

## RPU'S GROUNDWATER ATLAS

Board of Public Utilities  
March 22, 2021

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## INTRODUCTION

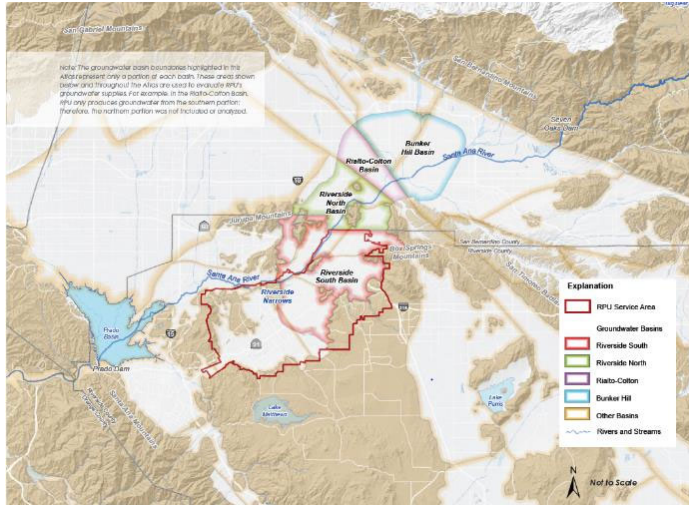
- Atlas-style document
- Provide readable data
- All data up to 2018



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## RPU GROUNDWATER BASINS



- RPU produces water from four groundwater basins adjacent to the Santa Ana River including the San Bernardino, Rialto-Colton, Riverside North and Riverside South Basins.

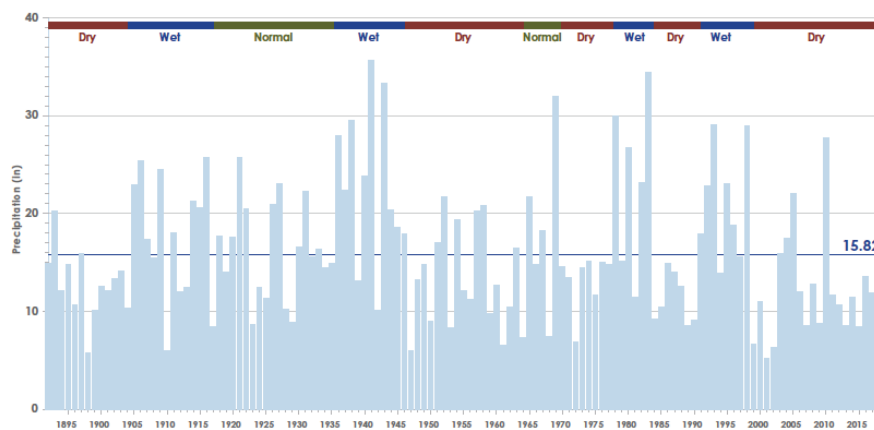
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## HYDROLOGIC CONDITIONS

Historical Annual Precipitation (San Bernardino County Hospital Gage)



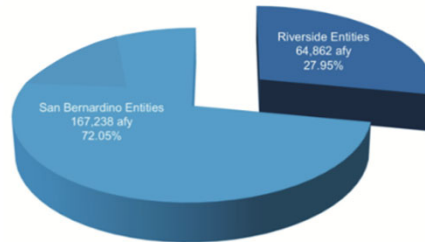
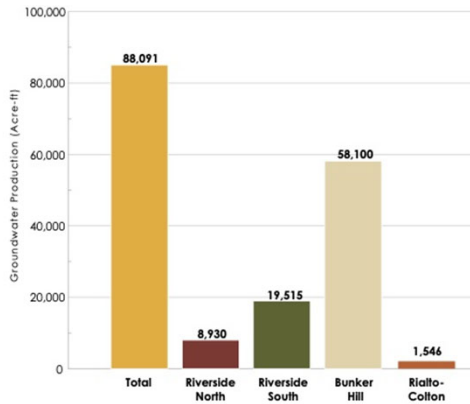
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# GROUNDWATER RESOURCES MANAGEMENT

Groundwater Production by Basin



The original division of water resources in the San Bernardino Basin Area.

Source: Physical Solution Western-San Bernardino Watermaster

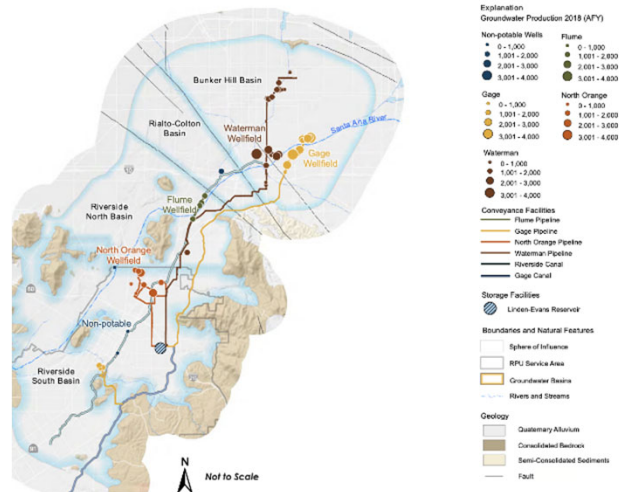
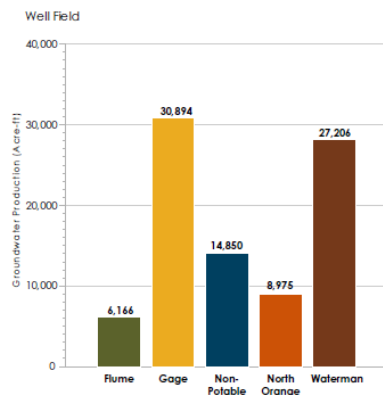
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# GROUNDWATER PRODUCTION

Groundwater Production by Well Field in 2018



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## GROUNDWATER FACILITIES

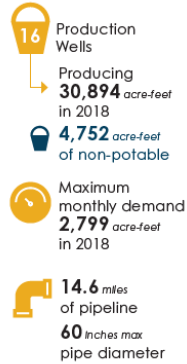
### WATERMAN



### NORTH ORANGE



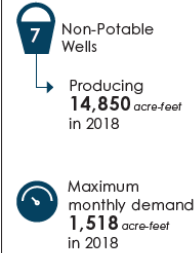
### GAGE



### FLUME



### NON-POTABLE

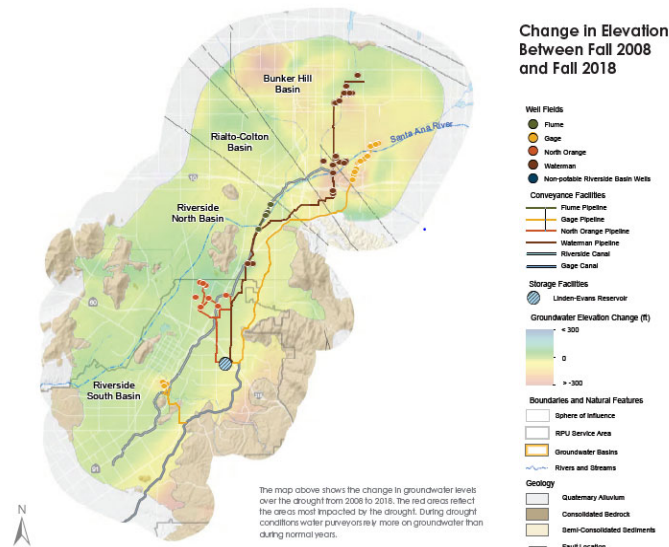


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## GROUNDWATER LEVELS

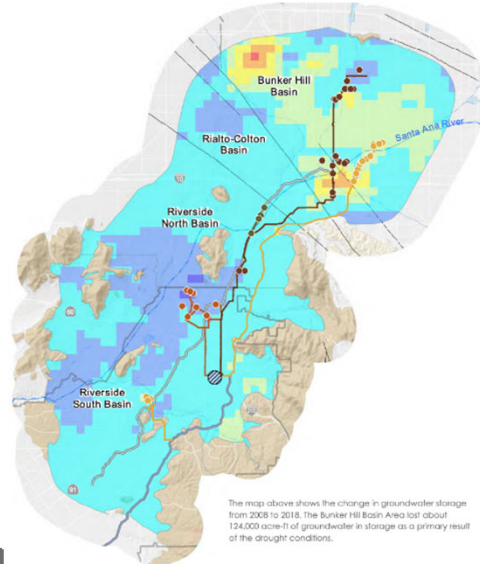


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# GROUNDWATER IN STORAGE



Change in Storage  
Between Fall 2008 and  
Fall 2018

- Explanation**
- Well Fields**
    - Flume
    - Gage
    - North Orange
    - Waterman
    - Non-potable Riverside Basin Wells
  - Conveyance Facilities**
    - Flume Pipeline
    - Gage Pipeline
    - North Orange Pipeline
    - Waterman Pipeline
    - Riverside Canal
    - Gage Canal
  - Storage Facilities**
    - Linden-Evans Reservoir
  - Change in Groundwater Storage (acre-ft) per 400x400 meter grid cell**
    - > 500
    - 499 - -250
    - 249 - 0
    - 1 - 250
    - 251 - 500
    - > 500
  - No calculated volume in storage**
  - Boundaries and Natural Features**
    - Sphere of Influence
    - RPU Service Area
    - Groundwater Basins
    - Rivers and Streams

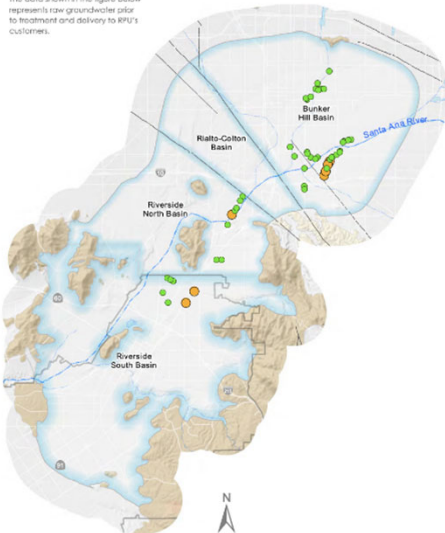
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# GROUNDWATER QUALITY

The data shown in the figure below represents raw groundwater prior to treatment and delivery to RPU's customers.



**Total Dissolved Solids**

Max = 650 mg/L  
Mean = 400 mg/L  
Above MCL = 2 wells

2018 RPU Groundwater Sampling

**52**  
wells sampled

**150+**  
constituents

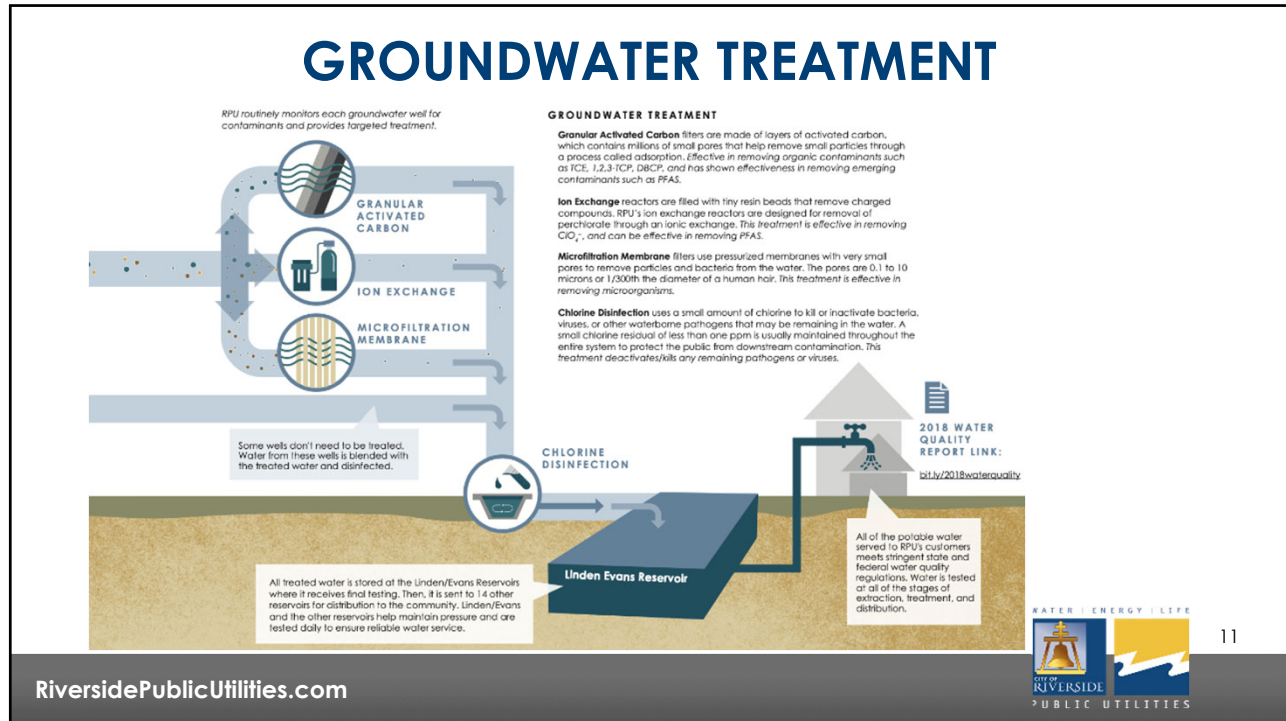
**492**  
water quality samples

- RPU Production Wells Total Dissolved Solids (TDS; mg/L)**
- Not Detected
  - < Detection Level Reporting (DLR)
  - > DLR and < MCL
  - > MCL
- Secondary US EPA MCL = 500 mg/L**
- Boundaries and Natural Features**
- Sphere of Influence
  - RPU Service Area
  - Groundwater Basins
  - Rivers and Streams
- Geology**
- Quaternary Alluvium
  - Consolidated Bedrock
  - Semi-Consolidated Bedrocks
  - Fault Location
- Common sources for TDS: Soil Runoff

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## RECOMMENDATIONS

That the Riverside Public Utilities Board receive this update on RPU's Groundwater Atlas.