

## A. Environmental and Social Review Summary

### ENVIRONMENTAL AND SOCIAL REVIEW SUMMARY

#### 1. Environmental and Social Categorization, and Rationale

The project has been classified as a Category B operation, in accordance with the Environmental and Social Sustainability Policy of IDB Invest, since it is expected that the environmental and social impacts and risks will be mostly limited to the Project site and will be largely reversible or temporary, and that they can be mitigated using standard industry measures. The main impacts include: i) effects on marine life due to the water intake and brine discharge, ii) impacts during construction phase (e.g. noise, dust, traffic), iii) the removal of vegetation for the construction of the aqueduct, iv) the creation of employment opportunities during the construction and operation phases. The project is subject to the following International Finance Corporation Performance Standards (PS):

- PS1: Evaluation and Management of Environmental and Social Risks and Impacts
- PS2: Labor and Working Conditions
- PS3: Resource Efficiency and Pollution Prevention
- PS4: Community Health, Safety and Security
- PS5: Land Acquisition and Involuntary Resettlement
- PS6: Conservation of Biodiversity and Sustainable Management of Living Natural Resources
- PS7: Indigenous Peoples
- PS8: Cultural Heritage

#### 2. Environmental and Social Context

The desalinization plant will be located in an urban/industrial area, within the locality of Playas de Rosarito in the State of Baja California, Mexico. The marine environment is mainly influenced by the California Current, and is characterized by high levels of local recirculation and strong stratification of coastal waters. The area is listed as a Priority Marine Region of Mexico according to the National Commission for the Awareness and Use of Biodiversity (Comisión Nacional para el Conocimiento y Uso de la Biodiversidad, or CONABIO). The terrestrial environment features predominantly natural desert scrubland vegetation, dominated by dry-climate-adapted species, with some riparian areas of more dense vegetation.

The Municipality of Rosarito is the most recently incorporated in the state and has the smallest population, though its growth rate is higher than the state average. It has a population of over 80,000 inhabitants, of which approximately 55% are economically active. The main productive activities in the area are manufacturing, trade, services and tourism.

#### 3. Environmental Risks and Impacts, and Proposed Mitigation and Compensation Measures

##### 3.1. Assessment and Management of Environmental and Social Risks and Impacts

The Project is still in its design and planning phase with the construction phase scheduled to start in 2019. The Project plans to create a general policy to define the objectives and principles for the management of

environmental and social impacts. Once the general policy has been created, the Project will develop an Environmental and Social Management System (ESMS) with environmental and social personnel being assigned for its implementation before the start of the construction phase.

The project has conducted several studies, including Environmental Impact Statements (EISs): one for the plant and another for the aqueduct. These were presented to the corresponding Mexican authority, the Environment and Natural Resources Secretariat (Secretaría de Medio Ambiente y Recursos Naturales, or SEMARNAT) in 2014, and amended in 2016. The Project possesses the Environmental Impact Resolution (“EIR”) from SEMARNAT. The EISs and EIRs identify the project’s significant direct, indirect and cumulative impacts.

The EISs and EIRs contain individual mitigation measures and four environmental protection, management and monitoring programs: The Environmental Optimization of the Brine Discharge Mechanism, the Environmental Protection Program for the Construction Phase, the Environmental Management Program for the Operation Phase and the Marine Environment Monitoring Program.

The Project has had various contacts and meetings with the Municipality of Rosarito, Ejido Mazatlán representatives, members of the Economic Consultancy and Development Council and local residents. The project successfully carried out a public consultation in November 2018 based on a previous mapping of stakeholders.

The Project is committed to the development of a mechanism and process to receive, document, monitor and respond consistently to any concerns of external social actors that may arise. The project will prepare an annual report that will include the disclosure of selected indicators of interest and relevance for the affected communities.

### **3.2. Labor and Working Conditions**

It is anticipated that, at the peak of construction, approximately 500 workers will be needed. The vast majority of workers for the construction and operation of the Project will come from the local metropolitan area of Tijuana, meaning that there will not be a large influx of workers, nor any need for worker camps or related facilities. Suez will be the EPC construction company in charge of the construction phase and will subcontract the workforce from other construction companies. Based on this preliminary information, the main risks involved in relation to work and labor conditions are those concerning workplace health and safety commonly seen in infrastructure projects in urban/suburban areas. Suez has its own workforce management policies which are suitable according to PS2. The EPC and APP contracts include requirements for labor and occupational health and safety conditions. Before beginning the construction phase, the Project will develop the detailed management plans specific

to the Project regarding labor management and occupational health and safety, especially for the construction phase. It will ensure that these plans comply with the Mexican Labor Legislation and PS2 standards.

### **3.3. Resource Efficiency and Pollution Prevention**

For the desalinization plant, a tender process will be conducted in the near future to select an energy supplier. The project has the authorization of CFE to use their intake and discharge facilities, thereby reducing the construction footprint and decreasing any possible impacts associated with the construction of these works.

One of the most significant effluents from the project will be the brine discharged into the sea. The brine dispersion model shows that salt will be diluted to normal background concentrations within the first 100-

300 meters of the discharge point. Design changes made after the model was developed resulted in a still greater dilution at the point of discharge, thereby further reducing any impacts. The design changes also resulted in the optimization of the processes of removing organic material from the seawater and the cleaning of the reverse osmosis filters. Neutralization and homogenization processes will be applied before the liquid effluent is discharged together with the brine, as per common industry practices.

The desalinization plant will be located in a mixed residential and industrial area. The EISs prepared for SEMARNAT do not include baseline noise studies or noise modelling studies. According to the APP and EPC contractual requirements, the project will be built to comply with national regulations. In addition to meeting national regulations, the project must also follow the World Bank/IFC Group Environmental, Health and Safety Guidelines for noise emission, whichever is more stringent, meaning that the acoustic baseline studies must be carried out prior to the start of construction.

### **3.4. Community Health, Safety and Security**

The main community risks of the project are those which are common to projects under construction, such as noise, dust and emissions from the equipment used during the construction and operation phases. The project will temporarily cause an increase in traffic in the area and will develop and implement a Traffic and Transportation Management Plan for the construction phase. With regards to hazardous wastes, the project will ensure use of secondary containment structures compliant with applicable regulations to protect against any potential environmental harm. The Municipality is the authority responsible for overseeing waste management, and wastes will be managed according to the pertinent regulations.

During the construction and operation phases, the workers will be from the local area and therefore will not need camp sites nor any permanent facilities.

Before starting any construction activities, the project will produce an emergency preparedness and response plan (for emergencies such as for earthquakes, hurricanes or tsunamis).

It is assumed that the project will need security personnel and that they will be hired locally. Should the Project need armed guards, a security plan will be produced that analyzes the need to have armed personnel and that documents the processes of hiring, training, and managing said personnel.

### **3.5. Land Acquisition and Involuntary Resettlement**

Interviews with AdR personnel and a site visit of the aqueduct route and the land acquired for the plant verified that the project does not require any resettlement or economic displacement. AdR members and their consultants report to have already agreed to the terms for the right of way with all the land owners along the aqueduct route. Regarding the plant site, it has been acquired by the project. Likewise, the purchase of an additional parcel of land to facilitate access and minimize disruptions for residents in the area has also now been agreed and is in the process of being concluded.

### **3.6. Biodiversity Conservation and Natural Habitats**

With regards to the water intake, the design of the project aims to minimize the impact on marine life, in line with good practice and the IFC environmental and social guidelines. The project will take water from a channel that has already existed for several decades, and which supplies the water for the cooling of the

CFE plant, and will make use of existing, decommissioned intake structures.<sup>1</sup> The potential impacts on the marine biodiversity of these structures identified in the EIS and EIR include the effect on the zooplankton and phytoplankton populations around the water intake area, due to the screening process removing and eliminating the plankton. According to the EIS and EIR it is estimated that, while the operation of the plant may decrease primary productivity in the area, said decrease will only represent 0.018% of the region's annual productivity – a minor impact. Wildlife should not be affected, as the intakes are gated to prevent animals from getting trapped against the screens.

The brine discharge and the consequent increase in salinity may result in potential effects on zooplankton and phytoplankton in the immediate surroundings. The analysis of impacts of the brine discharge is complemented by a quantitative model, and the project has made design changes that increase the dilution of the brine to minimize the effects of the brine discharge, in line with best industry practices. These effects will be monitored during plant operations, in relation to the baseline study, as foreseen in the EIS.

Finally, it is estimated that the project will present low risks to marine mammals and coastal birds, mainly due to the impact area of the project being limited in space, and because both marine mammals and birds will be able to avoid the affected areas.

The project area is within the #1 Priority Marine Region, according to CONABIO. Priority Marine Regions do not have any associated regulatory framework.

During the site visit, it was noted that the aqueduct route, for the most part, passes through land that has already been disturbed and parallel to other linear infrastructure such as a polyduct and a power line. Nevertheless, the project will implement a pre-construction biological inventory.

Neither the plant nor the aqueduct route are within a protected area or any other conservation area.

Some important aspects of the project are aligned with the biodiversity mitigation hierarchy. For example, previously disturbed lands and existing access roads will be used. With regard to the brine discharge, various alternatives were quantitatively explored, and the one that was selected (to combine the discharge water together with the discharge water from CFE, and not to use diffusers) will result in the least impact on marine biodiversity. Likewise, the water intake has been located in the same channel that has been used for decades by the CFE plant.

### **3.7. Indigenous Peoples**

In the existing Project studies, no reference is made to the presence or absence of indigenous peoples in the project area. During the environmental and social due diligence, the database of the National Commission for the Development of Indigenous People (Comisión Nacional para el Desarrollo de los Pueblos Indígenas, or CDI) was reviewed in order to verify if, either within the plant area or the ROW of the aqueduct, CDI had detected the presence of localities denominated as indigenous. No such localities were detected within the ROW of the aqueduct or near the plant.

### **3.8. Cultural Heritage**

The project requested an inspection by the National Anthropology and History Institute (Instituto Nacional de Antropología e Historia, or INAH) to check if there were any archaeological sites within the plant or aqueduct polygons. On June 7, 2018, the INAH issued a Partial Release Order clearing the polygons for the

---

<sup>1</sup> These have been decommissioned and will be remodelled and restored for the desalinization plant – minimizing the impacts of the project.

plant and aqueduct so work on the project could be undertaken, with the exception of in two sites. The Project is currently waiting for a report from the INAH with the results of its analysis of these two sites. The project will have an established process to guide the management of chance finds to meet the INAH regulations and the requirements of PS8.

4. **Local Access to Project Documentation:** [www.aguasderosarito.com/preguntas-frecuentes/](http://www.aguasderosarito.com/preguntas-frecuentes/)
5. **Environmental and Social Action Plan (ESAP).** Attached at the end of this document.
6. **Contact Information.** For project inquiries, including environmental and social issues related to an IDB Invest transaction, please contact the client (see **Investment Summary Sheet**), or IDB Invest via email to [divulgacionpublica@iadb.org](mailto:divulgacionpublica@iadb.org). As a last resort, communities affected by the Project have access to the IDB Invest Independent Consultation and Investigation Mechanism through the email address [mecanismo@iadb.org](mailto:mecanismo@iadb.org) or [MICI@iadb.org](mailto:MICI@iadb.org), or by calling +1(202) 623-3952.

## ENVIRONMENTAL AND SOCIAL ACTION PLAN (ESAP) PROPOSAL

N°	Action	Deliverable	Date
<b>1.0 Environmental and Social Management System</b>			
1.1	Develop and maintain a register of the permits required for the project in order to monitor the application deadlines, expiration dates and current status.	<ol style="list-style-type: none"> <li>1. Permit register.</li> <li>2. Update of Permit register.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prior to Financial Close</li> <li>2. Periodically in the Compliance Report.</li> </ol>
1.2	Develop and maintain an Environmental and Social Management System (ESMS) for the Project, in accordance with Performance Standard (PS) 01 of the IFC, considering the impacts and risks identified for the construction and operation phase.	<ol style="list-style-type: none"> <li>1. Construction ESMS.</li> <li>2. Operation ESMS.</li> <li>3. Updates of the Project ESMS, if any.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months prior to the first Notice to Proceed with Construction.</li> <li>2. 2 months prior to the first Notice to Proceed with Operations.</li> <li>3. If any, in the Compliance Report.</li> </ol>
1.3	Assign human resources for the implementation of the project's ESMS.	<ol style="list-style-type: none"> <li>1. CVs and contracts of hired personnel.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prior to the first Notice to Proceed with Construction.</li> </ol>
1.4	Summarize (in one single document) the analysis of alternatives studies carried out for the project.	<ol style="list-style-type: none"> <li>1. Analysis of alternatives.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prior to approval by IDB Invest Board of Directors.</li> </ol>
1.5	Update the brine dispersion model to reflect the improvements in the design of the project (e.g. the increase in the dilution rate and decrease in the discharge concentration of the brine).	<ol style="list-style-type: none"> <li>1. Updated dispersion model.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months prior the first Notice to Proceed with Construction.</li> </ol>
1.6	Prepare a map of key social actors and stakeholders.	<ol style="list-style-type: none"> <li>1. Map of social actors.</li> <li>2. Update of map of social actors.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prior to approval by the IDB Invest Board of Directors.</li> <li>2. Annually in the Compliance Report.</li> </ol>
1.7	Undertake a public socialization exercise for the Project with the social actors identified from the mapping. Keep a register of all the inquiries and participation activities of the social actors during the construction and operation of the project.	<ol style="list-style-type: none"> <li>1. Socialization exercise.</li> <li>2. Report, photos and meeting minutes of the participation of the social actors.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prior to approval by the IDB Invest Board of Directors.</li> <li>2. Periodically in each Compliance Report.</li> </ol>
1.8	Together with the lenders, develop a template for reporting on the environmental and social performance of the Project.	<ol style="list-style-type: none"> <li>1. Environmental and Social Compliance Report template.</li> </ol>	<ol style="list-style-type: none"> <li>2. 2 months prior the first Notice to Proceed with Construction.</li> </ol>
<b>2.0 Labor and Working conditions</b>			
2.1	Develop a Management Plan as part of the ESMS (see PS1) that complies with the Mexican labor legislation and PS2.	Labor Management Plan for construction.	<ol style="list-style-type: none"> <li>1. 2 months prior the first Notice to Proceed with Construction.</li> </ol>
<b>3.0 Resource Efficiency and Pollution Prevention</b>			
3.1	Develop and implement pollution prevention procedures from the ESMS (see PS1) designed to protect the environment and local communities, that meet the national standards and World Bank/IFC Group Environmental, Health and Safety Guidelines.	<ol style="list-style-type: none"> <li>1. Environmental Management plan for construction.</li> <li>2. Environmental Management plan for operation.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months prior the first Notice to Proceed with Construction.</li> <li>2. 2 months prior the first Notice to Proceed with Operations.</li> </ol>
3.2	Develop and implement a noise and dust monitoring program as part of the ESMS (see PS1).	<ol style="list-style-type: none"> <li>1. Environmental Monitoring plan for construction.</li> <li>2. Environmental Monitoring plan for operation.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months prior the first Notice to Proceed with Construction.</li> <li>2. 2 months prior the first Notice to Proceed with Operations.</li> </ol>
<b>4.0 Community Health and Safety</b>			

N°	Action	Deliverable	Date
4.1	Develop an Emergency Preparedness and Response Plan and Contingency Plan as part of the ESMS (See PS1) and ensure that it includes disclosure and support to the local community in the case of an emergency.	<ol style="list-style-type: none"> <li>1. Emergency Preparedness and Response Plan and Contingency Plan for construction.</li> <li>2. Emergency Preparedness and Response Plan and Contingency Plan for operation.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months prior the first Notice to Proceed with Construction.</li> <li>2. 2 months prior the first Notice to Proceed with Operations.</li> </ol>
4.2	Develop and implement a Transportation and Traffic Management Plan as part of the ESMS (see PS1).	<ol style="list-style-type: none"> <li>1. Transportation and Traffic Management Plan for construction.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months before the first start-up Minute for the Construction.</li> </ol>
4.3	Prepare a Safety Plan as part of the ESMS (see PS1).	<ol style="list-style-type: none"> <li>1. Safety Plan.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months prior the first Notice to Proceed with Construction.</li> </ol>
<b>6.0 Conservation of Biodiversity</b>			
6.1	Develop and implement a Marine Biodiversity Monitoring Plan (as required by the EIS, denominated the Marine Environmental Monitoring Program) as part of the ESMS (see PS1), for construction and operation.	<ol style="list-style-type: none"> <li>1. Marine Biodiversity Monitoring Plan for construction.</li> <li>2. Marine Biodiversity Monitoring Plan for operation.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months prior the first Notice to Proceed with Construction.</li> <li>2. 2 months prior the first Notice to Proceed with Operations.</li> </ol>
6.2	If needed, update the Marine Biodiversity Monitoring Plan to accord with the updated brine dispersion model (see PS1).	<ol style="list-style-type: none"> <li>1. Updated dispersion model, including a review of the impacts on biodiversity.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prior to first disbursement.</li> </ol>
6.3	Develop and implement a Terrestrial Biodiversity Management and Protection Plan (as required by the EIS, named the Flora and Fauna Protection Program) as part of the ESMS (see PS1).	<ol style="list-style-type: none"> <li>1. Terrestrial Biodiversity Management and Protection Plan for construction.</li> </ol>	<ol style="list-style-type: none"> <li>2. 2 months prior the first Notice to Proceed with Construction.</li> </ol>
<b>7.0 Indigenous Peoples</b>			
7.1	Perform an analysis of indigenous localities, if any exist within the area of influence of the Project, as part of the mapping of social actors.	<ol style="list-style-type: none"> <li>1. Analysis of indigenous localities, if any exist within the affected project area.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prior to approval by the IDB Invest Board of Directors.</li> </ol>
<b>8.0 Cultural Heritage</b>			
8.1	Develop and implement a chance finds procedure for the Project (plant and aqueduct) as part of the ESMS (see PS1).	<ol style="list-style-type: none"> <li>1. Chance Finds Procedure, including a training plan, for construction.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 months prior the first Notice to Proceed with Construction.</li> </ol>