

# 5B - Monitoring Networks & Data Gaps

## *Progress Report*

### Fillmore and Piru Basins Groundwater Sustainability Agency

February 20, 2020



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Aerial image by John Carman on 2/2/2019.  
Sespe Creek at high storm stage in Fillmore  
basin looking obliquely south.

# Reference / Background Materials

Feb  
2020

- *BMP #1 Monitoring Protocols Standards and Sites*
- *BMP #2 Monitoring Networks and Identification of Data Gaps*
- *BMP #4 Water Budget*
- *CCR § 354.18. Water Budget*
- *CCR Subarticle 4 Monitoring Networks*

## 23 CCR Subarticle 4. Monitoring Networks

- § 354.32 - Intro to Monitoring Networks
- § 354.34 - Monitoring Networks
- § 354.36 - Representative Monitoring
- § 354.38 - Assessment & Improvement of  
Monitoring Networks (Data Gaps)
- § 354.40 - Reporting Monitoring Data to  
the Department



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# Tech Memo Purpose

*Describe the historical data sets and established monitoring networks in the basins and how data gaps could be filled in the future.*

## Draft Tech Memo components include:

- Historical available groundwater level and water quality dataset distribution
- Established monitoring sites distribution
- Trends analysis of groundwater level and groundwater quality constituents
- Potential temporal and spatial data gaps
- Recommendations



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# Kinds of Monitoring Networks

- Groundwater Levels
- Groundwater Production
- Groundwater Quality
- Surface Water Quality
- Streamflow Gauging
- Precipitation
- Evaporation
- Subsidence
- Ecological



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# Tech Memo does NOT describe the following networks...

- Subsidence
- Ecological

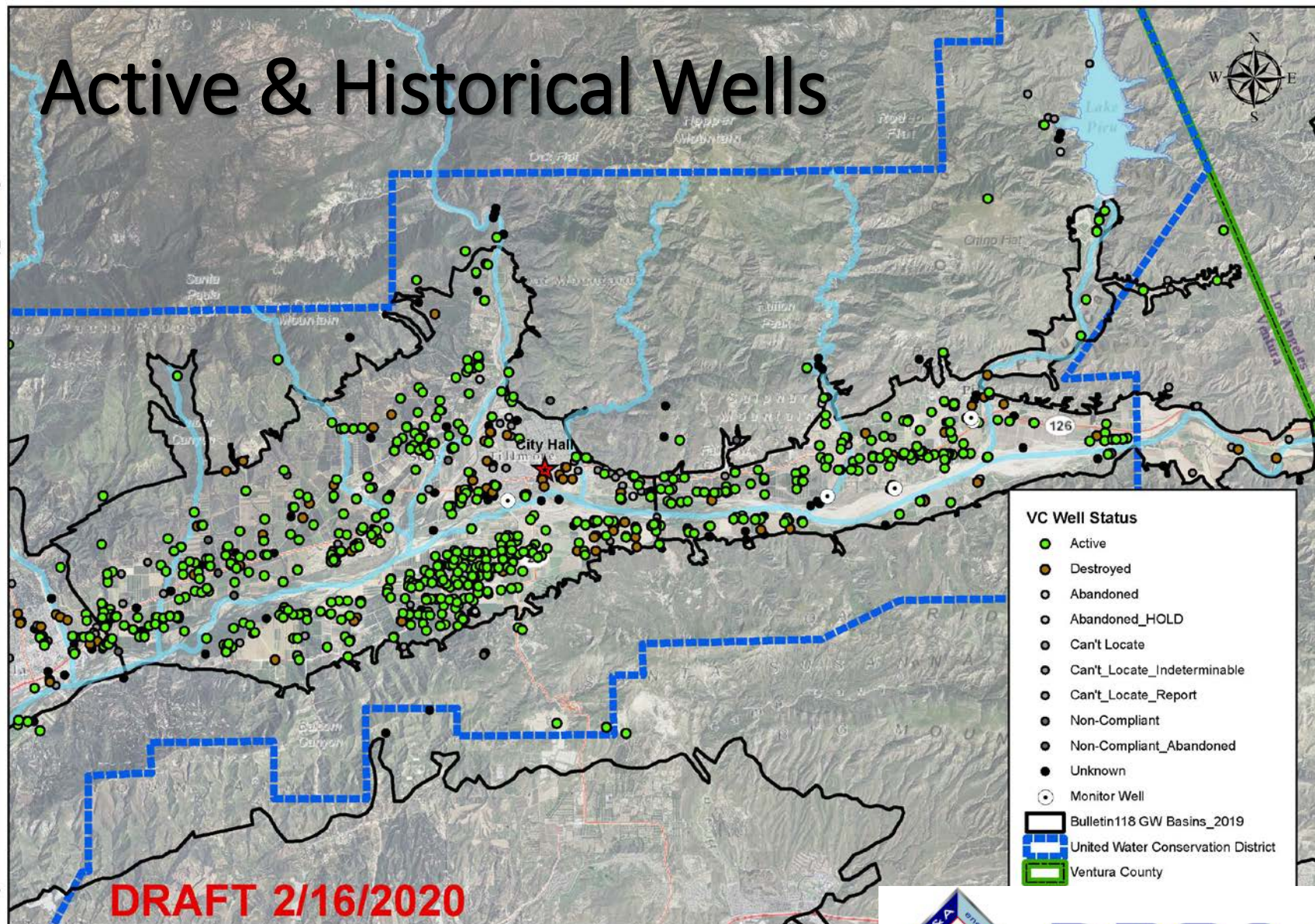
## Where are these elements defined?

➡ Separate Tech Memos



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# Active & Historical Wells



0 2 4 8 Miles



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# Groundwater Level & Quality

SGMA requires aquifer-specific evaluation and identification of “Primary Aquifers”.

## **What Information is needed?**

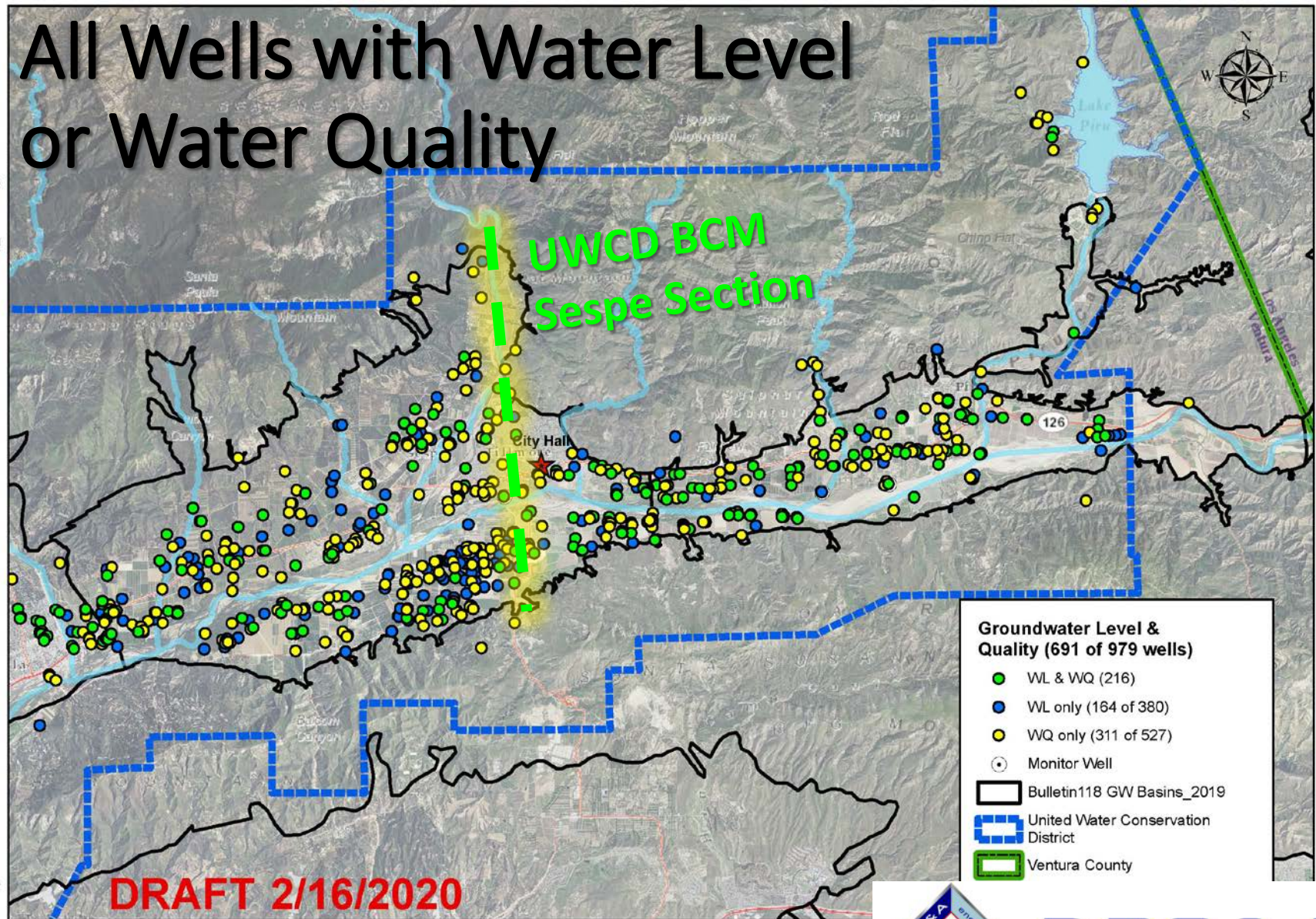
- Well Construction (DWR WCRs)
- Hydrostratigraphy Mapping (UWCD BCM)



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# All Wells with Water Level or Water Quality



0 2 4 8 Miles



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# S Cross-Section FP Sespe - Deep Wells N

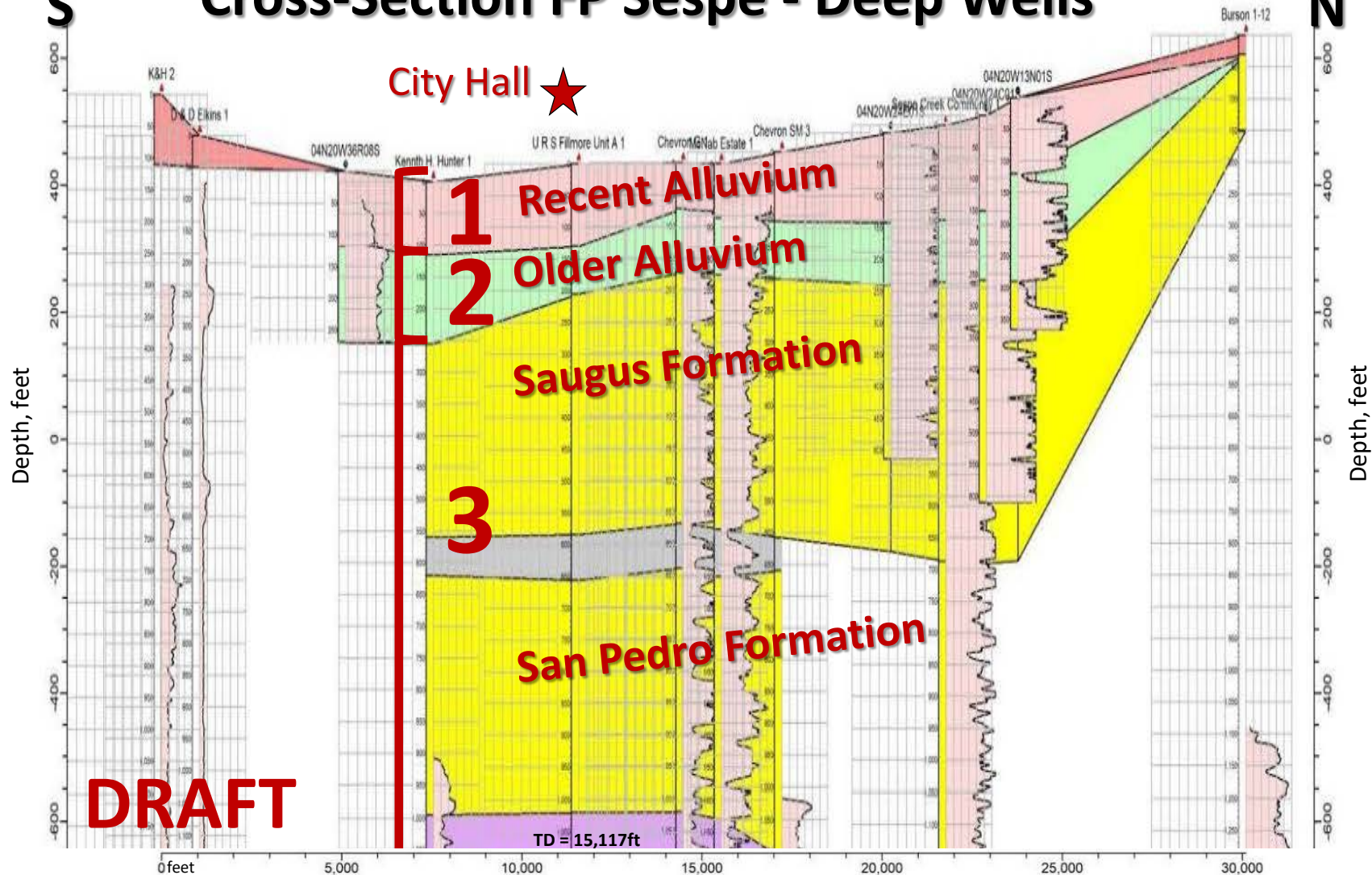


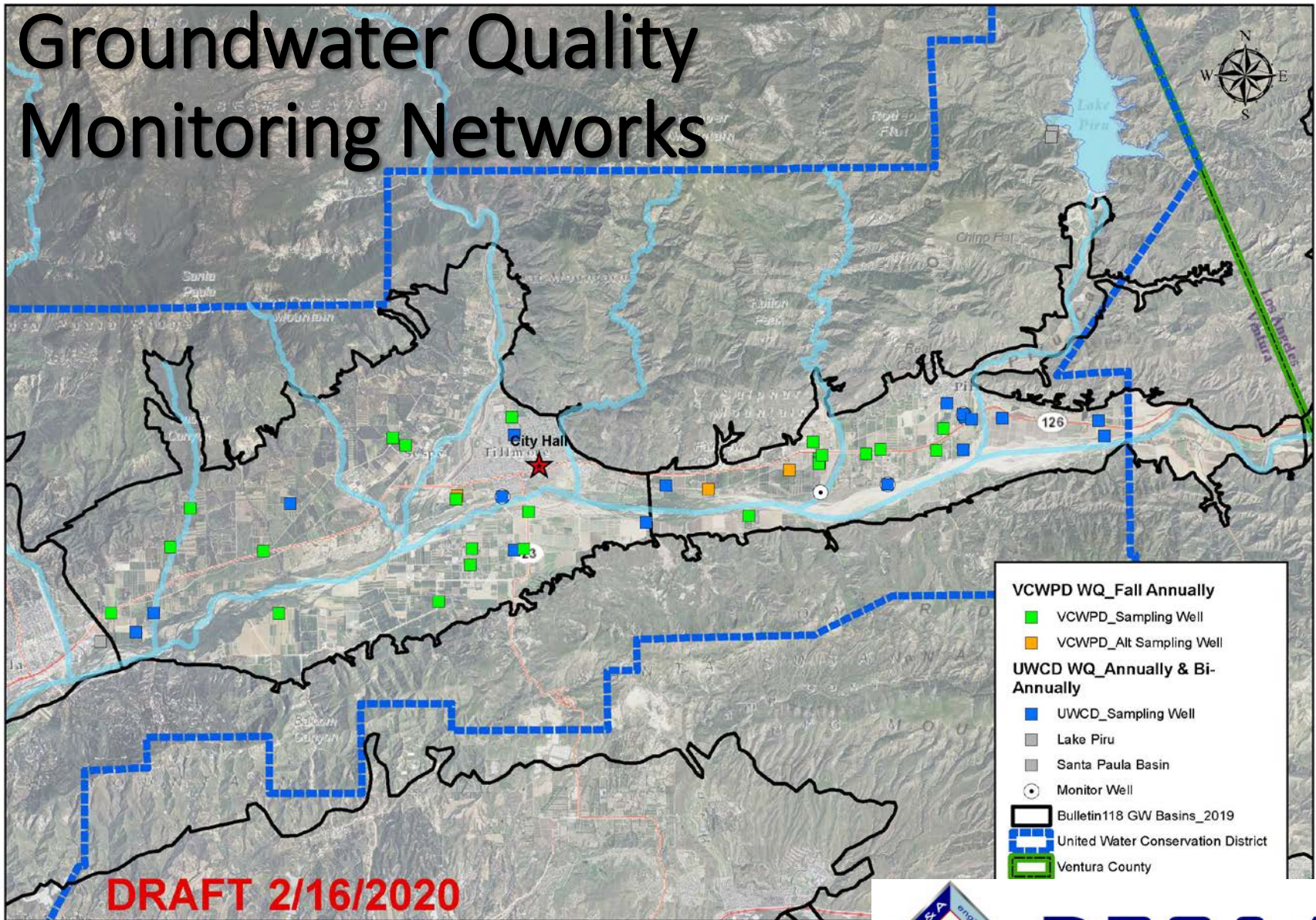
Figure Modified from UWCD 9/27/2019 Presentation



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# Groundwater Quality Monitoring Networks



0 2 4 8 Miles

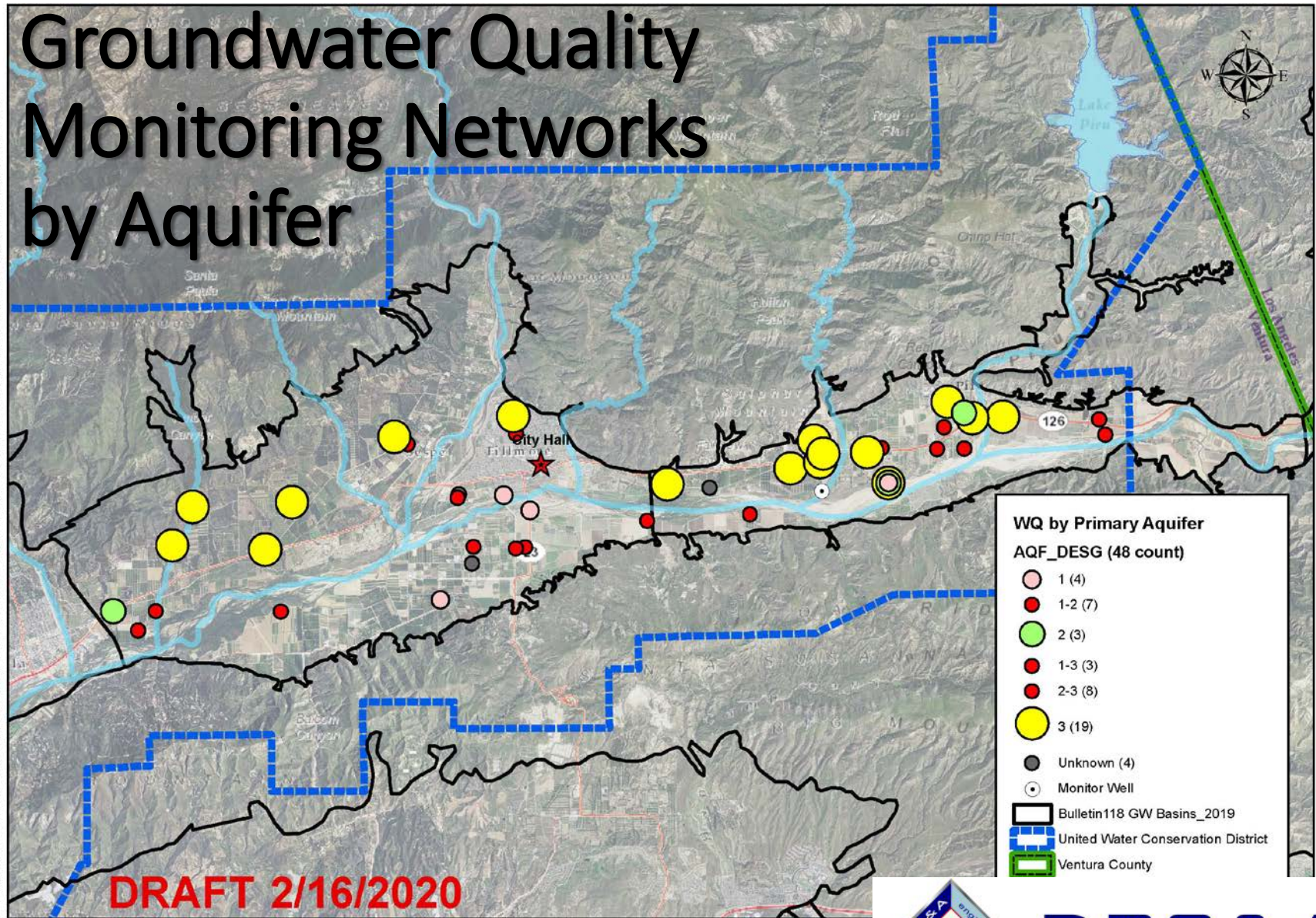


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# Groundwater Quality Monitoring Networks by Aquifer

K:\Projects\Water Resource Services\Public\DB19\_1084.00 Fillmore-Piru Basins GSP\GIS\MXDs\Fillmore-Piru Data map\_monitoring networks.mxd



0 2 4 8 Miles

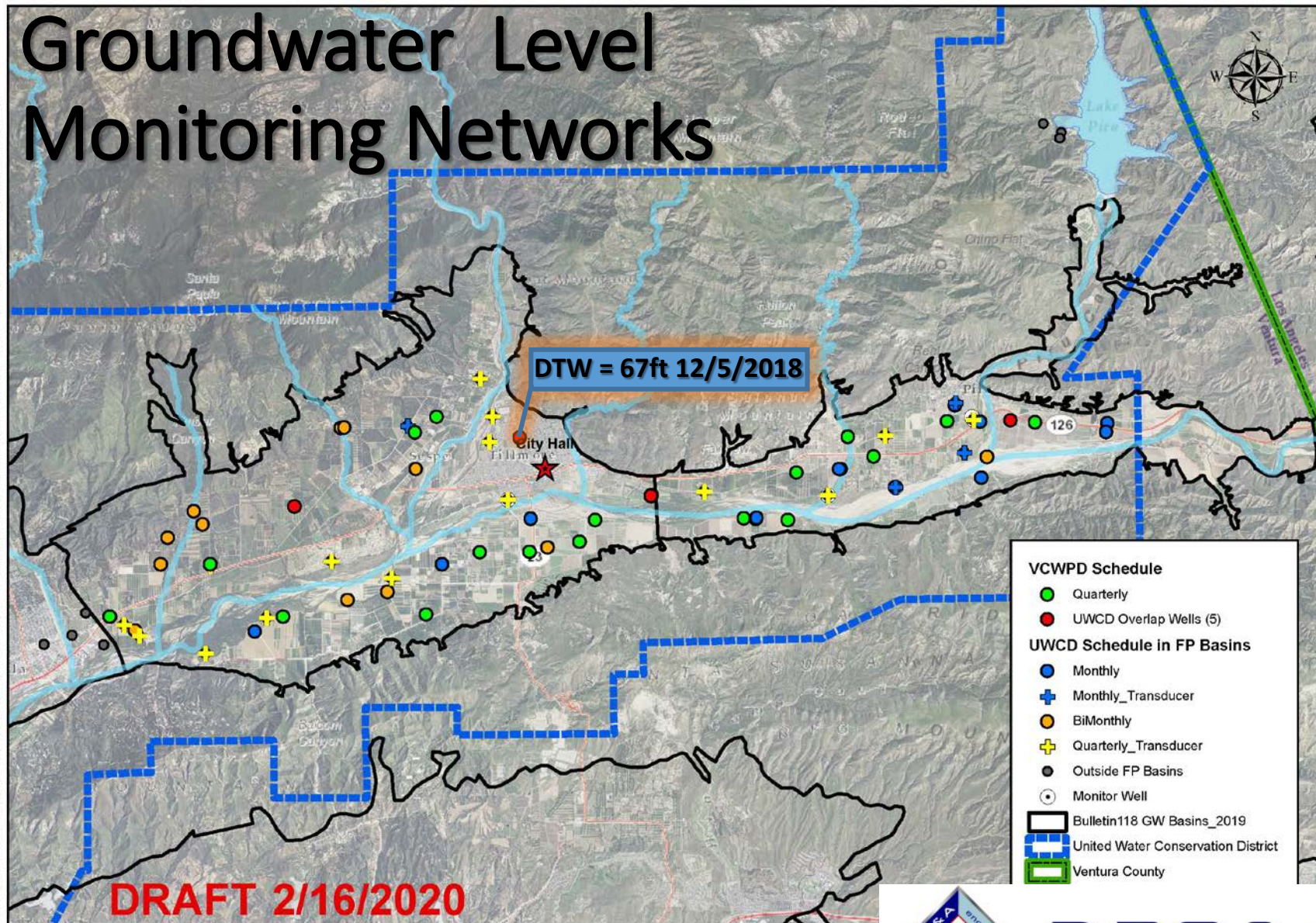


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# Groundwater Level Monitoring Networks

K:\Projects\Water Resource Services\Public\DB19.1084.00 Fillmore-Piru Basins GSP\GIS\MXDs\Fillmore-Piru Data map\_monitoring networks.mxd



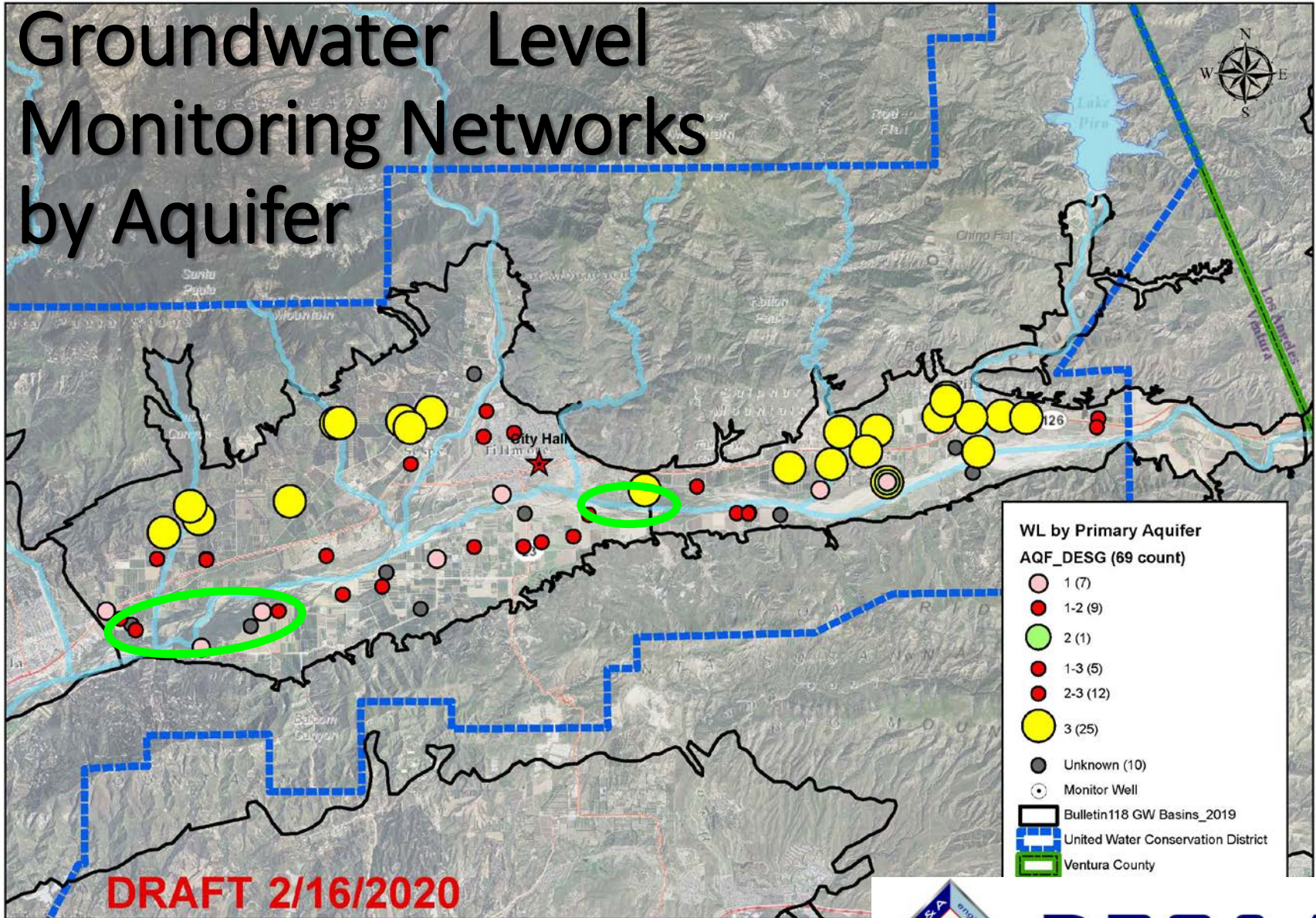
0 2 4 8 Miles



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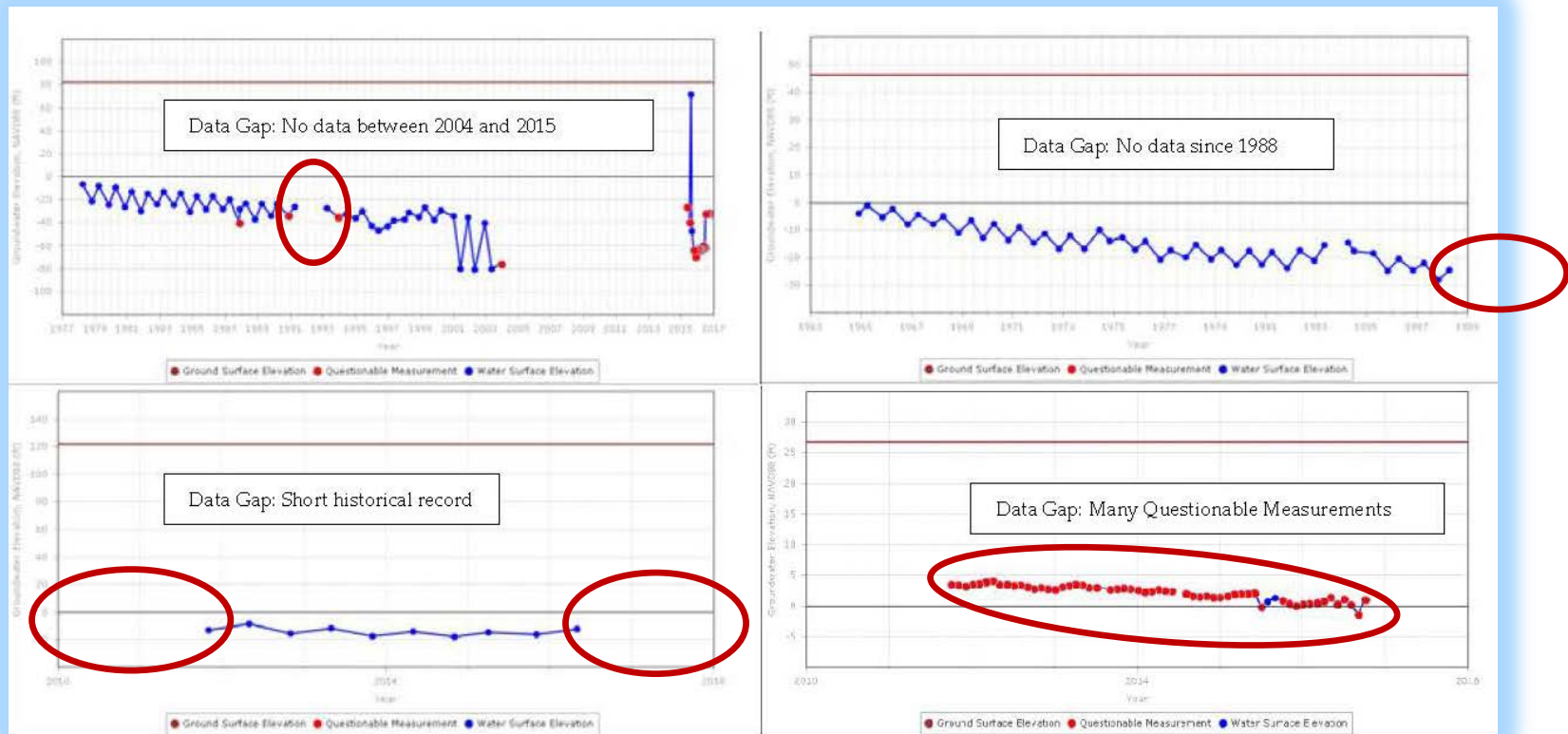


# Groundwater Level Monitoring Networks by Aquifer



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# Examples of Hydrographs with Temporal Data Gaps



Source: DWR BMP #2 - Figure 5



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# Tech Memo Next Steps

- Draft Tech Memo Preparation
- DBS&A Internal Review
- UWCD Review
- The Tech Memo will be included as an Appendix in the GSPs (it covers both basins)



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# Relationship of Monitoring Networks & Data Gaps To Other BMPs

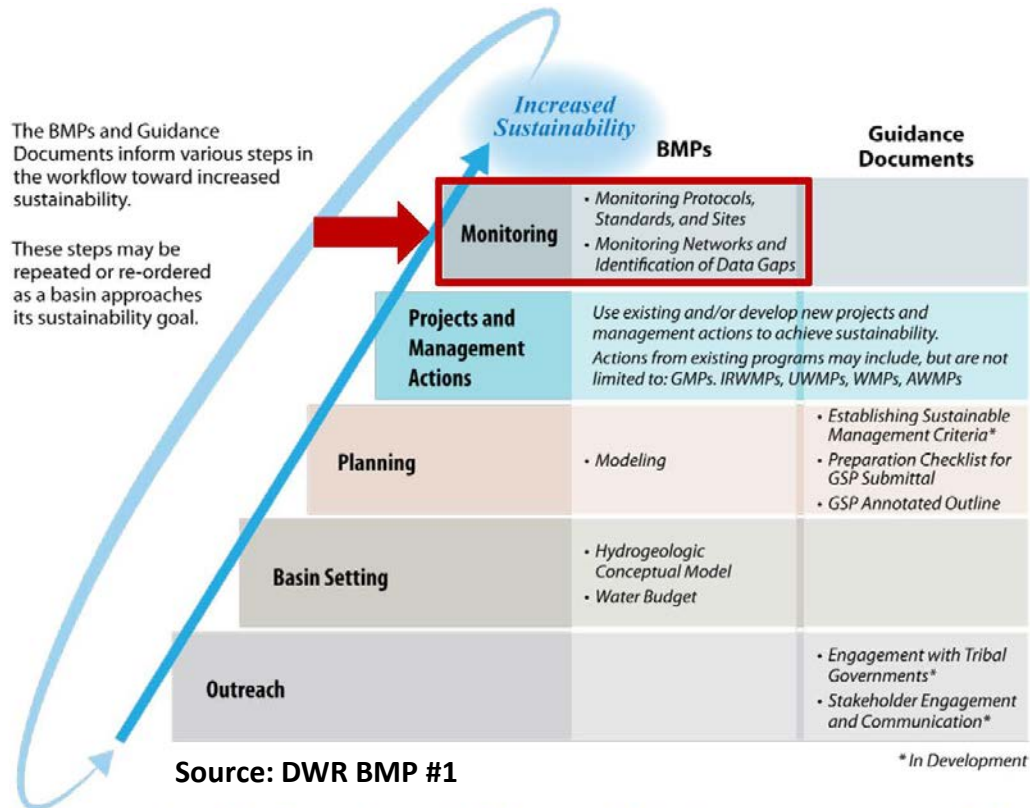


Figure 1 – Logical Progression of Basin Activities Needed to Increase Basin Sustainability



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