USIBWC Citizen Forum

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Impact of Industrial Pollutants upon the Nogales International Wastewater Treatment Plant (NIWTP)

Carlos Peña Jr., P.E.

Principal Engineer, Operations Department

International Boundary & Water Commission

United States Section

Agenda

- **Background**
- **Upgrades**
- **Contamination Issues**
- **Next steps**
- **Questions**

Upgrades

- **Original plant**
- **1992 Upgrade**
- **2009 Upgrade**

2009 Upgrade

- Technology upgrade online June 23, 2009
- Upgraded to Biological Nutrient Removal System (BNR)
- Treatment capacity of 14.74 MGD
- Influent flows originate from Nogales Sonora, Nogales Arizona and Rio Rico Arizona.
- Aerobic Digestion added for biosolids treatment
- Disinfection accomplished with ultraviolet light replacing previous chlorine gas system

Nogales International Wastewater Treatment Plant (NIWTP) 865 East Frontage Rd., Rio Rico AZ 85648

Contamination Issues

- **What are Industrial Pollutants?**

They are pollutants from non-domestic sources discharged into the sewer system which may pass through or interfere with Publically Owned Treatment Works (POTW) (Wastewater Treatment Plant) treatment processes or which may contaminate biosolids.
Fats, oils, grease, dissolved metals, solvents, acids and soaps are types of Industrial Pollutants.

Industrial Pollutants impacts to the NIWTP

Sampling has revealed elevated metal levels in the effluent discharge and biosolids of the NIWTP.

Levels of the metal Cadmium have been chronically elevated in the effluent and biosolids, putting the NIWTP into non-compliance with it's discharge permits.

Other metals have shown occasional elevated levels in the effluent but not in the biosolids.

Biosolids

- From Late 2009 until August of 2010, the NIWTP Land Applied biosolids in the Rio Rico, AZ area.
- In August of 2010 levels of Cadmium were found in the biosolids which were above the ceiling concentration allowed for land application but were well below levels to be considered hazardous waste.
- The land application of biosolids stopped, the fields used for land application were extensively tested using EPA TCLP Protocol and it was determined the fields were well below TCLP limits for all metals tested.
- The remaining stockpiled biosolids located at the land application field sites are currently being transported to a municipal landfill for disposal with the approval of ADEQ.
- The stockpiled biosolids located at the NIWTP, and any new biosolids produced may be transported to Mexico for disposal

Options

- The NIWTP is a biological process that cannot effectively treat metals
- Additional technology added to the NIWTP could treat metals but would interfere with the biological treatment process

Next Steps

- Increase monitoring
- Continue coordination of Binational Pretreatment efforts

Effluent discharge at Santa Cruz River

Questions

Further information

- **John Light : 520-281-1832 (john.light@ibwc.gov)**
- **Carlos Peña: 915-832-4118 (carlos.pena@ibwc.gov)**