MÉXICO
GOBIERNO DE LA REPÚBLICA

SEMARNAT
SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES

CONAGUA
COMISIÓN NACIONAL DEL AGUA

Deputy Director General's Office for Drinking water, drainage and sanitation

Department of Studies and Projects
For Drinking water and sewerage networks

UNITED MEXICAN STATES

NATIONAL INFRASTRUCTURE PROGRAM
2014-2018

STRATEGIC PROJECTS

DRINKING WATER • SEWERAGE • SANITATION

SEPTEMBER - 2016

Presentation

Table of contents

Versión en español: http://www.gob.mx/conagua/documentos/proyectos-estrategicos-28811

Versión en español:

PRESENTATION

Mexico needs to ensure the supply of water for this and future generations, in such a way that the resource becomes a fortress that is conducive to the economic, social and sustainable development of the country.

The biggest area of opportunity is the optimization in the exercise of the financial resources provided the hydraulic sector, both public and private, in order to meet the challenges of the 21st century for a growing population.

The projects that are included here, have been considered as strategic for the achievement of sustainable development, and almost all of them have been in the National Infrastructure Program 2014-2018 (Official Government Gazette, April 29, 2014).

Some of the projects are led by the C o n a g u a.
The rest, are promoted by local governments,
with the technical and financial support from the Federal Government,
so it is included promoter contact for more information.

NATIONAL
INFRASTRUCTURE PROGRAM
2014-2018

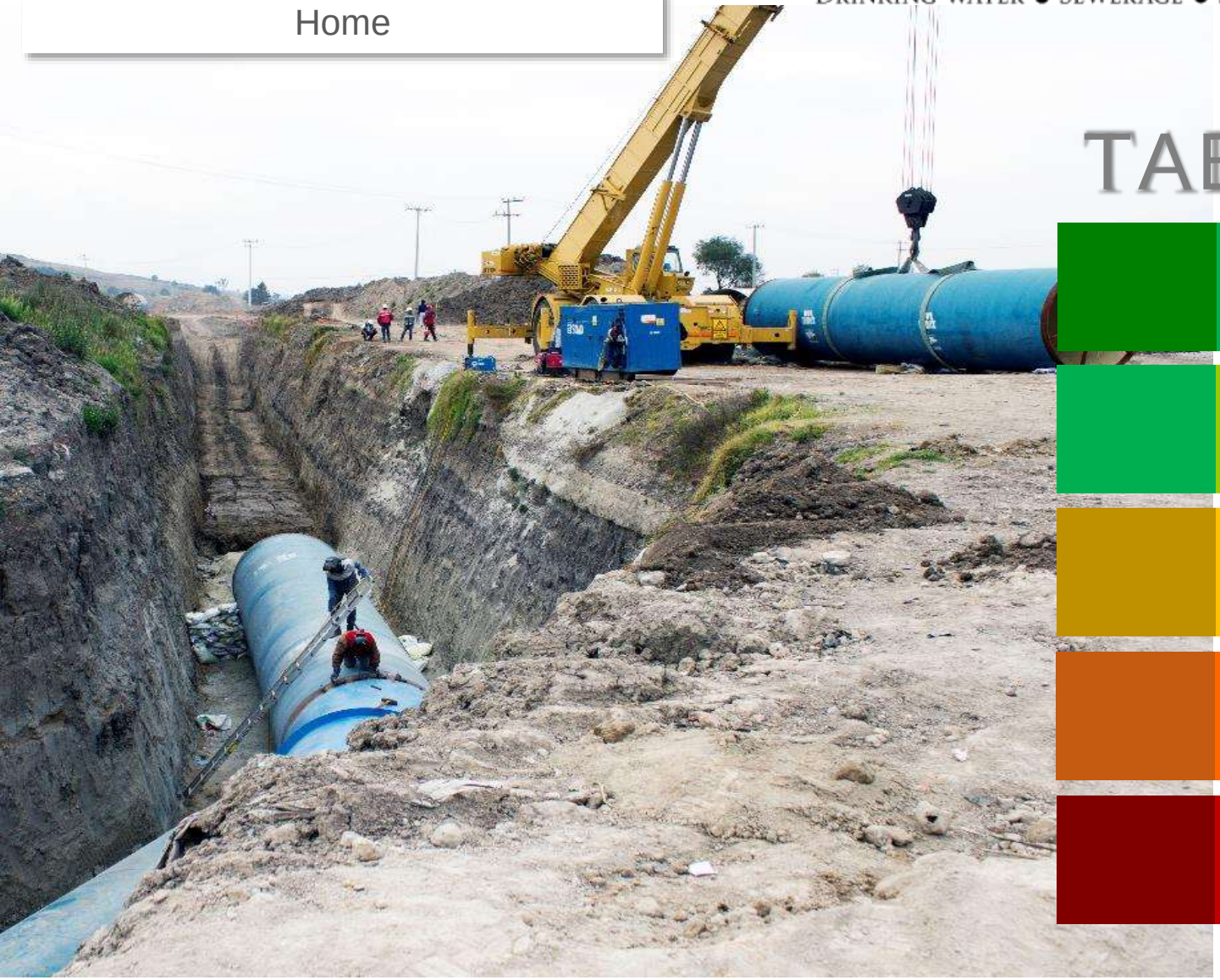


TABLE OF CONTENTS

VALLEY OF MEXICO

*Total investment estimated at 2014 prices
**Total investment estimated at 2015 prices

Project		Director of the project	Investment[1] (millions of pesos)	Status
V.1 New sources of water supply	view	Conagua	Value not determined	Under review
V.2 Third line of the Cutzamala System	view	Conagua	4 830*	**Under construction**
V.3 Atotonilco W.W.T.P.	view	Conagua	9 564*	**Completed**
V.4 Eastern Drainage Tunnel	view	Conagua	39 034**	**Under construction**
V.5 West Drainage Tunnel II	view	Conagua	2 228*	**Under construction**
V.6 General Channel Tunnel	view	Conagua	1 381*	**Under construction**
V.7 “Río de la Compañía” Tunnel II	view	Conagua	Value not determined	Under review


Eastern Drainage Tunnel


Third line of the Cutzamala System


P.P. La Caldera (“Río de la Compañía” Tunnel)


West Drainage Tunnel II

DAMS

*Total investment estimated at 2014 prices
**Total investment estimated at 2015 prices

Project		Director of the project	Investment (millions of pesos)	Status
P.1 El Zapotillo	view	Conagua	16 162*	**Under construction**
P.2 El Purgatorio	view	CEA-Jalisco	6 788*	**Under construction**
P.3 El Realito	view	Conagua and CEA-SLP	3 527*	**Completed**
P.4 La Laja	view	Capaseg	1 537**	Under review


"El Zapotillo" Dam


"El Purgatorio" Dam


"El Realito" Dam

"El Realito" Dam

AQUEDUCTS

Project		Director of the project	Investment (millions of pesos)	Status
A.1 Monterrey VI	view	SADM	18 283*	**Tender completed**
A.2 Chapultepec (Acapulco, Gro.)	view	CAPASEG	2 164*	**Completed**
A.3 Vicente Guerrero-Cd. Victoria	view	CEAT-TAMAULIPAS	1 260**	Under review
A.4 Riviera Veracruz System	view	CAEV	979***	Under review
A.5 Picachos-Mazatlán	view	JUMAPAM-CEAPAS	521**	Under review
A.6 Hobomó-Campeche	view	CAPAE	446**	**Under construction**
A.7 El Carrizal-La Paz	view	CEA-BCS	160*	**Under construction**

*Total investment estimated at 2014 prices **Total investment estimated at 2015 prices ***Total investment estimated at 2015 prices

OTHERS ...

V.2 Third line of the Cutzamala System	view	CONAGUA	**Under construction**
P.1 El Zapotillo-León, Gto.	view	CONAGUA	**Under construction**
P.3 El Realito-San Luis Potosí	view	CONAGUA AND CEA-SLP	**Completed**

CLEANING-UP

*Total investment estimated at 2014 prices
**Total investment estimated at 2015 prices

Project		Director of the project	Investment (millions of pesos)	Status
S.1 Atotonilco W.W.T.P.	view	CONAGUA	9 564*	**Completed**
S.2 La Paz W.W.T.P.	view	CONAGUA	443**	**Tender completed**
S.3 W.W.T.P. under process	view	GOVERNMENT OF THE STATE		**Under construction**
S.4 W.W.T.P. under review	view	GOVERNMENT OF THE STATE		**Under review**


"Atotonilco" WWTP


"Hermosillo" WWTP

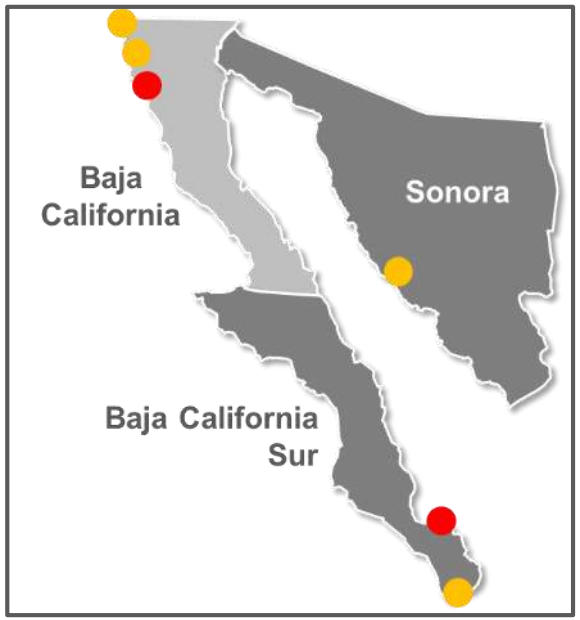

"Hidalgo del Parral" WWTP

DESALINATION

*Total investment estimated at 2014 prices

Project		Director of the project	Investment (millions of pesos)	State
D.1 Desalination plant Ensenada, B.C.	view	CEA-BC	517*	**Under construction**
D.2 Desalination plant La Paz, B.C.S.	view	SAPA-LA PAZ-BCS	545*	Under review
D.3 Desalination plants under review	view	GOVERNMENT OF THE STATE		Under review


Puerto Chale, La Paz, B.C.S.

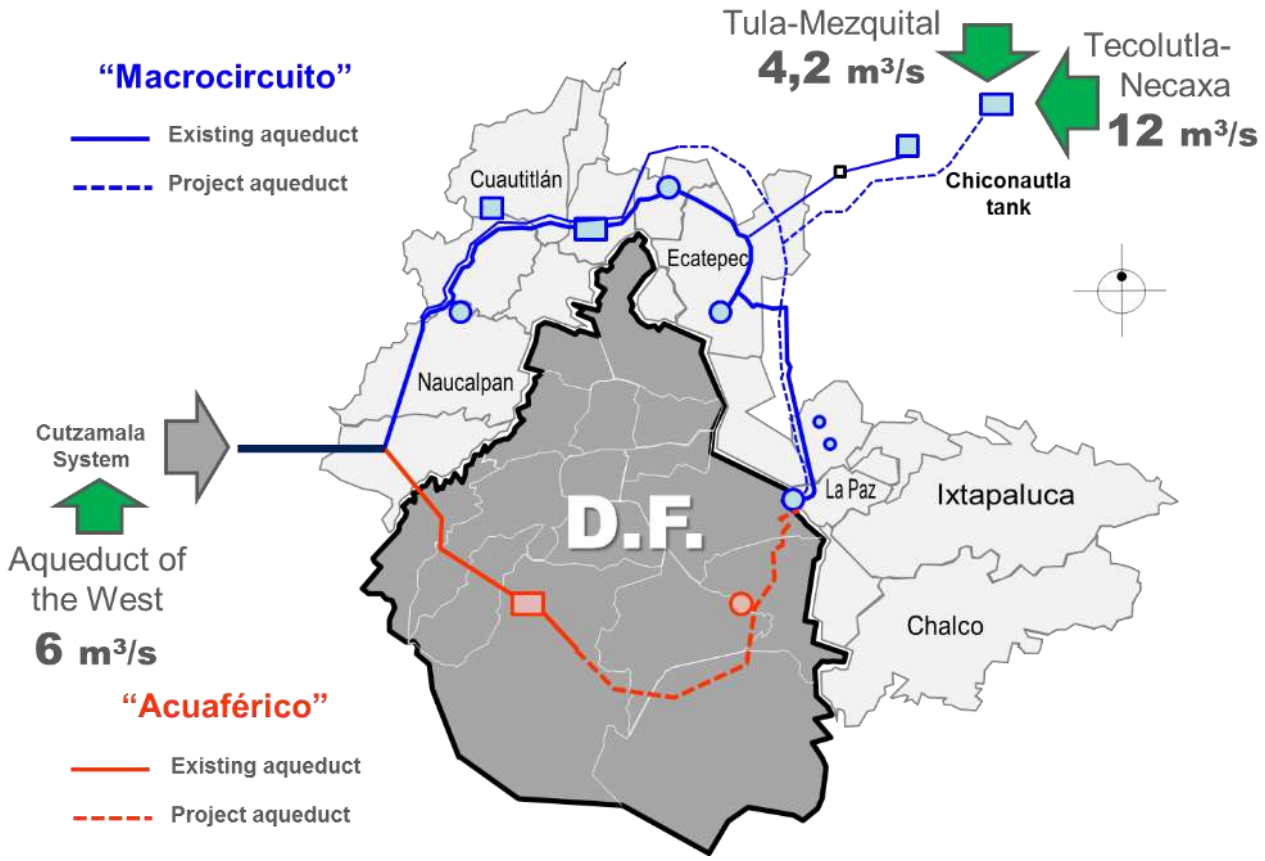


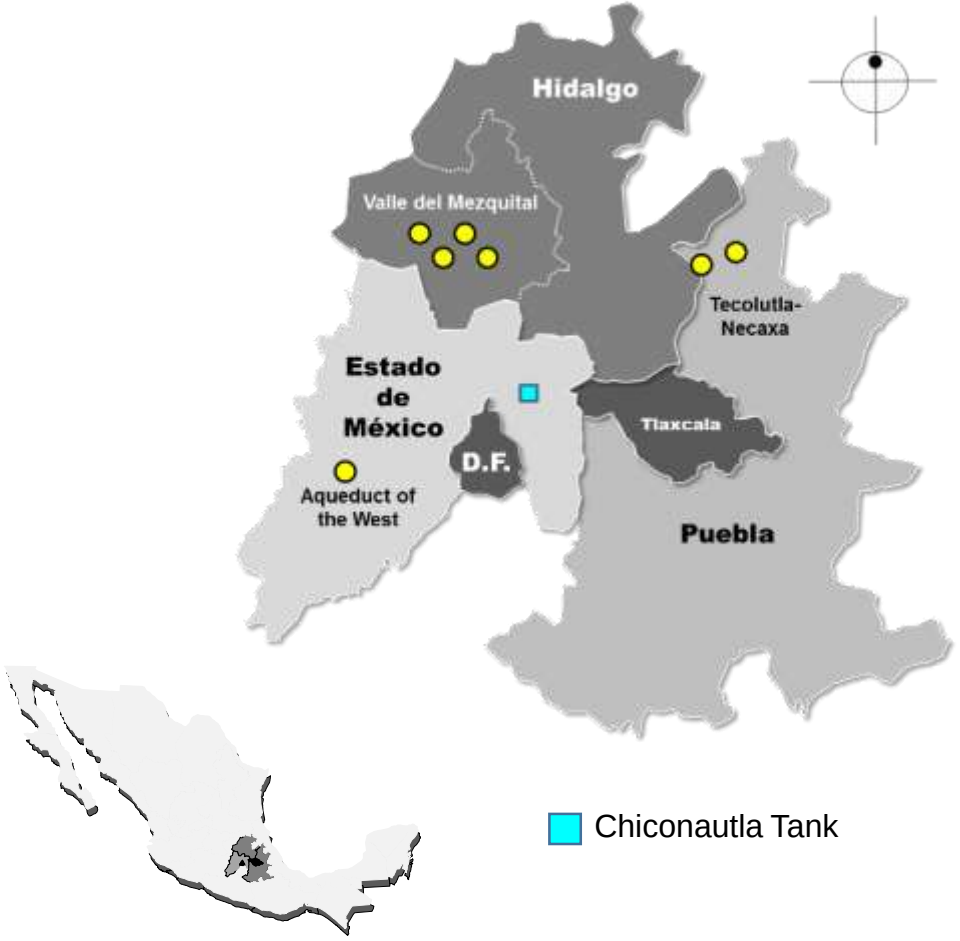

Los Cabos, La Paz, B.C.S.

V.1 New sources of water supply

Director of the project: CONAGUA (www.conagua.gob.mx)

New sources | Aqueduct of the West | Tula - Mezquital | Tecolutla - Necaxa

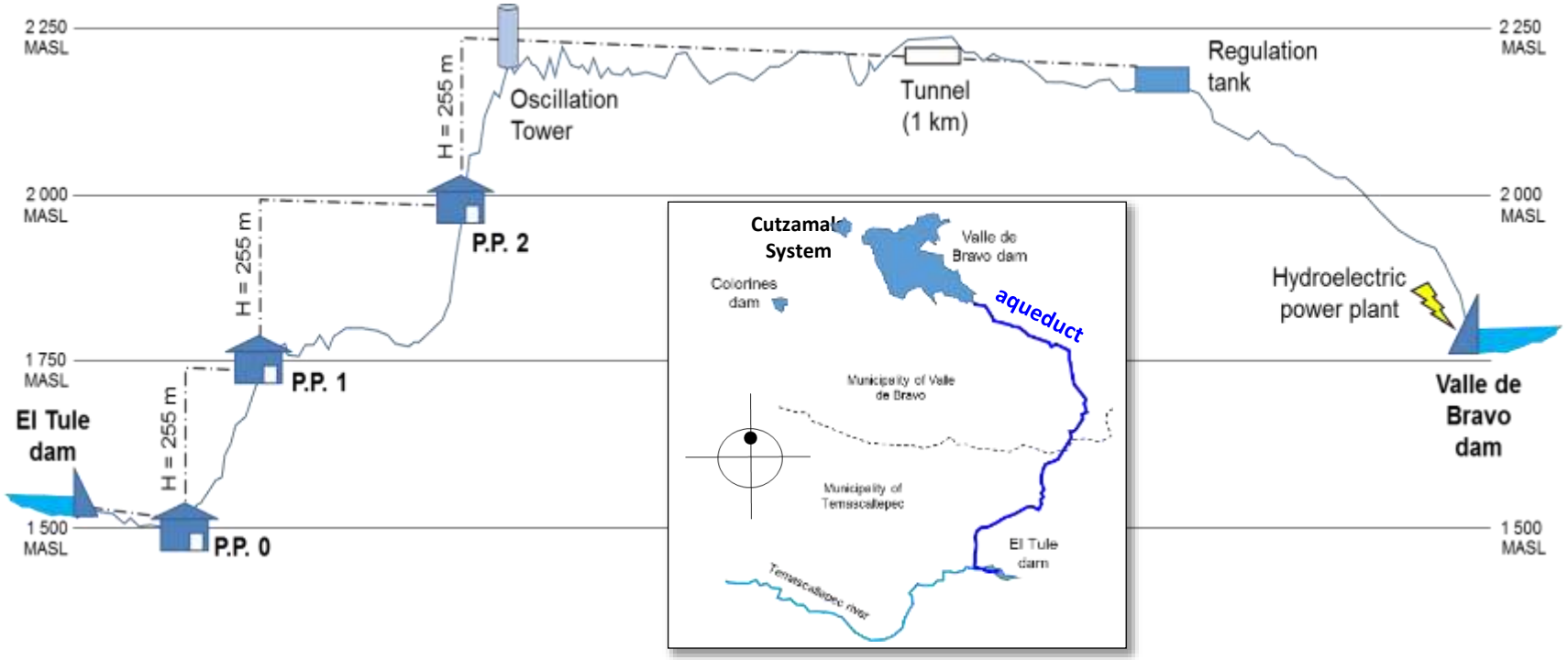




V.1 New sources of water supply

Director of the project: CONAGUA (www.conagua.gob.mx)

This Project, also known as stage IV of the Cutzamala System (SC), will take advantage of the water in "El Tule" dam and incorporate it to the SC in the Valle de Bravo dam.

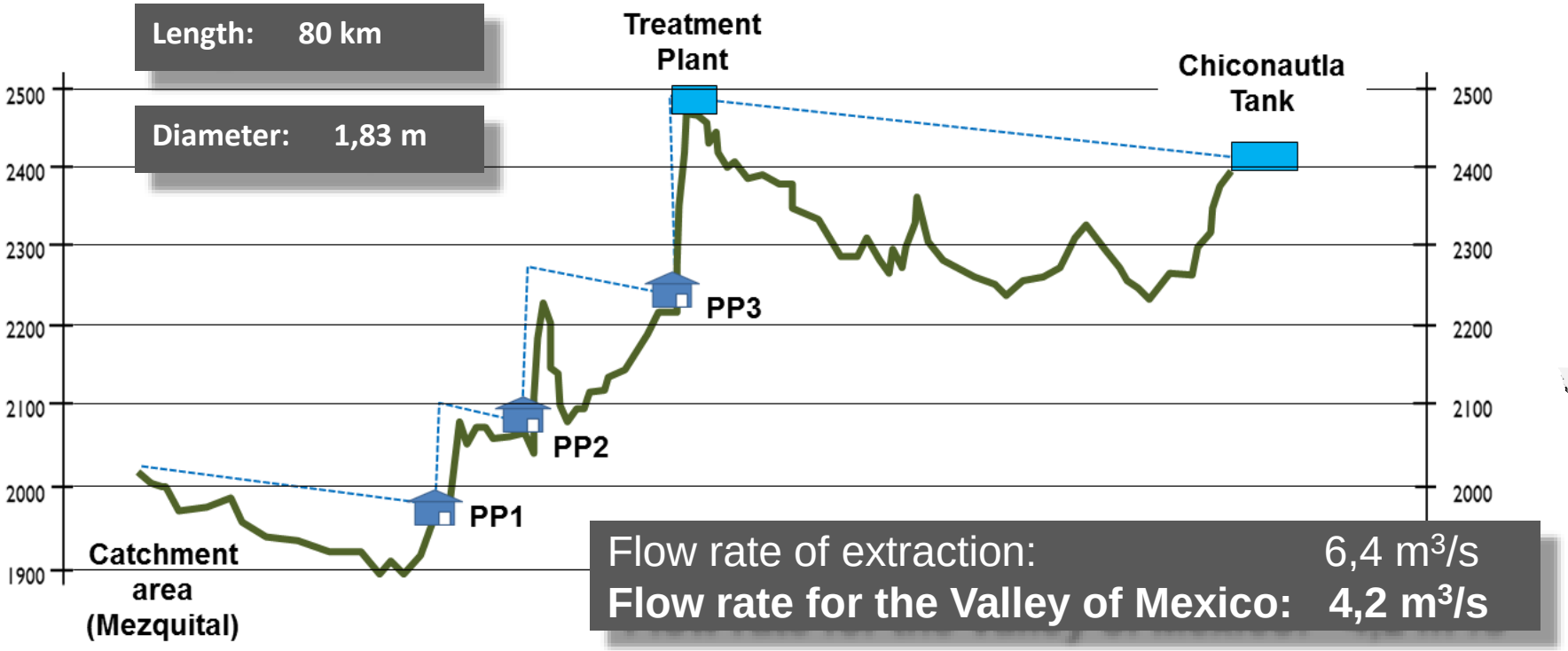


V.1 New sources of water supply

Director of the project: CONAGUA (www.conagua.gob.mx)

New sources | Aqueduct of the West | **Tula - Mezquital** | Tecolutla - Necaxa

The catchment area of Mezquital System consists of twelve batteries of extraction wells, with 200 km of interconnecting lines.



Flow rate of extraction: 6,4 m³/s
Flow rate for the Valley of Mexico: 4,2 m³/s

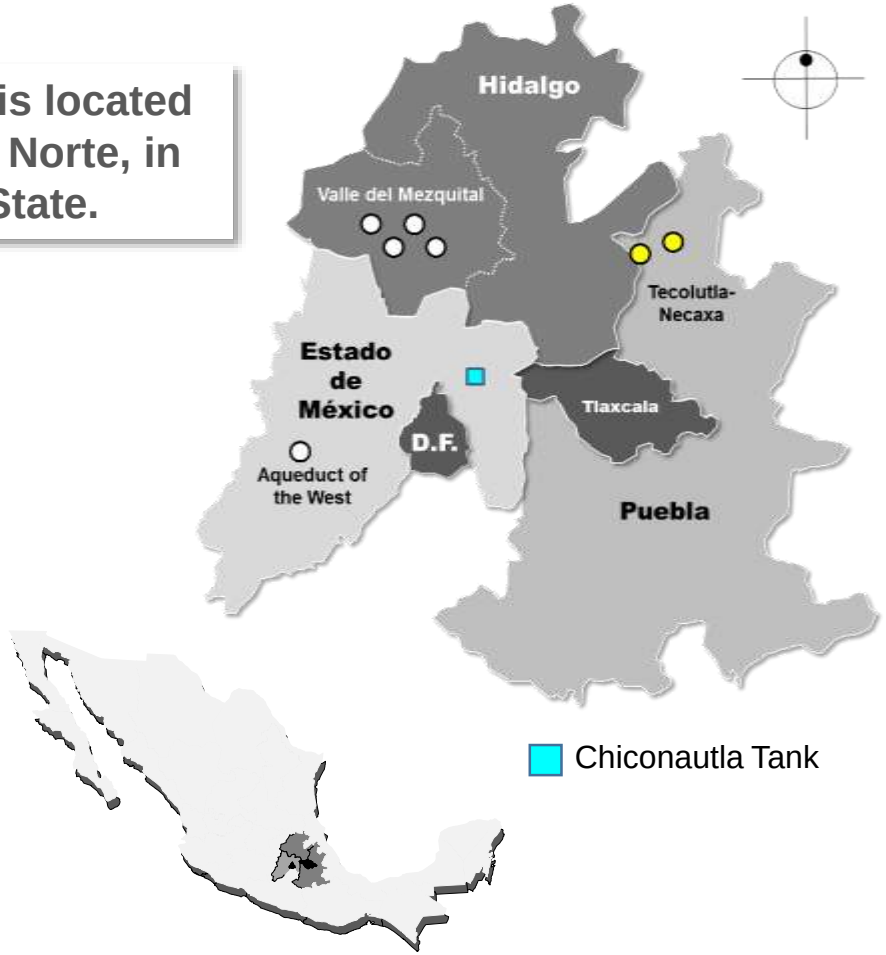
V.1 New sources of water supply

Director of the project: CONAGUA (www.conagua.gob.mx)

New sources | Aqueduct of the West | Tula - Mezquital | **Tecolutla - Necaxa**

The project includes supply approximately 12 m^3/s to the Valley of Mexico's water from the Necaxa Hydroelectric System (dams of Tenango, Nexapa, Necaxa, La Laguna and Los Reyes).

This system is located in the Sierra Norte, in Puebla State.



Preliminary data from the aqueduct:

Length:	**131 km**
Difference in elevation:	**1467 m**
Pumping Plants:	**8**

V.2 Third line of the Cutzamala System

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | Financial data | Location map

The Cutzamala system has been working 34 years without interruption. For maintenance of two existing driving lines, water supply is reduced to the population.

With a third line will be offered greater security in supply and will maintain the flow during maintenance work.

V.2 Third line of the Cutzamala System

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | **Technical data** | Financial data | Location map

Q = 12 m³/s

Length: 77,6 Km

Diameter: 2,50 m

Tubing material: steel

V.2 Third line of the Cutzamala System

Director of the project: CONAGUA (www.conagua.gob.mx)

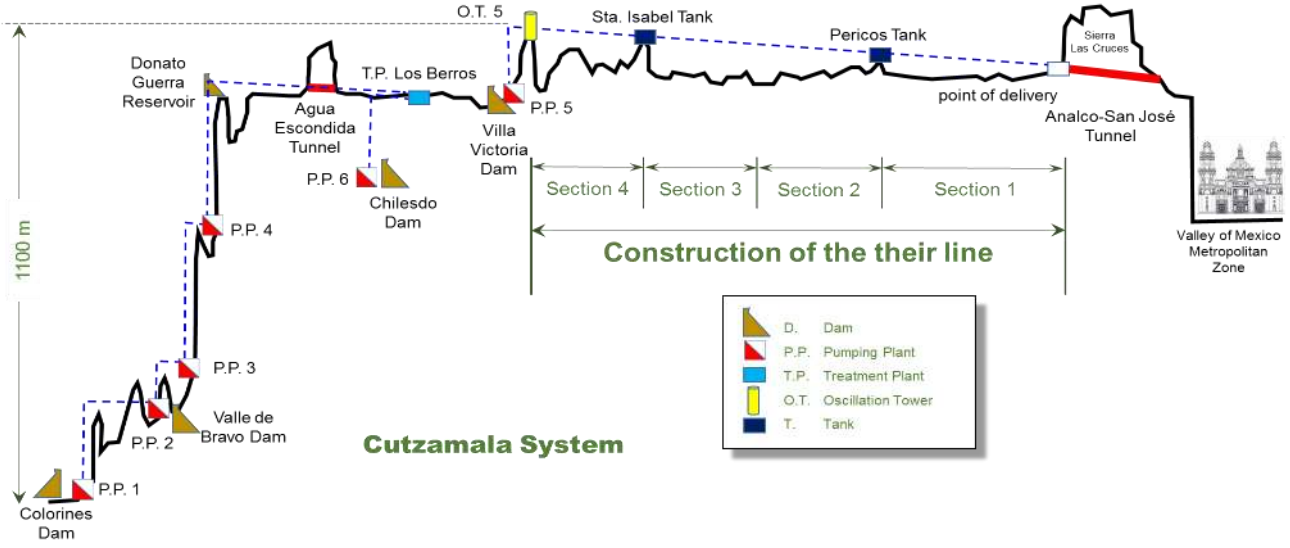
Total investment estimated: $ 4 830 millions of pesos (Federal resources, at 2014 prices)

Section	Winning consortium
Analco-San José tunnel – Pericos tank CNA-CGPEAS-FED-OP-101/2013-LPN December, 2013 - November, 2016	Álvarez y Ferreira Procuradores Técnicos y Legales Asociados, S.A. de C.V. Construcciones y Prefabricados Laguna, S.A. de C.V.
Pericos tank - PI 313 KM 42+379.53 CNA-CGPEAS-FED-OP-102/2013-LPN December, 2013 - August, 2016	La Peninsular Constructora, S.A. de C.V. Alcance Total, S.A. de C.V. Aqualia Infraestructuras de México, S.A. de C.V. Ingeniería de Bombas y Controles, S.A. de C.V.
PI 313 KM 42+379.53 - Sta. Isabel tank CNA-CGPEAS-FED-OP-103/2013-LPN December, 2013 - August, 2016	Construcciones y Servicios del Noreste, S.A. de C.V. Desarrollos Locsa, S.A. de C.V.
Sta. Isabel tank – Oscillation Tower 5 CNA-CGPEAS-FED-OP-104/2013-LPN December, 2013 - August, 2016	Productos y Estructura de Concreto, S.A. de C.V. Constructora Garza Ponce, S.A. de C.V. Construcciones y Dragados del Sureste, S.A. de C.V. Calzada Construcciones, S.A. de C.V.

V.2 Third line of the Cutzamala System

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | Financial data | **Location map**



The project starts at the Oscillation tower No. 5, in the municipality of Villa de Allende, crosses the municipalities of Villa Victoria, Almoloya de Juárez, Toluca, Temoaya, Xonacatlán, Otzolotepec, and concludes in the entrance portal of the Analco-San José tunnel, in the municipality of Lerma.

V.3 Atotonilco W.W.T.P.

Director of the project: CONAGUA (www.conagua.gob.mx)

The Valley of Mexico Basin has one of the country's lowest wastewater treatment indices (6%), which produces pollution and a serious water imbalance in the basin.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

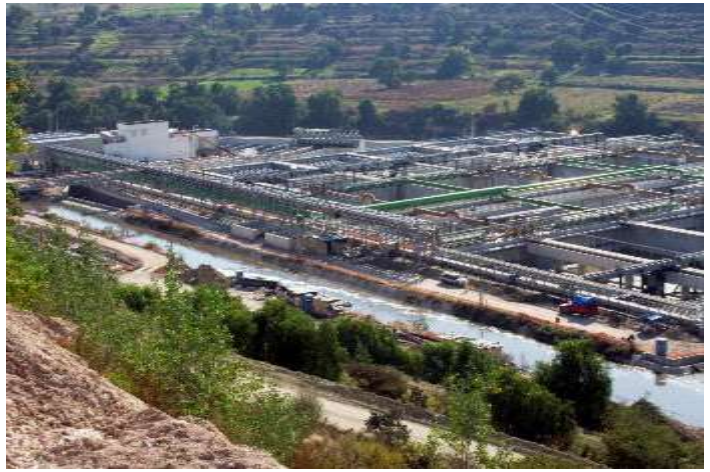
Benefits:

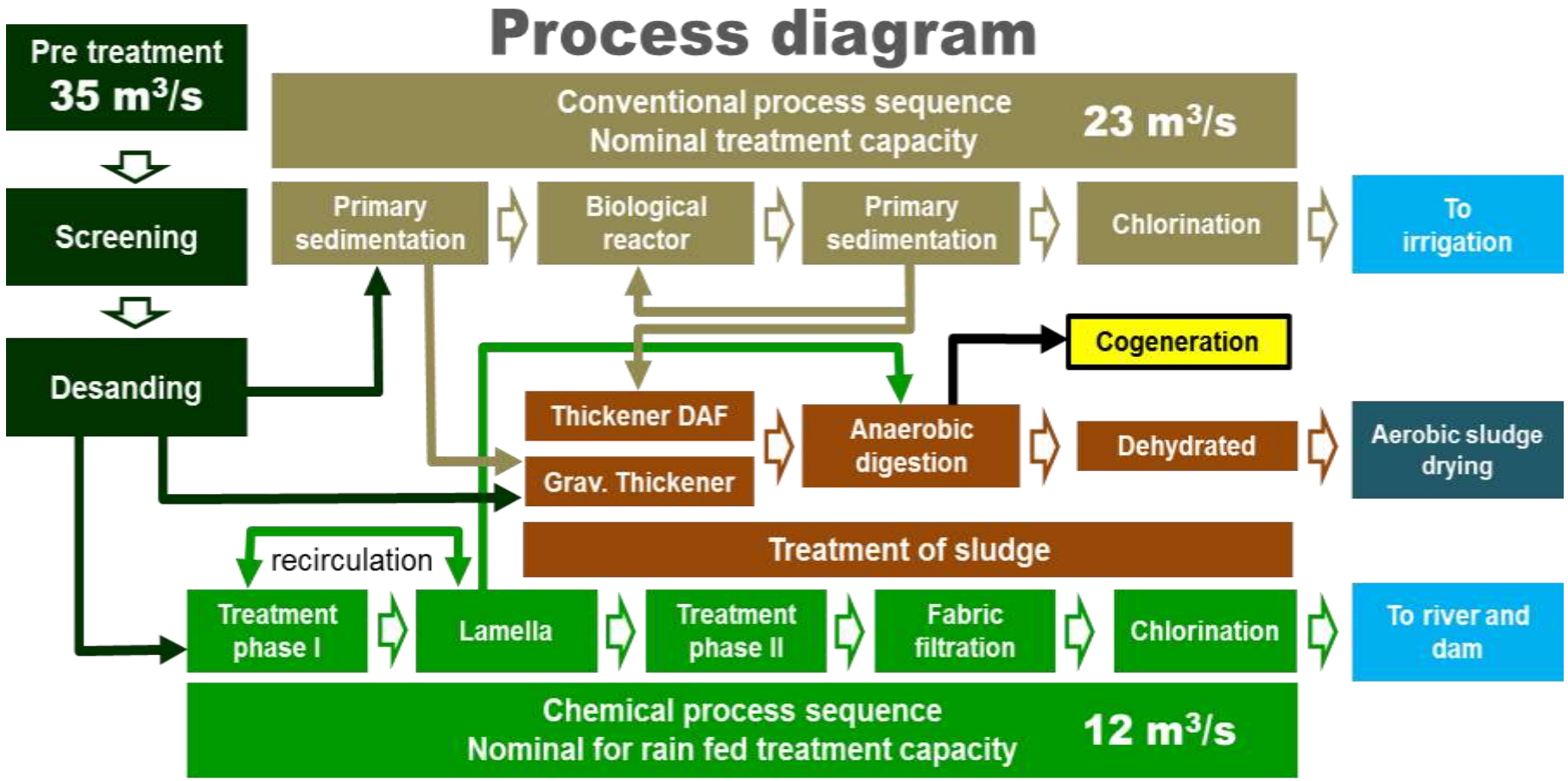
- To treat more than 60% of the wastewater produced in the Valley of Mexico.
- To irrigate with treated wastewater more than 80 thousand hectares in the Tula Valley, thus enhancing the region's agricultural potential.
- To restore the good conditions of the surface water bodies and streams that receive wastewater.
- To improve the sanitation conditions of over 300 000 people who live in irrigation zones.

The construction of the plant is completed. It is in the testing process.

V.3 Atotonilco W.W.T.P.

Director of the project: CONAGUA (www.conagua.gob.mx)





V.3 Atotonilco W.W.T.P.

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | **Financial data** | Location map

Total investment estimated

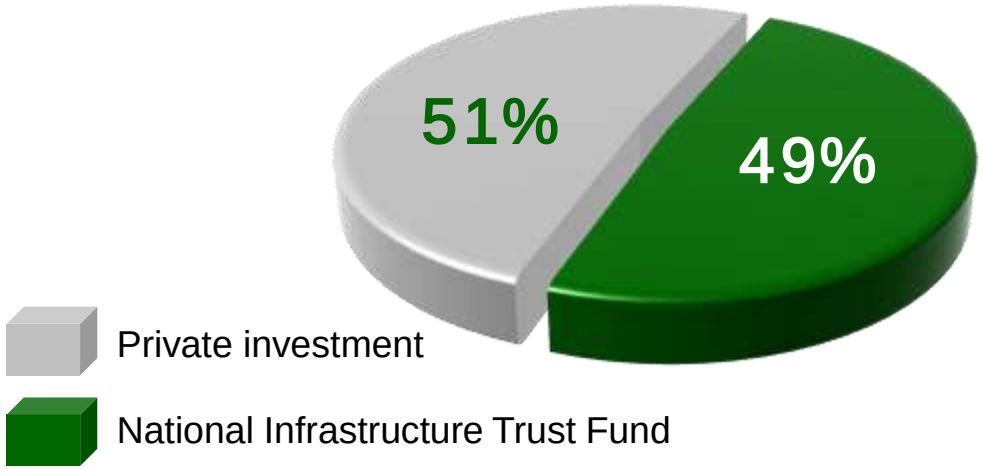
(at 2014 prices)

$ 9 564

millions of pesos

I.I.R.: 14,2 %

Investments sources



The construction of the wastewater treatment plant is performed under the DBOT scheme
(design, build, operate and transfer)
with a concession for operation.

The construction of the plant is completed. It is in the testing process.

Opening of the tender (DOF): May 12, 2009

Contract signed: January 7, 2010

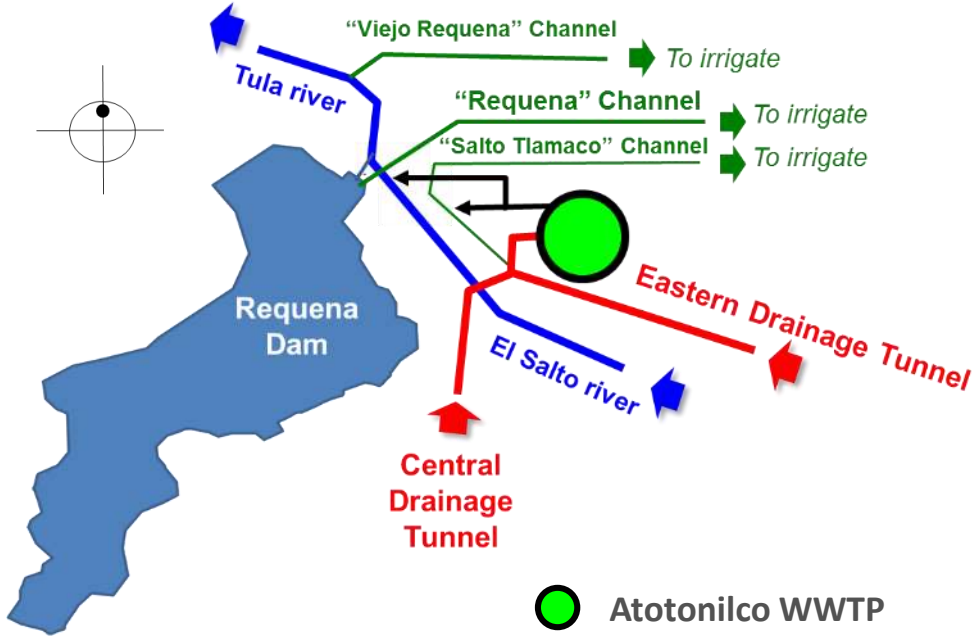
Winning consortium: Promotora del Desarrollo de América Latina, S.A. de C.V.; Controladora de Operaciones de Infraestructura, S.A de C.V.; Atlatec, S.A. de C.V.; Acciona Agua, S.A.; Desarrollo y Construcciones Urbanas, S.A. de C.V. ; Green Gas Pioneer Crossing, L.L.C.

V.3 Atotonilco W.W.T.P.

Director of the project: CONAGUA (www.conagua.gob.mx)

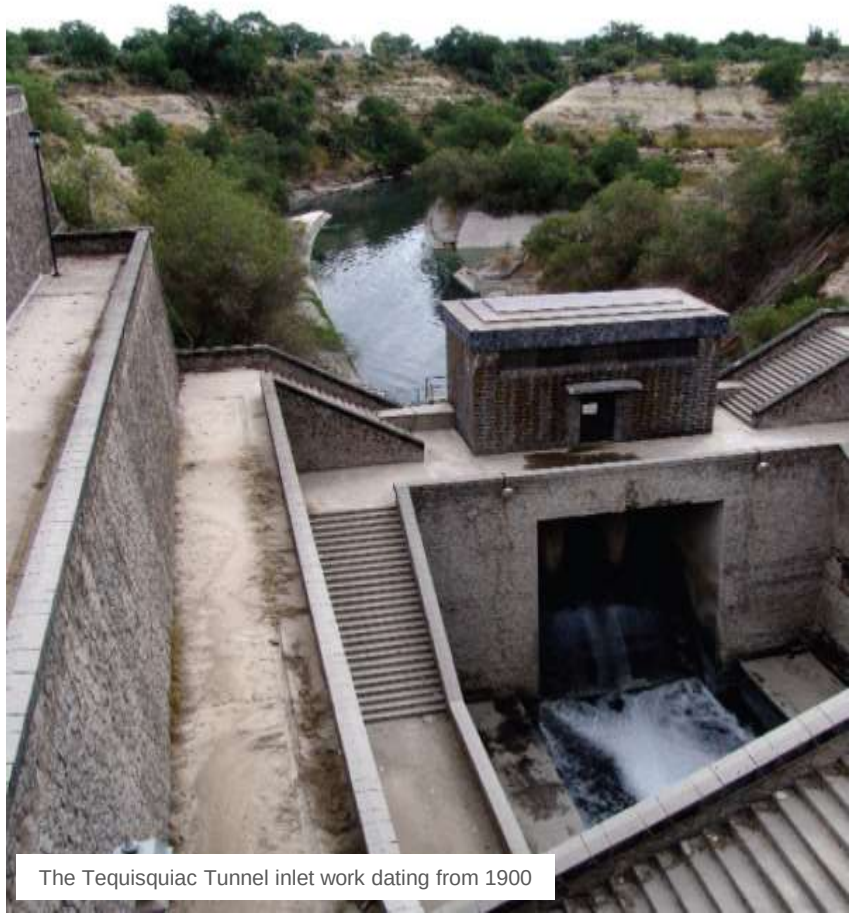
Reason | Technical data | Financial data | **Location map**

The plant is built in the municipality of “Atotonilco de Tula” in the state of Hidalgo.



V.4 Eastern Drainage Tunnel (TEO)

Director of the project: CONAGUA (www.conagua.gob.mx)



The Tequisquiac Tunnel inlet work dating from 1900

Hydrological and hydraulic studies determined the need to reinforce the Main Drainage System with works to drain up to another 150 m³/s and others to increase the regulatory capacity during the rainy season.

The Eastern Drainage Tunnel (TEO) will strengthen the Main Drainage System of the Valley of Mexico Metropolitan Zone for the benefit of its 20 million inhabitants.

By having sufficient capacity to drain wastewater and also rainwater, this will provide water sustainability in the Valley of Mexico Metropolitan Zone by reducing the risk of flooding.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

V.4 Eastern Drainage Tunnel (TEO)

Director of the project: CONAGUA (www.conagua.gob.mx)

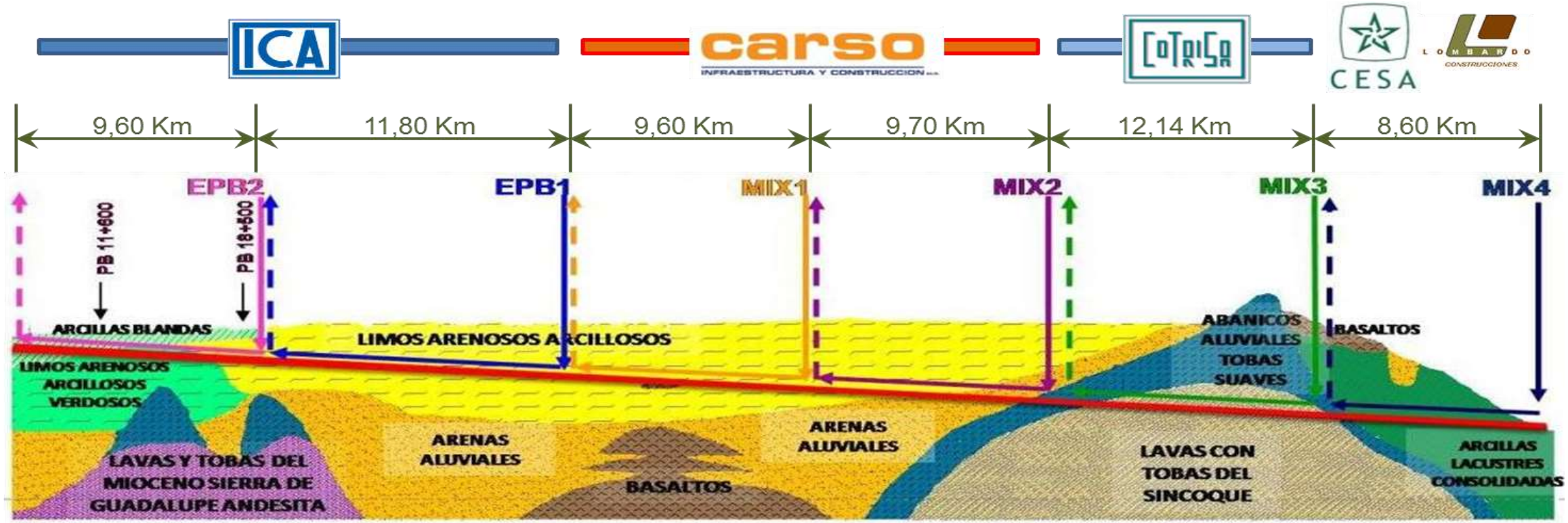
Reason | **Technical data** | Financial data | Location map

Features of the tunnel:

Diameter: 7 m
Length: 62 km

Depth: 30 a 150 m
Slop: 0,0016

Ports: 24
Capacity: 150 m³/s
Return Period: 50 years



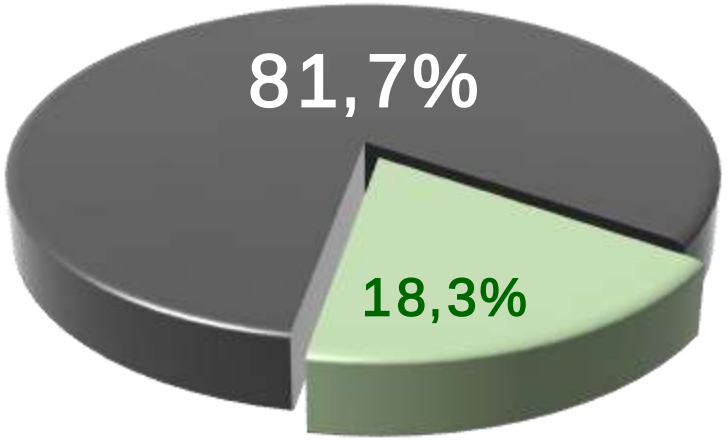
V.4 Eastern Drainage Tunnel (TEO)

Director of the project: CONAGUA (www.conagua.gob.mx)

Total investment estimated: $ 39 034 millions of pesos (at 2015 prices)

Commissioning of the first 10 kilometers of the Eastern Drainage Tunnel

Investments sources



I.I.R.: 22,9 %

Federal Resources

1928 Trust Fund

V.4 Eastern Drainage Tunnel (TEO)

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | Financial data | **Location map**

The project begins at the intersection of the Grand Canal and the Los Remedios River, on the boundary between Mexico City (Federal District) and the State of Mexico, and ends in the municipality of Atotonilco, in the State of Hidalgo, near the outlet of the Central Drainage Tunnel.

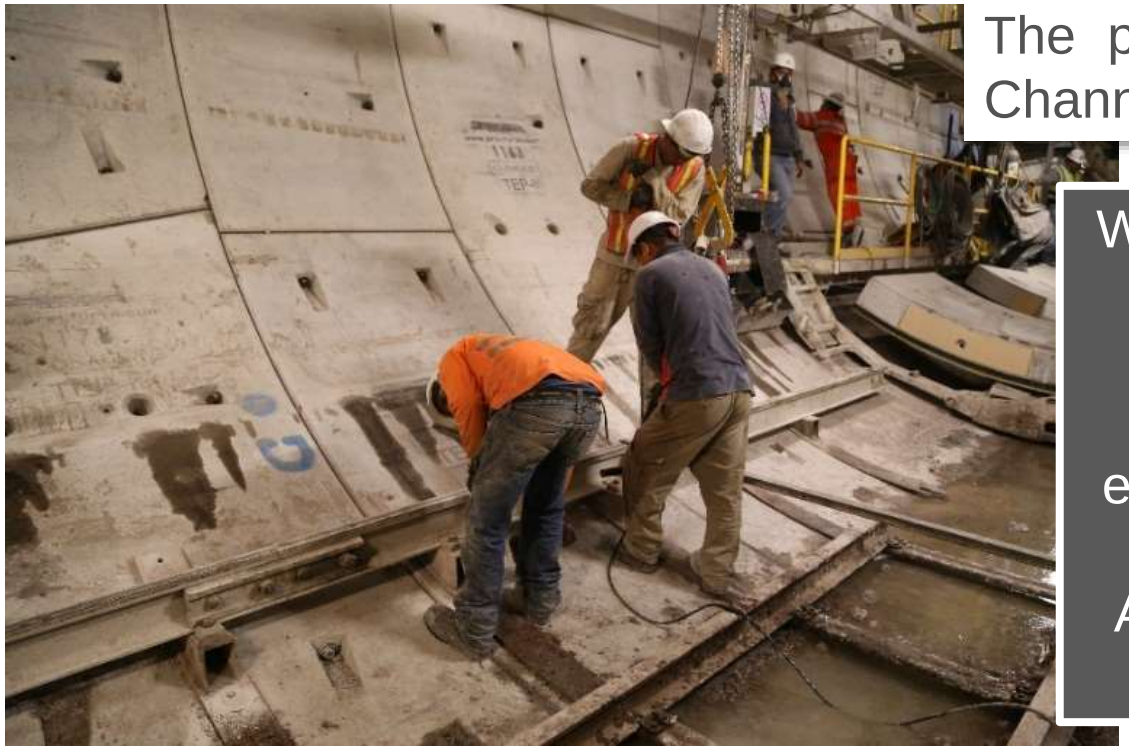
This tunnel will pass through several municipalities in the State of Mexico.

V.5 West Drainage Tunnel II (TEPII)

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | Financial data | Location map

Conagua developed the project of West Drainage Tunnel II, to strengthen the current Issuer of the west, and ensure the efficient eviction of the rainwater and residual water from the northwest area.



The project takes advantage of the West Drainage Open Channel, receiving the new TEPII water without pumping.

With the construction of the TEPII, you will be protecting the area Northwest floods and disasters associated with events of extraordinary rains (municipalities of Naucalpan, Tlalnepantla, Atizapán and Cuautitlán Izcalli in the State of Mexico).

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

V.5 West Drainage Tunnel II (TEPII)

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | **Technical data** | Financial data | Location map

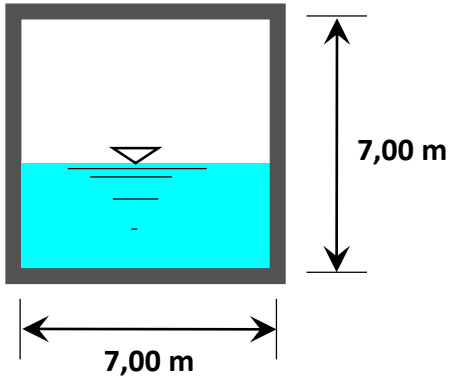
Capacity: 112 m³/s

Length: 9,8 km

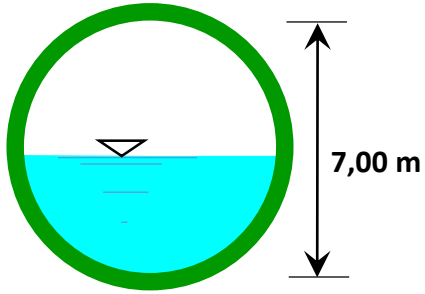
Depth: 12 to 110 m

Cross-section of the five main sections

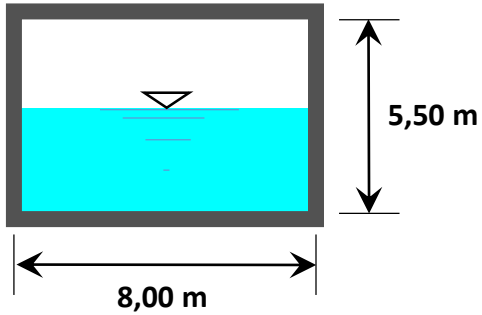
SECTION 1
Tlalnepantla-Atizapán



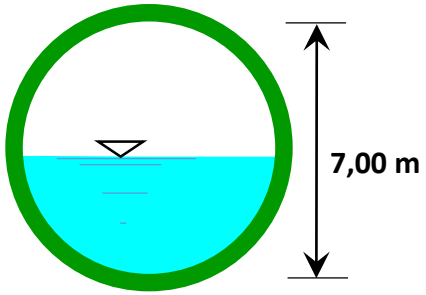
SECTION 2
Atizapán-Valle Dorado



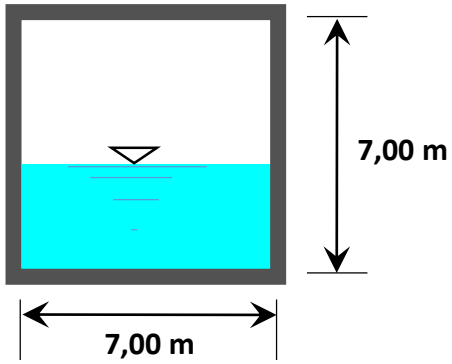
SECTION 3
Valle Dorado-San Javier



SECTION 4
San Javier-Outlet portal



SECTION 5
Outlet portal



V.5 West Drainage Tunnel II (TEPII)

Director of the project: CONAGUA (www.conagua.gob.mx)

Total investment estimated: $ 2 228 millions of pesos

(at 2014 prices)

- Construction of West Drainage Tunnel II (first stage)
- Project and Rectification of West Drainage Open Channel

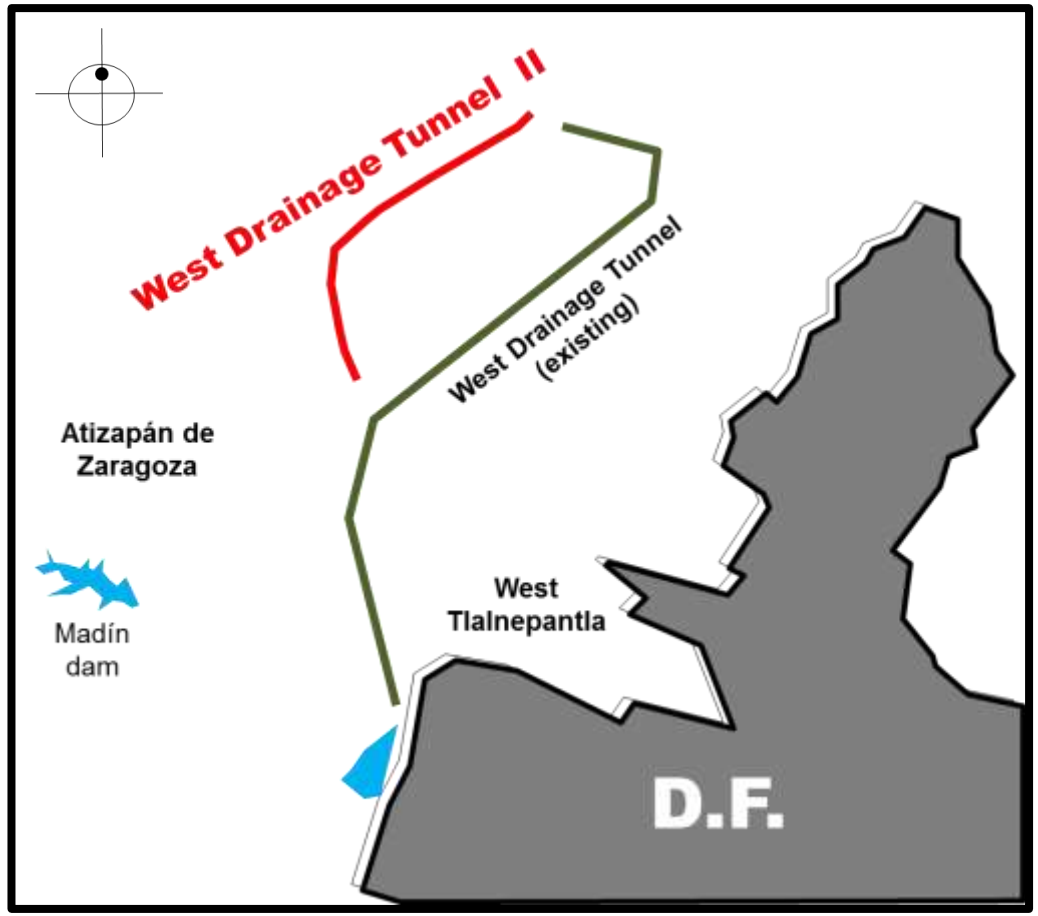
Tender No. CNA-CPEAS-FIDE-OP-41/2013-LPN
Investment: $ 1 795,5 millions (excluding VAT)
Period of execution: December, 2013 to March, 2017

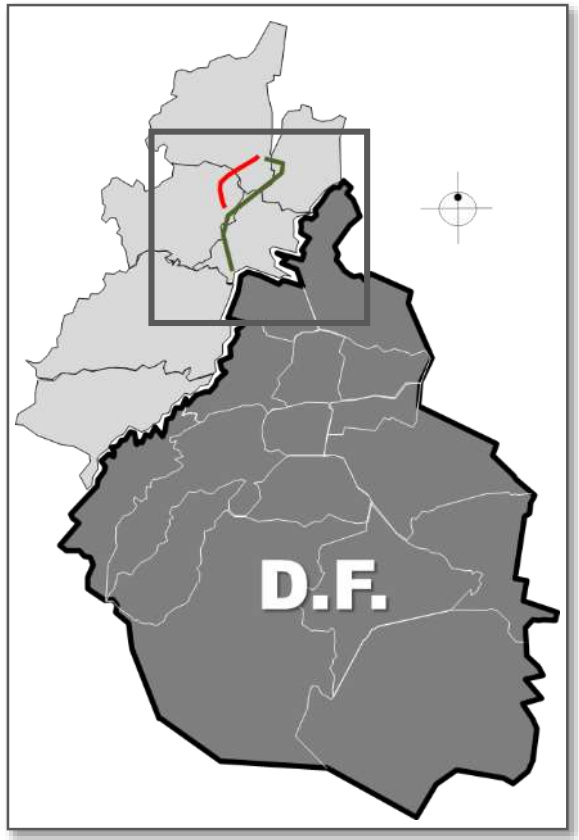
Investment sources:

Winning consortium: Proacon México, S.A. de C.V.
Construcciones Aldesem, S.A. de C.V.
Regiomontana de Construcción y Servicios, S.A.P.I. de C.V.

V.5 West Drainage Tunnel II (TEPII)

Director of the project: CONAGUA (www.conagua.gob.mx)





V.6 General Channel Tunnel

Director of the project: CONAGUA (www.conagua.gob.mx)

The current **General Channel** has reduced its carrying capacity by subsidence of the land.

With the construction of the General Channel Tunnel protection against floods, will be strengthened since it vacate sewage and rain waters in the area, working fully with the Río de la Compañía tunnel and La Caldera pumping plant.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

V.6 General Channel Tunnel

Director of the project: CONAGUA (www.conagua.gob.mx)

Features of the tunnel:

Capacity:	20 m^3/s
Diameter:	5,0 m
Length:	7,9 km

Features of the 4 Ports:

Diameter:	12 m
Depth:	25 m

V.6 General Channel Tunnel

Director of the project: CONAGUA (www.conagua.gob.mx)

Total investment estimated:

(at 2014 prices)

$ 1 381
millions of pesos

Investment sources:

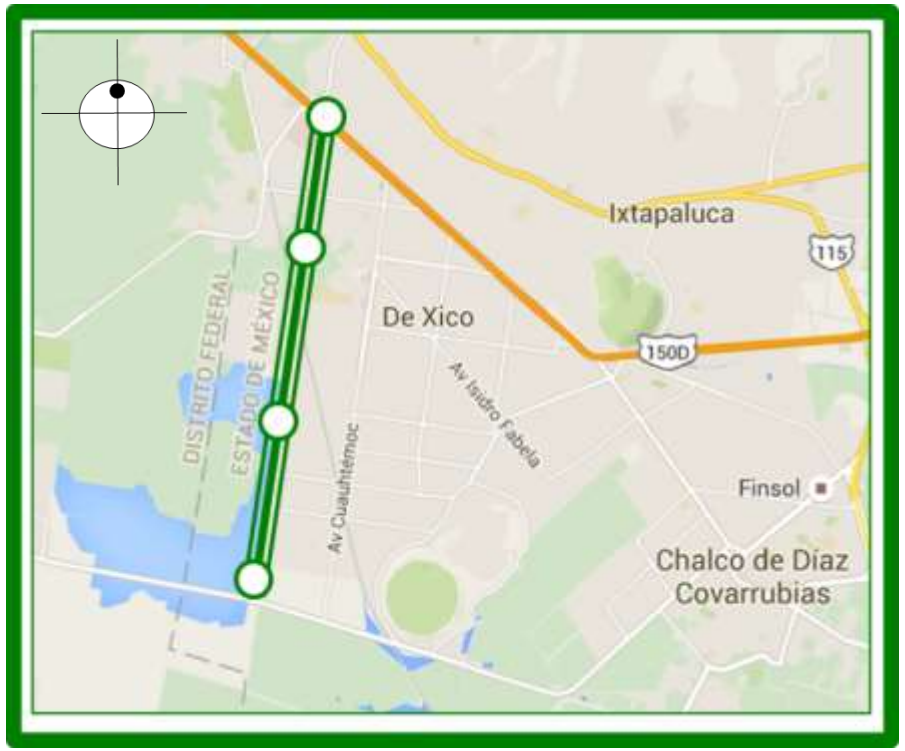
Tender No. CNA-CGPEAS-FIDE-OP-122/2013-LPN
Period of execution: February, 2014 to February, 2017

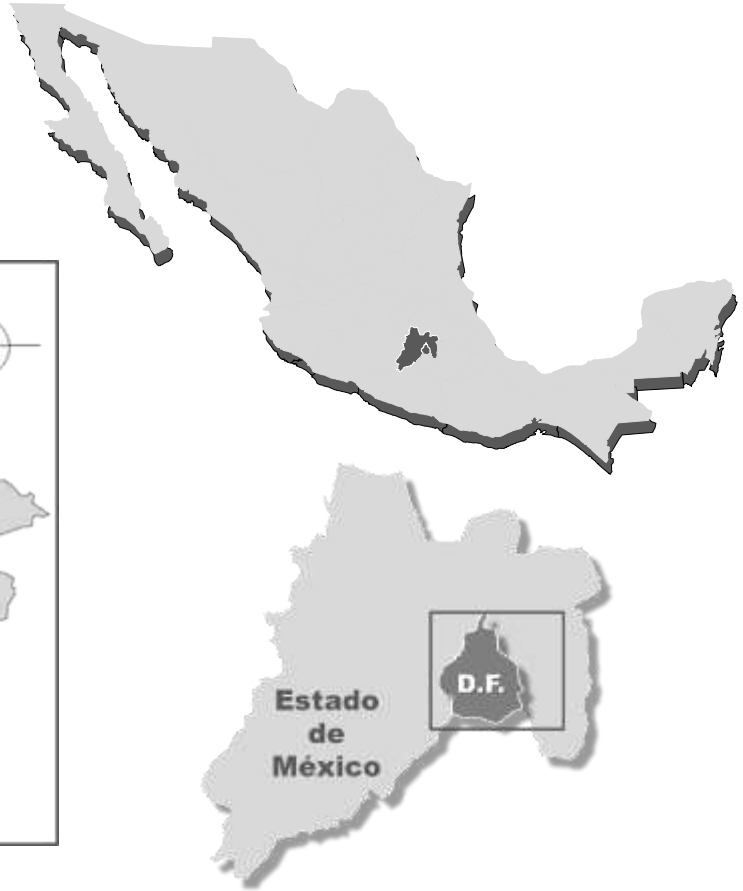
Winning consortium: Ingenieros Civiles Asociados, S.A. de C.V. and Construcciones y Trituraciones. S.A. de C.V .

V.6 General Channel Tunnel

Director of the project: CONAGUA (www.conagua.gob.mx)

The tunnel starts at the intersection with the Chalco-Tláhuac road and ends at Port 3A of the Río de la Compañía tunnel.

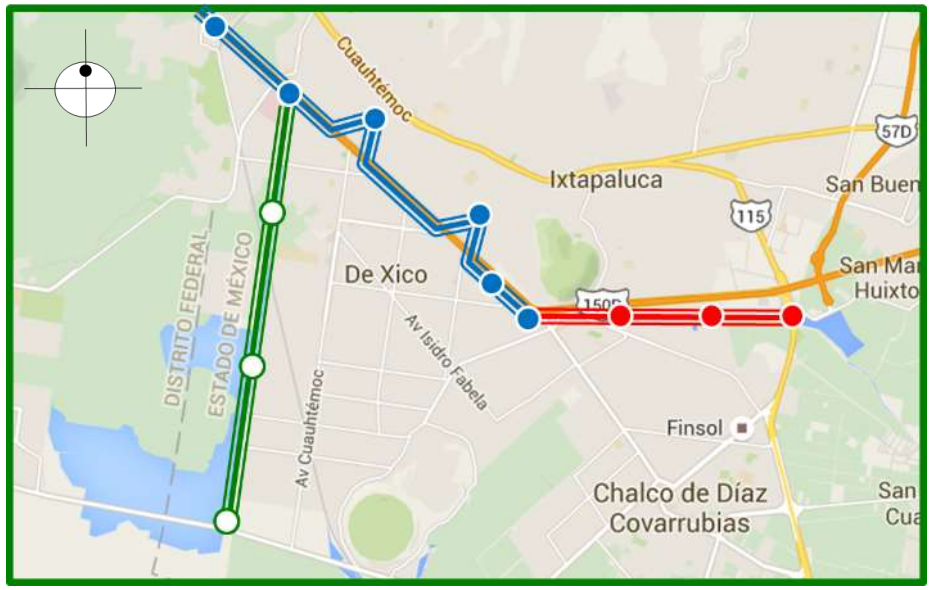




V.7 Río de la Compañía Tunnel II

Director of the project: CONAGUA (www.conagua.gob.mx)

Permanent monitoring of the Río de la Compañía channel, in the section that still works as an open channel, suggests that they could generate conditions of risk which forced the construction of tunnel and vent closed for drought-like.



Río de la Compañía II Tunnel (under review)
Río de la Compañía Tunnel (existing)
General Channel Tunnel (under construction)

Under review

Features of the tunnel:

Capacity:	**20 m³/s**
Diameter:	**5,0 m**
Length:	**7,9 km**

P.1 El Zapotillo Dam

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | Financial data | Location map

The National Water Commission and the Governments of the States of Guanajuato and Jalisco are carrying out this project on the Verde River in order to utilize up to 8,6 m^3/s for drinking water supply to:

- **León, Gto. 3,8 m^3/s**
- **Altos de Jalisco 1,8 m^3/s**
- **Guadalajara, Jal. 3,0 m^3/s**

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

Population benefited:

1,1 million inhabitants of León, Guanajuato
0,3 million inhabitants of Los Altos, Jalisco
1,4 million inhabitants

The population of León is supplied mainly through groundwater sources.
Aquifer overexploitation causes an estimated 3m annual decrease in water table levels.

The El Zapotillo project will make it possible to transfer a volume of around 120 million m^3 per year from the Verde River Basin to the Lerma River Basin, which is overexploited.

P.1 El Zapotillo Dam

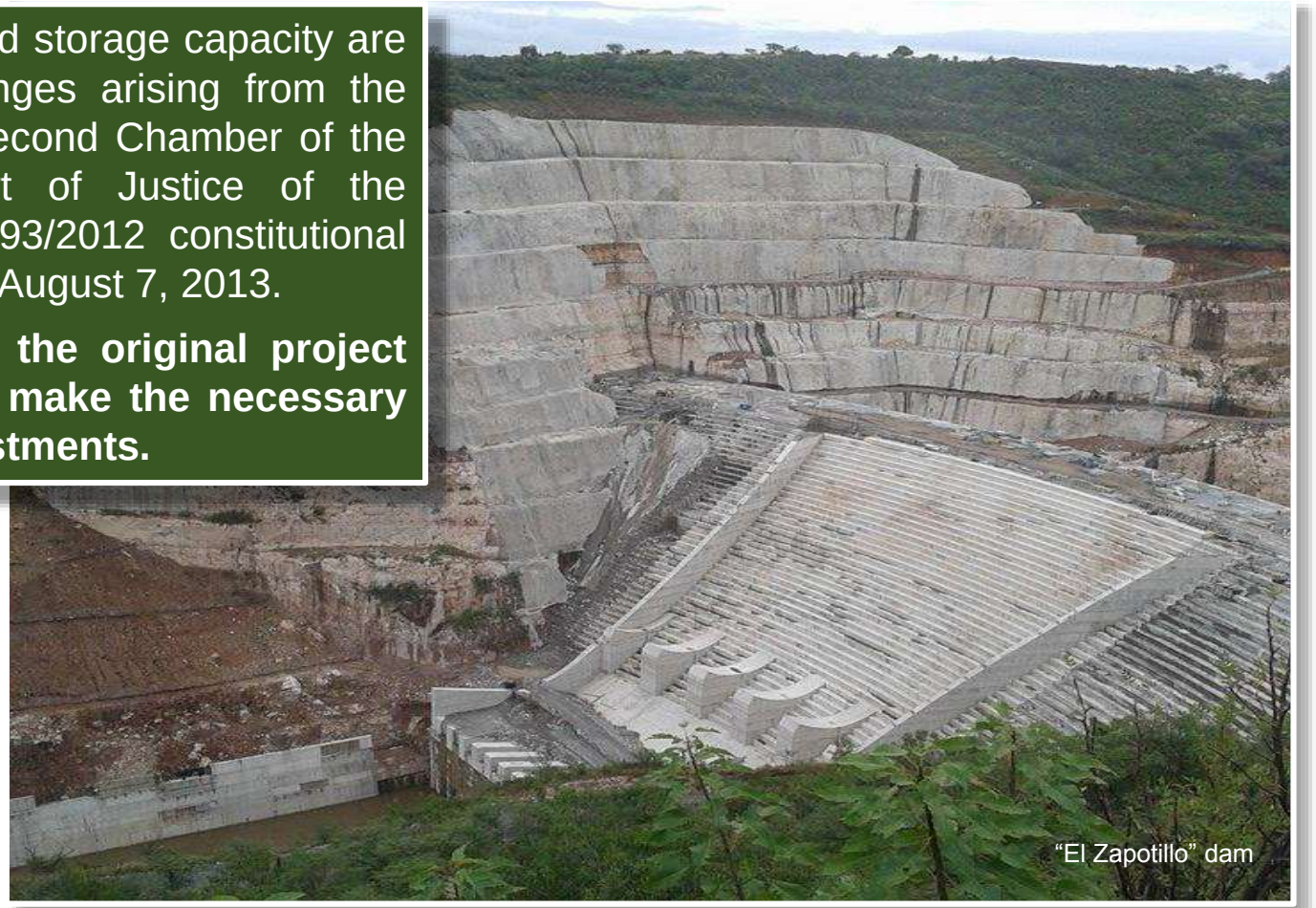
Director of the project: CONAGUA (www.conagua.gob.mx)

Basic data:

Storage capacity:	**411* Mm^3**
Height of dam:	**80* m**
Aqueduct:	**140 km**
diameter:	**2,54 m**
Pumping height:	**500 m**

*Dam height and storage capacity are subject to changes arising from the ruling by the Second Chamber of the Supreme Court of Justice of the Nation, in the 93/2012 constitutional controversy, on August 7, 2013.

The review of the original project has started to make the necessary technical adjustments.



"El Zapotillo" dam

In addition:

- Water treatment plant (3,8 m^3/s)
- Two pumping plants
- Storage tank (100 000 m^3)
- Distribution macro circuit (43 km) in the city of León, Guanajuato

P.1 El Zapotillo Dam

Director of the project: CONAGUA (www.conagua.gob.mx)

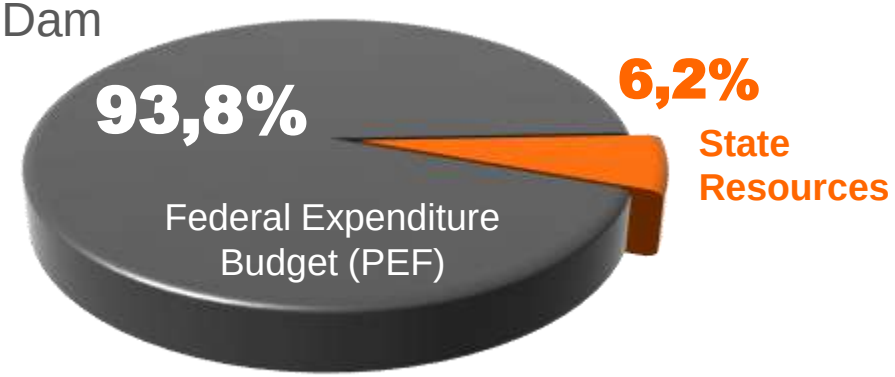
Total investment estimated: $ 16 162 millions of pesos

(at 2014 prices)

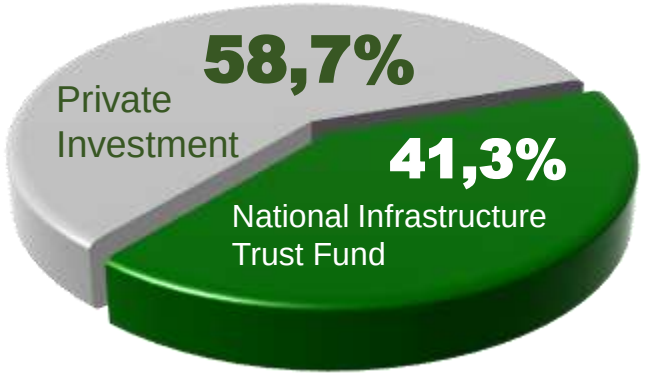
I.I.R.: 13,19 %

Investment sources

Dam



Aqueduct, treatment plant and distribution macro circuit (contract for the provision of services)



Winning consortium

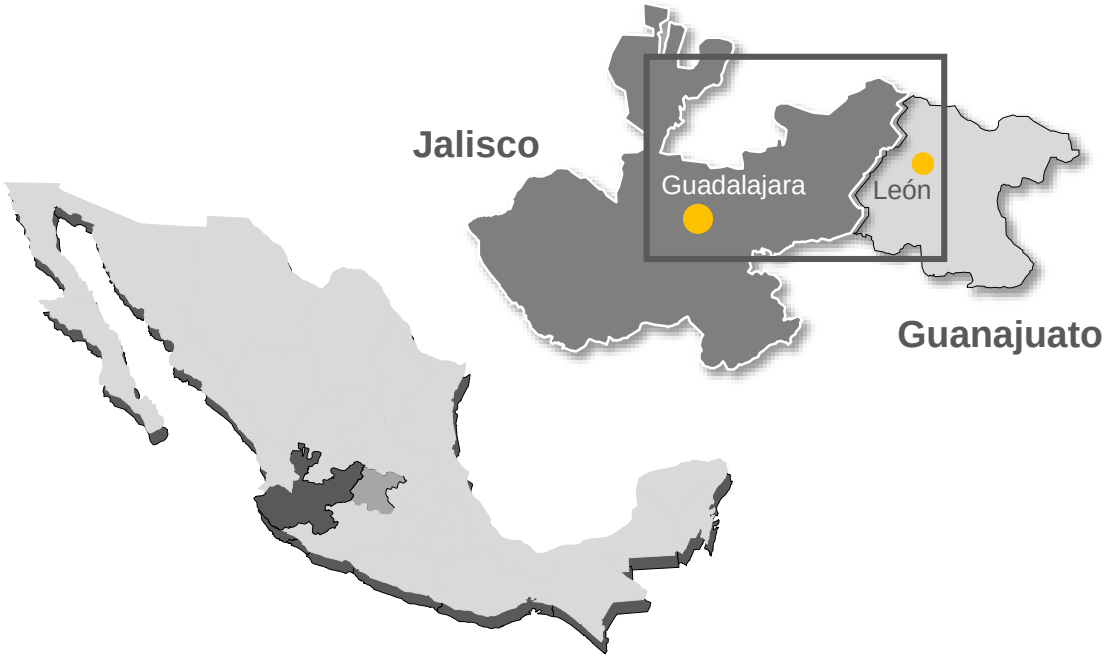
Dam:	La Peninsular Compañía Constructora, S.A. de C.V.; FCC Construcción, S.A.; Grupo Hermes, S.A de C.V.
Aqueduct:	Abengoa México, S.A. de C.V.; Abeinsa Infraestructuras Medio Ambiente, S.A. Sociedad Unipersonal; Abeinsa, Ingeniería y Construcción Industrial, S.A.

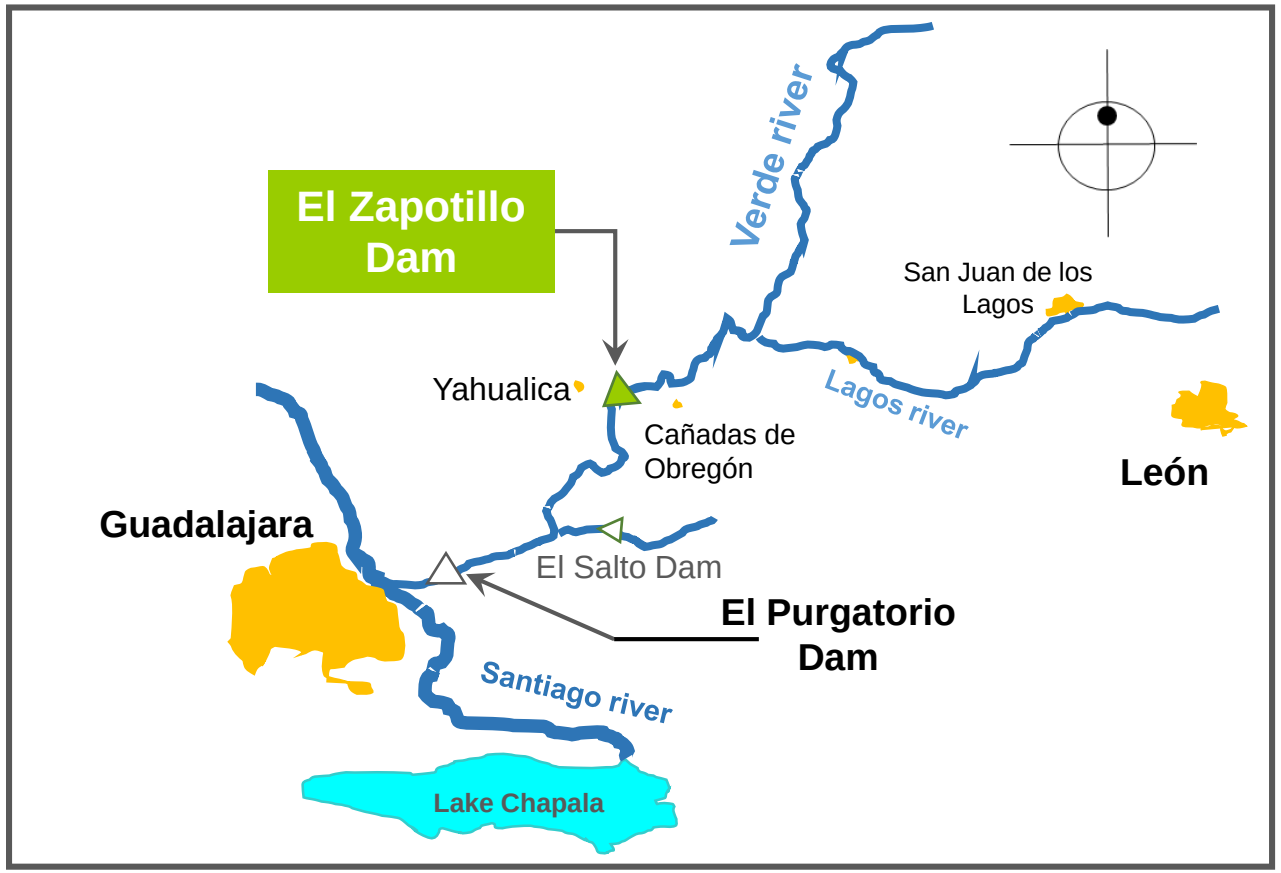
P.1 El Zapotillo Dam

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | Financial data | **Location map**

The dam site is 100 km from Guadalajara, on the Verde River, in the State of Jalisco.





P.2 El Purgatorio Dam

Director of the project: Comisión Estatal del Agua de Jalisco (www.ceajalisco.gob.mx)

Reason | Technical data | Financial data | Location map

The National Water Commission and the Government of the State of Jalisco are promoting the El Purgatorio Project on the Verde River to utilize: **5,6 m³/s**

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

Population benefited: 4,4 million inhabitants

- **Use of the El Salto dam (existing) 0,8 m³/s**
- **Diversion from the El Zapotillo dam 3,0 m³/s**
- **Capture from the catchment of El Purgatorio dam 1,8 m³/s**

The conurbated area of the city of Guadalajara is mainly supplied by surface water. 60% of the current supply comes from Lake Chapala.

The El Purgatorio Project, supported by the "El Zapotillo" Project, will make it possible to preserve Lake Chapala and contribute towards the ecological recovery of the Lerma-Chapala Basin.

P.2 El Purgatorio Dam

Director of the project: Comisión Estatal del Agua de Jalisco (www.ceajalisco.gob.mx)

Basic data:

Diversion dam:	3,5 Mm^3
Pumping height:	565 m

Aqueducts:

- pumping: 2,4 km
- gravity (2): 4,3 km

Conduction Ocotillo: 12,0 km

In addition:

- ❑ Pumping plant
- ❑ Ocotillo treatment plant
- ❑ San Gaspar treatment plant (capacity increase)
- ❑ Regime change tank (240 000 m^3)
- ❑ Southern and western distribution systems

P.2 El Purgatorio Dam

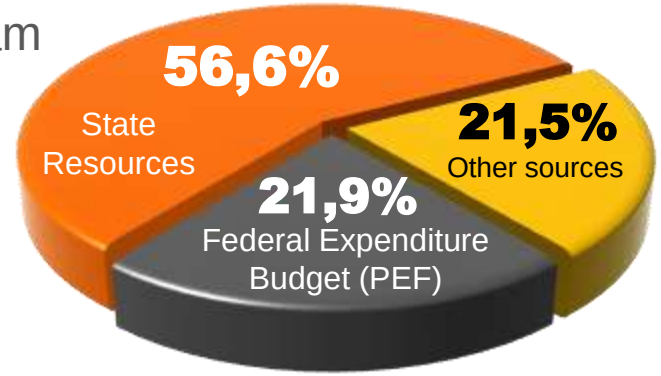
Director of the project: Comisión Estatal del Agua de Jalisco (www.ceajalisco.gob.mx)

Total investment estimated: $ 6 788 millions of pesos
(at 2014 prices)

I.I.R.: 15,07 %

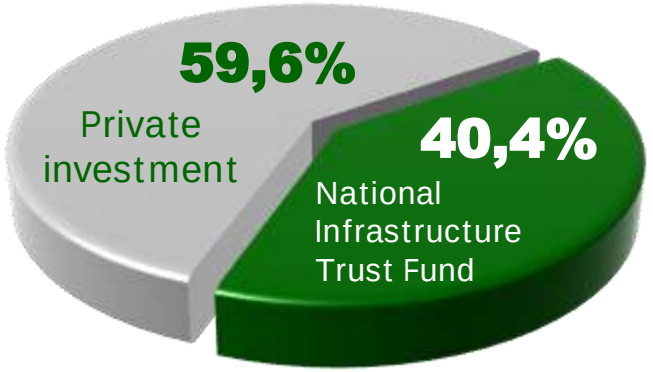
Investment sources

Dam



The construction of the dam is performed in accordance with Mexican Public Works Law.

Aqueduct, treatment planta and distribution system
(contract for the provision of services)

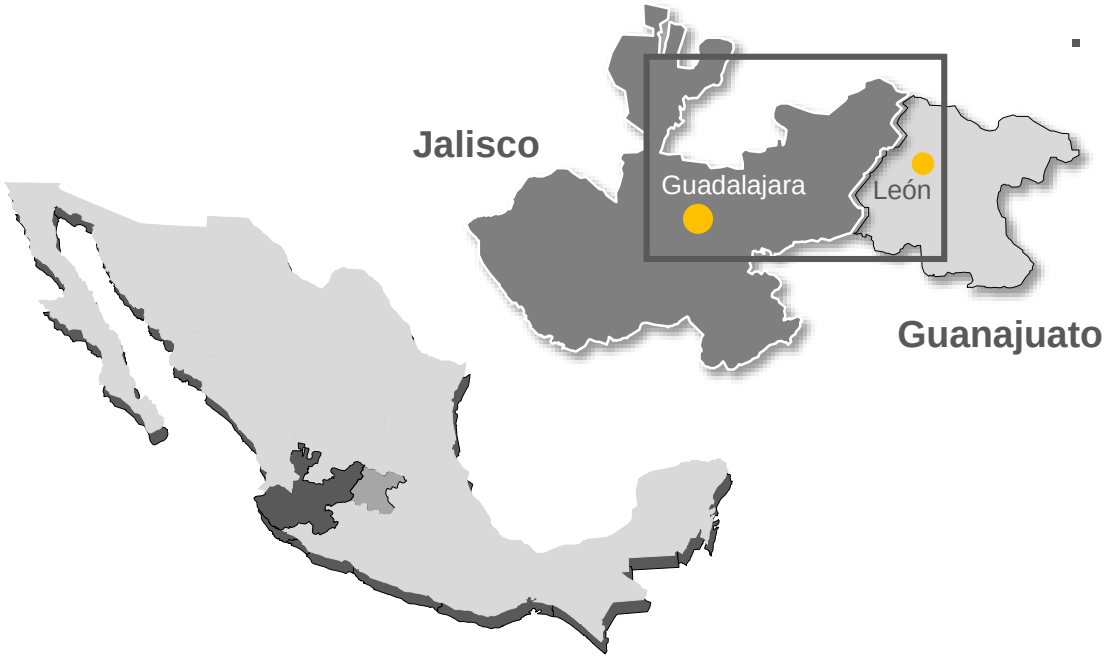


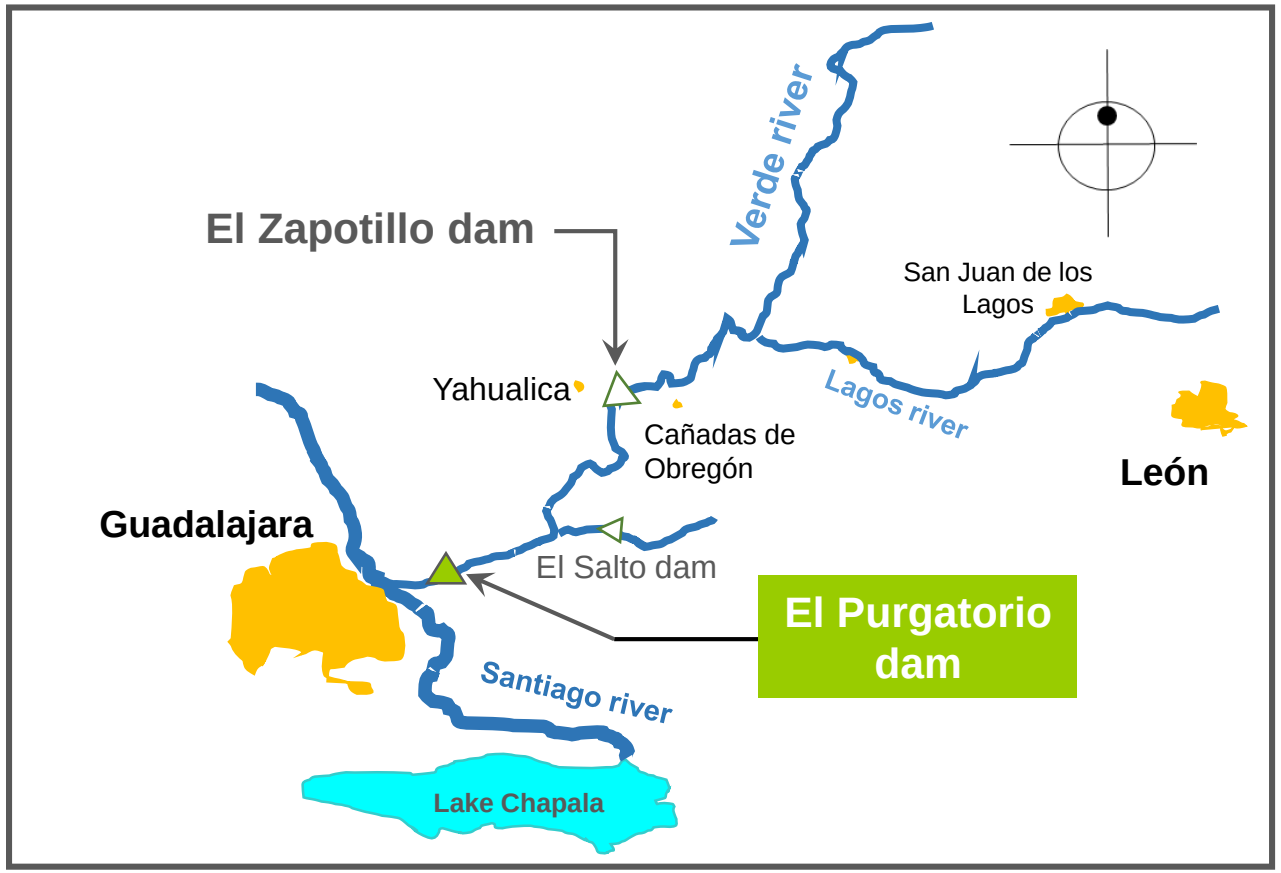
Opening of the tender (DOF):	July 17, 2012
Decision:	November 16, 2012
Winning consortium:	Isolux México, S.A. de C.V.; Corsan-Corviam, Construcción, S.A.; Ayesa Ingeniería y Arquitectura, S.A.U.; Ayesa México, S.A. de C.V.

P.2 El Purgatorio Dam

Director of the project: Comisión Estatal del Agua de Jalisco (www.ceajalisco.gob.mx)

The dam site is located on the Santiago River in the municipality of Zapopan, State of Jalisco





P.3 El Realito Dam

Director of the project: Comisión Estatal del Agua de San Luis Potosí (www.ceaslp.gob.mx)

Opening of the aqueduct (1st stage)

The National Water Commission and the governments of the States of San Luis Potosí and Guanajuato are developing this project to construct a dam that regulates 2 m^3/s and is utilized to supply drinking water to:

San Luis Potosí C.Z.	**1 m^3/s (1st stage)**
Celaya, Gto.	**1 m^3/s (2nd stage)**

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

This project will make it possible to revert dwindling aquifer levels and avoid the gradual increase in land subsidence that are affecting urban infrastructure and housing.

Population benefited: 800 000 inhabitants (1st stage)

The dam was inaugurated on October 9, 2012

The aqueduct (1st stage) is was inaugurated on January 22, 2015

P.3 El Realito Dam

Director of the project: Comisión Estatal del Agua de San Luis Potosí (www.ceaslp.gob.mx)

Regulation de 2 m³/s

Storage dam:	50 Mm³
Height of the dam:	88 m

Utilization of 1 m³/s

1st stage, San Luis Potosí C.Z.

Aqueduct:	133 km
Diameters:	0,91 m 1,42 m
Pumping height:	1 050 m

This project includes the implementation of a **Comprehensive Improvement of Management Program** (MIG) in the provision of services in the San Luis Potosí C.Z., enabling the financial feasibility of the investment.

Spillway, El Realito dam

P.3 El Realito Dam

Director of the project: Comisión Estatal del Agua de San Luis Potosí (www.ceaslp.gob.mx)

Total investment estimated: $ 3 527 millions of pesos (1st stage, San Luis Potosí C.Z.)

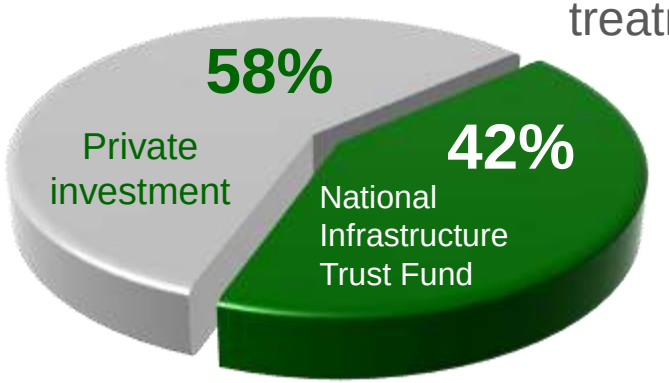
(at 2014 prices)

I.I.R.: 13,97 %

Investment sources

Dam

Aqueduct and treatment plant



Winning consortium (dam): Constructora de Infraestructura Latinoamericana, S.A. de C.V.; Carso Infraestructura y Construcción, S.A. de C.V.; Desarrollo y Construcciones Urbanas, S.A. de C.V.; Pavimentaciones, Caminos y Compactaciones, S.A. de C.V.; Construcciones Zugusa, S.A. de C.V; Tecnología y Sistemas, S.A.

Winning consortium (aqueduct): CONOISA (ICA); AQUALIA (FCC) ; SAT (Mitsui).

P.3 El Realito Dam

Director of the project: Comisión Estatal del Agua de San Luis Potosí (www.ceaslp.gob.mx)

Reason | Technical data | Financial data | **Location map**

This dam is located on the Santa María River in the municipality of San Luis de la Paz, Guanajuato, very close to the state border between Guanajuato and San Luis Potosí

Spillway, El Realito dam

P.4 La Laja Dam

Director of the project: Comisión de Agua Potable, Alcantarillado y Saneamiento del Estado de Guerrero (www.capaseg.gob.mx)

The Ixtapa-Zihuatanejo Metropolitan Zone has been affected badly by the batches in the service de delivery de potable water for domestic use, especially in the time de hottest and busiest tourist.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

Population benefited: 120 000 inhabitants

Consumption in hotels, and the tourist areas, increase significantly in the summer. This obliges the distribution de water in tank trucks.

This project will allow:

- **improve the service de drinking water to the population,**
- **promote economic and social development,**
- **promote the growth of tourism de region.**

P.4 La Laja Dam

Director of the project: Comisión de Agua Potable, Alcantarillado y Saneamiento del Estado de Guerrero (www.capaseg.gob.mx)

Basic data:

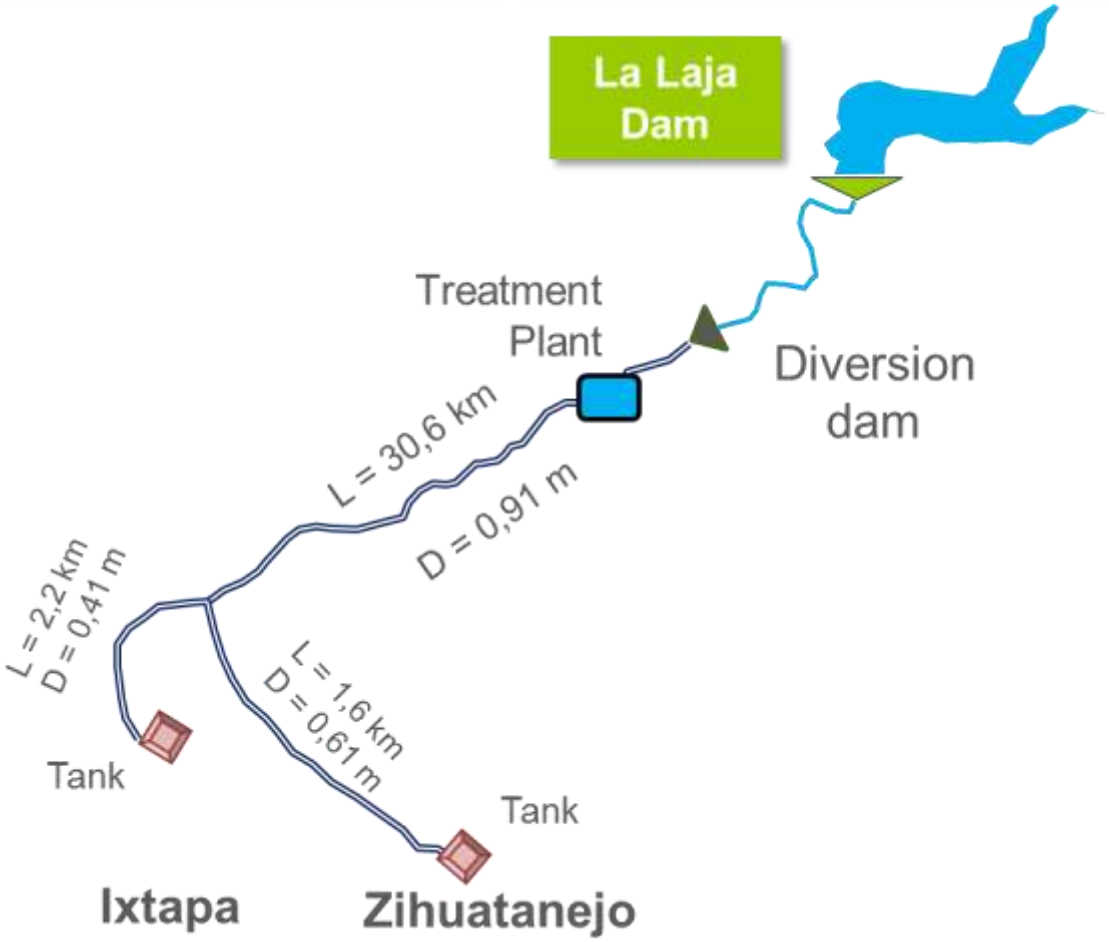
Storage capacity:	**40 Mm^3**
Height of the dam:	47 m
Diversion dam:	
Height of the dam:	10 m

Aqueducts:

Capacity:	0,50 m^3/s
Length:	32,0 km
Diameters:	0,41 m - 0,91 m

In addition:

Las Ollas treatment plant (0,50 m^3/s)



P.4 La Laja Dam

Director of the project: Comisión de Agua Potable, Alcantarillado y Saneamiento del Estado de Guerrero (www.capaseg.gob.mx)

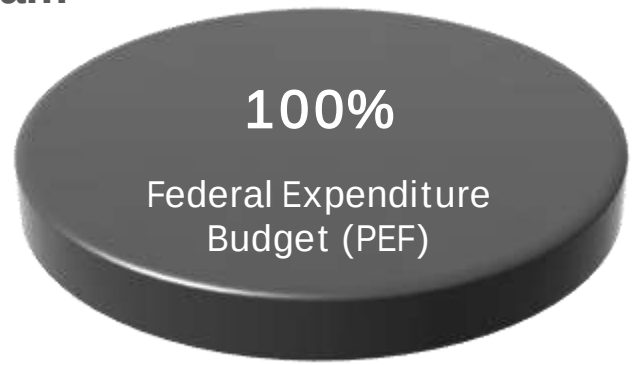
Total investment estimated: $ 1 537 millions of pesos

(at 2015 prices)

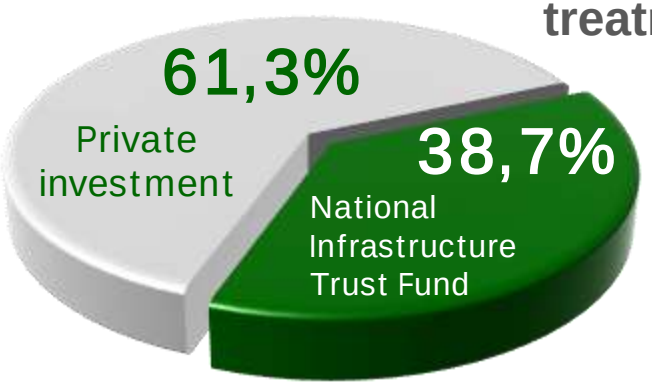
I.I.R.: 16,06 %

Investment sources

Dam



Aqueduct and treatment plant

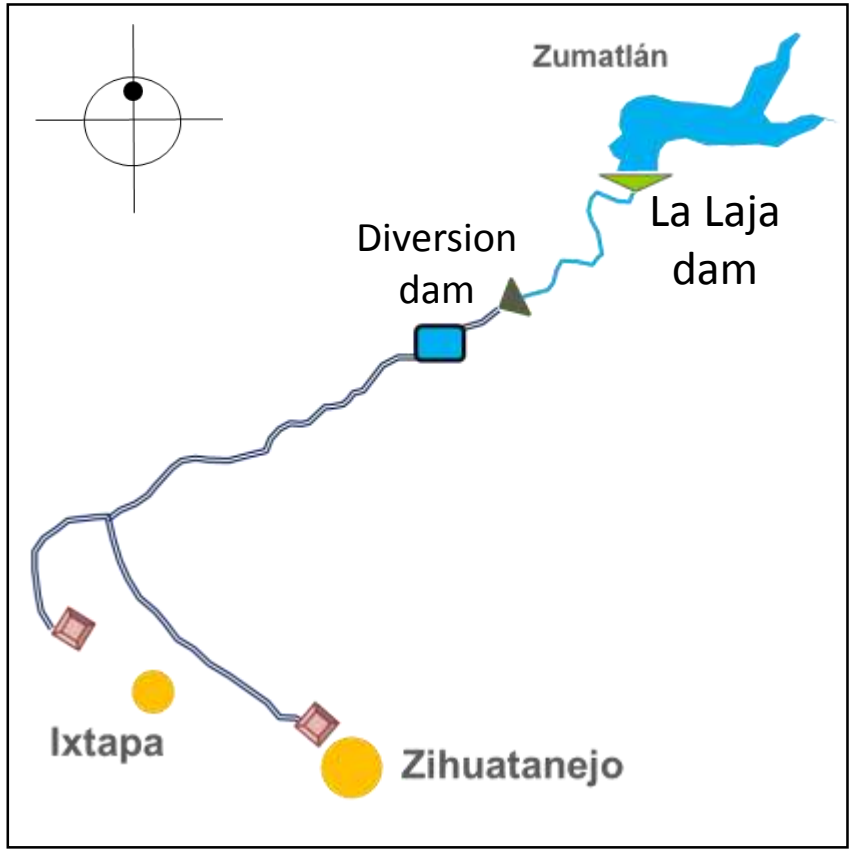


Windows of opportunity for the private sector :

- The dam will be built in accordance with the Mexican Public Works Law.
- Expected that the aqueduct and the water treatment plant are built by a contract for the provision of services, with an operating concession for 23 years.

P.4 La Laja Dam

Director of the project: Comisión de Agua Potable, Alcantarillado y Saneamiento del Estado de Guerrero (www.capaseg.gob.mx)



The dam site is 3 km from Las Mesillas, on the Lajas River, in the State of Guerrero.

A.1 Monterrey VI Project

Director of the project: Sistema de Agua y Drenaje de Monterrey (www.sadm.gob.mx)

Reason | Technical data | Financial data | Location map

The Monterrey Metropolitan Zone comprises 16 municipalities and has a population of around 4,2 million inhabitants.

In recent years, Monterrey Metropolitan Zone, have high rates of annual growth.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

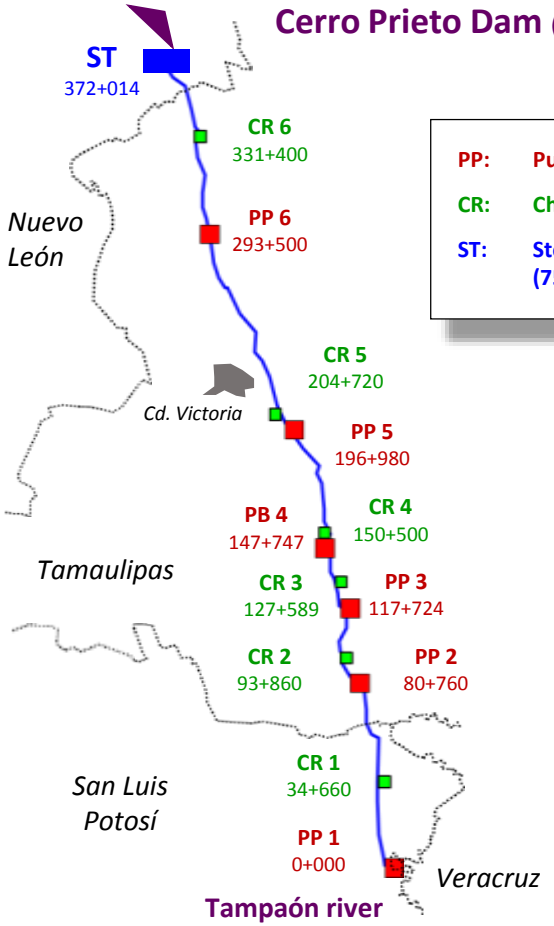
Now delivered a volume of 11,5 m³/s, an increase of 250 l/s annual.

Population benefited: 4,2 million inhabitants

The challenge is to give certainty to the current supply and future growth of the Monterrey Metropolitan Zone , and minimize the risk of water shortage over the vulnerability of the current sources.

A.1 Monterrey VI Project

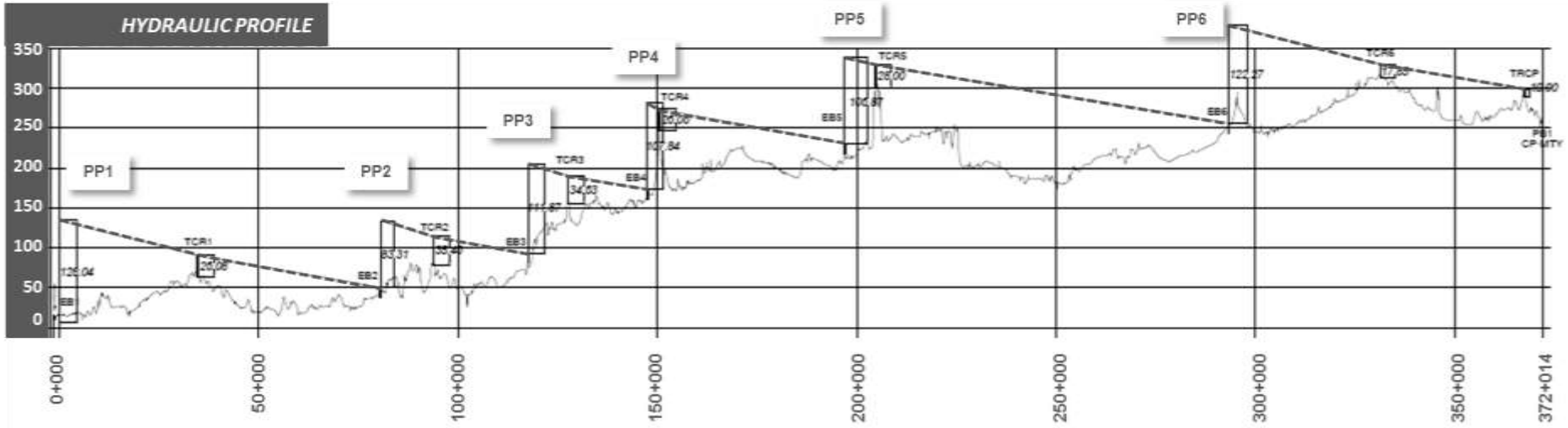
Director of the project: Sistema de Agua y Drenaje de Monterrey (www.sadm.gob.mx)



PP: Pumping plant
CR: Change of Regime
ST: Storage Tank (75 000 m³)

Aqueduct Monterrey VI

Design flow: 5 m³/s	Static head: 265 m
	Pumping plants: 6
Aqueduct: 372 km	Dynamic head: 600 m
Diameter: 2,13 m	Total power: 45 250 KW



A.1 Monterrey VI Project

Director of the project: Sistema de Agua y Drenaje de Monterrey (www.sadm.gob.mx)

Total investment estimated

(at 2014 prices)

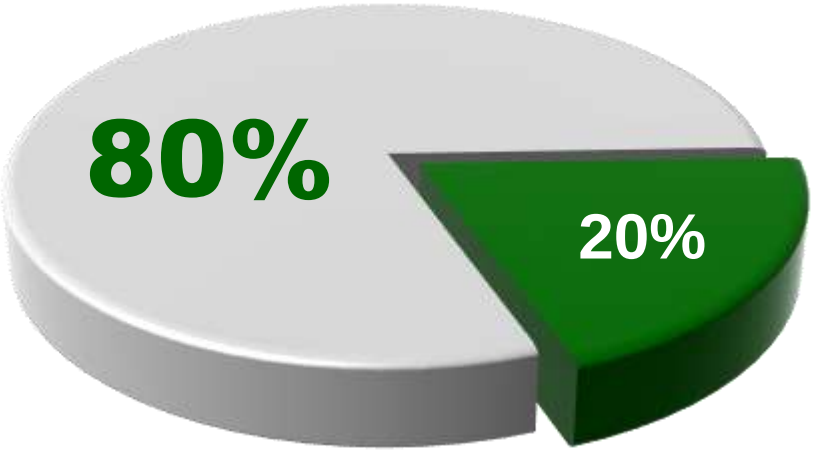
I.I.R.: 16,9%

$ 18 283
millions of pesos

The aqueduct will be built under a contract for the provision of services, with an operating concession for 30 years
(3 years of construction and 27 years of operation)

In addition, the Government of the State of Nuevo Leon, will conduct the suitability of the water treatment plant of San Roque and the strengthening of the existing aqueduct Cerro Prieto-Monterrey.

Investments sources:



Private investment

National Infrastructure Trust Fund

Winning consortium: Concretos y Obra Civil del Pacífico, S.A. de C.V.; Controladora de Operaciones e Infraestructura, S.A. de C.V.; Desarrollos y Construcciones Rogar, S.A. de C.V.; RECSA Concesiones, S.A. de C.V.; y Productos y Estructuras de Concretos, S.A. de C.V.

A.1 Monterrey VI Project

Director of the project: Sistema de Agua y Drenaje de Monterrey (www.sadm.gob.mx)

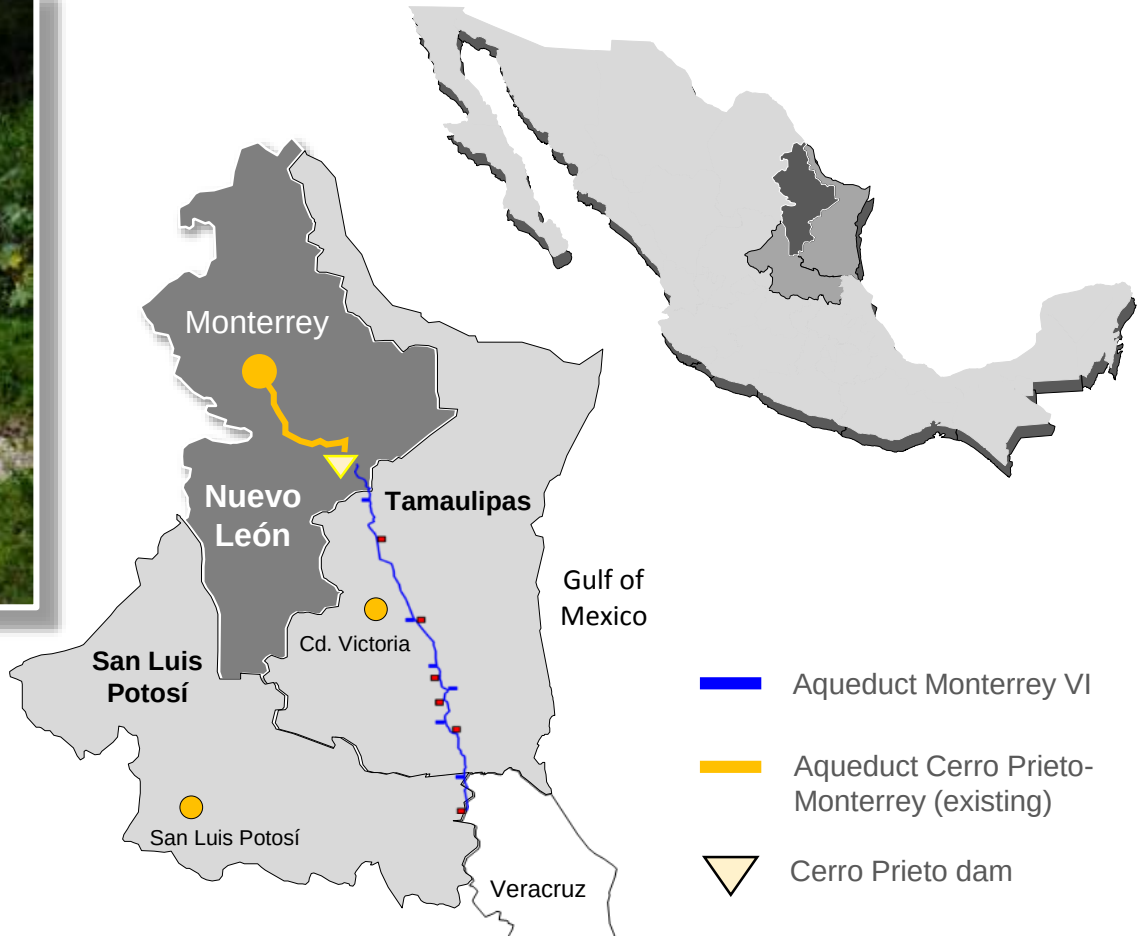
Reason | Technical data | Financial data | **Location map**

The water intake is located at the confluence of the rivers Tampaón and Moctezuma, in the State of San Luis Potosi.

Confluence of the rivers Tampaón and Moctezuma

Cerro Prieto dam

The delivery of the bulk water will be in the pumping plant 1, Cerro Prieto-Monterrey System (existing).



A.2 Chapultepec

Director of the project: Comisión de Agua Potable, Alcantarillado y Saneamiento del Estado de Guerrero (www.capaseg.gob.mx)

The tourist vocation of Guerrero is a great opportunity to design and carry out a program of economic development based on criteria of sustainability.

Population benefited: 637 000 inhabitants

The aqueduct Chapultepec-Acapulco will promote tourism and urban development in the coastal strip between Barra Vieja and Punta Diamante.

The project also will release the Papagayo I and II system flows, which also benefited the areas of Renacimiento and Zapata, improving the overall efficiency of the system.

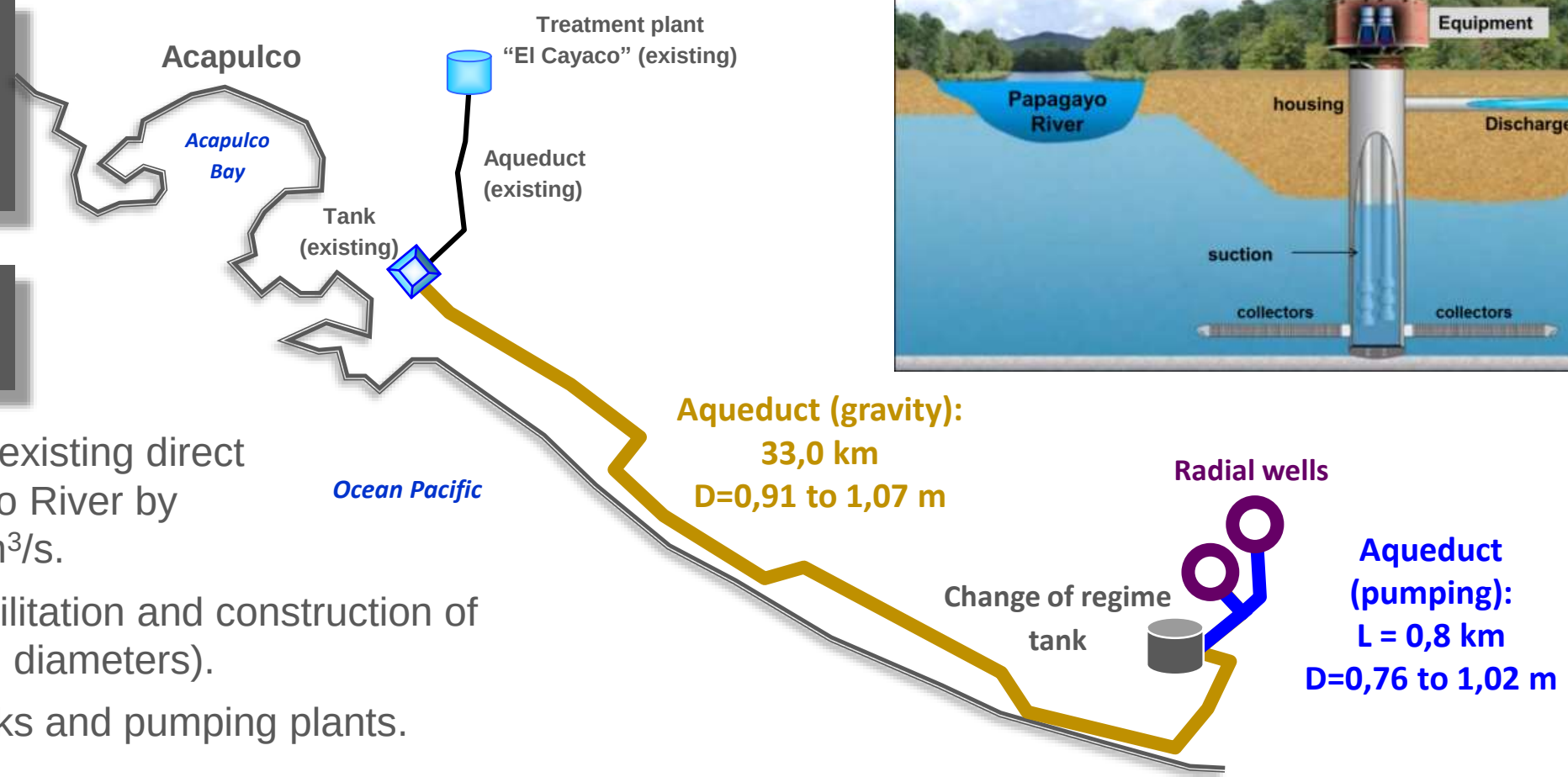
A.2 Chapultepec

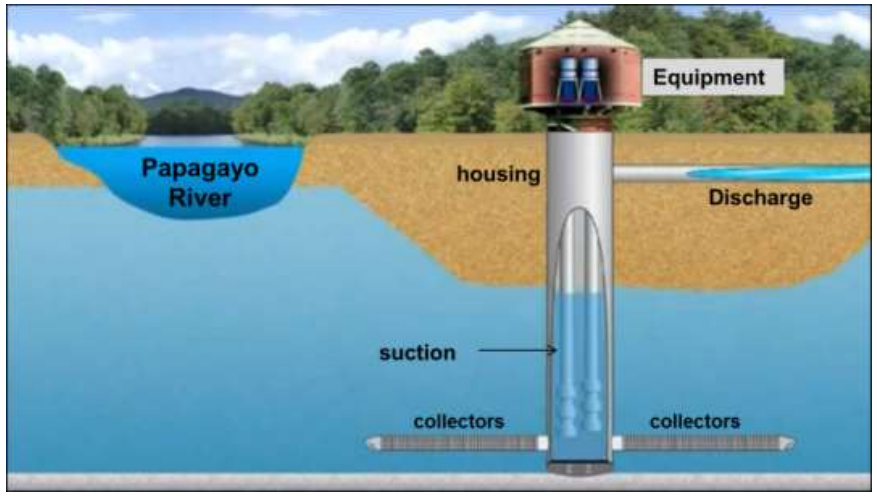
Director of the project: Comisión de Agua Potable, Alcantarillado y Saneamiento del Estado de Guerrero (www.capaseg.gob.mx)

Design flow: 1,25 m³/s

Complementary works

- Replacement of the existing direct take of the Papagayo River by radial wells for 2,5 m³/s.
- Replacement, rehabilitation and construction of lines (0.46 to 1.07 m diameters).
- Rehabilitation of tanks and pumping plants.





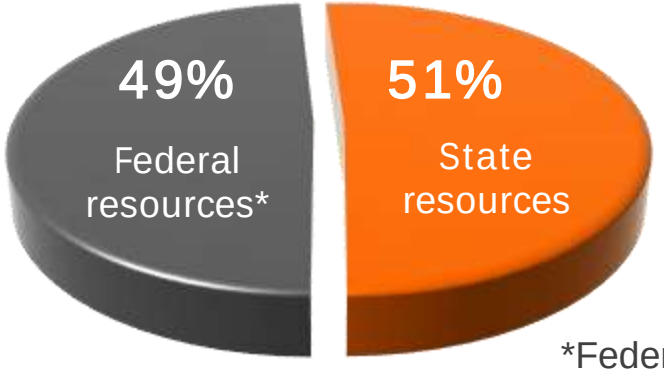
A.2 Chapultepec

Director of the project: Comisión de Agua Potable, Alcantarillado y Saneamiento del Estado de Guerrero (www.capaseg.gob.mx)

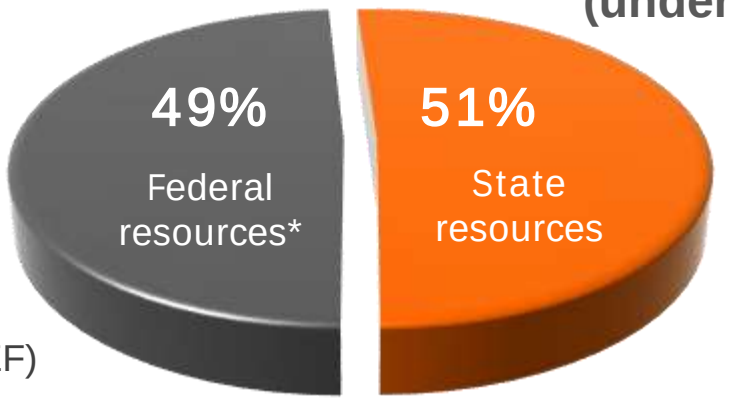
Total investment estimated: $ 2 164 millions of pesos

Investment sources

Aqueduct (completed)



Complementary works (under construction)



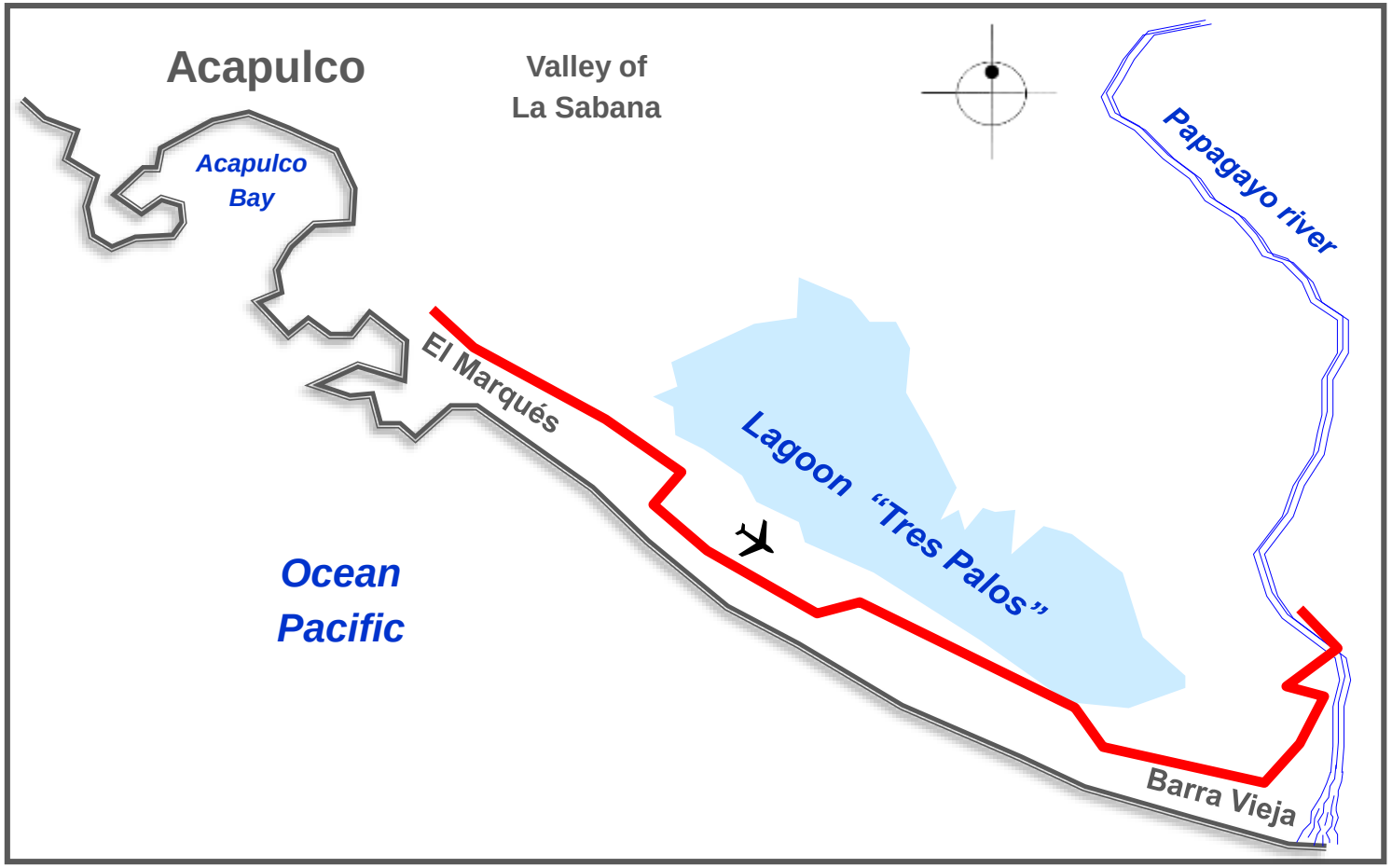
*Federal Expenditure Budget (PEF)

Windows of opportunity for the private sector:

The aqueduct construction carried out in accordance with the Mexican Public Works Law.

A.2 Chapultepec

Director of the project: Comisión de Agua Potable, Alcantarillado y Saneamiento del Estado de Guerrero (www.capaseg.gob.mx)



A.3 Vicente Guerrero-Victoria City

Director of the project: Comisión Estatal del Agua el Tamaulipas (www.ceat.tamaulipas.gob.mx)

The project of the second stage of the aqueduct from the Vicente Guerrero dam to Ciudad Victoria will allow to ensure the supply for the city in the long run, which has been affected by the poor reliability and capacity of its current sources.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

Population benefited: 310 000 inhabitants

La Peñita spring is the main source of current, and its flow can vary from 200 to 700 l/s during the year.

There are problems in the supply in times of drought, which is also the time of greatest demand.

A.3 Vicente Guerrero-Victoria City

Director of the project: Comisión Estatal del Agua el Tamaulipas (www.ceat.tamaulipas.gob.mx)

Reason | **Technical data** | Financial data | Location data

Design flow: 0,75 m³/s

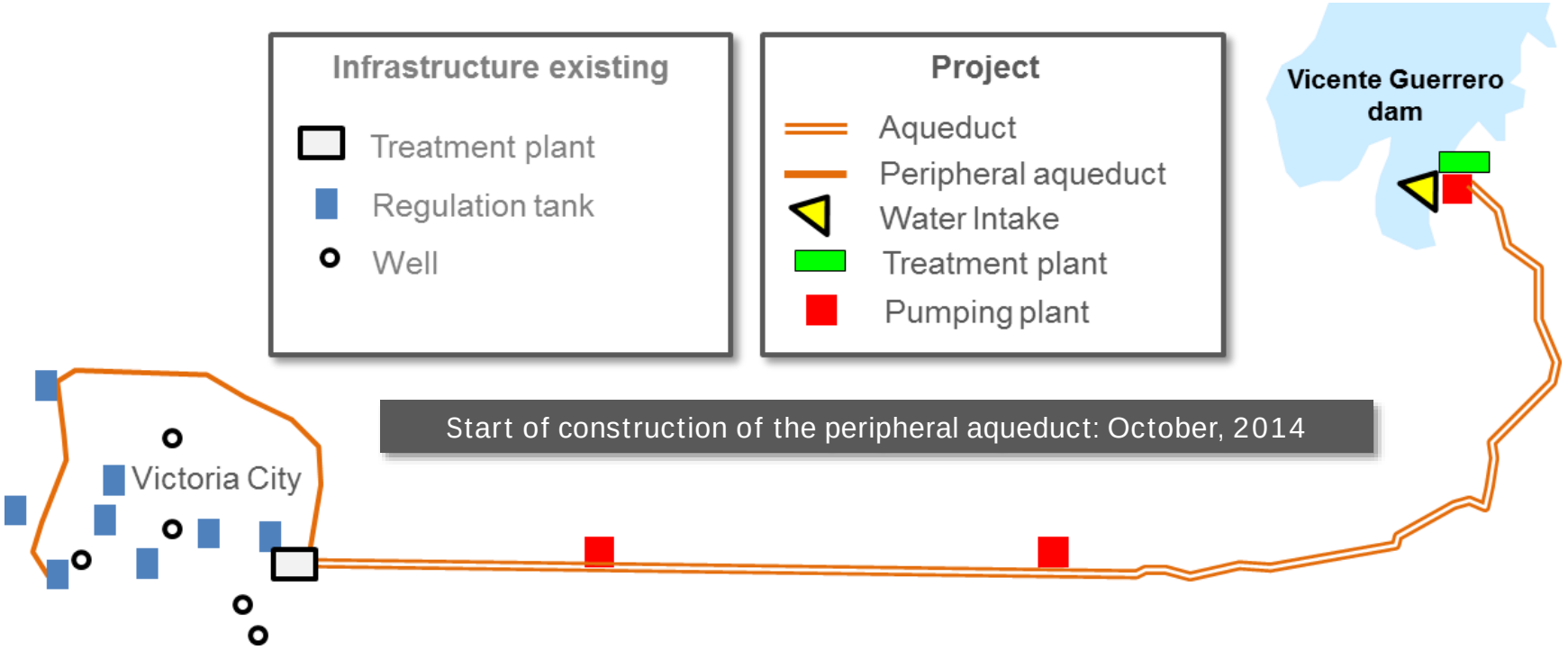
Length:	54,6 km
Diameter:	0,91 m
Difference in elevation:	195 m
Pumping plant:	3 (5U)

Infrastructure existing

- Treatment plant
- Regulation tank
- Well

Project

- Aqueduct
- Peripheral aqueduct
- Water Intake
- Treatment plant
- Pumping plant



Start of construction of the peripheral aqueduct: October, 2014

The water intake by the current aqueduct, at the Vicente Guerrero dam.

A.3 Vicente Guerrero-Victoria City

Director of the project: Comisión Estatal del Agua el Tamaulipas (www.ceat.tamaulipas.gob.mx)

Total investment estimated

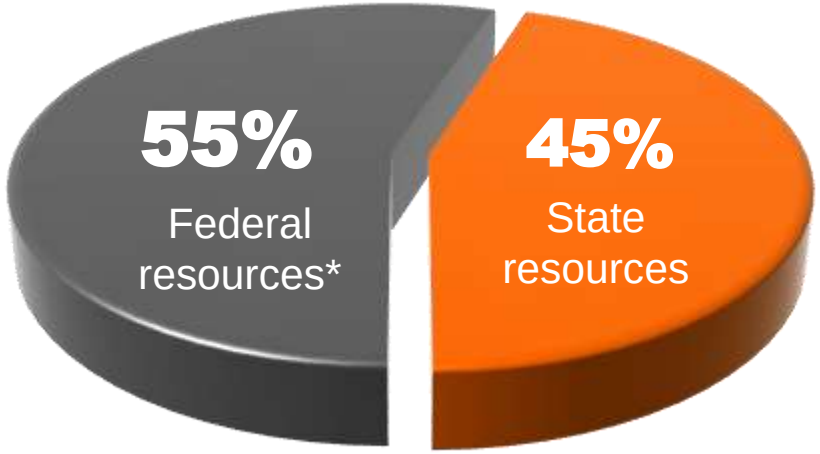
(at 2015 prices)

$ 1 260

millions of pesos

Start of construction of the peripheral aqueduct: October, 2014

Investment sources



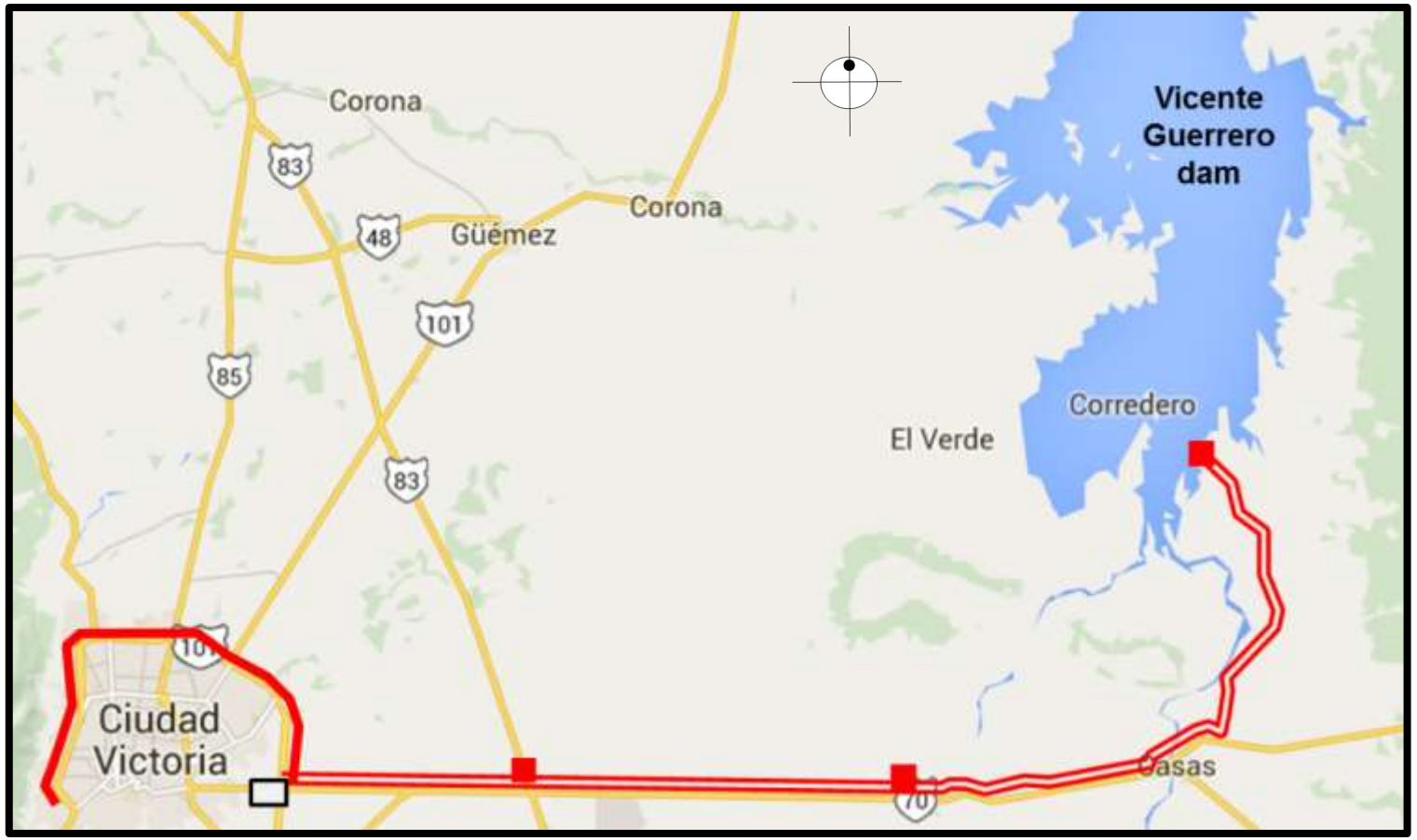
*Federal Expenditure Budget (PEF)

Windows of opportunity for the private sector:

The aqueduct will be built in accordance with the Mexican Public Works Law.

A.3 Vicente Guerrero-Victoria City

Director of the project: Comisión Estatal del Agua el Tamaulipas (www.ceat.tamaulipas.gob.mx)



Vicente Guerrero dam

A.4 Riviera Veracruzana System

Director of the project: Comisión del Agua del Estado de Veracruz (www.caev.gob.mx)

The Riviera of Veracruz, in the municipalities of Boca del Río, Medellín and Alvarado, does not have municipal water service, are supplied by local wells that extract brackish water.

The current supply to Boca del Río is complemented by the surface catchment on the Jamapa river at the height of the "El Tejar".

Population benefited: 400 000 inhabitants

Water catchment in "El Tejar" should be used for the growth and development of the port of Veracruz, so Boca del Rio demands a new source of supply.

A lower exploitation of the aquifer would contribute to the reduction of saline intrusion.

A.4 Riviera Veracruzana System

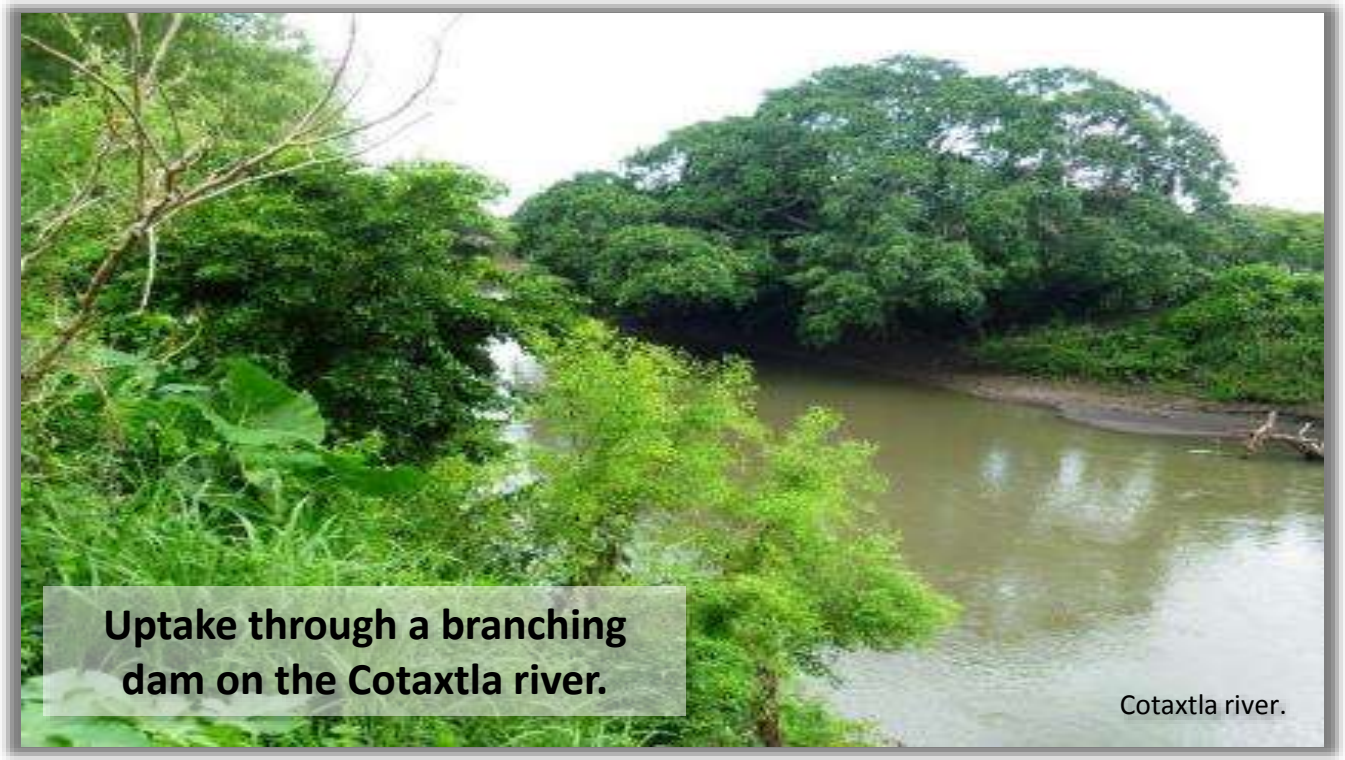
Director of the project: Comisión del Agua del Estado de Veracruz (www.caev.gob.mx)

Reason | **Technical data** | Financial data | Location map

Design flow: 1,5 m³/s

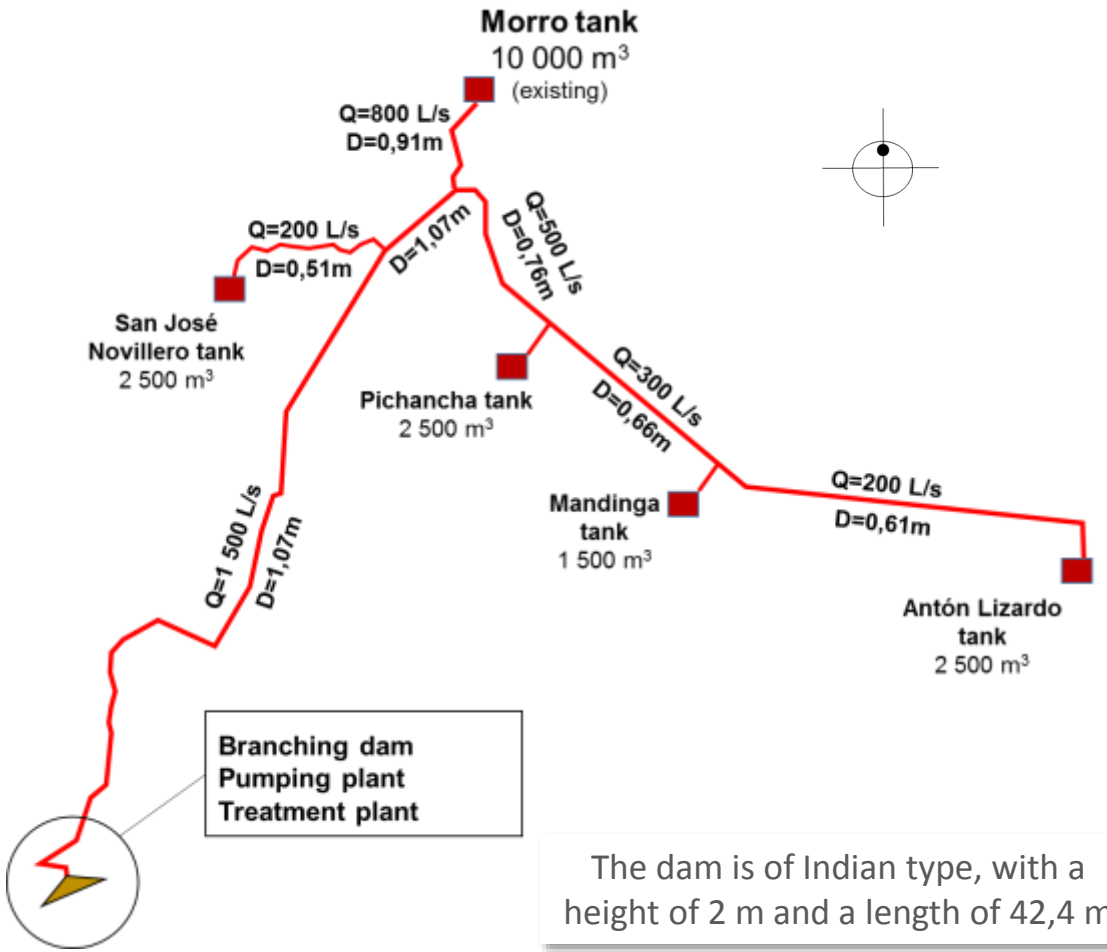
Length: 30,8 km

Diameters: 1,07 a 0,41 m



Uptake through a branching dam on the Cotaxtla river.

Cotaxtla river.



The dam is of Indian type, with a height of 2 m and a length of 42,4 m

A.4 Riviera Veracruzana System

Director of the project: Comisión del Agua del Estado de Veracruz (www.caev.gob.mx)

Total investment estimated

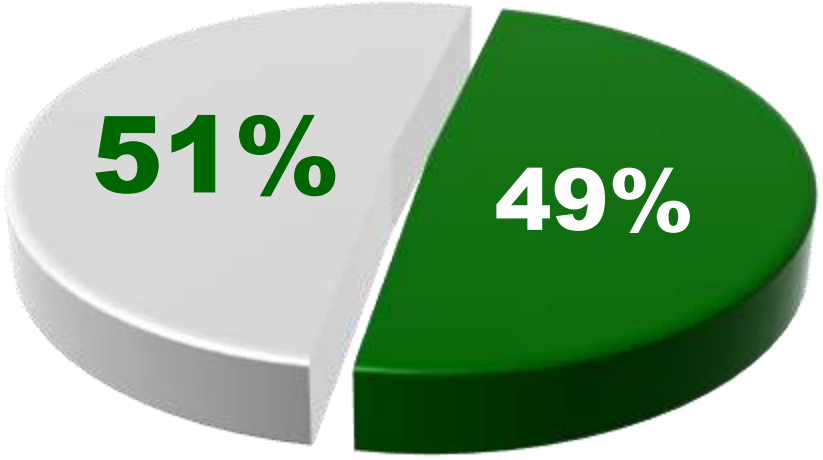
(at 2016 prices)

$ 979

millions of pesos

I.I.R.: 15,9%

Possible investment sources:



Private investment

National Infrastructure Trust Fund

Windows of opportunity for the private sector:

Expected that the aqueduct is built by a contract for the provision of services with a concession operation.

A.4 Riviera Veracruzana System

Director of the project: Comisión del Agua del Estado de Veracruz (www.caev.gob.mx)

Reason | Technical data | Financial data | **Location map**

A.5 Picachos-Mazatlán

Director of the project: Junta Municipal de Agua Potable y Alcantarillado de Mazatlán (www.jumapam.gob.mx)

The city of Mazatlán is a major port and a tourist center, which has generated a sustained growth of economic activity. Its geographical location and its high temperatures hamper the availability of drinking water.

Problem: overexploitation of the aquifer and water extraction with increasing content of iron and manganese.

This project represents the best choice among the alternatives analyzed:

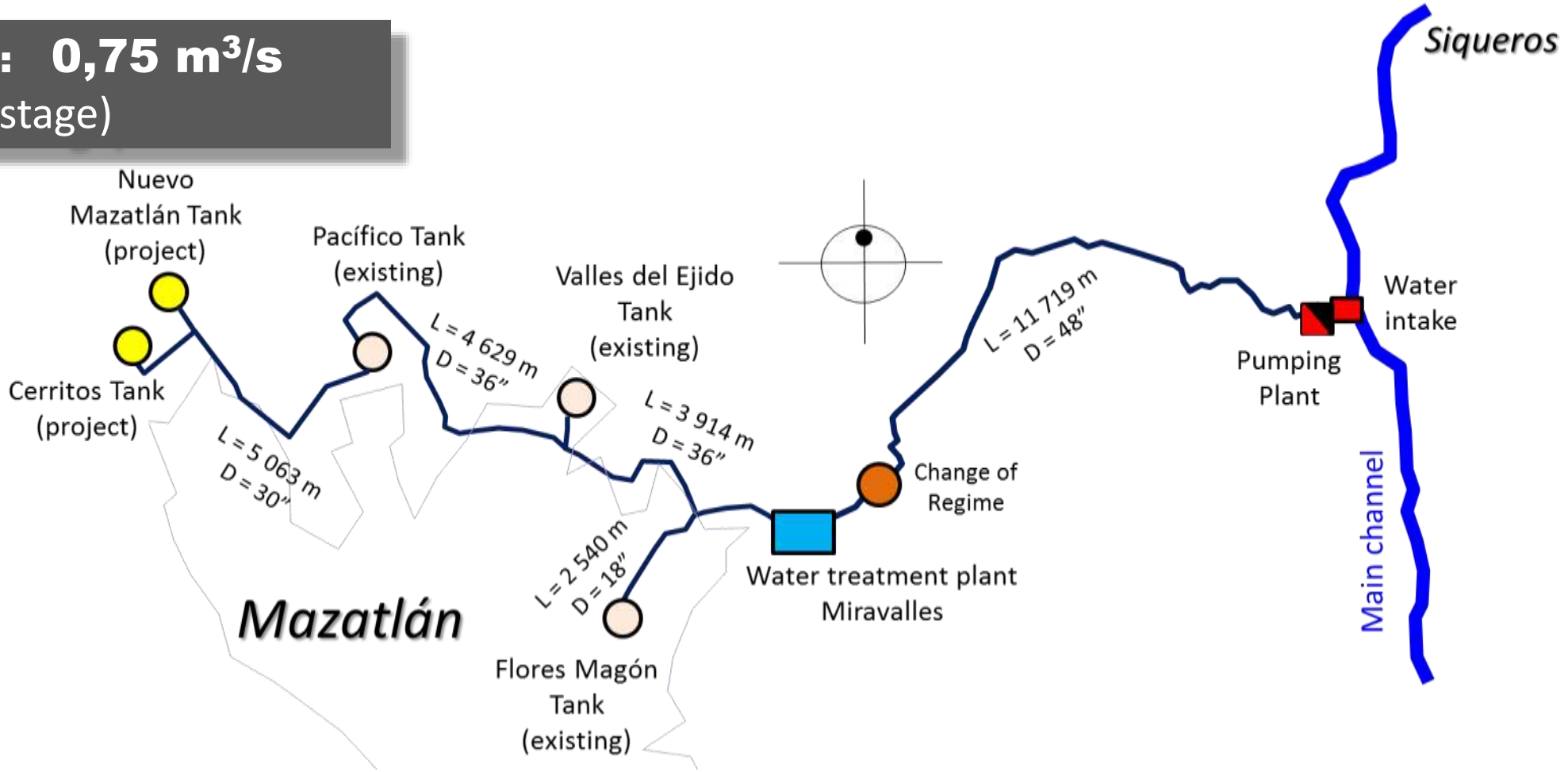
- water of better quality
- decrease in the extraction of underground water
- reduction in costs of energy
- use of the current infrastructure.

Population benefited: 435 000 inhabitants

A.5 Picachos-Mazatlán

Director of the project: Junta Municipal de Agua Potable y Alcantarillado de Mazatlán (www.jumapam.gob.mx)

Design flow: 0,75 m³/s
(1st stage)



A.5 Picachos-Mazatlán

Director of the project: Junta Municipal de Agua Potable y Alcantarillado de Mazatlán (www.jumapam.gob.mx)

Total investment estimated

(at 2015 prices)

$ 521

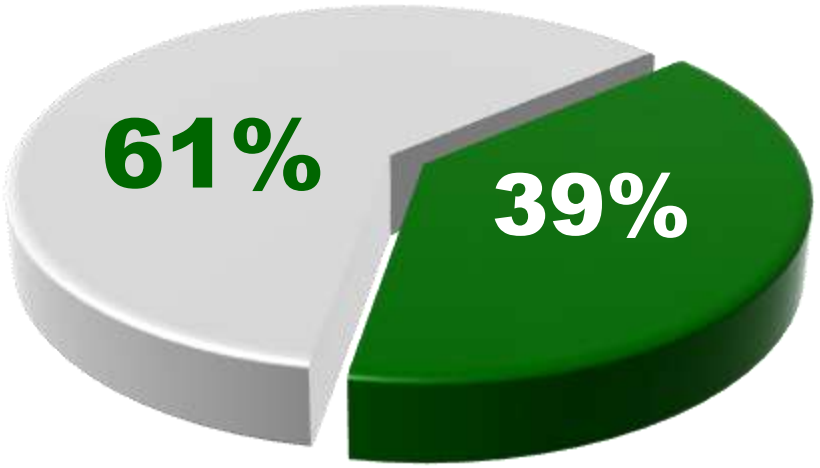
millions of pesos

I.I.R.: 39,17%

Windows of opportunity for the private sector:

Expected that the aqueduct is built by a contract for the provision of services with a concession operation.

Possible investment sources:

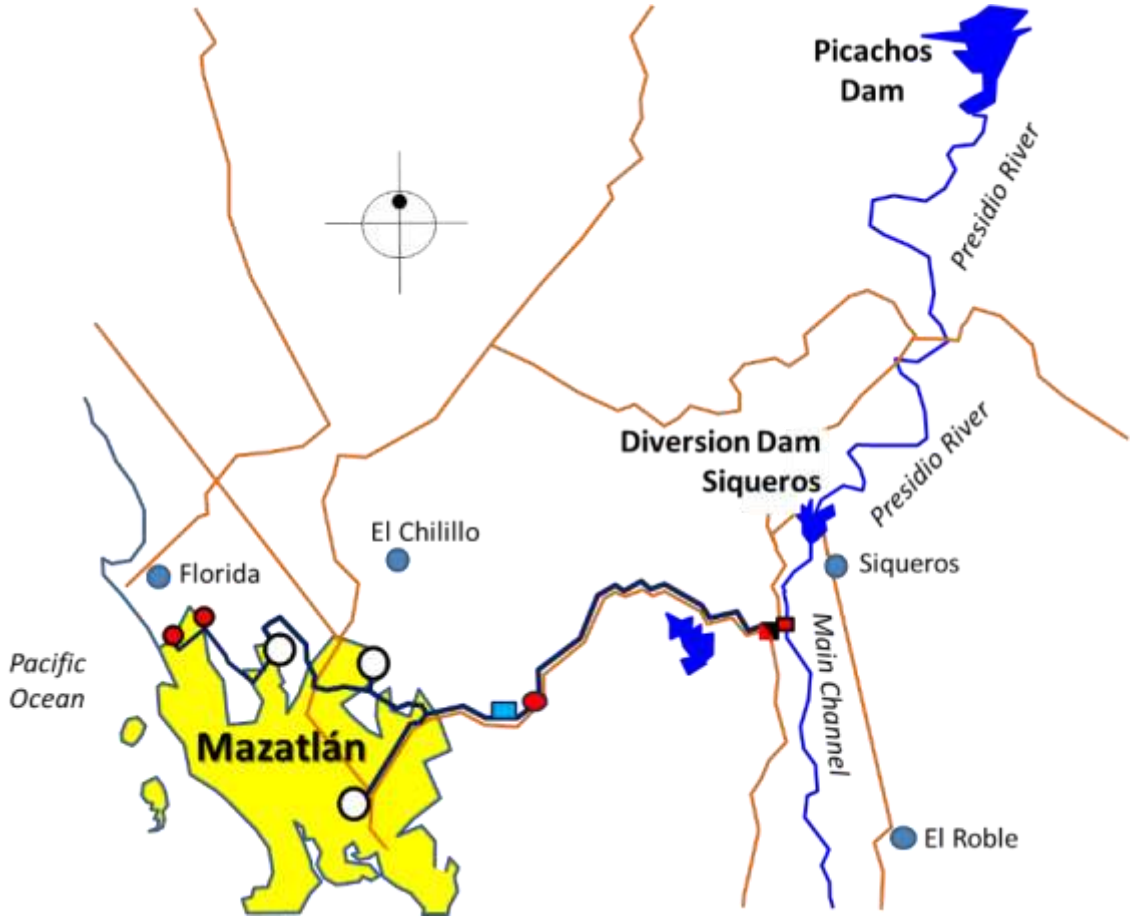


Private investment

National Infrastructure Trust Fund

A.5 Picachos-Mazatlán

Director of the project: Junta Municipal de Agua Potable y Alcantarillado de Mazatlán (www.jumapam.gob.mx)



In the first stage it is planned to take water from the main channel right bank to 5,8 km downstream the "SIQUEROS" diversion dam, in the vicinity of the village “El Tecomate de Siqueros”.

A.6 Hobomó-Campeche

Director of the project: Comisión de Agua Potable y Alcantarillado del Estado de Campeche (CAPAE)

The city of San Francisco of Campeche has three drinking water supply systems: Santa Rosa Valley, Gallery China and urban wells within the city, whose joint bid is 1105 l/s.

The quality of the groundwater has deteriorated gradually, above all that of the Santa Rosa Valley aquifer and the urban wells, which together represent nearly 70% of the supply.

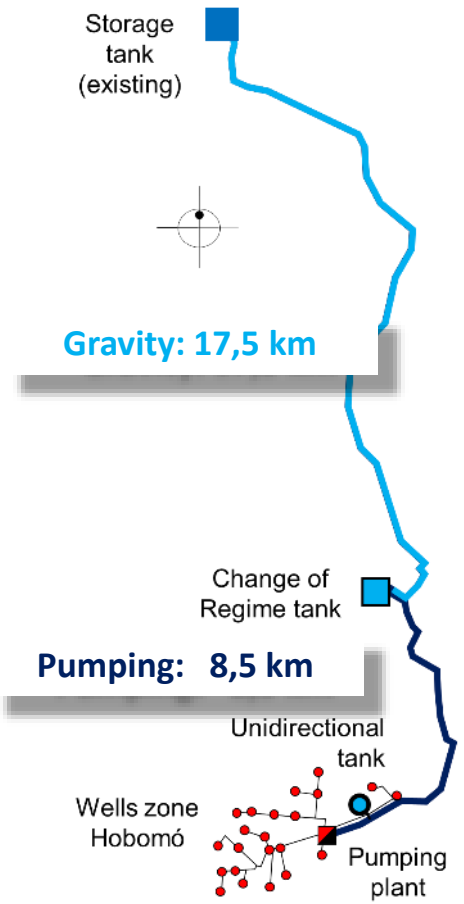
Population benefited: 240 000 inhabitants

The Government of the State of Campeche promotes the project of Hobomó-Campeche aqueduct, which will replace the volume supplied with water of better quality.

A.6 Hobomó-Campeche

Director of the project: Comisión de Agua Potable y Alcantarillado del Estado de Campeche (CAPAE)

Reason | **Technical data** | Financial data | Location map



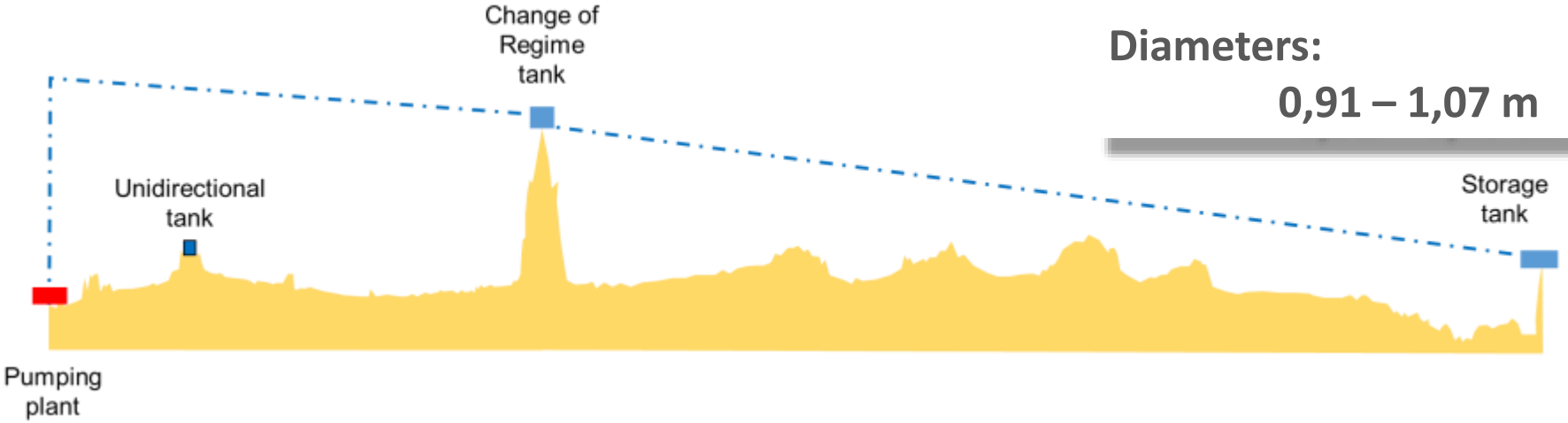
Design flow: 1,0 m³/s

Interconnection line: L = 16 km

Aqueducts

- Pumping: 8,50 km
- Gravity: 17,50 km

Diameters: 0,91 – 1,07 m



A.6 Hobomó-Campeche

Director of the project: Comisión de Agua Potable y Alcantarillado del Estado de Campeche (CAPAE)

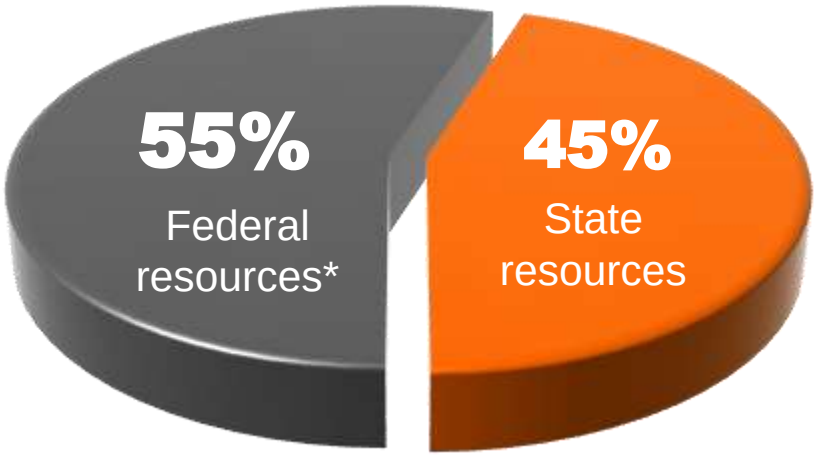
Total investment estimated

$ 446

millions of pesos

I.I.R.: 15,9%

Possible investment sources:



*Federal Expenditure Budget (PEF)

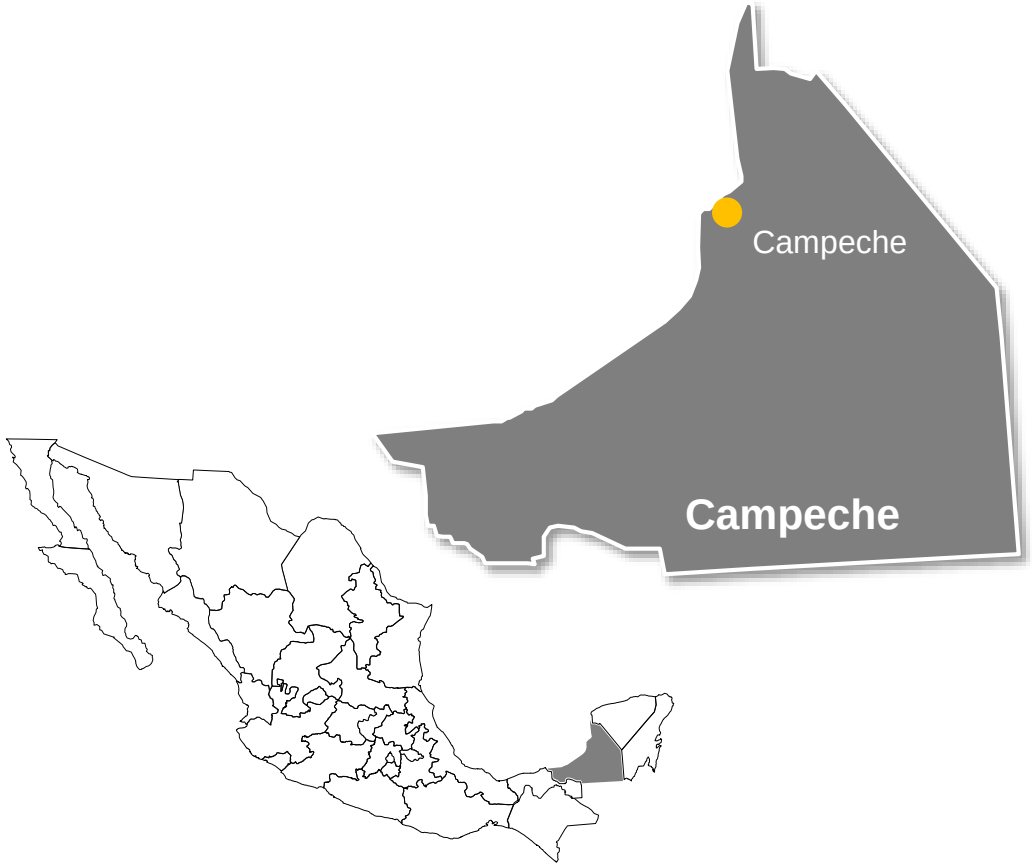
Windows of opportunity for the private sector:

The aqueduct will be built in accordance with the Mexican Public Works Law.

A.6 Hobomó-Campeche

Director of the project: Comisión de Agua Potable y Alcantarillado del Estado de Campeche (CAPAE)

Reason | Technical data | Financial data | **Location map**



A.7 El Carrizal-La Paz

Director of the project: Comisión Estatal del Agua de Baja California Sur (http://cea.bcs.gob.mx/)

The La Paz Metropolitan Zone has had a greater than 30% population growth, based on the Census of population and housing of the INEGI 2000 and 2010.

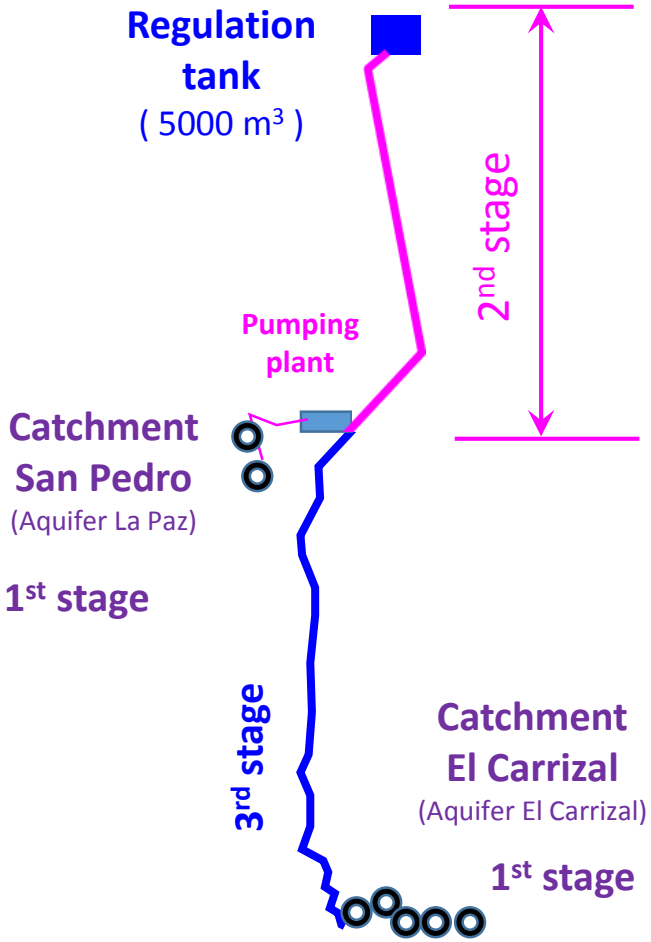
Population benefited: 67 000 inhabitants

In addition to the increase in the population, the severe drought that hit the country in 2012 affected significantly the aquifer with declines in levels and flows from extraction wells.

A.7 El Carrizal-La Paz

Director of the project: Comisión Estatal del Agua de Baja California Sur (http://cea.bcs.gob.mx/)

Reason | **Technical data** | Financial data | Location map



Design flow: 350 L/s


Catchment San Pedro


Interconnection line

Aqueduct: L = 41,6 km
D = 0,61 m

A.7 El Carrizal-La Paz

Director of the project: Comisión Estatal del Agua de Baja California Sur (http://cea.bcs.gob.mx/)

Total investment estimated: $ 160 millions of pesos

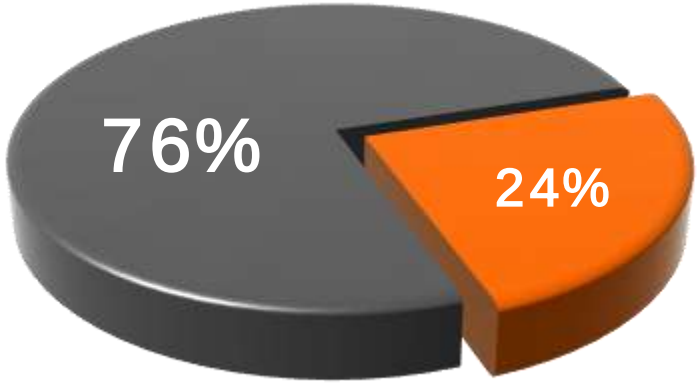
(at 2014 prices)

1st y 2nd stage: completed

3rd stage (under construction):

1. Interconnection line and regulation tank of 5000 m³.
2. Automation, construction and equipment of the stand of chlorination.
3. Mainline of 17 km the Carrizal-San Pedro.

Investment sources:



Federal Expenditure Budget (PEF)

State resources

Windows of opportunity for the private sector:

The aqueduct will be built in accordance with the Mexican Public Works Law.

A.7 El Carrizal-La Paz

Director of the project: Comisión Estatal del Agua de Baja California Sur (http://cea.bcs.gob.mx/)

Reason | Technical data | Financial data | **Location map**

S.1 Atotonilco Wastewater Treatment Plant

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | Financial data | Location map

The Valley of Mexico Basin has one of the country's lowest wastewater treatment indices (6%), which produces pollution and a serious water imbalance in the basin.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

Benefits:

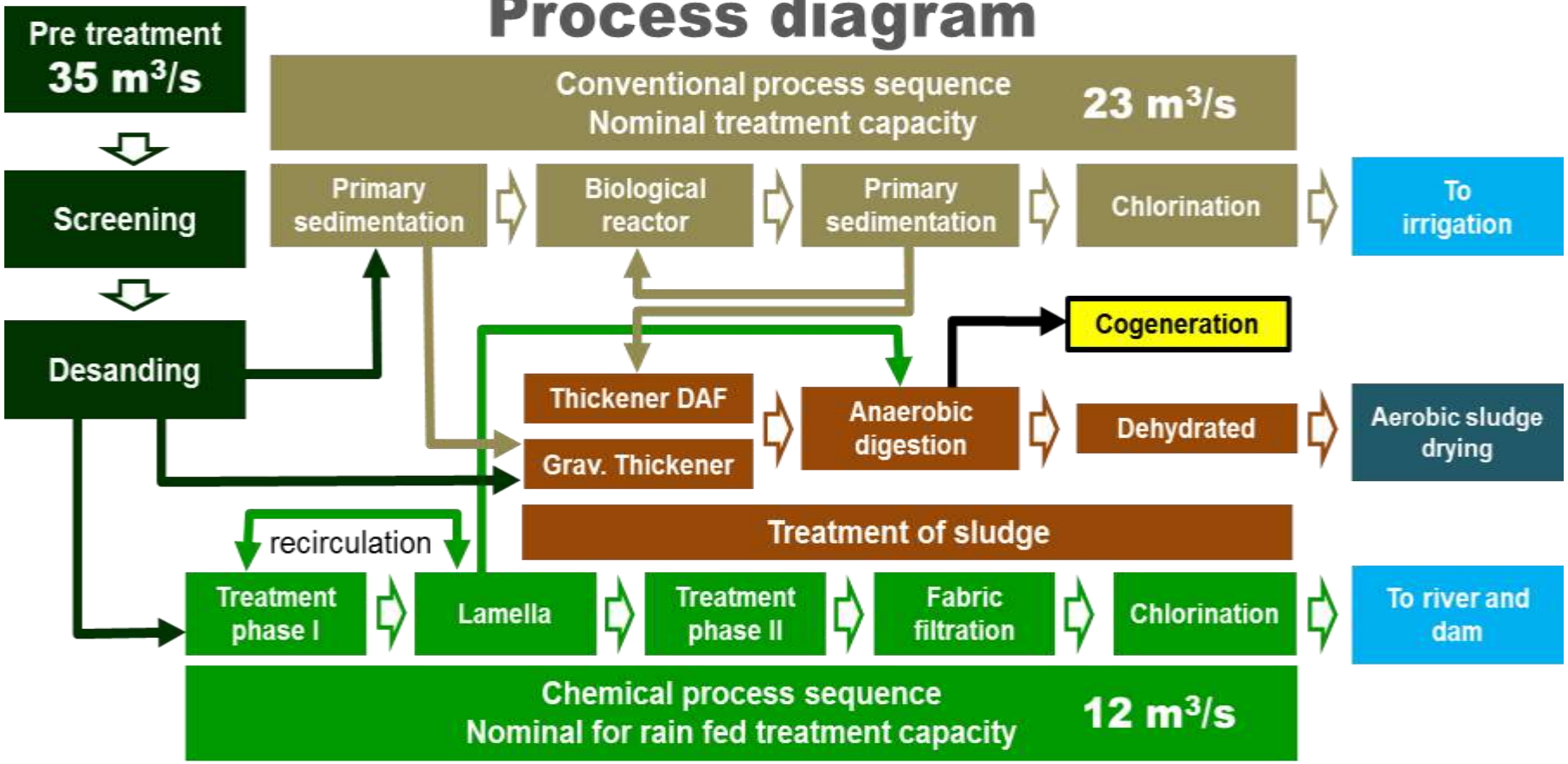
- To treat more than 60% of the wastewater produced in the Valley of Mexico.
- To irrigate with treated wastewater more than 80 thousand hectares in the Tula Valley, thus enhancing the region's agricultural potential.
- To restore the good conditions of the surface water bodies and streams that receive wastewater.
- To improve the sanitation conditions of over 300 000 people who live in irrigation zones.

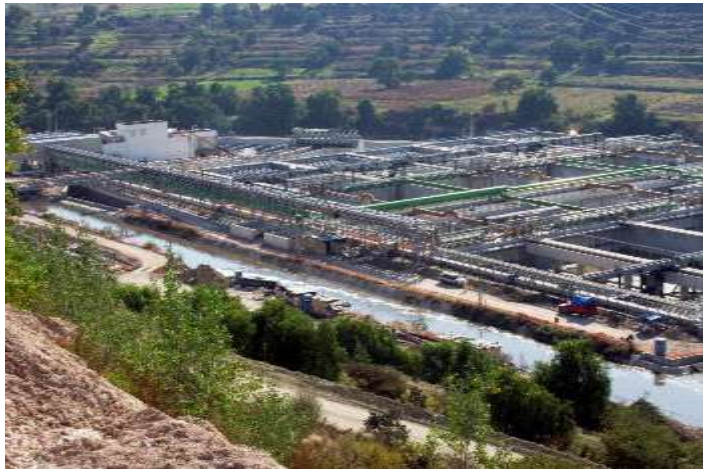
The construction of the plant is completed. It is in the testing process.

S.1 Atotonilco Wastewater Treatment Plant

Director of the project: CONAGUA (www.conagua.gob.mx)

Process diagram





S.1 Atotonilco Wastewater Treatment Plant

Director of the project: CONAGUA (www.conagua.gob.mx)

Total investment estimated

(at 2014 prices)

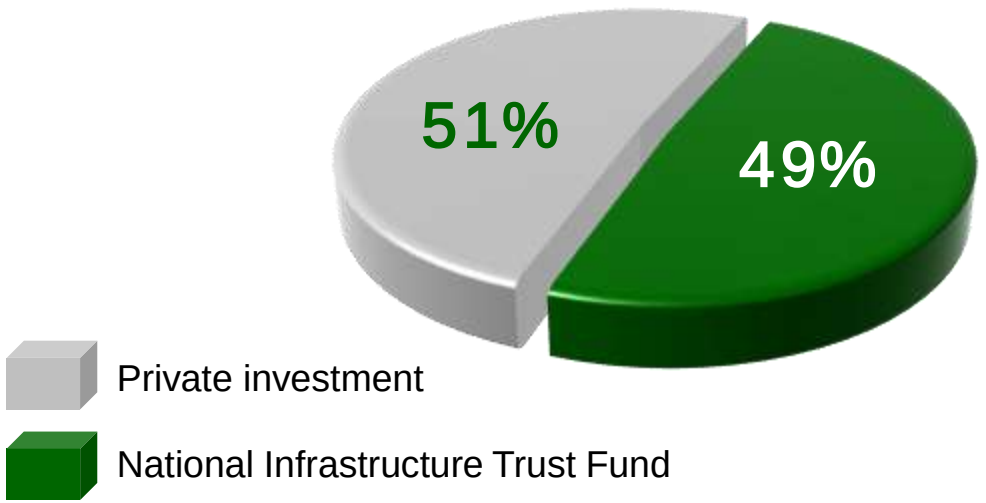
$ 9 564

millions of pesos

I.I.R.: 14,2 %

The construction of the wastewater treatment plant is performed under the DBOT scheme
(design, build, operate and transfer)
with a concession for operation.

Investments sources



Opening of the tender (DOF): May 12, 2009

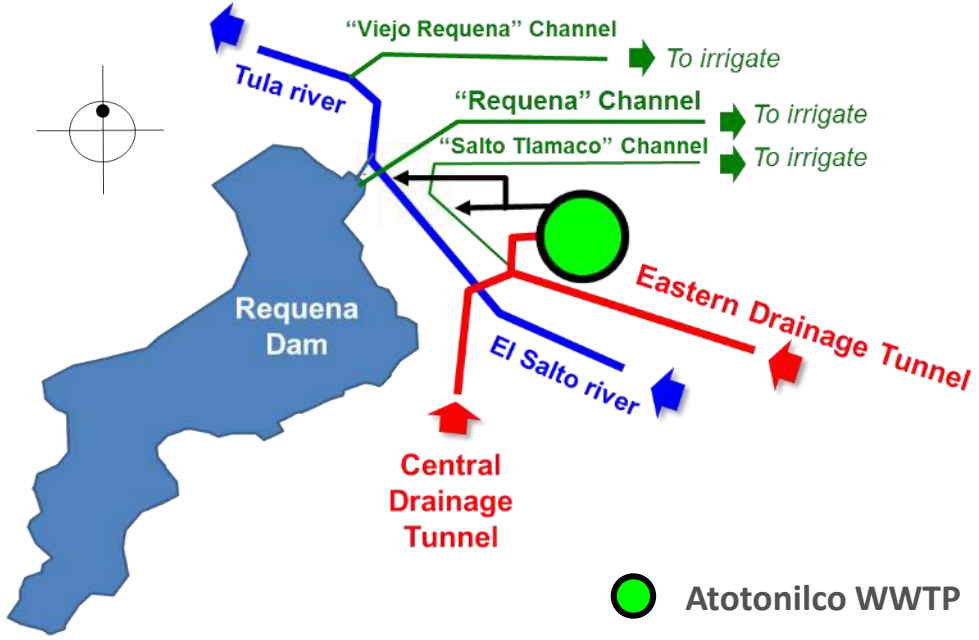
Contract signed: January 7, 2010

Winning consortium: Promotora del Desarrollo de América Latina, S.A. de C.V.; Controladora de Operaciones de Infraestructura, S.A de C.V.; Atlatec, S.A. de C.V.; Acciona Agua, S.A.; Desarrollo y Construcciones Urbanas, S.A. de C.V. ; Green Gas Pioneer Crossing, L.L.C.

S.1 Atotonilco Wastewater Treatment Plant

Director of the project: CONAGUA (www.conagua.gob.mx)

The plant is built in the municipality of “Atotonilco de Tula” in the state of Hidalgo.



The construction of the plant is completed. It is in the testing process.

S.2 La Paz Wastewater Treatment Plant

Director of the project: CONAGUA (www.conagua.gob.mx)

Population growth demands a greater supply of water for human consumption. With the aqueduct El Carrizal and the desalination plant projects they will complement the current supply.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

Problem:

- **The current treatment plant has fulfilled its useful life.**
- **Greater volume of residual water that requires treatment.**

The project includes integral sanitation of water generated in the city of La Paz and its suburbs, including the towns of “Chametla” and “El Centenario”.

Population benefited: 220 000 inhabitants

S.2 La Paz Wastewater Treatment Plant

Director of the project: CONAGUA (www.conagua.gob.mx)

The project consists of the comprehensive renovation of the sewage generated in the suburbs of La Paz.

Components:

- Construction of a W.W.T.P. process of **Activated Sludge**, with a capacity of 700 l/s* (two modules).
- Rehabilitation of “Olas Altas", "Agustín Olachea", "Transpeninsular" and “Sur" **Collectors**.
- Construction of the **Sumps Pump**, raw water and treated water.
- Construction of the **Outfalls** of raw water and treated water.

*The project includes the possibility of adding a module in the future to reach the 1050 l/s.

S.2 La Paz Wastewater Treatment Plant

Director of the project: CONAGUA (www.conagua.gob.mx)

Total investment estimated

(at 2015 prices)

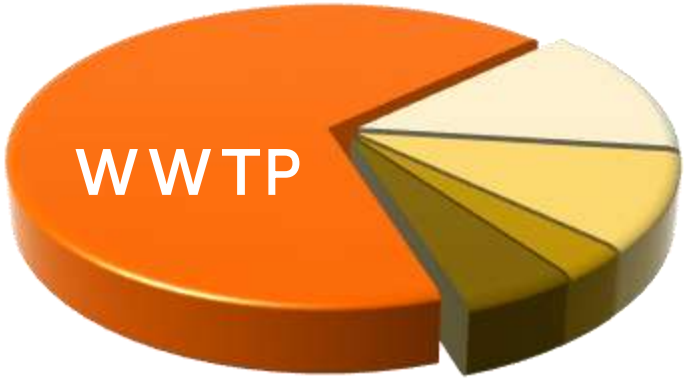
$ 443,3

millions of pesos

I.I.R.: 17,35%

Investments sources

Investment costs



- Treatment plant(68%)
- Outfalls (14%)
- Sumps pump (10%)
- Collectors rehabilitation (3%)
- Studies, projects, supervision, etc. (5%)

Winning consortium:

Controladora de Operaciones de Infraestructura, S.A de C.V.; FYPASA Construcciones Urbanas, S.A. de C.V.

S.2 La Paz Wastewater Treatment Plant

Director of the project: CONAGUA (www.conagua.gob.mx)

Reason | Technical data | Financial data | Location map

S.3 Wastewater treatment plants under process

Director of the project: The Government of the State concerned, and where applicable, the respective Municipal Government.

Projects under construction (National Infrastructure Trust Fund - private investment)

Locality		Nominal treatment capacity (L/s)	Investment (millions of pesos)		
			No recoverable	Private sector contribution	Total
Atotonilco (Valley of Mexico)	view	23 000	4 686,4	4 877,6	9 564,0
Hermosillo[1] (Sonora)		2 500	240,1	635,9	876,0
San Luis Potosí "El Morro"[3] (SLP)		750	144,7	250,3	395,0
Tuxtla Gutiérrez[2] (Chiapas)	completed	720	149,0	419,5	568,5
Bahía de Banderas[5] (Nay.)	completed	600	87,0	158,4	245,4
Pachuca[2] (Hidalgo)		500	68,2	108,1	176,3
Cd. Juárez "Sur-Sur"[4] (Chihuahua)	completed	500	56,8	119,4	176,2

[1] Winning Consortium: Cobra Instalaciones México, S.A. de C.V.; Tedagua México, S.A. de C.V.; FYPASA Construcciones, S.A. de C.V.; Inmobiliaria Canoras, S.A. de C.V.
[2] Winning Company: Tecnología Intercontinental, S.A. de C.V. (TICSA).
[3] Winning Company: MARHNOS.
[4] Winning Company: DEGREMONT, S.A. de C.V.
[5] Winning Company: Fuerza de Apoyo Constructiva de Ote. S.A. de C.V.

NB: Only the plants with the greatest capacities have been included.

S.4 Wastewater treatment plants under process

Director of the project: The Government of the State concerned, and where applicable, the respective Municipal Government.

Projects under review or construction (Federal Expenditure Budget - State investment)

Locality		State	Investment estimated (millions of pesos)
La Paz	view	Baja California Sur	**443,3**
Poza Rica	*Under construction*	Veracruz	**150,0**
San Cristóbal de las Casas		Chiapas	**135,0**
Taxco	*Under construction*	Guerrero	**95,0**
Tixtla		Guerrero	**51,9**
Ometepec	*Under construction*	Guerrero	**50,0**
Playa del Carmen	*Under construction*	Quintana Roo	**35,8**
Tlacotalpan	*Under construction*	Veracruz	**25,0**

NB: Only the plants with the greatest capacities have been included.

D.1 Ensenada desalination plant, B.C.

Director of the project: Comisión Estatal del Agua en Baja California (http://www.cea.gob.mx)

Reason | Technical data | Financial data | Location map

To guarantee drinking water supply for the population of the city of Ensenada, the government of the State of Baja California is planning a project involving a seawater desalination system for drinking water supply to the city, with a nominal production of 250 l/s.

NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

Population benefited: 72 000 inhabitants

The original uploader was Togo de Wikipedia en español - Transferido desde es.wikipedia a Commons

https://upload.wikimedia.org/wikipedia/commons/a/a9/EnsenadaView2k4.jpg

D.1 Ensenada desalination plant, B.C.

Director of the project: Comisión Estatal del Agua en Baja California (http://www.cea.gob.mx)

Desalination plant
(reverse osmosis)
Q = 250 L/s

Direct seawater intake
700 L/s

Reject water line
400 L/s D = 610 mm
- Ground-based outlet: L = 3,10 km
- Underwater outlet: L = 1,97 km

Seawater inflow
700 L/s D = 914 mm
- Underwater stretch: L = 1,23 km
- Ground-based stretch: L = 2,89 km

Pipeline
300 L/s D = 508 mm
- Pressure (including PP): L = 14,36 km
- Gravity: L = 3,56 km

Complementary works and facilities

D.1 Ensenada desalination plant, B.C.

Director of the project: Comisión Estatal del Agua en Baja California (http://www.cea.gob.mx)

Reason | Technical data | Financial data | Location map

Total investment estimated

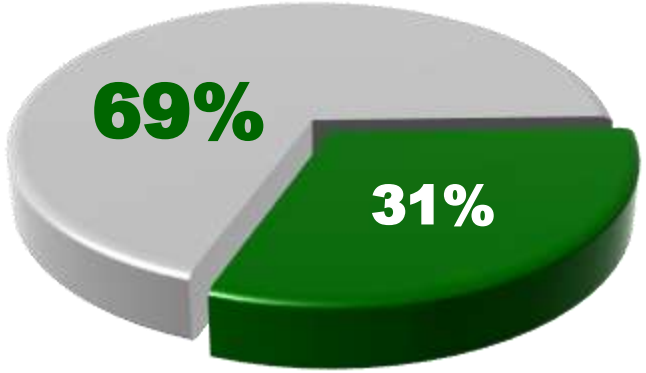
(at 2014 prices)

$ 517

millions of pesos

I.I.R.: 17,55 %

Investments sources



Private investment

National Infrastructure Trust Fund

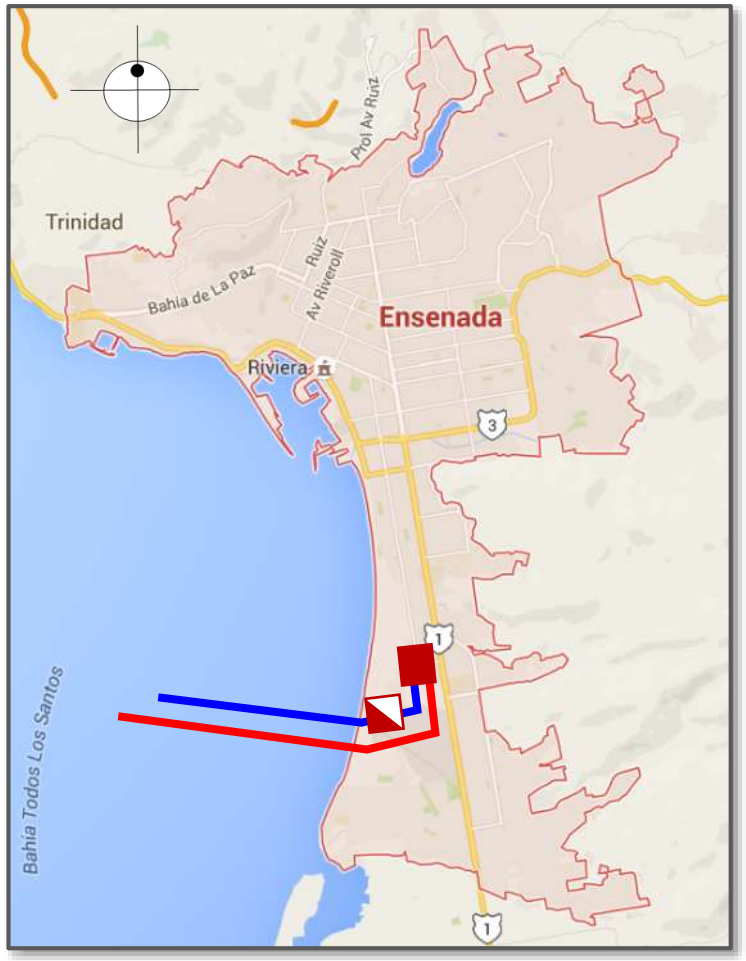
The construction of the desalination plant is performed under the DBOT scheme
(design, build, operate and transfer)
with a concession for operation.

Opening of the tender:	February 22, 2011
Winning Company:	OHL Medio Ambiente Inima, S.A.U. (August 31, 2011)

D.1 Ensenada desalination plant, B.C.

Director of the project: Comisión Estatal del Agua en Baja California (http://www.cea.gob.mx)

Reason | Technical data | Financial data | Location map

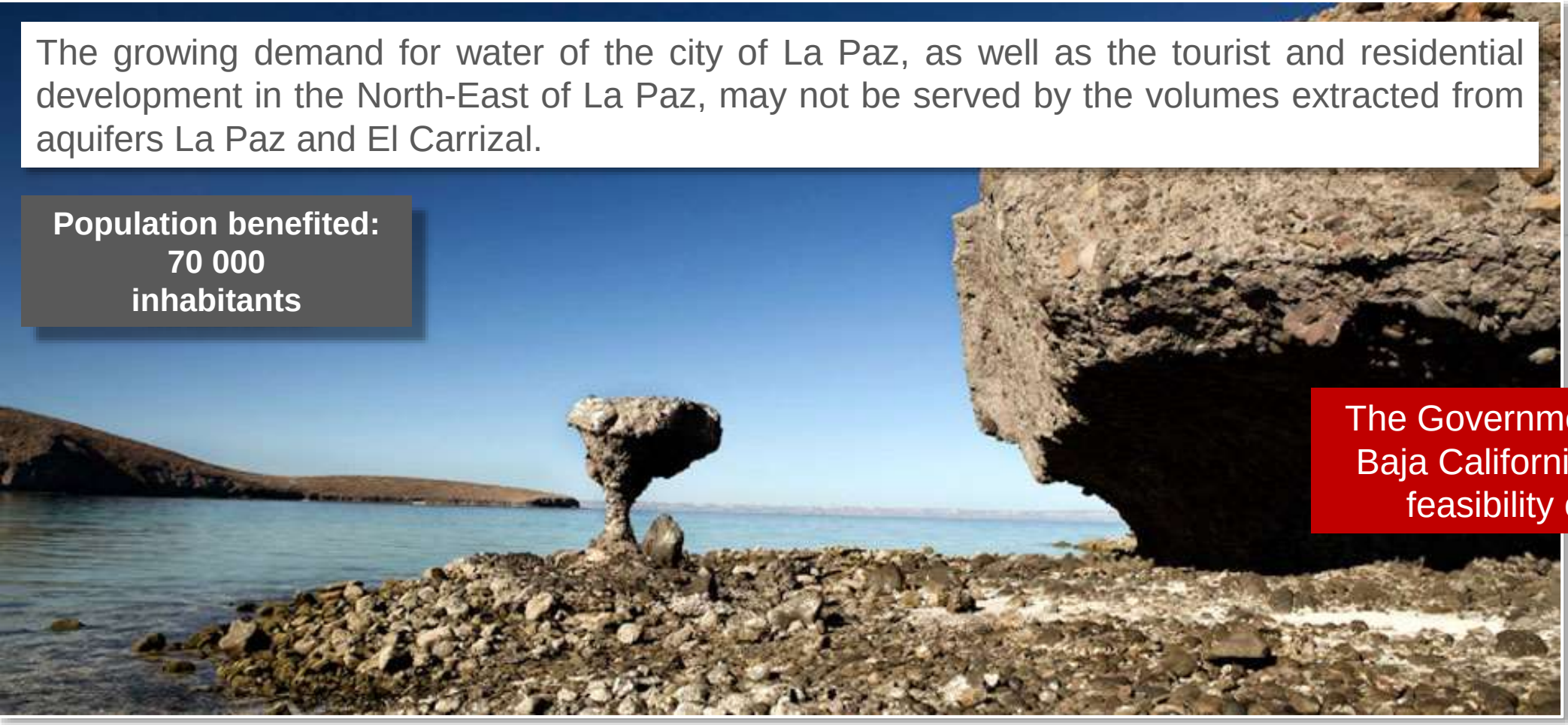


D.2 La Paz desalination plant, B.C.S.

Director of the project: Organismo Operador Municipal del Sistema de Agua Potable, Alcantarillado y Saneamiento (www.lapaz.gob.mx/sapa)

The growing demand for water of the city of La Paz, as well as the tourist and residential development in the North-East of La Paz, may not be served by the volumes extracted from aquifers La Paz and El Carrizal.

Population benefited: 70 000 inhabitants

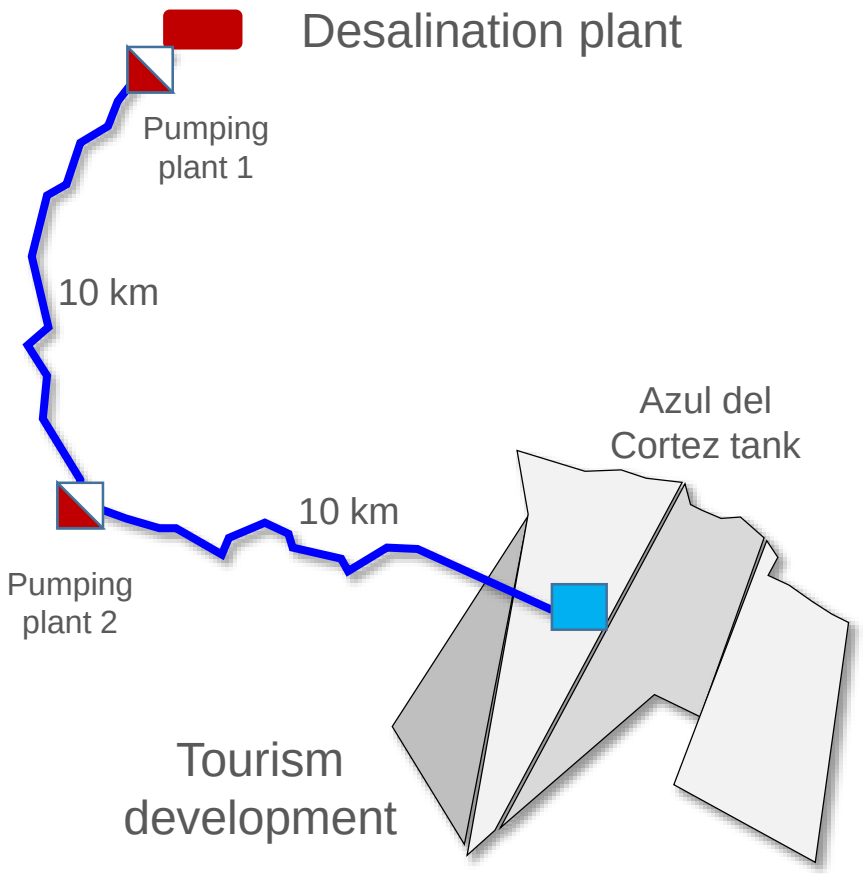


NATIONAL INFRASTRUCTURE PROGRAM 2014-2018

The Government of the State of Baja California Sur, review the feasibility of this project.

D.2 La Paz desalination plant, B.C.S.

Director of the project: Organismo Operador Municipal del Sistema de Agua Potable, Alcantarillado y Saneamiento (www.lapaz.gob.mx/sapa)



Desalinization process: **reverse osmosis**

The project includes:

- direct seawater intake
- desalination plant
- aqueduct
- potable water storage
- work of reject water disposal

First stage: 200 L/s

Expected an expansion in the future, up to 600 l/s, to strengthen the supply of the city of La Paz and the tourist area of Pichilingue, Punta Colorada, Balandra Bay and Tecolote Beach.

D.2 La Paz desalination plant, B.C.S.

Director of the project: Organismo Operador Municipal del Sistema de Agua Potable, Alcantarillado y Saneamiento (www.lapaz.gob.mx/sapa)

Total investment estimated

(at 2014 prices)

$ 545

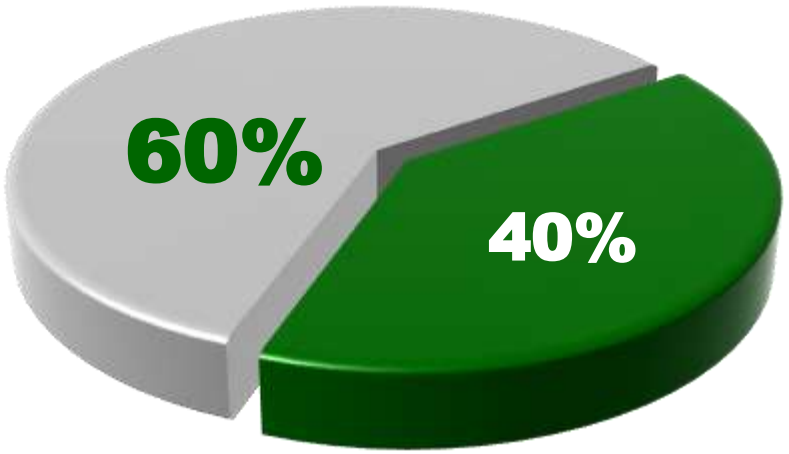
millions of pesos

Windows of opportunity for the private sector:

Expected that this project will be built by a contract for the provision of services with a concession operation.

The Government of the State of Baja California Sur, review the feasibility of this project.

Investments sources



Private investment

National Infrastructure Trust Fund

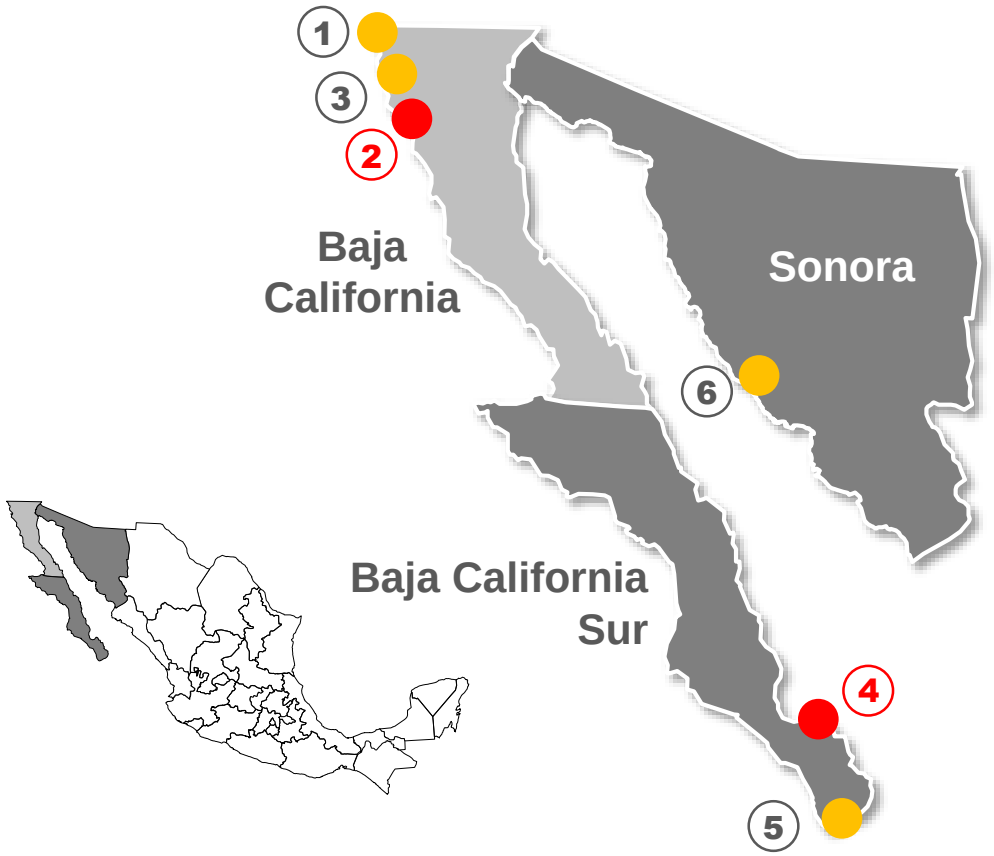
D.2 La Paz desalination plant, B.C.S.

Director of the project: Organismo Operador Municipal del Sistema de Agua Potable, Alcantarillado y Saneamiento (www.lapaz.gob.mx/sapa)

D.3 Desalination plants under review

Director of the project: The Government of the State concerned, and where applicable, the respective Municipal Government

Desalination of seawater is an alternative solution for certain cities based in coastal regions, with a high potential for development and low availability of water resources.



Among the most significant projects under review

Locality	Q (L/s)	Investment (millions of pesos)		
		non recoverable*	Private sector contribution	total
1 Tijuana, B.C. (I y II)	1 000	440	660	1 100
2 Ensenada, B.C. view	250	162	355	517
3 Ensenada, B.C. (La Misión)	250	120	180	300
4 La Paz, B.C.S. view	200	218	327	545
5 Los Cabos, B.C.S. (Amp.)	200	120	180	300
6 San Carlos, (Son.)	100	100	150	250

*National Infrastructure Trust Fund (FONADIN)