

# Grand Valley Water Users Association

## Headworks Project: Aging Infrastructure

*Gateway of the lifeblood of the  
Grand Valley*



# The Historic Roller Dam aka Grand Valley Diversion Dam



# *History & purpose of an iconic structure*

- The Roller Dam celebrated its 100<sup>th</sup> birthday in 2016
- Construction began August 1913 and irrigation diversions began May of 1916 as part of the Grand Valley Project by the US Bureau of Reclamation.
- The Headworks at the Roller Dam diverts all of the irrigation water for not only Grand Valley Water Users, but Orchard Mesa Irrigation District, Palisade Irrigation District, and Mesa County Irrigation
  - This totals approximately 42,000 acres of irrigable land in the Grand Valley from Palisade to Mack



- The Headworks diversion is 1730 CFS during the irrigation season
- This diversion also provides water to the Vinelands Power Plant, the new hydroelectric plant managed by Orchard Mesa Irrigation Company, owned by OMID, GWWUA, and Sorenson Electric providing green energy to the Valley
- Grand Valley Diversion Dam was listed on the National Register of Historic Places on October 8, 1991



# Canal Headworks (get to the point already!)

- The GVC headworks are located on the right abutment of the GVDD and contain nine 7 x 7 foot cast iron slide gates and associated hoist equipment. A motor located inside the power house provides power to a single shaft connected to all the gates. Each gate has an individual clutch or pinion gear for single or multiple gate operation
- In a January, 2011 inspection, the BOR noted that much of the concrete in the GVC headworks is deteriorating—mainly from freeze/thaw activity (wouldn't you after 100 years?)
- The cast iron gates have been patched and repaired extensively throughout the years and...well...all good things come to an end.





# Purpose of the HW's Replacement Project

- This project has been recognized as a Top Basinwide Project in the Colorado Basin Implementation Plans (2015 and 2022) and the Colorado Water Plans (2015 and 2022).
  - Maintain and protect the 'Cameo Call'
  - Improve operation of the water delivery system
  - Improve canal capacity and reliability
  - Preserve the agricultural economy of the Grand Valley
  - Maintain and expand foregone diversion

Slow & Steady Progress



## Slow & Steady Progress

Regular maintenance is a yearly job, but large upgrades and replacements have been ongoing for decades.

