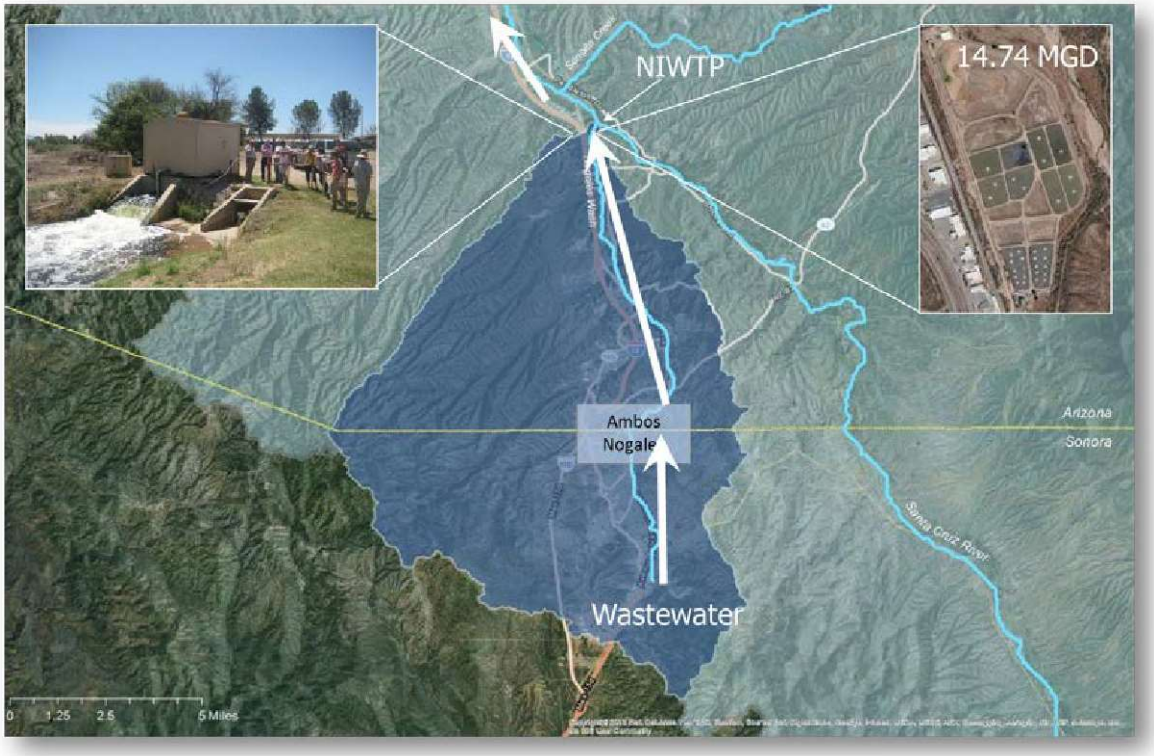

Nogales International Outfall Interceptor
SCAMA Groundwater Users Advisory Council

August 28, 2018

ADEQ Arizona Department of Environmental Quality

Background

ADEQ Arizona Department of Environmental Quality

1951	1972	1992	2009	2012	2018
• 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	• 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	• 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	• 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	• ADEQ files lawsuit against IBWC for Clean Water Act and permit violations • 20,837 Nogales, AZ population • 47,420 Santa Cruz County population • 225,829 Nogales, Sonora population	• 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.

Why are we here?

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

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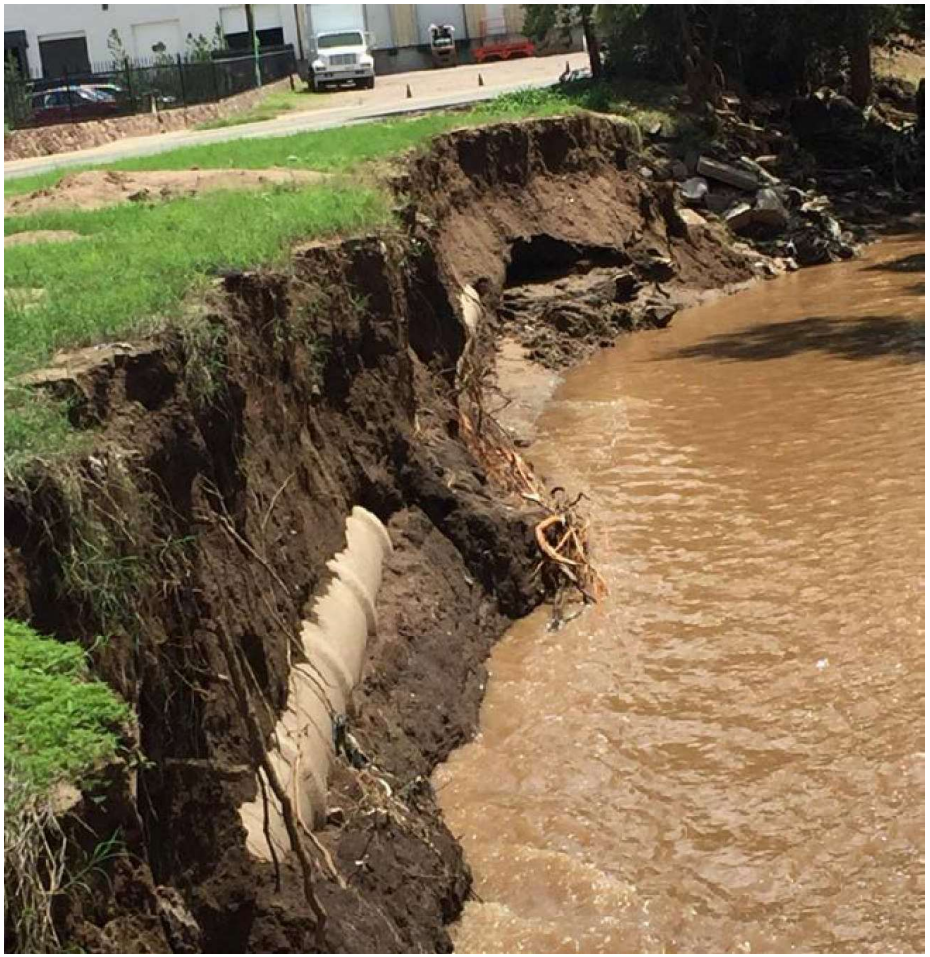

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Never ask a question if you are not prepared to hear an honest answer

Is the water certain?

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

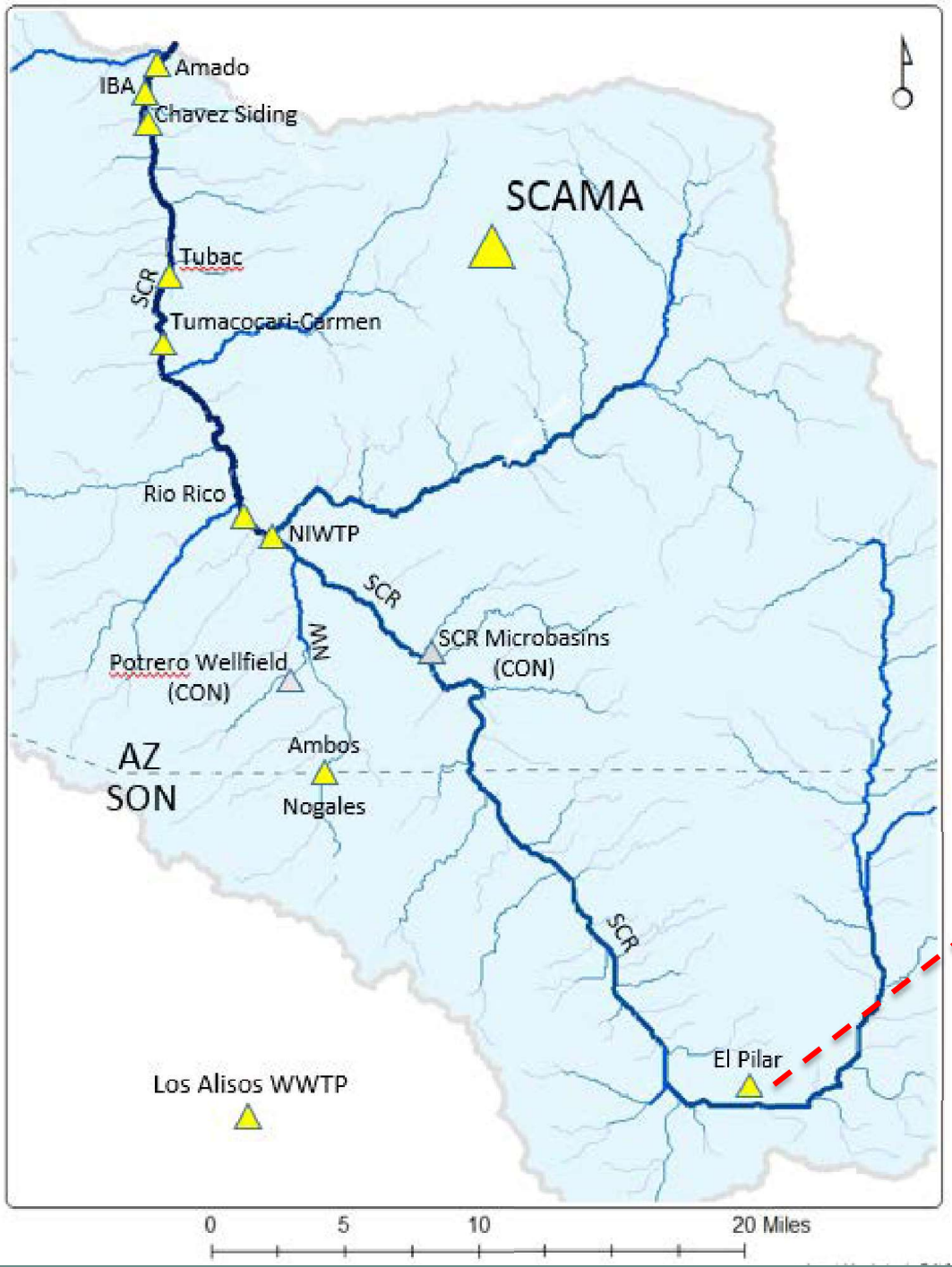
MINUTE NO. 276

Ciudad Juarez, Chihuahua
July 26, 1988

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 territory, the effluent from the international plant that is part of the sewage inflows corresponding to Nogales, Sonora.



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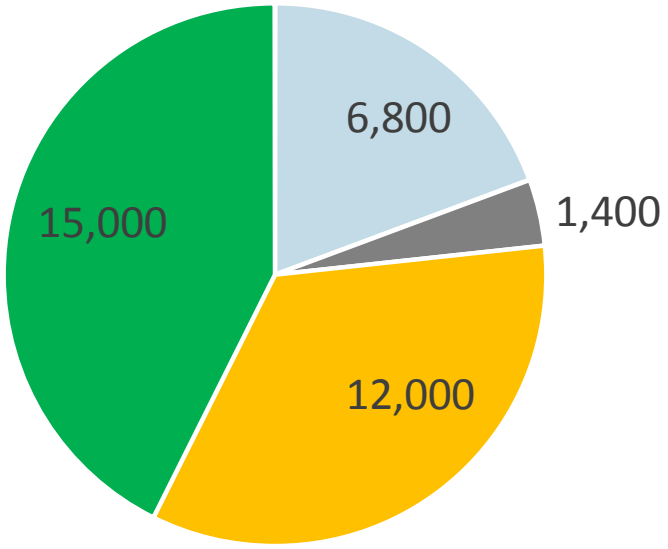
Is the water certain? (cont'd)

Positive impacts of effluent are regional

Replenishes the SCAMA

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

SCAMA Water Demand (AF/yr)

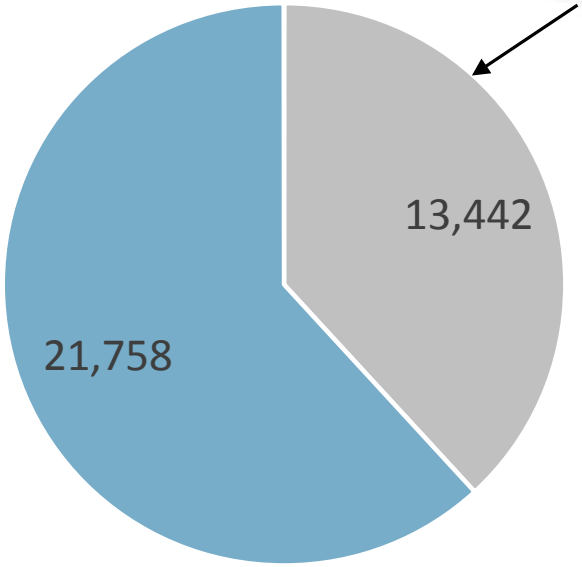


Municipal ■ Industrial ■ Agricultural ■ Riparian

Relies On

SCAMA Water Supply (AF/yr)*

Delivered by IOI



■ Effluent ■ Other

*Varies annually
Graphic assumes safe yield

Maintains Perennial Extent of Surface Water

USGS Study on Ecosystem Services of effluent to border region

USGS
science for a changing world

Water **2013**, *5*, 852-874; doi:10.3390/w5030852

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Article

Framing Scenarios of Binational Water Policy with a Tool to Visualize, Quantify and Valuate Changes in Ecosystem Services

Laura M. Norman [1,*], Miguel L. Villarreal [1], Rewati Niraula [2], Thomas Meixner [2], George Frisvold [3] and William Labiosa [4]

Chavez Siding , 2004 - perennial

Chavez Siding, 2016 - ephemeral

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

Valuable for property and development

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USGS Study on Ecosystem Services of effluent to border region

USGS science for a changing world

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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%

Good faith efforts to re-write minute 276

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

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

Contact information

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