Nogales International Outfall Interceptor
SCAMA Groundwater Users Advisory Council

August 28, 2018
### Background

<table>
<thead>
<tr>
<th>Year</th>
<th>Details</th>
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| 1951 | - Original NIWTP constructed  
- Located 1.5 miles north of border  
- 1.6 MGD capacity  
- 6,153 Nogales, AZ population  
- 9,147 Santa Cruz County population  
- 26,016 Nogales, Sonora population |
| 1972 | - NIWTP upgraded  
- Relocated 8.8 miles north of border  
- 8.2 MGD capacity  
- 8,946 Nogales, AZ population  
- 13,966 Santa Cruz County population  
- 53,494 Nogales, Sonora population |
| 1992 | - NIWTP upgraded  
- No change in location  
- 15.75 MGD capacity  
- 19,489 Nogales, AZ population  
- 29,676 Santa Cruz County population  
- 107,936 Nogales, Sonora population |
| 2009 | - NIWTP upgraded to Biological Nutrient Removal System  
- No change in location  
- 14.74 MGD capacity  
- 20,878 Nogales, AZ population  
- 38,381 Santa Cruz County population  
- 159,787 Nogales, Sonora population |
| 2012 | - ADEQ files lawsuit against IBWC for Clean Water Act and permit violations  
- No change in location  
- 20,837 Nogales, AZ population  
- 47,420 Santa Cruz County population  
- 225,829 Nogales, Sonora population |
| 2018 | - EPA brokers a discussion between DOJ and ADEQ  
- Discussion results in opportunity  
- 20,076 Nogales, AZ population  
- 46,212 Santa Cruz County population  
- 252,614 Nogales, Sonora population |

Populations from 1950 census.  
Populations from 1970 census.  
Populations from 1990 census.  
Populations from 2000 census.  
Populations from 2010 census.  
Populations estimates for 2017.
ADEQ Flow Measurements: July 27, 2017

- Upstream flow: 21.006 cfs
- Downstream flow: 21.977 cfs
- Difference attributed to IOI: 0.971 cfs
  - 0.6278 MGD
  - 627,574 gallons per day (+/-8%)
...and many more risks
Never ask a question if you are not prepared to hear an honest answer
MINUTE NO. 276

Ciudad Juarez, Chihuahua
July 26, 1988

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

CONVEYANCE, TREATMENT AND DISPOSAL OF
SEWAGE FROM NOGALES, ARIZONA AND NOGALES, SONORA EXCEEDING THE
CAPACITIES ALLOTTED TO THE UNITED STATES AND MEXICO
AT THE NOGALES INTERNATIONAL SEWAGE TREATMENT PLANT
UNDER MINUTE NO. 227

Finally, the Mexican Commissioner expressed that the Government of
Mexico reserves the right to dispose of part or of all of the Nogales,
Sonora sewage, in its own territory or return for reuse, in its own ter-
ritory, the effluent from the international plant that is part of the
sewage inflows corresponding to Nogales, Sonora.
Is the water certain? (cont’d)
Positive impacts of effluent are regional

12M gal/day
(13,442 acre-ft/yr)
Replenishes the SCAMA

Santa Cruz Active Management Area (SCAMA) Budget (2011 – 2016)

SCAMA Water Demand (AF/yr)

- Municipal: 15,000
- Industrial: 6,800
- Agricultural: 12,000
- Riparian: 1,400

SCAMA Water Supply (AF/yr)*

- Effluent: 13,442
- Other: 21,758

*Varies annually
Graphic assumes safe yield

Delivered by IOI

Relies On
Maintains Perennial Extent of Surface Water

USGS Study on Ecosystem Services of effluent to border region

Perennial extent could decrease from 18 to 6.3 miles depending on the time of year.

Chavez Siding, 2004 - perennial

Chavez Siding, 2016 - ephemeral
Valuable for property and development

USGS Study on Ecosystem Services of effluent to border region

If we neglect impacts on real estate values and just look at domestic water and recharge value, 12 MGD of effluent is valued at $2.1M / year.
Opportunity to start work

IBWC
- $21 million initial funding for repairs
- Good faith efforts for rest of funding
- Continue Operating NIWTP 100%

Local
- 22% match for repairs
- OK if match comes later
- OK if match comes from other federal sources
- 100% of IOI O&M
- Easements, ROWs & permits, traffic control

Good faith efforts to re-write minute 276

O&M doesn’t begin until after rehab is complete
Potential Funding Mechanisms

- Domestic water improvement district (DWID)
- County Improvement District
- Other Special Taxing District
- Non-profit contributions
- Other federal grants
- Other?

*O&M seems to be the most difficult issue*
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