Status of Tijuana Diversion System

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Tijuana Watershed

Area = 1750 sq.mi.
75% (1312 sq.mi.) in Mexico
25% (427 sq. mi.) in U.S.

½-inch rainfall = 15,200 MG runoff
SBIWTP Capacity = 25 MGD

Over 600 WWTPs required to treat runoff from one ½-inch rainfall event
Tijuana Diversion System

PB CILA diverts flow from the Tijuana River when the flow does not exceed 23 MGD
PB CILA Intake

Diverts 23 MGD (1000 L/s) from Tijuana River to PB CILA lift station during dry-weather conditions (April-October)
PB CILA
Conveys 23 MGD, 1000 L/s to International Collector (11.5 MGD, 500 L/s) and PB-1A (11.5 MGD, 500 L/s) during dry weather season

3 Vertical Pumps, 11.5 MGD, 500 L/s each:
1 Primary, 1 Back-up - working; 1 - not in service

3 Horizontal Pumps, 11.5 MGD, 500 L/s each:
1 Primary - working
1 Backup - working
1 Spare - working
PB CILA

36.5 MGD Wastewater
Flow Greater Than 23 MGD (1000 L/S) At Tijuana River

- PB CILA is turned off to prevent pump damage.
- Flow continues into the United States

What is that liquid flowing into the U.S?
- 12 MGD Effluent from La Morita and Herrera WWTP
- 5-11 MGD Urban Wastewater Runoff
- Excess liquid is Stormwater
Recommendations for PB CILA

- Identify where this 5-11 MGD Wastewater Runoff is coming from and tie it to the WW system
- Isolate the 12 MGD Effluent from La Morita and Herrera WWTPs from the system (send to Dam or end of SBIWTP)
- Design a system to settle out the sediment and trash prior to going to the PB CILA pumps, increase capacity if possible
- Divert all 23 MGD to SAB instead of SBIWTP
PB CILA

36.5 MGD Wastewater
PB 1A
Conveys 11.5 MGD, 500 L/s from PB CILA to ocean
3 Pairs of Pumps: 11.5 MGD, 500 L/s per pair working in series
One pair working - one pair required to meet demand
Recommendation for
PB 1A

- Repair at least one set of pumps for back up 11.5 MGD (500 L/s)
PB 1B Pump Station
PB 1B

Conveys 23 MGD (1000 L/s) to San Antonio de los Buenos WWTP
5 Pairs of Pumps: 11.5 MGD, 500 L/s per pair working in series
3 pairs working- 2 pairs required to meet demand

Pair not in service

3 Pairs working

Pair not in service
Recommendation for PB 1B

• None, back-up is available
Laureles 1

Conveys canyon runoff collection to San Antonio de los Buenos WWTP
3 Pumps: 70 L/s per pump
2 primary pumps working- 2 required to meet demand
1 backup pump not in service
Laureles 2

Conveys canyon runoff collection to San Antonio de los Buenos WWTP
4 pairs of pumps: 66 L/s per pair working in series
3 primary pairs working- 3 required to meet demand
1 backup pair not in service
Matadero Station Flooded
Matadero

Conveys canyon runoff collection to San Antonio de los Buenos WWTP
5 Pairs of Pumps: 150 L/s per pair working in parallel
2 pairs working- 2 required to meet demand
2 backup pairs installed, undergoing testing; 1 backup pair being repaired
Recommendations

Laureles 1: Fix the 70 L/S pump for back-up
Laureles 2: Fix the 66 L/S pump for back-up
Matadero: None, back-up is available

L/s per pump