


Salinas Valley Basin GSA

Extraction Data Update

Presented to Forebay Aquifer
Subbasin Committee
May 5, 2021

Prepared by




An aerial photograph of a river delta with multiple channels and sandbars. A teal arrow points from the left edge of the image towards the right.

Ongoing Process to Resolve Three Sources of Extraction Information

- ➔ GEMS database – self reported pumping for wells with a discharge greater than 3”
- ➔ Annual MCWRA Groundwater Summary reports
- ➔ SVIHM model

Stakeholders have pointed out that numbers from these three sources do not always match

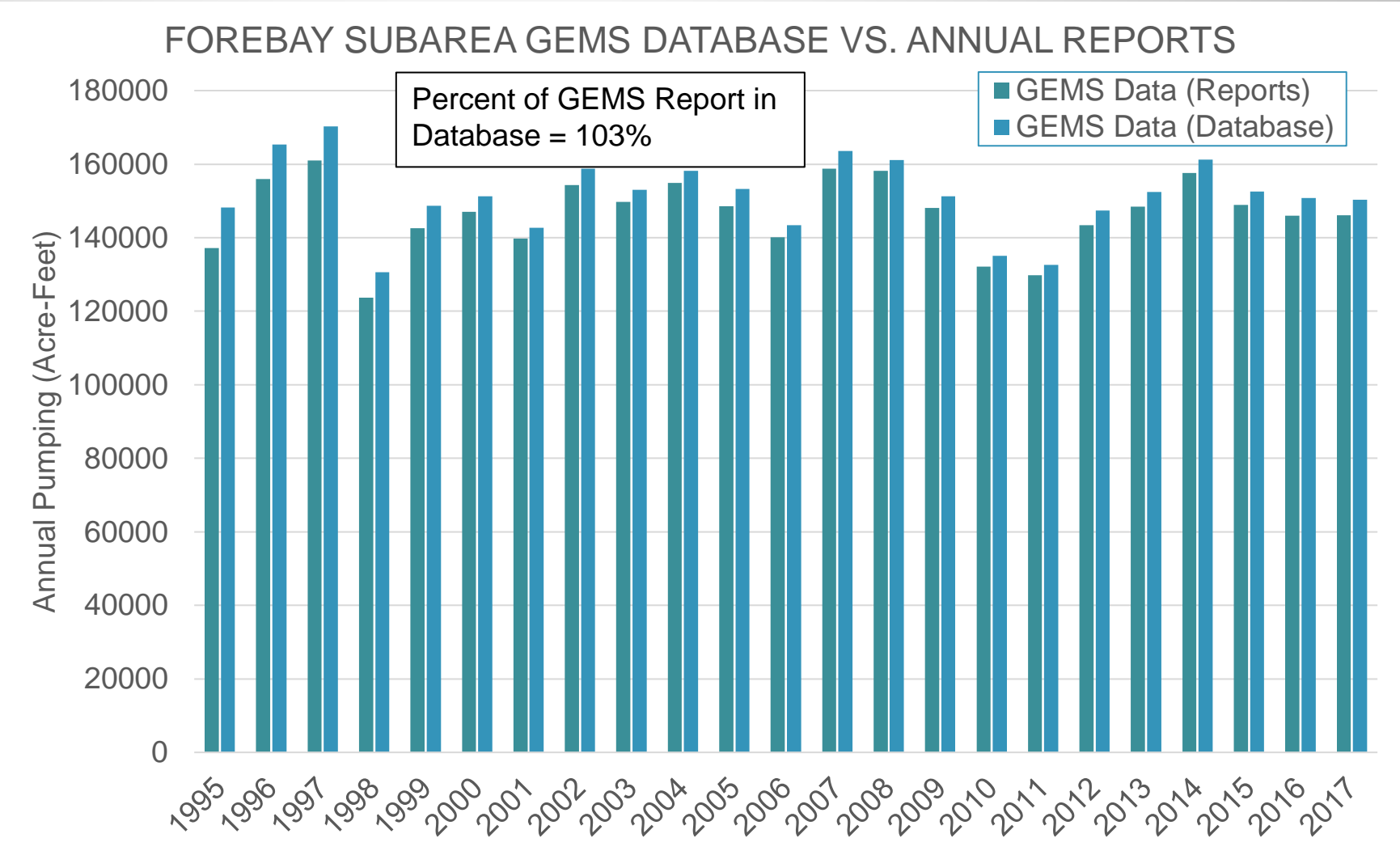


Difficulties Matching GEMS Database to MCWRA Groundwater Summary Reports

1. Database extraction error
2. Area reported in summary reports
3. Extraction data is updated after reports are issued
4. Changes to subarea designations
5. Changing well use designations

Totals will never exactly match

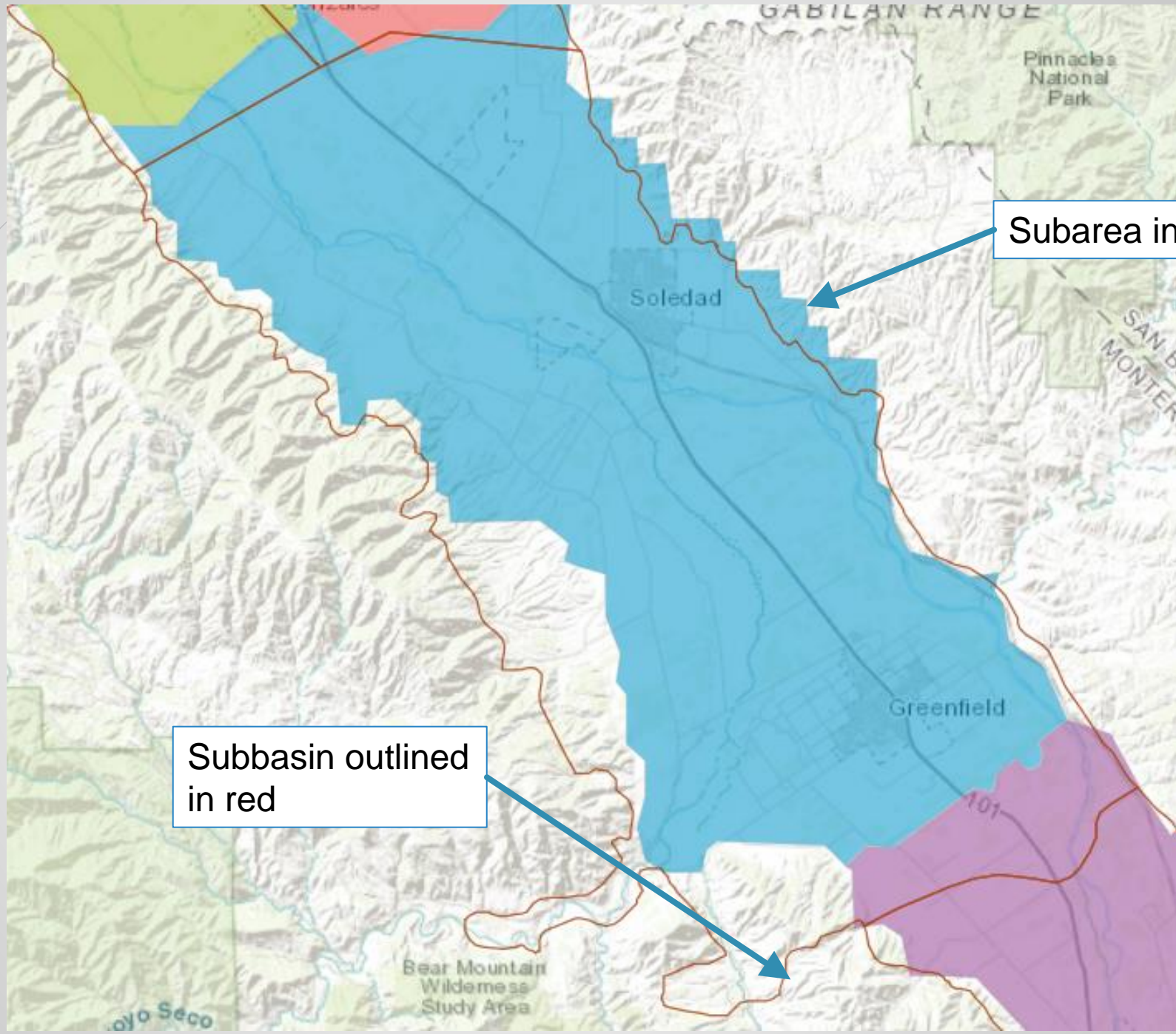
M&A Database Extraction Error Has Been Fixed





Reporting Area Consistency

- ➔ MCWRA Groundwater Summary reports provide data by subarea
- ➔ GSP and modeling data are provided by subbasin
- ➔ Data provided in GSPs are not expected to match the Groundwater Summary reports




Subarea in blue

Subbasin outlined in red

An aerial photograph of a river delta with multiple channels and sandbars. A teal arrow points from the left edge of the image towards the right.

Changing GEMS Data Make it Impossible to Match Annual Reports

1. Extraction data is updated after reports are issued
 - A. Additional wells
 - B. Corrections provided by extractors
2. Subarea designations change over time, based on updated mapping
3. Changing well use designations confuses agricultural and municipal uses

An aerial photograph of a river delta with a teal arrow pointing right. The river branches out into several channels, creating a complex network of waterways. The surrounding land is a mix of green vegetation and brownish soil. The sky is clear and blue.

Conclusions: Matching GEMS Database to MCWRA Groundwater Summary Reports

- ➔ Data now match well valley-wide, and relatively well in each subarea
- ➔ No previous estimates of Forebay Subbasin extractions in annual reports
- ➔ Changes over time mean subarea data will not match perfectly
- ➔ Data provided in GSPs are not expected to match the Groundwater Summary reports

An aerial photograph of a wide river with several large sandbars. The water is a light blue-grey color, and the sandbars are a light tan color. In the background, there are green trees and a clear blue sky. A large blue arrow points from the left edge of the image towards the right.


SVIHM Data

- ➔ Agricultural pumping is not directly input into SVIHM
- ➔ SVIHM estimates agricultural pumping based on crop type and climate
- ➔ SVIHM is calibrated to simulate Valley-wide GEMS data
- ➔ Further explained by USGS at the upcoming technical workshop



SVIHM Data and GSPs

- ➔ SVIHM appears to underestimate pumping, but this is still being investigated
- ➔ GSPs will acknowledge GEMS data in sustainable management criteria
 - ➔ Sustainable yield is not a number, it is the absence of Undesirable Results

An aerial photograph of a wide river with a sandy and rocky bed, surrounded by green vegetation and a clear blue sky. A teal arrow points from the left edge of the image towards the right.

The Ongoing Process Focuses on Data Checks and Improvements

- ➔ Receive GEMS data from MCWRA
- ➔ QA/QC GEMS data
- ➔ Summarize GEMS data by subarea and compare to annual reports
- ➔ Summarize GEMS data by subbasin
- ➔ Compare subbasin GEMS data to SVIHM
- ➔ Develop management action to expand and enhance the GEMS program



Questions

