Safety of Dams OP/BP 4.37</td>
<td>No</td>
<td>This policy is not applicable.</td>
</tr>
<tr>
<td>Projects on International Waterways OP/BP 7.50</td>
<td>Yes</td>
<td>The project area is located on the Tigris which is an international waterway. However, the project involves rehabilitation of existing pumping stations, construction of potable water reservoir, and non-revenue water including replacement of old drinking water distribution network. The project does not involve works and activities that would exceed the original capacity of the pumping stations and will not increase water off-take from the Tigris. Therefore, the project falls within the exception to the notification requirements of OP 7.50, set forth in paragraph 7(a) of OP 7.50. The RVP has approved such an exception on 22 February 2016.</td>
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<tr>
<td>Projects in Disputed Areas OP/BP 7.60</td>
<td>No</td>
<td>This policy is not applicable.</td>
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KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

   The project is classified as environmental category “B”, in accordance with the World Bank’s Operational Policy (OP) 4.01, due to potential adverse environmental and social impacts which are site-specific and reversible; thus easily remediable by applying appropriate mitigation measures. These potential adverse environmental impacts may include the following: air quality and noise; construction debris, including old piping and sewerage infrastructure requiring proper disposal; employee health and safety issues; as well as vehicular and pedestrian traffic disruptions. The contract document for rehabilitation of pumping stations and the construction of R2 reservoir will include agreed provisions of mitigation of short-term impact to noise, traffic disruption and health and safety. The project will contribute to improving the environment primarily through rehabilitation of sewerage pumping stations. The project does not include new water resources development and will not support expansion or rehabilitation of existing underutilized wastewater treatment facilities. There are no potential large-scale, significant, and/or irreversible impacts.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

   The rehabilitation of the sewerage pumping stations will have long-term positive impacts in terms of minimizing emergency discharges to the Tigris River due to blockages and/or overflow events. This minimization of emergency discharges will also result in indirect positive impacts on soil, land, and groundwater. Construction of R2 reservoir will provide more stability of water supply and water quality to consumers. It will also alleviate pressure on adjacent pressure zones. Both of these interventions will improve water efficiency of existing water in the Baghdad water system.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

   The original design of this project included expansion of Dora water treatment plant. This component has been delayed so as to implement solutions, like non-revenue water reduction, water conversation plans, wastewater and storm water reuse, in order to increase the water available for urban water consumption without the expansion of existing facilities or the construction of new facilities.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

   The client has previous substantial safeguards implementation and supervision experience with the recently-closed Emergency Baghdad Water Supply and Sanitation Project (P087912). The same Environmental and Social Safeguards Focal Points from that project, who now have substantial safeguards experience, will be seconded to this project's PMU as Environmental and Social Officers (ESOs) representing BWA and BSA. The ESOs will work closely with a team of Resident Engineers, who are tasked with conducting regular site visits to construction sites to evaluate and document contractor compliance with special provisions of the contract, to include proper occupational health and safety measures; air, water, noise, and waste disposal management; site fencing and 24-hour security; vehicular and pedestrian traffic diversion and safety.

   Environmental mitigation will be led by the contractors; mitigation measures to be included in the construction contracts are estimated at US$5.5 million, or approximately 4% of the total contract costs. The construction teams are
expected to include on-site safety engineers. An amount of US$2 million is allocated in Component 3, to assess and strengthen the capacity of the BWA and BSA water quality laboratories, provide relevant safeguards training through the length of the project, and upgrade the BWA, BSA, and municipalities’ grievance redress mechanisms. A program of technical assistance is included under the project and include provisos to strengthen current BWA and BSA protocol for water quality monitoring and reporting, including baseline setting for identified critical monitoring points and prepare and implement a series of trainings for BWA, BSA, and Municipalities on environmental and social safeguards topics.

A Project Implementation Consultant (PIC) firm will be employed to provide an independent assessment of quality of the work of both the contractors' on-site safety engineers as well as the BWA and BSA Resident Engineers. Security permitting, World Bank environmental and social safeguards specialists will either conduct site visits to verify quarterly monitoring reports specific to safeguards compliance and/or will meet with the PMU ESOs and the PIC Environmental Safeguards Specialist and Social Safeguards Specialist. During project implementation, the PIC environmental and social specialists will design and hold workshops on relevant topics, including, but not limited to: operational health and safety; good-practice mitigation measures; institutional responsibilities for measuring, monitoring, and reporting to ensure compliance; and construction-phase on-site supervision practices, including documentation of monitoring and reporting.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Public consultations were advertised and held by BWA and BSA between November 2015 and January 2017. These consultations were a combination of open public consultations and one-on-one interviews with directly impacted neighbors to each of the sites. The three environmental safeguards instruments (two ESIs/ESMPs and one generic ESMP), have been disclosed at the Bank's external website and in country (August 31st, 2017), at publicly accessible locations and in a form and language accessible to potentially affected persons. Each of these three safeguards documents will include Arabic- and English-language Executive Summaries. Due to the prolonged preparation time, that the project management unit will design, hold, and document site-specific consultations prior to start of construction phase. These consultations will be detailed in project management unit progress reports and documented in World Bank documents, including the publically-disclosed version of the Implementation Status Report (ISR).

B. Disclosure Requirements

<table>
<thead>
<tr>
<th>Environmental Assessment/Audit/Management Plan/Other</th>
<th>Date of receipt by the Bank</th>
<th>Date of submission for disclosure</th>
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<tr>
<td></td>
<td>21-Aug-2017</td>
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"In country" Disclosure

Iraq

31-Aug-2017

Comments
Resettlement Action Plan/Framework/Policy Process

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<thead>
<tr>
<th>Date of receipt by the Bank</th>
<th>Date of submission for disclosure</th>
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<tr>
<td>26-Sep-2017</td>
<td>31-Aug-2017</td>
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"In country" Disclosure

Iraq
31-Aug-2017

Comments
Mayorality of Baghdad website, including Executive Summaries in English and Arabic

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?
Yes
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?
Yes
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?
Yes

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?
Yes
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?
Yes

OP 7.50 - Projects on International Waterways

Have the other riparians been notified of the project?
NA
If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?
Yes
Has the RVP approved such an exception?
Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?
Yes
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?
Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?
Yes
Have costs related to safeguard policy measures been included in the project cost?
Yes
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?
Yes
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?
Yes

CONTACT POINT

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Borrower/Client/Recipient
REPUBLIC OF IRAQ
**Implementing Agencies**

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|                       | Nafie Mohammed Mofid |
| Approved By          |                         |
| Safeguards Advisor:  | Nina Chee               | 08-Sep-2017 |
| Practice Manager/Manager: | Steven N. Schonberger | 08-Sep-2017 |
| Country Director:    | Saroj Kumar Jha         | 17-Sep-2017 |

**Note to Task Teams:** End of system generated content, document is editable from here. *Please delete this note when finalizing the document.*