

# Scoring results

ALT <sup>1</sup>									Score	Cost Effectiveness <sup>2</sup>	Total Capital (\$M)
	P1	P2	P3	P4	P5	P6	P7	P8			
I-2	60 mgd	conveyance to APTP	35 mgd	8 mgd	5 mgd	✓	10 mgd	5 mgd	297	18	627
I	60 mgd	conveyance to APTP	35 mgd	8 mgd	5 mgd	✓	10 mgd	10 mgd	287	15	674
H			25 mgd	8 mgd	5 mgd	✓	10 mgd		269	33	368
F-2		35 mgd	20 mgd		5 mgd	✓	10 mgd		242	22	386
E-2	35 mgd	conveyance to APTP	15 mgd		5 mgd	✓	10 mgd		230	25	367
E	35 mgd	conveyance to APTP	15 mgd		5 mgd	✓			220	22	346
F		35 mgd	20 mgd			✓	10 mgd		219	20	372
G		35 mgd	15 mgd			✓		10 mgd	204	17	381
B	100 mgd	conveyance to APTP			5 mgd	✓	10 mgd	10 mgd	200	20	314
A	163 mgd	conveyance to APTP				✓	10 mgd		190	21	280
D	60 mgd		15 mgd			✓			188	17	350
C	100 mgd		5 mgd			✓			179	19	332
B-2	100 mgd	conveyance to APTP			5 mgd	✓	10 mgd		163	21	248

Ranking Based on Score



<sup>1</sup> All alternatives contain canyon regrading

<sup>2</sup> Cost effectiveness is calculated by Score/40y-yr Lifecycle Cost

<sup>3</sup> Cost estate includes 1.5 contingency factor.

# Three Alternatives for Further Evaluation

ALT <sup>1</sup>									Score <sup>2</sup>	Cost Effectiveness <sup>3</sup>	% Reduction (higher is better)		Total Cost	
	P1	P2	P3	P4	P5	P6	P7	P8			Transboundary flow days in TJR (annual)	Days with impaired water quality at IB (summer)	Capital (\$M) <sup>4</sup>	Annual O&M (\$M)
I-2	60 mgd	conveyance to APTP	35 mgd	8 mgd	5 mgd	✓	10 mgd	5 mgd	297	18	76%	95%	627	26
H			25 mgd	8 mgd	5 mgd	✓	10 mgd		269	33	54%	74%	368	11
E-2	35 mgd	conveyance to APTP	15 mgd		5 mgd	✓	10 mgd		230	25	64%	63%	367	14

<sup>1</sup> All alternatives contain canyon regrading

<sup>2</sup> Scores have been updated from August 4<sup>th</sup> meeting materials to reflect more recent data and calculations

<sup>3</sup> Cost effectiveness is calculated by Score/40y-yr Lifecycle Cost

<sup>4</sup> Cost estimates include 1.5 contingency factor. Costs have been updated from August 4<sup>th</sup> meeting materials to reflect more recent data and calculations

# Alternative I-2

## Comprehensive Alternative

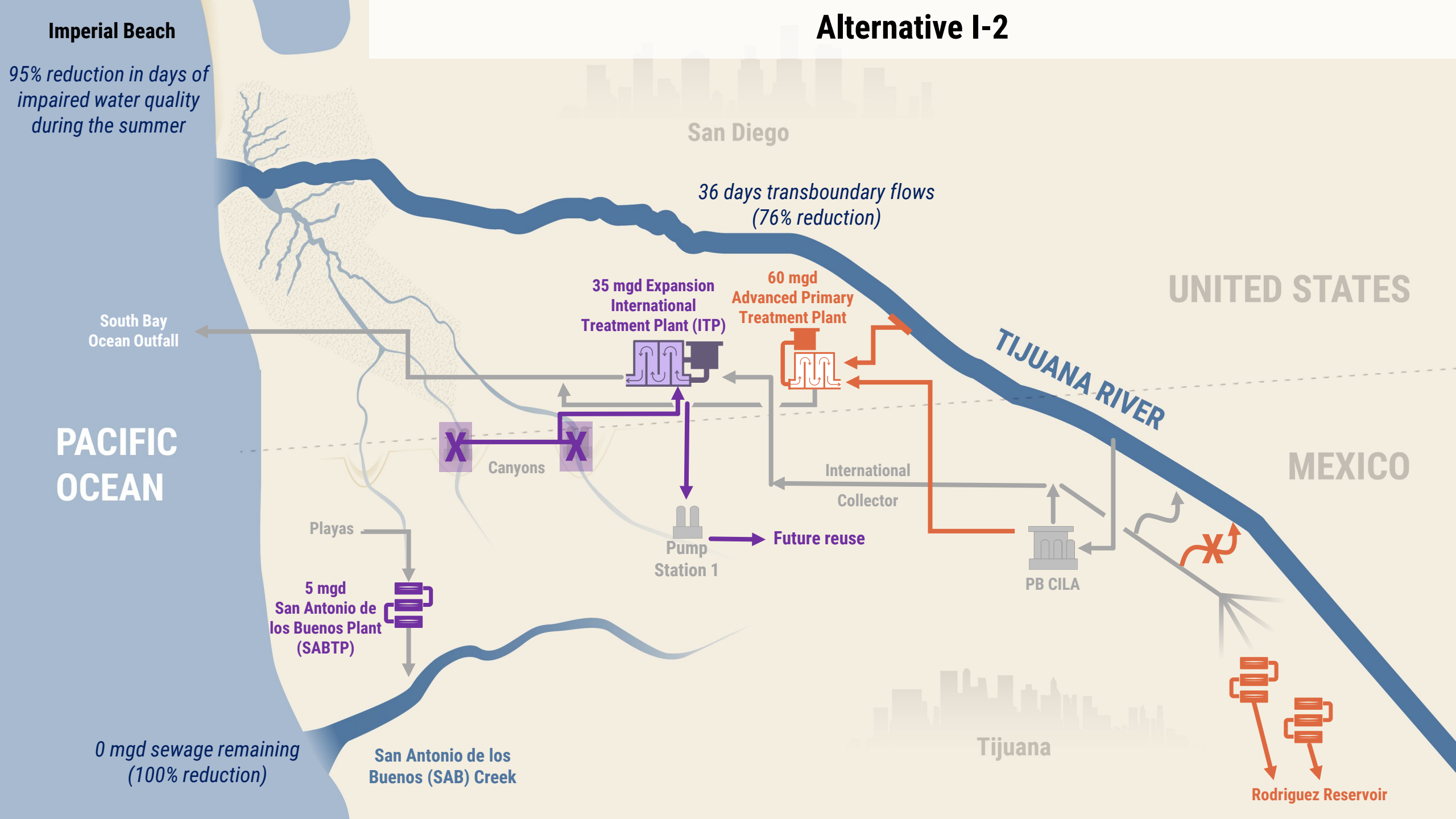
### **Project Components**

- 35 MGD expansion of the International Treatment Plant to treat Tijuana and canyon sewage until 2050. Treated effluent would be sent back to Tijuana for reuse
- 60 MGD river diversion and Advanced Primary Treatment Plant in the US to capture and treat Tijuana River flows
- 5 MGD San Antonio de Los Buenos Treatment Plant to treat sewage from Tijuana coastal areas until 2050
- 10 MGD of water reuse and 5 MGD of sewer repairs to reduce Tijuana River flows
- Trash boom in the river to prevent transboundary trash contamination
- Canyon regrading project to reduce pooling of wastewater on the U.S.-side of canyons

### **Major Expected Impacts**

- 76% reduction of transboundary river flow days
- 95% reduction of days with impaired water quality at Imperial Beach (tourist season)
- Provides more U.S. oversight to treat wastewater and ensures the majority of sewage remains out of the river and ocean
- Diverts all dry-weather and some wet-weather transboundary river flows when the existing Mexico-side diversion is failing or has reached its operational threshold
- Reduces sewage pooling in canyons and negative impacts on U.S. Customs and Border Protection

# Alternative I-2



**Imperial Beach**

*95% reduction in days of impaired water quality during the summer*

San Diego

*36 days transboundary flows (76% reduction)*

UNITED STATES

South Bay Ocean Outfall

**35 mgd Expansion International Treatment Plant (ITP)**

**60 mgd Advanced Primary Treatment Plant**

**TIJUANA RIVER**

**PACIFIC OCEAN**

**X** Canyons **X**

International Collector

MEXICO

Playas

Pump Station 1

Future reuse

PB CILA

**5 mgd San Antonio de los Buenos Plant (SABTP)**

*0 mgd sewage remaining (100% reduction)*

**San Antonio de los Buenos (SAB) Creek**

Tijuana

**Rodriguez Reservoir**

# Alternative H

## Wastewater Treatment Alternative

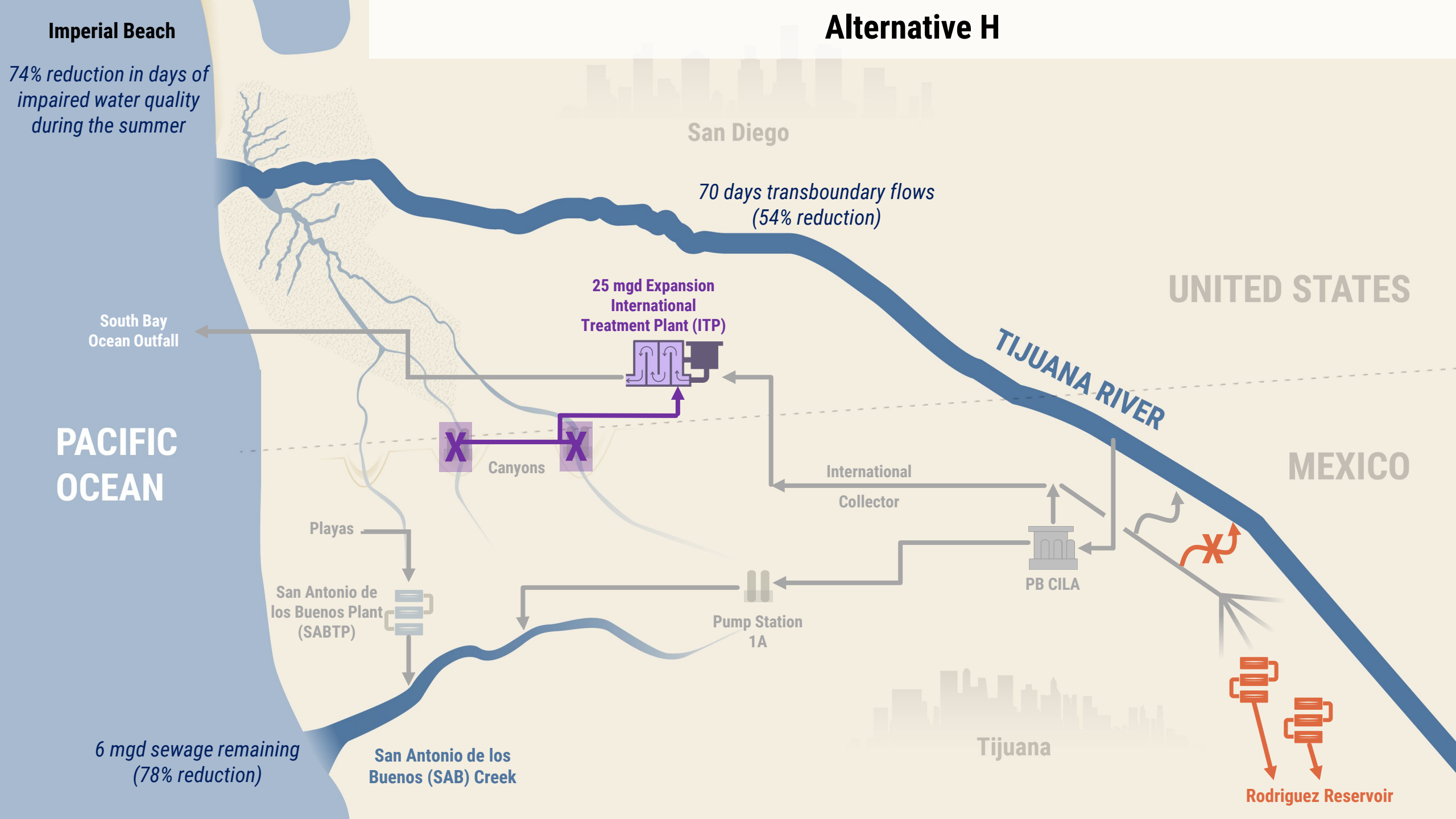
### Project Components

- 25 MGD expansion of the International Treatment plant to treat central Tijuana and canyon sewage until 2030
- 10 MGD of water reuse and 5 MGD of sewer repairs to reduce Tijuana River flows
- Trash boom in the river to prevent transboundary trash contamination
- Canyon regrading project to reduce pooling of wastewater on the U.S.-side of canyons

### Major Expected Impacts

- 54% reduction of transboundary river flow days
- 74% reduction of days with impaired water quality at Imperial Beach (tourist season)
- Provides more U.S. oversight to treat wastewater and ensures a significant amount of sewage remains out of the river and ocean
- Reduces sewage pooling in canyons and negative impacts on U.S. Customs and Border Protection

# Alternative H



**Imperial Beach**

74% reduction in days of impaired water quality during the summer

San Diego

70 days transboundary flows (54% reduction)

UNITED STATES

South Bay Ocean Outfall

PACIFIC OCEAN

25 mgd Expansion International Treatment Plant (ITP)

Canyons

International Collector

MEXICO

TIJUANA RIVER

Playas

San Antonio de los Buenos Plant (SABTP)

PB CILA

Pump Station 1A

6 mgd sewage remaining (78% reduction)

San Antonio de los Buenos (SAB) Creek

Tijuana

Rodriguez Reservoir

# Alternative E-2

## Hybrid Alternative

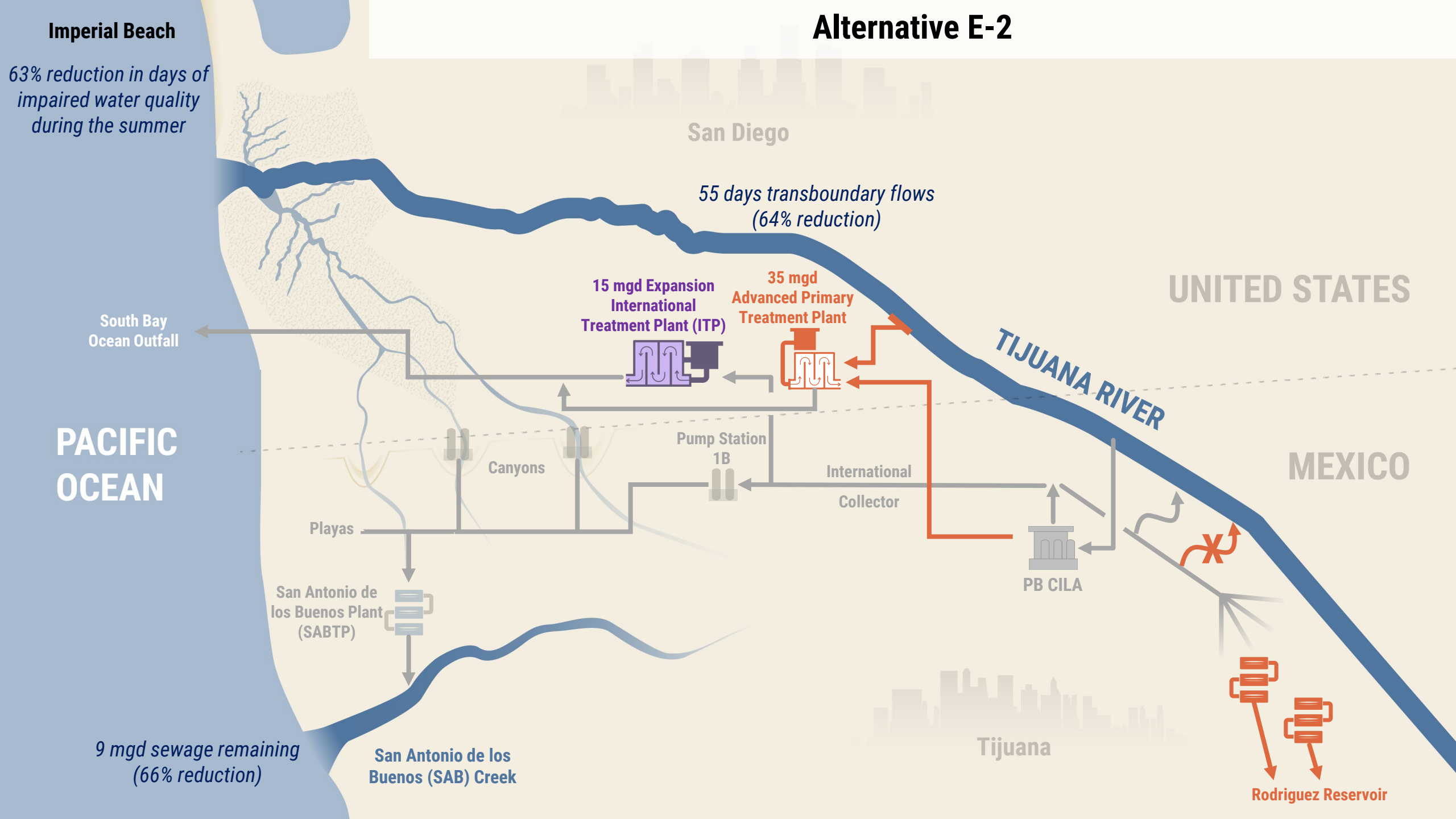
### Project Components

- 15 MGD expansion of the International Treatment plant to treat majority of current Tijuana sewage
- 35 MGD river diversion and Advanced Primary Treatment Plant in the US to capture and treat Tijuana River flows
- 10 MGD of water reuse and 5 MGD of sewer repairs to reduce Tijuana River flows
- Trash boom in the river to prevent transboundary trash contamination
- Canyon regrading project to reduce pooling of wastewater on the U.S.-side of canyons

### Major Expected Impacts

- 64% reduction of transboundary river flow days
- 63% reduction of days with impaired water quality at Imperial Beach (tourist season)
- Provides more U.S. oversight to treat wastewater and ensures a significant amount of sewage remains out of the river and ocean
- Diverts all dry-weather transboundary river flows when the existing Mexico-side diversion is failing or has reached its operational threshold

# Alternative E-2



**Imperial Beach**

*63% reduction in days of impaired water quality during the summer*

San Diego

*55 days transboundary flows (64% reduction)*

UNITED STATES

**TIJUANA RIVER**

MEXICO

**PACIFIC OCEAN**

South Bay Ocean Outfall

**15 mgd Expansion International Treatment Plant (ITP)**

**35 mgd Advanced Primary Treatment Plant**

Pump Station 1B

International Collector

Canyons

Playas

San Antonio de los Buenos Plant (SABTP)

PB CILA

*9 mgd sewage remaining (66% reduction)*

San Antonio de los Buenos (SAB) Creek

Tijuana

Rodriguez Reservoir