

LAS VEGAS VALLEY NPDES STORMWATER DISCHARGE PERMIT STORMWATER QUALITY MANAGEMENT COMMITTEE (SQMC)

August 11, 2020



Item # 6

- Action to accept a presentation and receive an update on proposed water quality standards for the Las Vegas Wash for selenium (*For possible action*)



Update on Water Quality Criteria for Selenium



Background

There are high levels of naturally occurring selenium in Las Vegas Valley soils

- Dissolves in groundwater
- Very little dilution in the tributaries
- High selenium levels in the tributaries
 - Much higher than the existing or proposed criteria

Background

- Based on feedback from the Permittees, NDEP proposed a revised selenium standard that would exempt the Las Vegas Wash from the new standard for three years
- NDEP agreed to work with the local stakeholders to develop site specific criteria for selenium
- NDEP has also agreed to revisit tributaries

Selenium

- RFCD contracted with Arcadis in May 2020 to begin the work necessary to develop a site-specific standard for selenium
- Have met with NDEP three times (virtually) to discuss progress

Discharge Monitoring Data

- Analyzed data collected by USGS over the past 20 years for various drainages to the Las Vegas Wash as well as the mainstem of the Wash
- Data was summarized from 15 USGS monitoring locations
- Discharge monitoring data shows stability in average discharge over the period that was analyzed (2000-2020)

Fish Community Data

- Fish community data is based on fish surveys conducted by the SNWA in 2002-2003 and 2017-2019
- Fish surveys have identified 9 species of fish, including green sunfish
 - All are non-native fish species
- Green sunfish (*Lepomis cyanellus*) are important indicator species for selenium as identified in the EPA criteria guidance document

Selenium Water Quality Data

- SNWA and the US Bureau of Reclamation have been conducting water quality monitoring in the tributaries and mainstem of the Las Vegas Wash for roughly 20 years
- Dataset is robust and impressive
- Data show higher levels of selenium in the tributaries that is then diluted by effluent in the Las Vegas Wash

Bioassessment Data

- SNWA conducted a series of bioassessment studies from 2001 through 2010 that included analyzing selenium concentrations in fish
- Fish were sampled from the Nature Preserve and Pabco Weir
- Data indicate relatively stable concentrations in fish over time

Summary

- Arcadis presented all existing data to NDEP on July 31, 2020
- Data indicates stability in surface water hydrology and selenium concentrations
- NDEP indicated that they were “impressed” with data and the analysis
- Recommended that we prepare a presentation/memo for US EPA to get buy-in to use existing data to develop site-specific criteria for the Las Vegas Wash

Questions?

