

# Tehama County Flood Control and Water Conservation District Board Meeting

WY 2022

*(October 1, 2021 – September 30, 2022)*

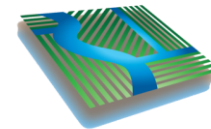
## Annual Report Update

Eddy Teasdale, PG, CHG (LSCE)

June 19, 2023



**Luhdorff &  
Scalmanini**  
Consulting Engineers



**DAVIDS**  
ENGINEERING, INC

# Where are We Headed Today?



Overview



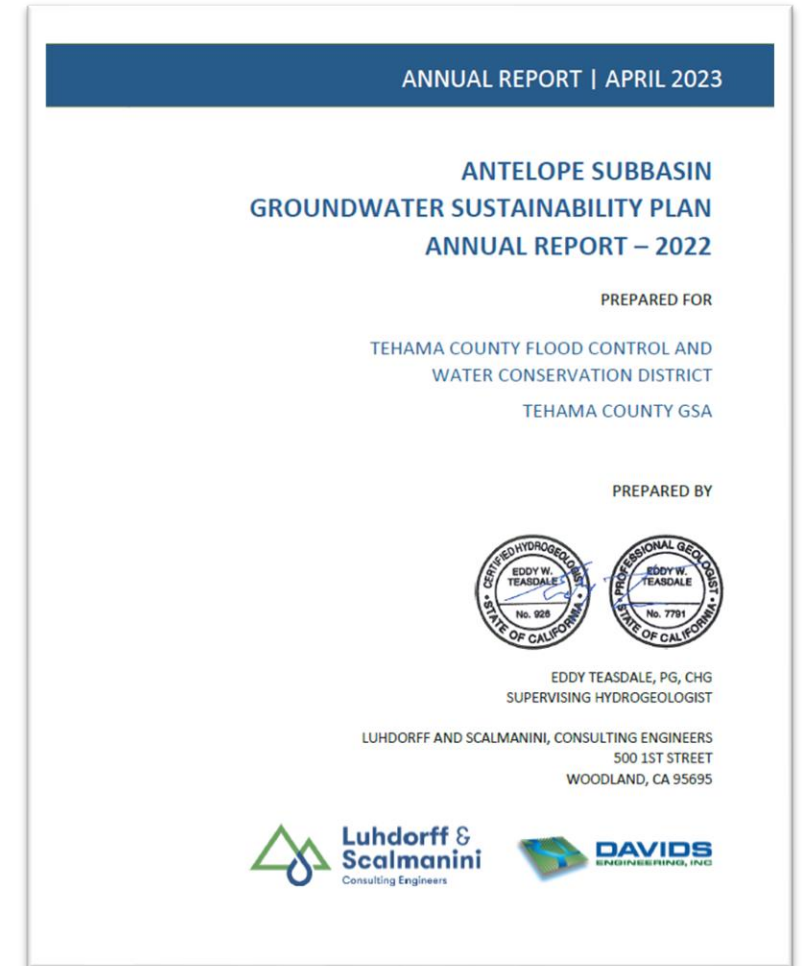
Groundwater Conditions



Water Supply and Water Use (Water Budget)



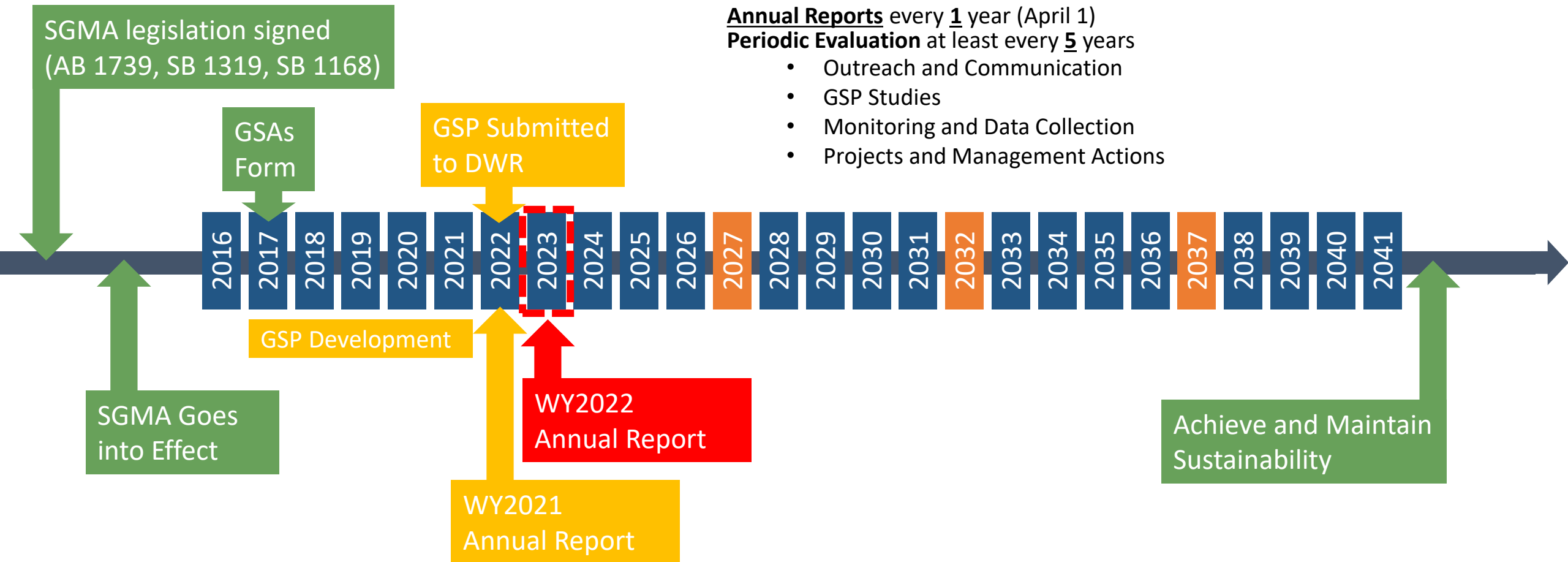
Progress Towards GSP Implementation



# Annual Report Requirements

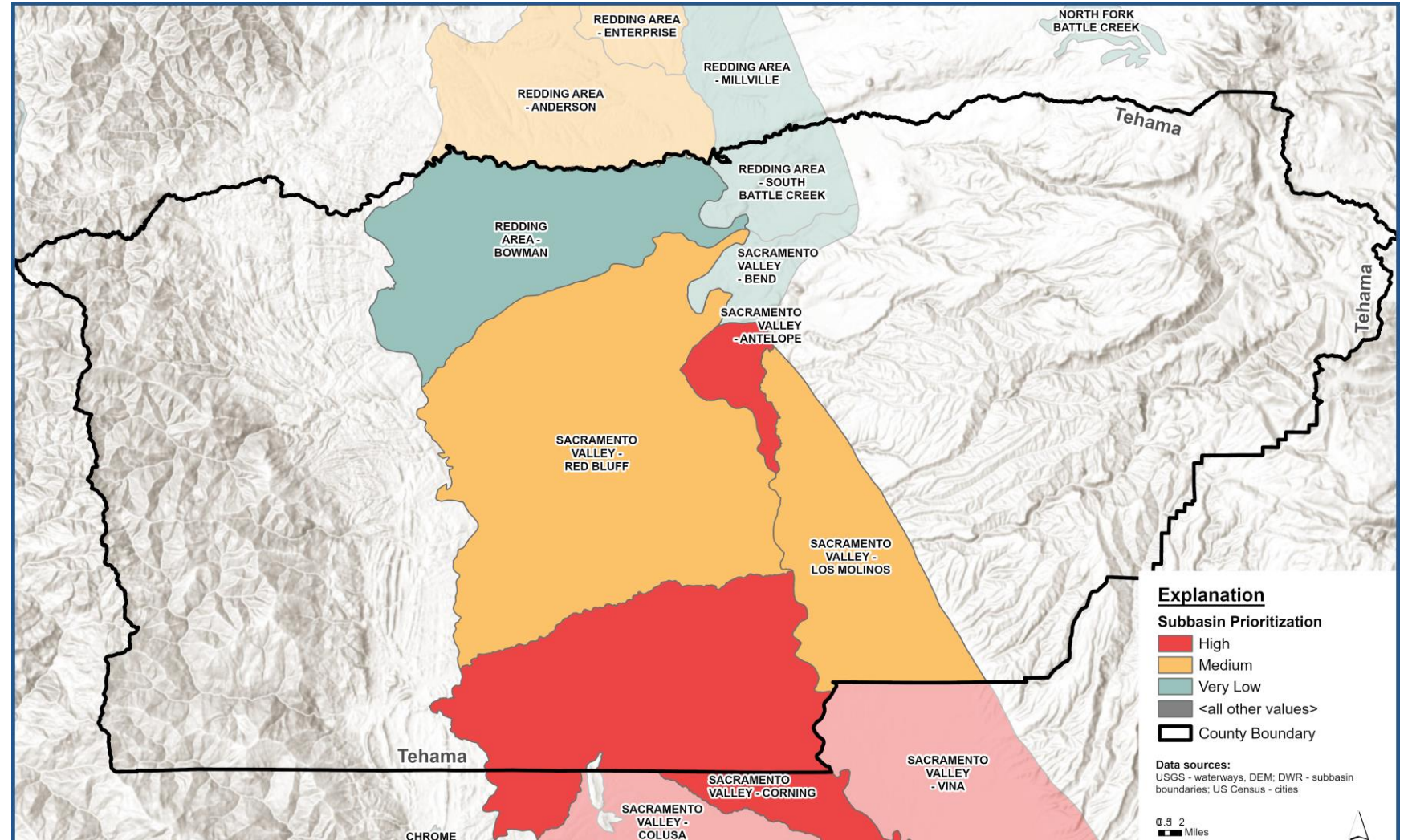
- Updates on Groundwater Conditions
  - Groundwater Elevation (Hydrographs, Contour Maps)
  - Change in Groundwater Storage
- Water Supply and Water Use
  - Groundwater Extraction
  - Surface Water Supplies
  - Total Water Use
- Progress Toward Plan Implementation  
(e.g., implementation of planned projects and management actions)

# Overview – SGMA Implementation Timeline



# Subbasins in Tehama County

1. Red Bluff – Medium Priority
2. Corning – High Priority
3. Antelope – High Priority
4. Los Molinos – Medium Priority
5. Bowman – Low Priority
6. South Battle Creek – Low Priority
7. Bend – Low Priority



# Groundwater Conditions

- Groundwater Elevations
- Groundwater Storage
  - Utilizing RMS wells
- Subsidence
  - InSAR
- Surface Water Depletion



**Lowering  
Groundwater  
Levels**



**Surface Water  
Depletion**



**Reduction of  
Storage**



**Land  
Subsidence**

# Groundwater Conditions – Groundwater Elevations

## Groundwater Elevations

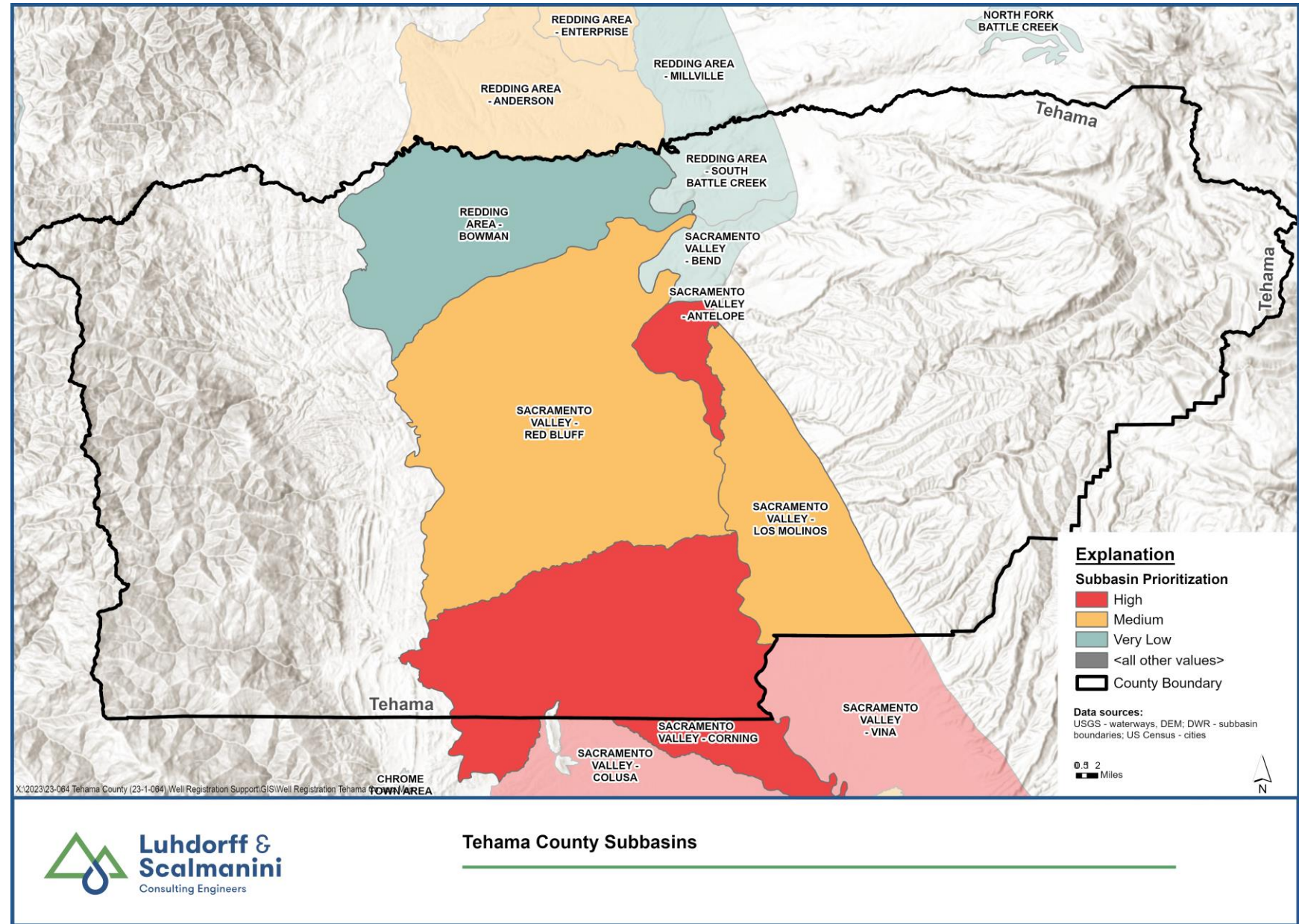
Bowman (7 wells)

Red Bluff (8 wells)

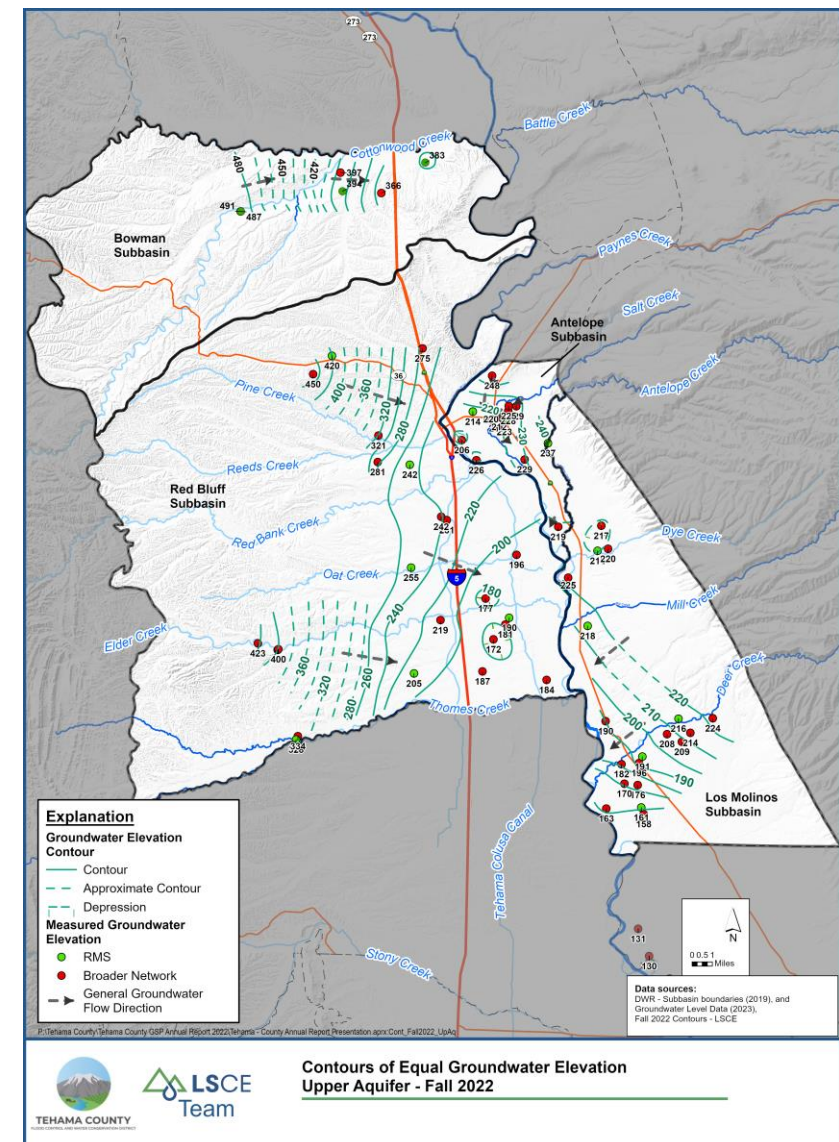
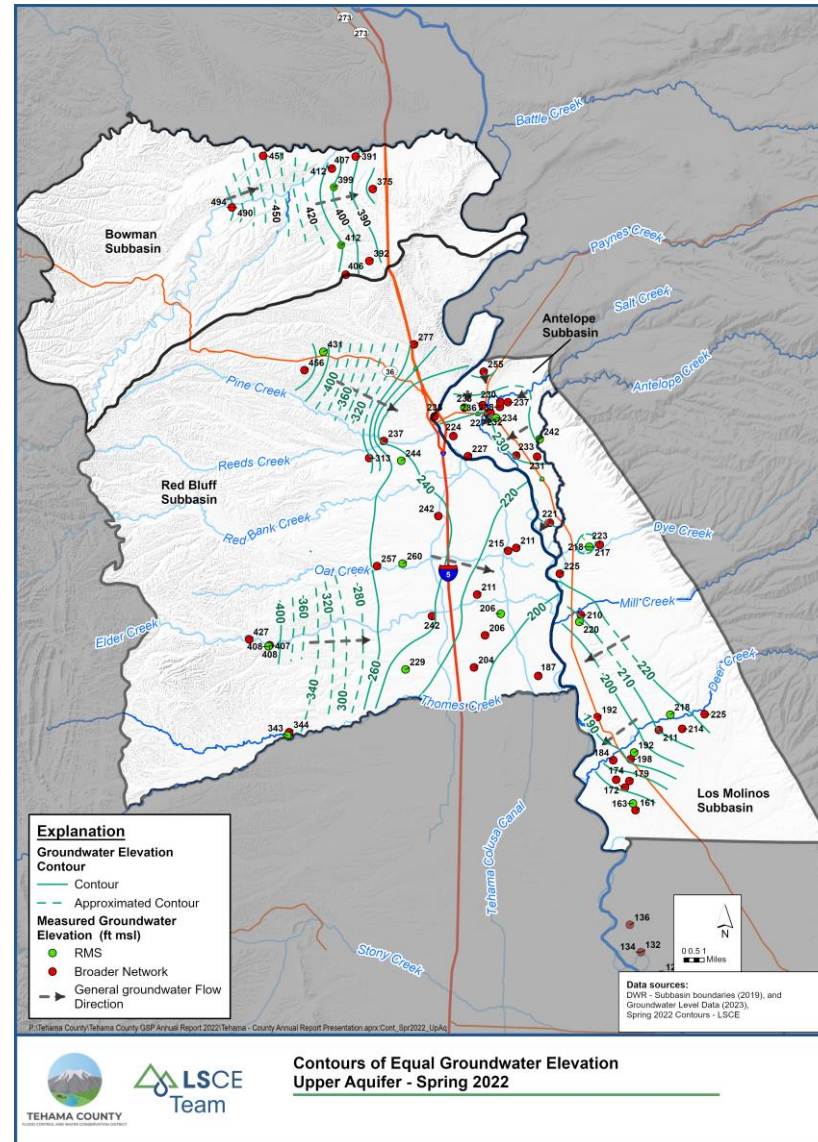
Corning (56 wells)

Los Molinos (9 wells)

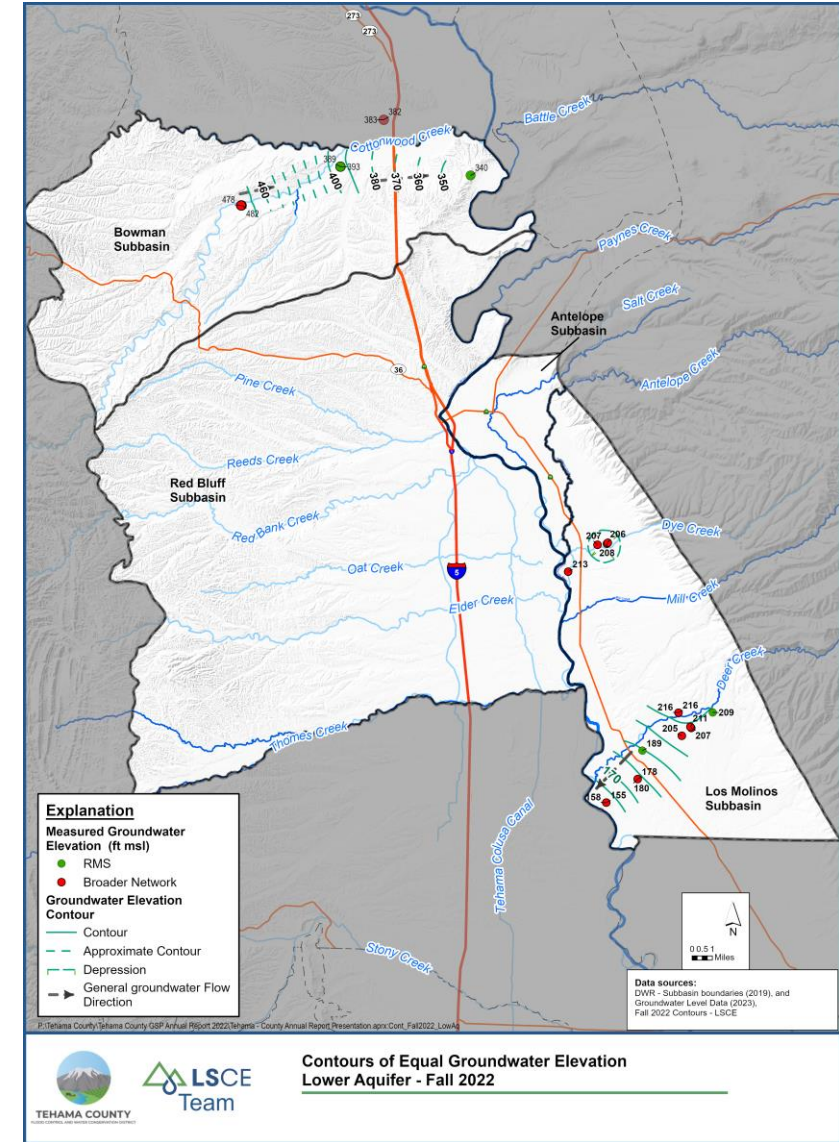
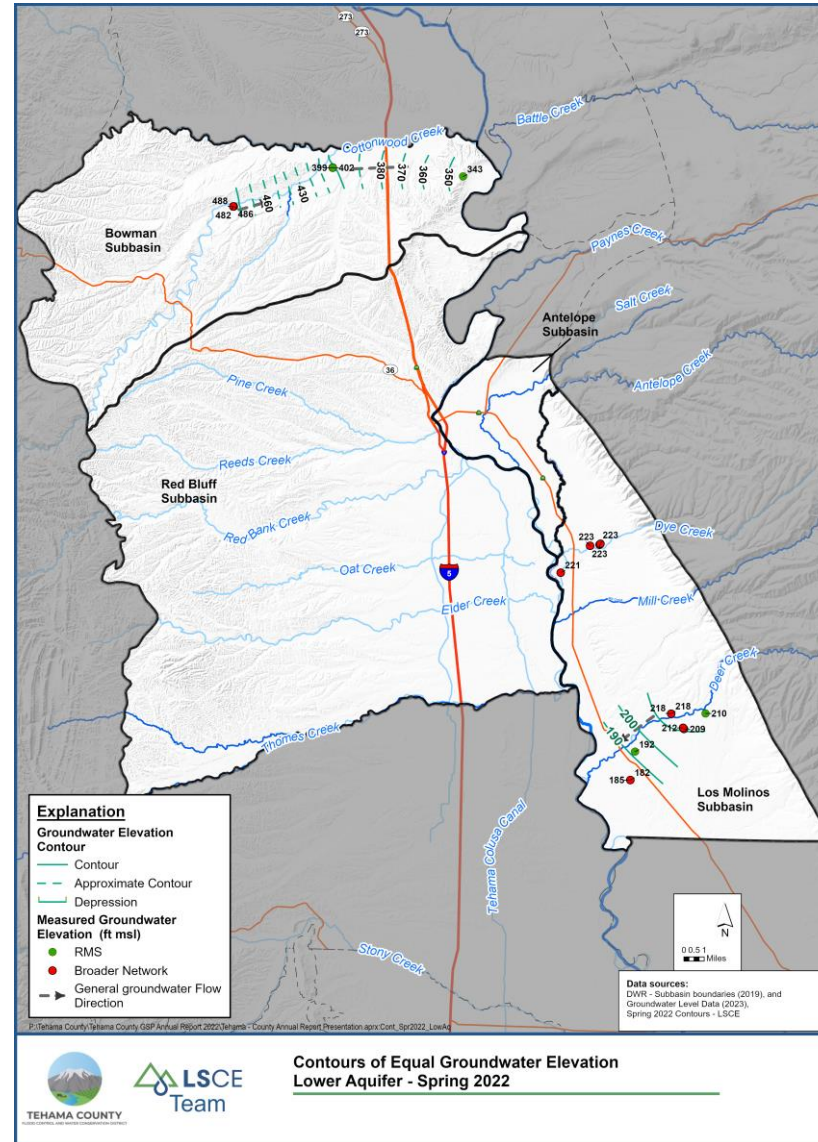
Antelope (3 wells)



# Groundwater Conditions – Groundwater Elevations (Upper Aquifer)



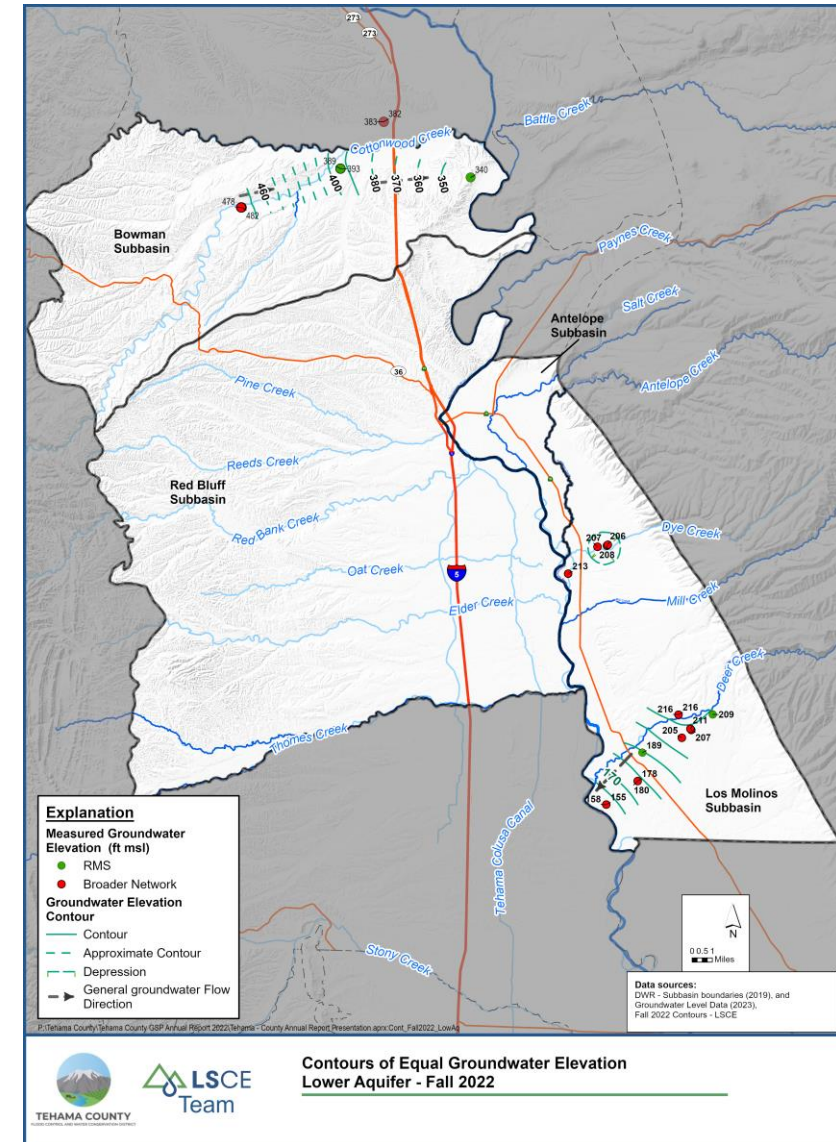
# Groundwater Conditions – Groundwater Elevations (Lower Aquifer)



## Groundwater Conditions – Groundwater Elevations (Lower Aquifer)

### Groundwater Elevations

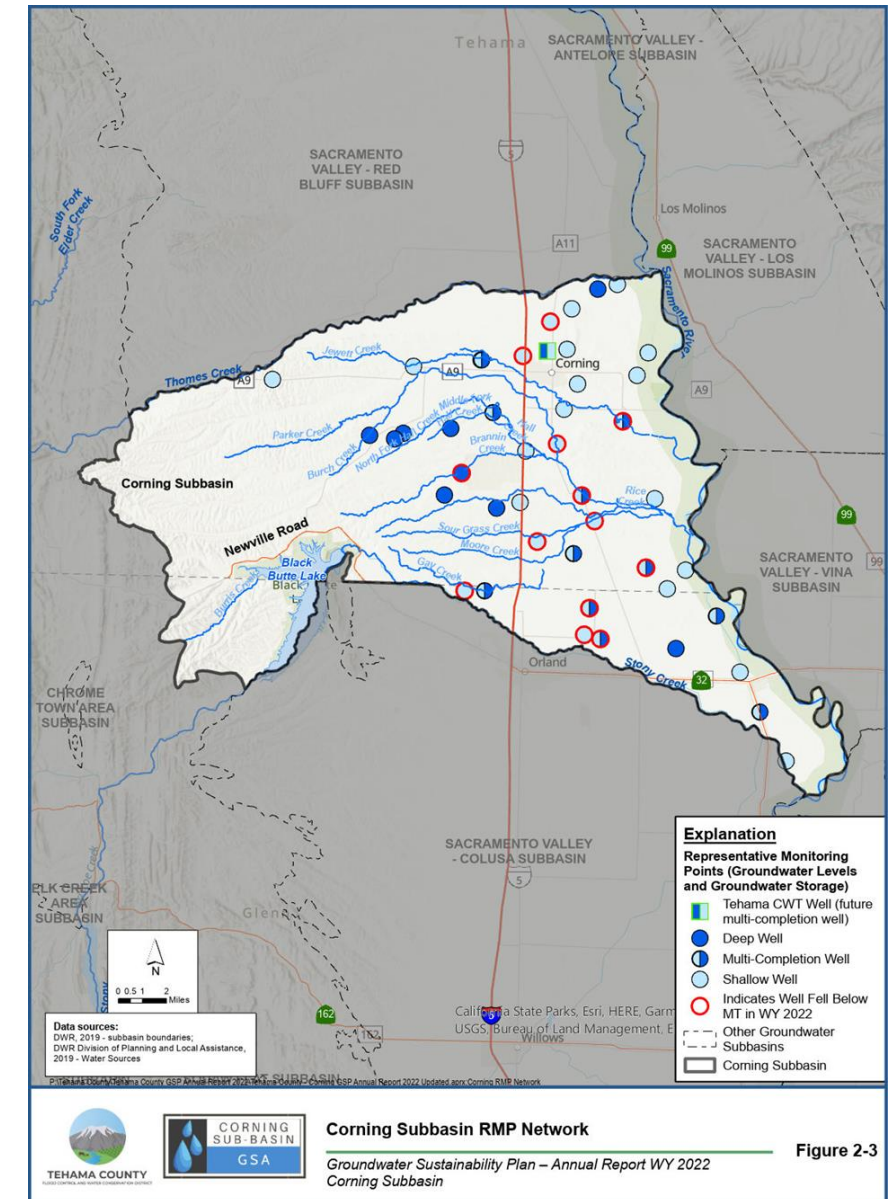
- Los Molinos
  - 1 below MO
  - 0 below MT
- Antelope
  - 2 below MO
  - 0 below MT
- Bowman
  - 4 below MO
  - 0 below MT
- Red Bluff
  - 6 below MO
  - 0 below MT



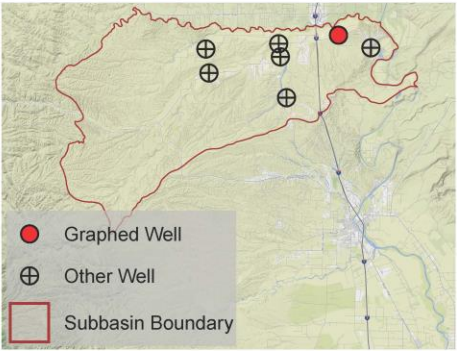
## Groundwater Conditions – Groundwater Elevations

### Groundwater Elevations

- 54 Representative Monitoring Point (RMP) Wells
- 35 shallow portion of the aquifer
- 19 wells screened in the deeper portion of the aquifer
- 16 of the 54 wells had fall measurements below the MT in 2022.
- Undesirable results occur when 20% of the RMP wells fall below the MT in two consecutive years
- No undesirable results as only 15% (6 wells) of RMP wells fall below the MT in two consecutive years

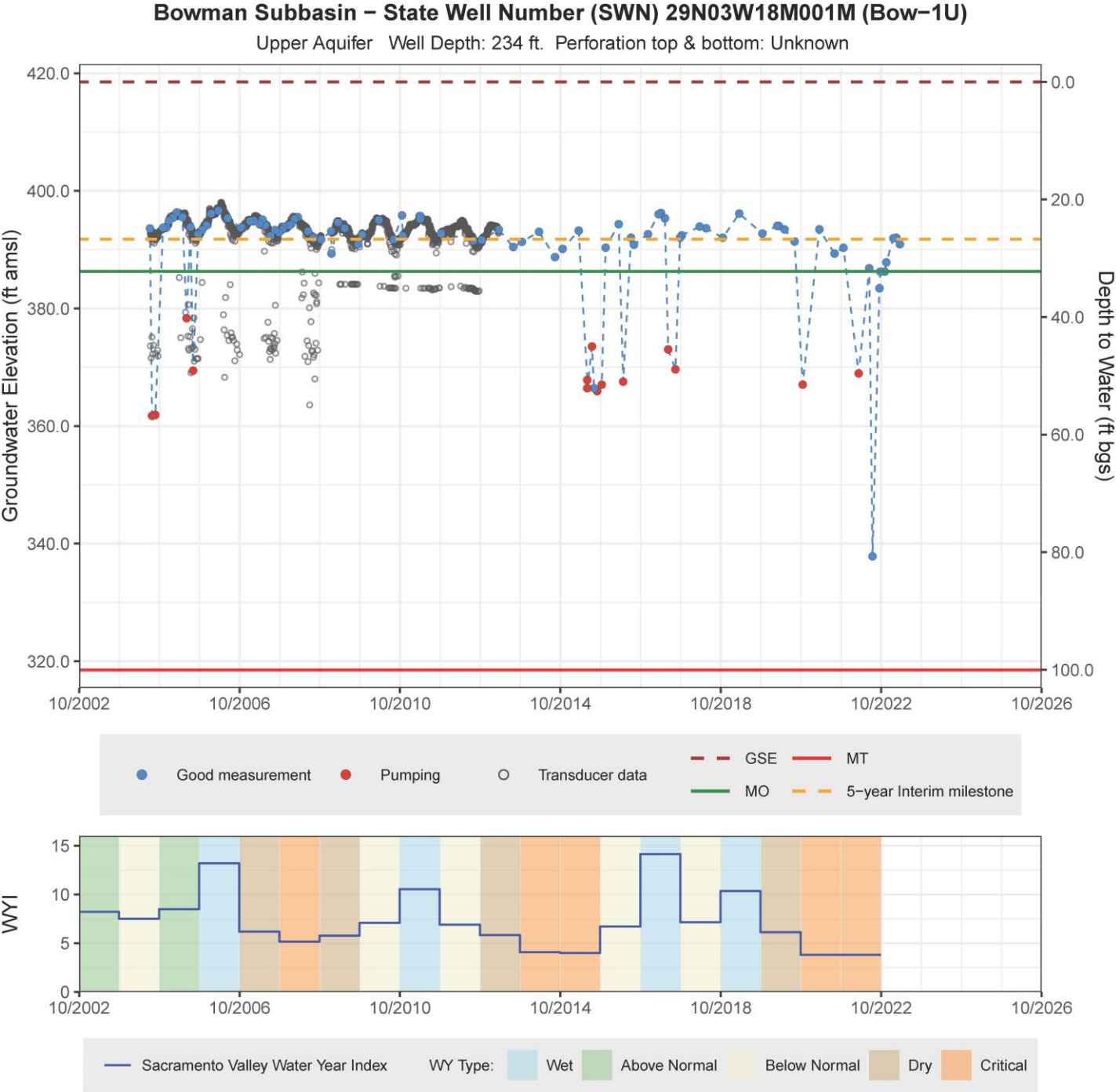


# Groundwater Conditions – Groundwater Elevations Bowman Subbasin

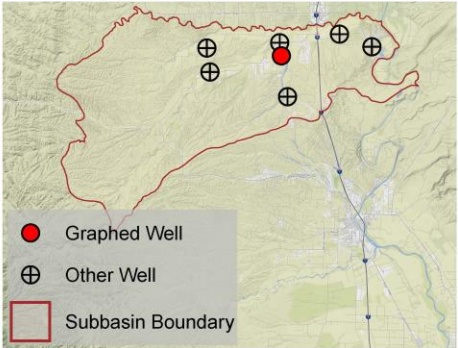


Sustainable Management Criteria  
 IM (2027) = 391.8 ft amsl  
 MO = 386.3 ft amsl  
 MT = 318.5 ft amsl

Sufficient data not available to calculate  
 spring water level statistics for 20 years

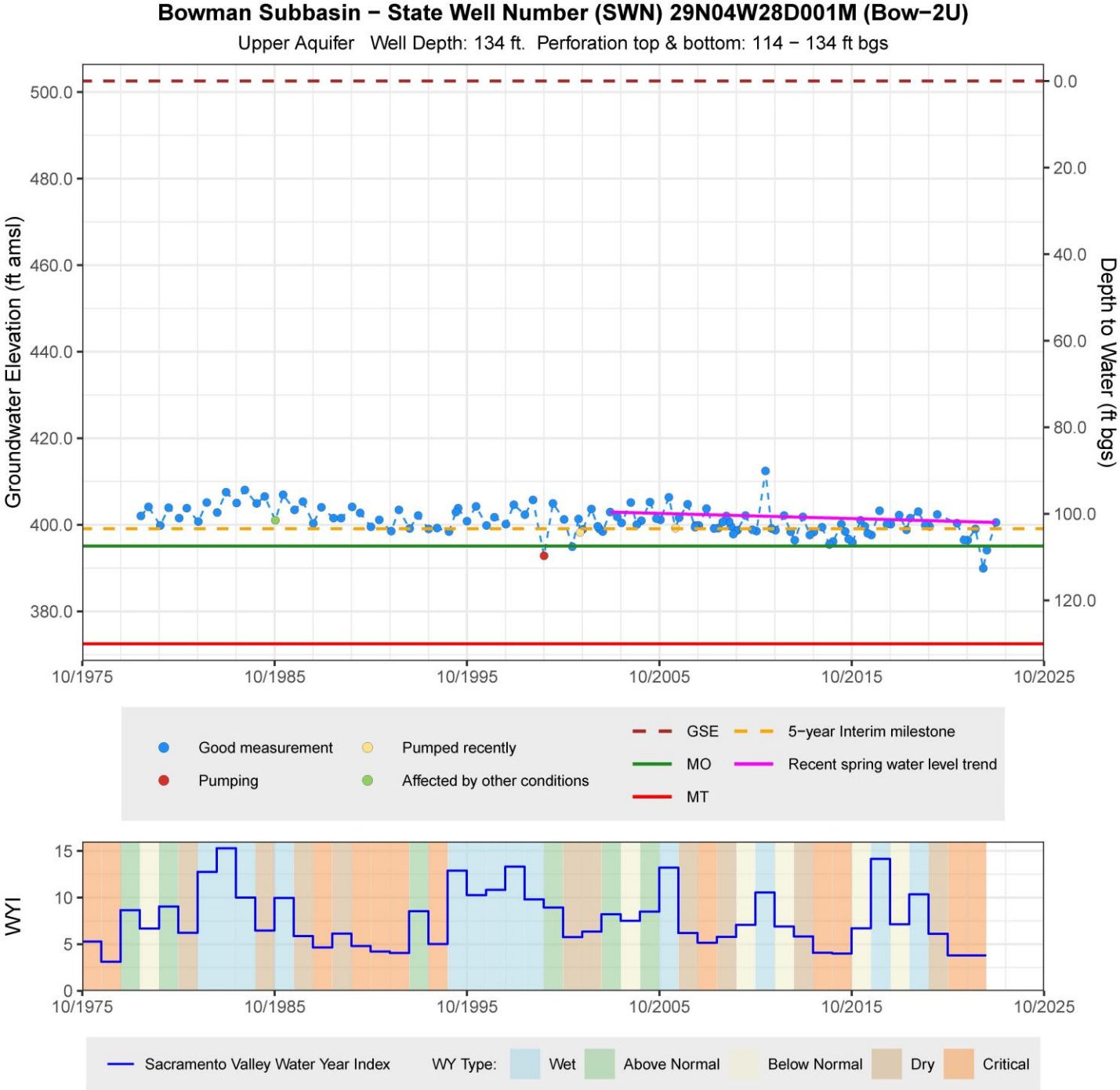


# Groundwater Conditions – Groundwater Elevations Bowman Subbasin

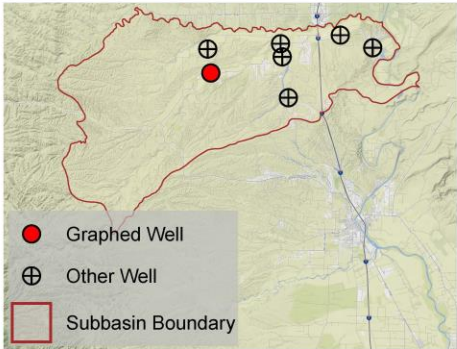


Sustainable Management Criteria  
 IM (2027) = 399.1 ft amsl  
 MO = 395.1 ft amsl  
 MT = 372.5 ft amsl

Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -2.4 ft  
 Average rate of change = -0.12 ft/year  
 Average water level = 403.33 ft amsl



# Groundwater Conditions – Groundwater Elevations Bowman Subbasin

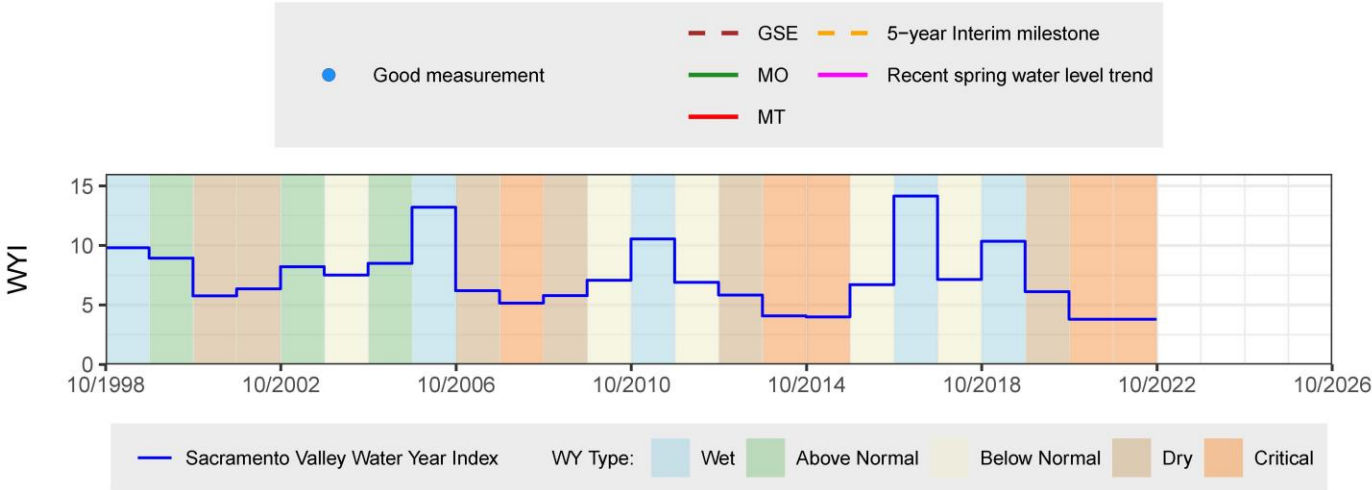
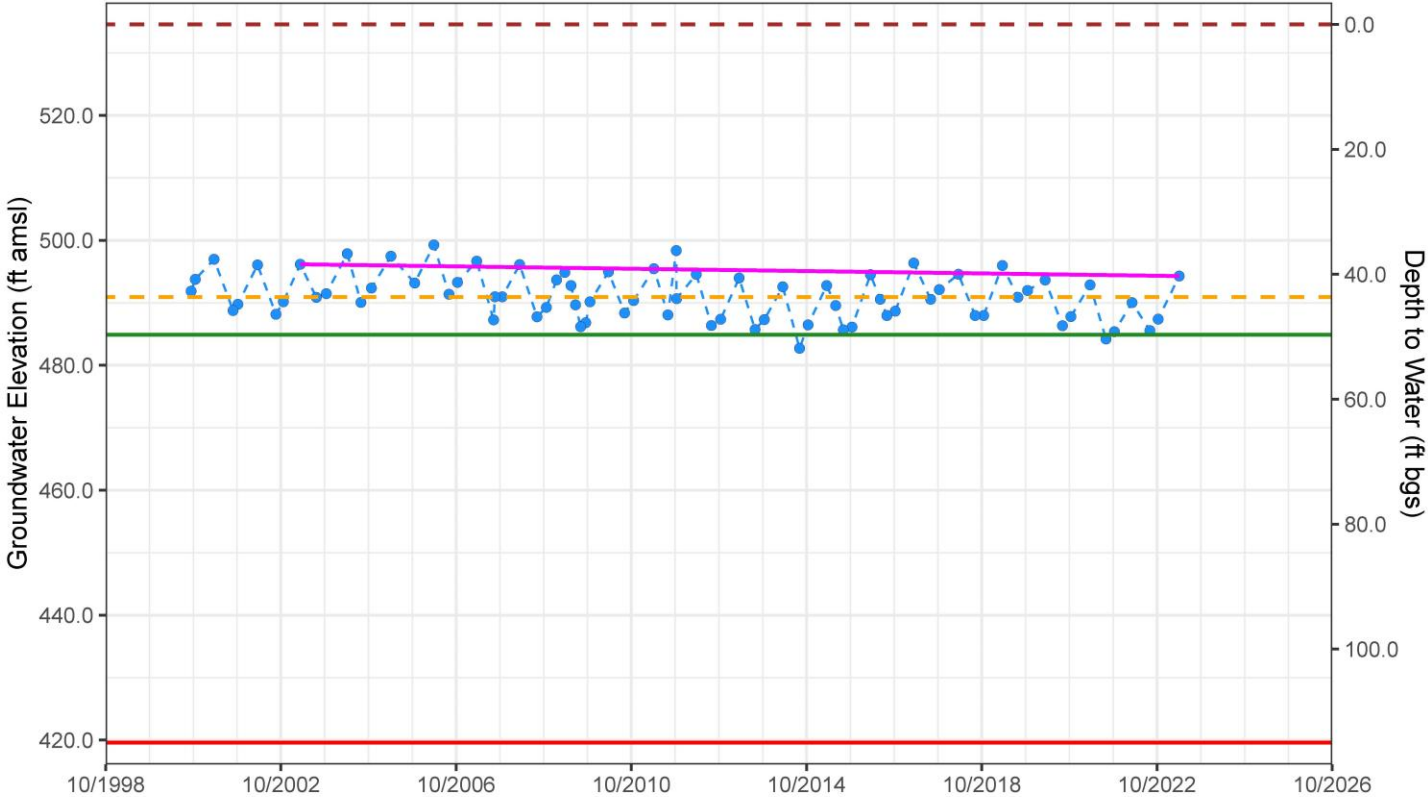


Sustainable Management Criteria  
IM (2027) = 490.9 ft amsl  
MO = 484.9 ft amsl  
MT = 419.6 ft amsl

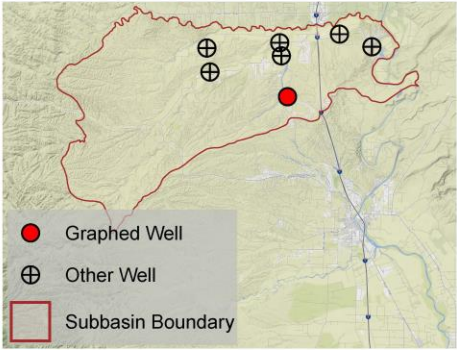
Statistics of spring water levels for past 20 years (2003 to 2023):  
Change = -1.88 ft  
Average rate of change = -0.09 ft/year  
Average water level = 495.12 ft amsl

## Bowman Subbasin – State Well Number (SWN) 29N05W33A004M (Bow-3U)

Upper Aquifer Well Depth: 210 ft. Perforation top & bottom: 110 – 210 ft bgs

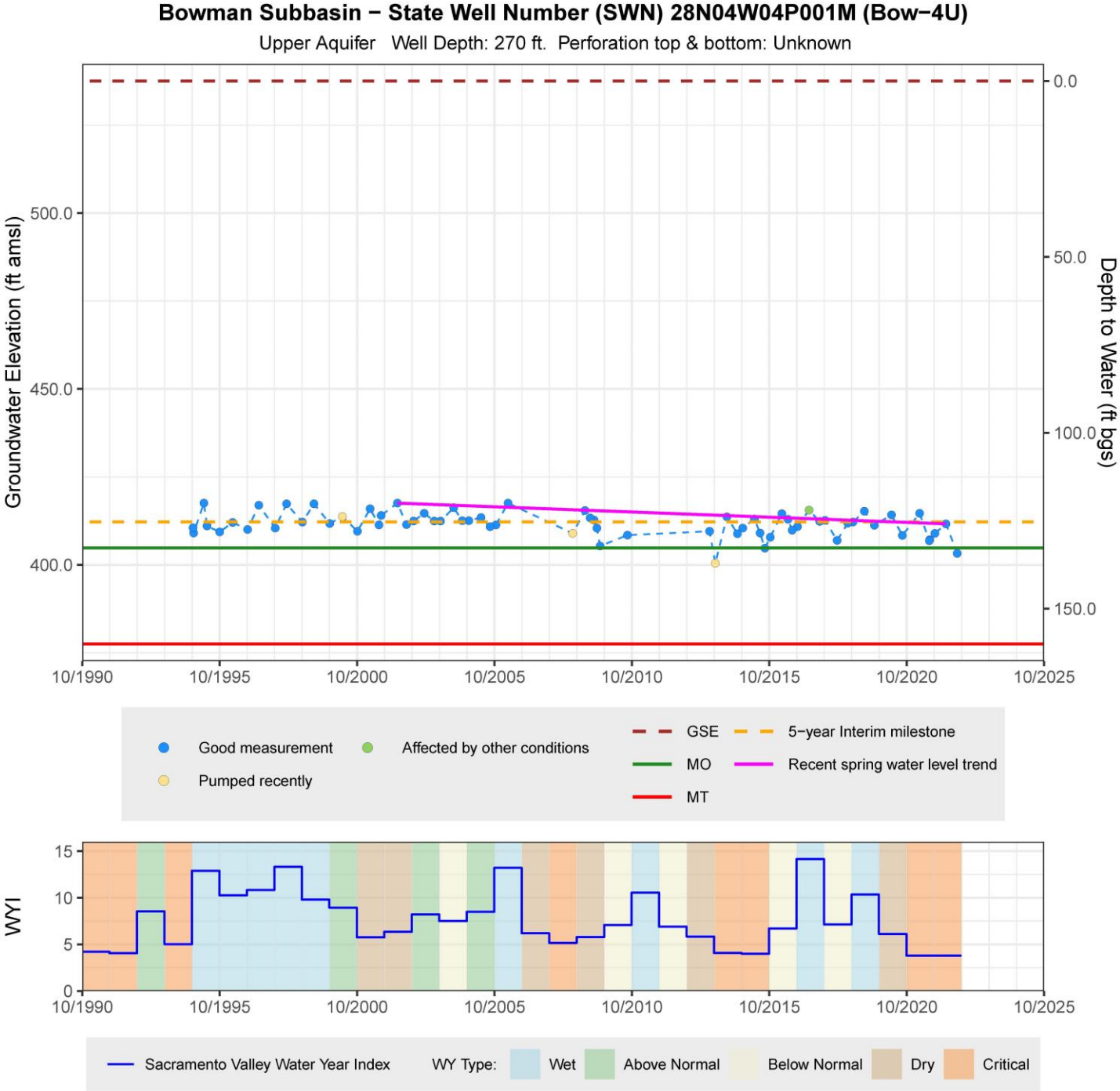


# Groundwater Conditions – Groundwater Elevations Bowman Subbasin

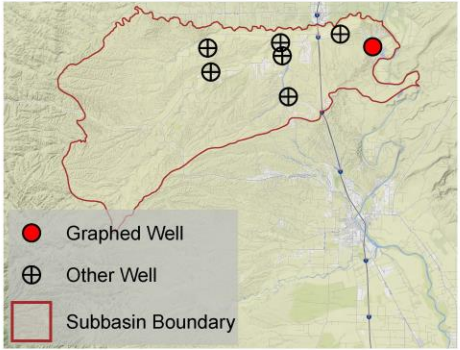


Sustainable Management Criteria  
IM (2027) = 412.2 ft amsl  
MO = 404.8 ft amsl  
MT = 377.5 ft amsl

Statistics of spring water levels for  
past 20 years (2002 to 2022):  
Change = -5.9 ft  
Average rate of change = -0.3 ft/year  
Average water level = 414.83 ft amsl



# Groundwater Conditions – Groundwater Elevations Bowman Subbasin



Sustainable Management Criteria  
IM (2027) = 342.6 ft amsl  
MO = 338.5 ft amsl  
MT = 294.0 ft amsl

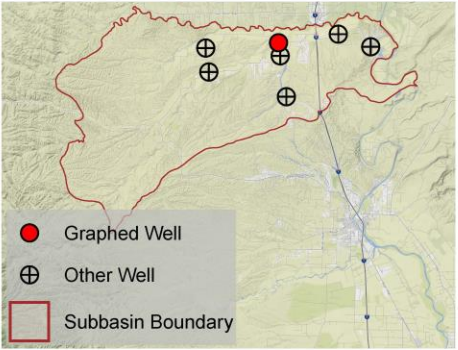
Sufficient data not available to calculate  
spring water level statistics for 20 years

Bowman Subbasin – State Well Number (SWN) 29N03W21-XXX (Bow-5L)

Lower Aquifer Well Depth: 760 ft. Perforation top & bottom: 390 – 750 ft bgs



# Groundwater Conditions – Groundwater Elevations Bowman Subbasin

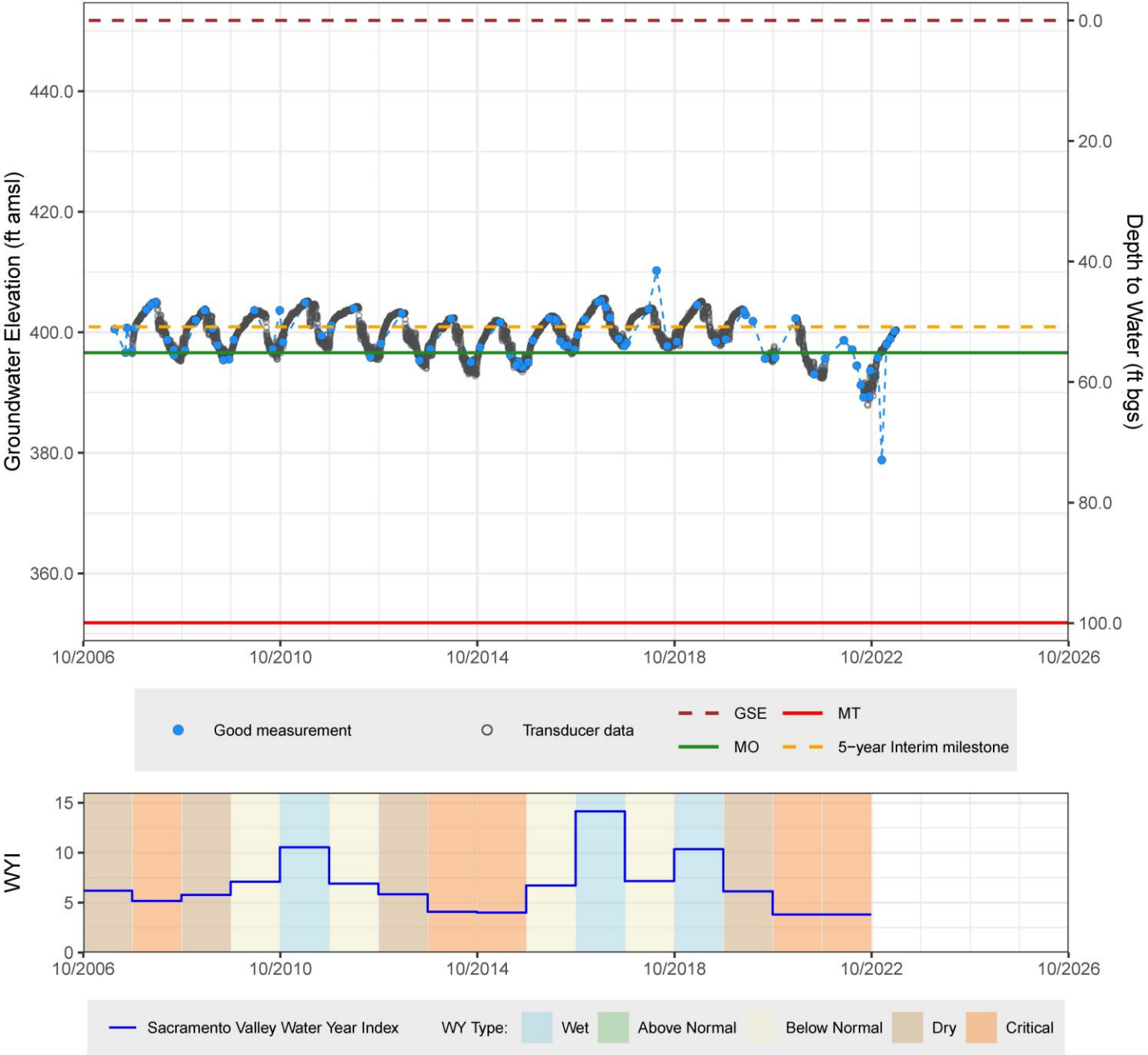


Sustainable Management Criteria  
 IM (2027) = 400.9 ft amsl  
 MO = 396.6 ft amsl  
 MT = 351.8 ft amsl

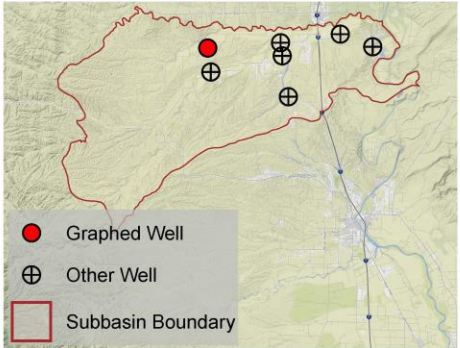
Sufficient data not available to calculate  
 spring water level statistics for 20 years

**Bowman Subbasin – State Well Number (SWN) 29N04W20A002M (Bow-6L)**

Lower Aquifer Well Depth: 451 ft. Perforation top & bottom: 360 – 430 ft bgs



# Groundwater Conditions – Groundwater Elevations Bowman Subbasin

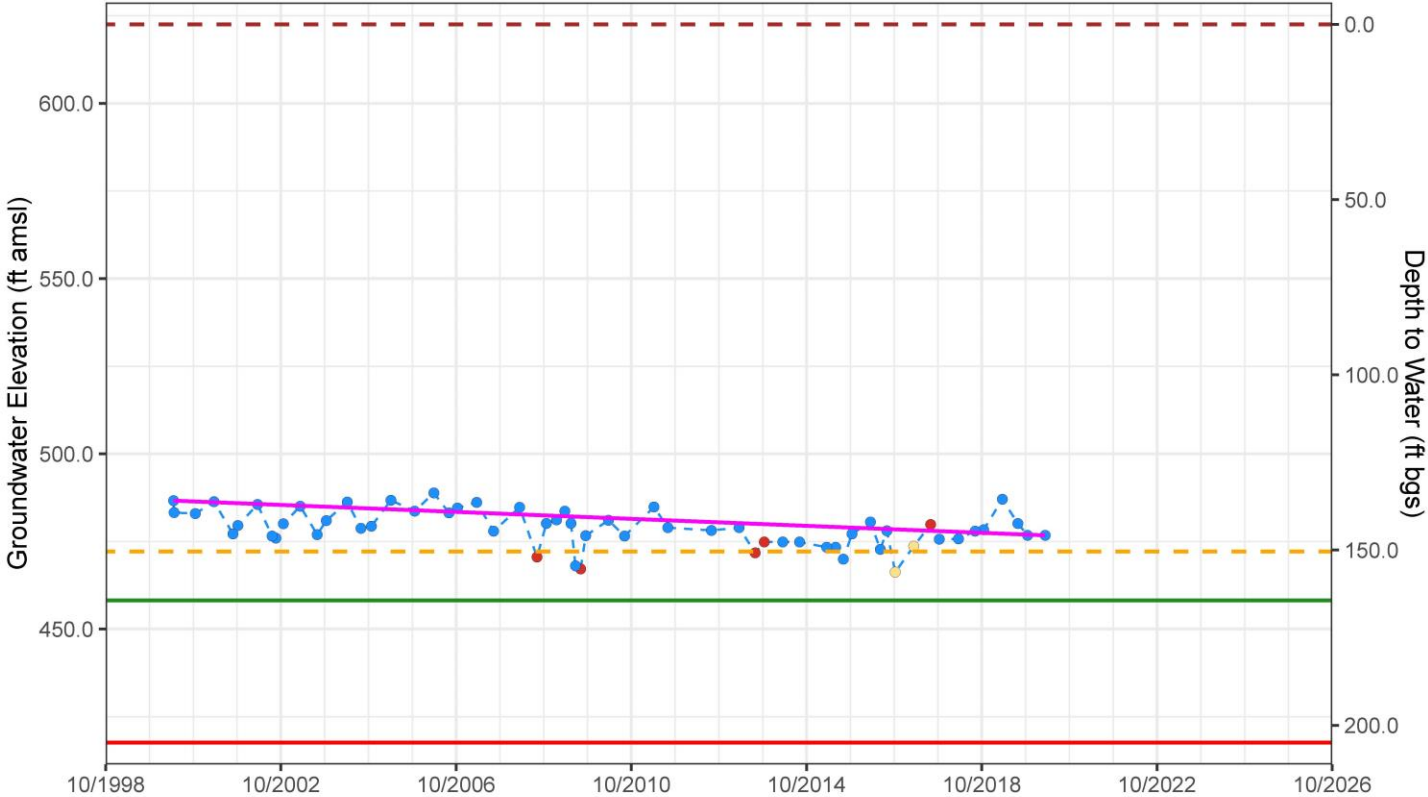


Sustainable Management Criteria  
IM (2027) = 472.1 ft amsl  
MO = 458.2 ft amsl  
MT = 417.6 ft amsl

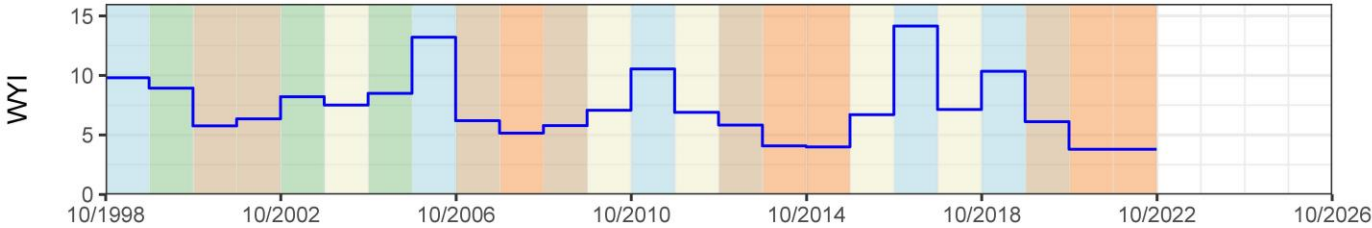
Statistics of spring water levels for past 20 years (2000 to 2020):  
Change = -9.9 ft  
Average rate of change = -0.49 ft/year  
Average water level = 482.8 ft amsl

## Bowman Subbasin – State Well Number (SWN) 29N05W21H001M (Bow-7L)

Lower Aquifer Well Depth: 280 ft. Perforation top & bottom: 250 – 280 ft bgs

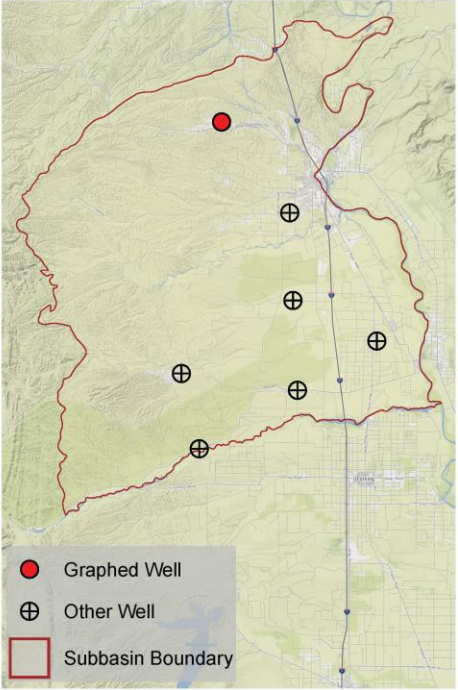


● Good measurement ● Pumped recently ● GSE ● 5-year Interim milestone  
● Pumping — MO — Recent spring water level trend  
— MT



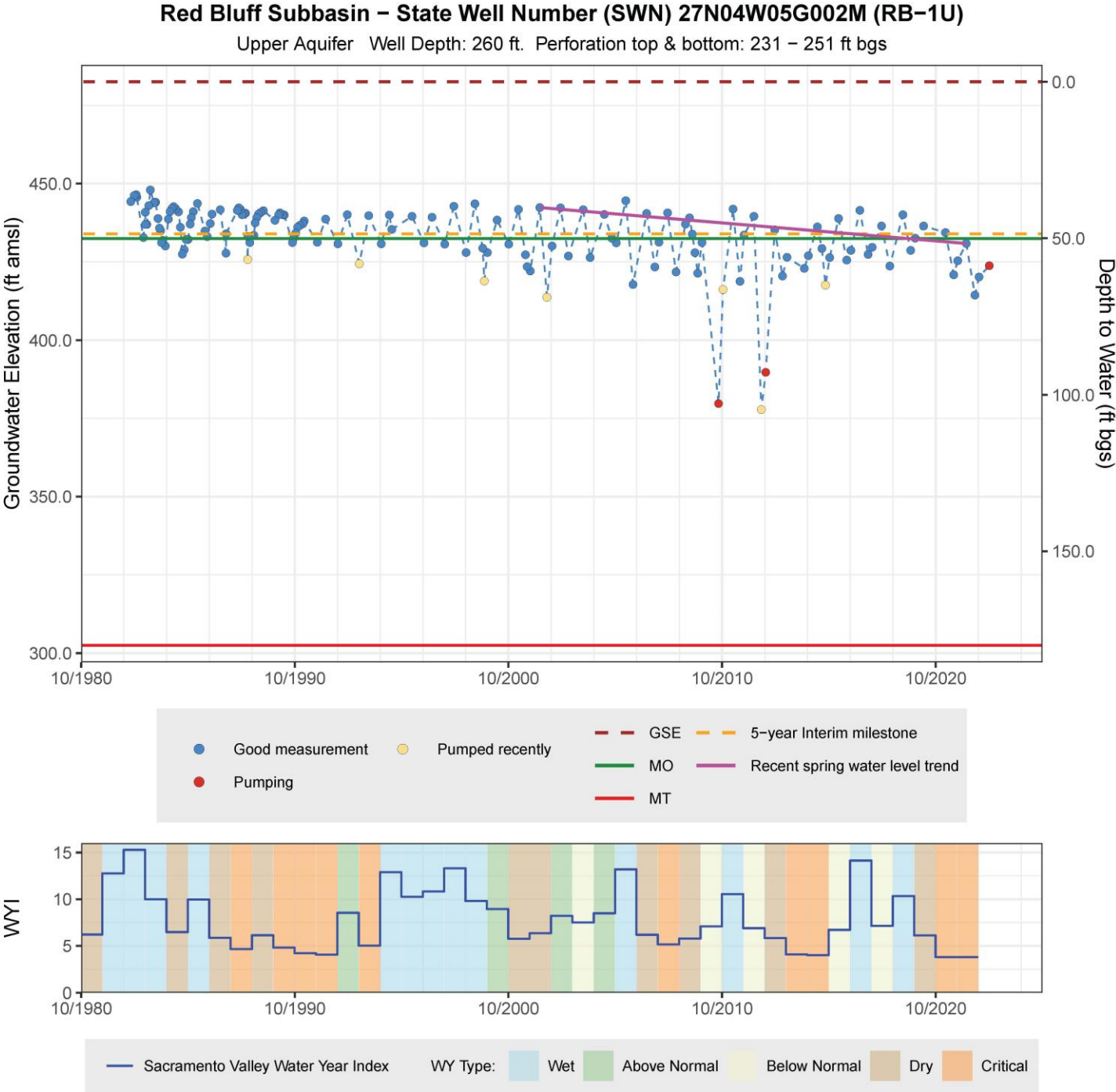
— Sacramento Valley Water Year Index WY Type: Wet Above Normal Below Normal Dry Critical

# Groundwater Conditions – Groundwater Elevations Red Bluff Subbasin

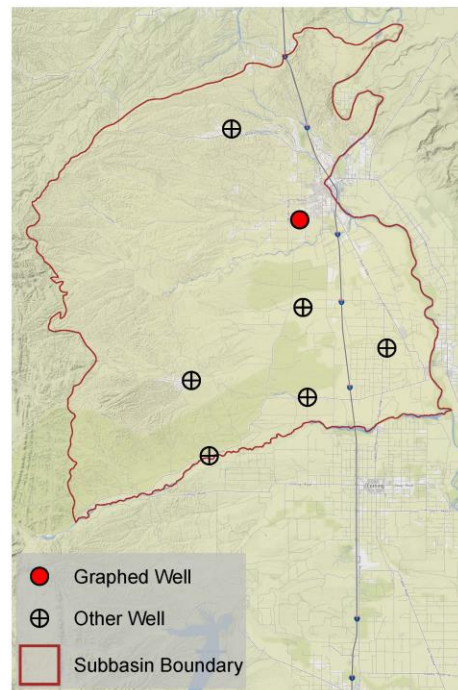


Sustainable Management Criteria  
IM (2027) = 433.9 ft amsl  
MO = 432.4 ft amsl  
MT = 302.5 ft amsl

Statistics of spring water levels for  
past 20 years (2002 to 2022):  
Change = -11.5 ft  
Average rate of change = -0.58 ft/year  
Average water level = 440.16 ft amsl



# Groundwater Conditions – Groundwater Elevations Red Bluff Subbasin

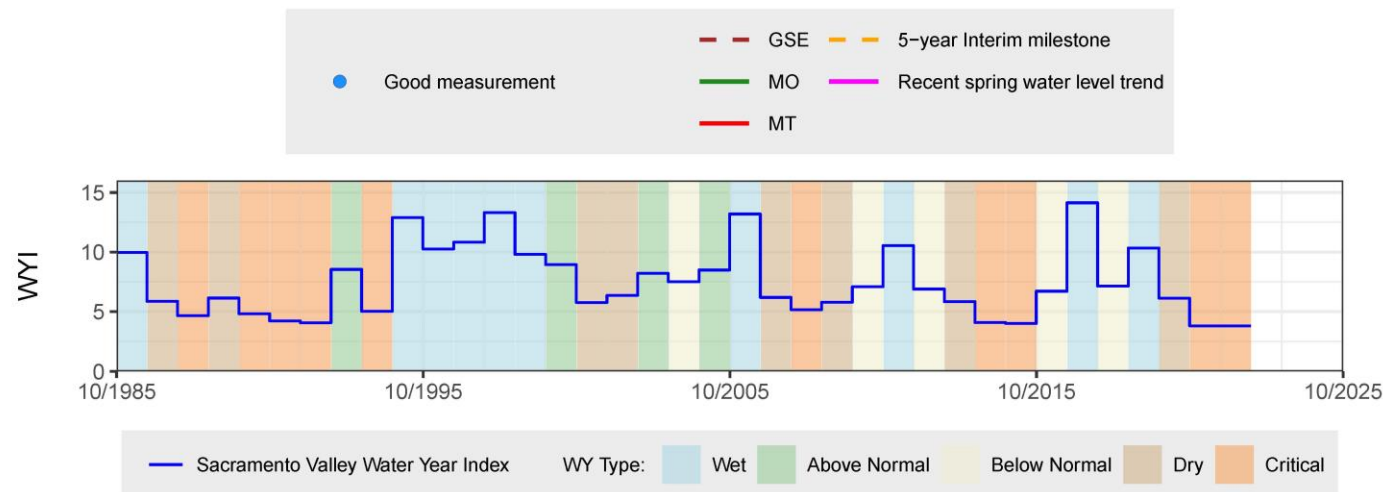
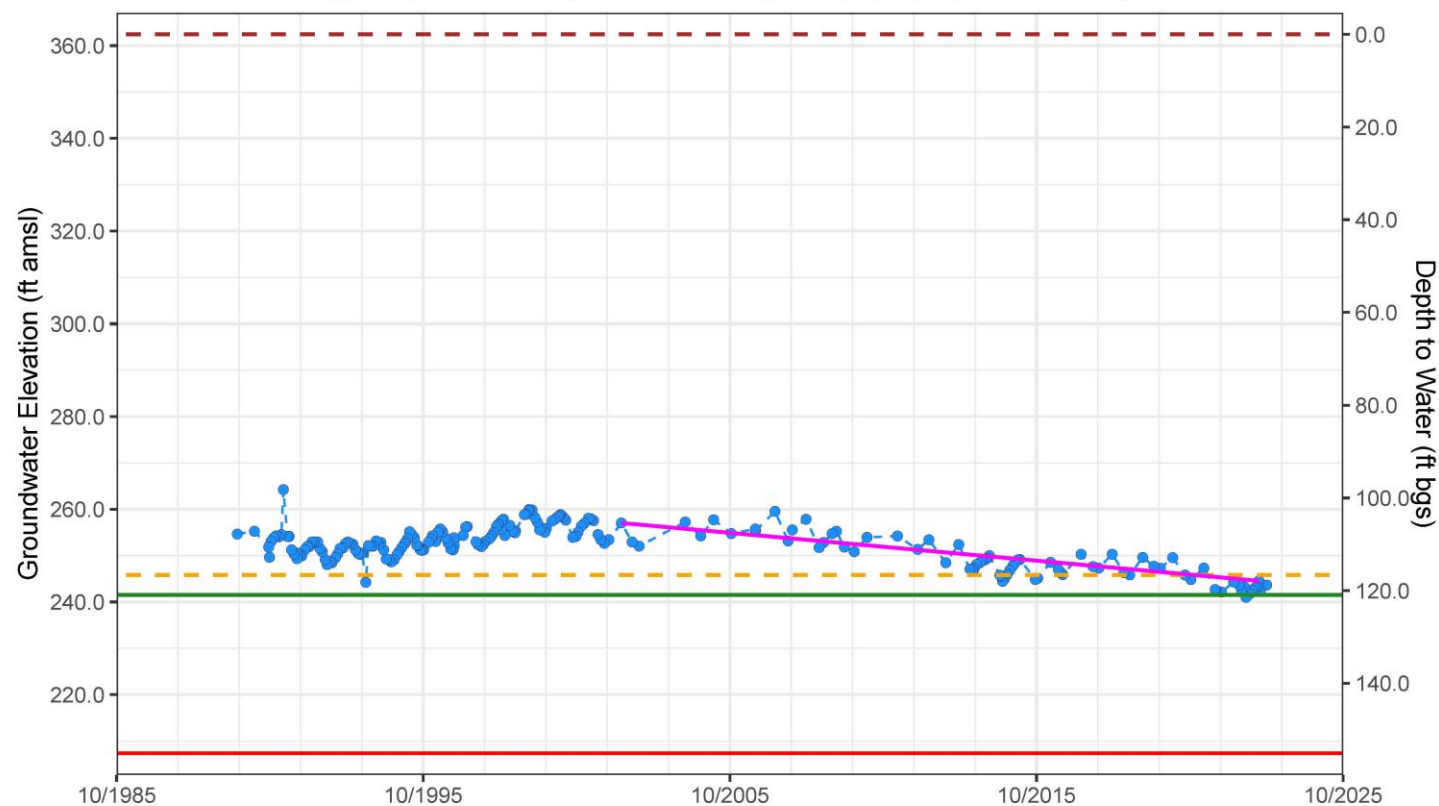


Sustainable Management Criteria  
 IM (2027) = 245.8 ft amsl  
 MO = 241.5 ft amsl  
 MT = 207.4 ft amsl

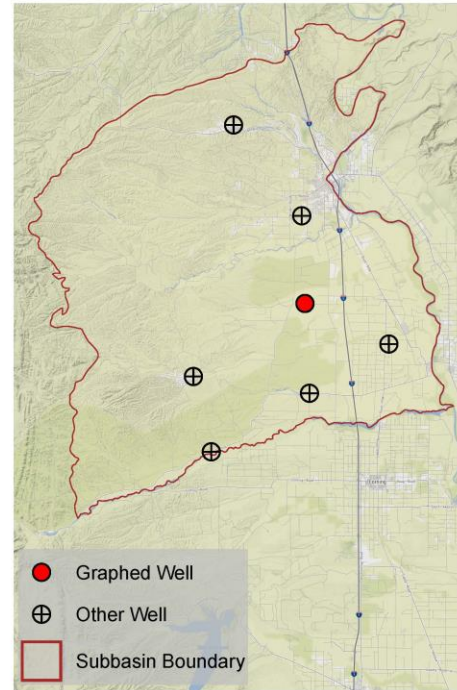
Statistics of spring water levels for past 21 years (2002 to 2023):  
 Change = -12.5 ft  
 Average rate of change = -0.6 ft/year  
 Average water level = 253.82 ft amsl

## Red Bluff Subbasin – State Well Number (SWN) 27N04W36G001M (RB-2U)

Upper Aquifer Well Depth: 155 ft. Perforation top & bottom: 135 – 155 ft bgs



# Groundwater Conditions – Groundwater Elevations Red Bluff Subbasin

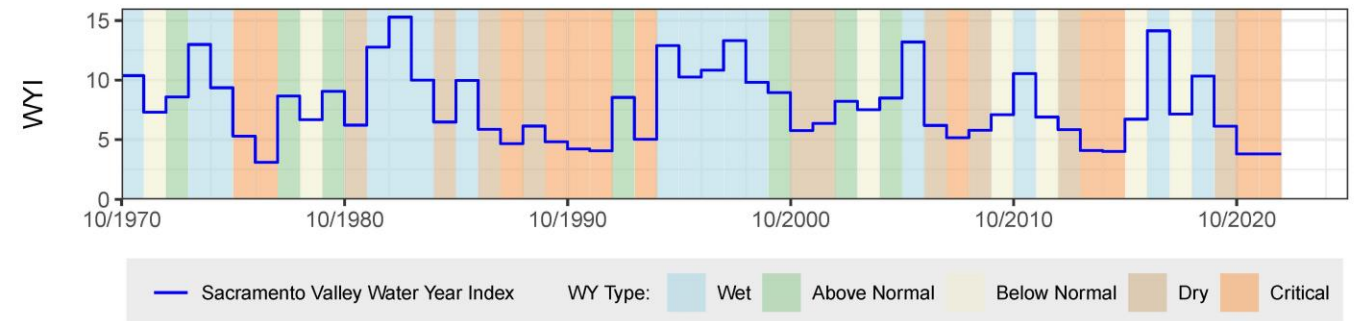
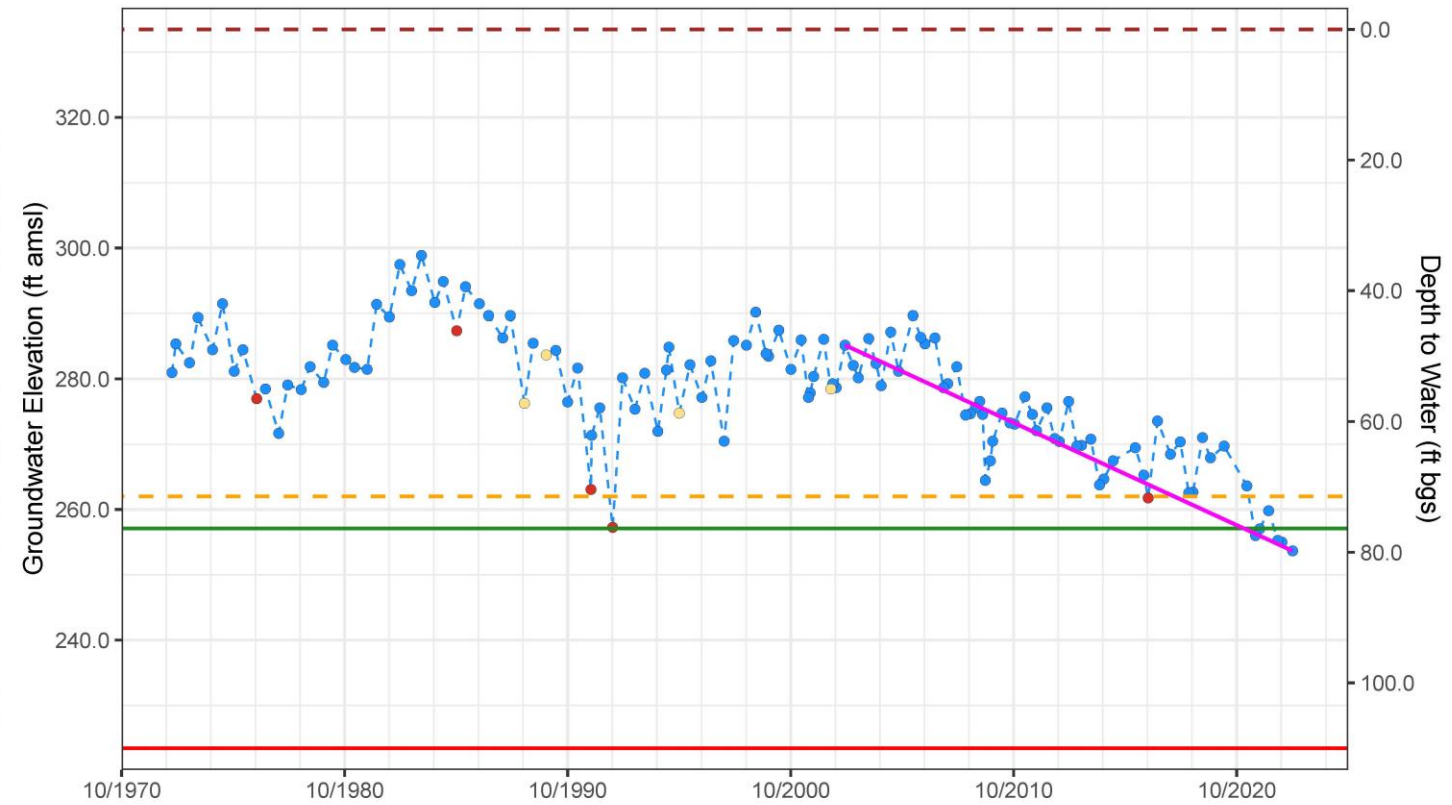


Sustainable Management Criteria  
 IM (2027) = 262.0 ft amsl  
 MO = 257.1 ft amsl  
 MT = 223.5 ft amsl

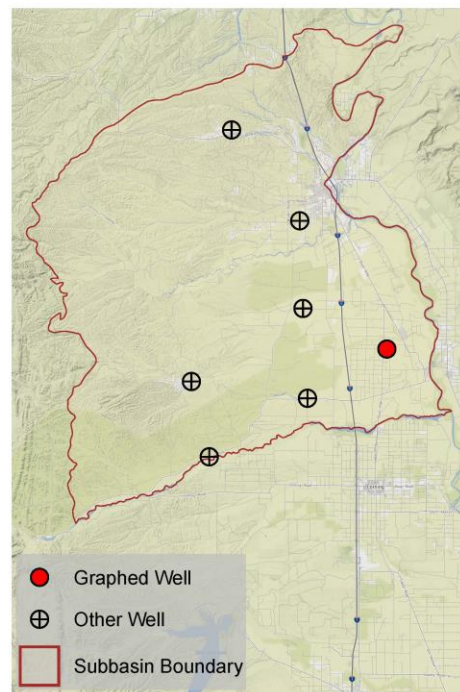
Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -31.5 ft  
 Average rate of change = -1.58 ft/year  
 Average water level = 281.42 ft amsl

## Red Bluff Subbasin – State Well Number (SWN) 26N04W25J001M (RB-3U)

Upper Aquifer Well Depth: 128 ft. Perforation top & bottom: 116 – 124 ft bgs



# Groundwater Conditions – Groundwater Elevations Red Bluff Subbasin



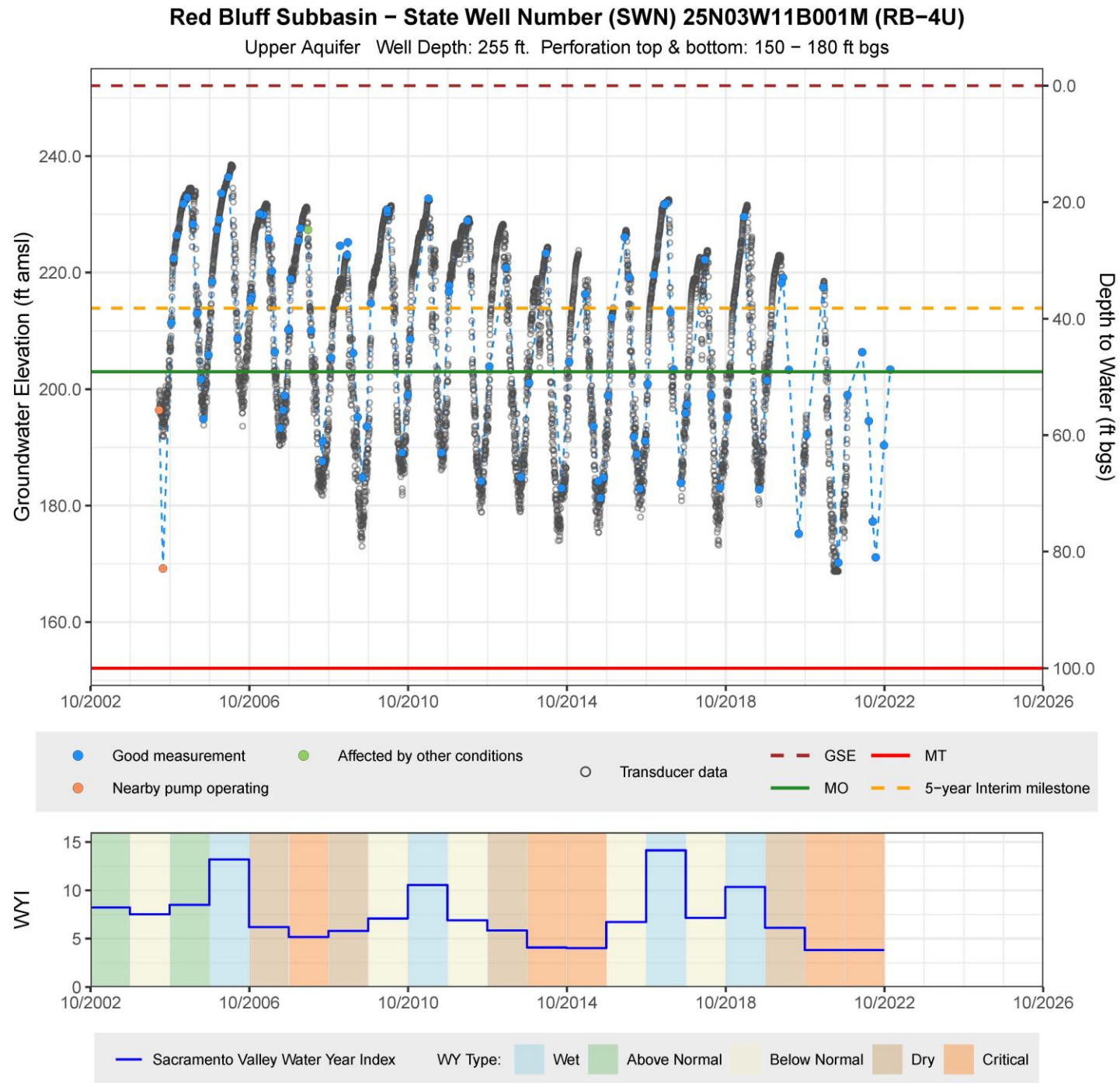
## Sustainable Management Criteria

IM (2027) = 213.9 ft amsl

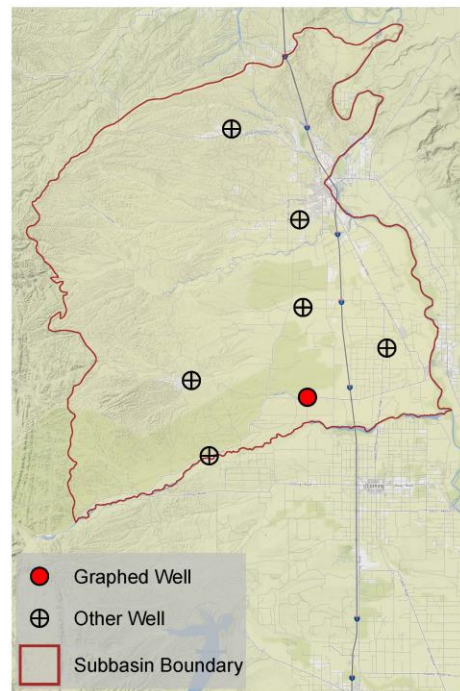
MO = 203.0 ft amsl

MT = 152.1 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years



# Groundwater Conditions – Groundwater Elevations Red Bluff Subbasin

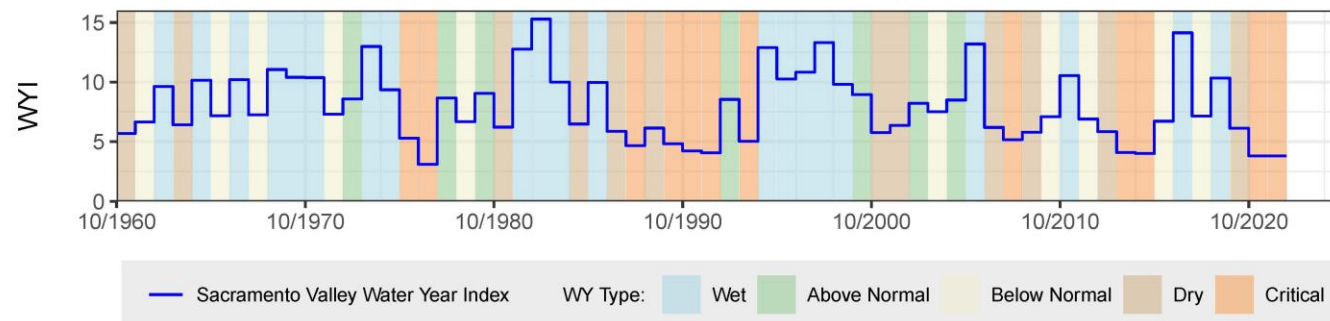
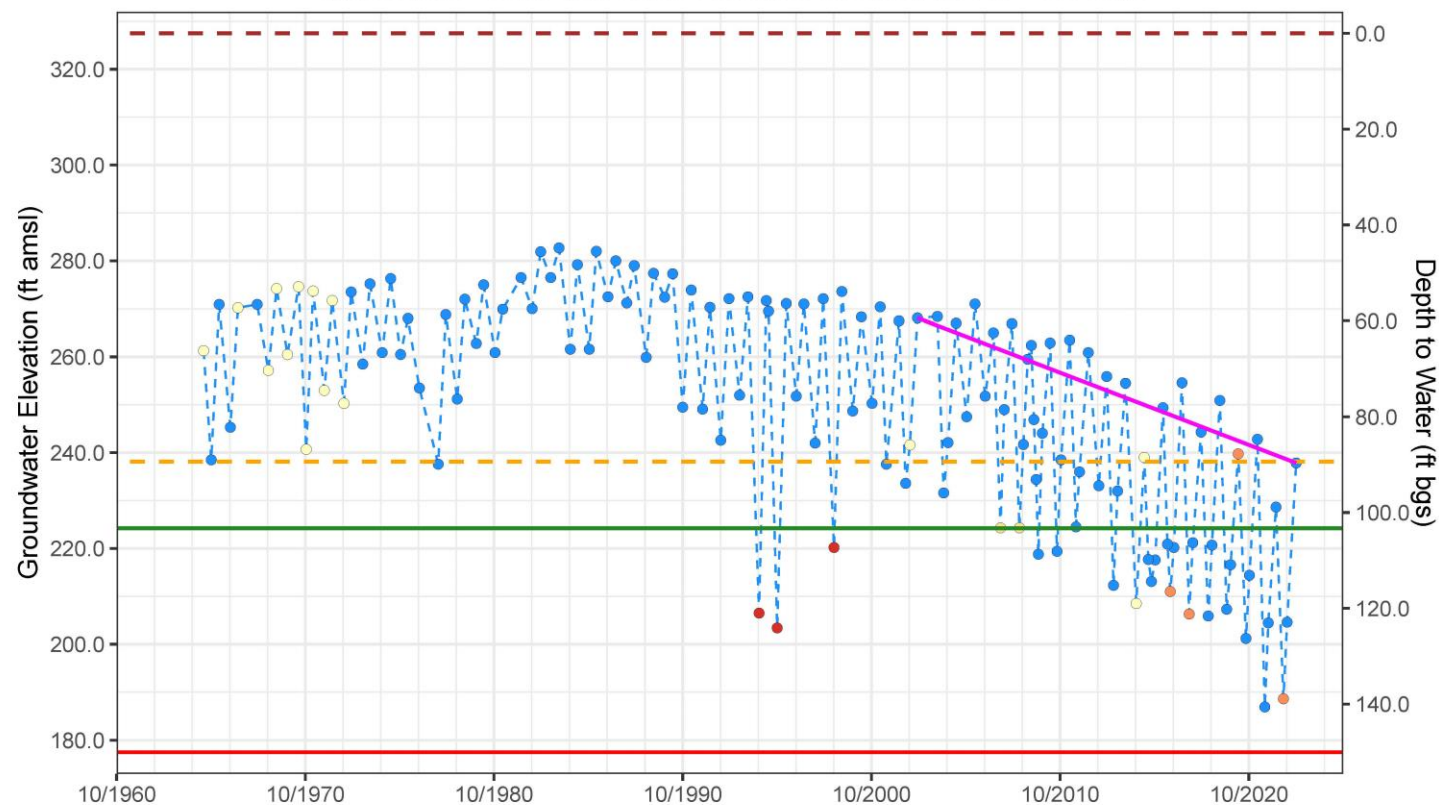


Sustainable Management Criteria  
 IM (2027) = 238.1 ft amsl  
 MO = 224.2 ft amsl  
 MT = 177.5 ft amsl

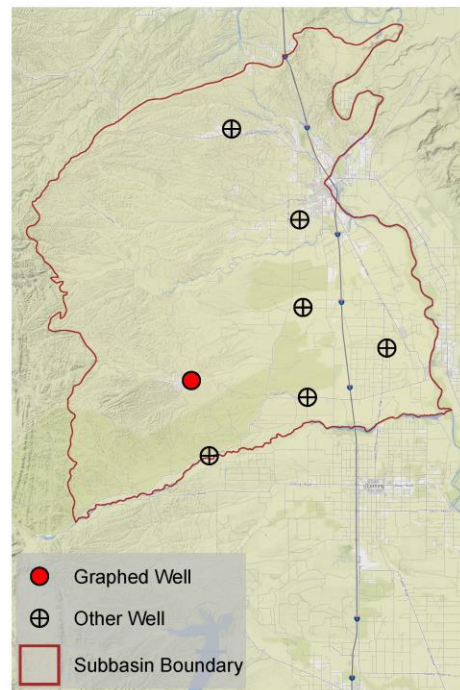
Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -30.25 ft  
 Average rate of change = -1.51 ft/year  
 Average water level = 267.17 ft amsl

## Red Bluff Subbasin – State Well Number (SWN) 25N03W19N001M (RB-5U)

Upper Aquifer Well Depth: 370 ft. Perforation top & bottom: 135 – 358 ft bgs



# Groundwater Conditions – Groundwater Elevations Red Bluff Subbasin



## Sustainable Management Criteria

IM (2027) = 408.5 ft amsl

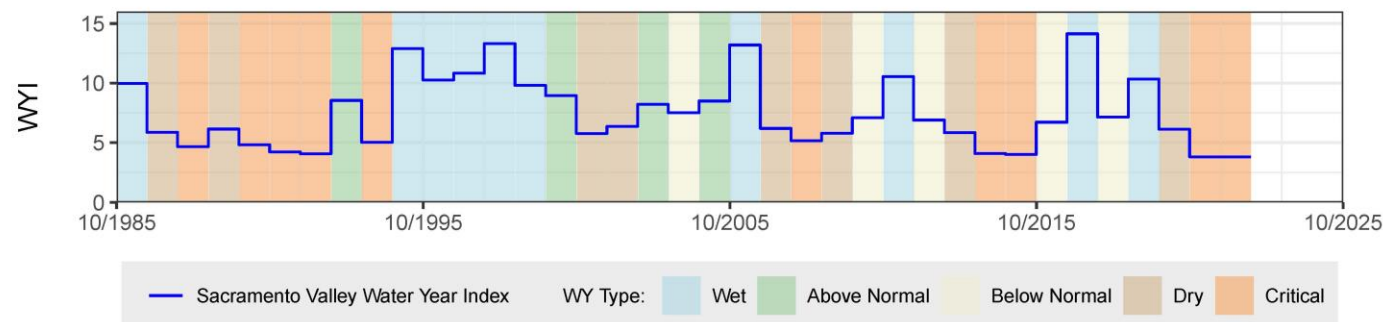
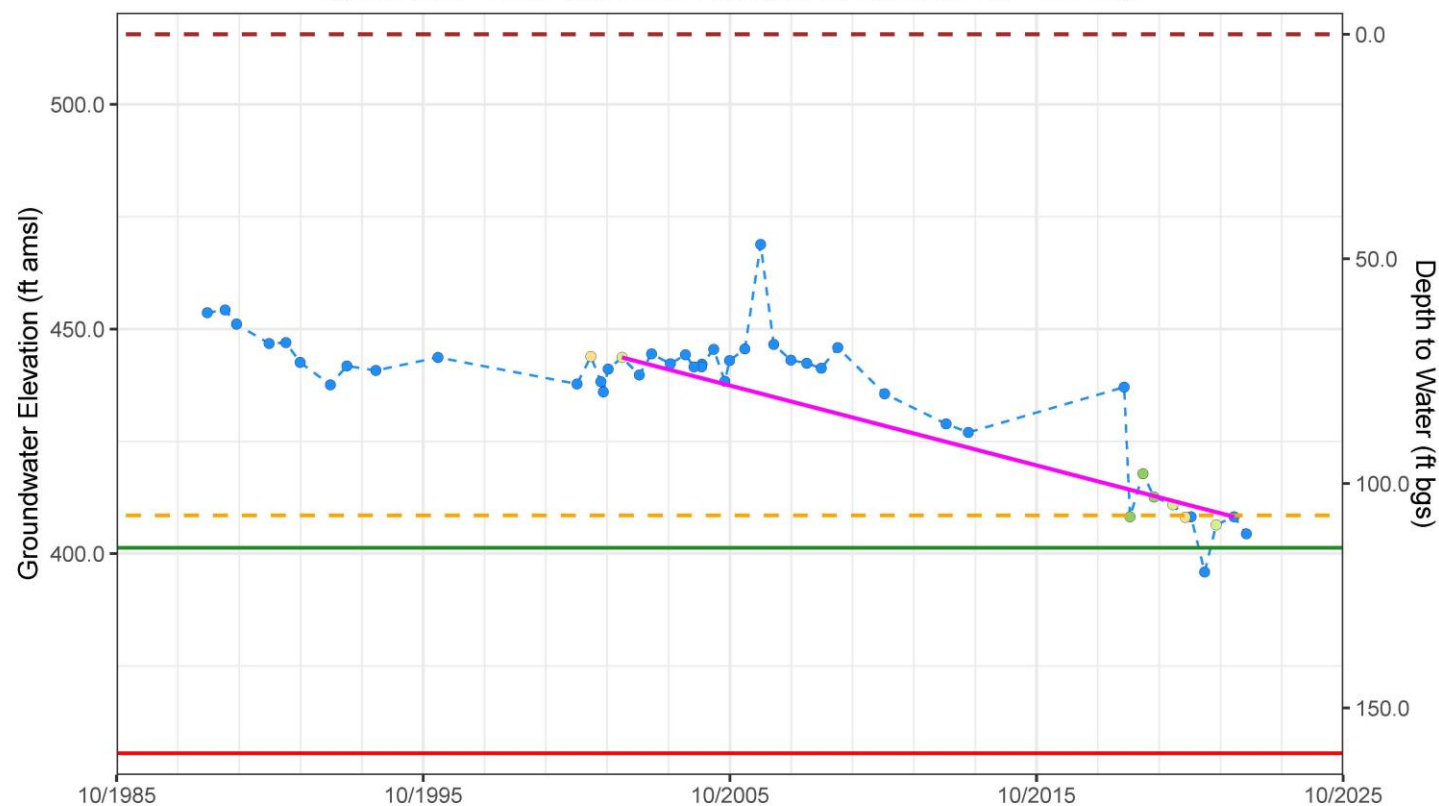
MO = 401.3 ft amsl

MT = 355.6 ft amsl

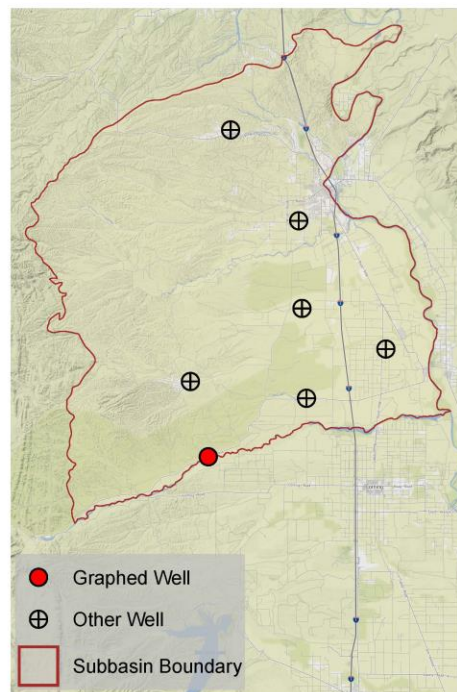
Statistics of spring water levels for past 20 years (2002 to 2022):  
 Change = -35.5 ft  
 Average rate of change = -1.77 ft/year  
 Average water level = 436.4 ft amsl

## Red Bluff Subbasin – State Well Number (SWN) 25N05W24D001M (RB-6U)

Upper Aquifer Well Depth: 183 ft. Perforation top & bottom: 143 – 183 ft bgs



# Groundwater Conditions – Groundwater Elevations Red Bluff Subbasin



## Sustainable Management Criteria

IM (2027) = 347.6 ft amsl

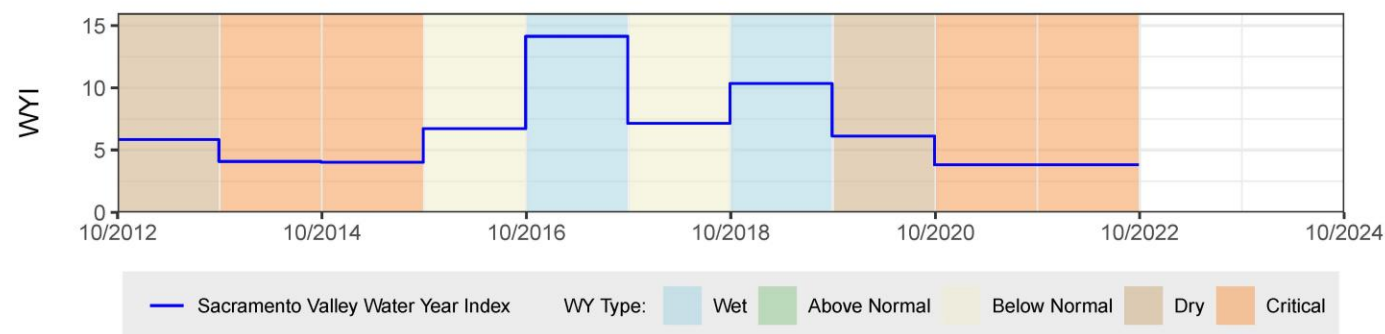
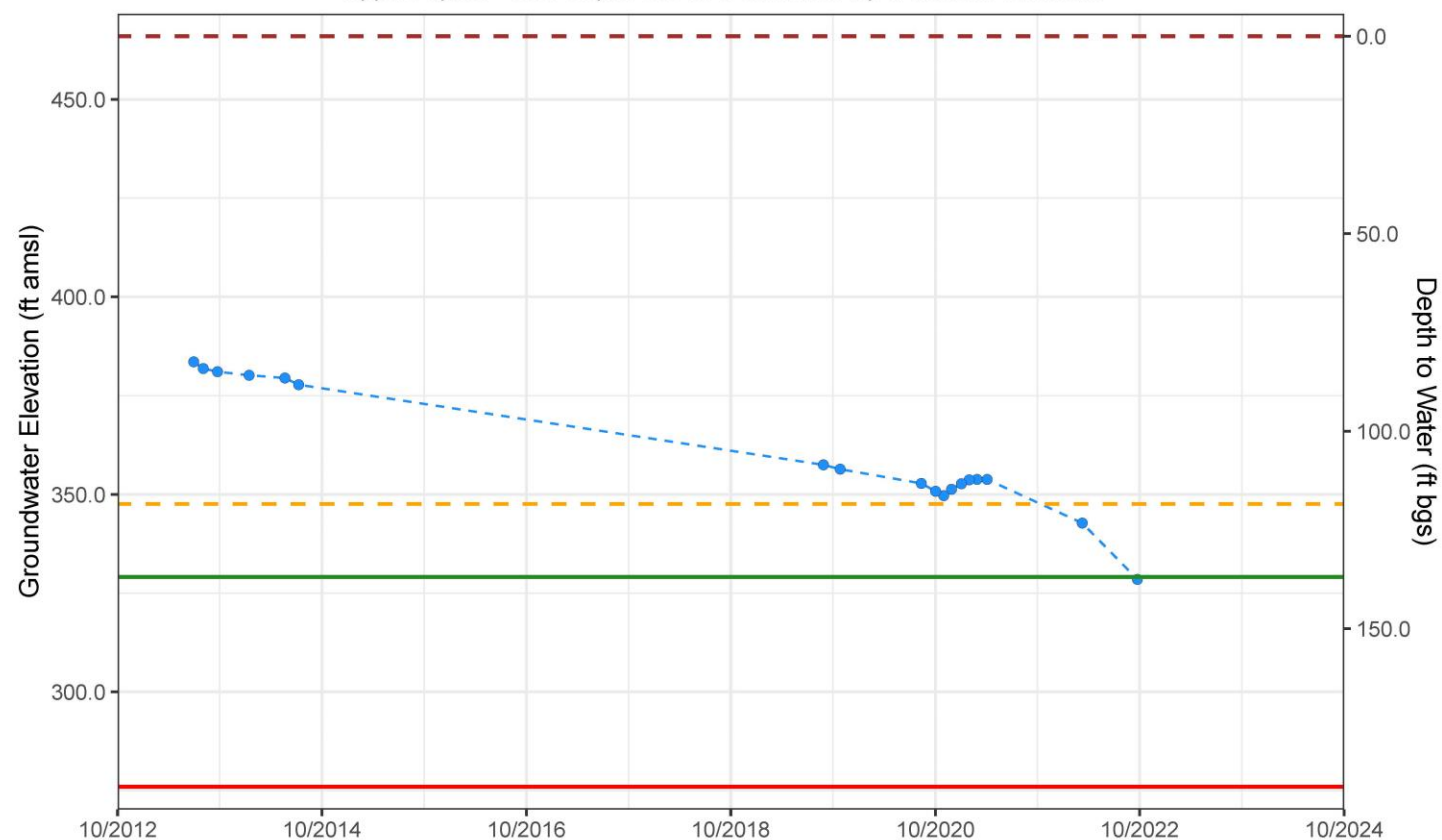
MO = 329.1 ft amsl

MT = 276.0 ft amsl

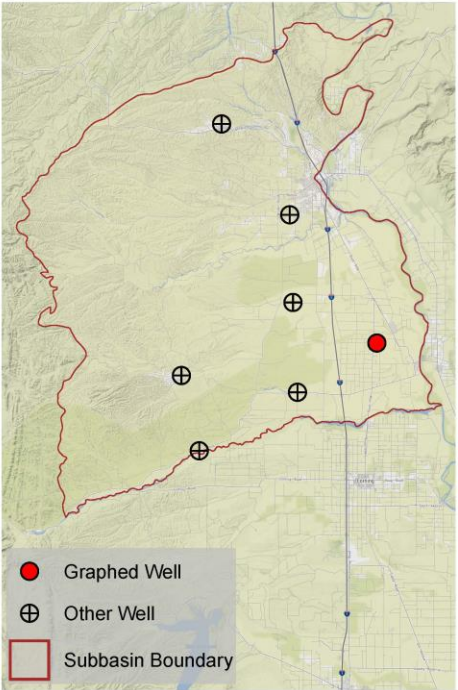
Sufficient data not available to calculate spring water level statistics for 20 years

## Red Bluff Subbasin – State Well Number (SWN) NA (RB-7U)

Upper Aquifer Well Depth: 240 ft. Perforation top & bottom: Unknown

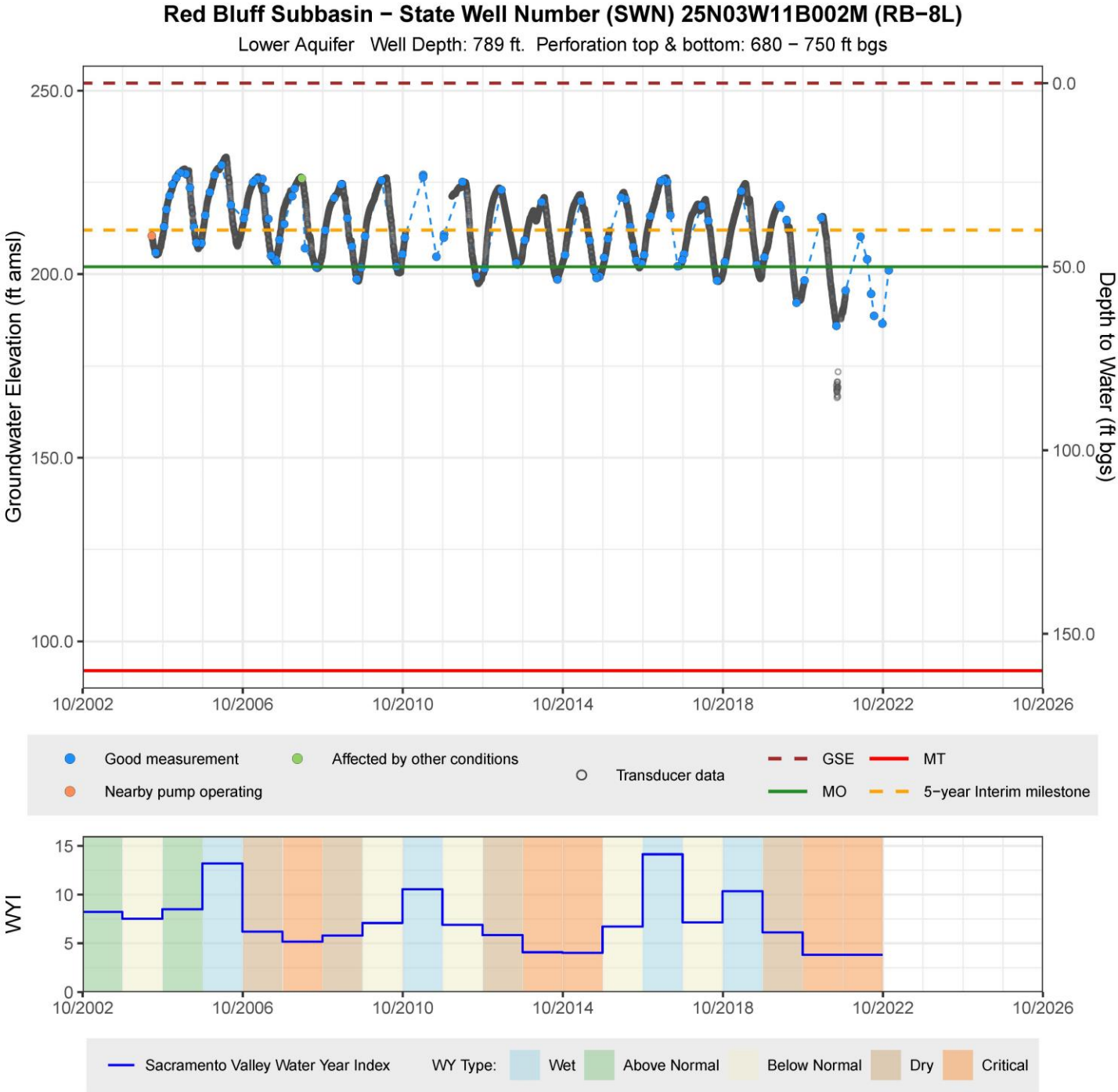


# Groundwater Conditions – Groundwater Elevations Red Bluff Subbasin



Sustainable Management Criteria  
 IM (2027) = 212.0 ft amsl  
 MO = 202.0 ft amsl  
 MT = 92.0 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years



# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin



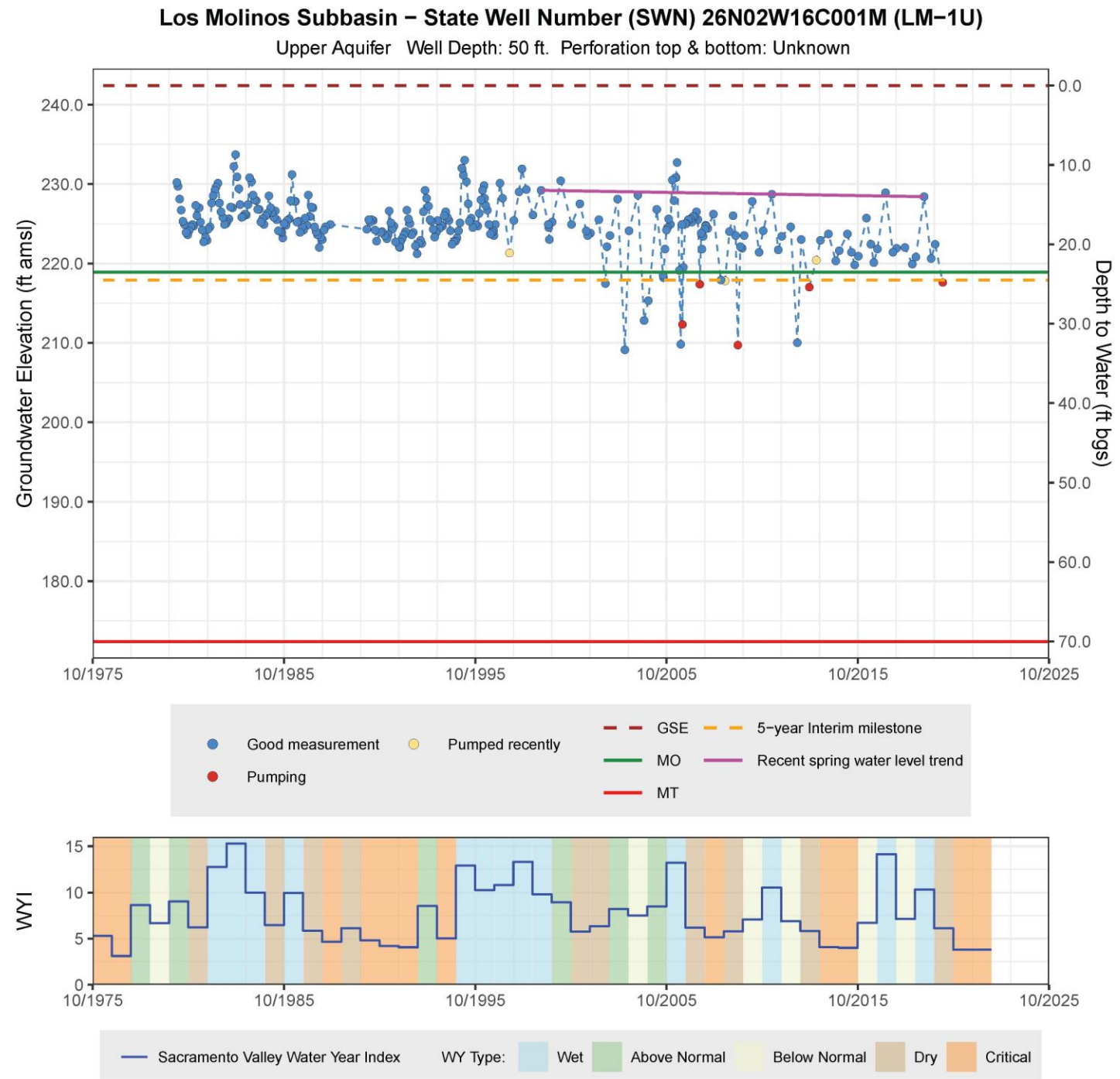
## Sustainable Management Criteria

IM (2027) = 217.9 ft amsl

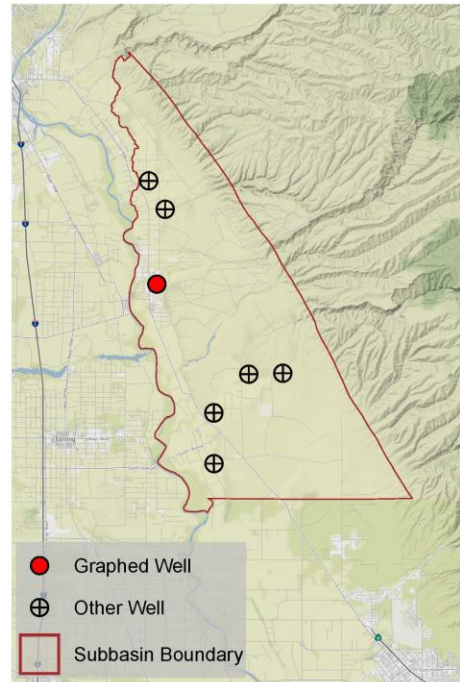
MO = 218.9 ft amsl

MT = 172.4 ft amsl

Statistics of spring water levels for  
 past 20 years (1999 to 2019):  
 Change = -0.8 ft  
 Average rate of change = -0.04 ft/year  
 Average water level = 228 ft amsl

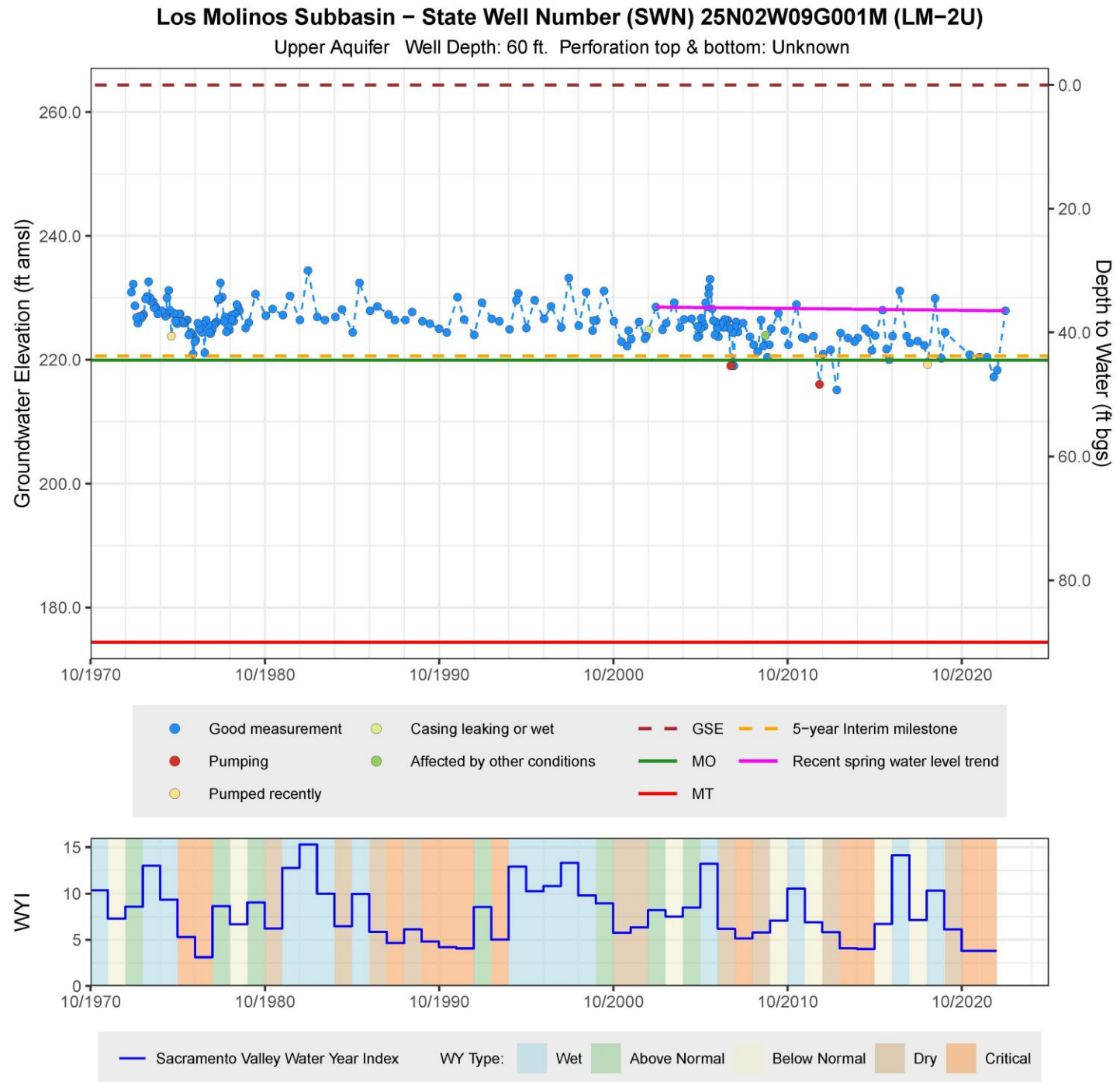


# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin

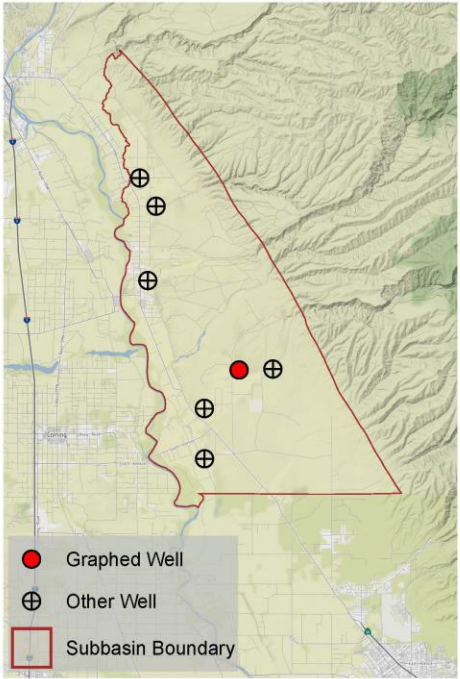


Sustainable Management Criteria  
IM (2027) = 220.6 ft amsl  
MO = 219.9 ft amsl  
MT = 174.4 ft amsl

Statistics of spring water levels for past 20 years (2003 to 2023):  
Change = -0.6 ft  
Average rate of change = -0.03 ft/year  
Average water level = 227.9 ft amsl



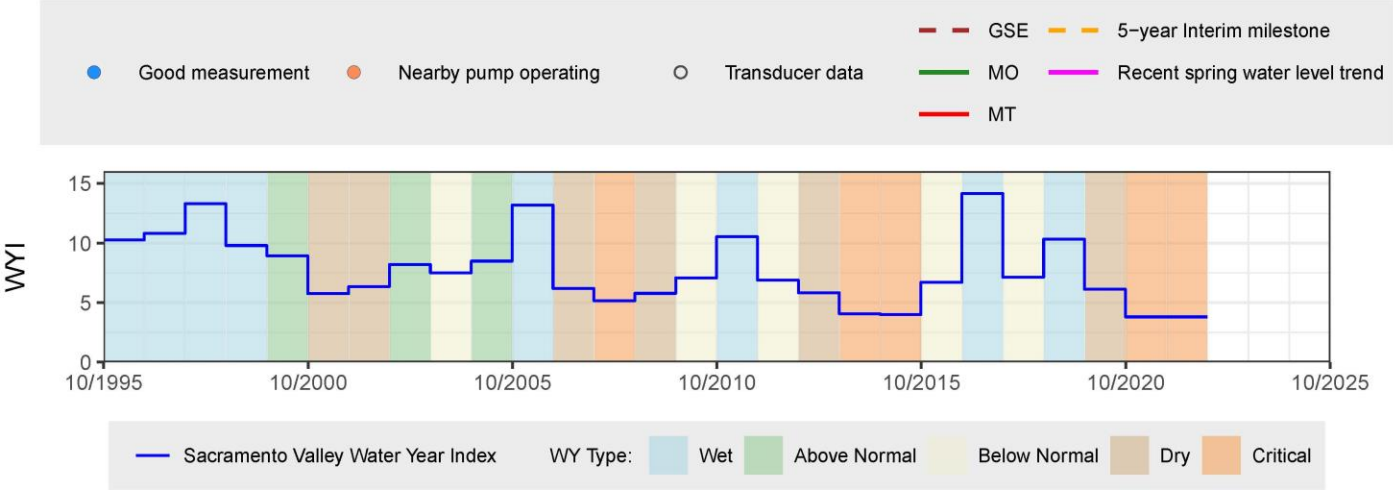
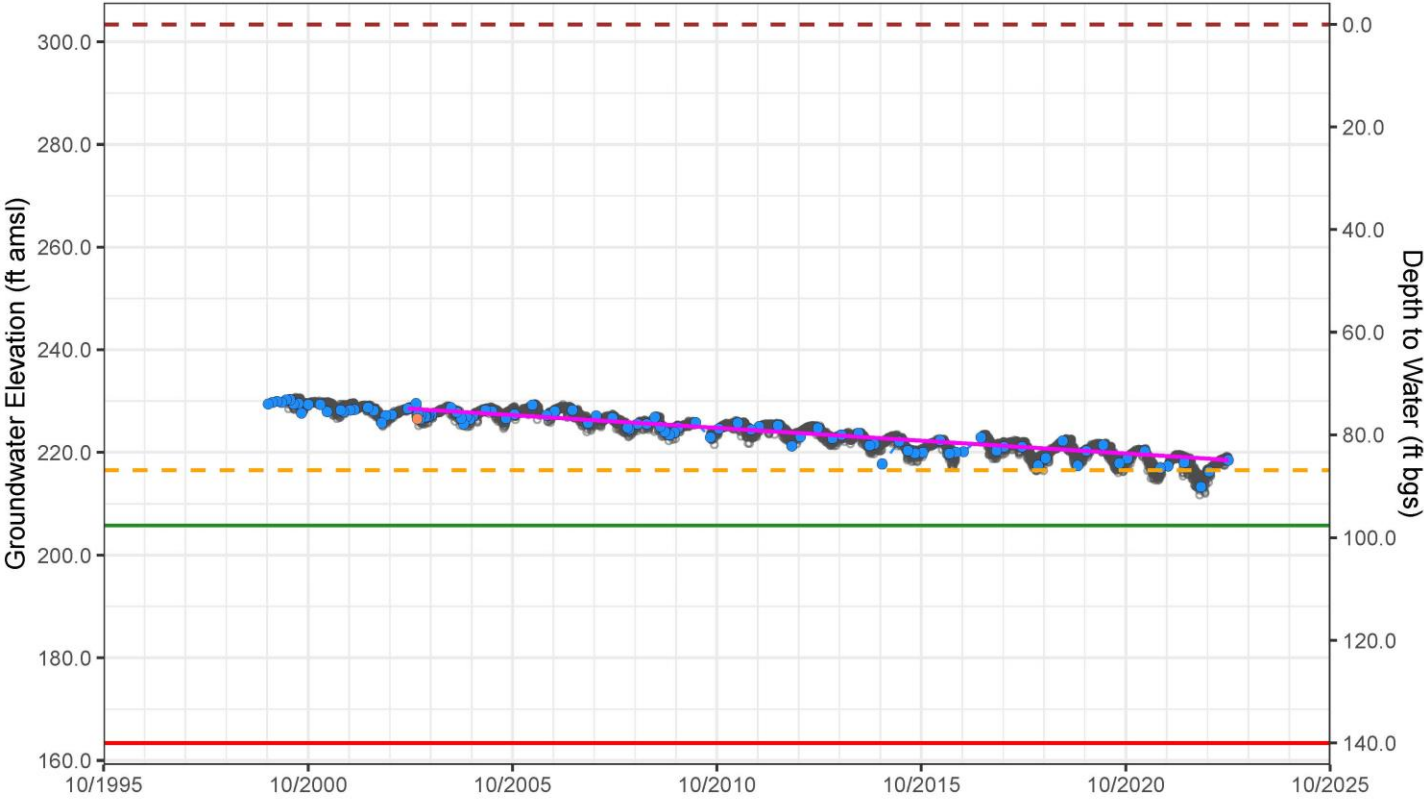
# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin



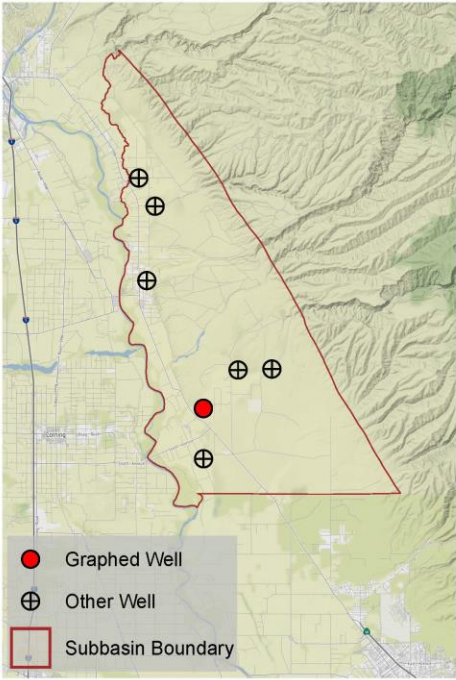
Sustainable Management Criteria  
IM (2027) = 216.6 ft amsl  
MO = 205.8 ft amsl  
MT = 163.4 ft amsl

Statistics of spring water levels for  
past 20 years (2003 to 2023):  
Change = -10 ft  
Average rate of change = -0.5 ft/year  
Average water level = 224.94 ft amsl

Los Molinos Subbasin – State Well Number (SWN) 25N01W32P001M (LM-3U)  
Upper Aquifer Well Depth: 330 ft. Perforation top & bottom: 209 – 256 ft bgs

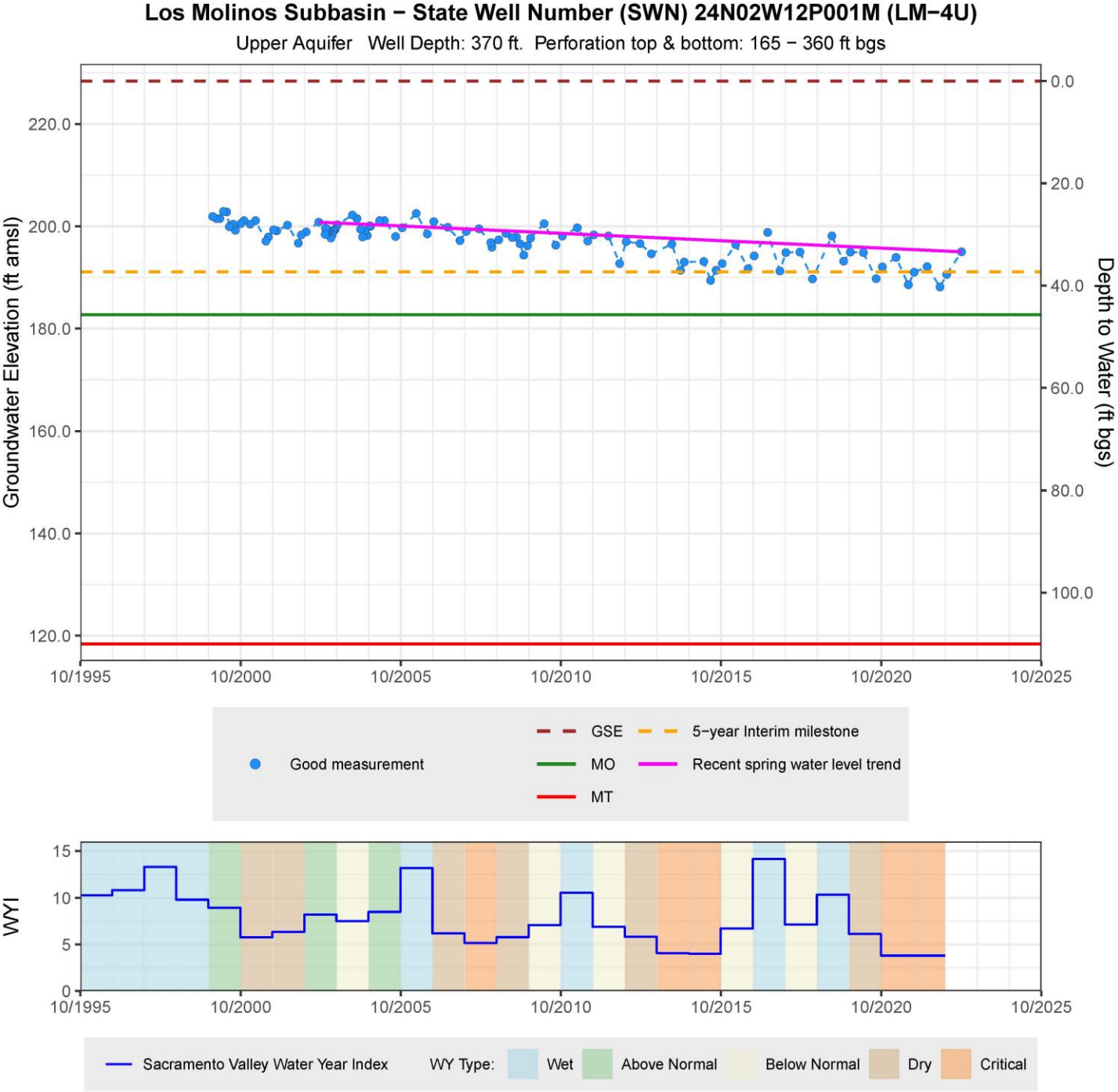


# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin

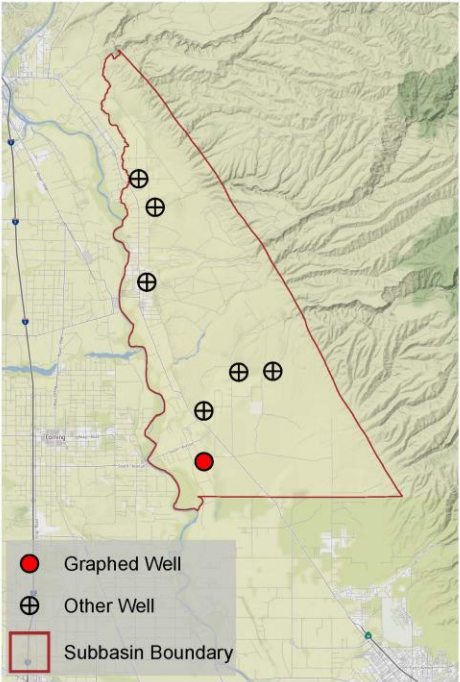


Sustainable Management Criteria  
IM (2027) = 191.1 ft amsl  
MO = 182.7 ft amsl  
MT = 118.4 ft amsl

Statistics of spring water levels for past 20 years (2003 to 2023):  
Change = -5.8 ft  
Average rate of change = -0.29 ft/year  
Average water level = 198.23 ft amsl



# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin

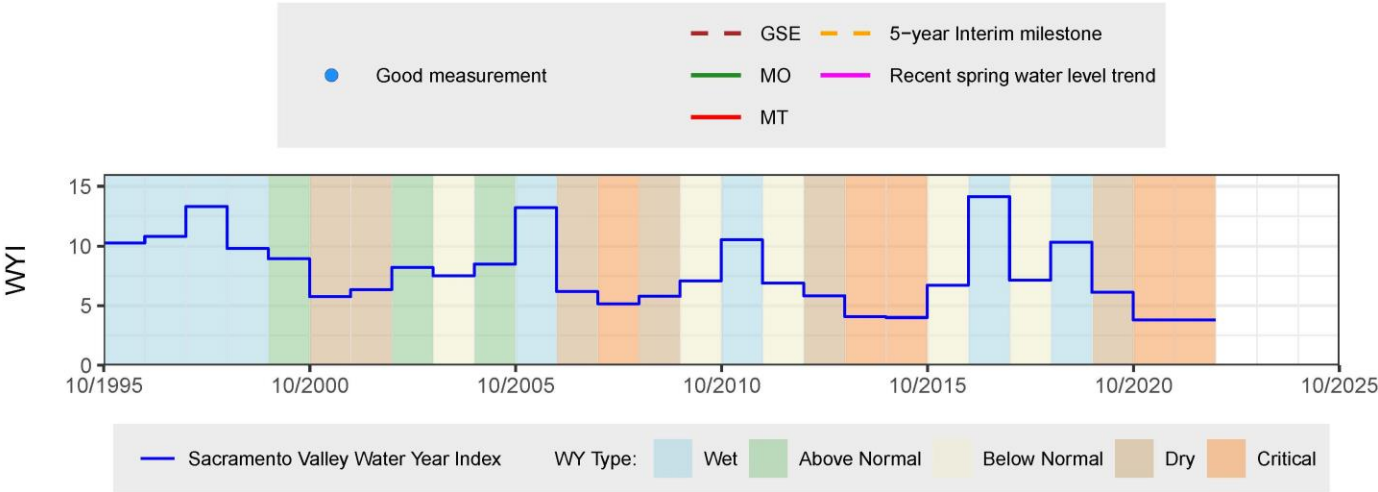
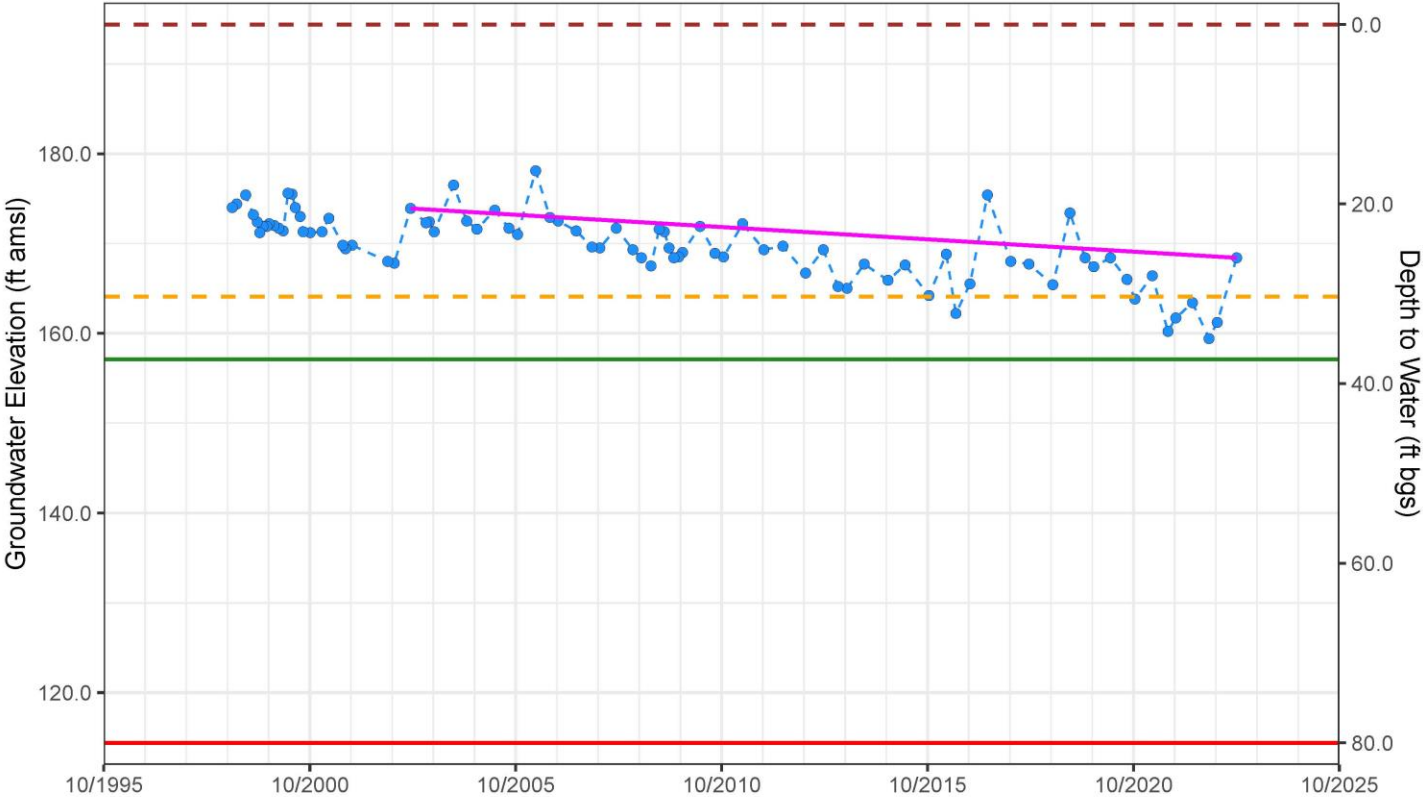


Sustainable Management Criteria  
 IM (2027) = 164.1 ft amsl  
 MO = 157.1 ft amsl  
 MT = 114.4 ft amsl

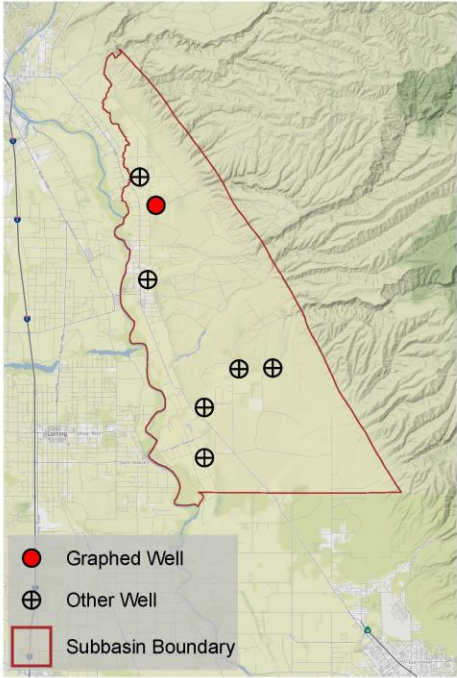
Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -5.5 ft  
 Average rate of change = -0.28 ft/year  
 Average water level = 171.3 ft amsl

Los Molinos Subbasin – State Well Number (SWN) 24N02W25G001M (LM-5U)

Upper Aquifer Well Depth: 256 ft. Perforation top & bottom: 108 – 256 ft bgs



# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin

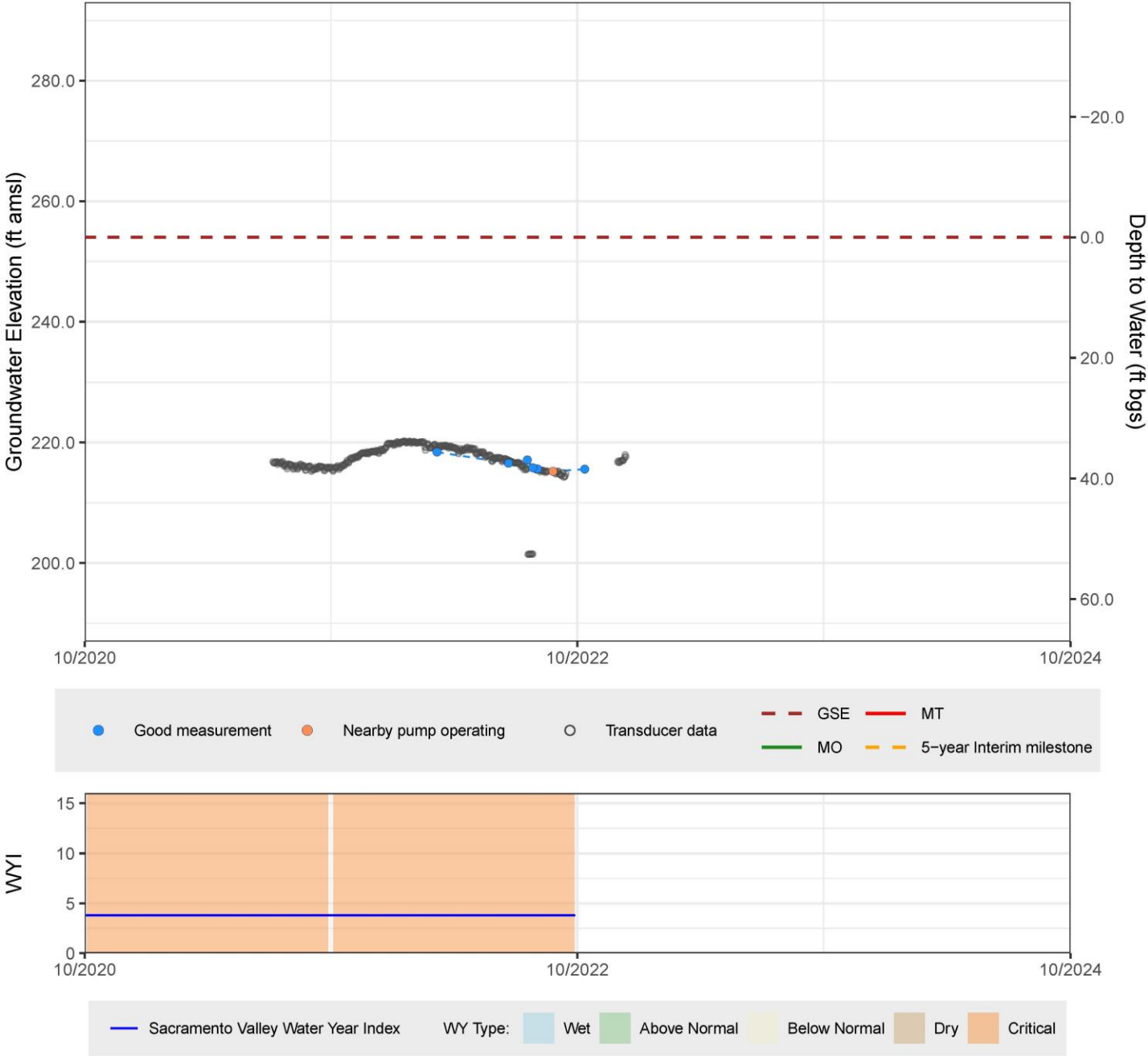


Sustainable Management Criteria  
IM (2027) = NA  
MO = NA  
MT = NA

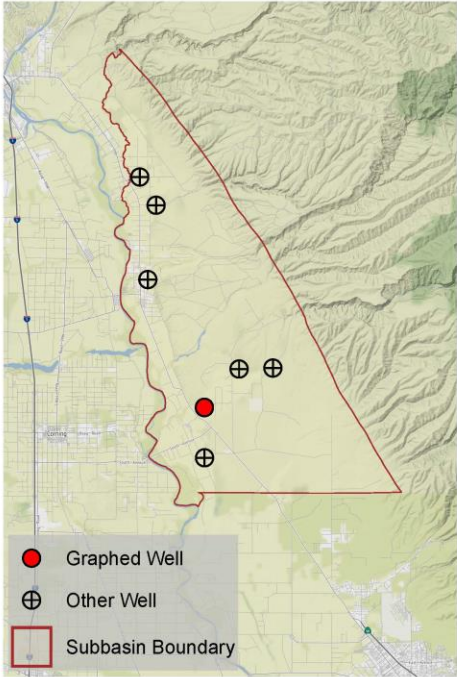
Sufficient data not available to calculate  
spring water level statistics for 20 years

## Los Molinos Subbasin – State Well Number (SWN) 26N02W22E006M (LM-6U)

Upper Aquifer Well Depth: 60 ft. Perforation top & bottom: 40 – 50 ft bgs



# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin

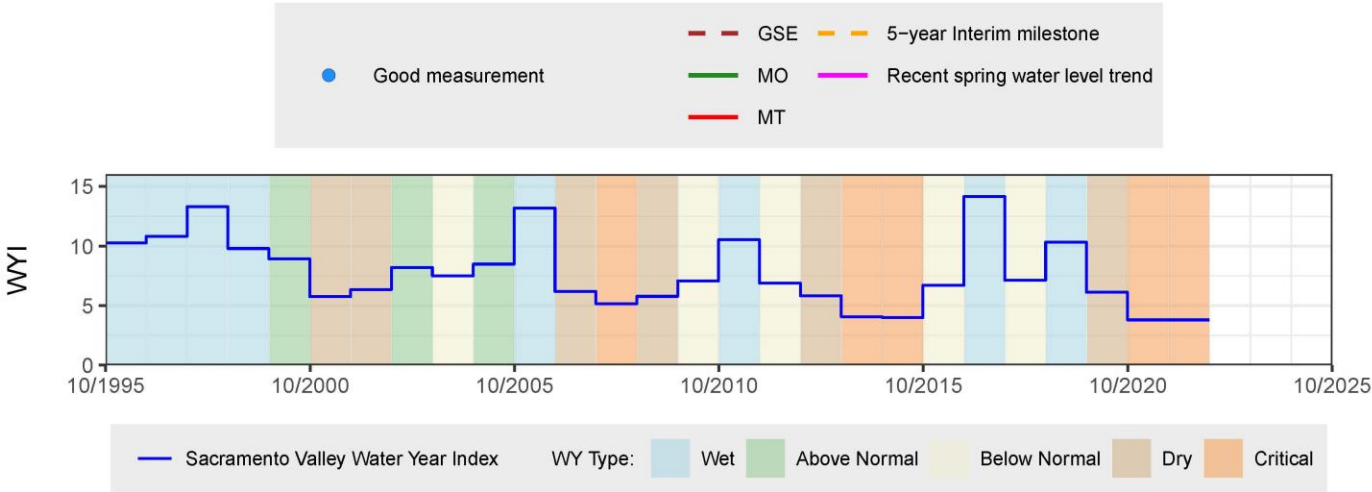
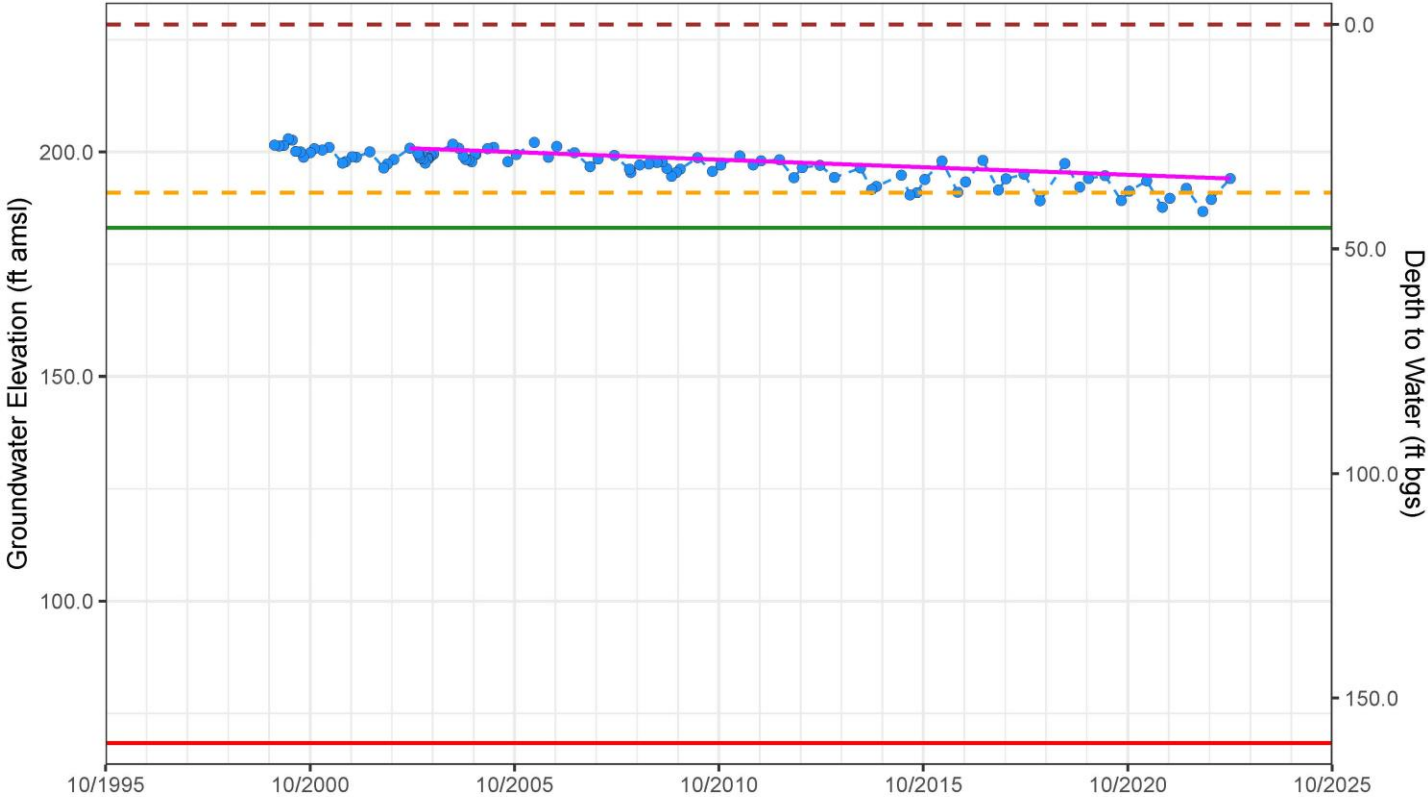


Sustainable Management Criteria  
IM (2027) = 190.9 ft amsl  
MO = 183.1 ft amsl  
MT = 68.4 ft amsl

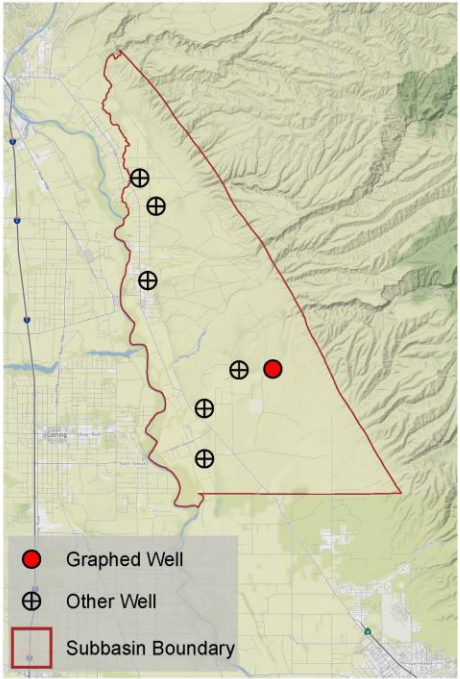
Statistics of spring water levels for  
past 20 years (2003 to 2023):  
Change = -6.75 ft  
Average rate of change = -0.34 ft/year  
Average water level = 198.05 ft amsl

## Los Molinos Subbasin – State Well Number (SWN) 24N02W12P002M (LM-7L)

Lower Aquifer Well Depth: 870 ft. Perforation top & bottom: 760 – 850 ft bgs



# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin

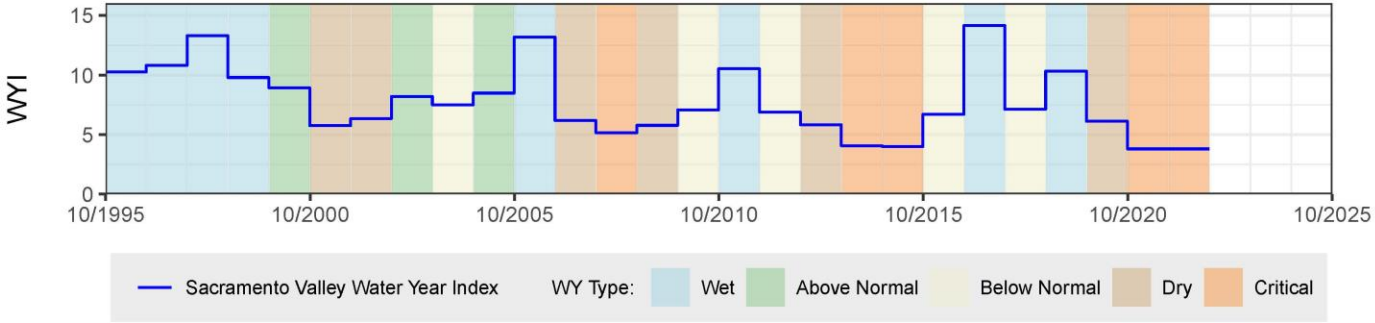
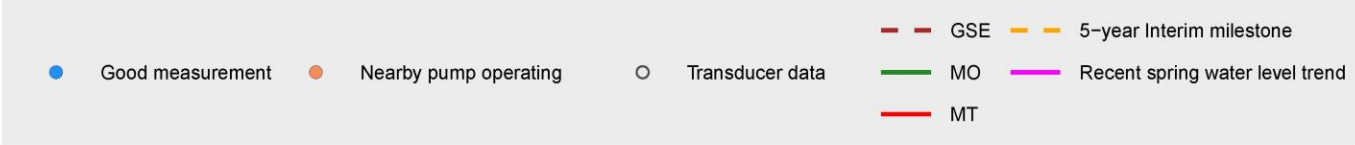
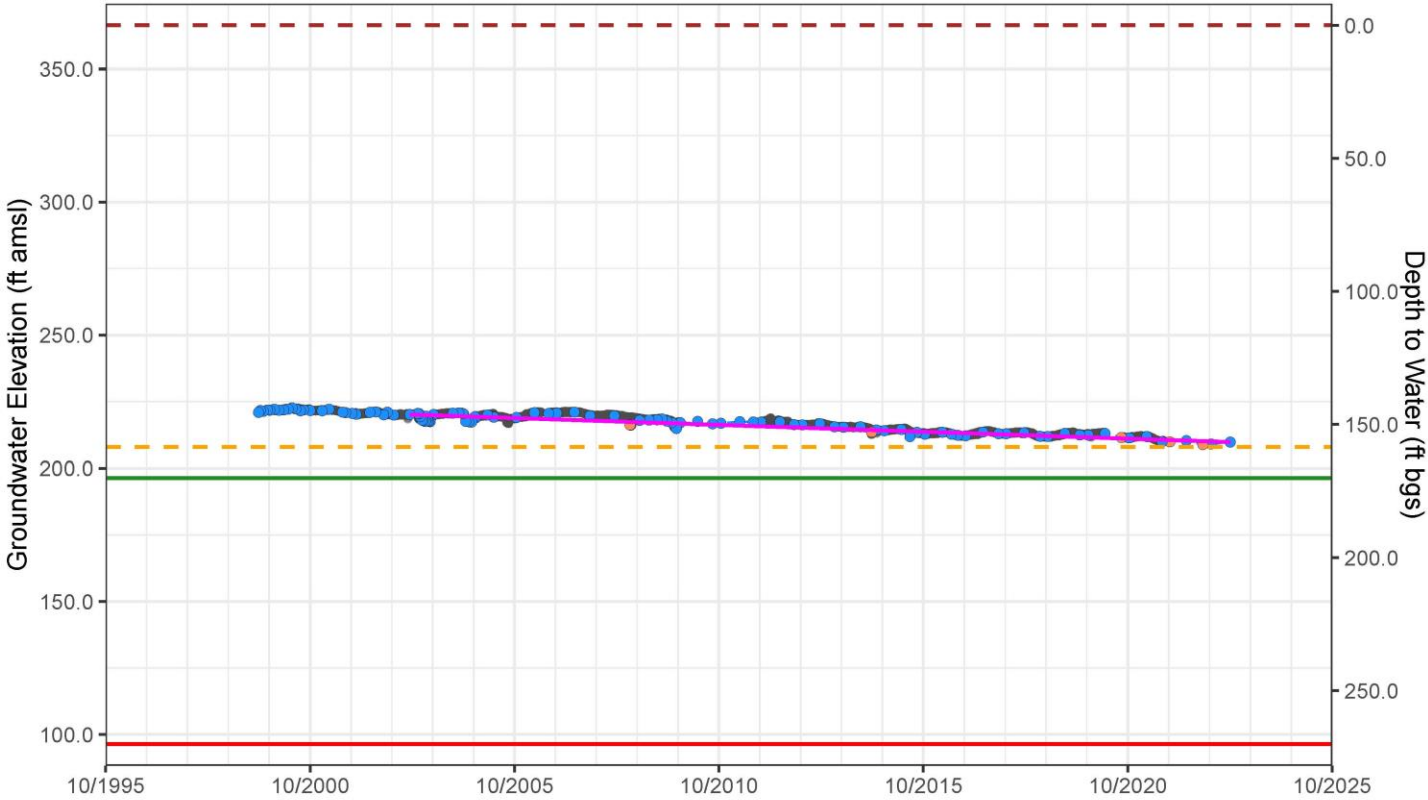


Sustainable Management Criteria  
IM (2027) = 208.0 ft amsl  
MO = 196.3 ft amsl  
MT = 96.4 ft amsl

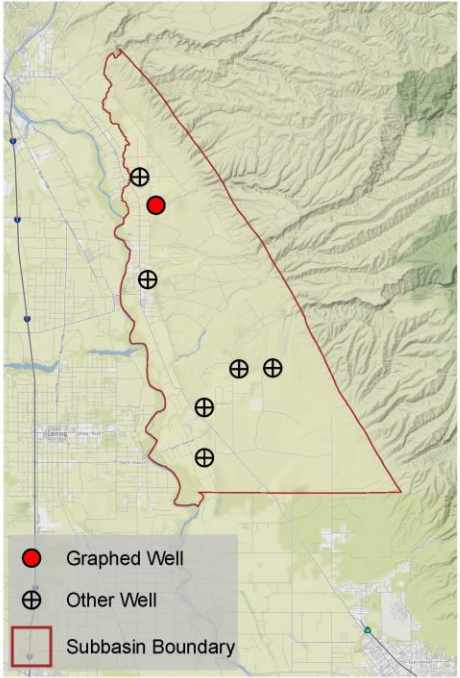
Statistics of spring water levels for  
past 20 years (2003 to 2023):  
Change = -10.37 ft  
Average rate of change = -0.52 ft/year  
Average water level = 216.8 ft amsl

## Los Molinos Subbasin – State Well Number (SWN) 25N01W34N003M (LM-8L)

Lower Aquifer Well Depth: 743 ft. Perforation top & bottom: 625 – 680 ft bgs



# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin

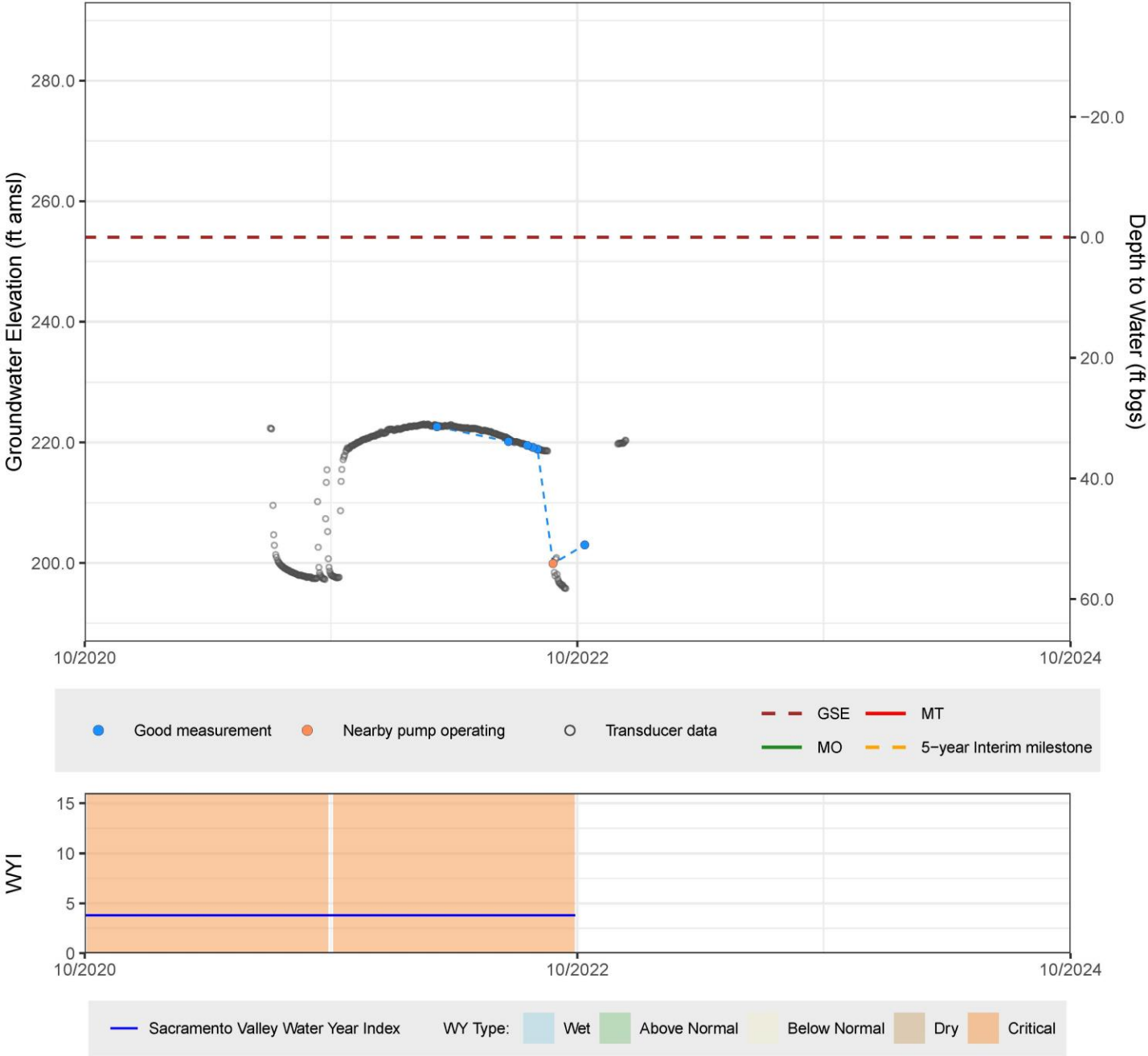


Sustainable Management Criteria  
IM (2027) = NA  
MO = NA  
MT = NA

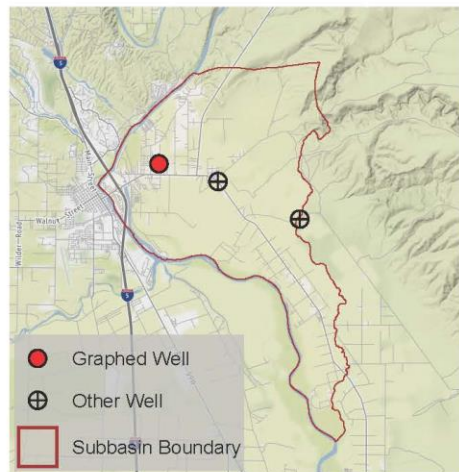
Sufficient data not available to calculate spring water level statistics for 20 years

## Los Molinos Subbasin – State Well Number (SWN) 26N02W22E004M (LM-9L)

Lower Aquifer Well Depth: 680 ft. Perforation top & bottom: 560 – 670 ft bgs



# Groundwater Conditions – Groundwater Elevations Antelope Subbasin

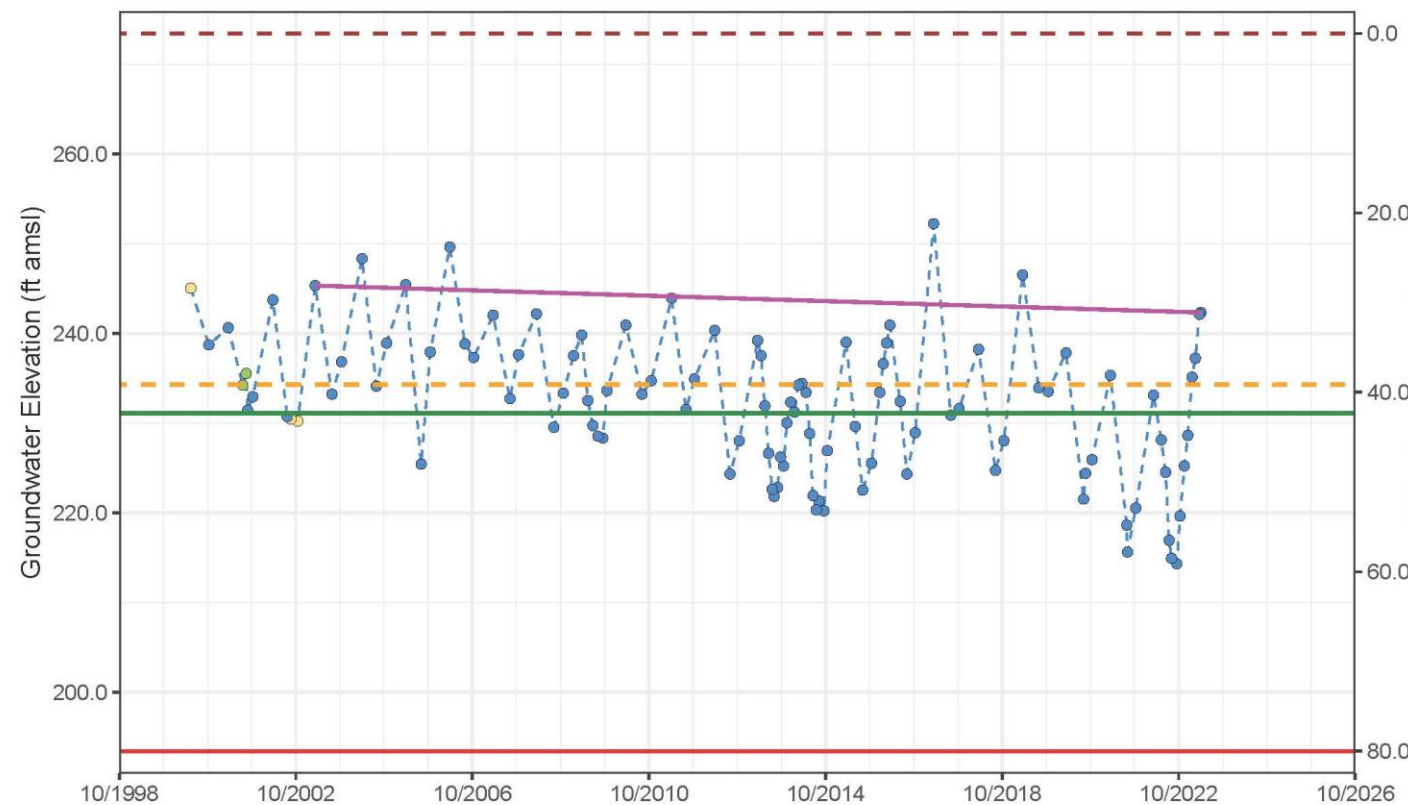


Sustainable Management Criteria  
 IM (2027) = 234.3 ft amsl  
 MO = 231.1 ft amsl  
 MT = 193.4 ft amsl

Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -3 ft  
 Average rate of change = -0.15 ft/year  
 Average water level = 241.81 ft amsl

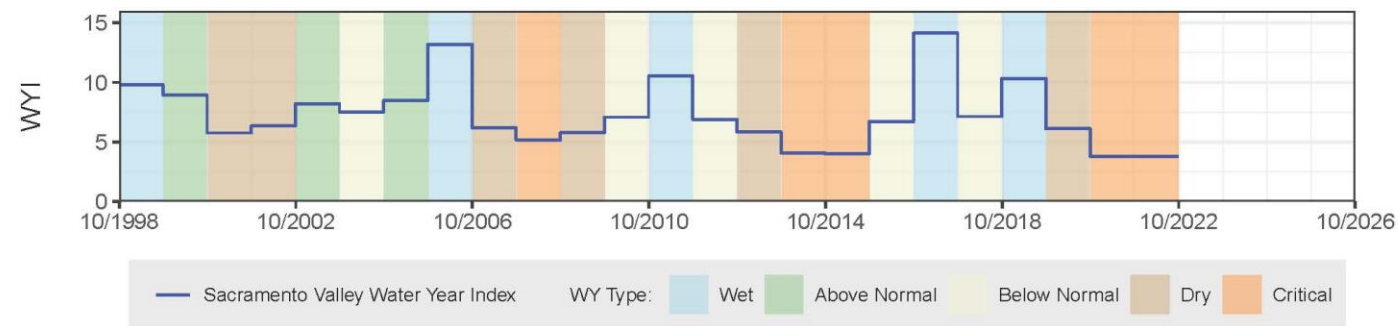
## Antelope Subbasin – State Well Number (SWN) 27N03W16K003M (Ant-1U)

Upper Aquifer Well Depth: 137 ft. Perforation top & bottom: 117 – 137 ft bgs

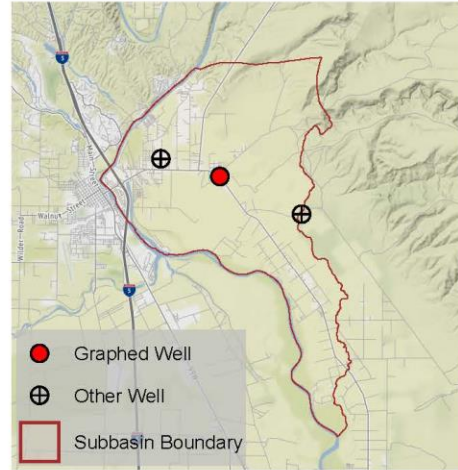


Legend for the Groundwater Elevation graph:

- Good measurement
- Affected by other conditions
- Pumped recently
- GSE
- 5-year Interim milestone
- MO
- Recent spring water level trend
- MT



# Groundwater Conditions – Groundwater Elevations Antelope Subbasin



## Sustainable Management Criteria

IM (2027) = 236.0 ft amsl

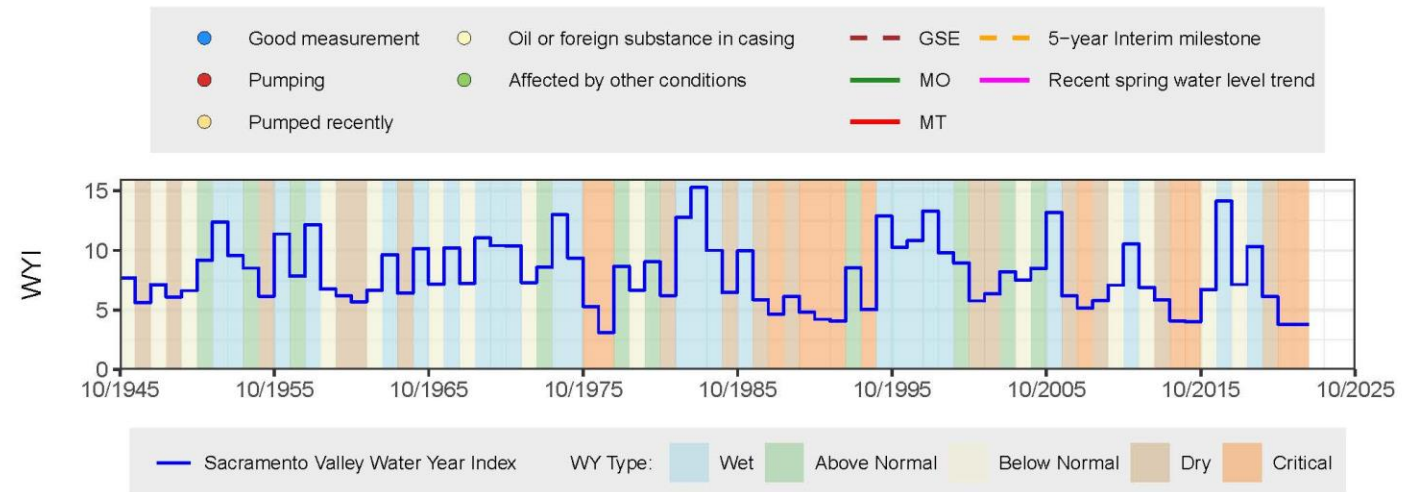
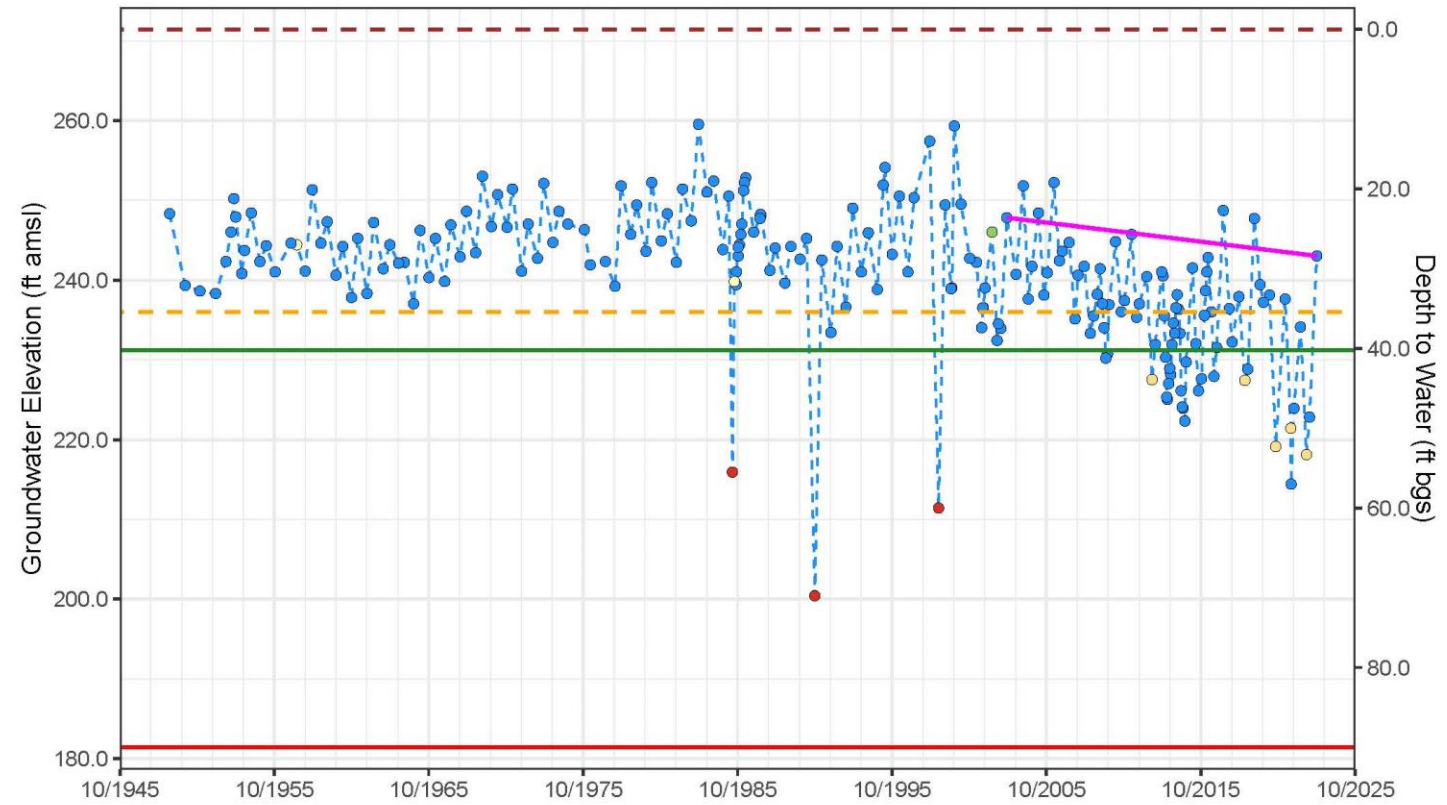
MO = 231.2 ft amsl

MT = 181.4 ft amsl

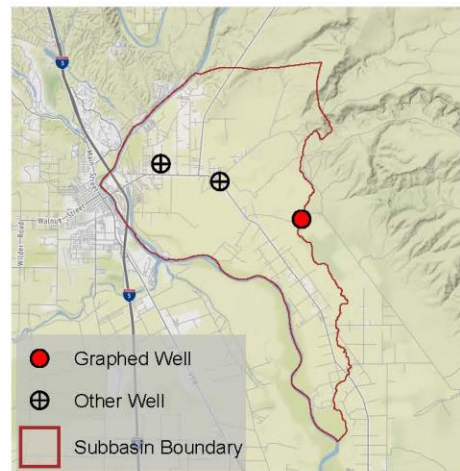
Statistics of spring water levels for past 20 years (2003 to 2023):  
Change = -4.8 ft  
Average rate of change = -0.24 ft/year  
Average water level = 246.75 ft amsl

## Antelope Subbasin – State Well Number (SWN) 27N03W23D001M (Ant-2U)

Upper Aquifer Well Depth: 250 ft. Perforation top & bottom: 30 – 155 ft bgs



# Groundwater Conditions – Groundwater Elevations Antelope Subbasin

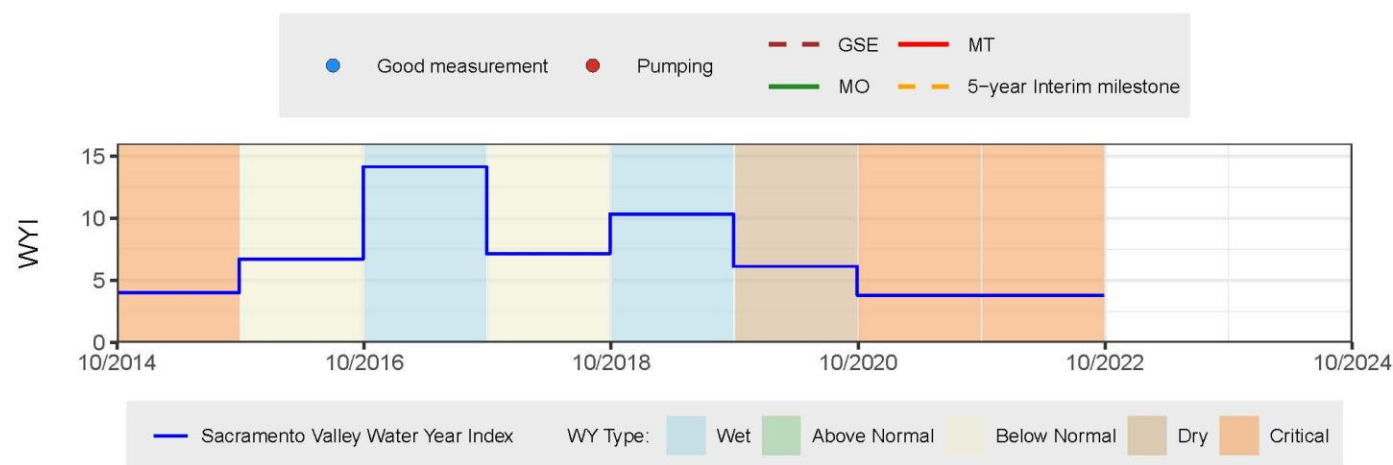
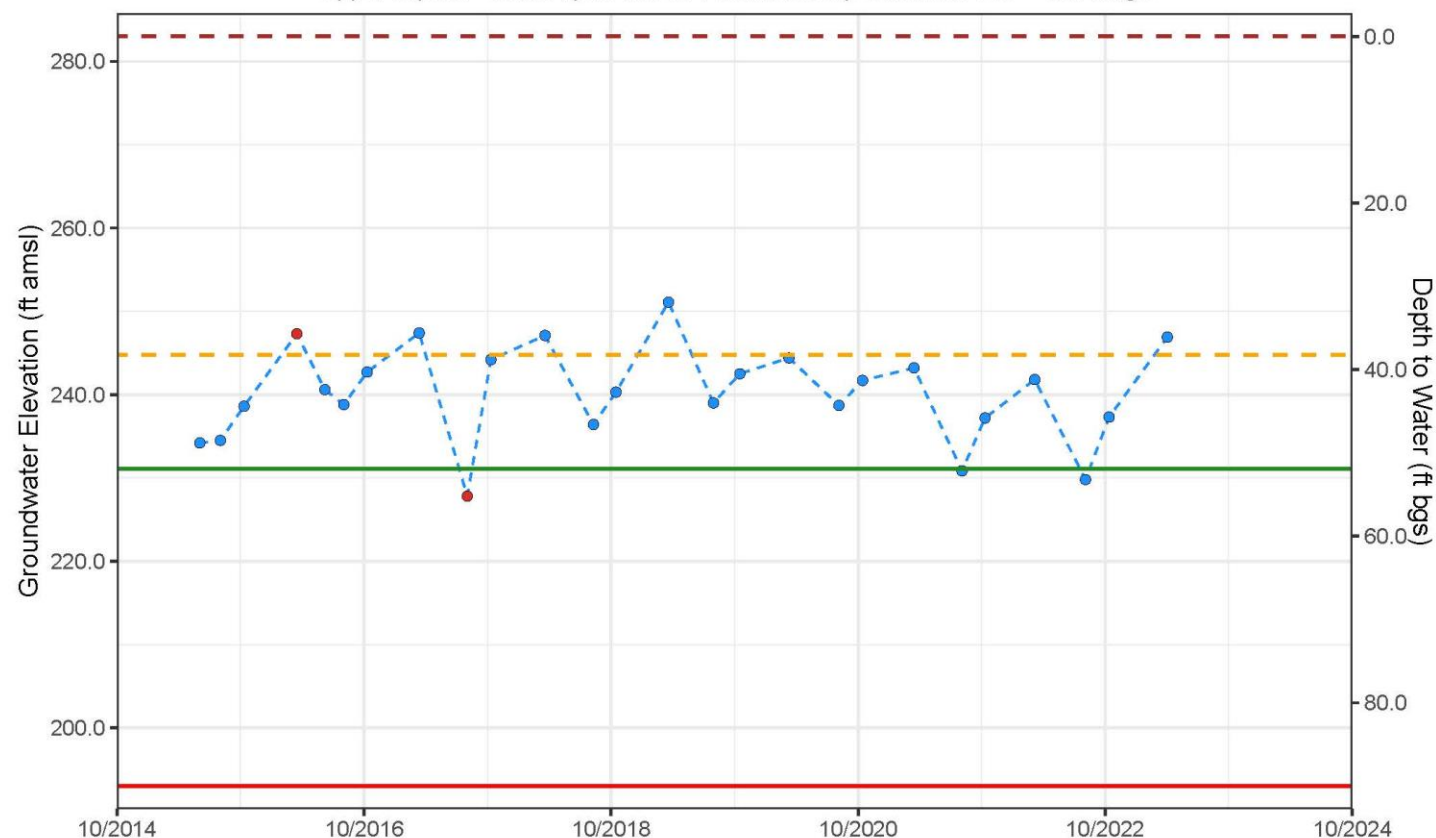


Sustainable Management Criteria  
 IM (2027) = 244.8 ft amsl  
 MO = 231.1 ft amsl  
 MT = 193.0 ft amsl

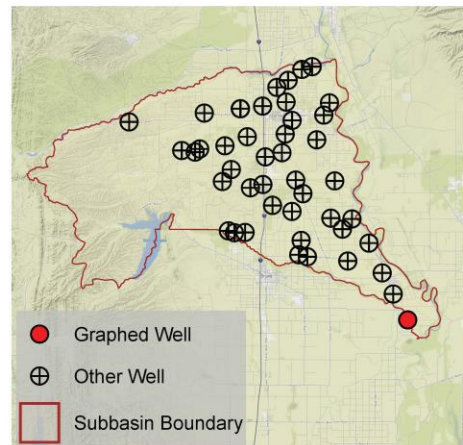
Sufficient data not available to calculate spring water level statistics for 20 years

## Antelope Subbasin – State Well Number (SWN) 27N02W30C003M (Ant-3U)

Upper Aquifer Well Depth: 170 ft. Perforation top & bottom: 157 – 170 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 113.5 ft amsl

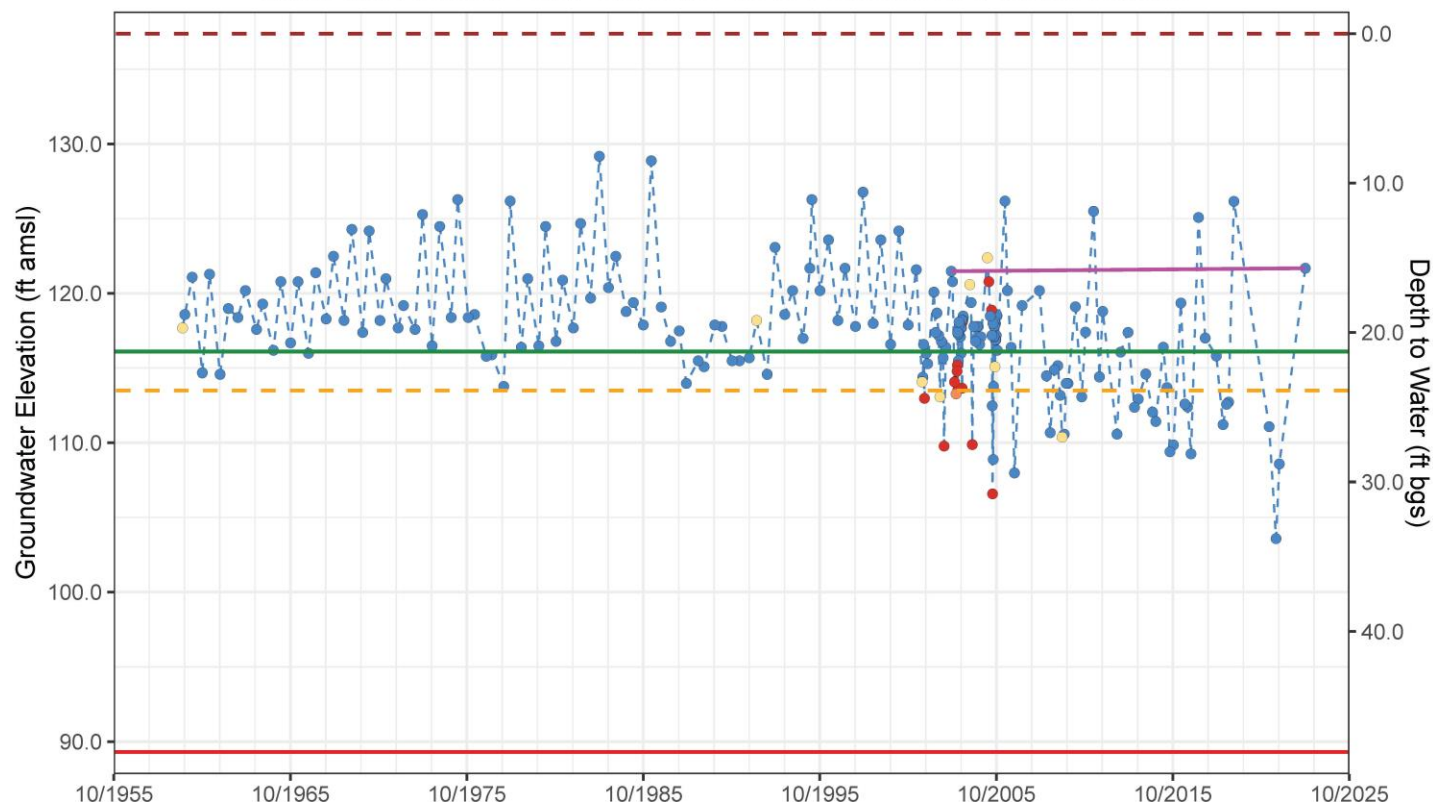
MO = 116.1 ft amsl

MT = 89.3 ft amsl

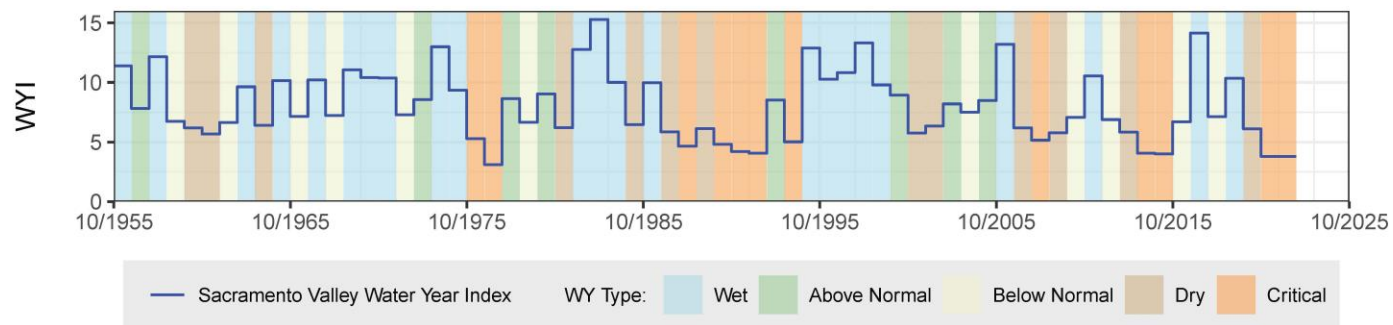
Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = 0.2 ft  
 Average rate of change = 0.01 ft/year  
 Average water level = 121.12 ft amsl

## Corning Subbasin – State Well Number (SWN) 21N01W04N001M

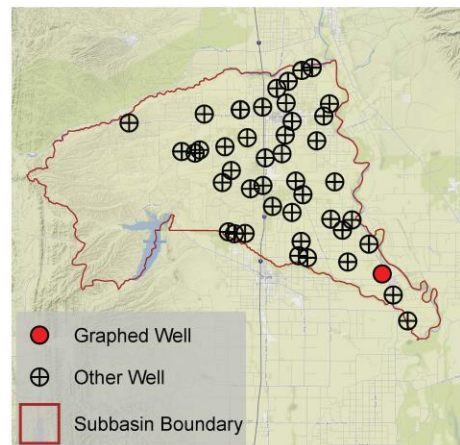
Upper Aquifer (Shallow Zone) Well Depth: 100 ft. Perforation top & bottom: Unknown



● Good measurement    ● Nearby pump operating    --- GSE    --- 5-year Interim milestone  
 ● Pumping    ● Pumped recently    --- MO    --- Recent spring water level trend  
 --- MT



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

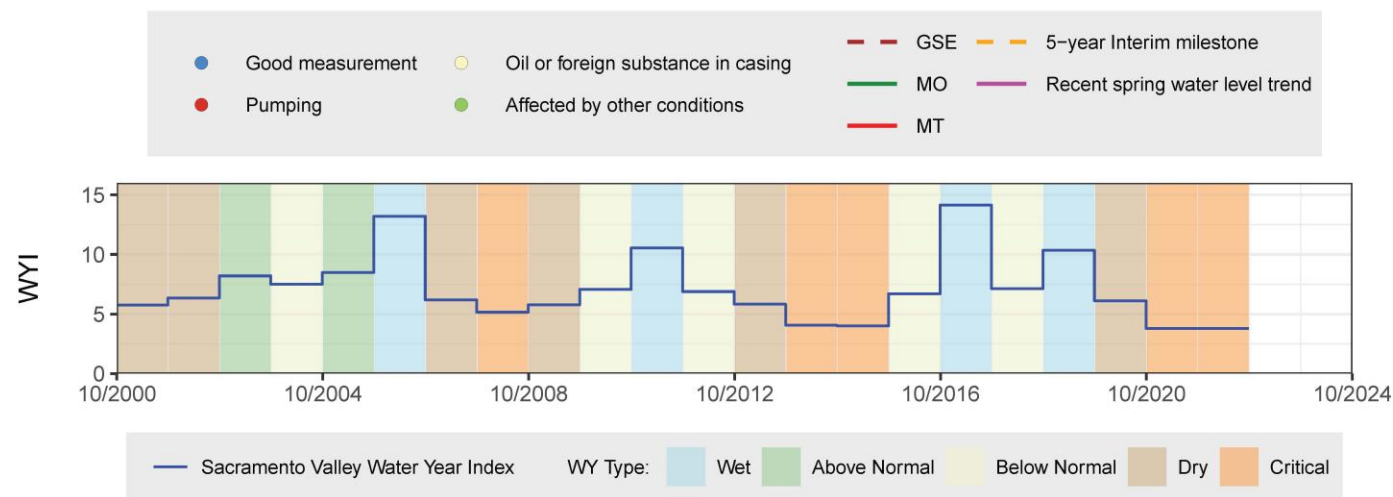
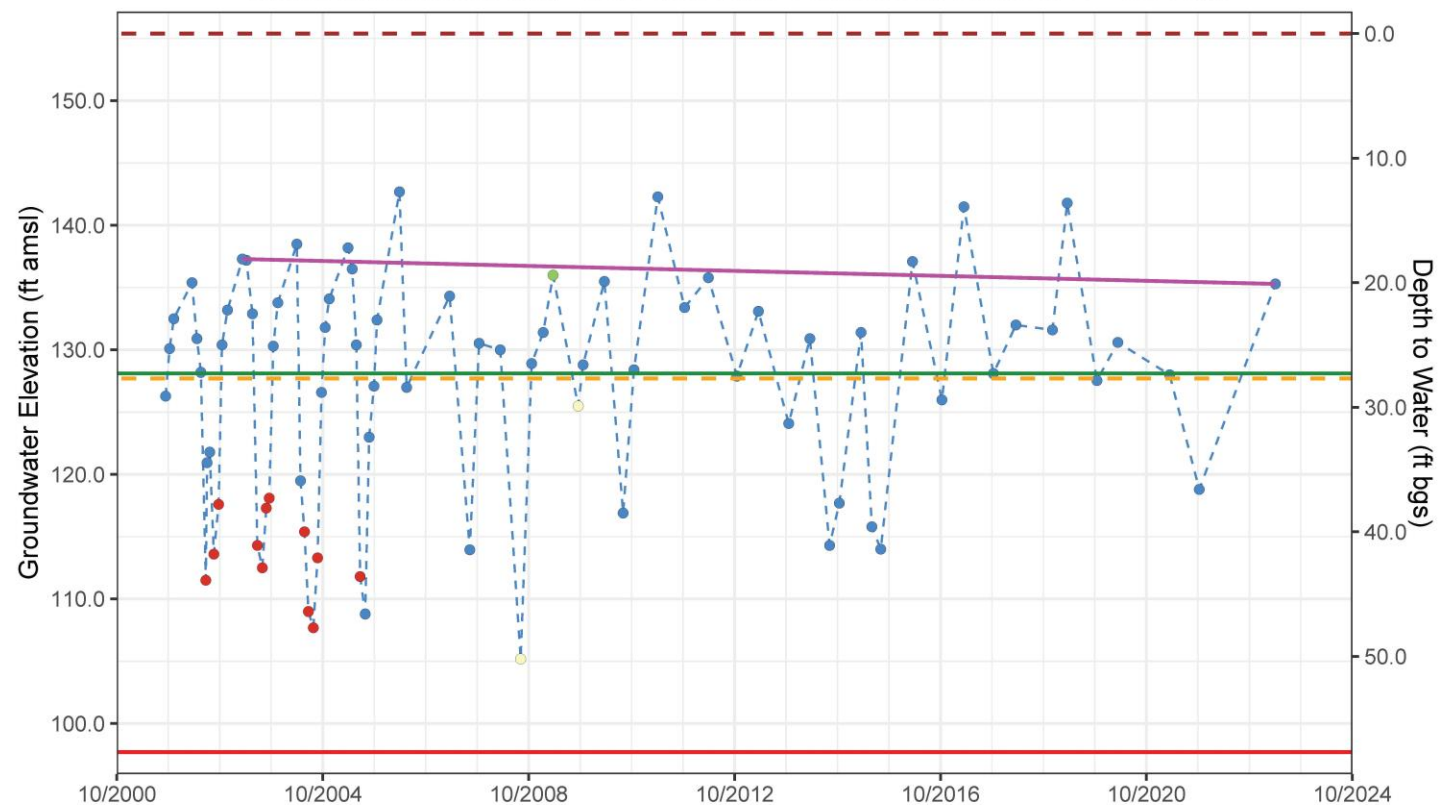
IM (2027) = 127.7 ft amsl

MO = 128.1 ft amsl

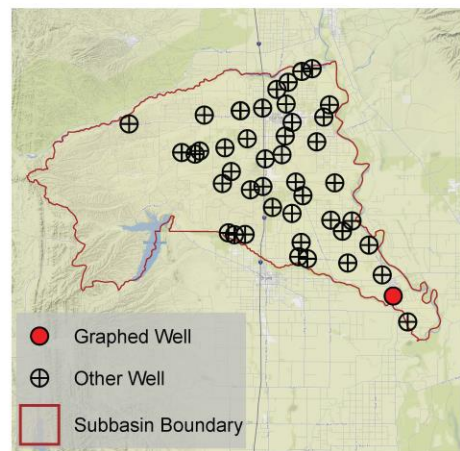
MT = 97.7 ft amsl

Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -2 ft  
 Average rate of change = -0.1 ft/year  
 Average water level = 135.6 ft amsl

## Corning Subbasin – State Well Number (SWN) 22N01W19E003M Upper Aquifer (Shallow Zone) Well Depth: 500 ft. Perforation top & bottom: 80 – 400 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

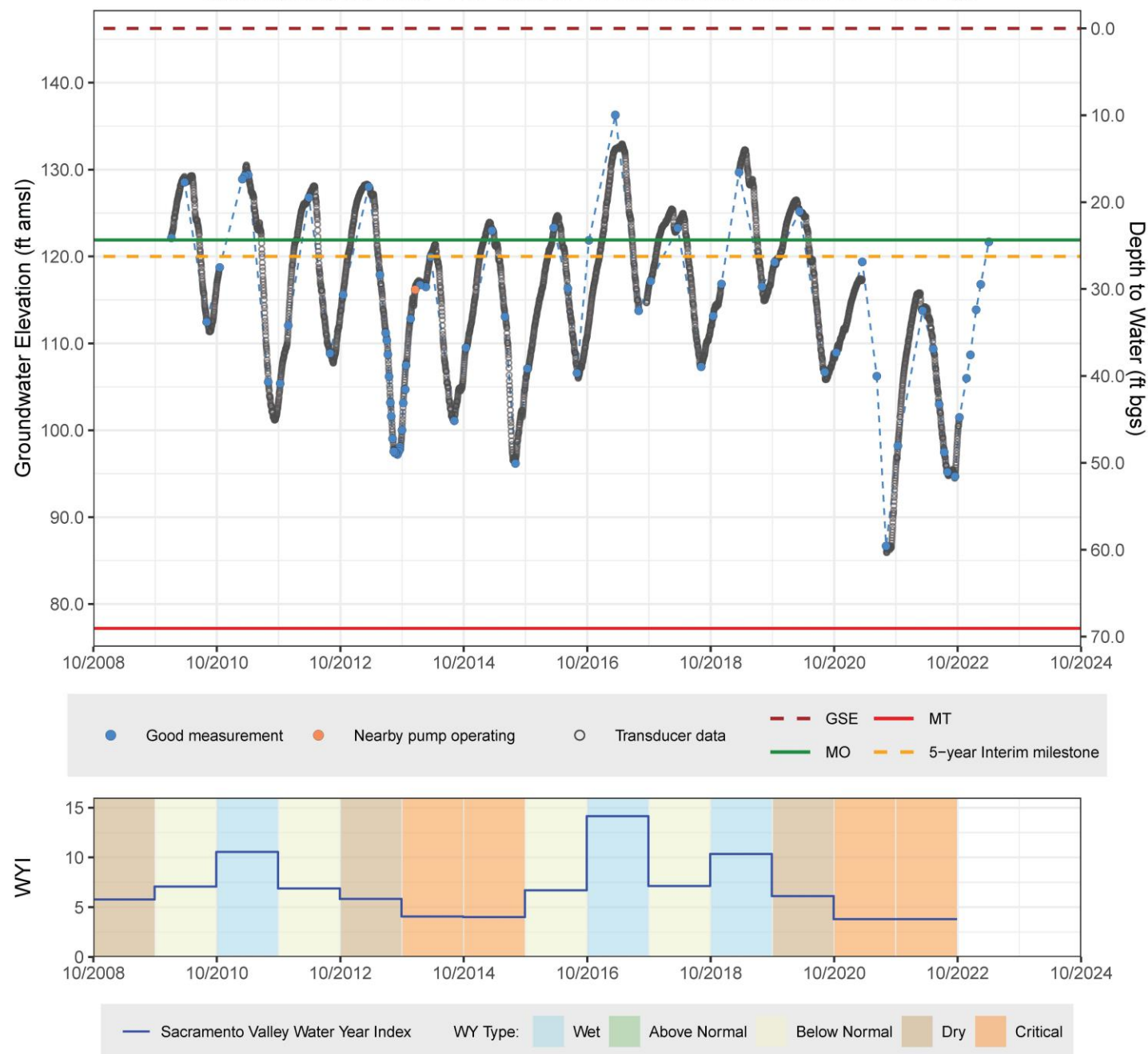
IM (2027) = 120.0 ft amsl

MO = 121.9 ft amsl

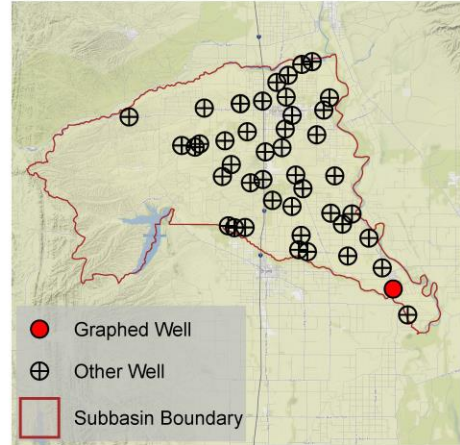
MT = 77.2 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

## Corning Subbasin – State Well Number (SWN) 22N01W29N002M Upper Aquifer (Deep Zone) Well Depth: 670 ft. Perforation top & bottom: 549 – 641 ft bgs



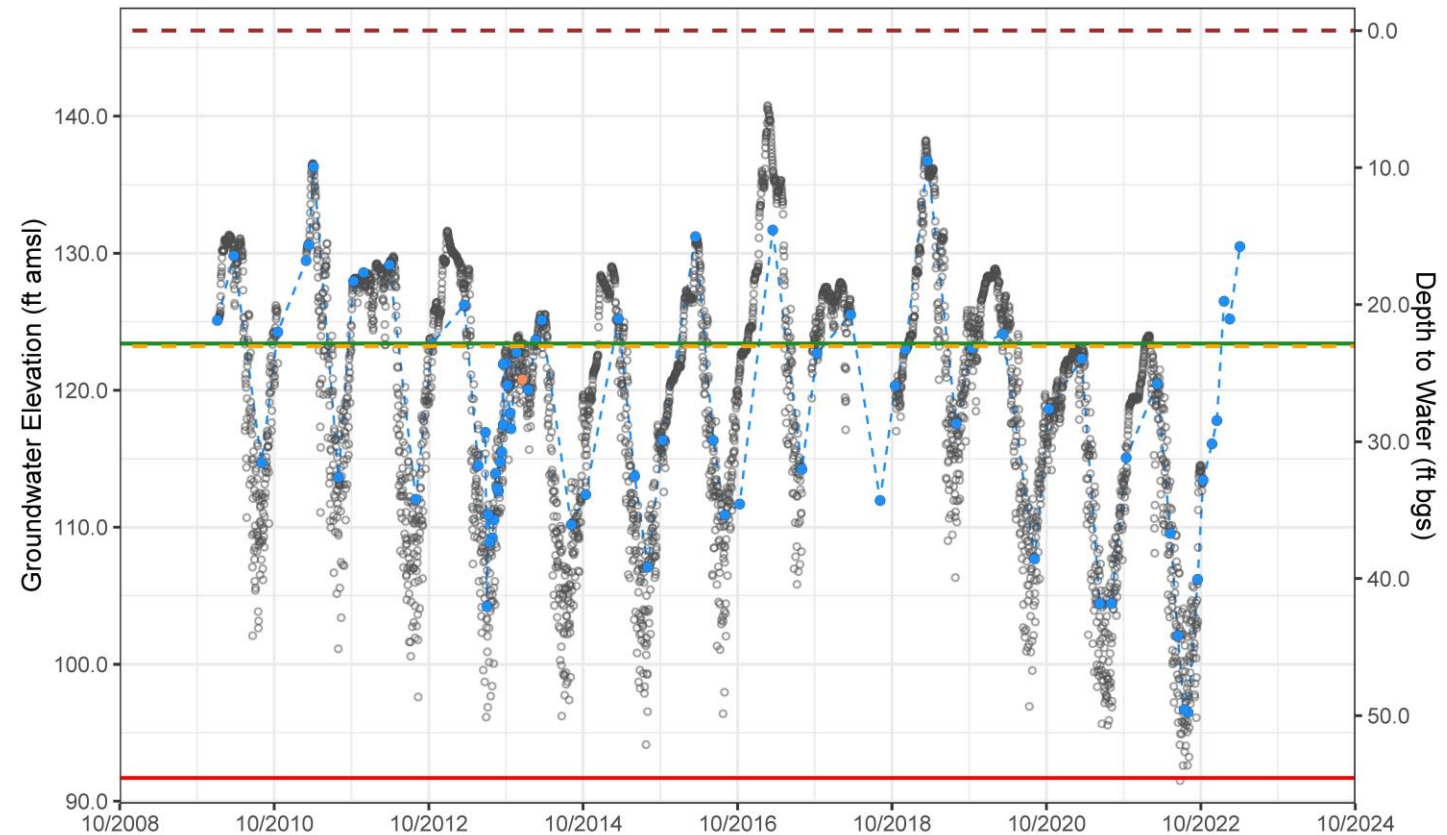
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



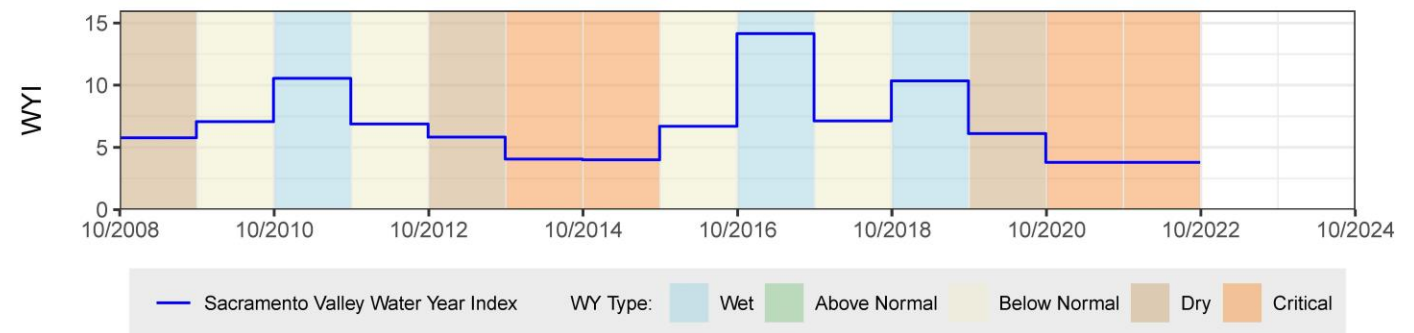
Sustainable Management Criteria  
 IM (2027) = 123.2 ft amsl  
 MO = 123.4 ft amsl  
 MT = 91.7 ft amsl

Sufficient data not available to calculate  
 spring water level statistics for 20 years

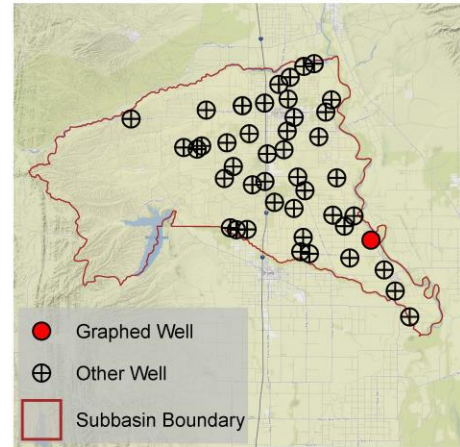
**Corning Subbasin – State Well Number (SWN) 22N01W29N003M**  
 Upper Aquifer (Shallow Zone) Well Depth: 400 ft. Perforation top & bottom: 189 – 380 ft bgs



● Good measurement    ● Nearby pump operating    ○ Transducer data    --- GSE    --- MT  
 --- MO    --- 5-year Interim milestone



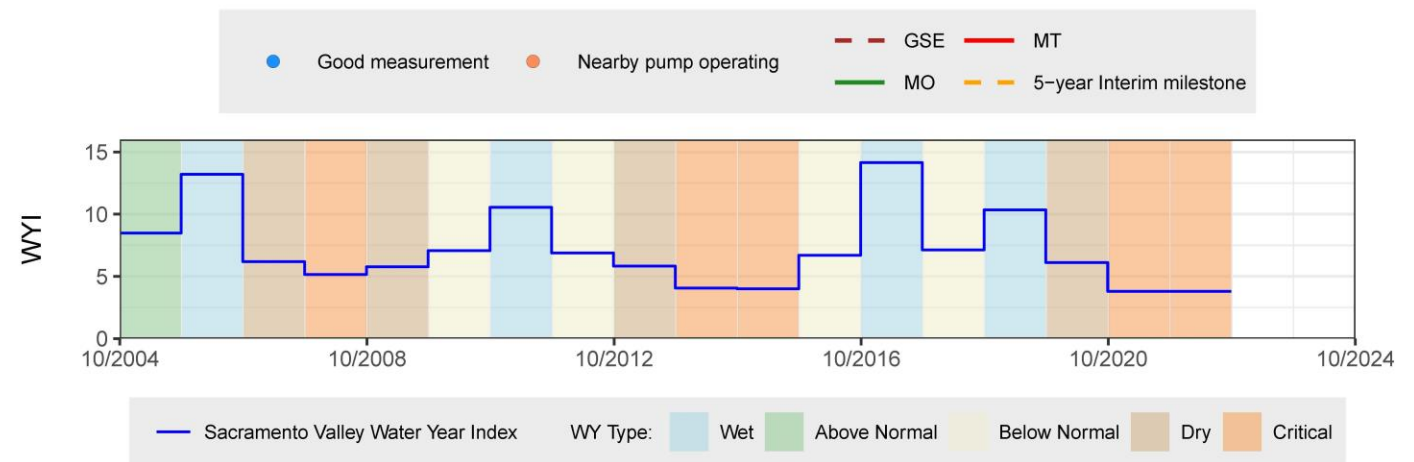
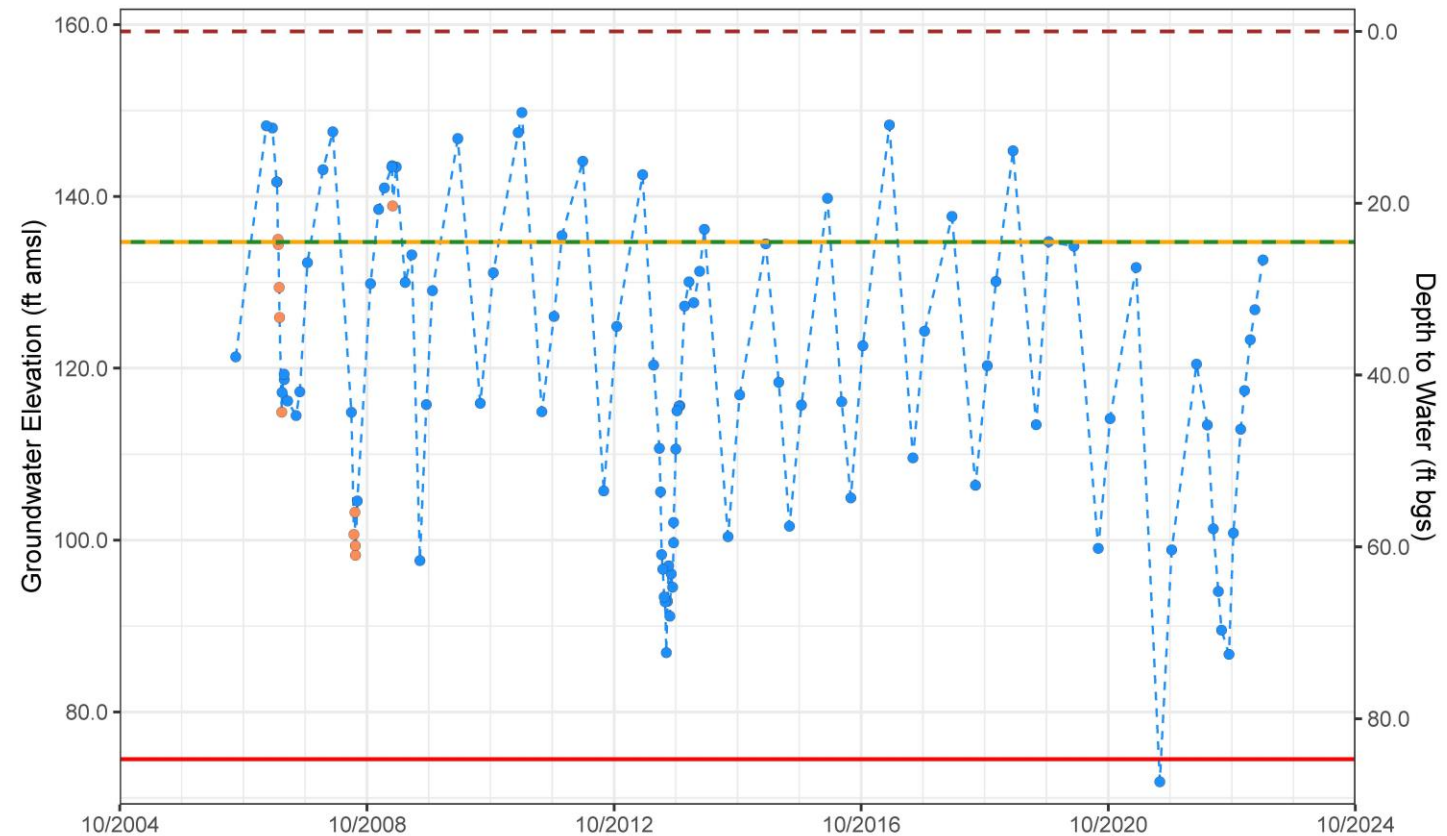
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



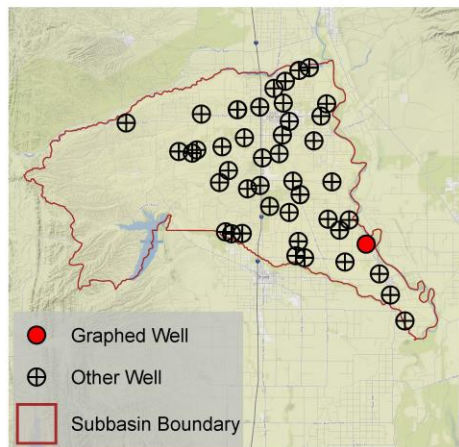
Sustainable Management Criteria  
 IM (2027) = 134.7 ft amsl  
 MO = 134.7 ft amsl  
 MT = 74.5 ft amsl

Sufficient data not available to calculate  
 spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 22N02W01N002M**  
 Upper Aquifer (Deep Zone) Well Depth: 730 ft. Perforation top & bottom: 700 – 710 ft bgs



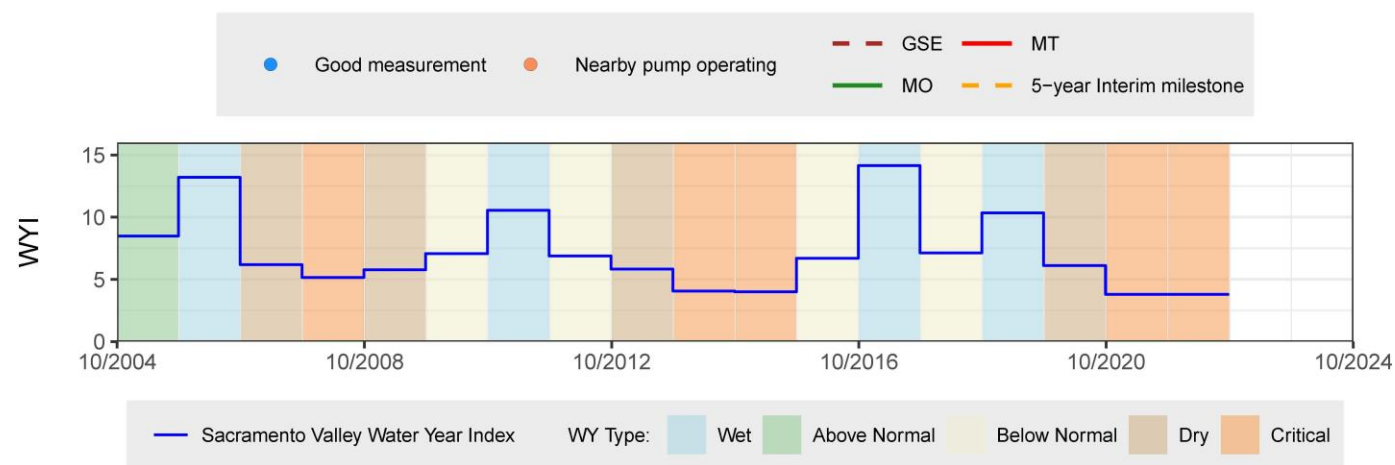
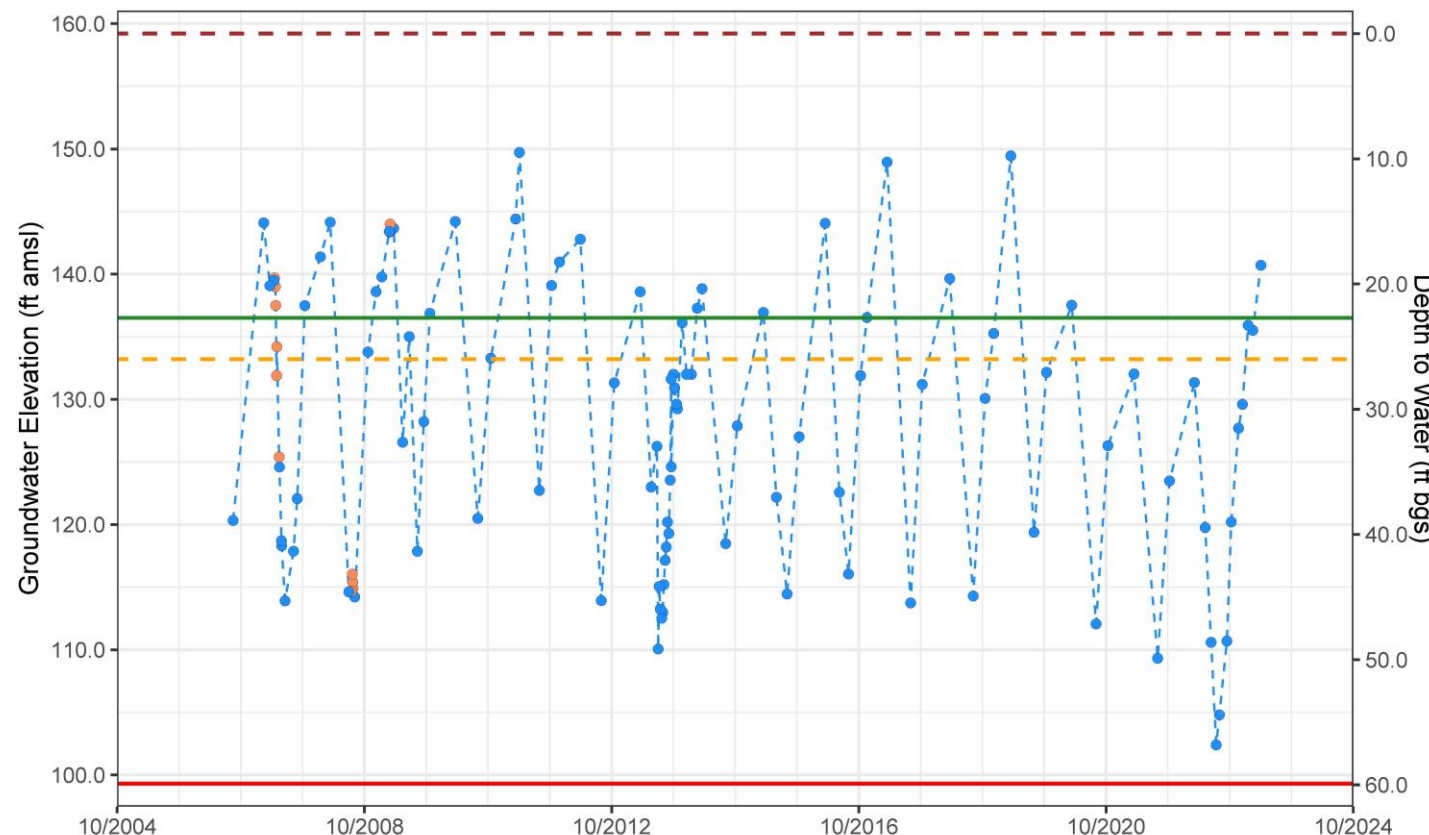
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



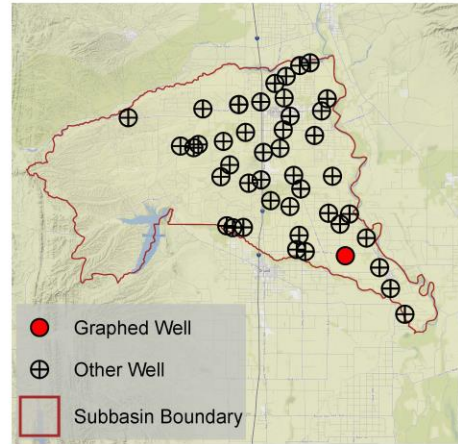
Sustainable Management Criteria  
 IM (2027) = 133.2 ft amsl  
 MO = 136.5 ft amsl  
 MT = 99.3 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 22N02W01N003M**  
 Upper Aquifer (Shallow Zone) Well Depth: 440 ft. Perforation top & bottom: 210 – 370 ft bgs



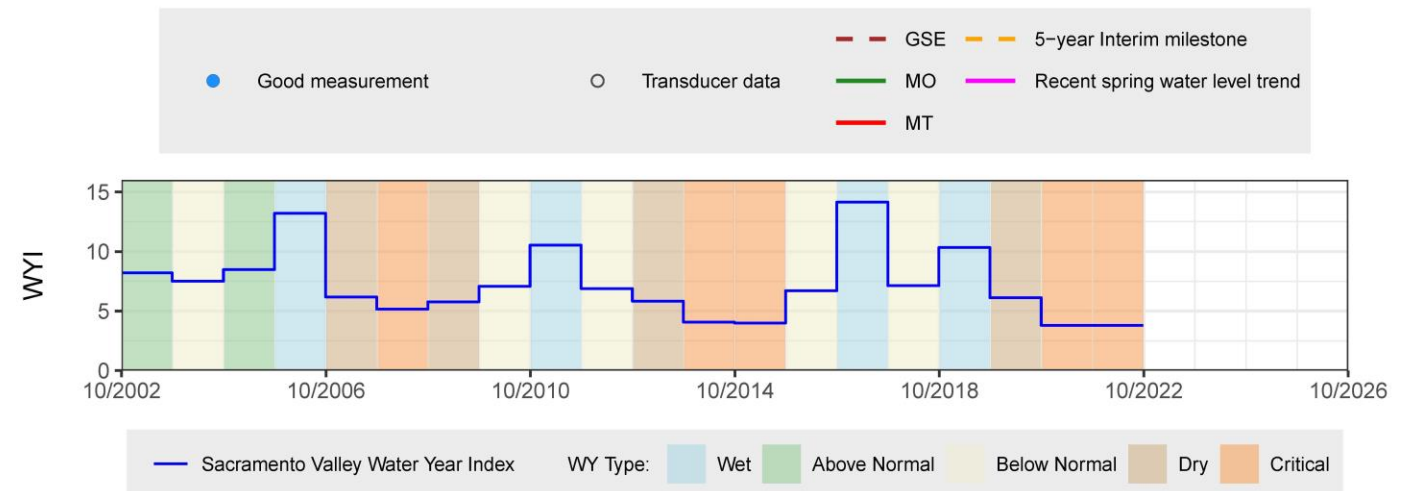
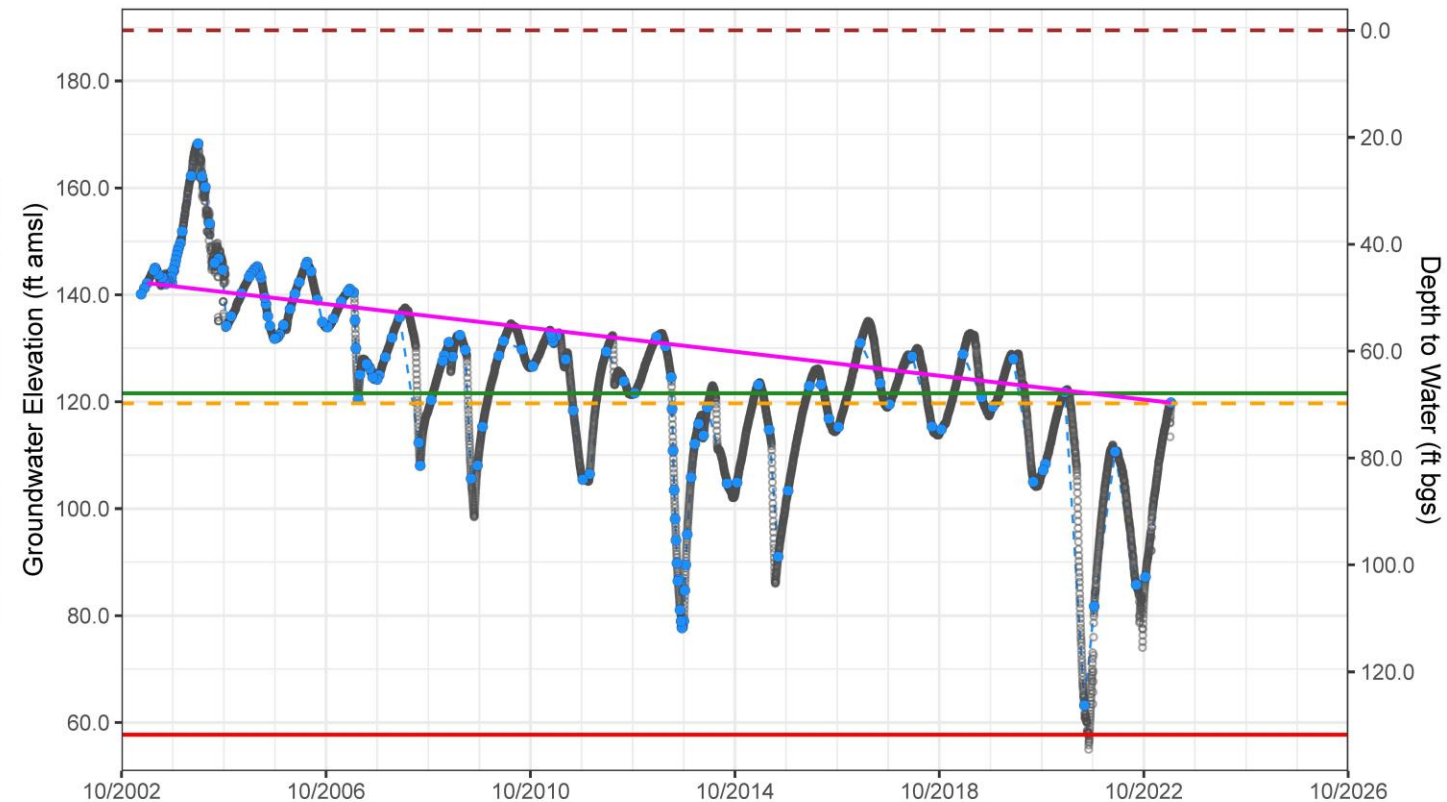
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



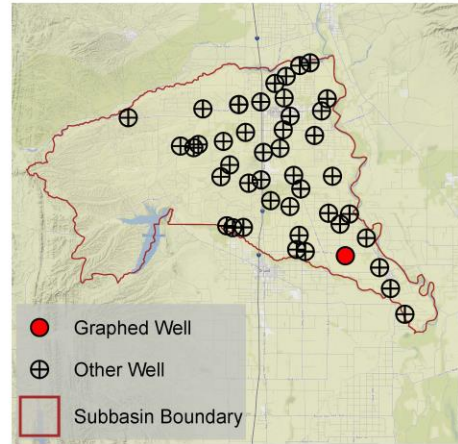
Sustainable Management Criteria  
 IM (2027) = 119.7 ft amsl  
 MO = 121.6 ft amsl  
 MT = 57.7 ft amsl

Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -22.35 ft  
 Average rate of change = -1.12 ft/year  
 Average water level = 131.64 ft amsl

**Corning Subbasin – State Well Number (SWN) 22N02W15C002M**  
 Upper Aquifer (Deep Zone) Well Depth: 825 ft. Perforation top & bottom: 760 – 781 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

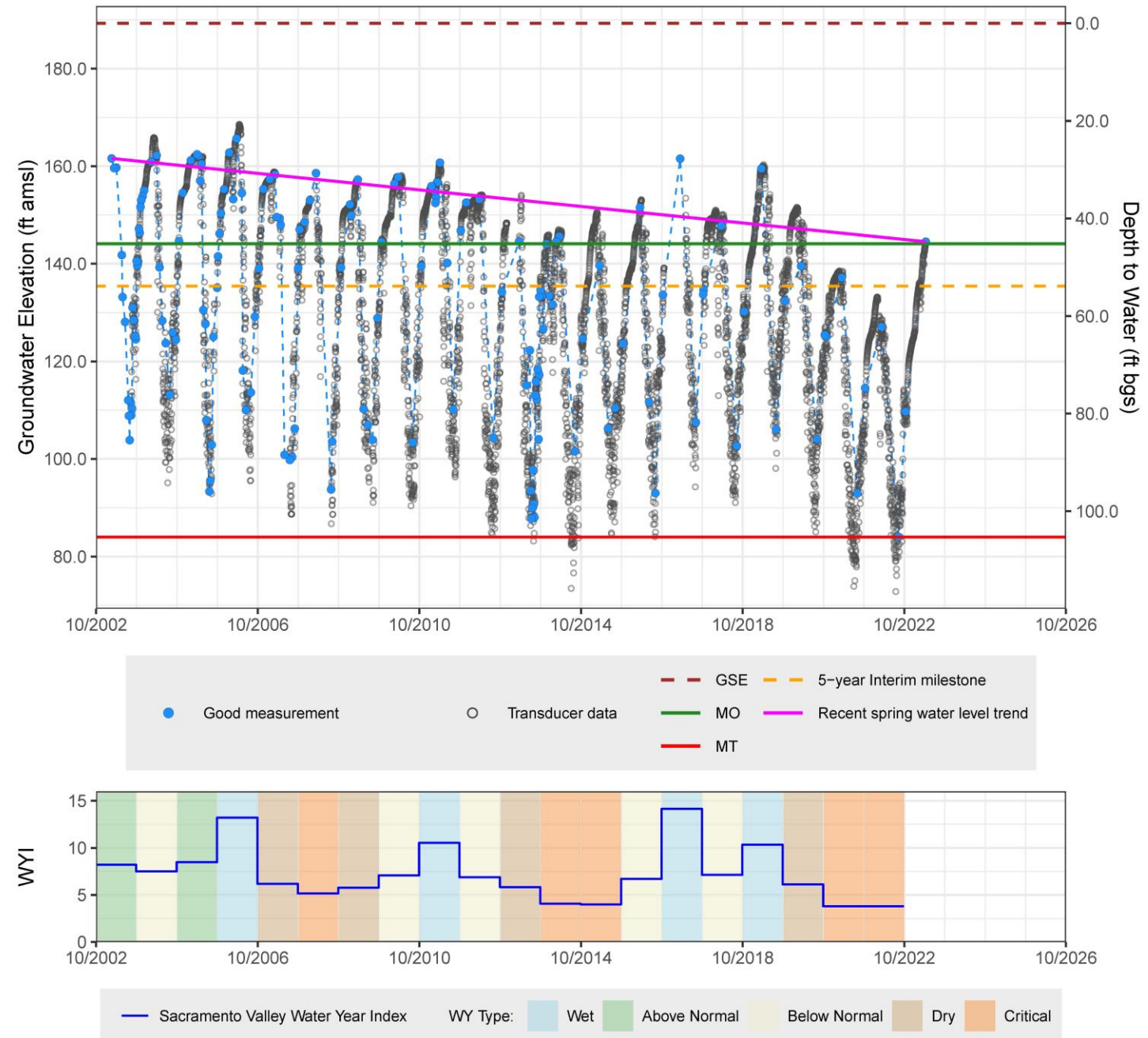
IM (2027) = 135.4 ft amsl

MO = 144.1 ft amsl

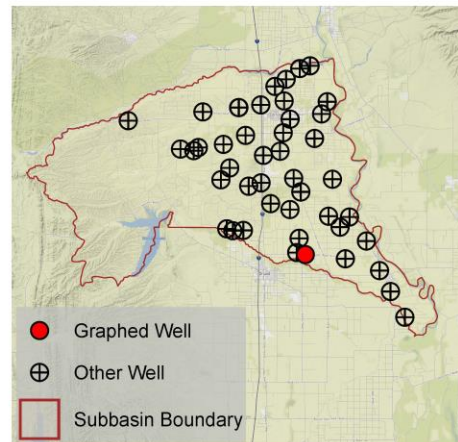
MT = 84.0 ft amsl

Statistics of spring water levels for past 20 years (2003 to 2023):  
Change = -17.08 ft  
Average rate of change = -0.85 ft/year  
Average water level = 152.2 ft amsl

## Corning Subbasin – State Well Number (SWN) 22N02W15C004M Upper Aquifer (Shallow Zone) Well Depth: 258 ft. Perforation top & bottom: 210 – 220 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 90.4 ft amsl

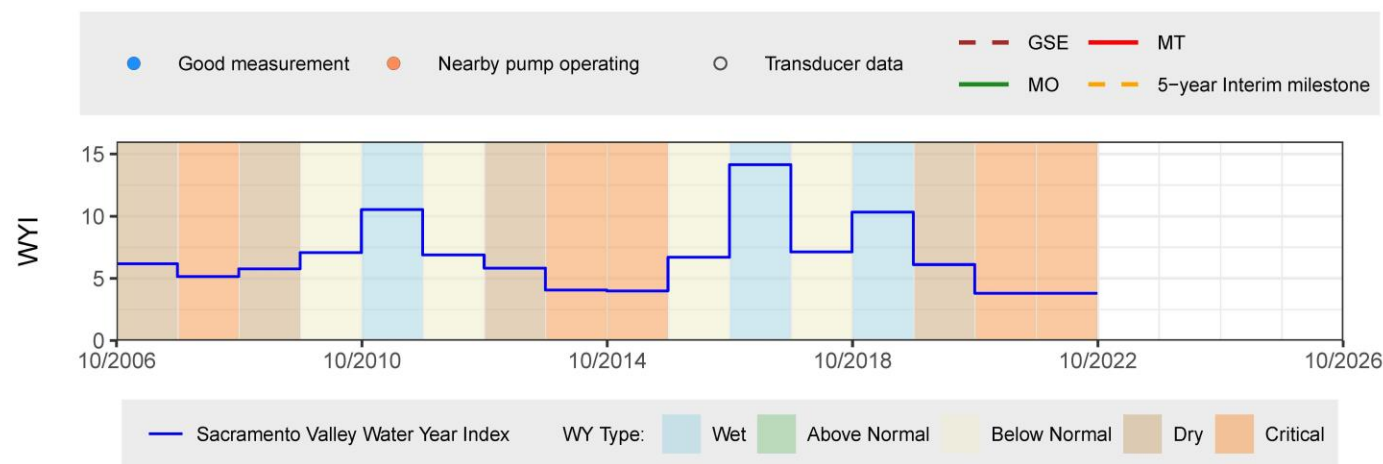
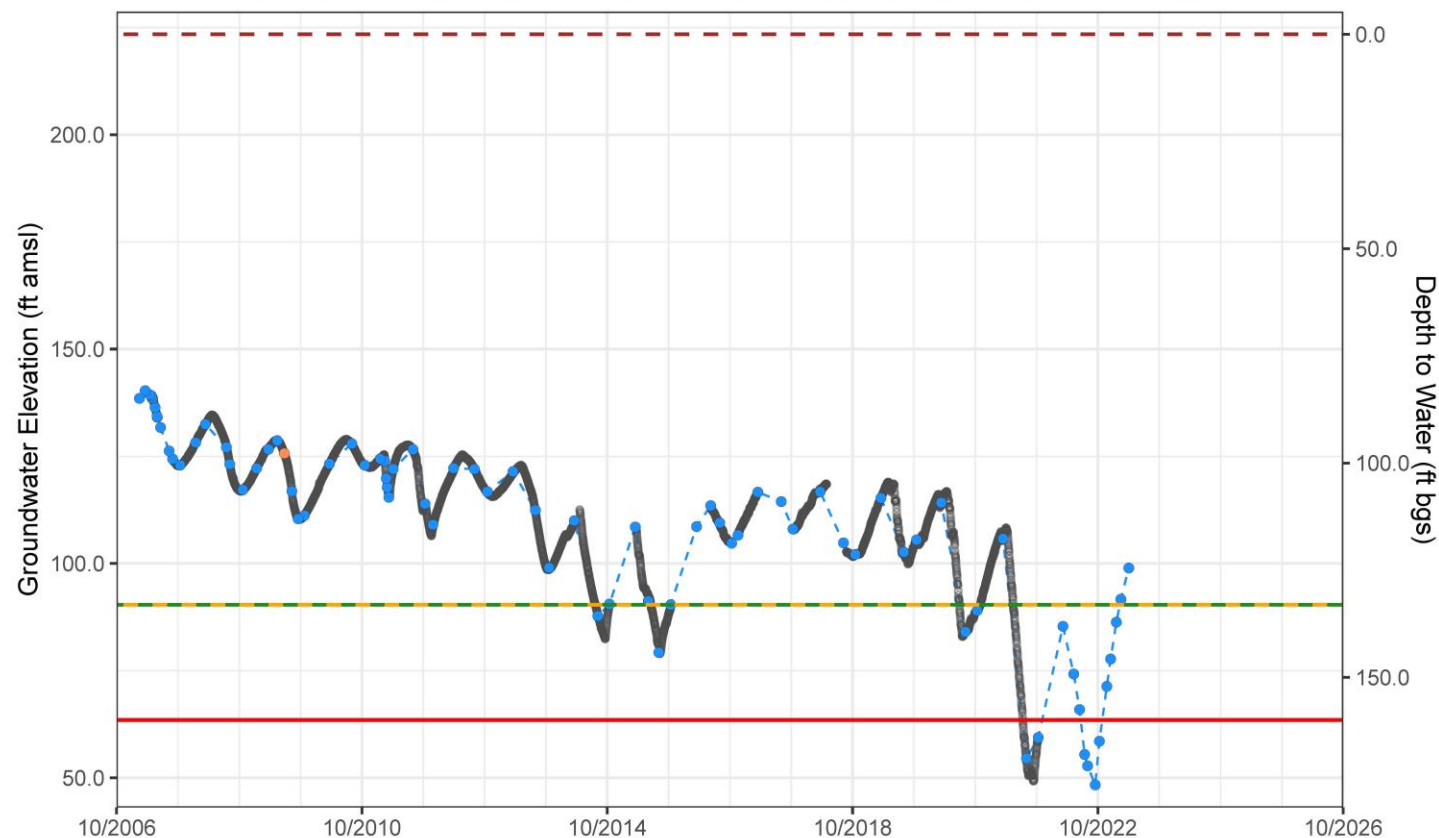
MO = 90.4 ft amsl

MT = 63.5 ft amsl

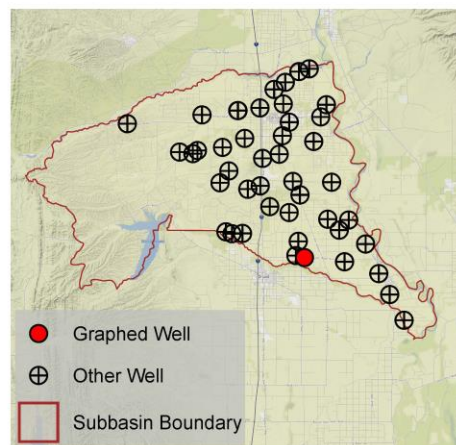
Sufficient data not available to calculate spring water level statistics for 20 years

## Corning Subbasin – State Well Number (SWN) 22N02W18C001M

Upper Aquifer (Deep Zone) Well Depth: 1062 ft. Perforation top & bottom: 841 – 1029 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 147.6 ft amsl

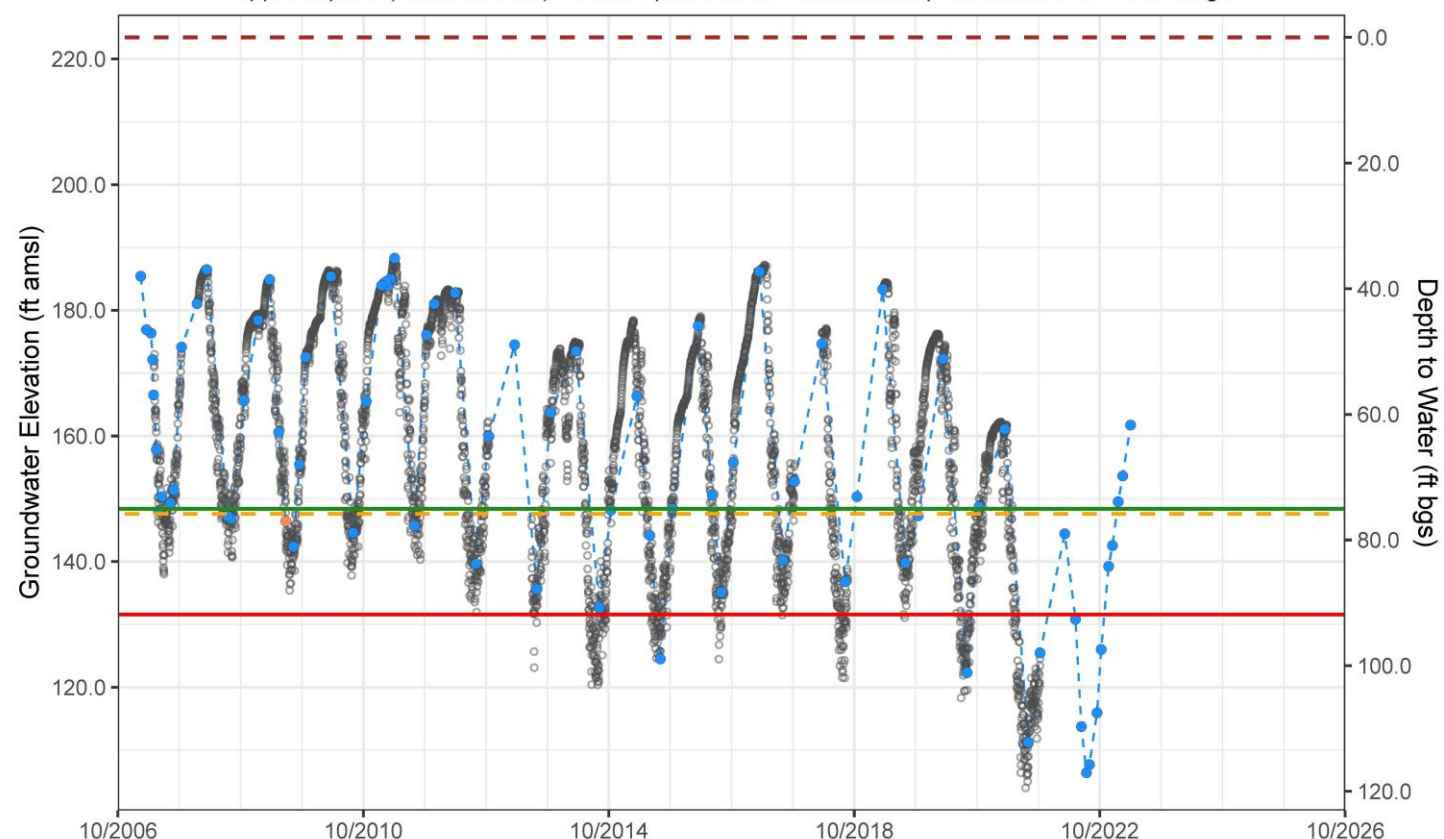
MO = 148.4 ft amsl

MT = 131.6 ft amsl

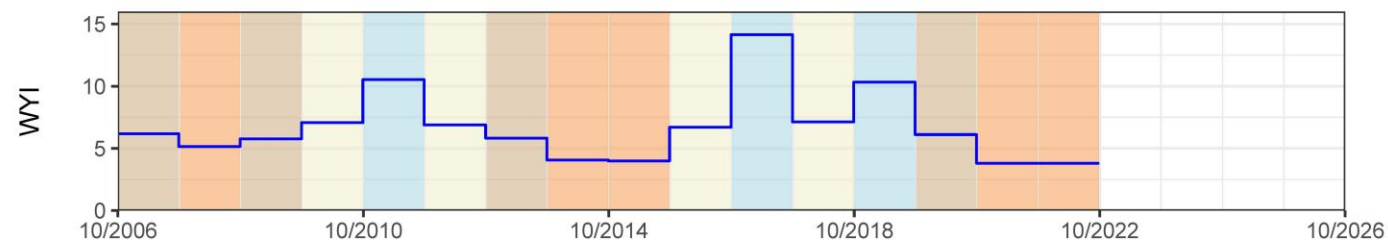
Sufficient data not available to calculate spring water level statistics for 20 years

## Corning Subbasin – State Well Number (SWN) 22N02W18C003M

Upper Aquifer (Shallow Zone) Well Depth: 188 ft. Perforation top & bottom: 165 – 175 ft bgs

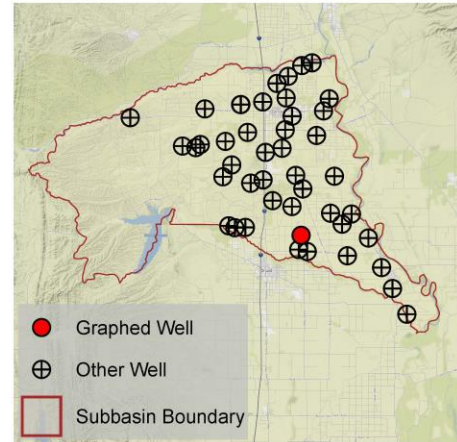


● Good measurement    ● Nearby pump operating    ○ Transducer data    --- GSE    — MT  
 — MO    - - - 5-year Interim milestone



— Sacramento Valley Water Year Index    WY Type:    Wet    Above Normal    Below Normal    Dry    Critical

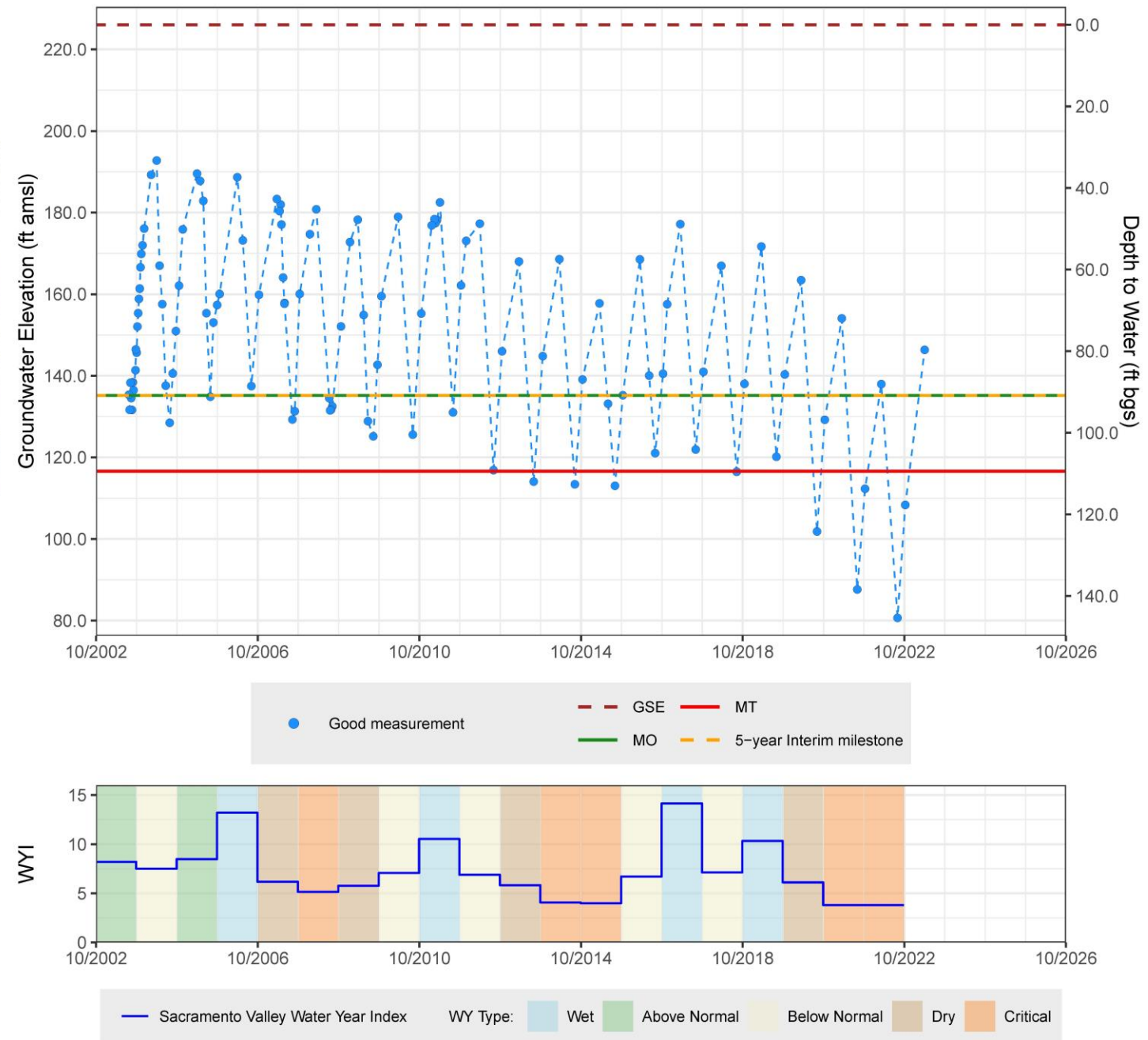
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



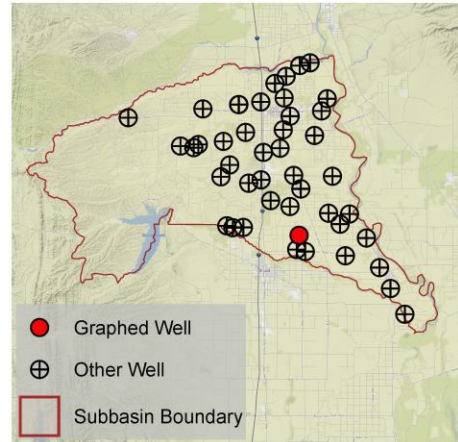
Sustainable Management Criteria  
 IM (2027) = 135.2 ft amsl  
 MO = 135.2 ft amsl  
 MT = 116.6 ft amsl

Sufficient data not available to calculate  
 spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 22N03W01R001M**  
 Upper Aquifer (Deep Zone) Well Depth: 515 ft. Perforation top & bottom: 470 – 480 ft bgs



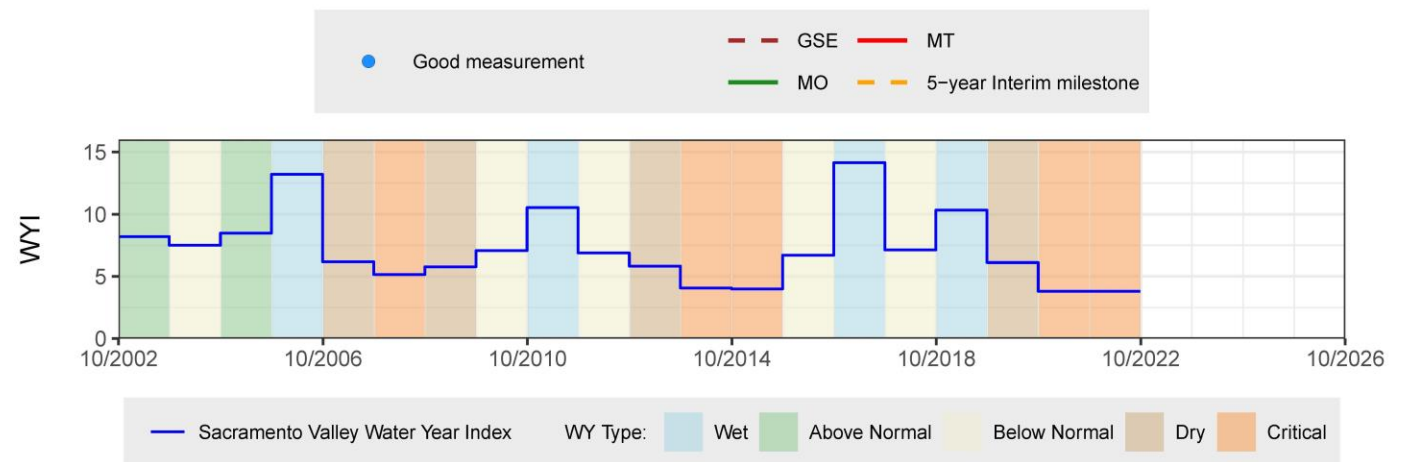
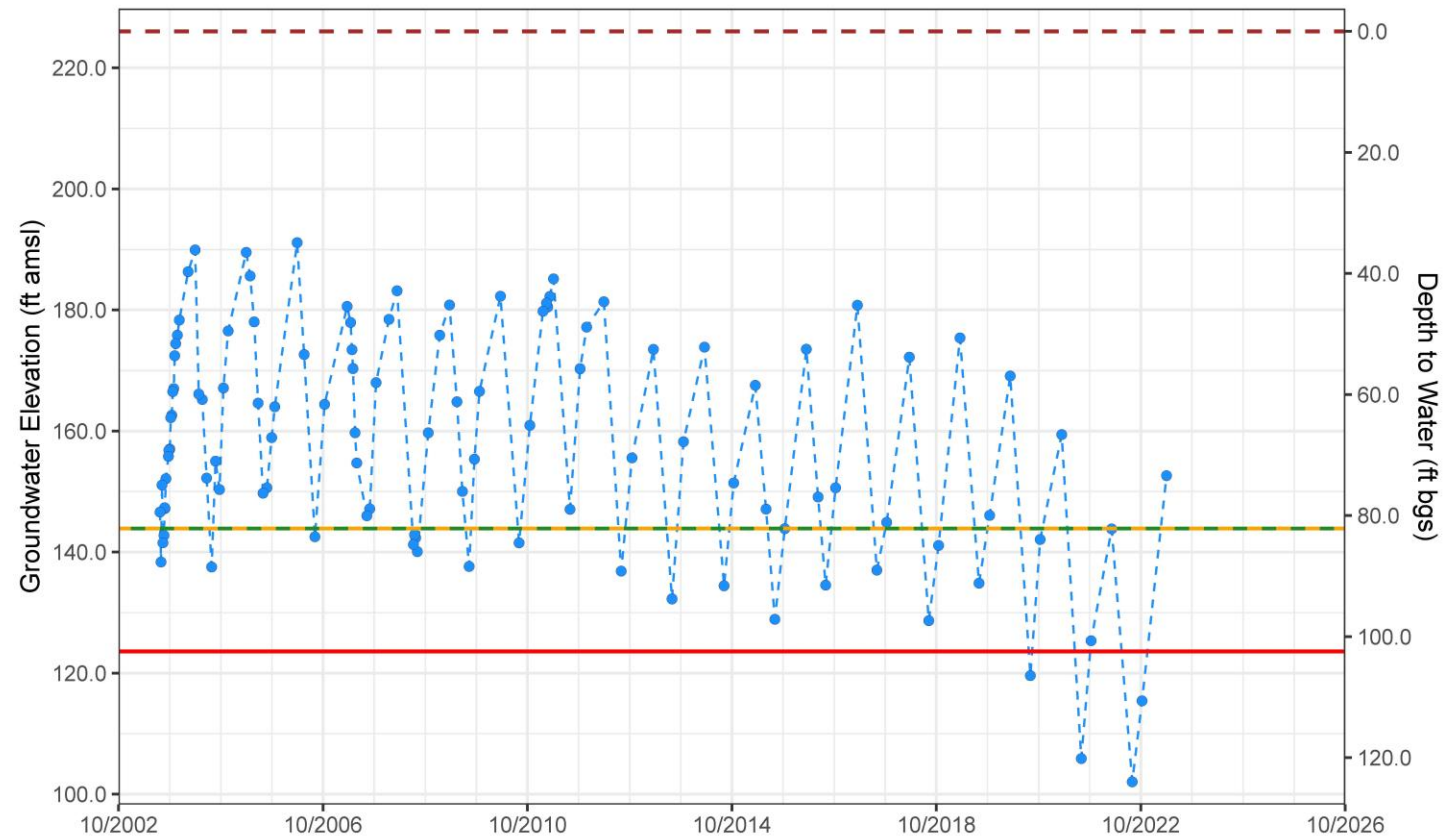
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



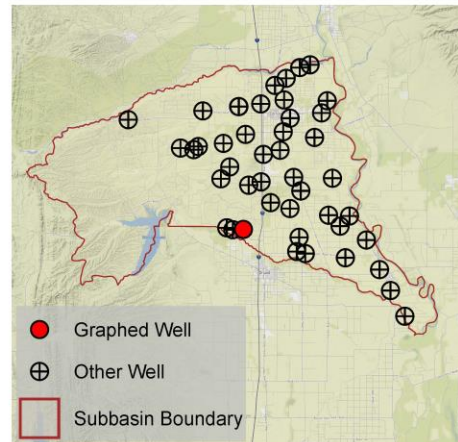
Sustainable Management Criteria  
 IM (2027) = 143.9 ft amsl  
 MO = 143.9 ft amsl  
 MT = 123.6 ft amsl

Sufficient data not available to calculate  
 spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 22N03W01R002M**  
 Upper Aquifer (Shallow Zone) Well Depth: 314 ft. Perforation top & bottom: 270 – 280 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 199.7 ft amsl

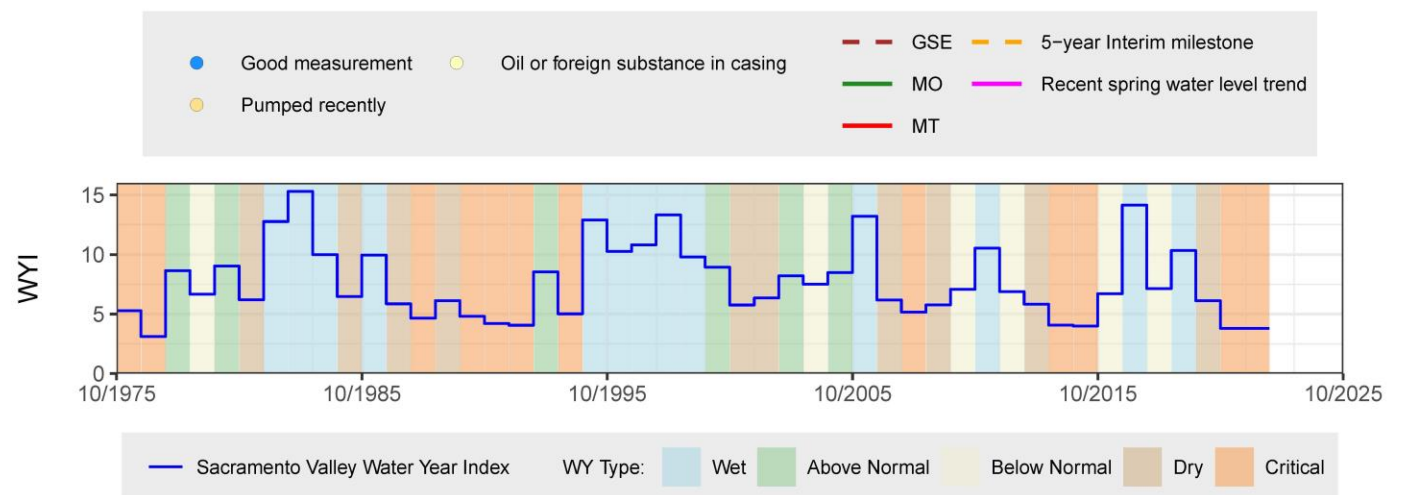
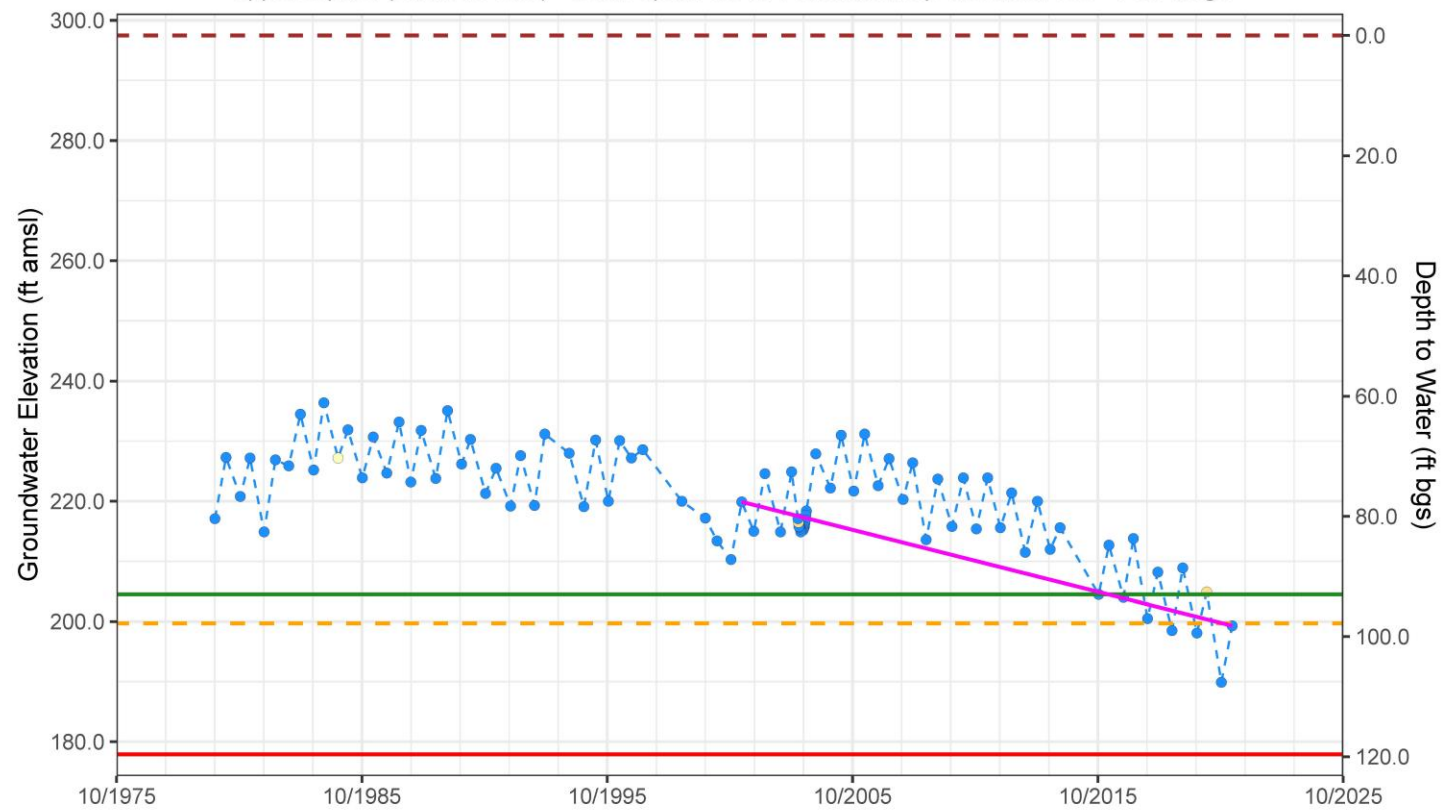
MO = 204.5 ft amsl

MT = 177.9 ft amsl

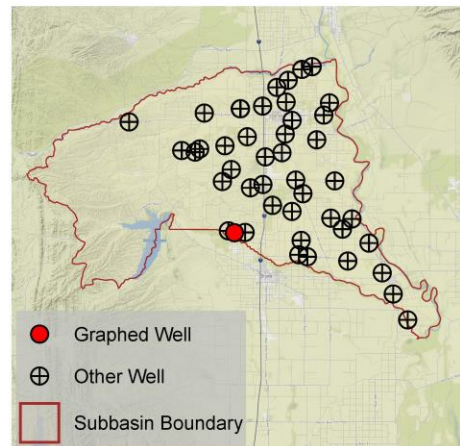
Statistics of spring water levels for  
 past 20 years (2001 to 2021):  
 Change = -20.6 ft  
 Average rate of change = -1.03 ft/year  
 Average water level = 224.84 ft amsl

## Corning Subbasin – State Well Number (SWN) 22N03W05F002M

Upper Aquifer (Shallow Zone) Well Depth: 218 ft. Perforation top & bottom: 188 – 218 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 253.5 ft amsl

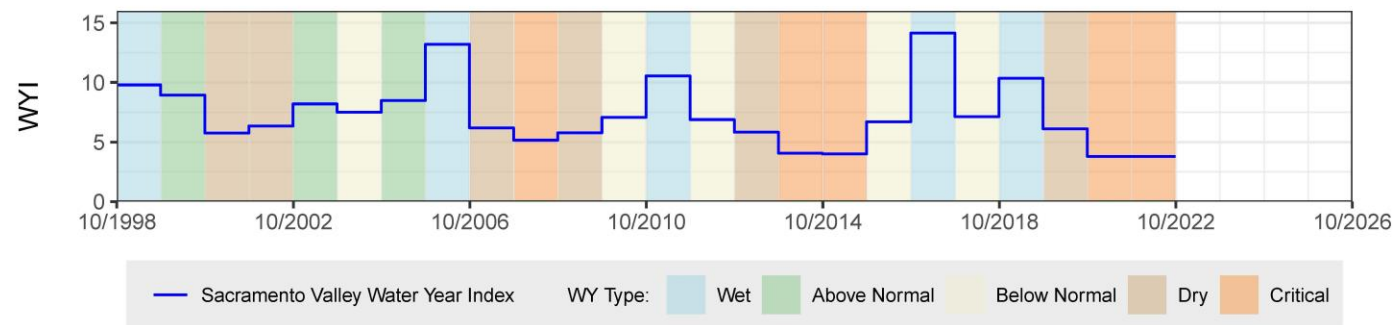
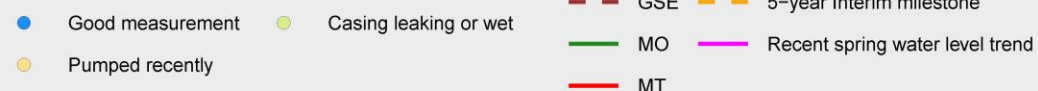
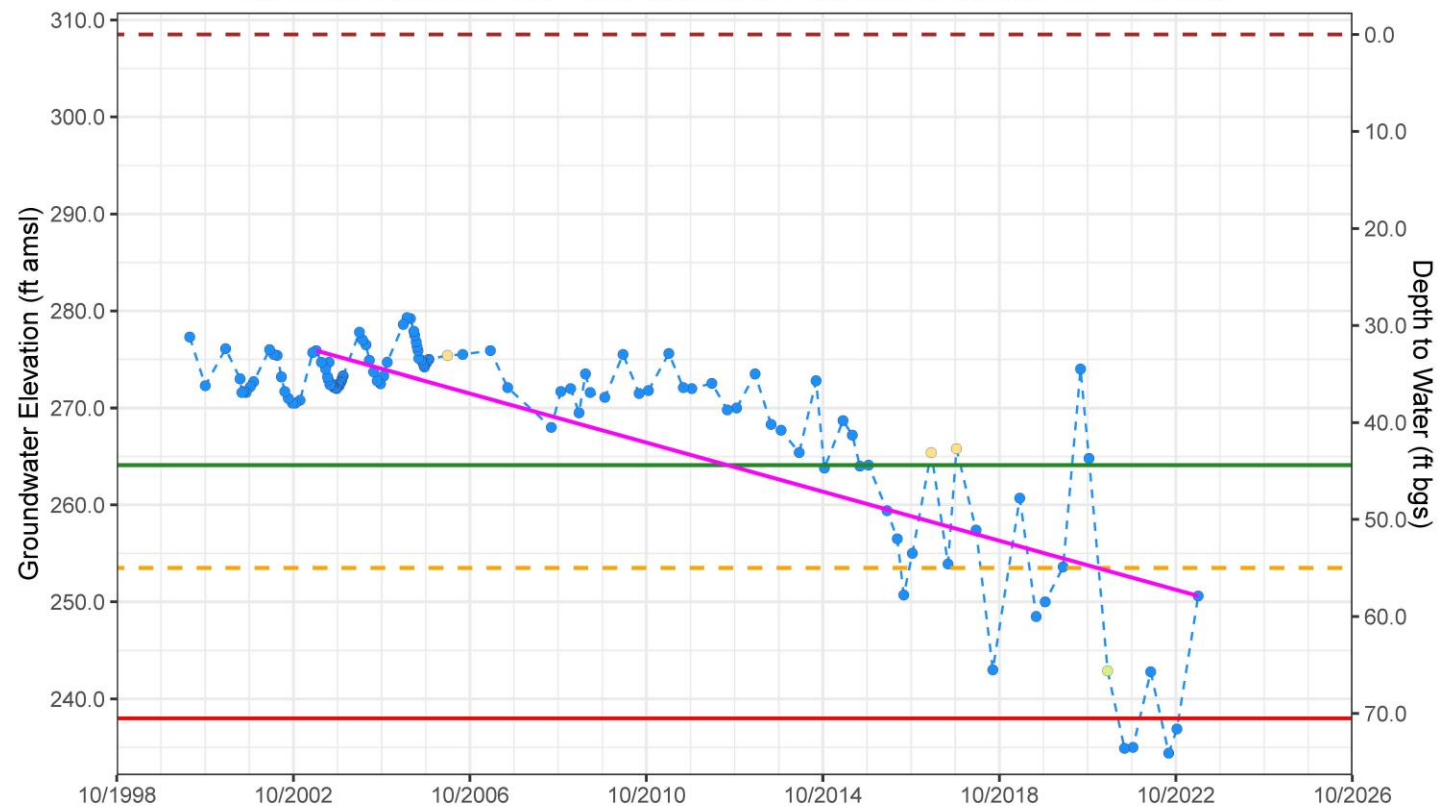
MO = 264.1 ft amsl

MT = 238.0 ft amsl

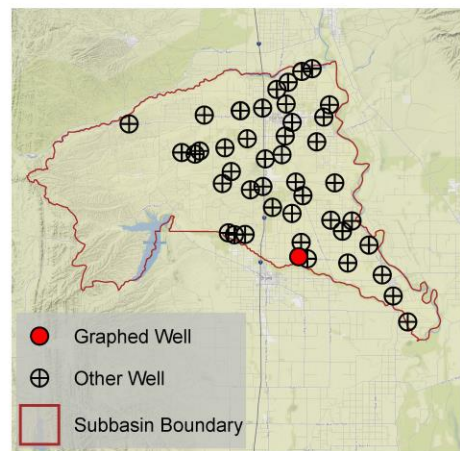
Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -25.3 ft  
 Average rate of change = -1.26 ft/year  
 Average water level = 266.58 ft amsl

## Corning Subbasin – State Well Number (SWN) 22N03W06B001M

Upper Aquifer (Shallow Zone) Well Depth: 210 ft. Perforation top & bottom: 195 – 210 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

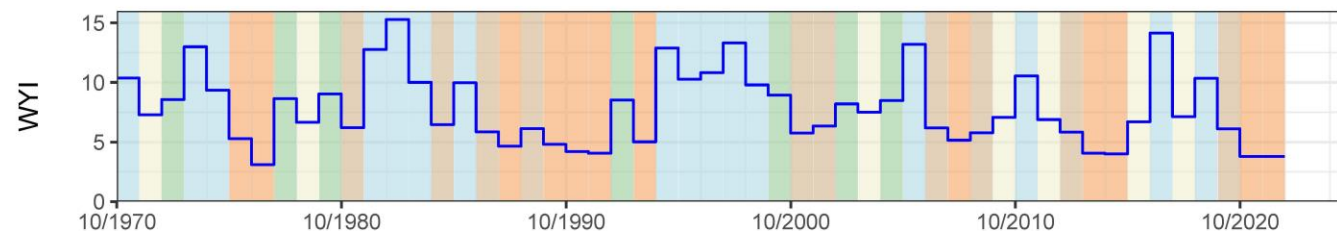
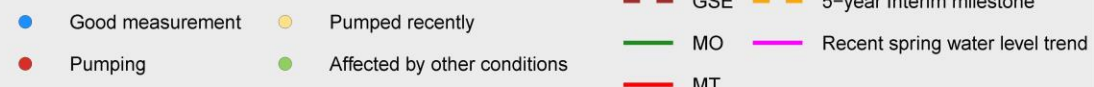
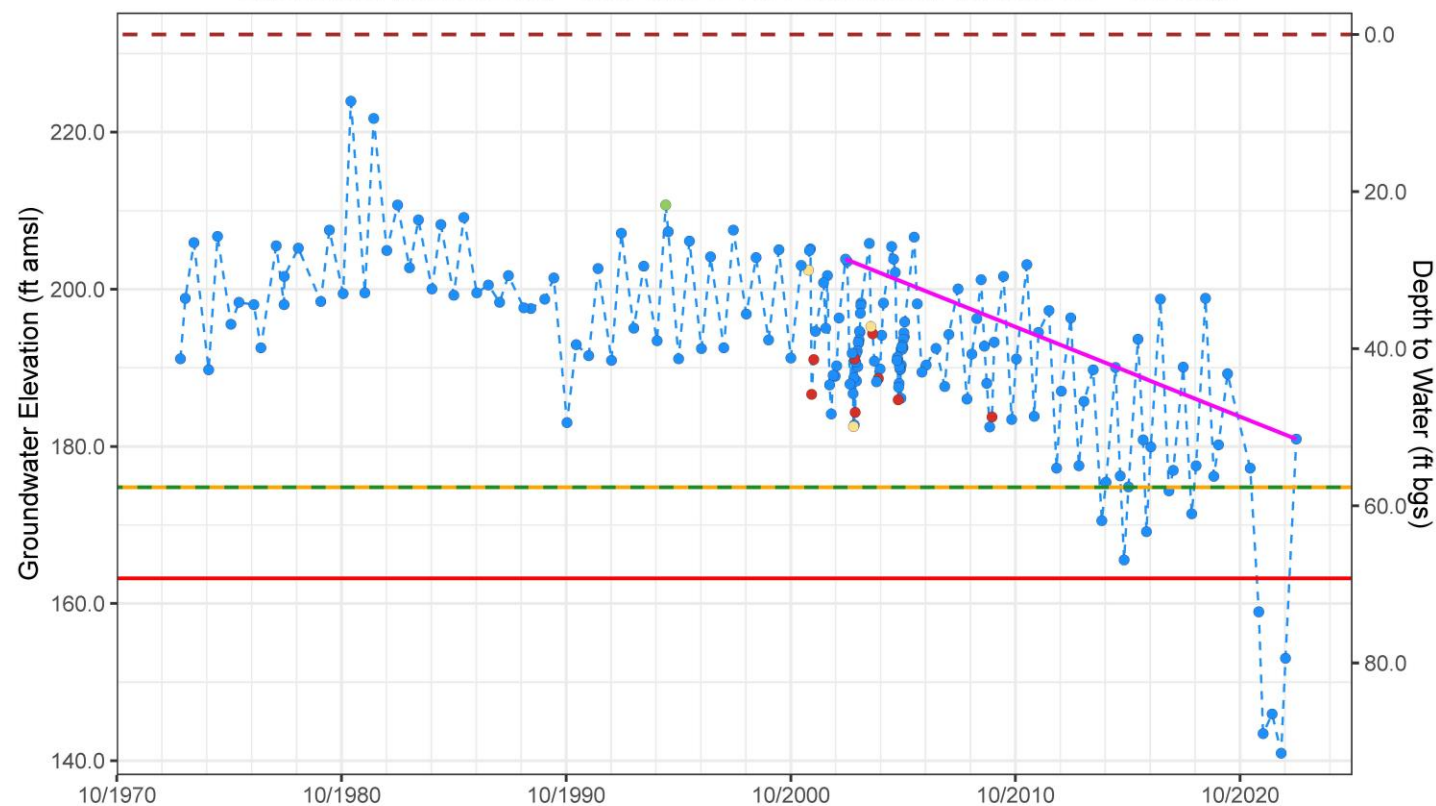
IM (2027) = 174.8 ft amsl

MO = 174.8 ft amsl

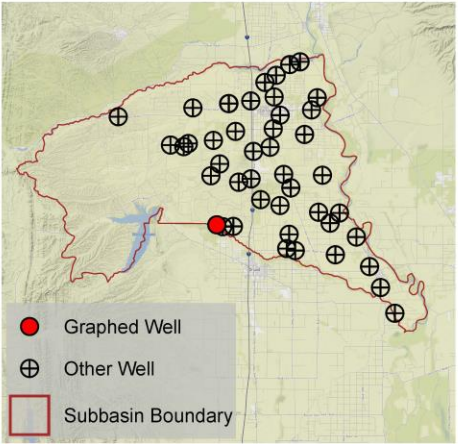
MT = 163.2 ft amsl

Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -22.9 ft  
 Average rate of change = -1.15 ft/year  
 Average water level = 200.25 ft amsl

## Corning Subbasin – State Well Number (SWN) 22N03W12Q003M Upper Aquifer (Shallow Zone) Well Depth: 124 ft. Perforation top & bottom: 112 – 123 ft bgs

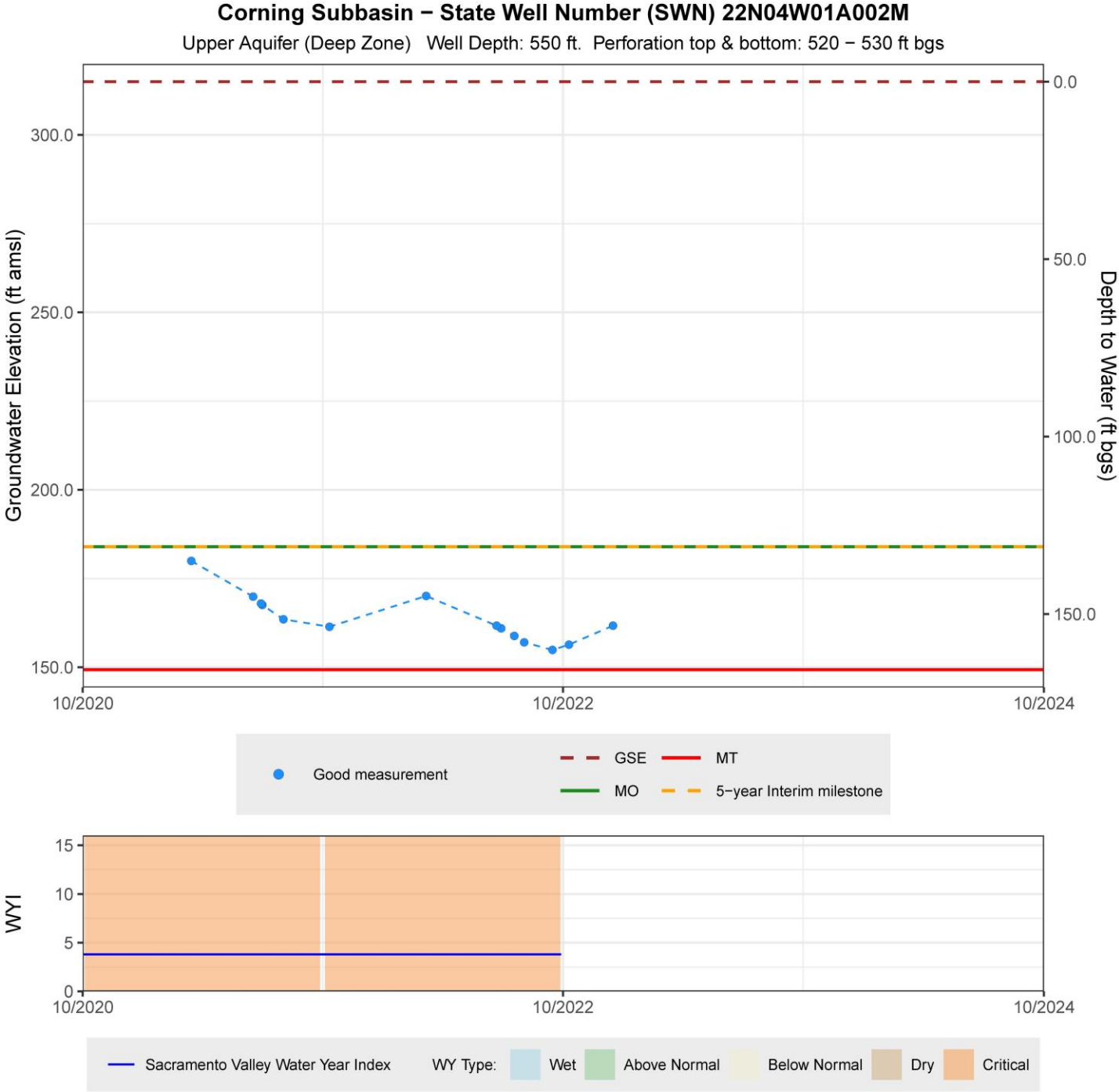


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

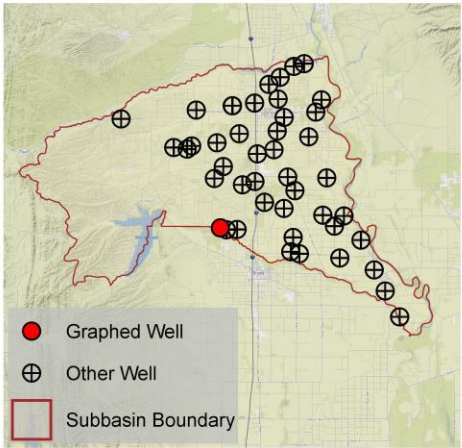


Sustainable Management Criteria  
IM (2027) = 184.0 ft amsl  
MO = 184.0 ft amsl  
MT = 149.3 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years



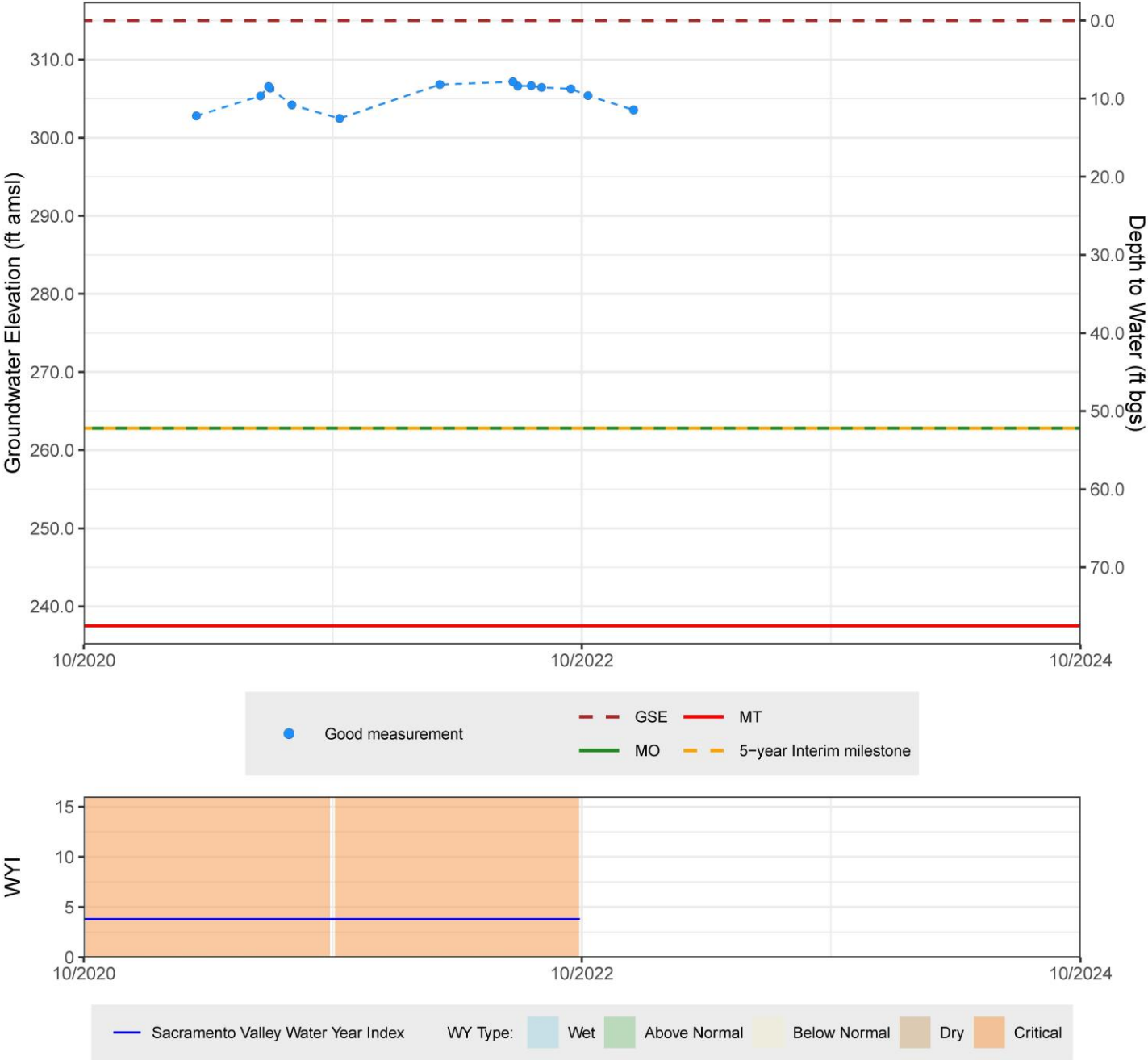
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



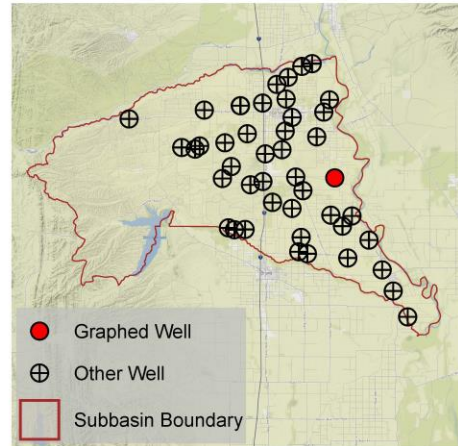
Sustainable Management Criteria  
IM (2027) = 262.8 ft amsl  
MO = 262.8 ft amsl  
MT = 237.5 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 22N04W01A004M**  
Upper Aquifer (Shallow Zone) Well Depth: 70 ft. Perforation top & bottom: 40 – 50 ft bgs



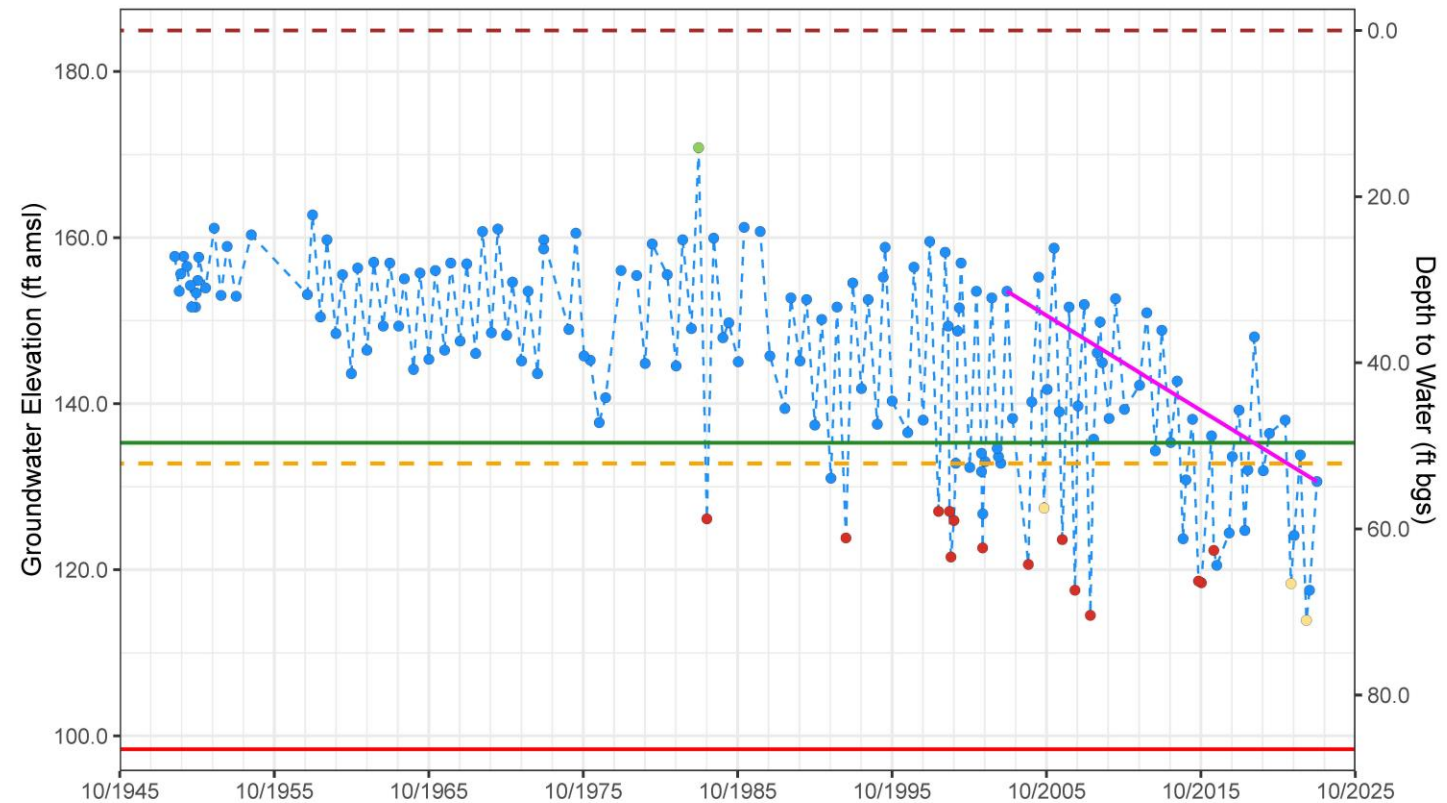
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



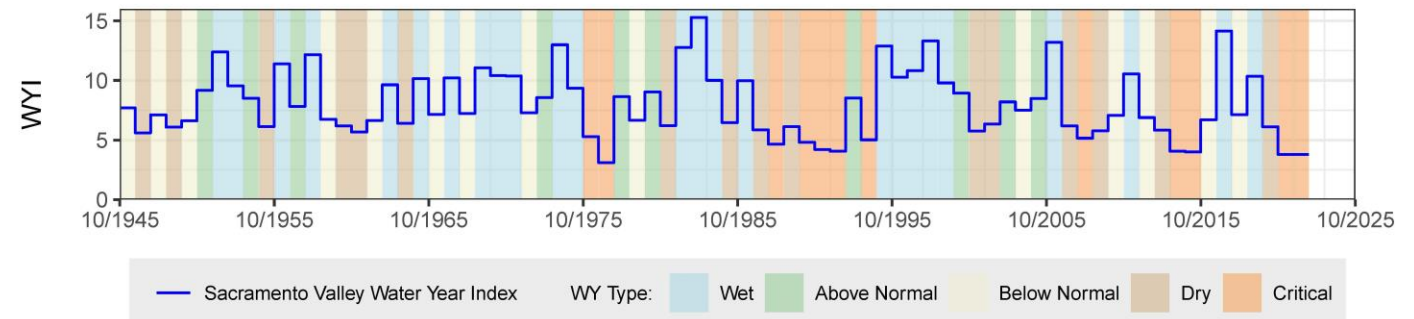
Sustainable Management Criteria  
 IM (2027) = 132.8 ft amsl  
 MO = 135.3 ft amsl  
 MT = 98.4 ft amsl

Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -22.9 ft  
 Average rate of change = -1.15 ft/year  
 Average water level = 153.51 ft amsl

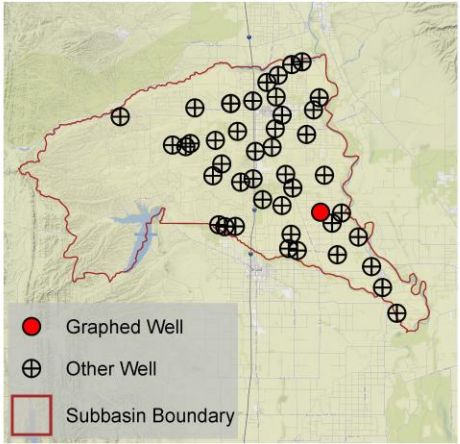
**Corning Subbasin – State Well Number (SWN) 23N02W16B001M**  
 Upper Aquifer (Shallow Zone) Well Depth: 120 ft. Perforation top & bottom: 100 – 120 ft bgs



● Good measurement    ● Pumped recently    --- GSE    --- 5-year Interim milestone  
 ● Pumping    ● Affected by other conditions    --- MO    --- Recent spring water level trend  
 --- MT

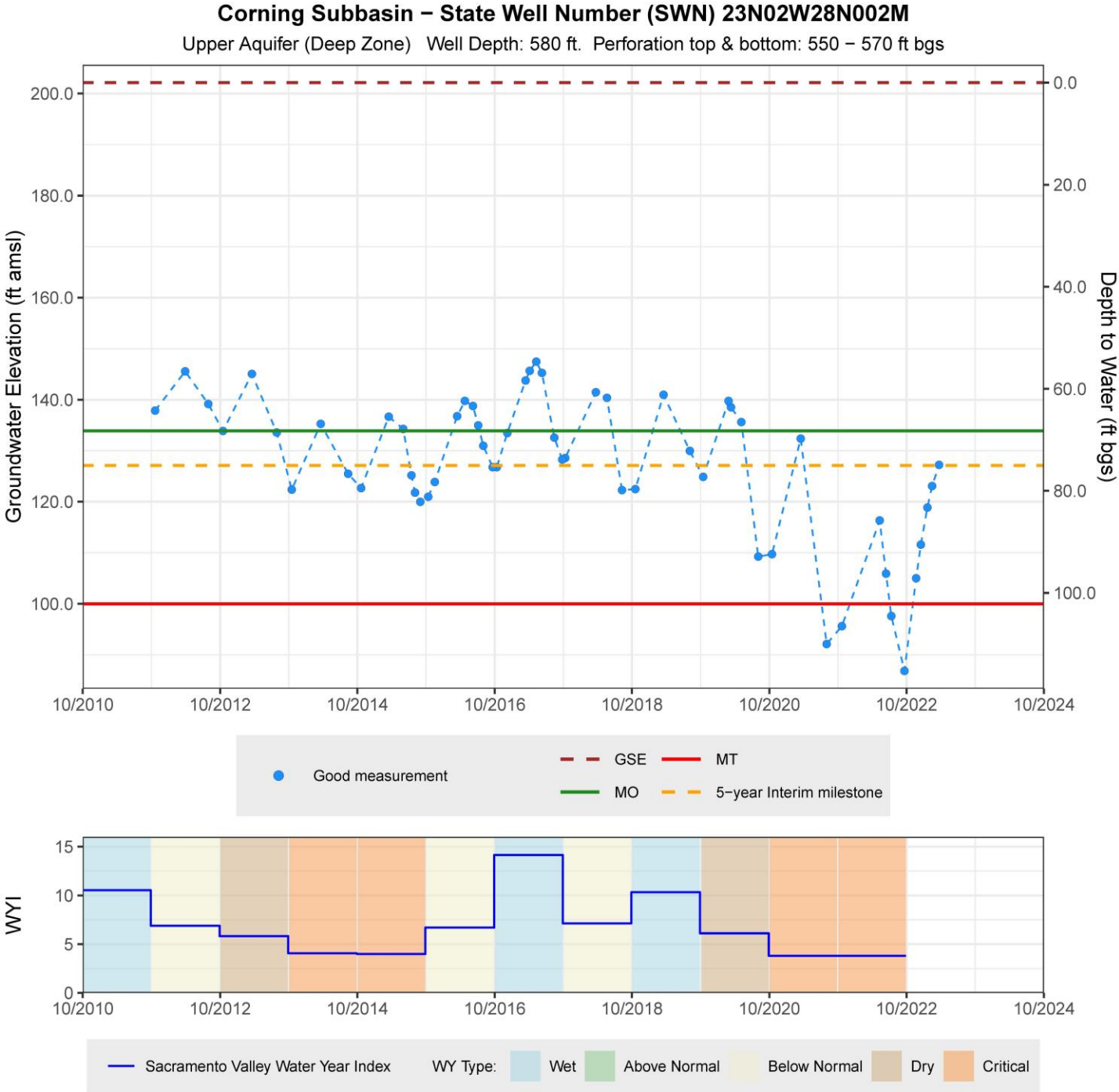


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

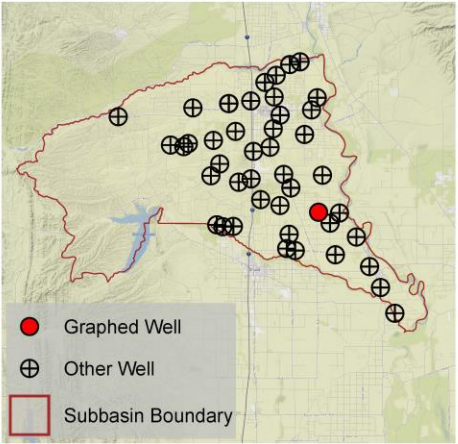


Sustainable Management Criteria  
IM (2027) = 127.1 ft amsl  
MO = 133.9 ft amsl  
MT = 100.0 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

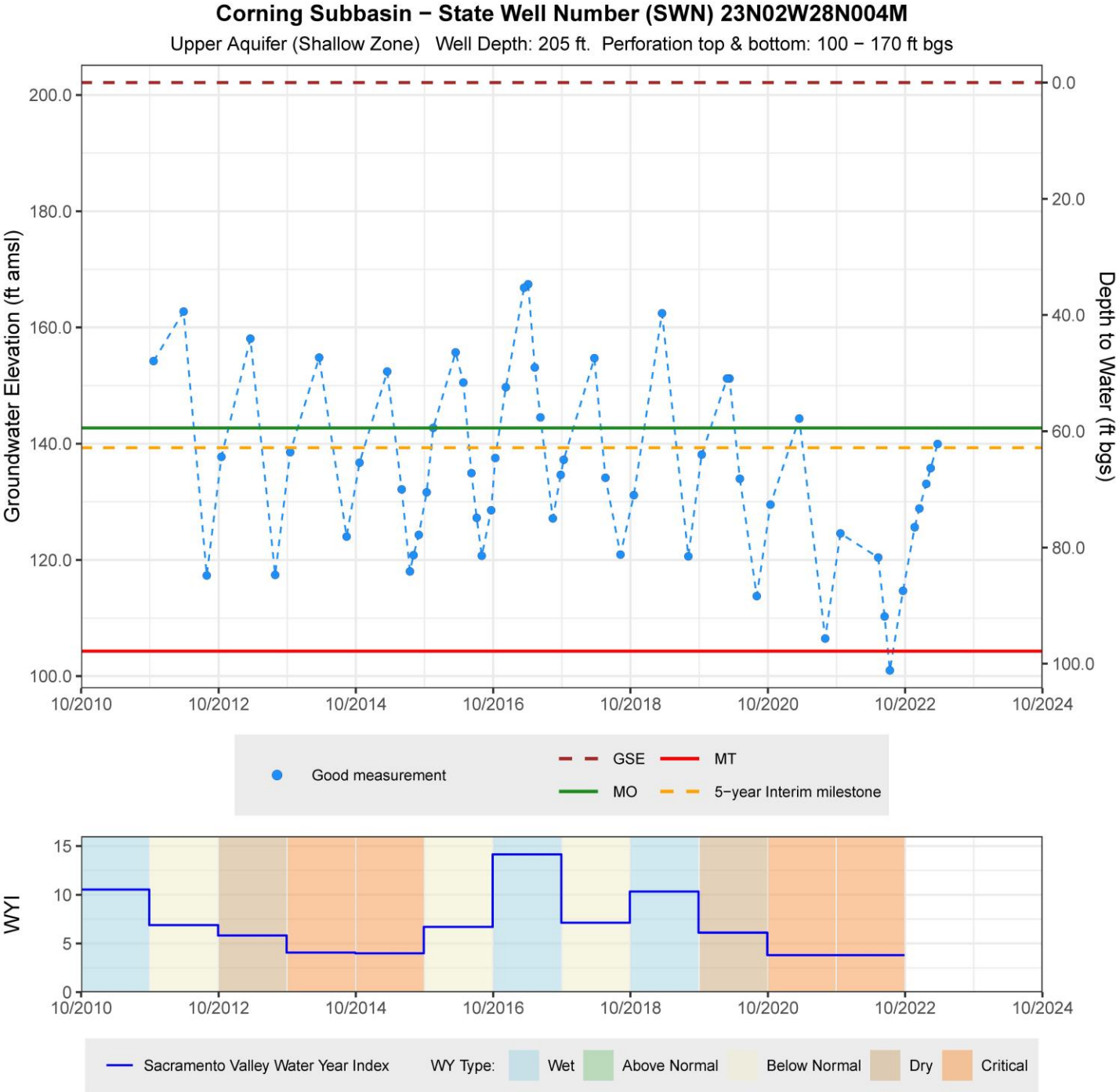


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

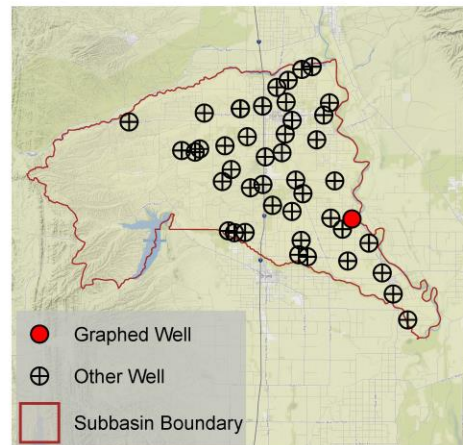


Sustainable Management Criteria  
 IM (2027) = 139.3 ft amsl  
 MO = 142.7 ft amsl  
 MT = 104.3 ft amsl

Sufficient data not available to calculate  
 spring water level statistics for 20 years



# Groundwater Conditions – Groundwater Elevations Corning Subbasin

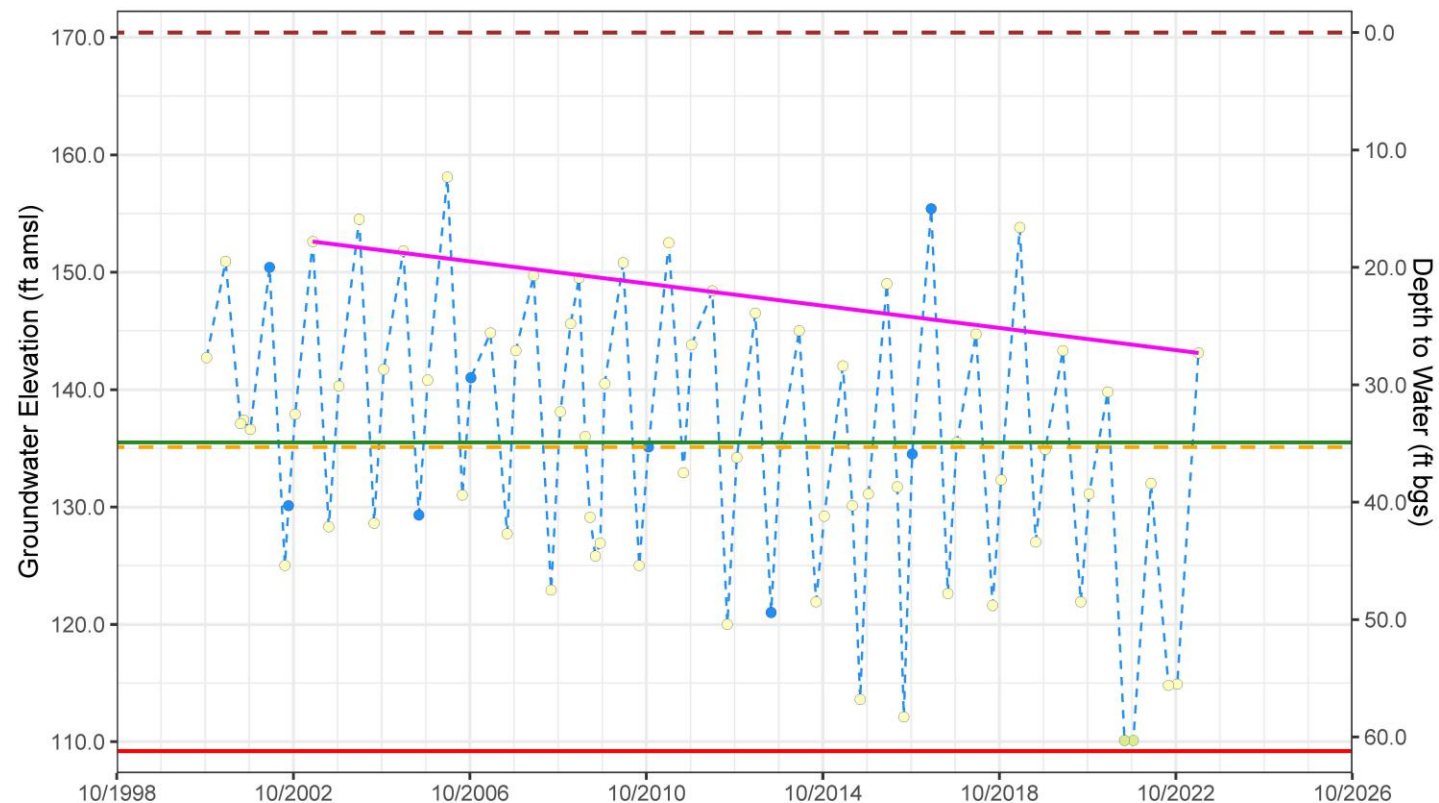


Sustainable Management Criteria  
 IM (2027) = 135.1 ft amsl  
 MO = 135.5 ft amsl  
 MT = 109.2 ft amsl

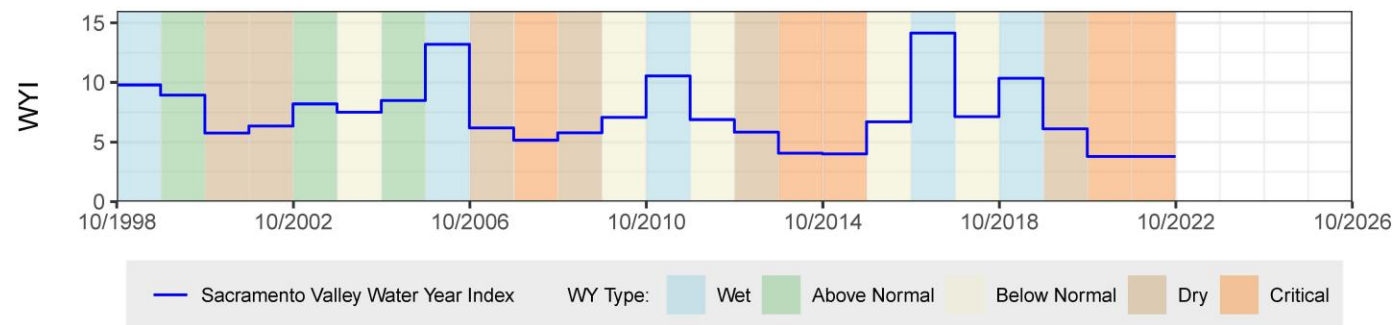
Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -9.5 ft  
 Average rate of change = -0.48 ft/year  
 Average water level = 148.21 ft amsl

## Corning Subbasin – State Well Number (SWN) 23N02W34A003M

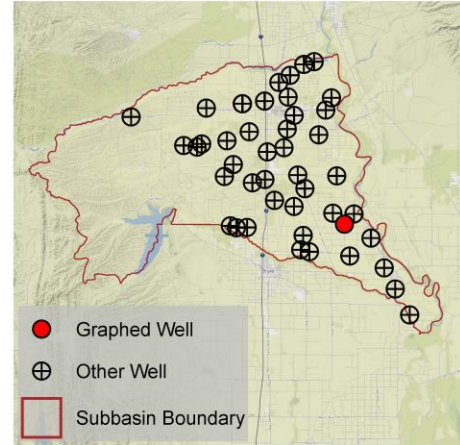
Upper Aquifer (Shallow Zone) Well Depth: 125 ft. Perforation top & bottom: 104 – 124 ft bgs



● Good measurement      ● Casing leaking or wet  
 ● Oil or foreign substance in casing      — MO      — Recent spring water level trend  
 — GSE      — 5-year Interim milestone      — MT



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

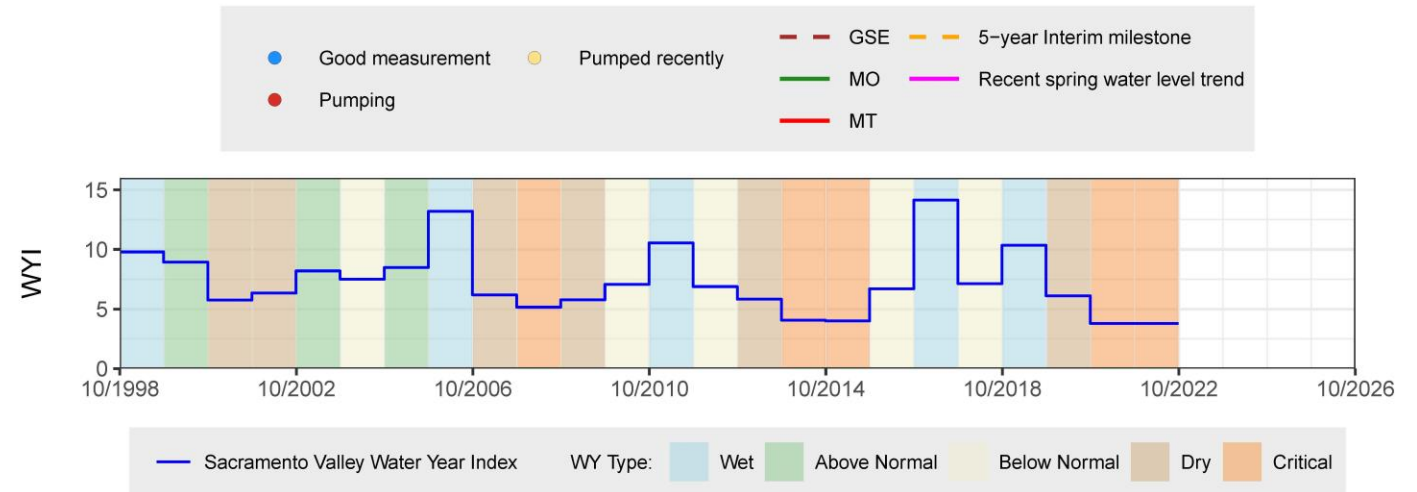
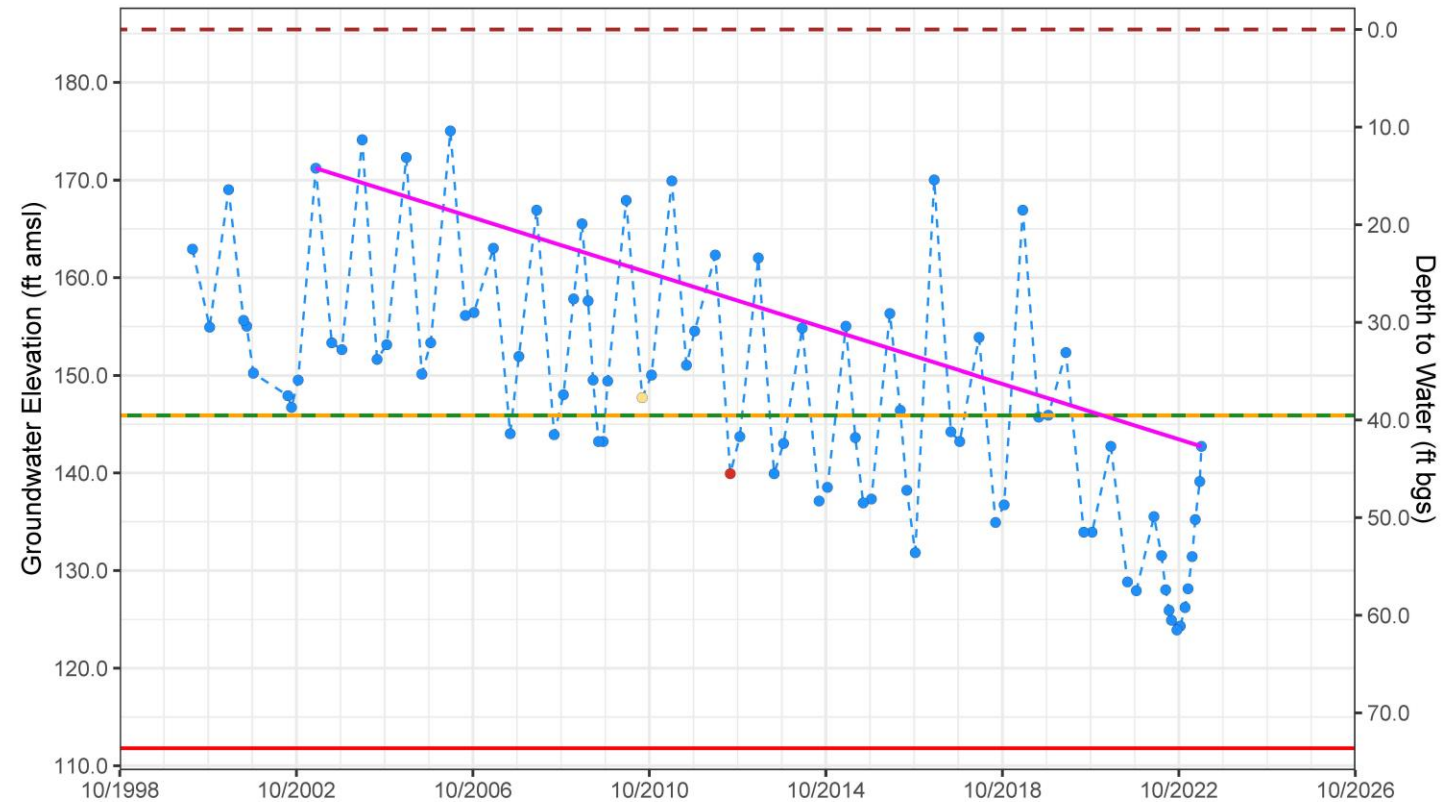
IM (2027) = 145.9 ft amsl

MO = 145.9 ft amsl

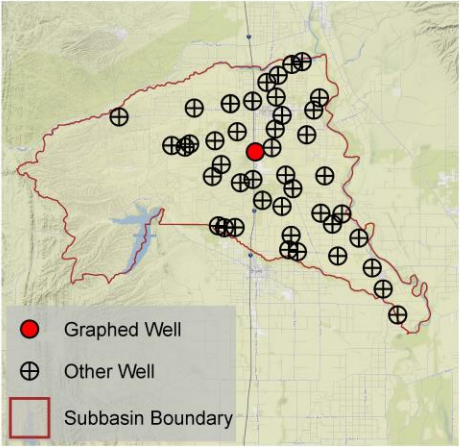
MT = 111.8 ft amsl

Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -28.5 ft  
 Average rate of change = -1.43 ft/year  
 Average water level = 161.34 ft amsl

**Corning Subbasin – State Well Number (SWN) 23N02W34N001M**  
 Upper Aquifer (Shallow Zone) Well Depth: 100 ft. Perforation top & bottom: 70 – 100 ft bgs



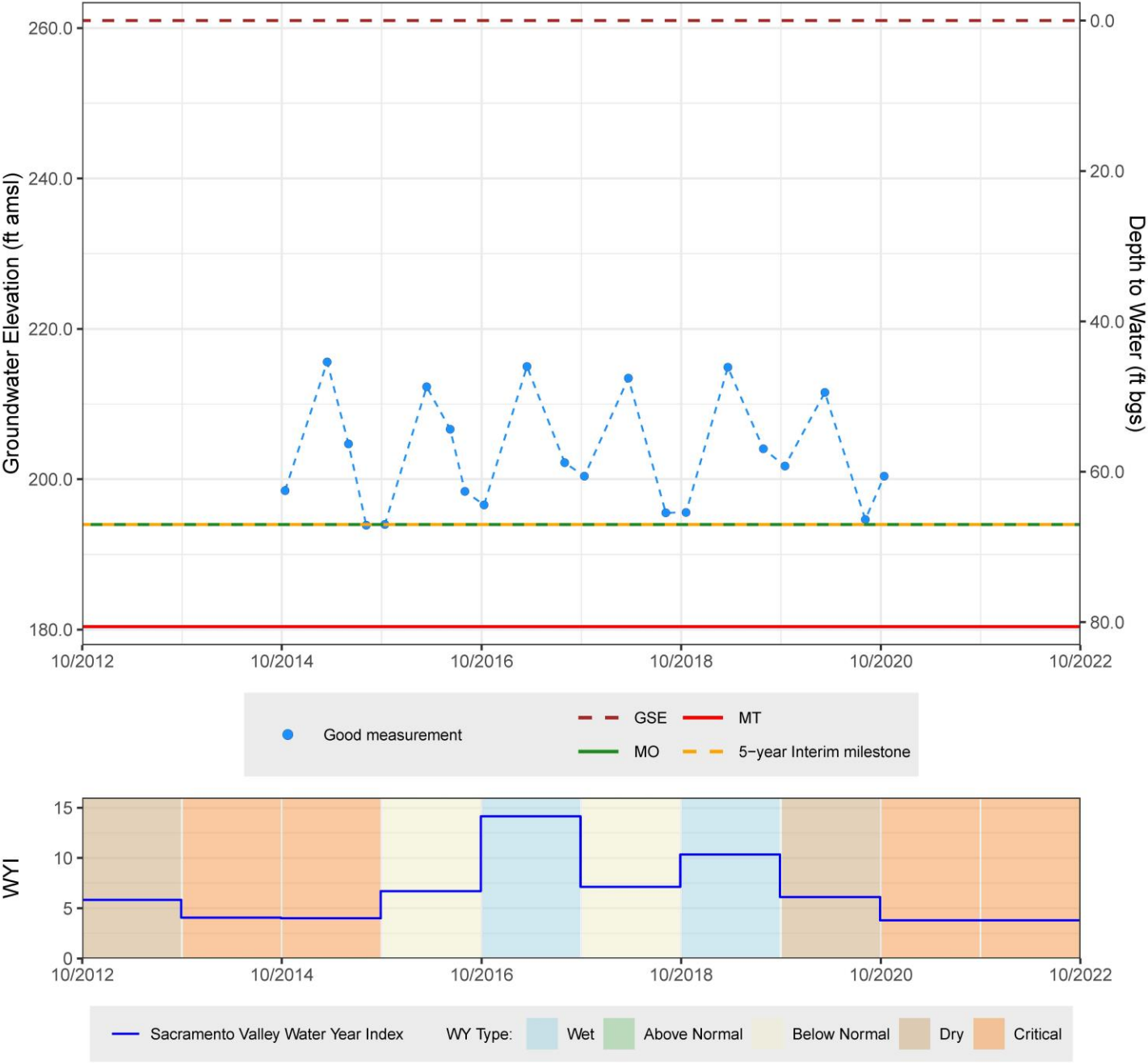
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



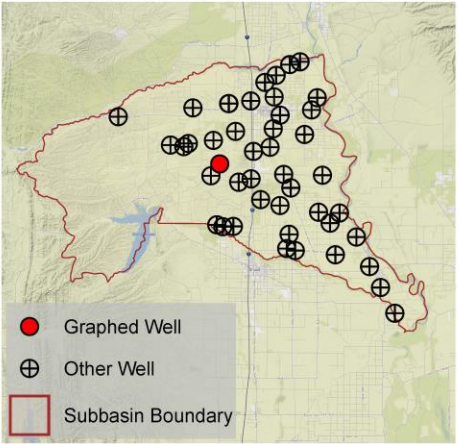
Sustainable Management Criteria  
IM (2027) = 194.0 ft amsl  
MO = 194.0 ft amsl  
MT = 180.4 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 23N03W04H001M**  
Upper Aquifer (Shallow Zone) Well Depth: 270 ft. Perforation top & bottom: 200 – 260 ft bgs

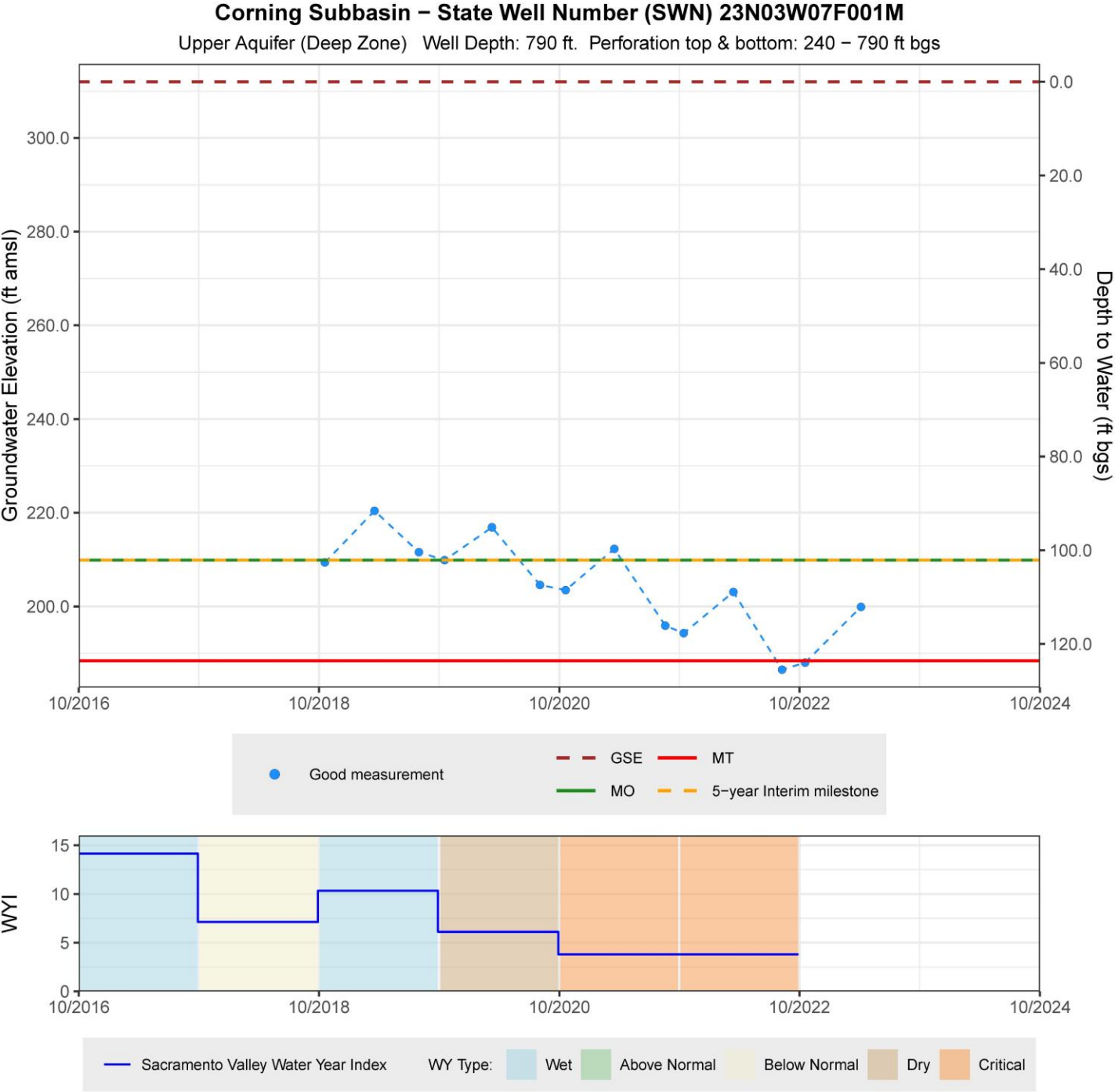


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

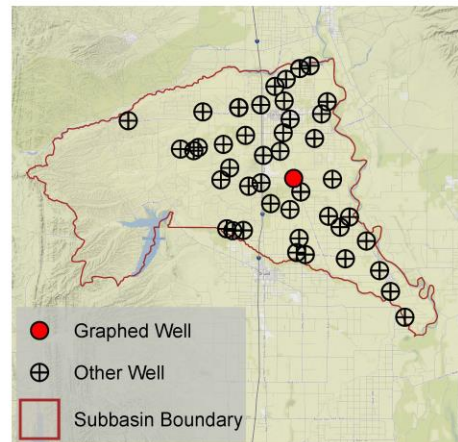


Sustainable Management Criteria  
 IM (2027) = 209.9 ft amsl  
 MO = 209.9 ft amsl  
 MT = 188.4 ft amsl

Sufficient data not available to calculate  
 spring water level statistics for 20 years



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 126.7 ft amsl

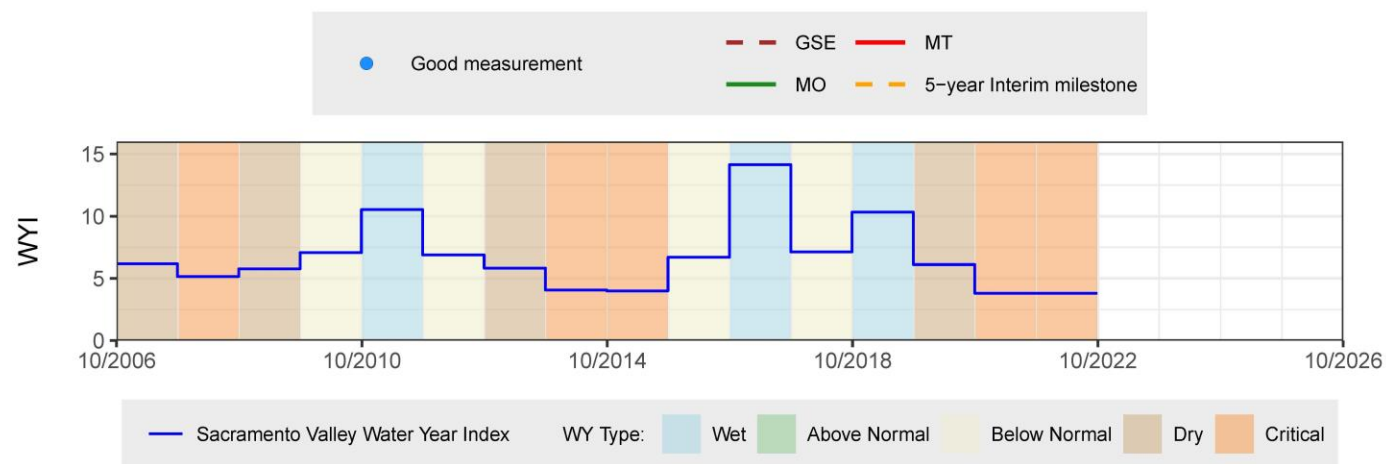
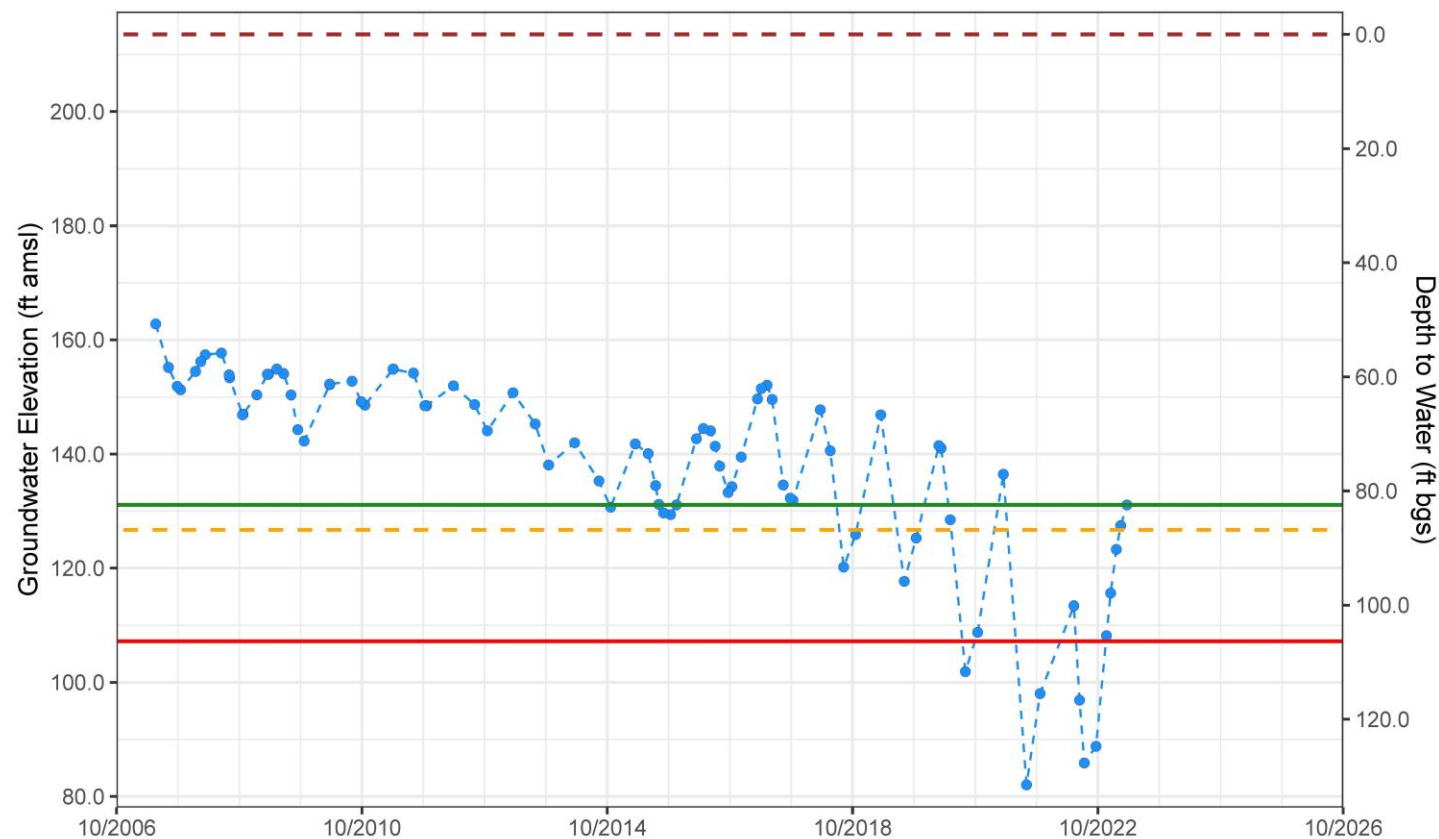
MO = 131.1 ft amsl

MT = 107.2 ft amsl

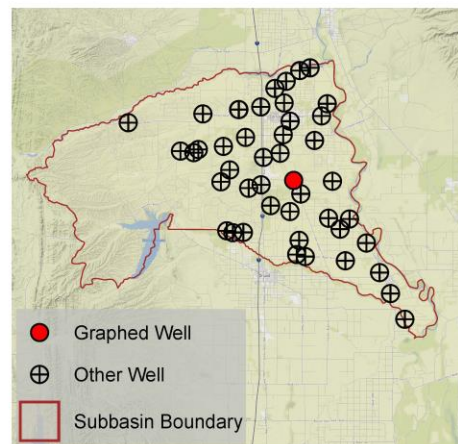
Sufficient data not available to calculate spring water level statistics for 20 years

## Corning Subbasin – State Well Number (SWN) 23N03W13C004M

Upper Aquifer (Deep Zone) Well Depth: 835 ft. Perforation top & bottom: 815 – 825 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

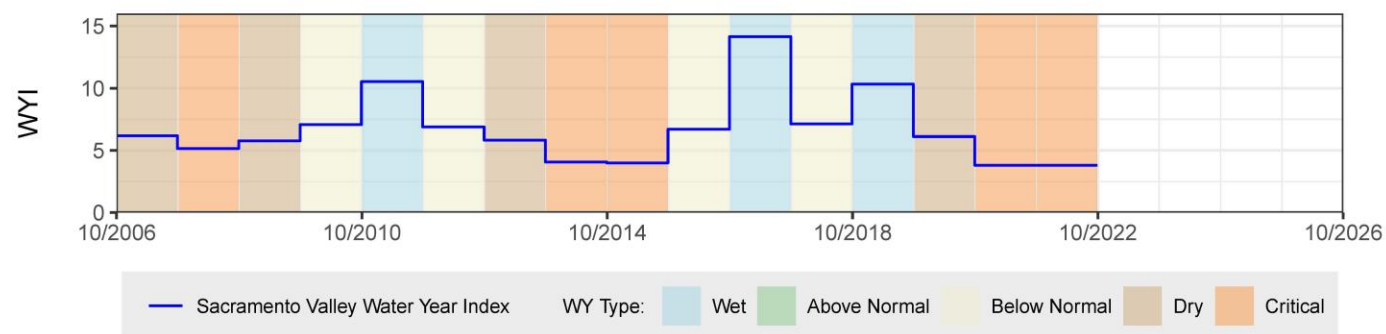
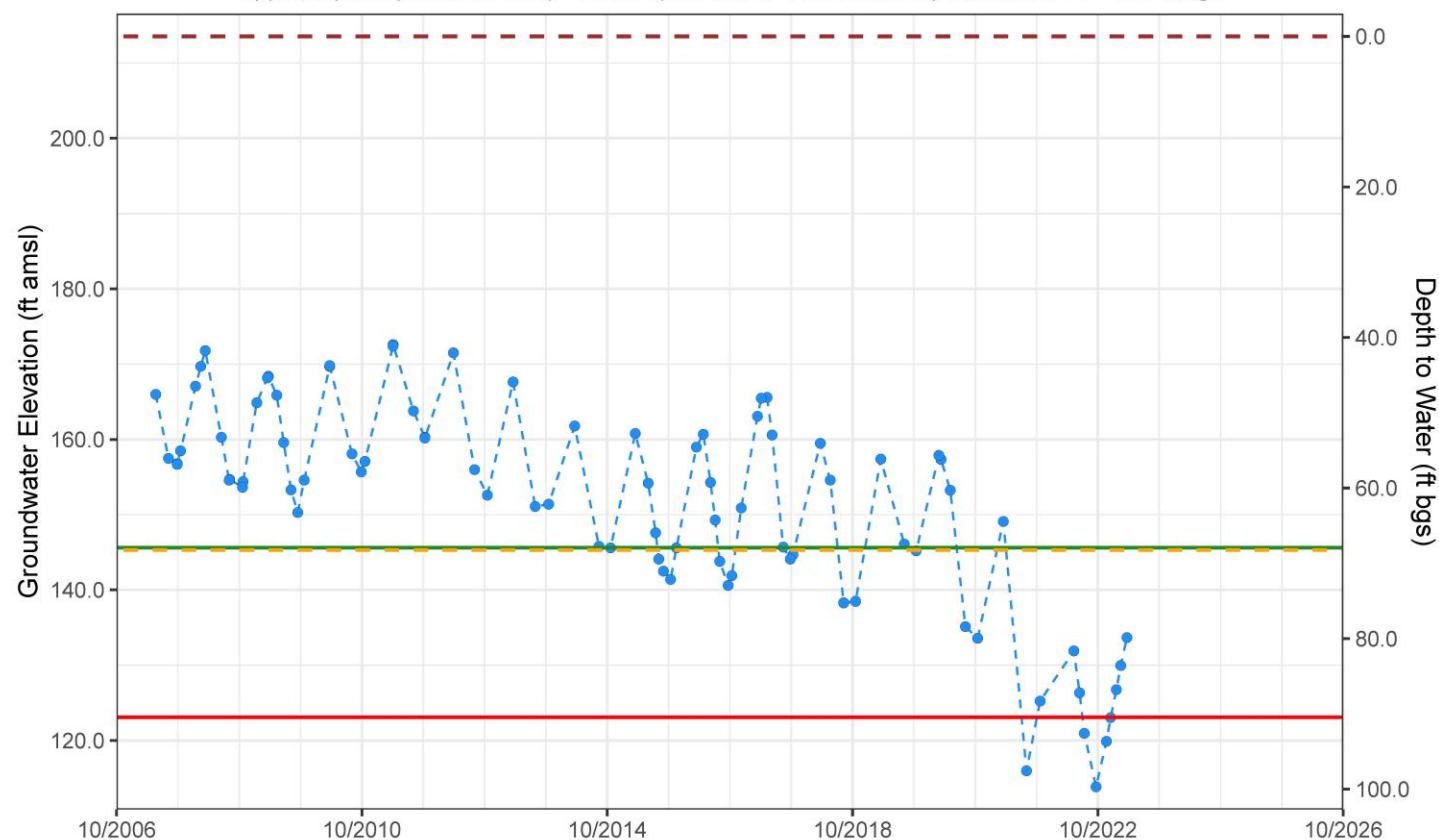
IM (2027) = 145.3 ft amsl

MO = 145.6 ft amsl

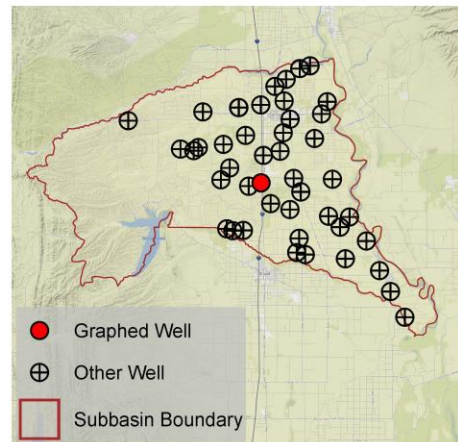
MT = 123.1 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

## Corning Subbasin – State Well Number (SWN) 23N03W13C006M Upper Aquifer (Shallow Zone) Well Depth: 182 ft. Perforation top & bottom: 95 – 135 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 193.4 ft amsl

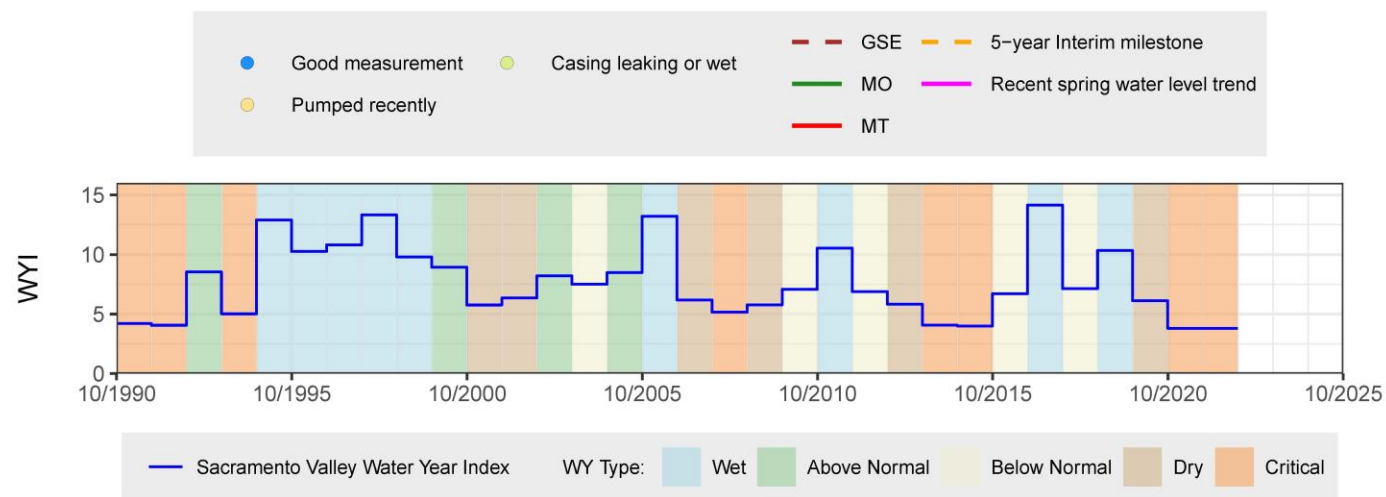
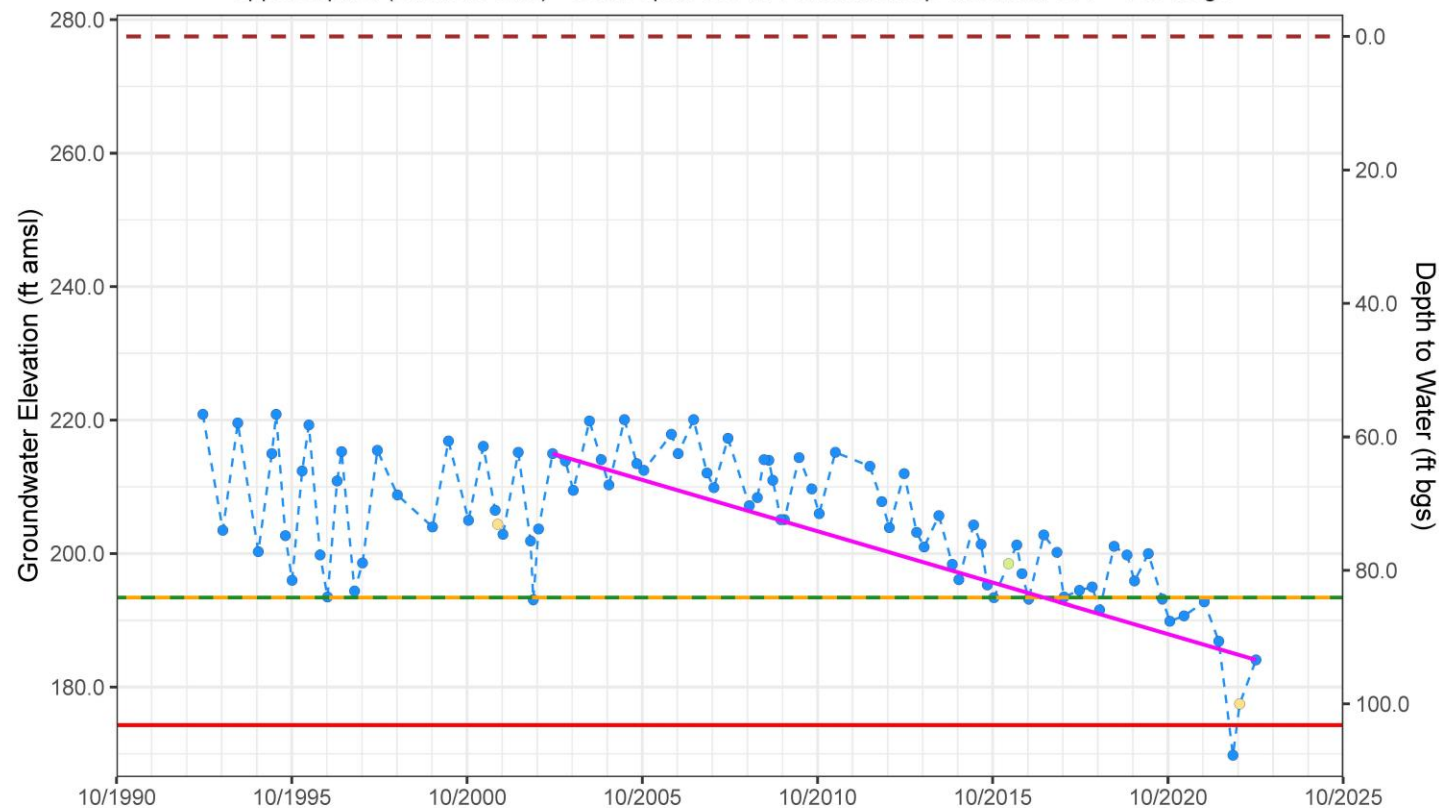
MO = 193.4 ft amsl

MT = 174.3 ft amsl

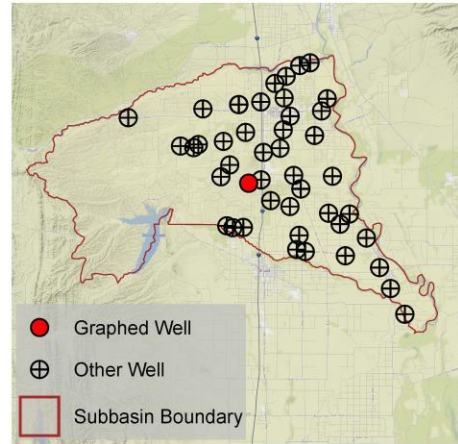
Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -30.9 ft  
 Average rate of change = -1.54 ft/year  
 Average water level = 209.96 ft amsl

## Corning Subbasin – State Well Number (SWN) 23N03W16H001M

Upper Aquifer (Shallow Zone) Well Depth: 150 ft. Perforation top & bottom: 144 – 150 ft bgs



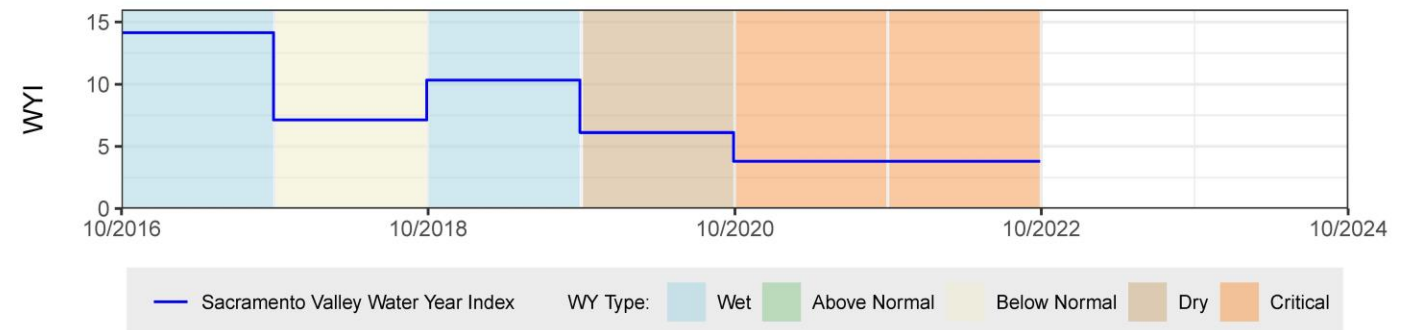
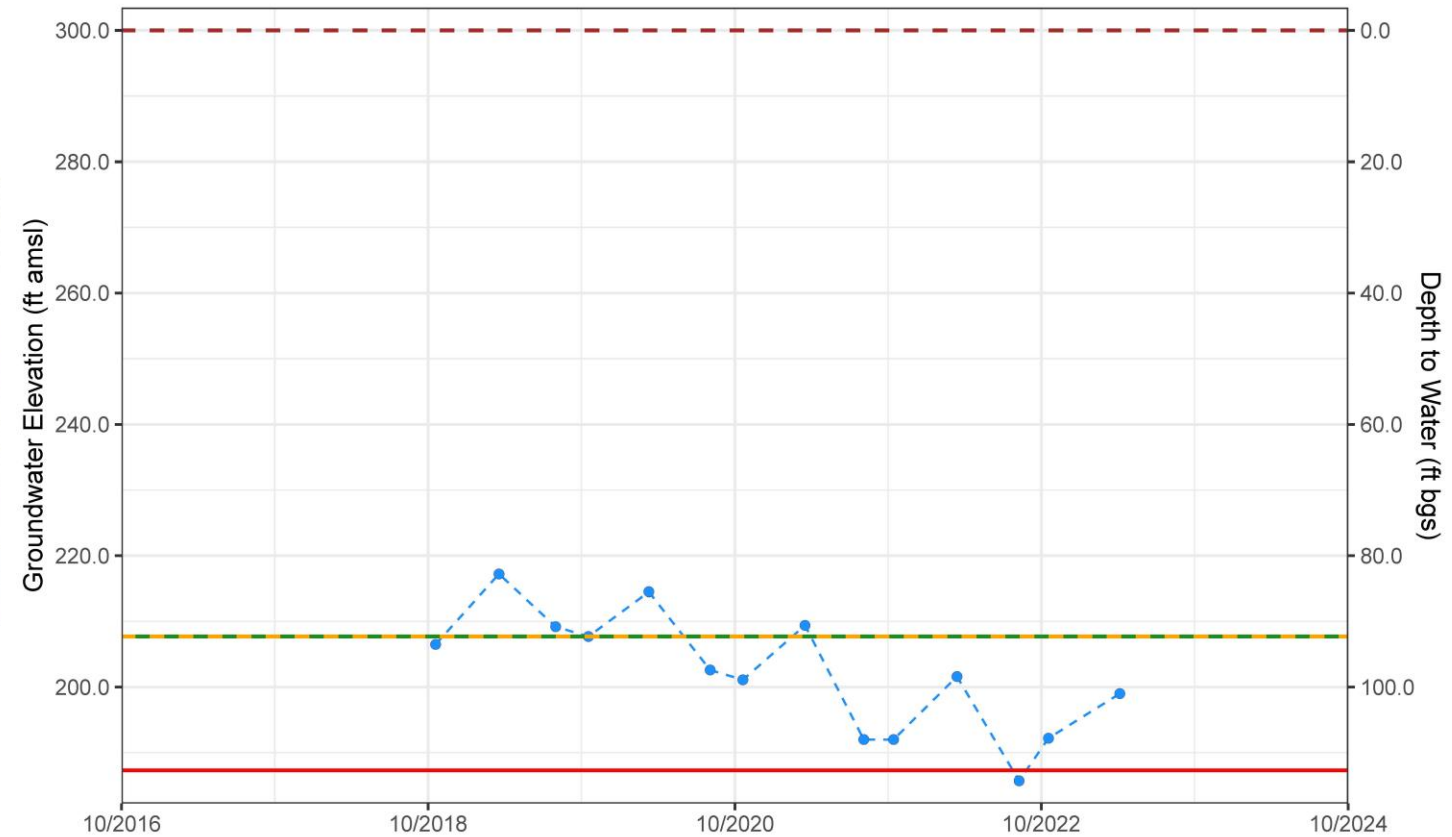
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



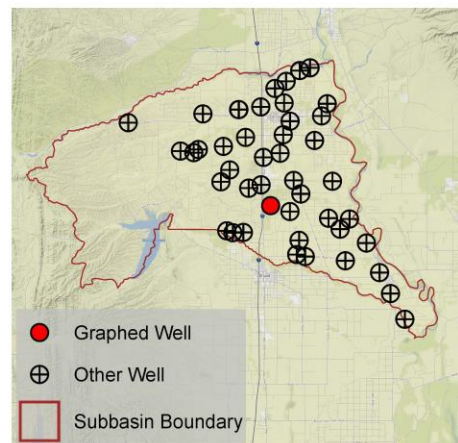
Sustainable Management Criteria  
 IM (2027) = 207.7 ft amsl  
 MO = 207.7 ft amsl  
 MT = 187.3 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 23N03W17R001M**  
 Upper Aquifer (Deep Zone) Well Depth: 720 ft. Perforation top & bottom: 360 – 720 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 152.7 ft amsl

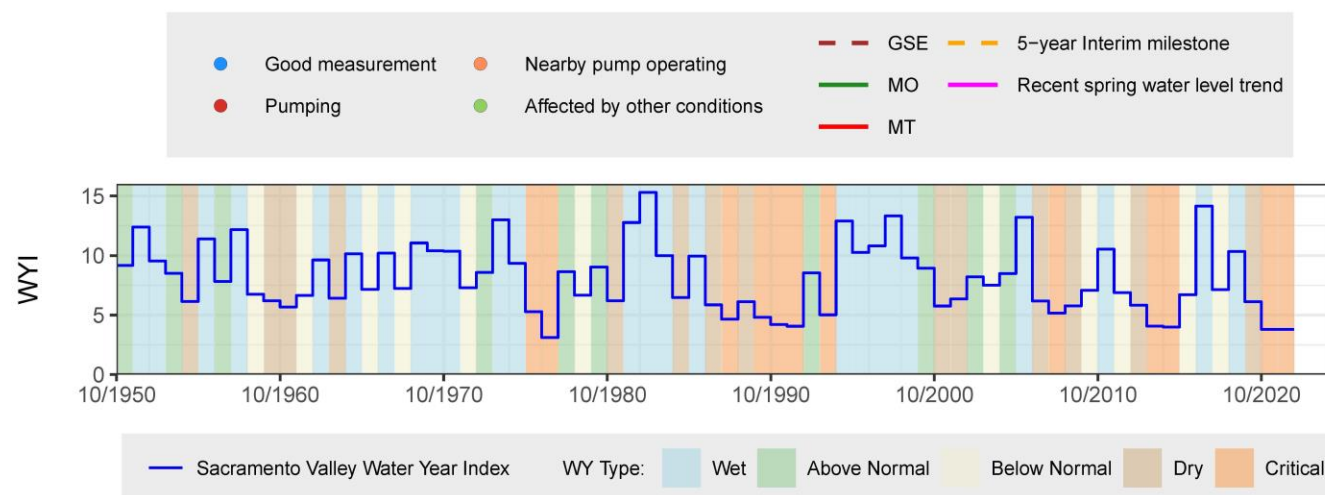
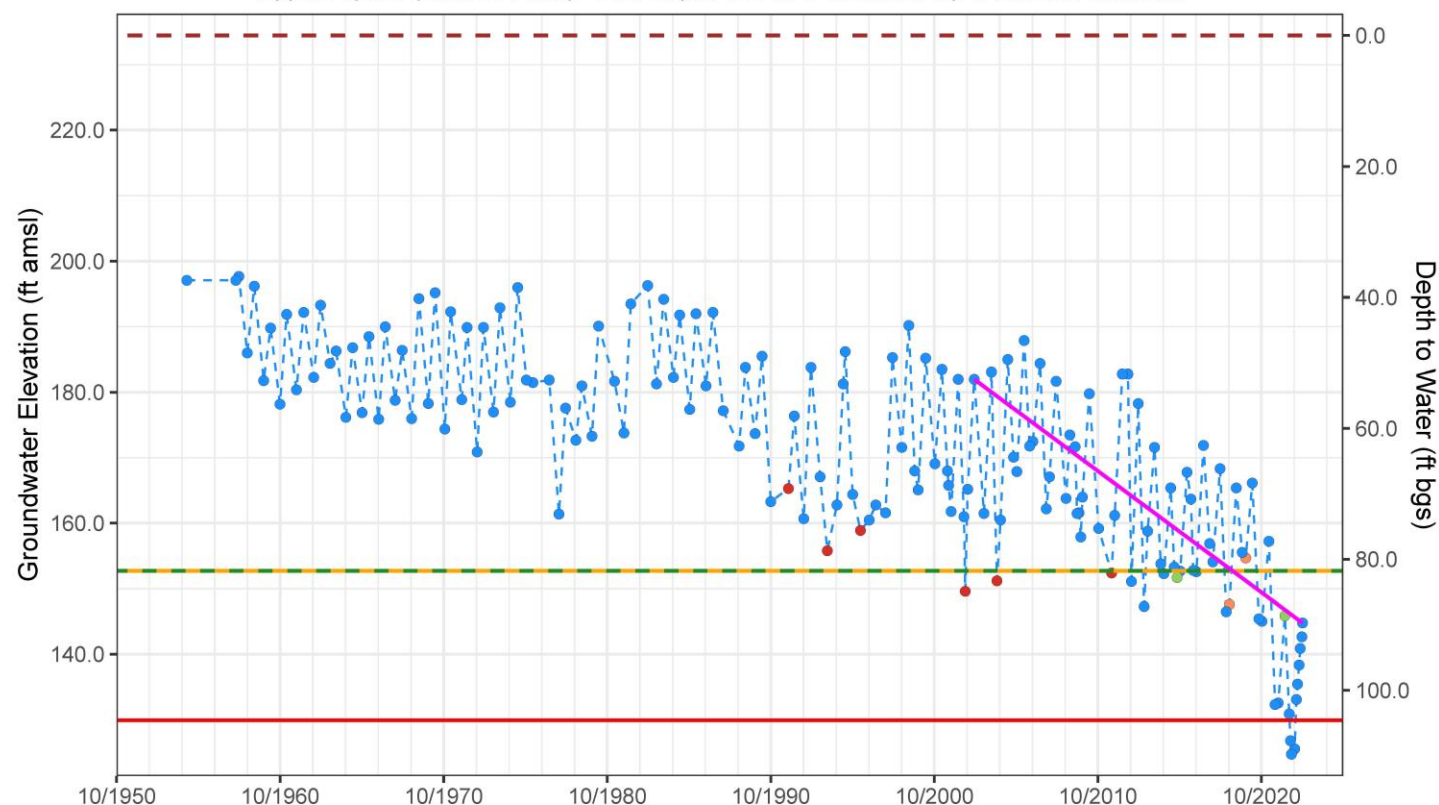
MO = 152.7 ft amsl

MT = 129.9 ft amsl

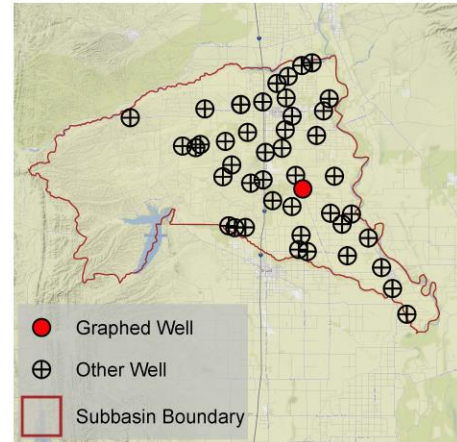
Statistics of spring water levels for past 20 years (2003 to 2023):  
Change = -37.2 ft  
Average rate of change = -1.86 ft/year  
Average water level = 183.01 ft amsl

## Corning Subbasin – State Well Number (SWN) 23N03W22Q001M

Upper Aquifer (Shallow Zone) Well Depth: 380 ft. Perforation top & bottom: Unknown



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

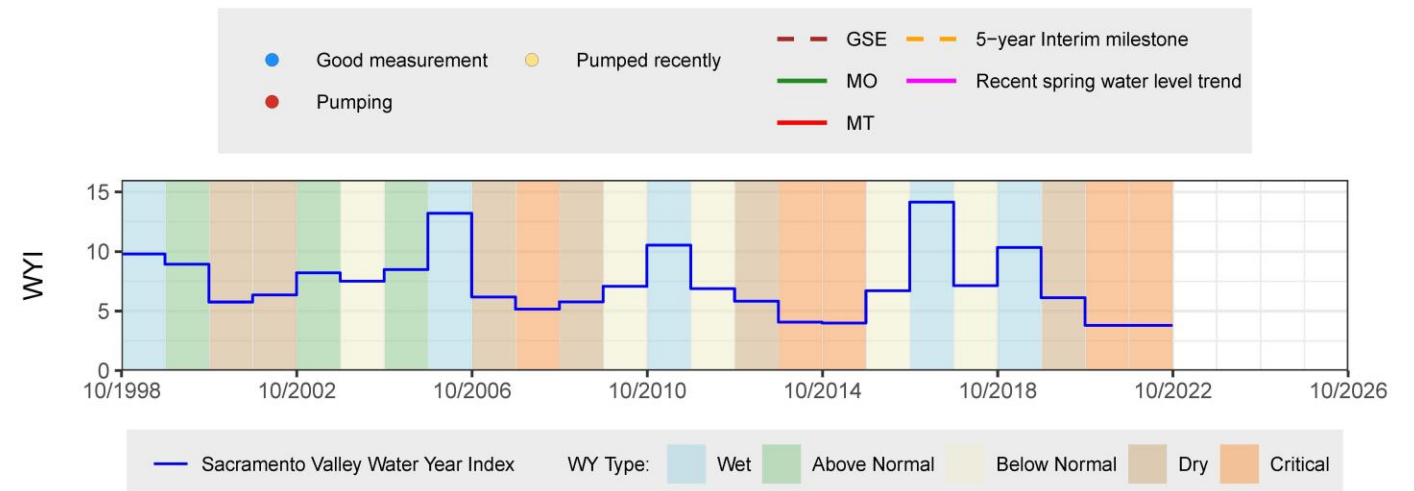
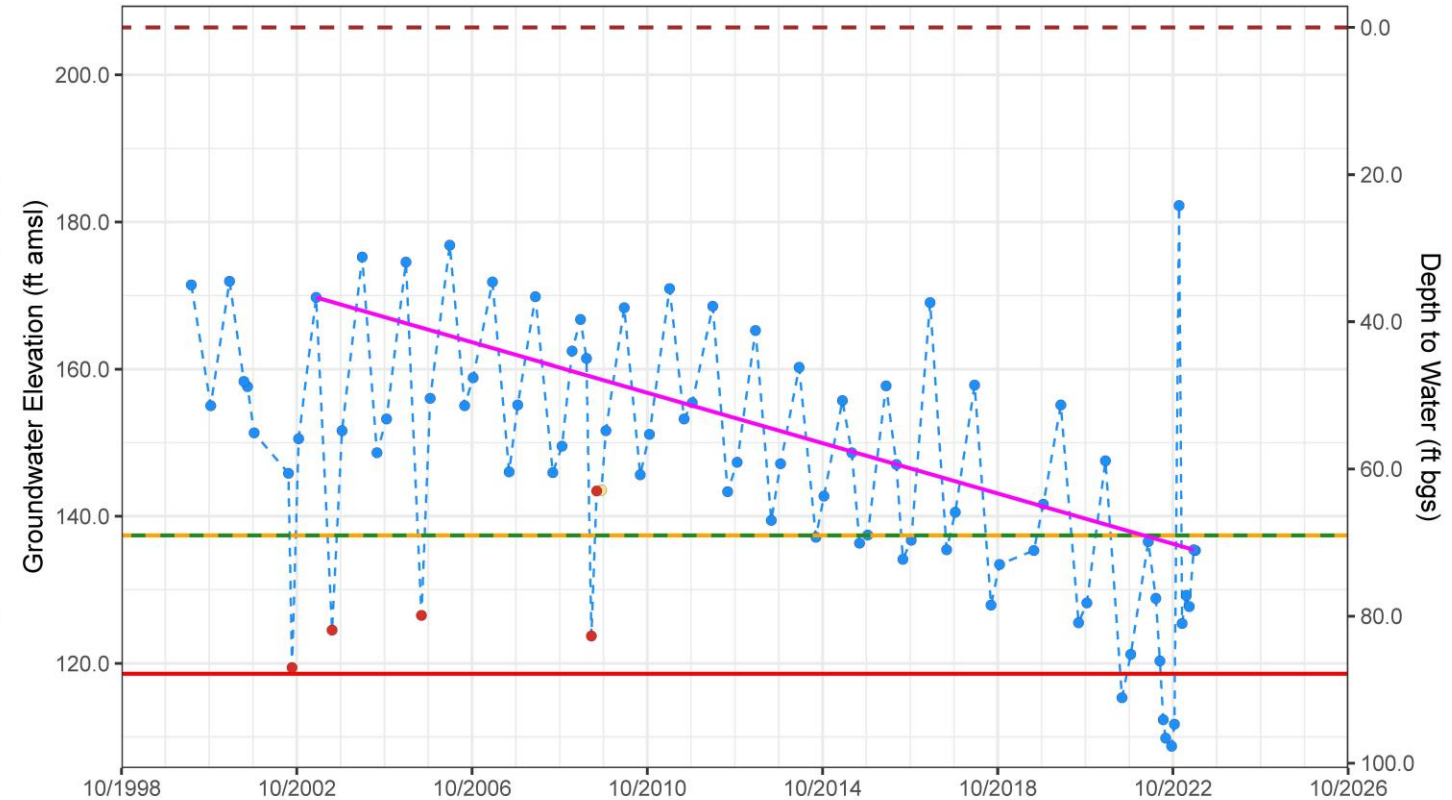
IM (2027) = 137.4 ft amsl

MO = 137.4 ft amsl

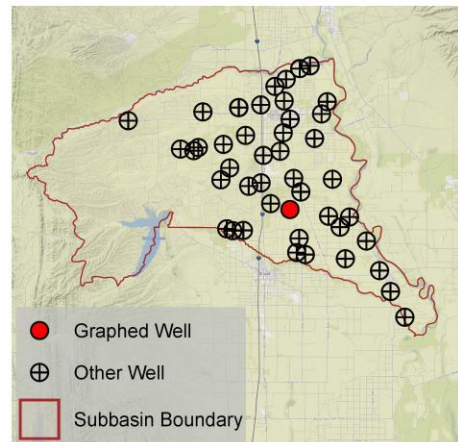
MT = 118.6 ft amsl

Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -34.3 ft  
 Average rate of change = -1.72 ft/year  
 Average water level = 163.1 ft amsl

Corning Subbasin – State Well Number (SWN) 23N03W24A003M  
 Upper Aquifer (Shallow Zone) Well Depth: 199 ft. Perforation top & bottom: 180 – 199 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 145.3 ft amsl

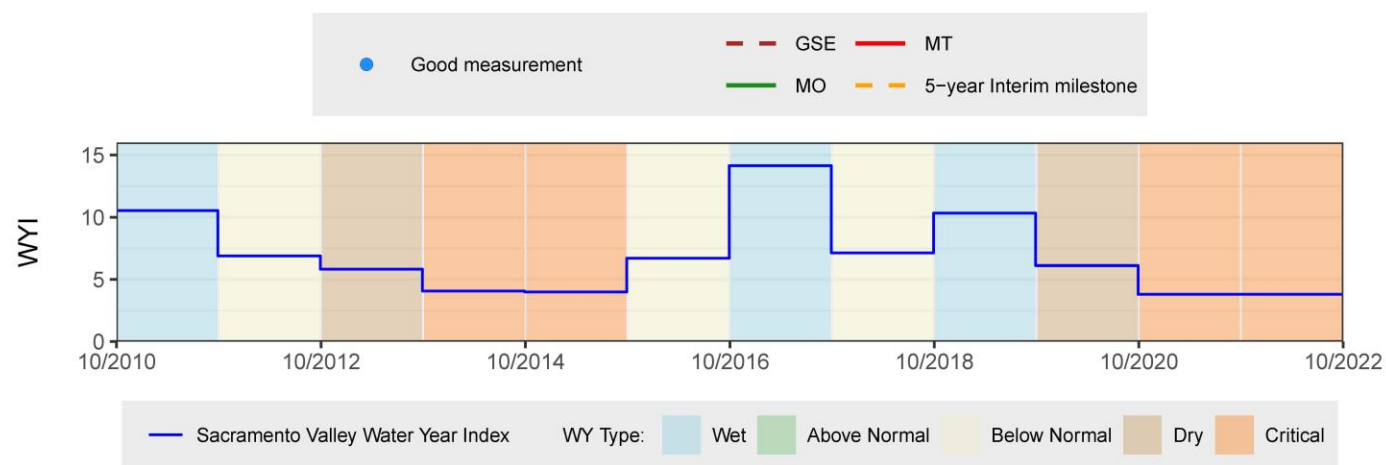
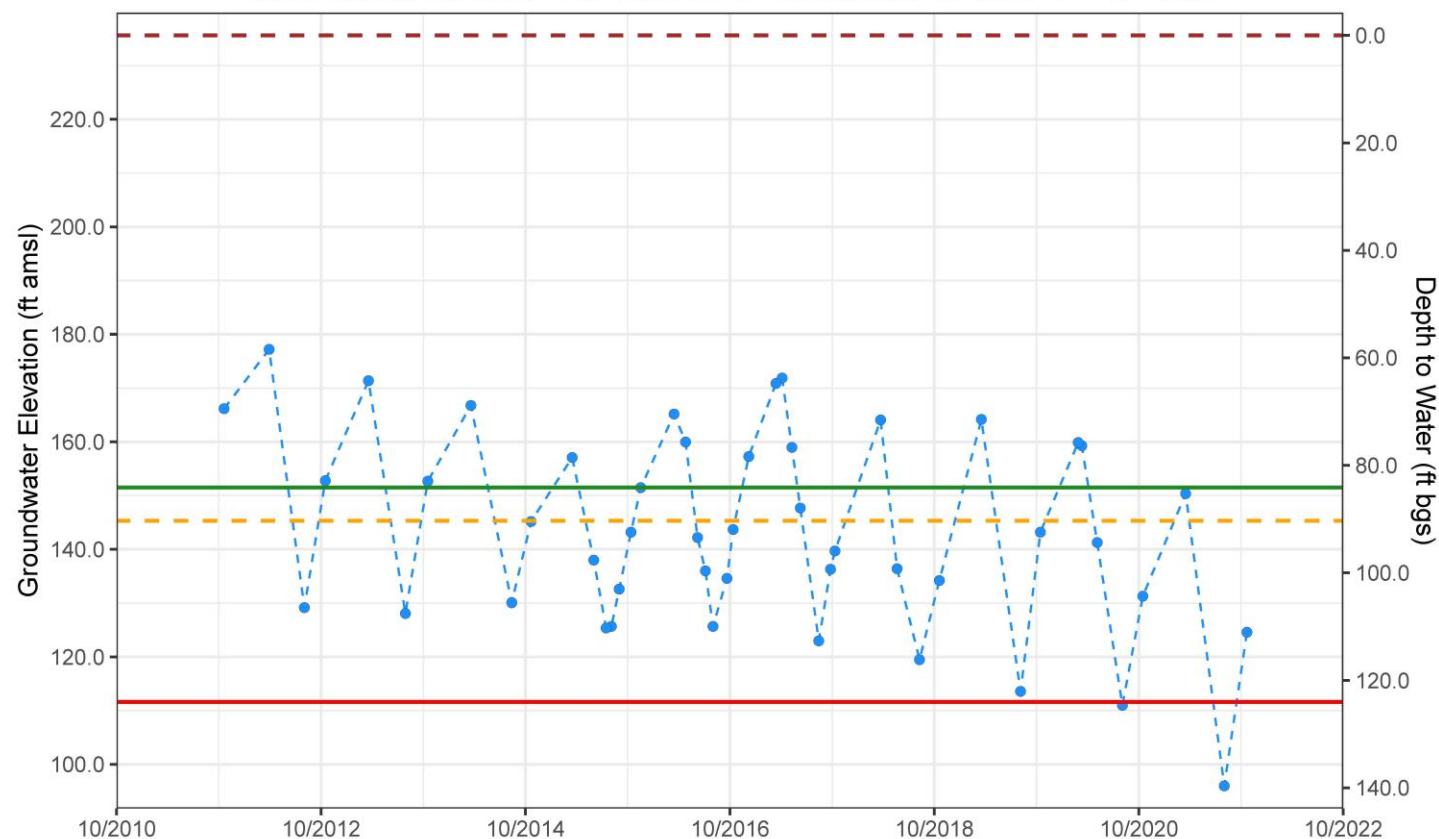
MO = 151.5 ft amsl

MT = 111.6 ft amsl

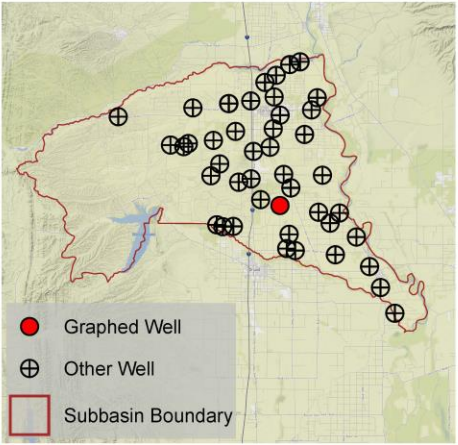
Sufficient data not available to calculate spring water level statistics for 20 years

## Corning Subbasin – State Well Number (SWN) 23N03W25M002M

Upper Aquifer (Deep Zone) Well Depth: 513 ft. Perforation top & bottom: 470 – 500 ft bgs



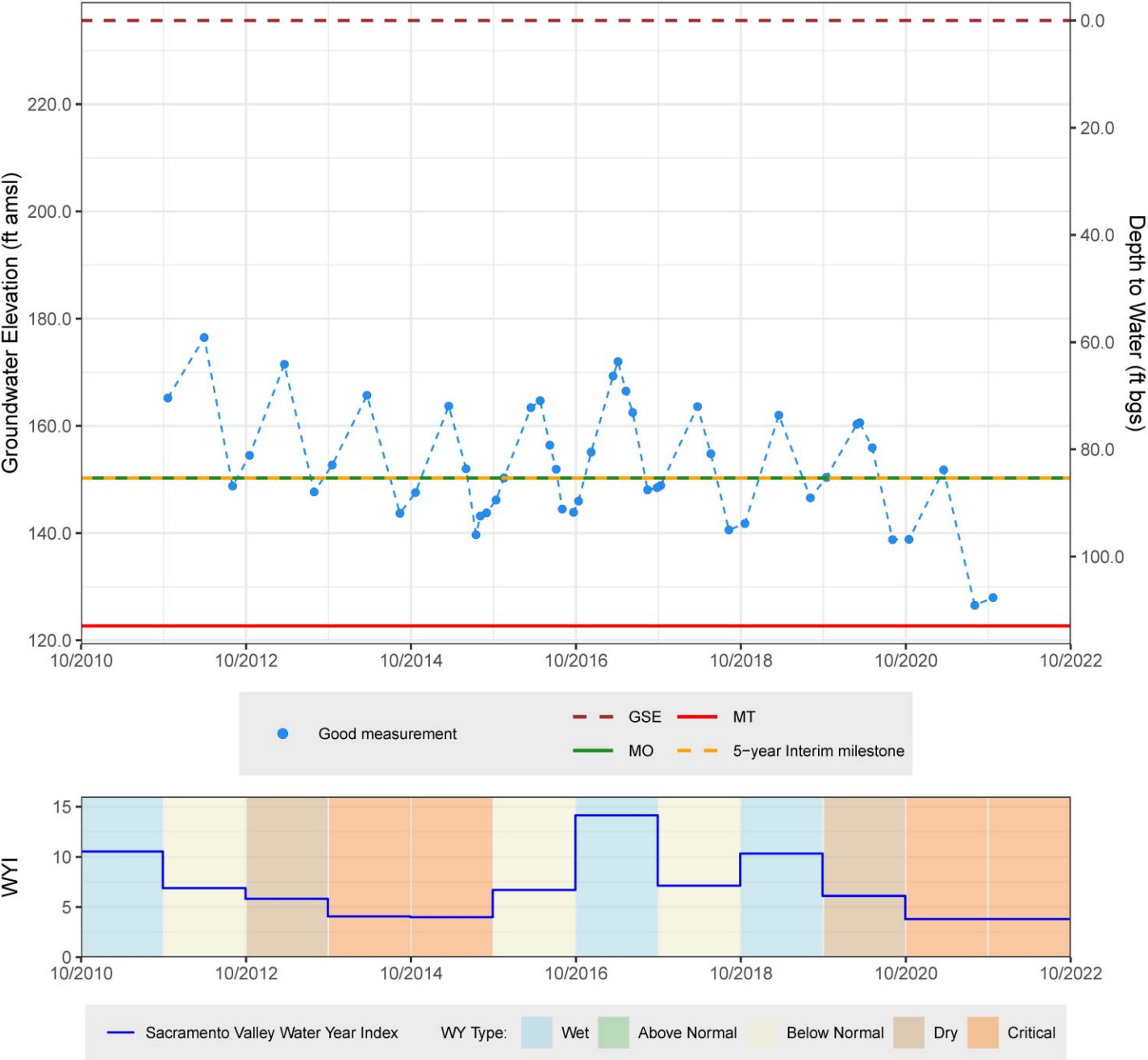
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



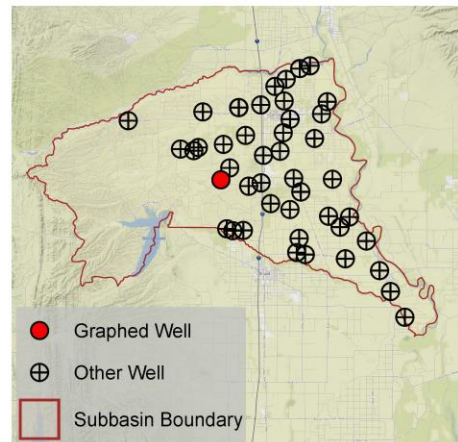
Sustainable Management Criteria  
IM (2027) = 150.3 ft amsl  
MO = 150.3 ft amsl  
MT = 122.7 ft amsl

Sufficient data not available to calculate  
spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 23N03W25M004M**  
Upper Aquifer (Shallow Zone) Well Depth: 155 ft. Perforation top & bottom: 120 – 130 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 198.6 ft amsl

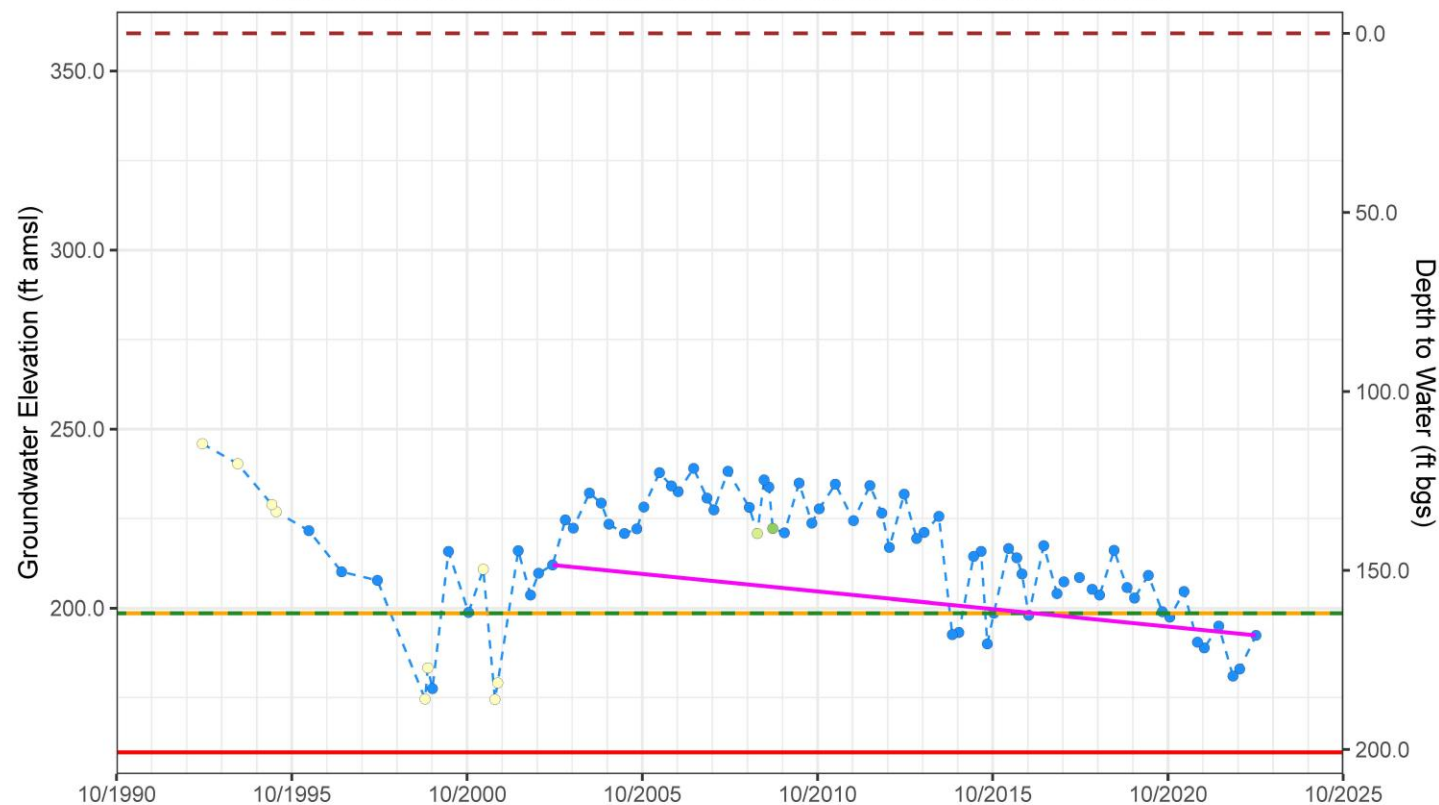
MO = 198.6 ft amsl

MT = 159.7 ft amsl

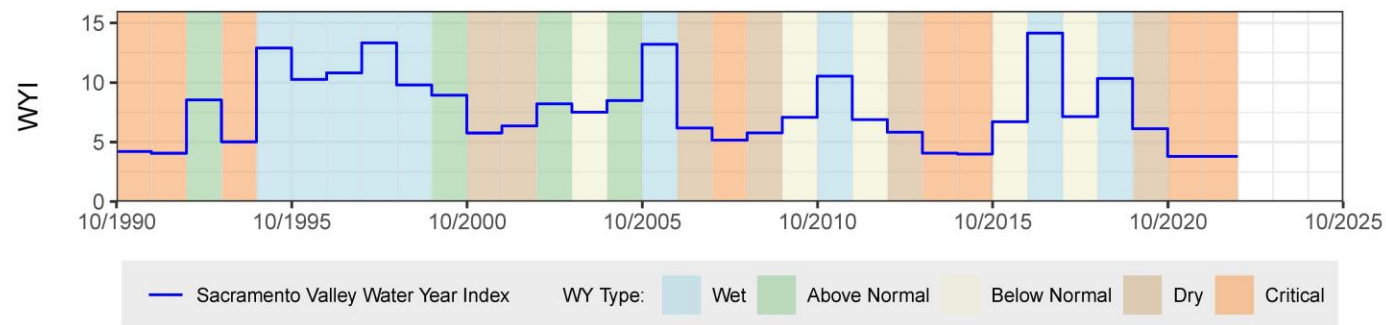
Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -19.61 ft  
 Average rate of change = -0.98 ft/year  
 Average water level = 221.61 ft amsl

## Corning Subbasin – State Well Number (SWN) 23N04W13G001M

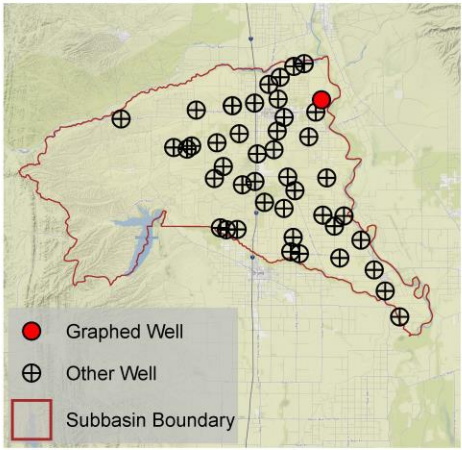
Upper Aquifer (Deep Zone) Well Depth: 560 ft. Perforation top & bottom: Unknown



● Good measurement  
 ● Oil or foreign substance in casing  
 ● Casing leaking or wet  
 ● Affected by other conditions  
 --- GSE  
 --- MO  
 --- MT  
 --- 5-year Interim milestone  
 --- Recent spring water level trend

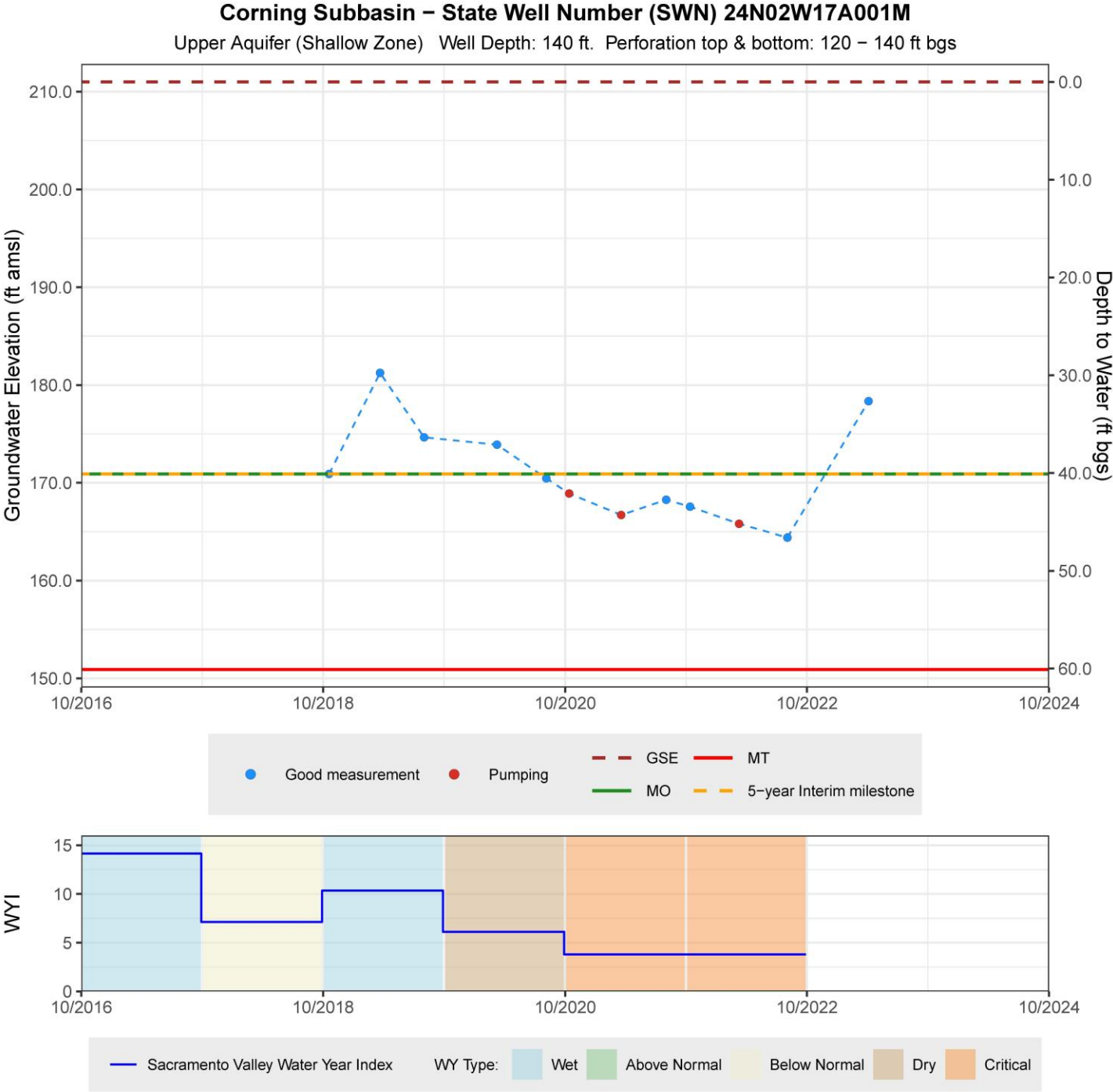


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

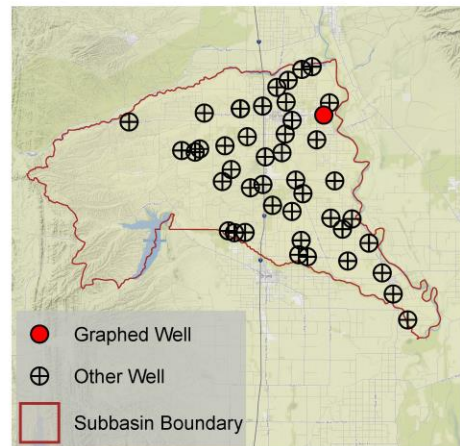


Sustainable Management Criteria  
IM (2027) = 170.9 ft amsl  
MO = 170.9 ft amsl  
MT = 150.9 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 173.3 ft amsl

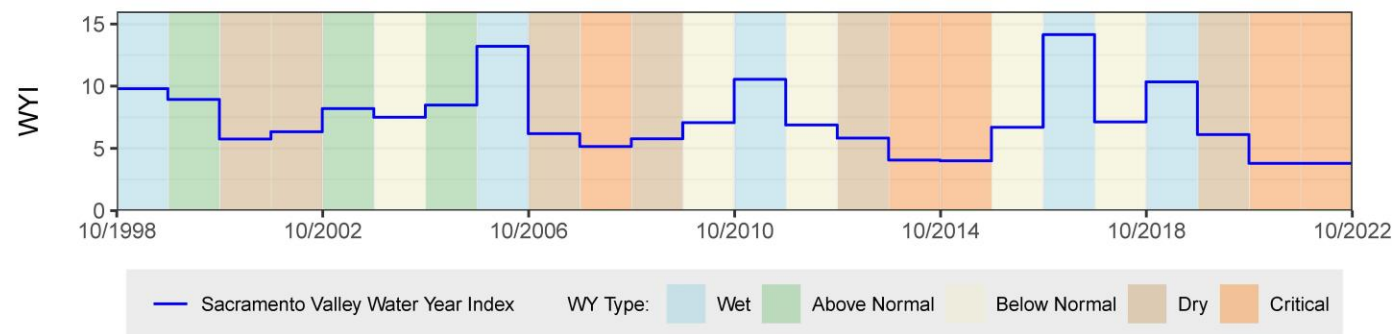
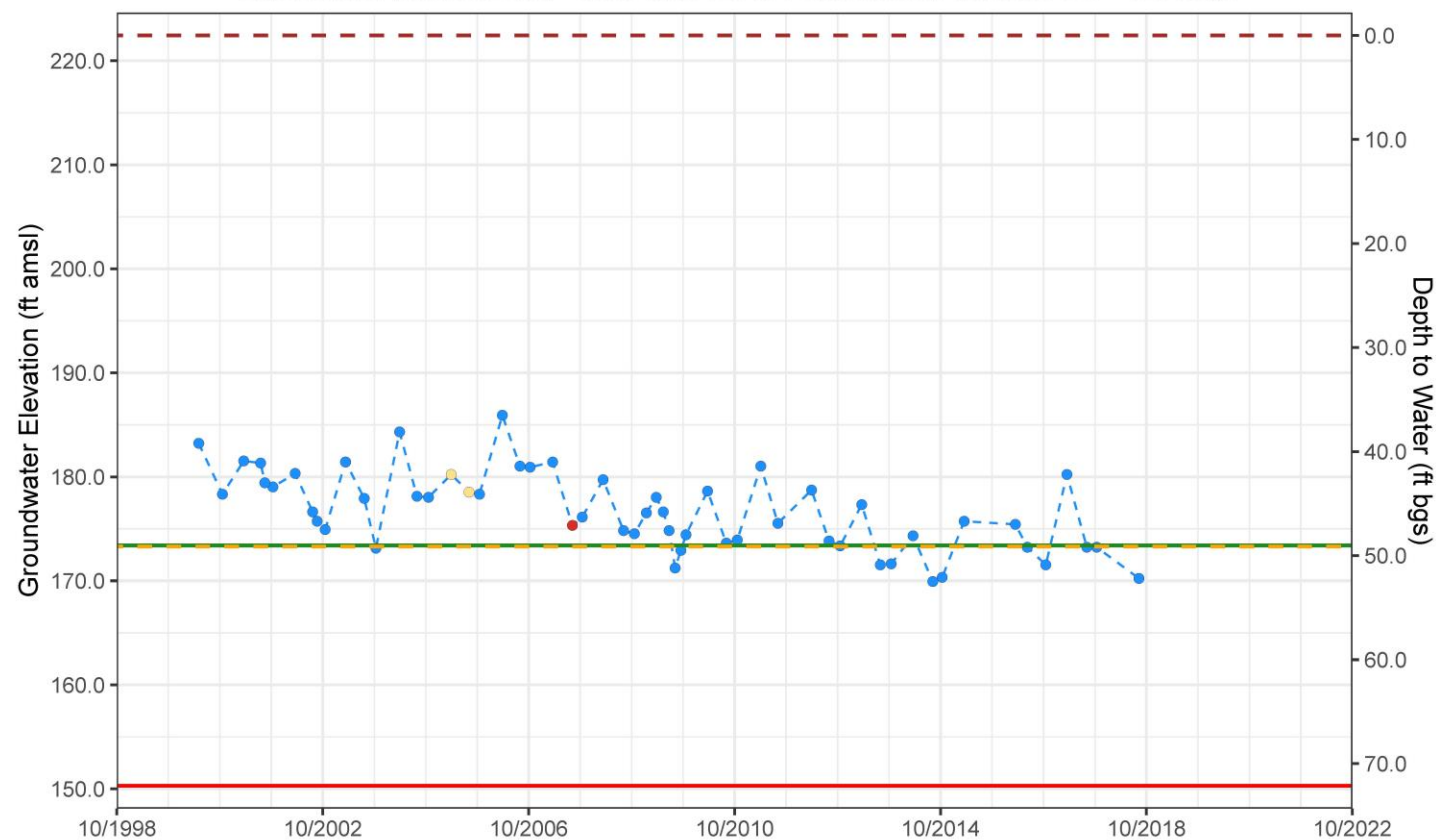
MO = 173.4 ft amsl

MT = 150.3 ft amsl

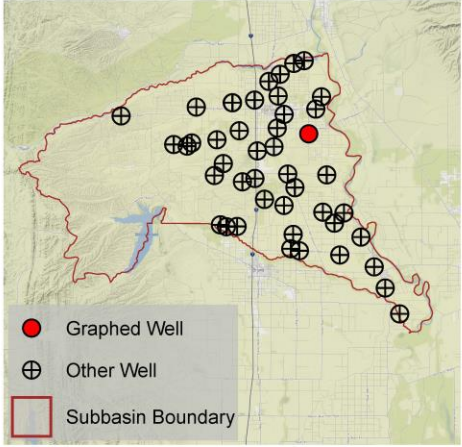
Sufficient data not available to calculate spring water level statistics for 20 years

## Corning Subbasin – State Well Number (SWN) 24N02W20B001M

Upper Aquifer (Shallow Zone) Well Depth: 120 ft. Perforation top & bottom: 100 – 120 ft bgs



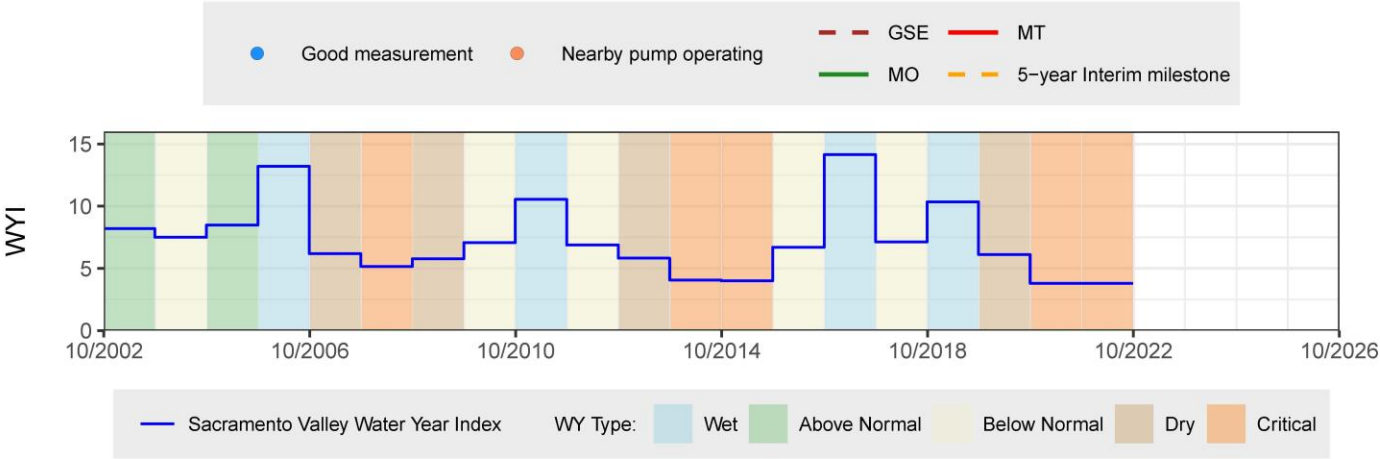
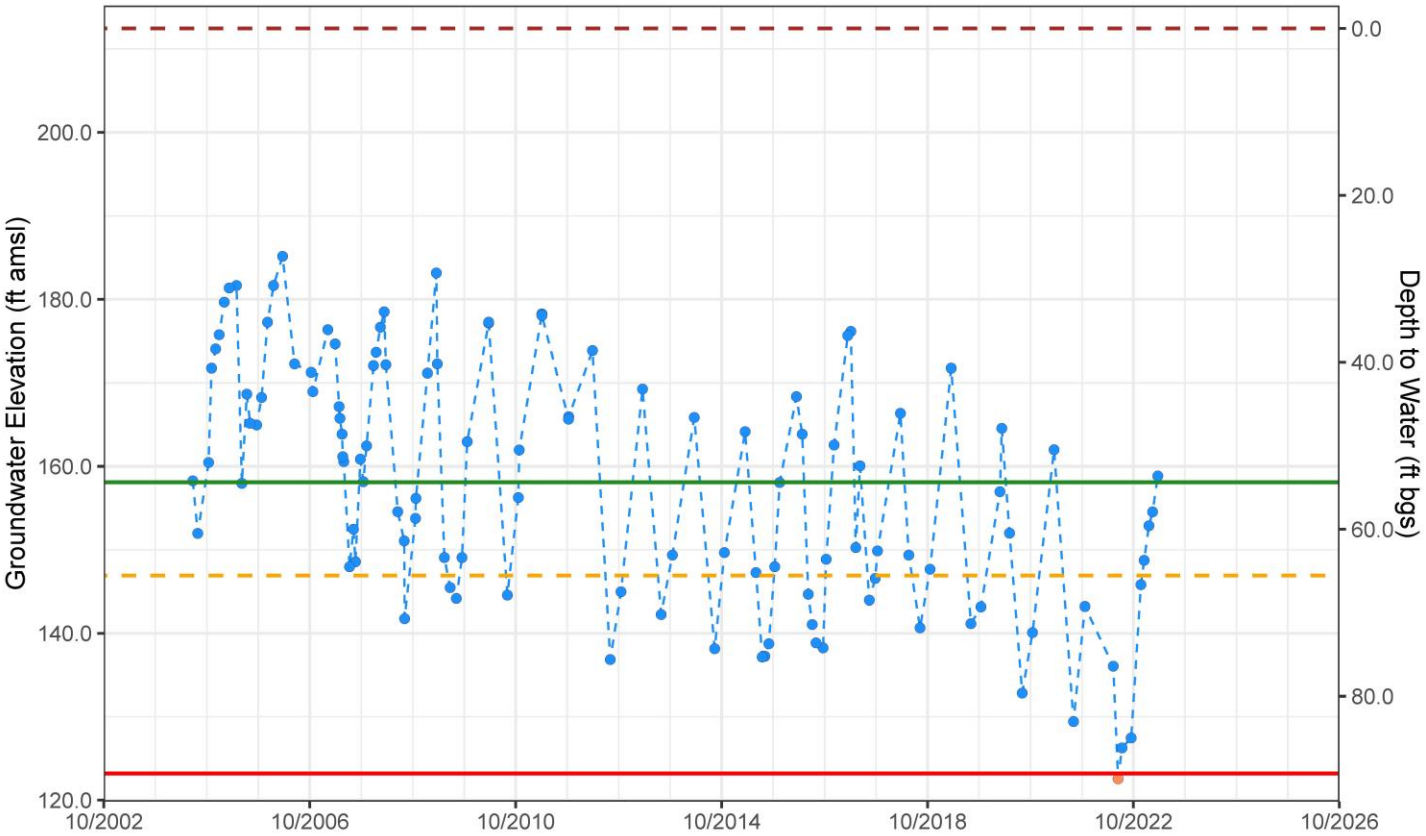
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



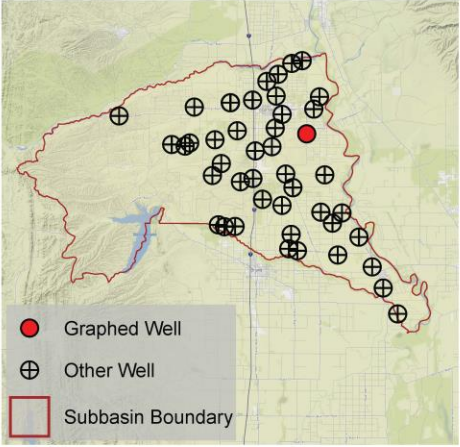
Sustainable Management Criteria  
IM (2027) = 146.9 ft amsl  
MO = 158.1 ft amsl  
MT = 123.2 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 24N02W29N003M**  
Upper Aquifer (Shallow Zone) Well Depth: 388 ft. Perforation top & bottom: 200 – 290 ft bgs



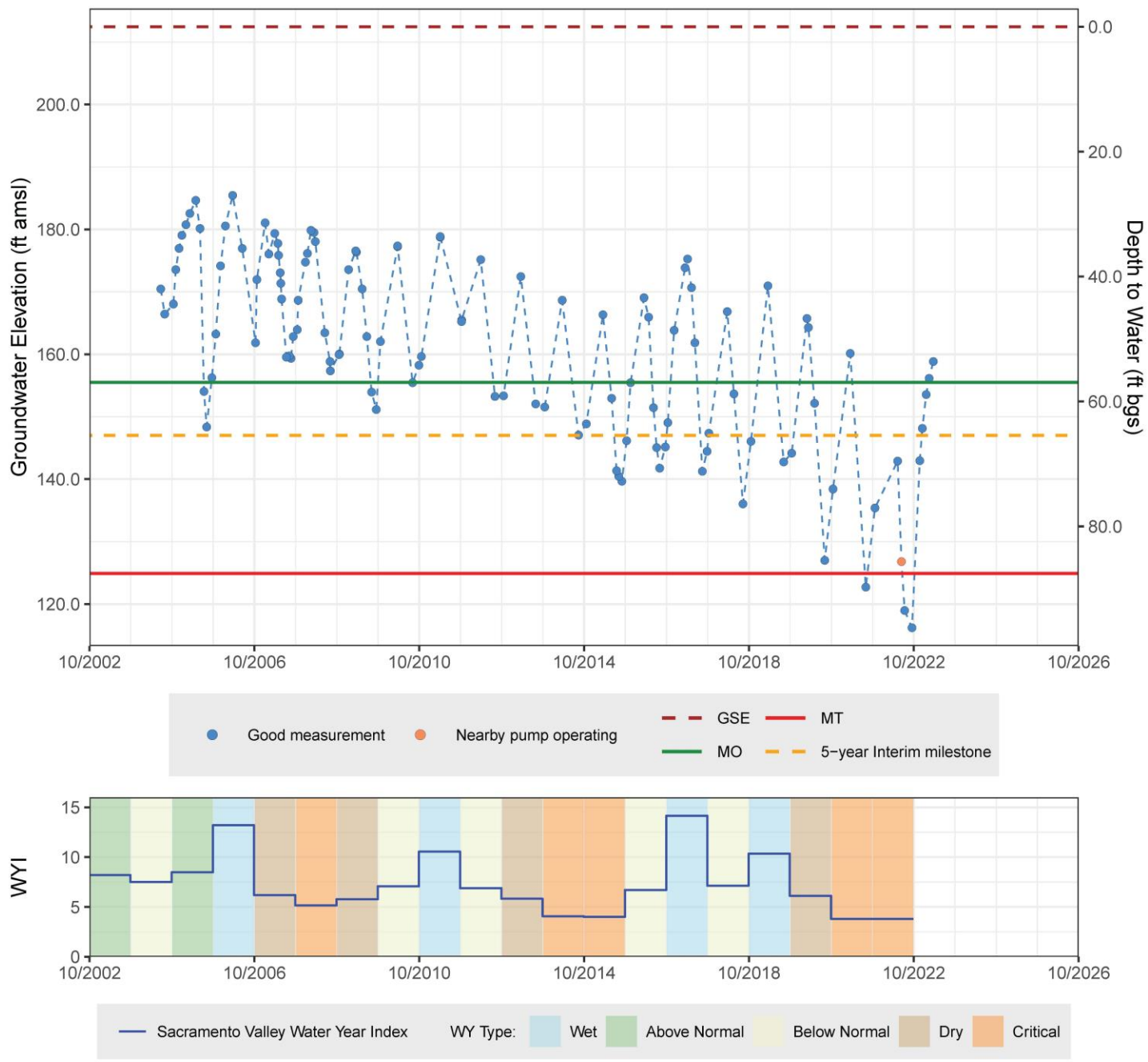
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



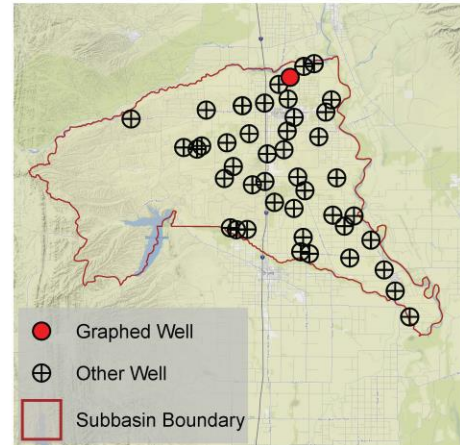
Sustainable Management Criteria  
 IM (2027) = 147.0 ft amsl  
 MO = 155.5 ft amsl  
 MT = 124.9 ft amsl

Sufficient data not available to calculate  
 spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 24N02W29N004M**  
 Upper Aquifer (Deep Zone) Well Depth: 741 ft. Perforation top & bottom: 590 – 710 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



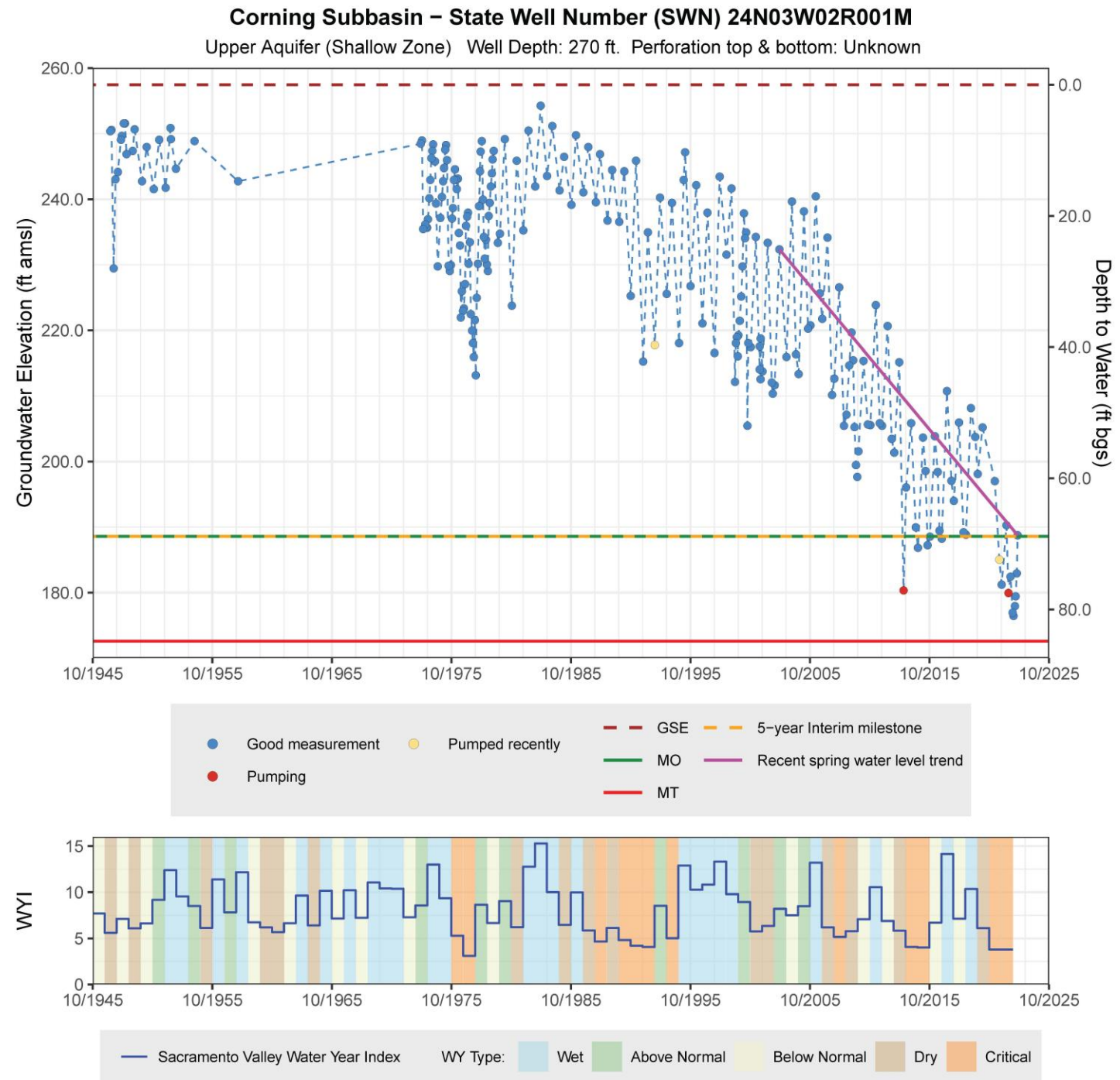
## Sustainable Management Criteria

IM (2027) = 188.6 ft amsl

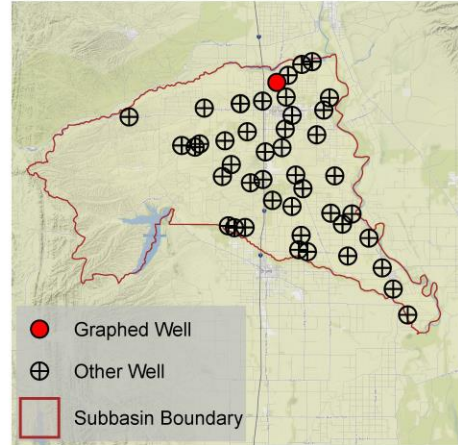
MO = 188.6 ft amsl

MT = 172.6 ft amsl

Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -43.6 ft  
 Average rate of change = -2.18 ft/year  
 Average water level = 234.59 ft amsl



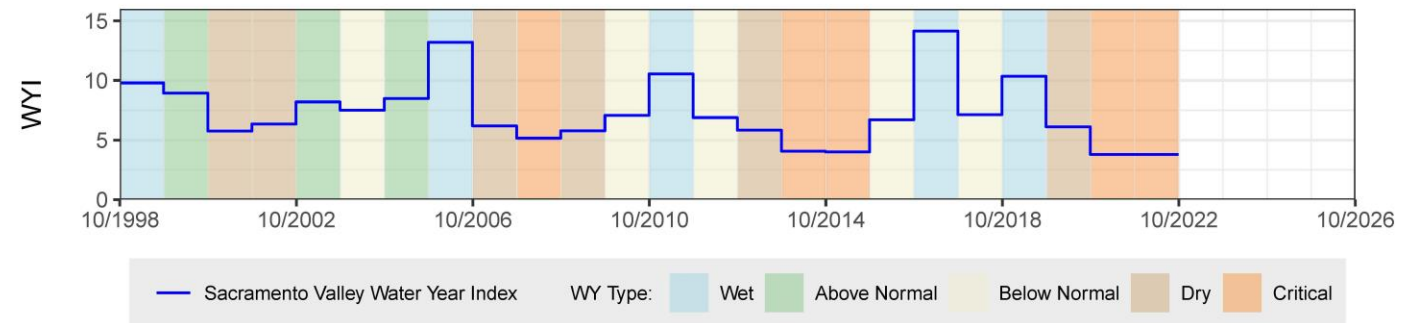
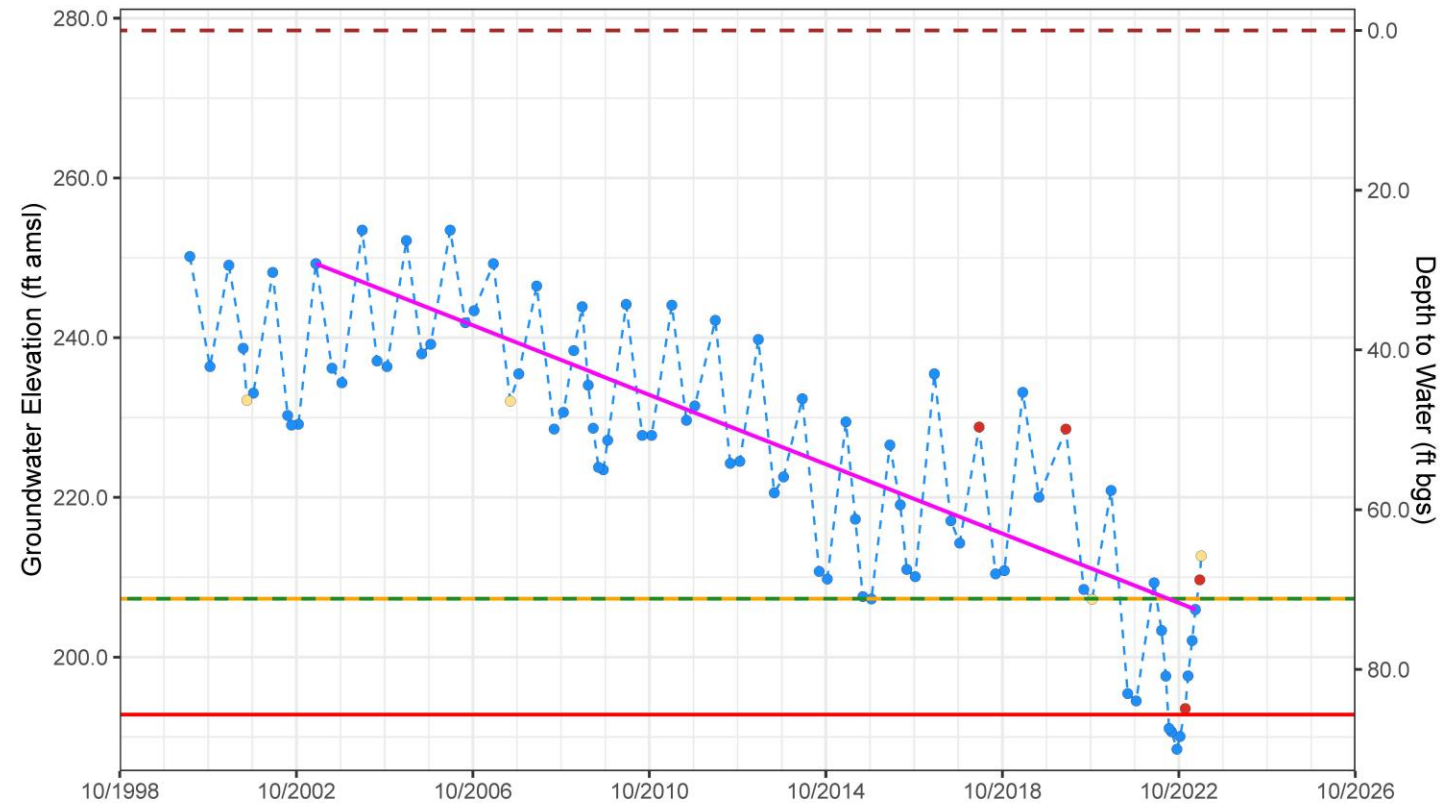
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



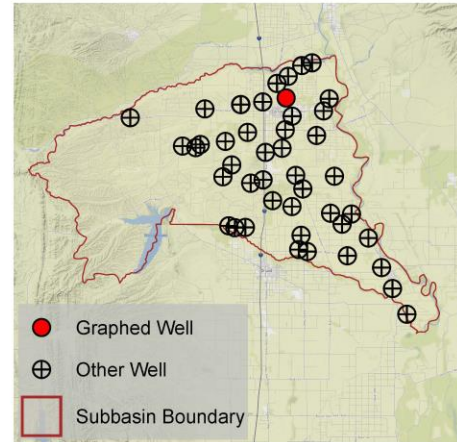
Sustainable Management Criteria  
 IM (2027) = 207.3 ft amsl  
 MO = 207.3 ft amsl  
 MT = 192.8 ft amsl

Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -43.3 ft  
 Average rate of change = -2.16 ft/year  
 Average water level = 238.49 ft amsl

**Corning Subbasin – State Well Number (SWN) 24N03W03R002M**  
 Upper Aquifer (Shallow Zone) Well Depth: 132 ft. Perforation top & bottom: 112 – 132 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

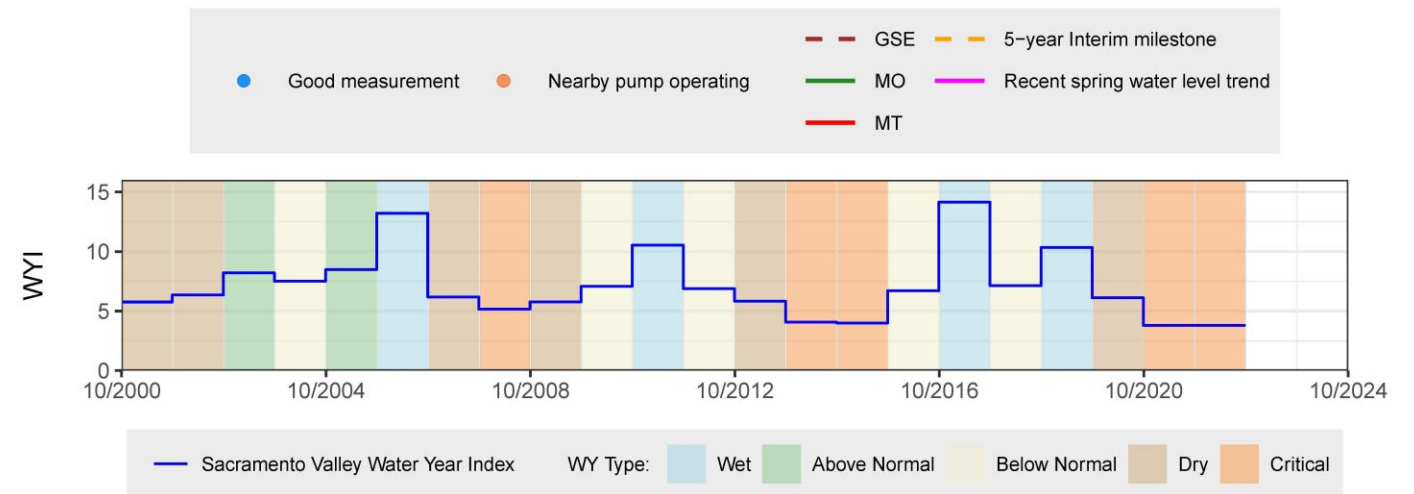
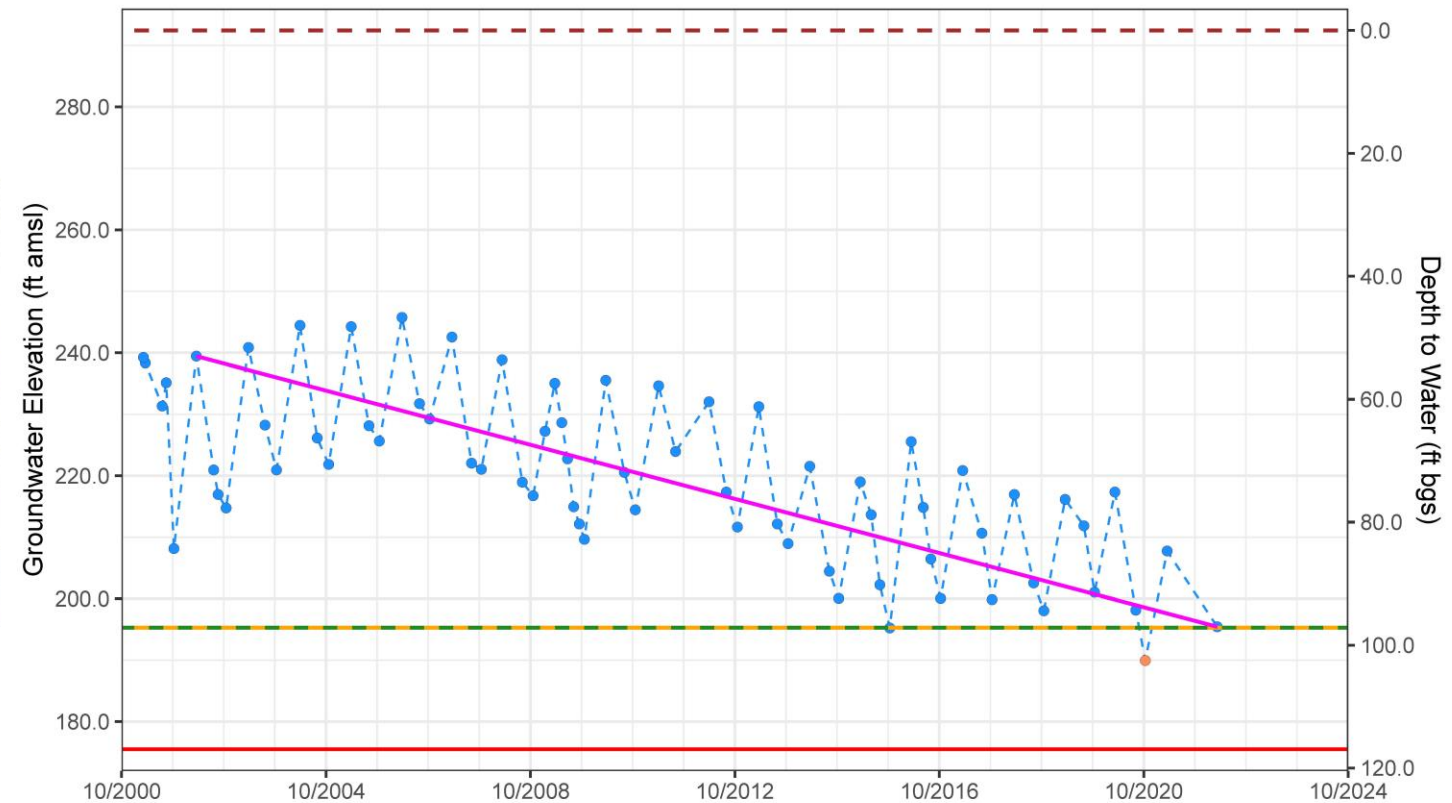
IM (2027) = 195.3 ft amsl

MO = 195.3 ft amsl

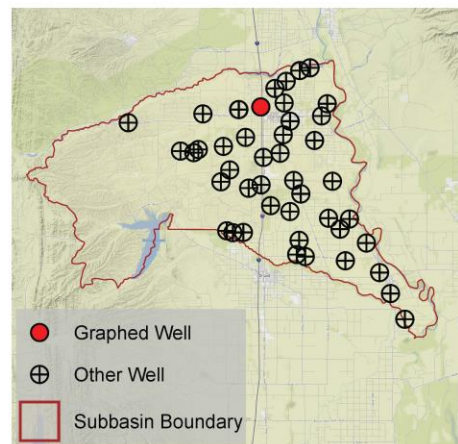
MT = 175.5 ft amsl

Statistics of spring water levels for past 20 years (2002 to 2022):  
Change = -44 ft  
Average rate of change = -2.2 ft/year  
Average water level = 229.3 ft amsl

## Corning Subbasin – State Well Number (SWN) 24N03W14B001M Upper Aquifer (Shallow Zone) Well Depth: 140 ft. Perforation top & bottom: 130 – 140 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

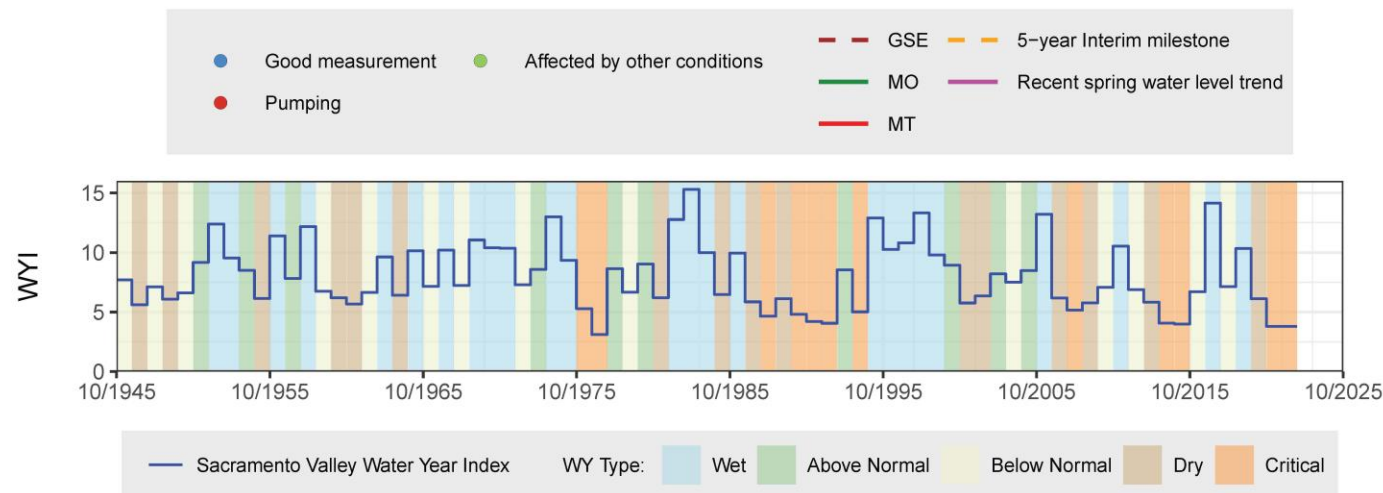
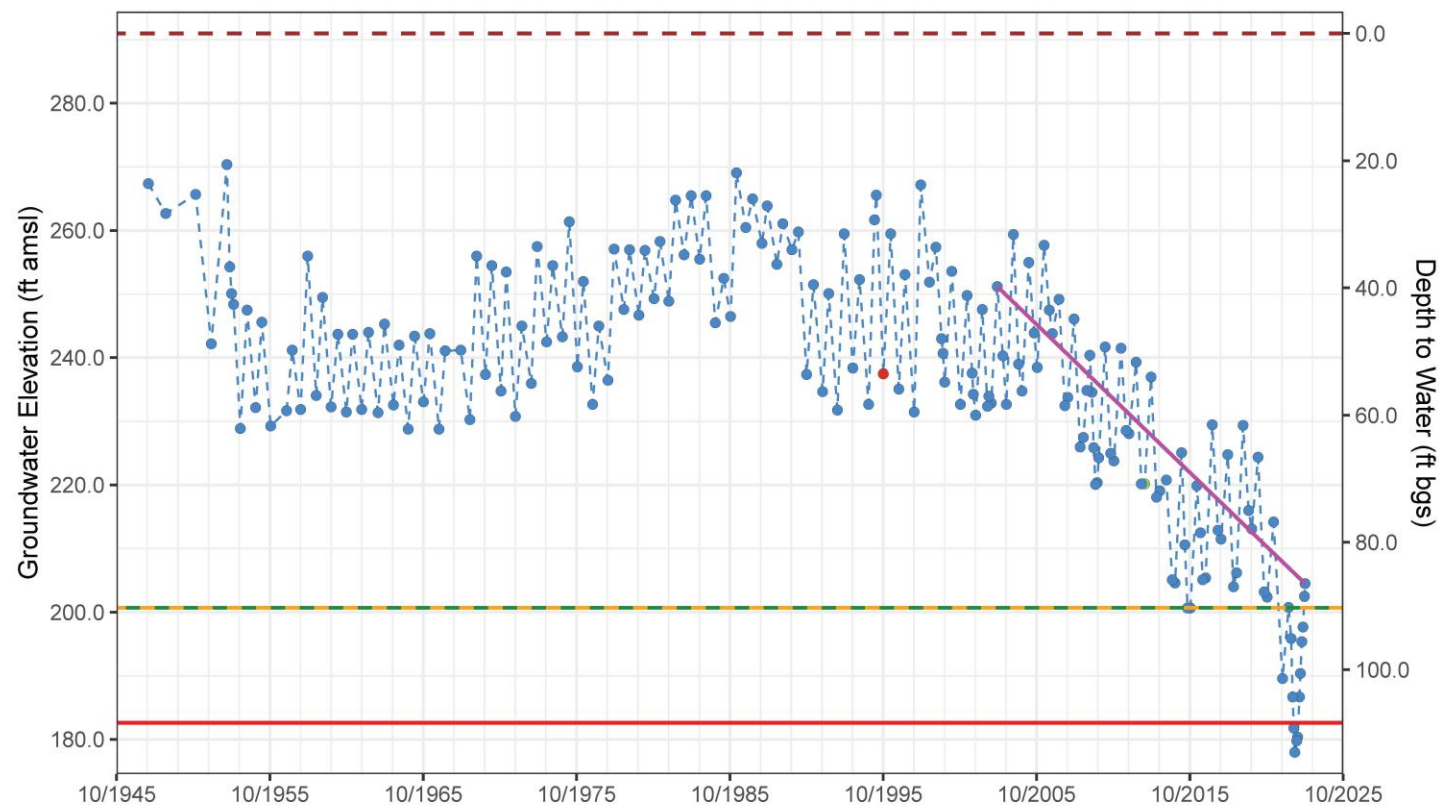
IM (2027) = 200.7 ft amsl

MO = 200.7 ft amsl

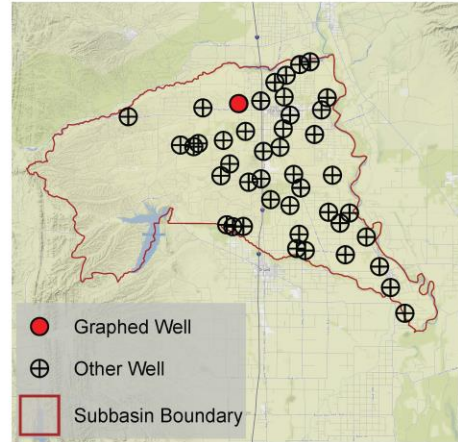
MT = 182.6 ft amsl

Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -46.7 ft  
 Average rate of change = -2.33 ft/year  
 Average water level = 247.58 ft amsl

## Corning Subbasin – State Well Number (SWN) 24N03W16A001M Upper Aquifer (Shallow Zone) Well Depth: 195 ft. Perforation top & bottom: 85 – 195 ft bgs



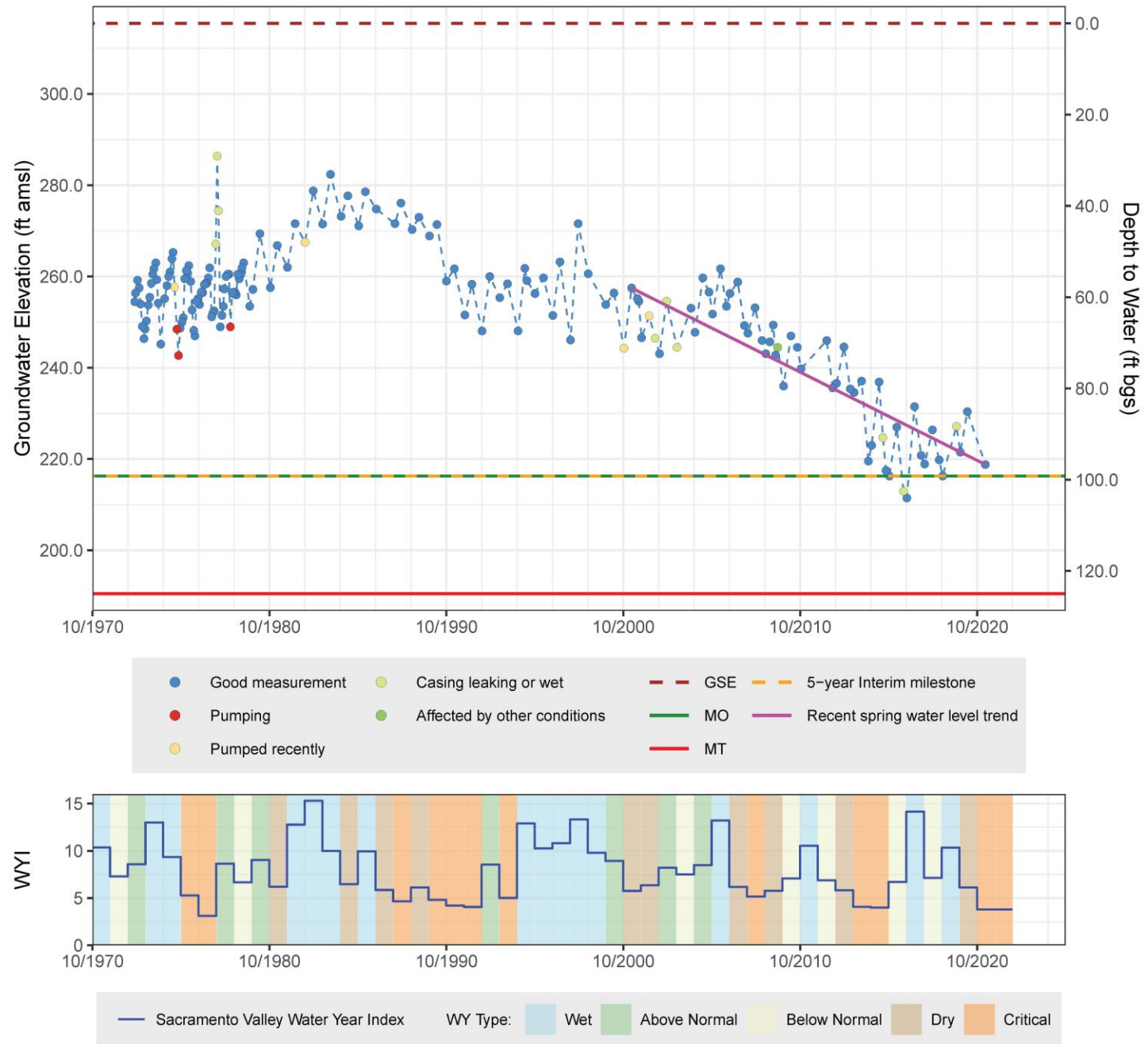
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



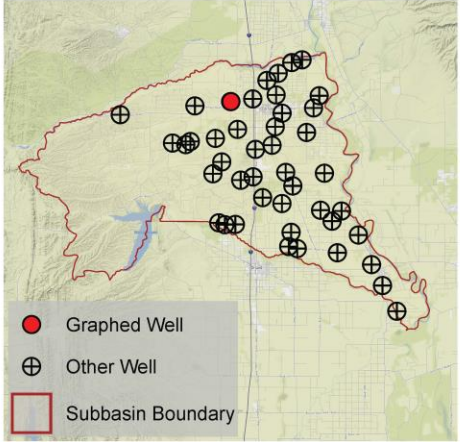
Sustainable Management Criteria  
 IM (2027) = 216.3 ft amsl  
 MO = 216.3 ft amsl  
 MT = 190.5 ft amsl

Statistics of spring water levels for  
 past 20 years (2001 to 2021):  
 Change = -38.7 ft  
 Average rate of change = -1.94 ft/year  
 Average water level = 257.42 ft amsl

**Corning Subbasin – State Well Number (SWN) 24N03W17M001M**  
 Upper Aquifer (Shallow Zone) Well Depth: 108 ft. Perforation top & bottom: 100 – 108 ft bgs

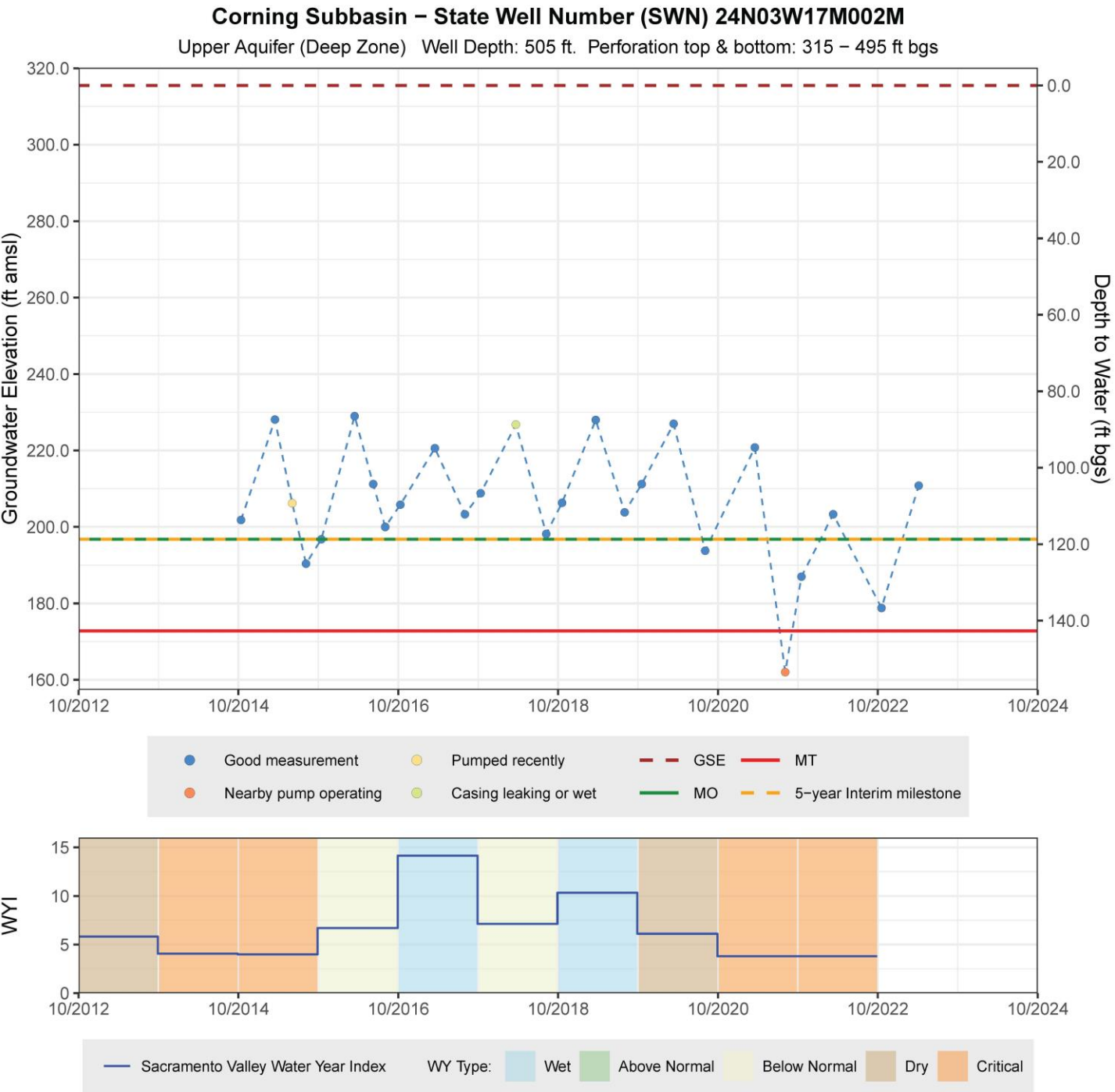


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

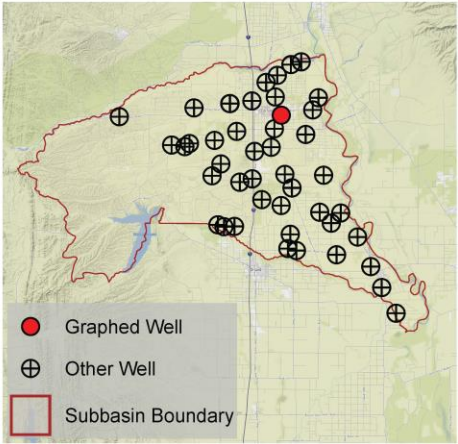


Sustainable Management Criteria  
IM (2027) = 196.8 ft amsl  
MO = 196.8 ft amsl  
MT = 172.8 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

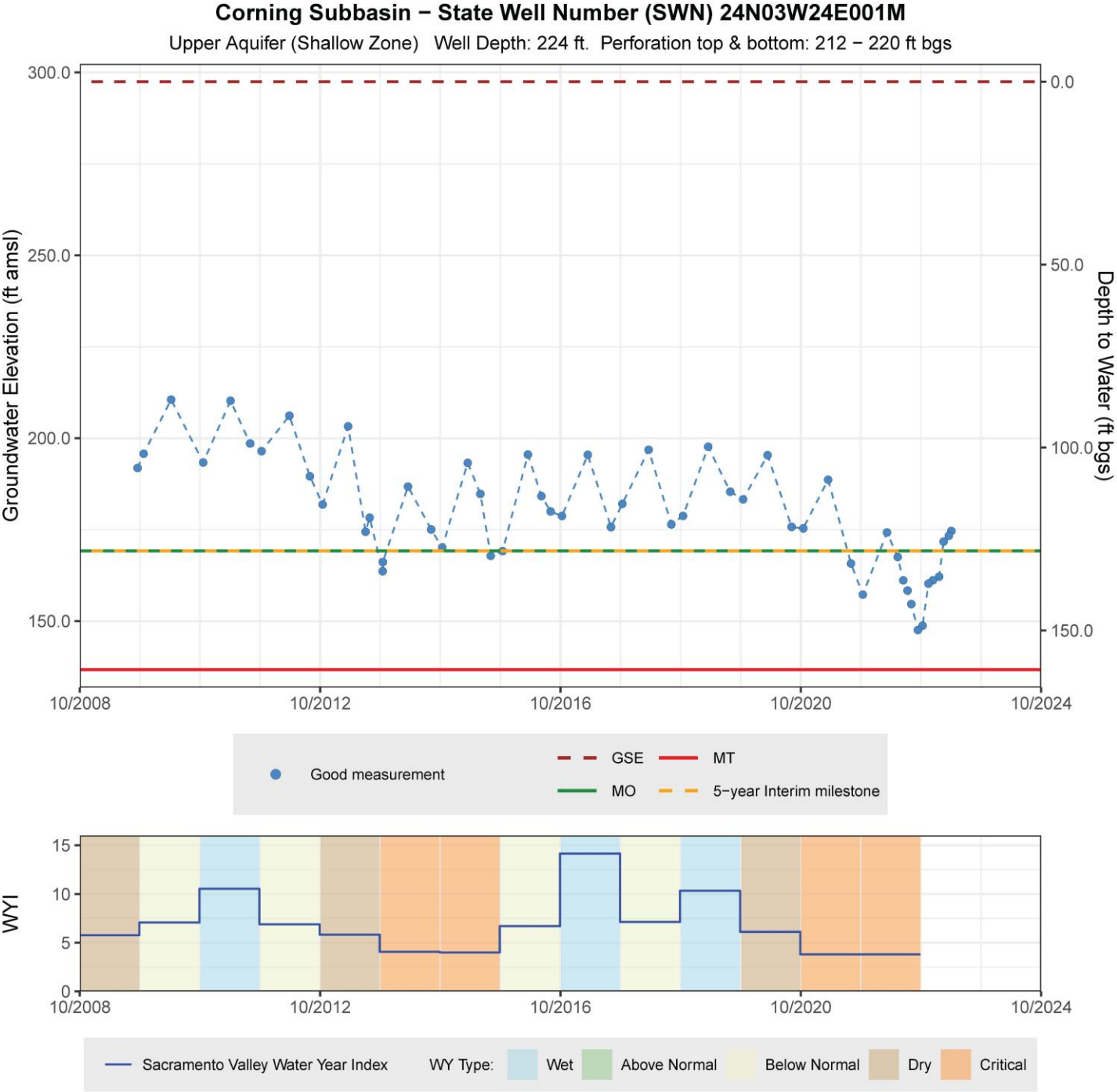


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

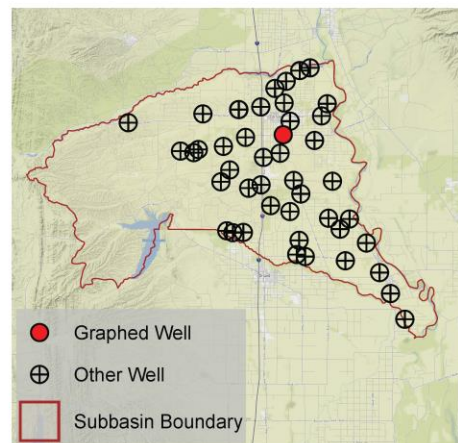


Sustainable Management Criteria  
IM (2027) = 169.2 ft amsl  
MO = 169.2 ft amsl  
MT = 136.7 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 191.1 ft amsl

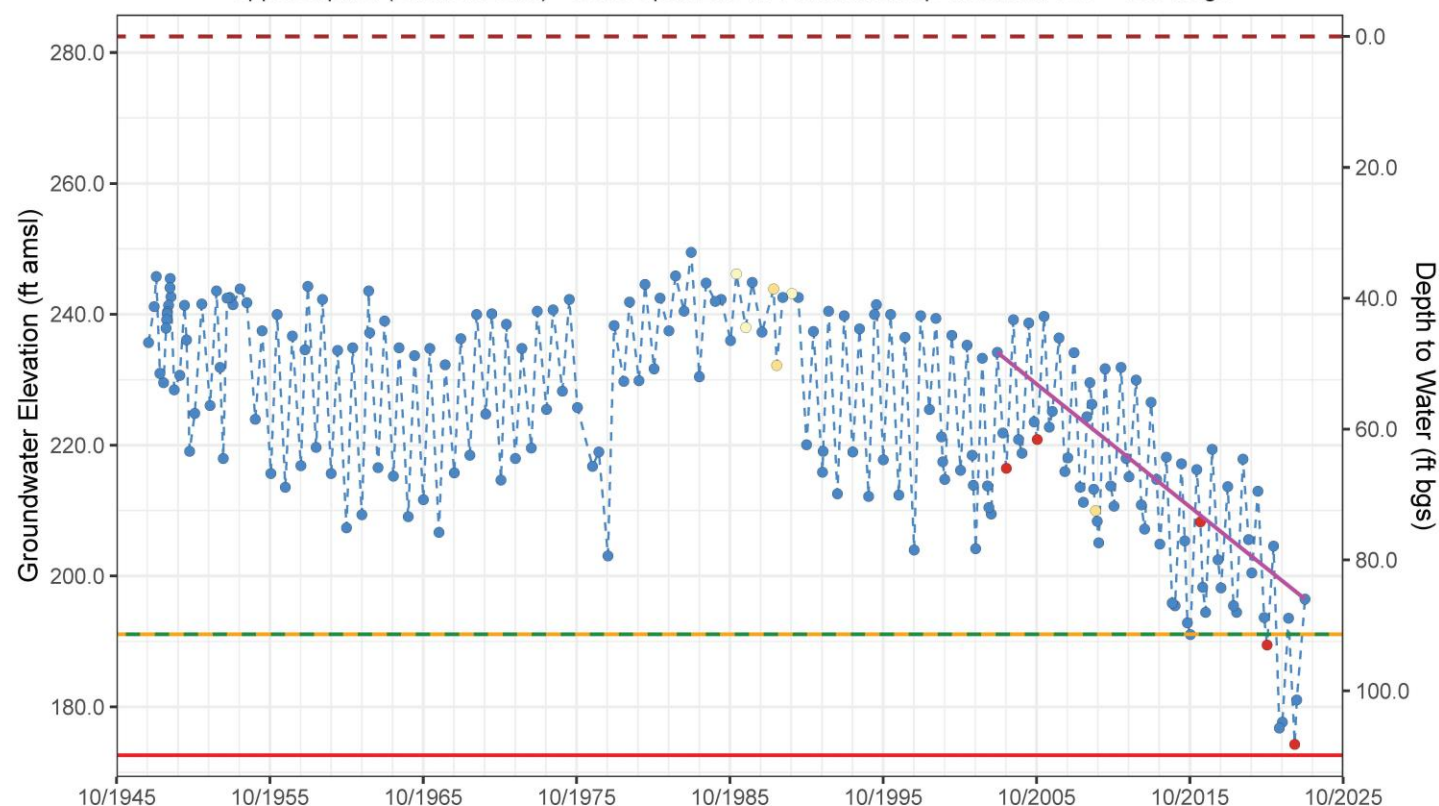
MO = 191.1 ft amsl

MT = 172.6 ft amsl

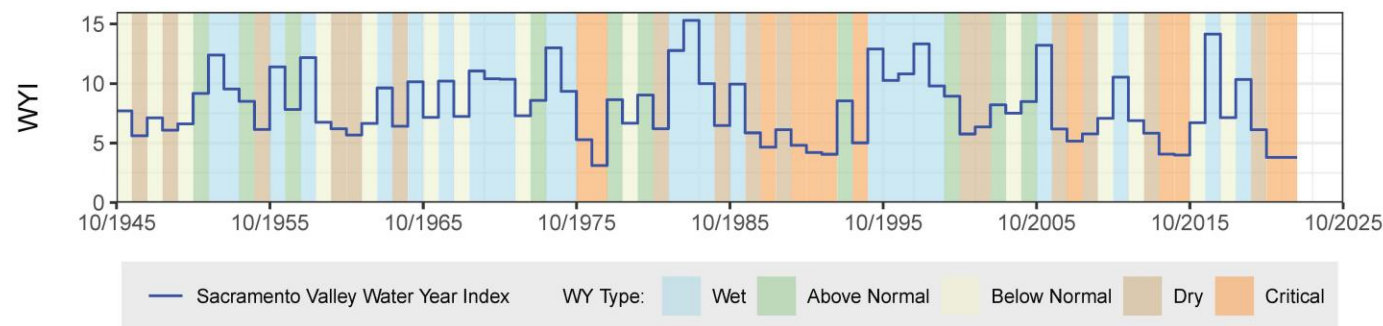
Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -37.7 ft  
 Average rate of change = -1.88 ft/year  
 Average water level = 234.89 ft amsl

## Corning Subbasin – State Well Number (SWN) 24N03W26K001M

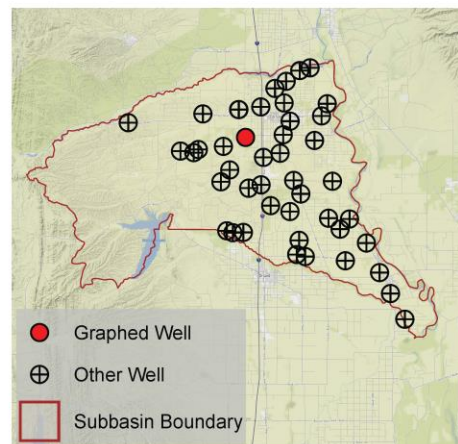
Upper Aquifer (Shallow Zone) Well Depth: 245 ft. Perforation top & bottom: 103 – 175 ft bgs



● Good measurement    ● Pumped recently  
 ● Pumping    ● Oil or foreign substance in casing  
 --- GSE    --- 5-year Interim milestone  
 --- MO    --- Recent spring water level trend  
 --- MT



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

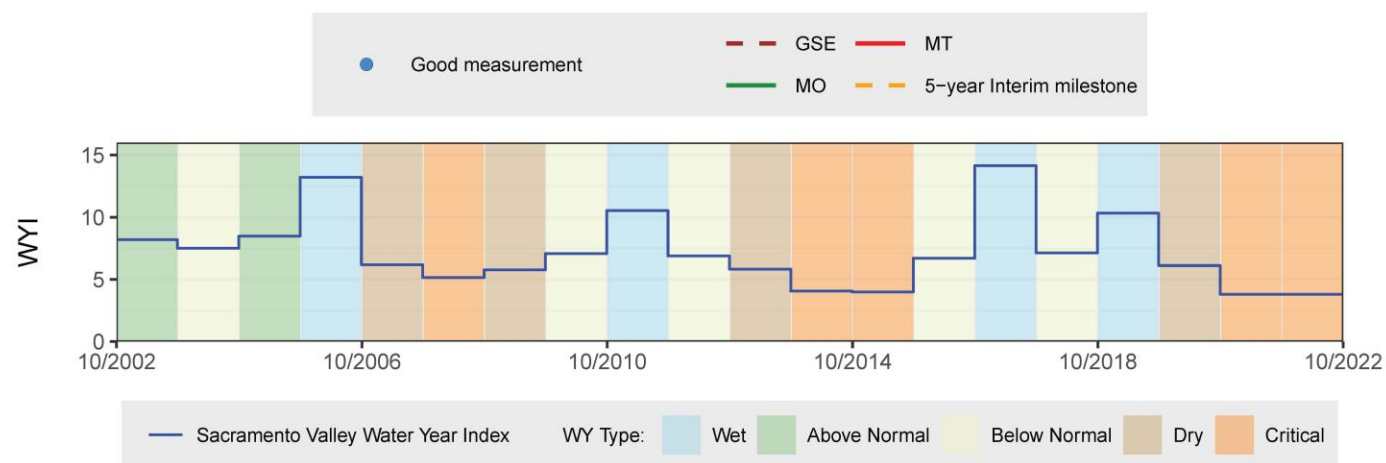
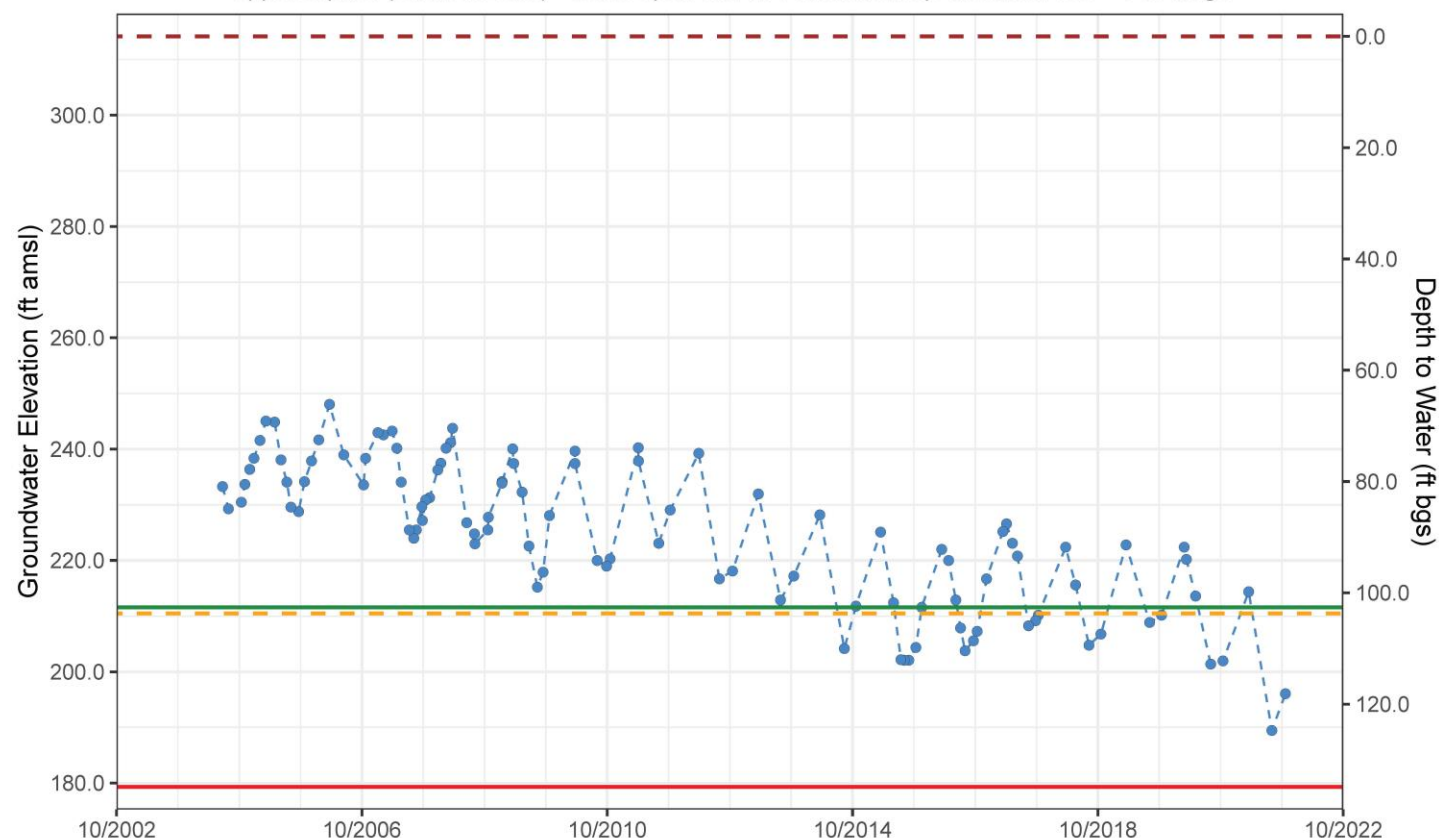
IM (2027) = 210.5 ft amsl

MO = 211.6 ft amsl

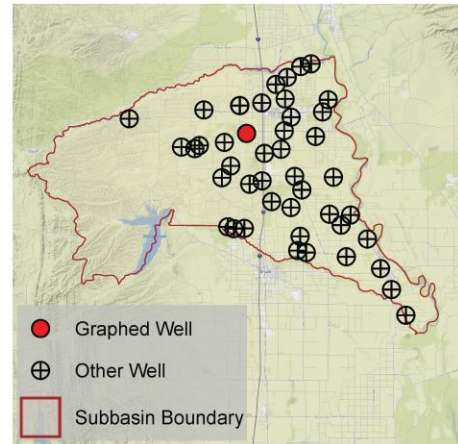
MT = 179.3 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 24N03W29Q001M**  
 Upper Aquifer (Shallow Zone) Well Depth: 372 ft. Perforation top & bottom: 130 – 360 ft bgs



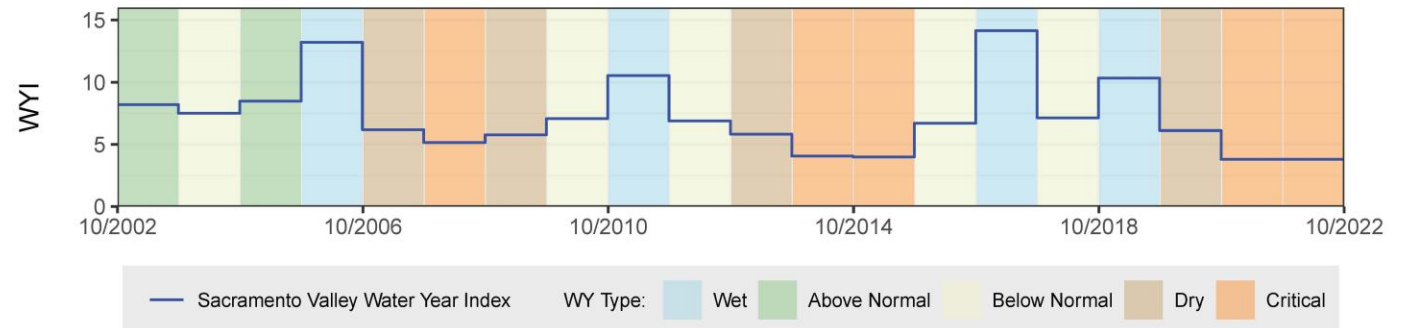
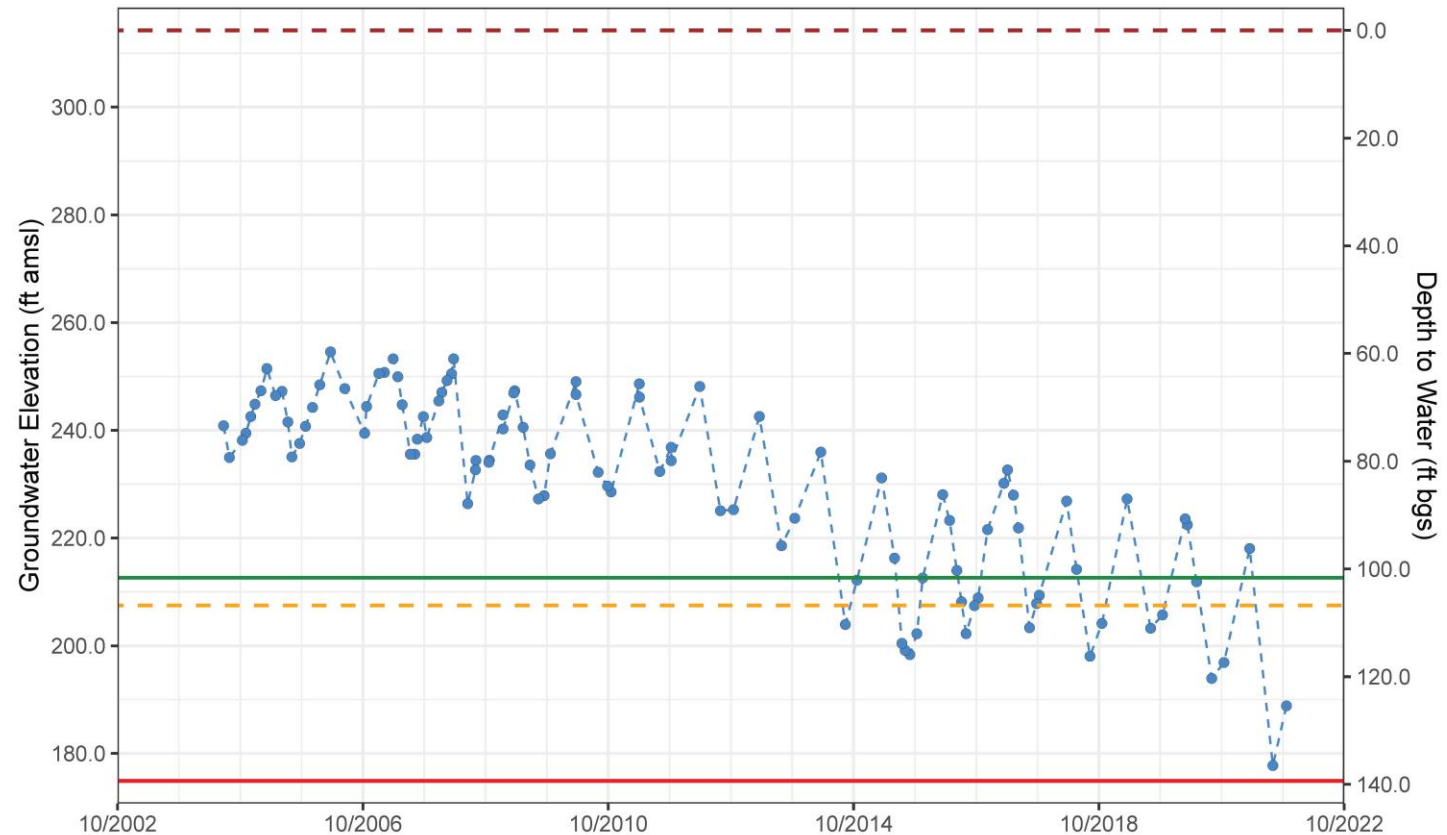
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



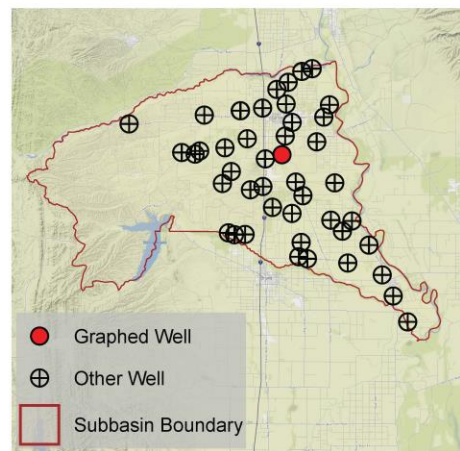
Sustainable Management Criteria  
 IM (2027) = 207.5 ft amsl  
 MO = 212.6 ft amsl  
 MT = 174.9 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

**Corning Subbasin – State Well Number (SWN) 24N03W29Q002M**  
 Upper Aquifer (Deep Zone) Well Depth: 575 ft. Perforation top & bottom: 490 – 550 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

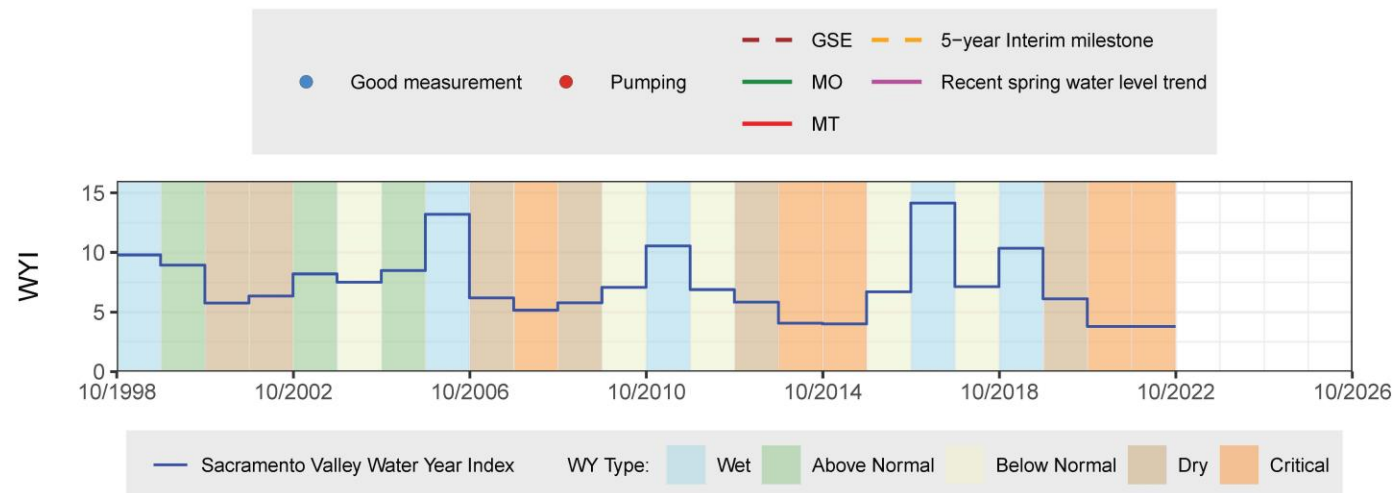
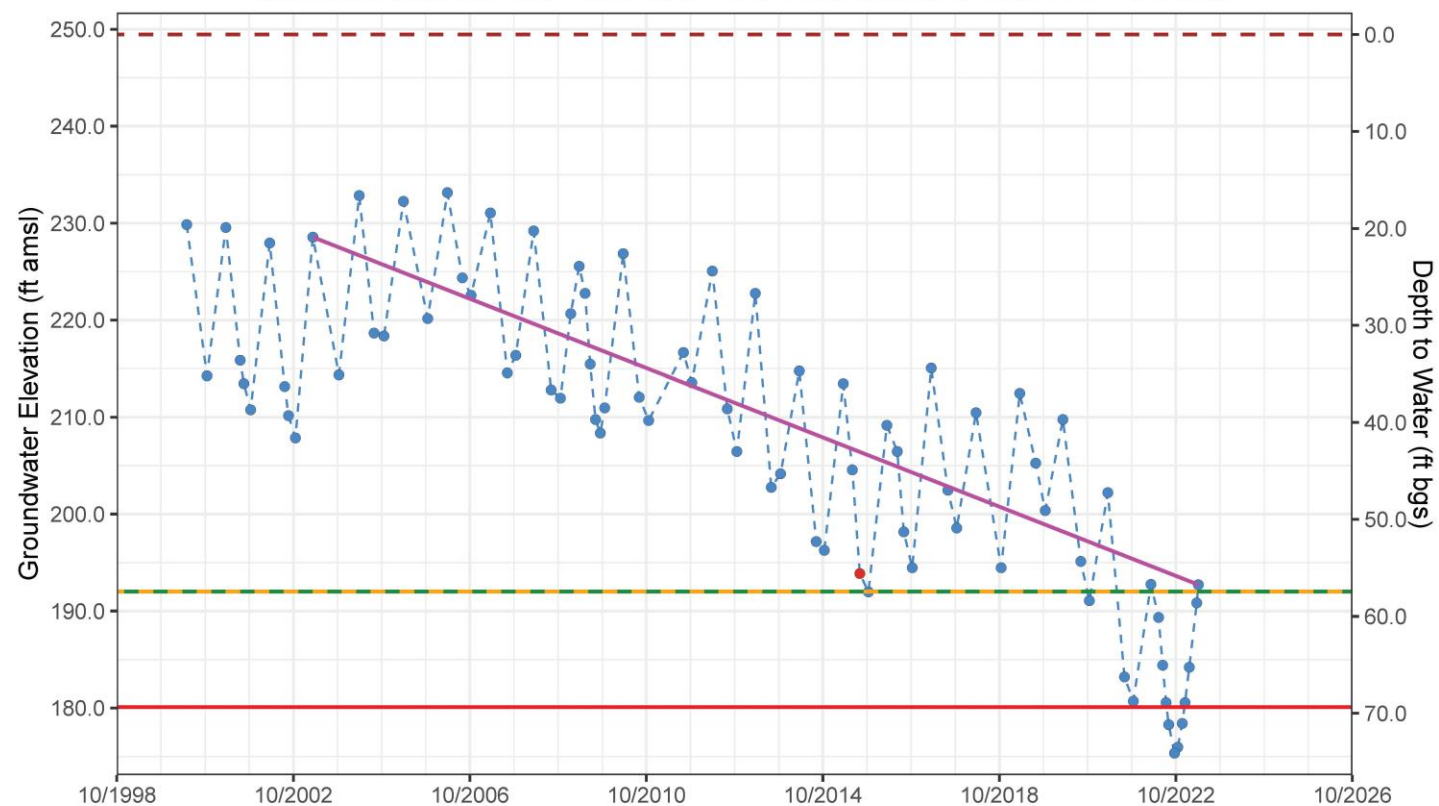
IM (2027) = 192.0 ft amsl

MO = 192.0 ft amsl

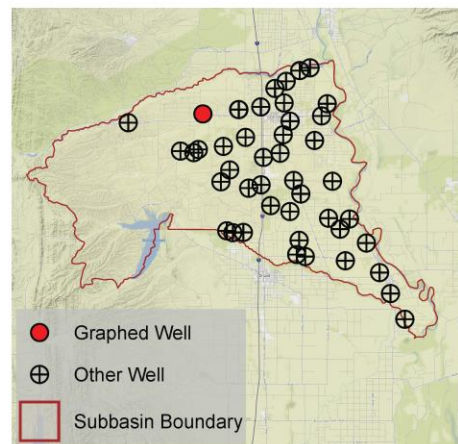
MT = 180.1 ft amsl

Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = -35.85 ft  
 Average rate of change = -1.79 ft/year  
 Average water level = 218.98 ft amsl

**Corning Subbasin – State Well Number (SWN) 24N03W35P005M**  
 Upper Aquifer (Shallow Zone) Well Depth: 120 ft. Perforation top & bottom: 100 – 120 ft bgs



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 247.4 ft amsl

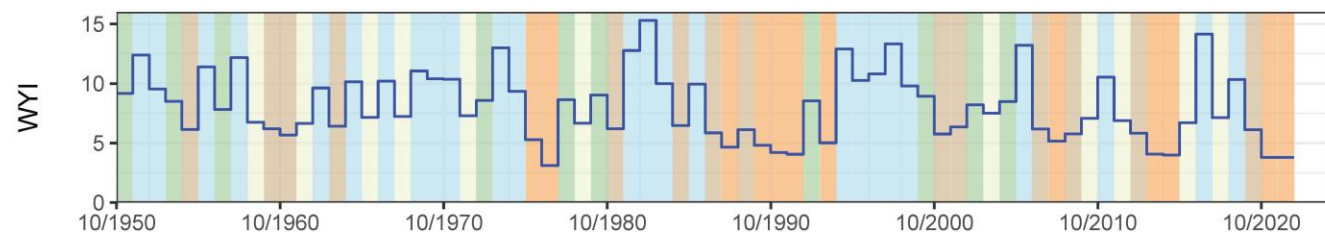
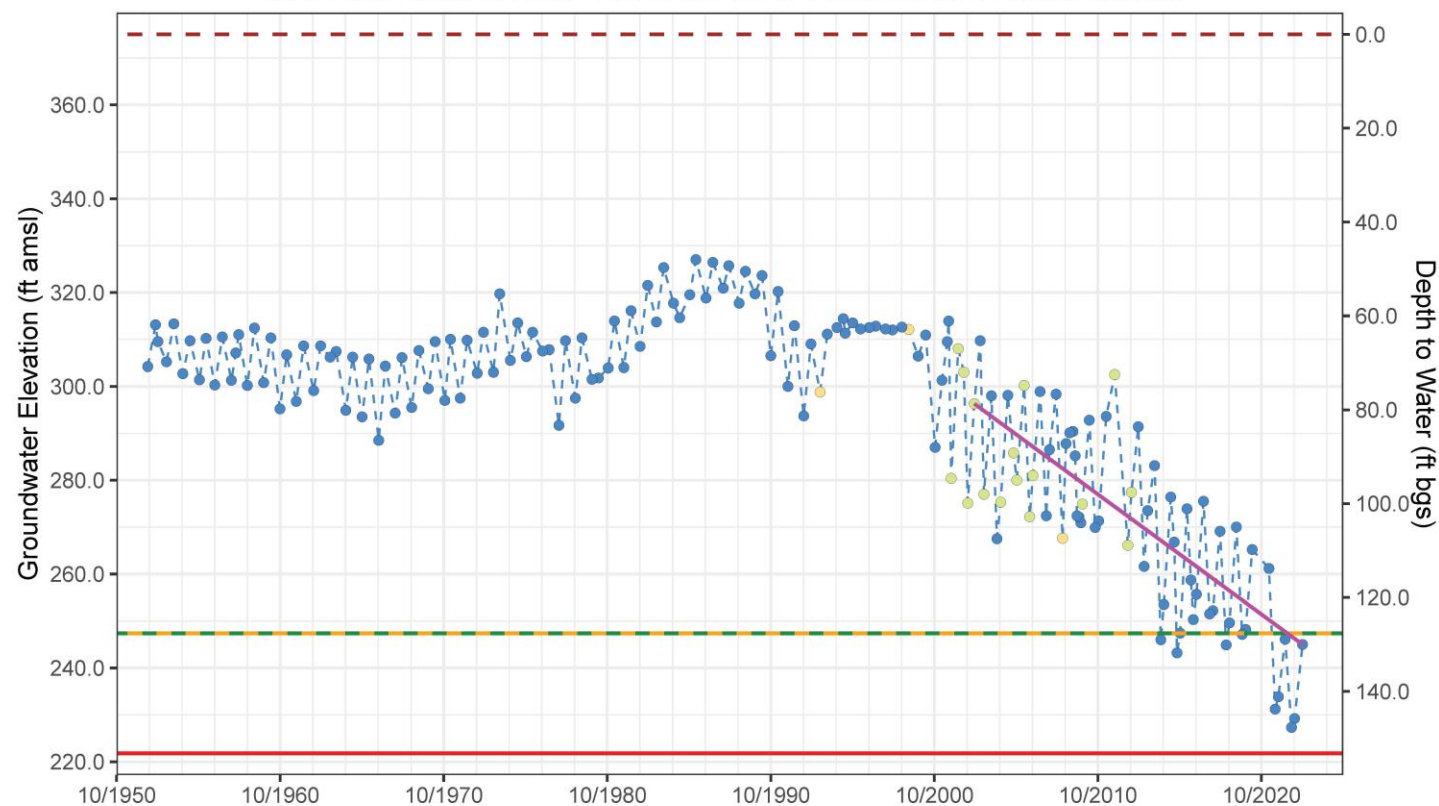
MO = 247.4 ft amsl

MT = 221.8 ft amsl

Statistics of spring water levels for past 20 years (2003 to 2023):  
 Change = -51.3 ft  
 Average rate of change = -2.56 ft/year  
 Average water level = 303.41 ft amsl

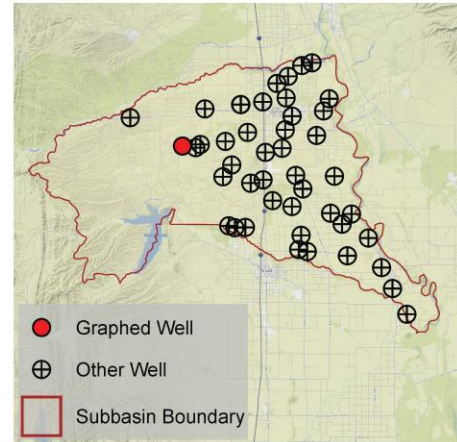
## Corning Subbasin – State Well Number (SWN) 24N04W14N002M

Upper Aquifer (Shallow Zone) Well Depth: 180 ft. Perforation top & bottom: Unknown



— Sacramento Valley Water Year Index WY Type: Wet Above Normal Below Normal Dry Critical

# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

IM (2027) = 227.7 ft amsl

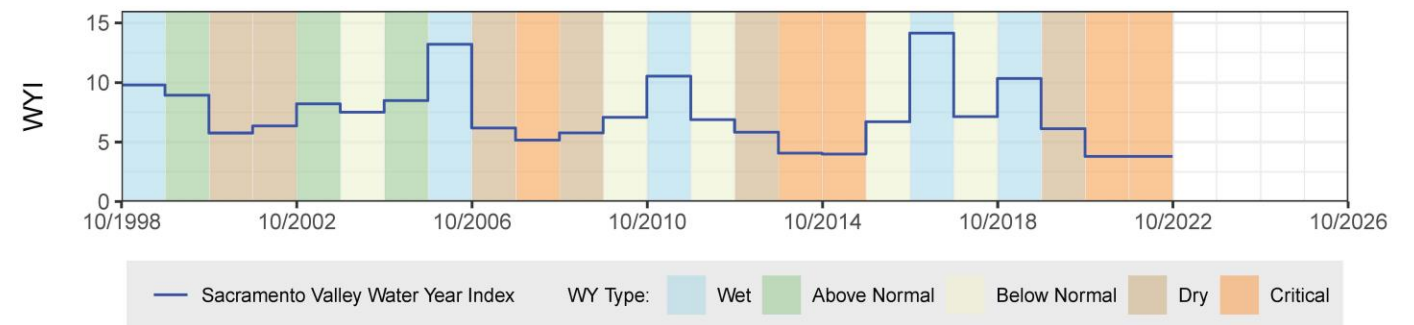
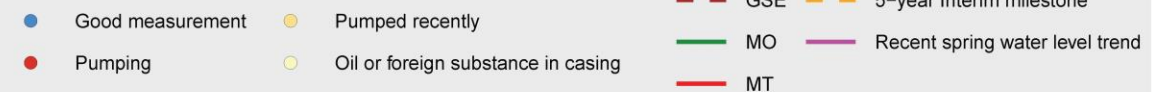
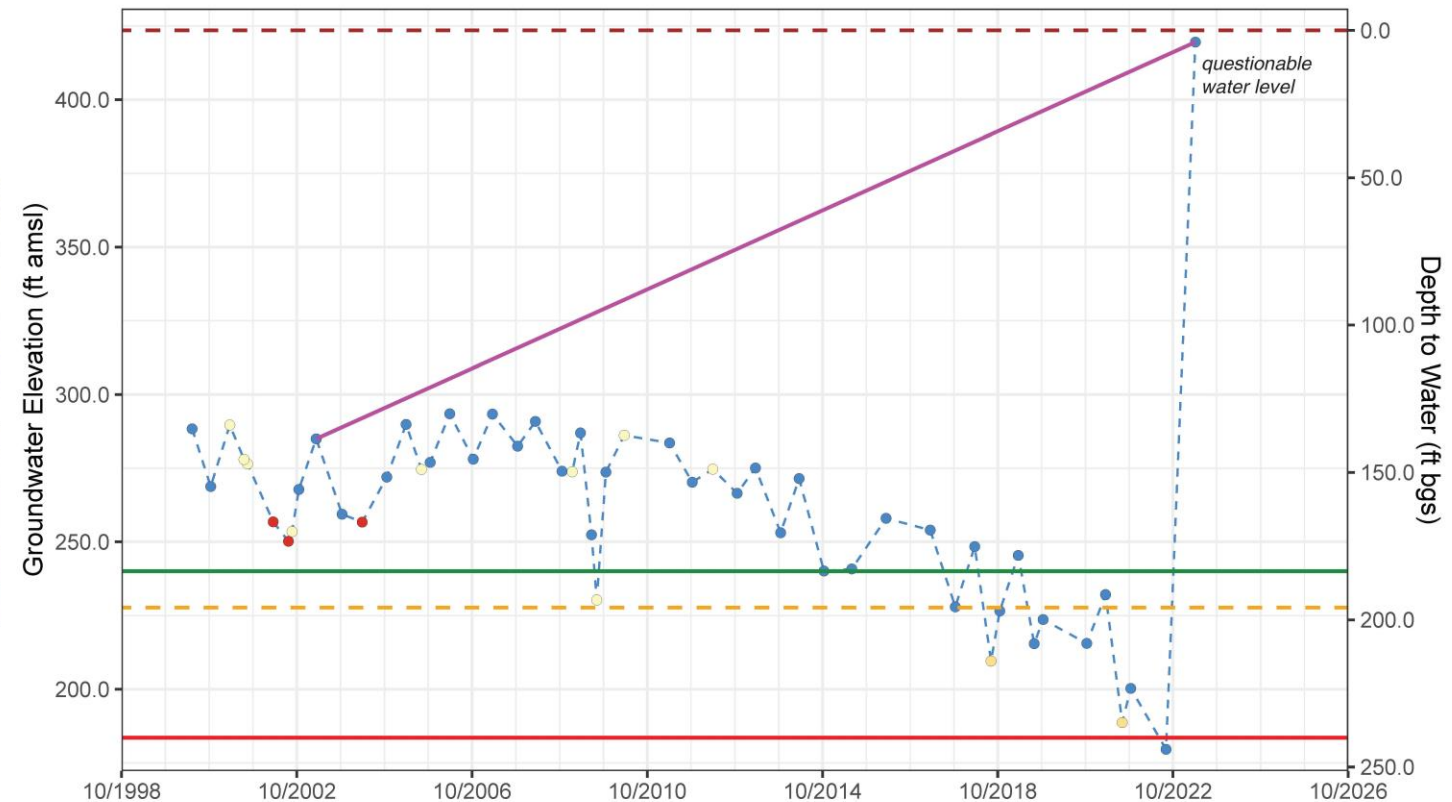
MO = 240.0 ft amsl

MT = 183.5 ft amsl

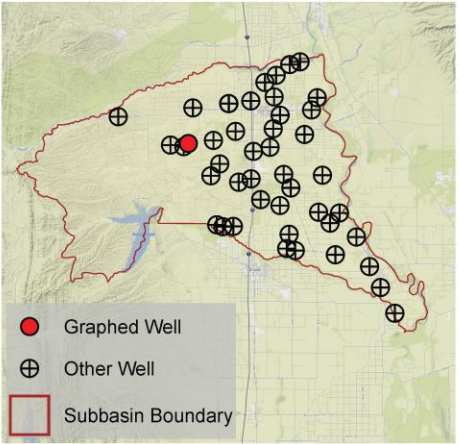
Statistics of spring water levels for  
 past 20 years (2003 to 2023):  
 Change = 134.6 ft  
 Average rate of change = 6.73 ft/year  
 Average water level = 282.07 ft amsl

## Corning Subbasin – State Well Number (SWN) 24N04W33P001M

Upper Aquifer (Deep Zone) Well Depth: 780 ft. Perforation top & bottom: 250 – 780 ft bgs

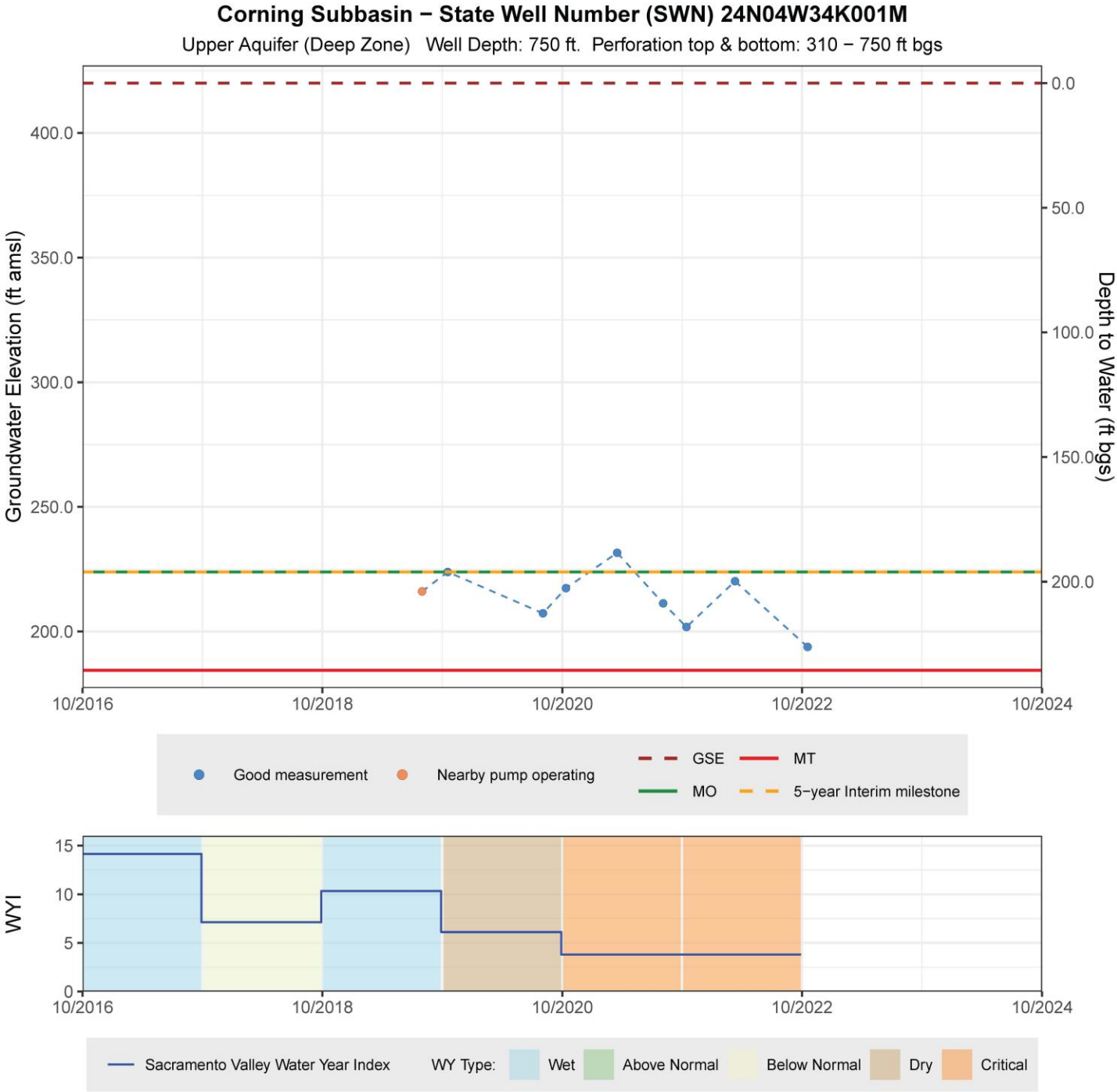


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

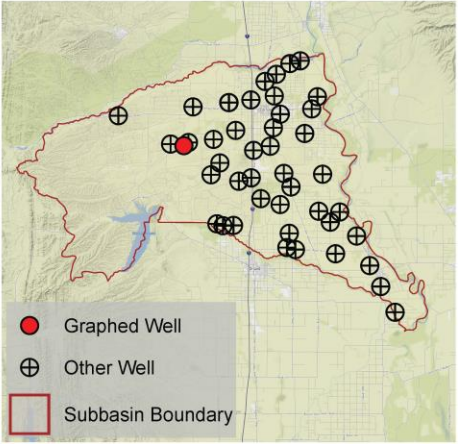


Sustainable Management Criteria  
IM (2027) = 223.9 ft amsl  
MO = 223.9 ft amsl  
MT = 184.4 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years



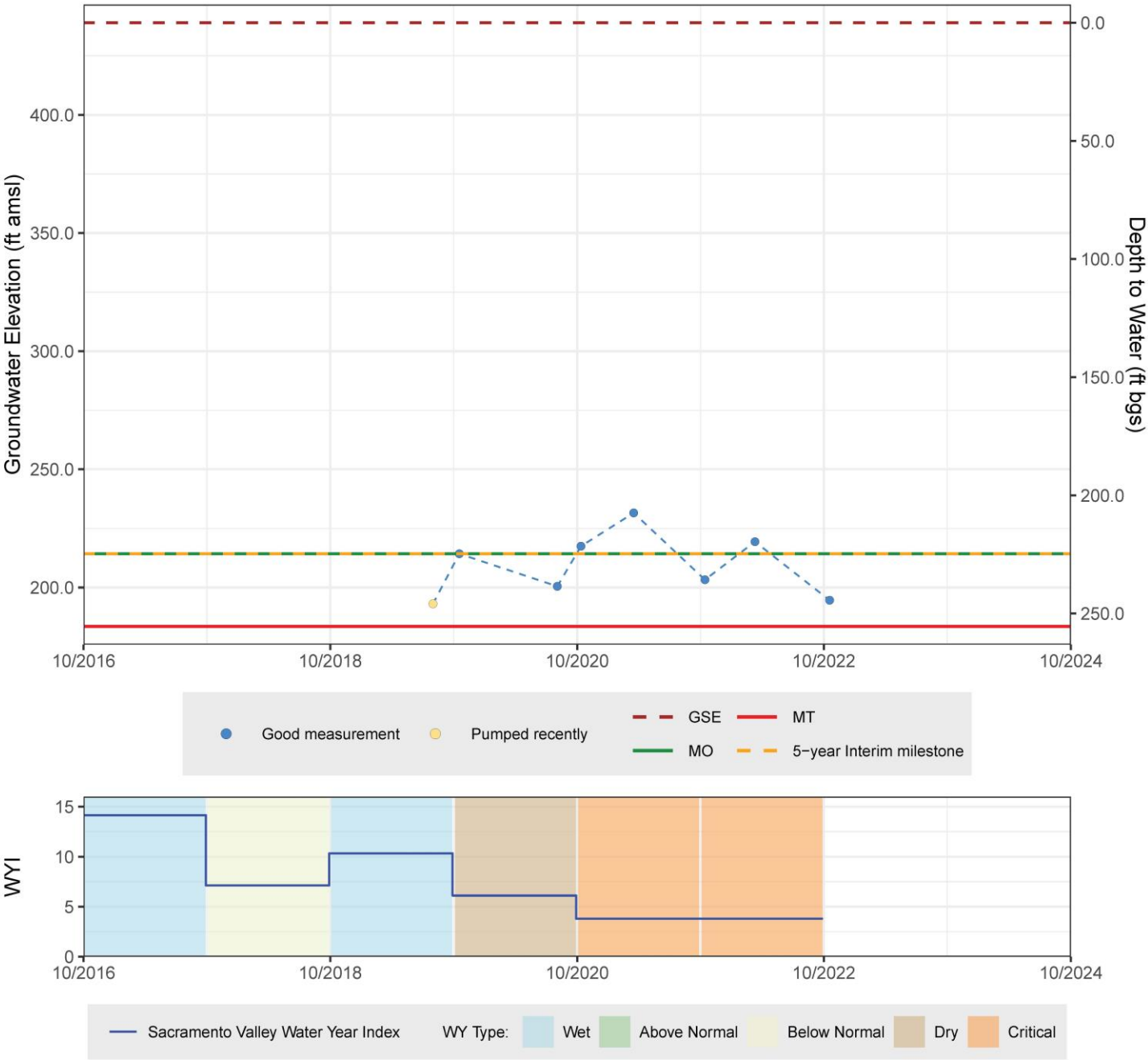
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



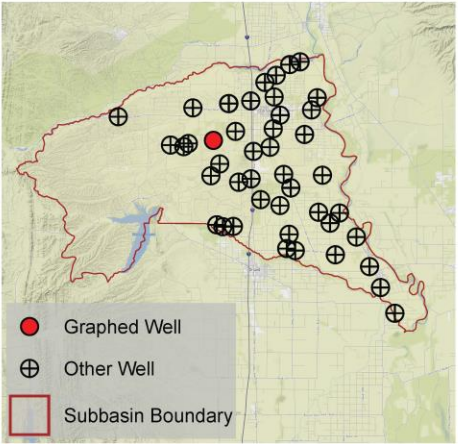
Sustainable Management Criteria  
IM (2027) = 214.3 ft amsl  
MO = 214.3 ft amsl  
MT = 183.5 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

Corning Subbasin – State Well Number (SWN) 24N04W34P001M  
Upper Aquifer (Deep Zone) Well Depth: 535 ft. Perforation top & bottom: 290 – 475 ft bgs

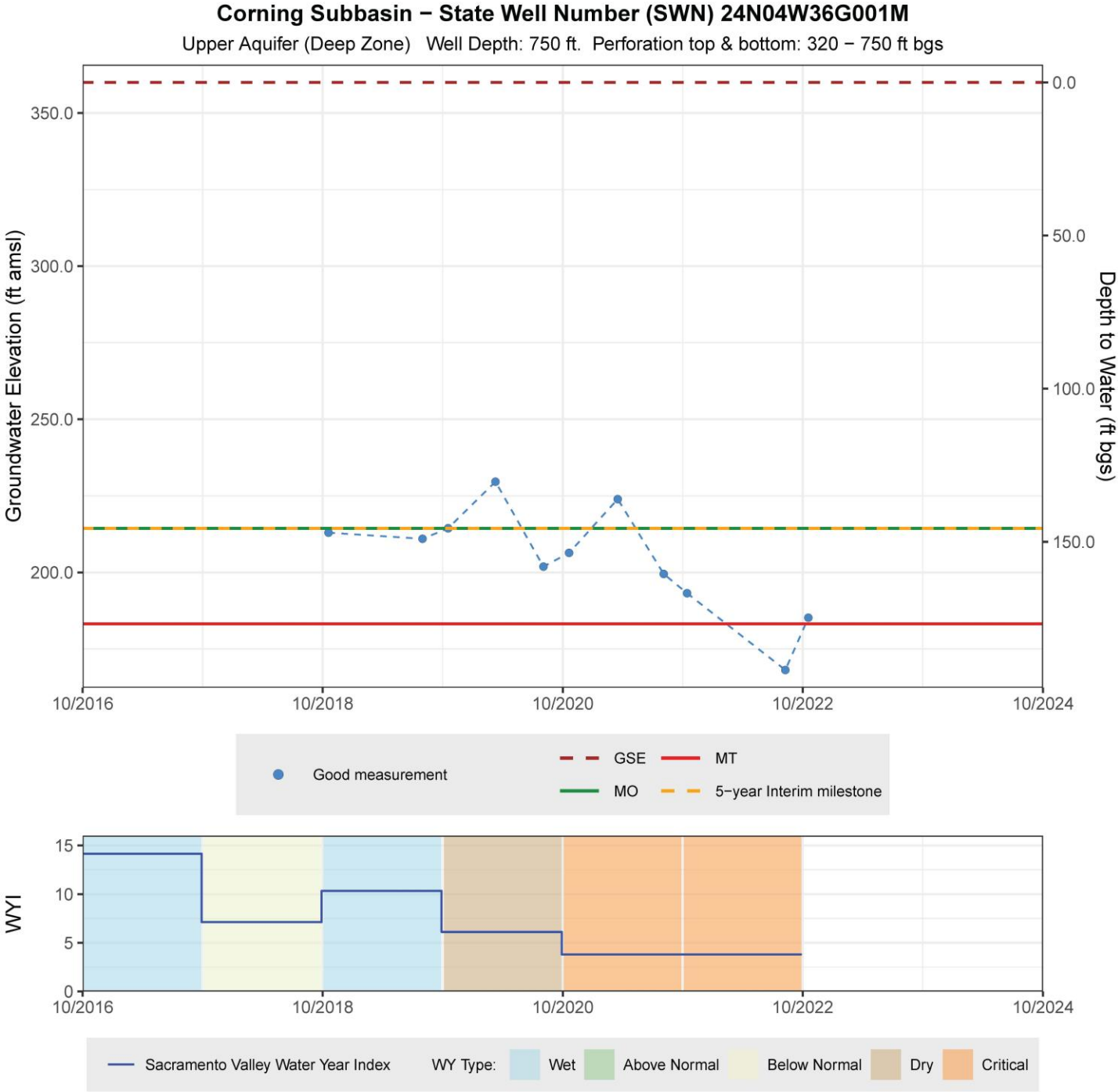


# Groundwater Conditions – Groundwater Elevations Corning Subbasin

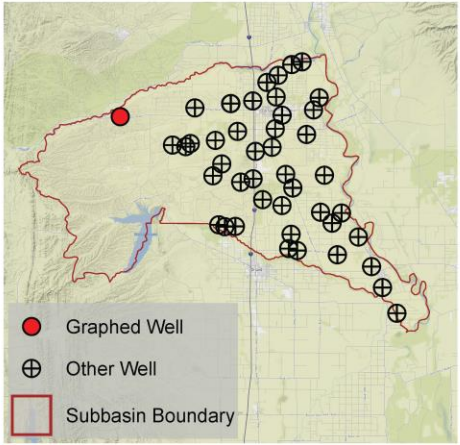


Sustainable Management Criteria  
IM (2027) = 214.4 ft amsl  
MO = 214.4 ft amsl  
MT = 183.2 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years



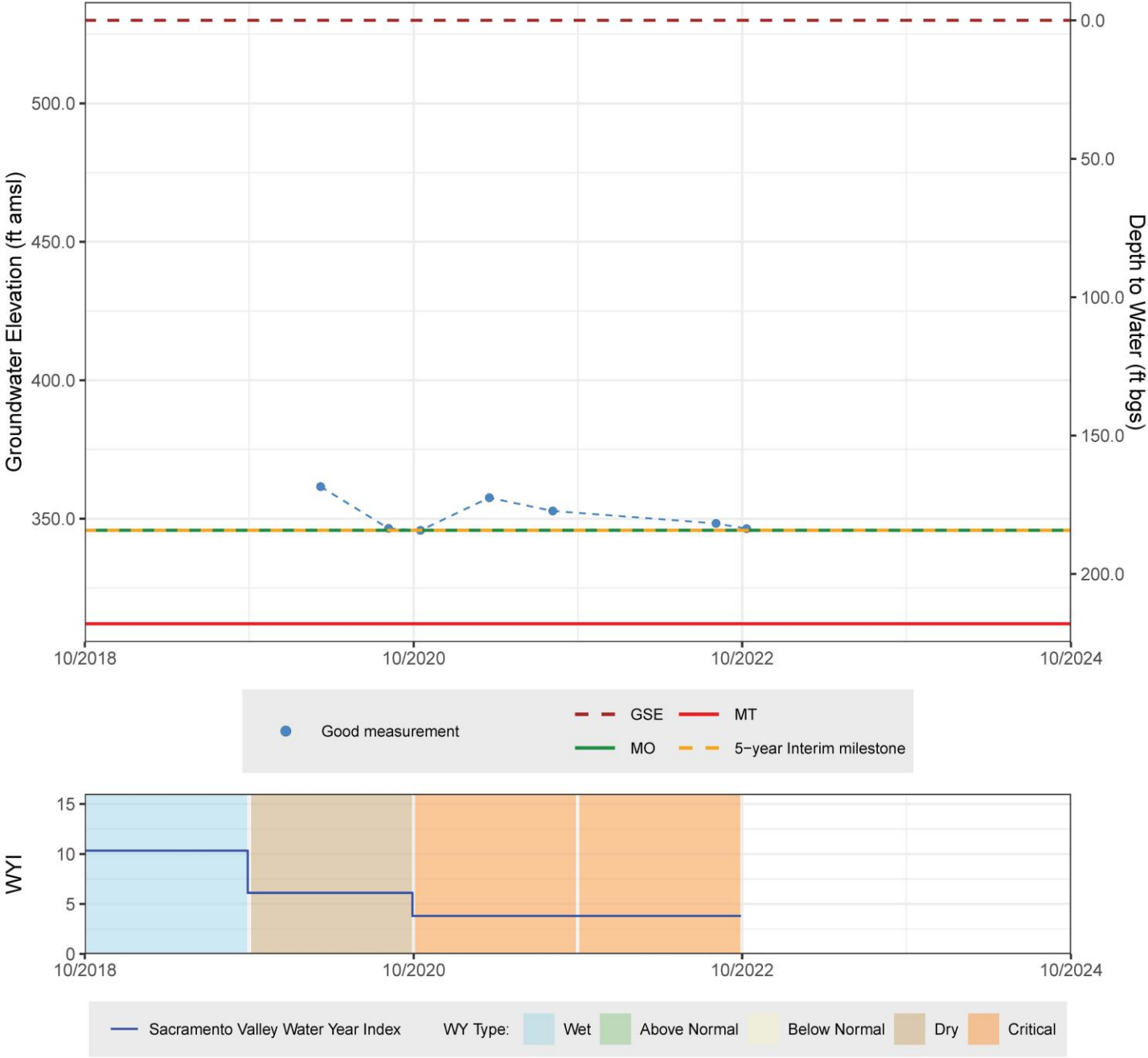
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



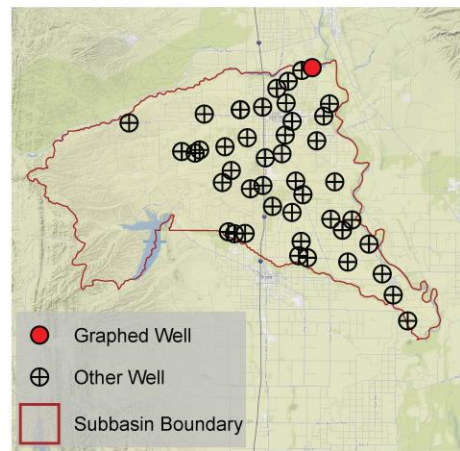
Sustainable Management Criteria  
IM (2027) = 345.8 ft amsl  
MO = 345.8 ft amsl  
MT = 312.0 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

Corning Subbasin – State Well Number (SWN) 24N05W23L001M  
Upper Aquifer (Shallow Zone) Well Depth: 235 ft. Perforation top & bottom: Unknown



# Groundwater Conditions – Groundwater Elevations Corning Subbasin



## Sustainable Management Criteria

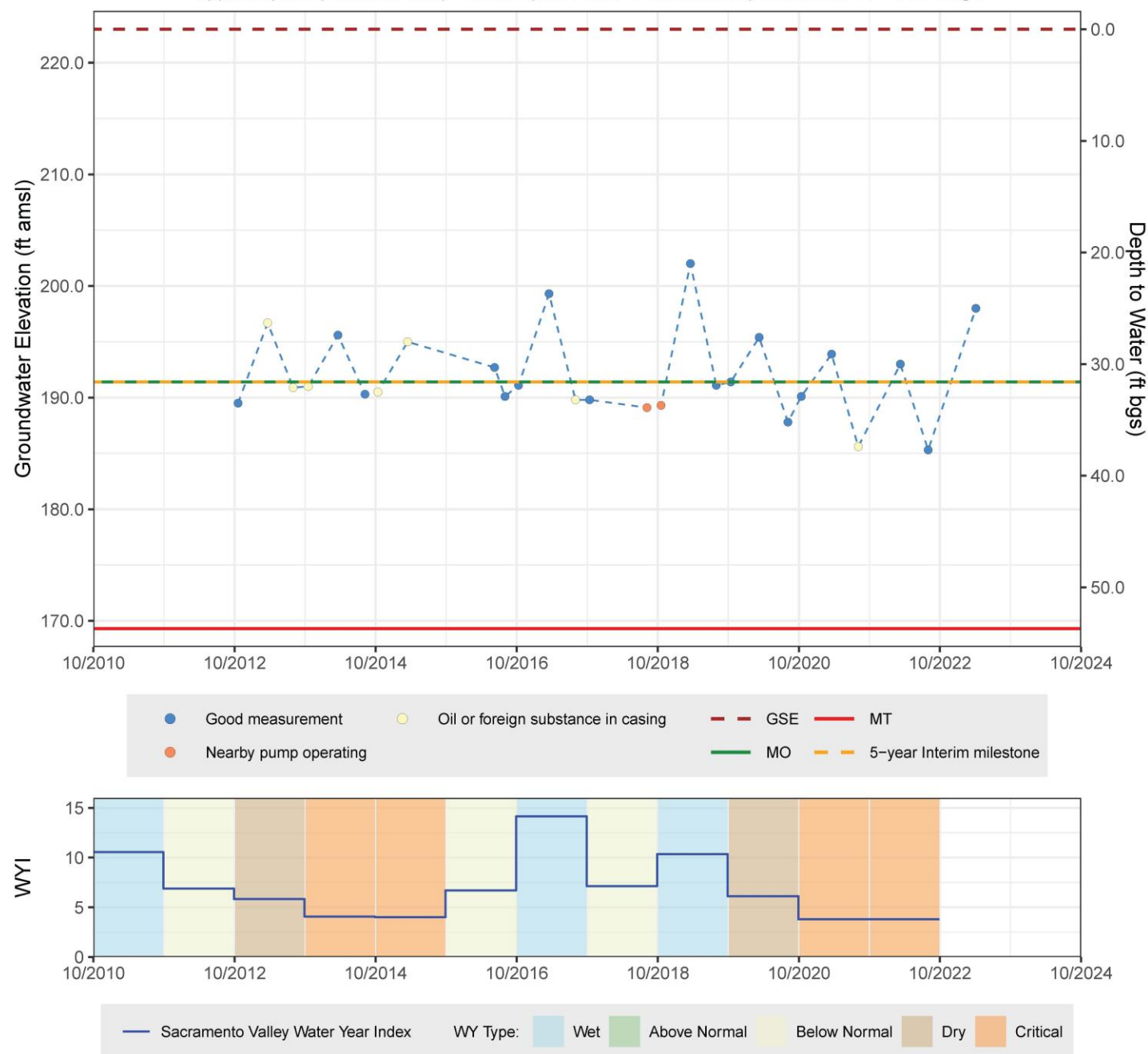
IM (2027) = 191.4 ft amsl

MO = 191.4 ft amsl

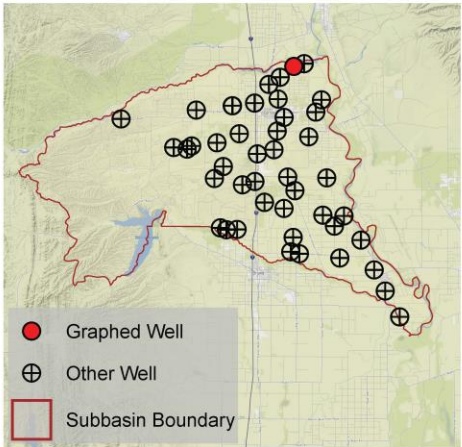
MT = 169.3 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

## Corning Subbasin – State Well Number (SWN) 25N02W31G002M Upper Aquifer (Shallow Zone) Well Depth: 115 ft. Perforation top & bottom: 93 – 113 ft bgs



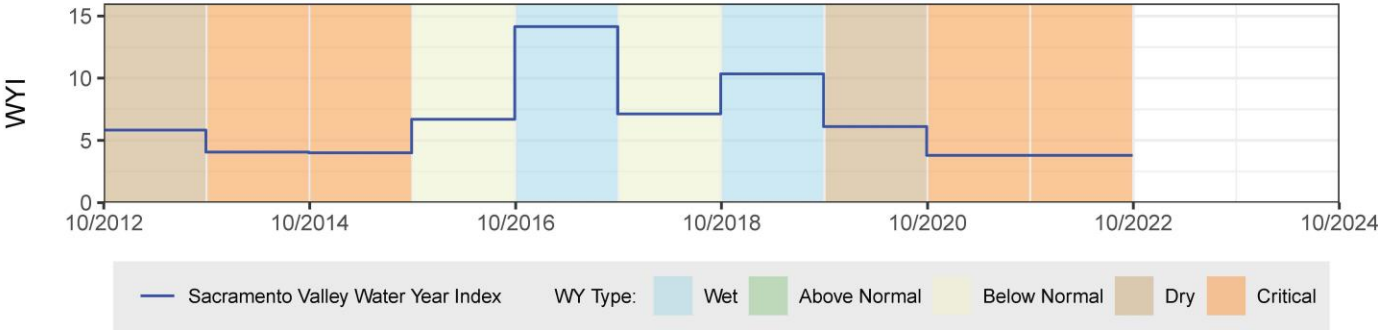
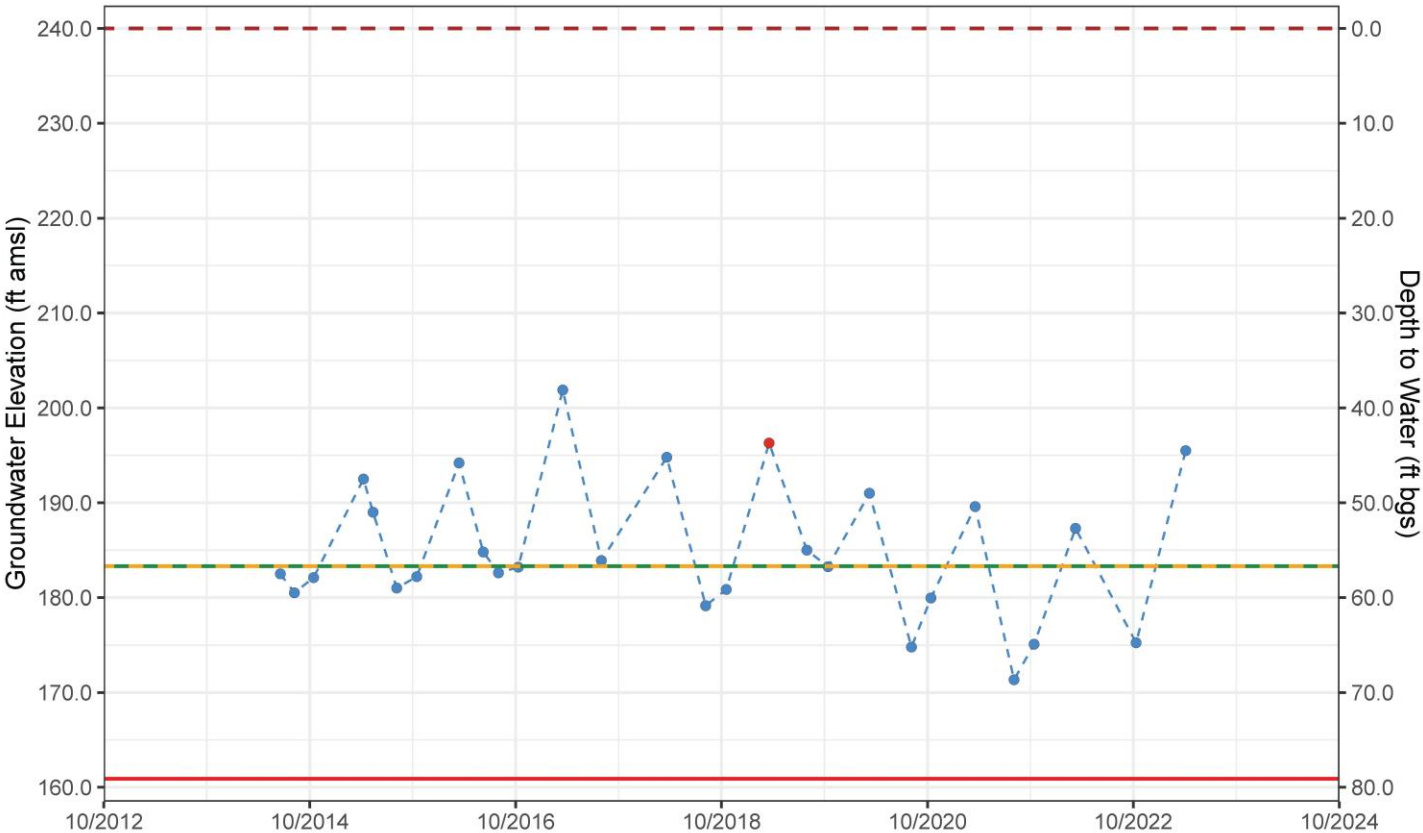
# Groundwater Conditions – Groundwater Elevations Corning Subbasin



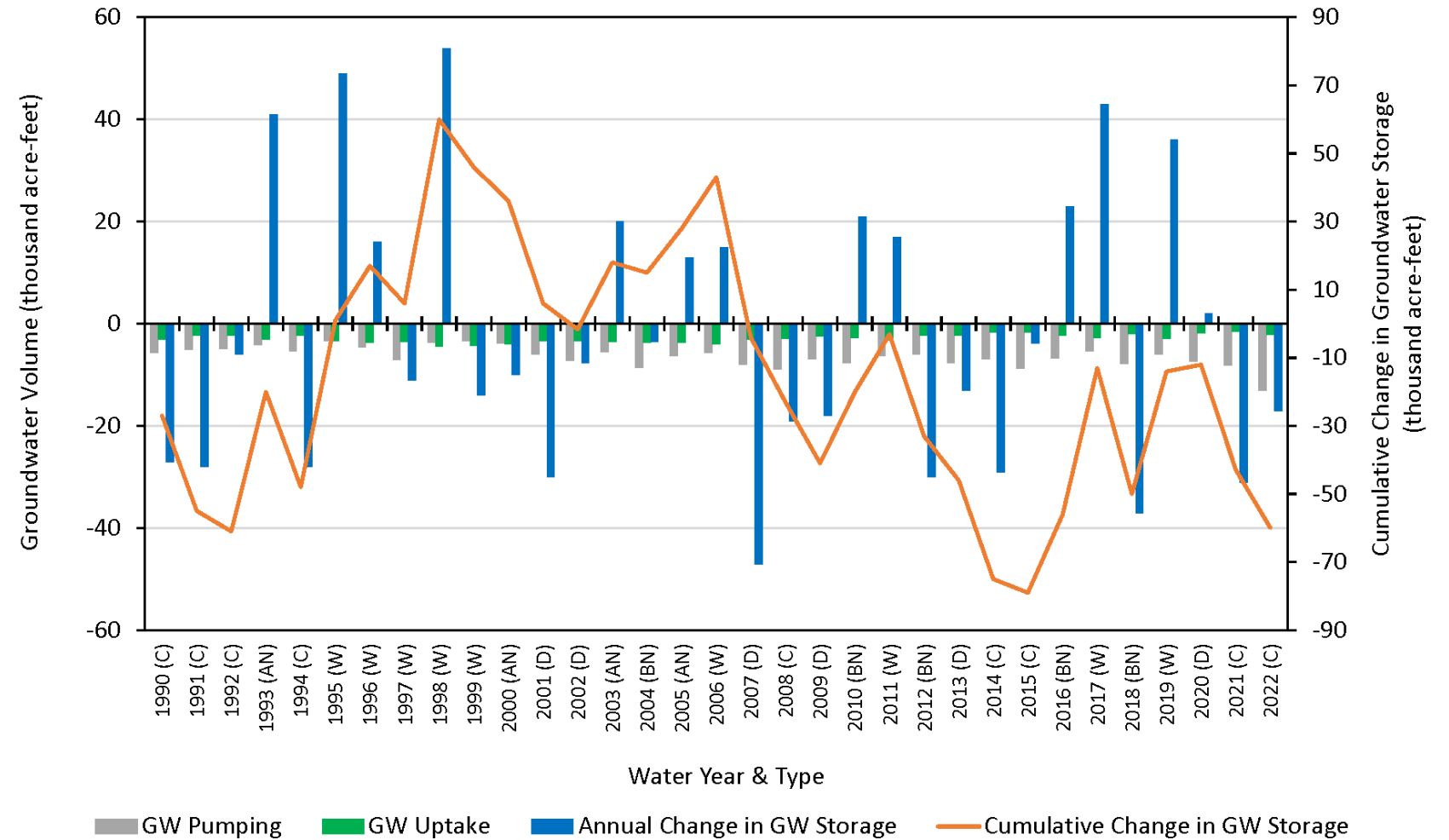
Sustainable Management Criteria  
IM (2027) = 183.3 ft amsl  
MO = 183.3 ft amsl  
MT = 160.9 ft amsl

Sufficient data not available to calculate spring water level statistics for 20 years

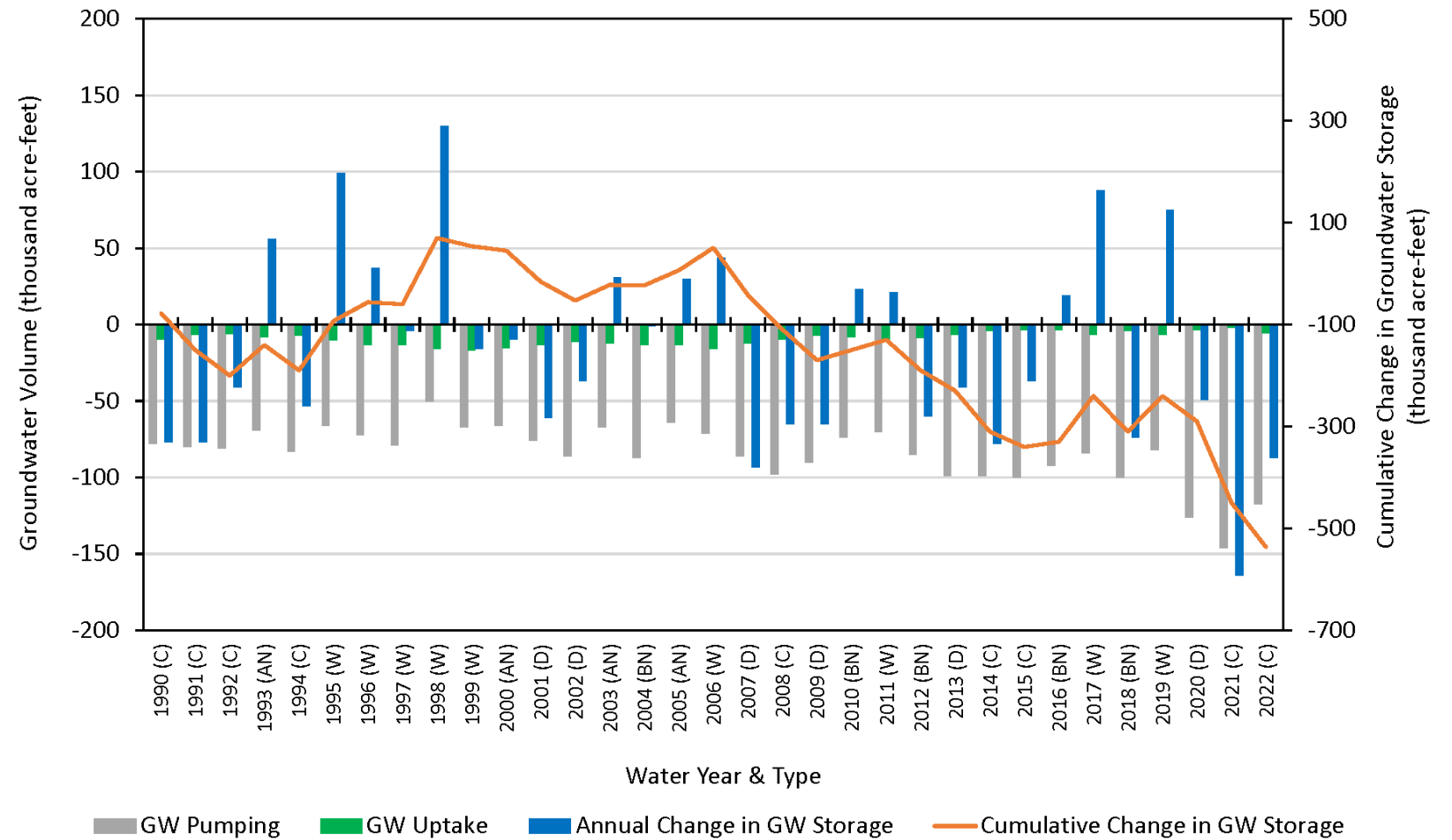
Corning Subbasin – State Well Number (SWN) 25N03W36H001M  
Upper Aquifer (Deep Zone) Well Depth: 524 ft. Perforation top & bottom: Unknown



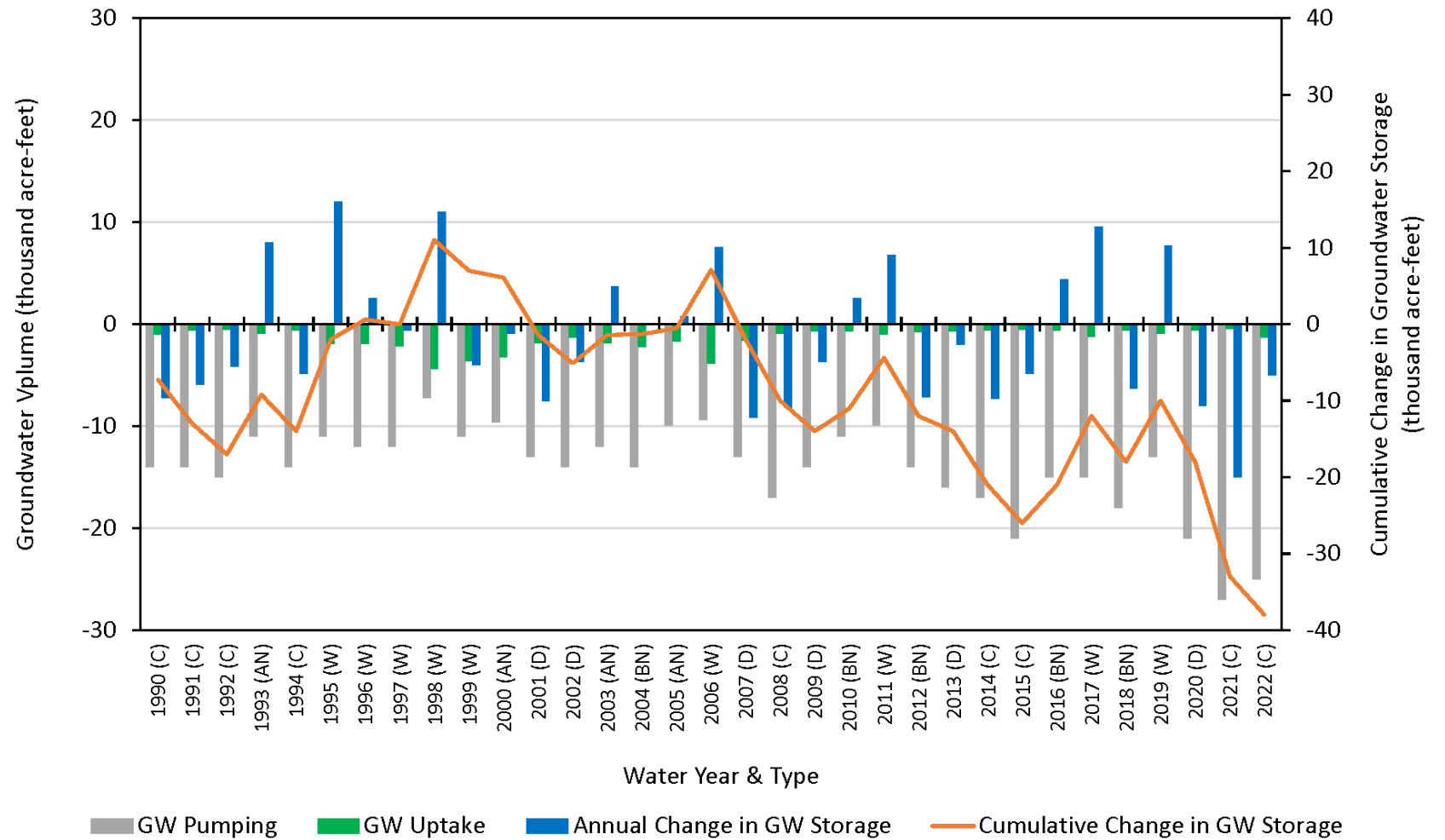
# Groundwater Conditions – Groundwater Storage Bowman Subbasin



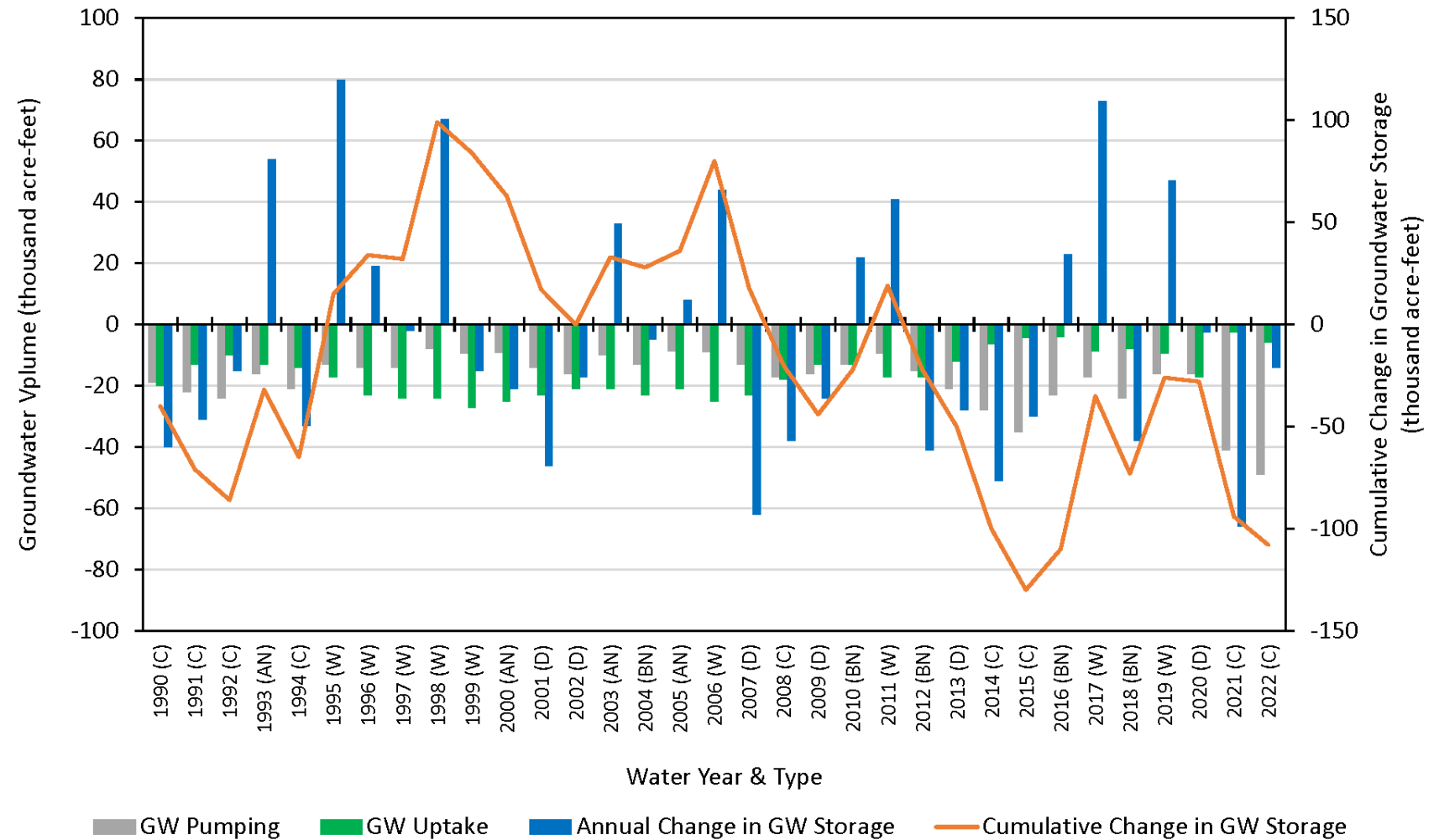
# Groundwater Conditions – Groundwater Storage Red Bluff Subbasin



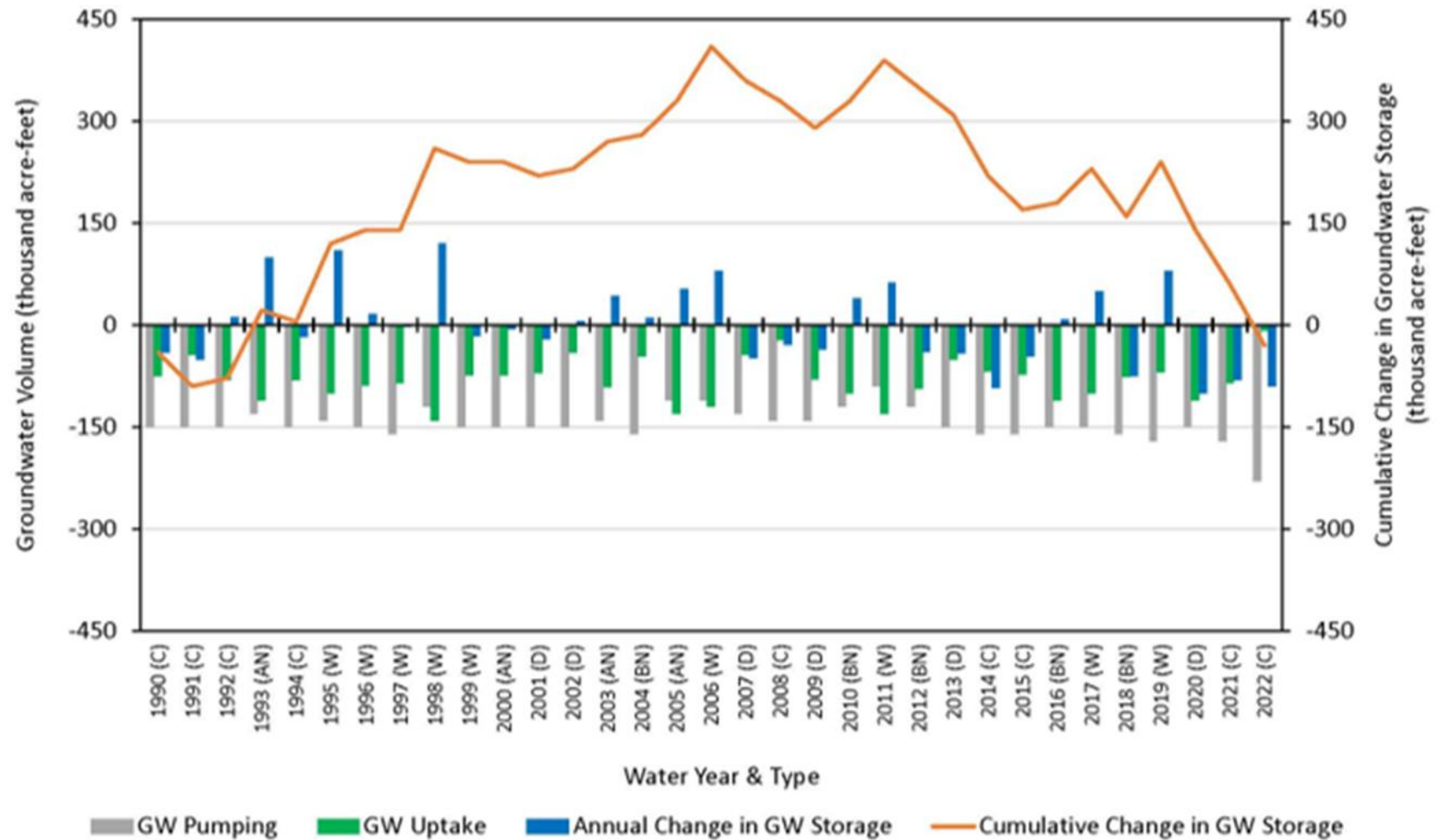
# Groundwater Conditions – Groundwater Storage Antelope Subbasin



# Groundwater Conditions – Groundwater Storage Los Molinos Subbasin



# Groundwater Conditions – Groundwater Storage Corning Subbasin



# Groundwater Conditions – Groundwater Storage Bowman Subbasin

**Table 4-1. Change in Groundwater Storage Based on Seasonal High Groundwater Levels**

Aquifer	2022 (af)
Upper Aquifer	-6,000
Lower Aquifer	-11,000
Total	-17,000

**Table 4-2. Change in Groundwater Storage**

Water Year & Type <sup>a</sup>	Groundwater Pumping (af)	Groundwater Uptake (af)	Annual Groundwater Storage Change <sup>b</sup> (af)	Cumulative Groundwater Storage Change (af)
2020 (D)	-7,400	-1,800	2,000 <sup>b</sup>	-12,000
2021 (C)	-8,100	-1,500	-31,000 <sup>b</sup>	-43,000
2022 (C)	-13,000	-2,100	-17,000 <sup>b</sup>	-60,000
Average	-6,400	-2,900	-1,800	-
2015 (C)	-8,800	-1,700	-3,800	-79,000
2016 (BN)	-6,700	-2,300	23,000	-56,000
2017 (W)	-5,400	-2,800	43,000	-13,000
2018 (BN)	-7,800	-1,900	-37,000	-50,000
2019 (W)	-6,000	-2,900	36,000 <sup>b</sup>	-14,000

Groundwater  
Conditions –  
Groundwater  
Storage  
Red Bluff  
Subbasin

**Table 4-1. Change in Groundwater Storage  
Based on Seasonal High Groundwater Levels**

Aquifer	2022 (af)
Upper Aquifer	-35,000
Lower Aquifer	-52,000
<b>Total</b>	<b>-87,000</b>

**Table 4-2. Change in Groundwater Storage (Annual and Cumulative)**

Water Year & Type <sup>a</sup>	Groundwater Pumping (af)	Groundwater Uptake (af)	Annual Groundwater Storage Change <sup>b</sup> (af)	Cumulative Groundwater Storage Change (af)
2021 (C)	-146,000	-2,100	-164,000 <sup>b</sup>	-450,000
2022 (C)	-120,000	-5,400	-87,000 <sup>b</sup>	-537,000
<b>Average</b>	<b>-85,000</b>	<b>-9,000</b>	<b>-16,000</b>	-
2015 (C)	-100,000	-3,200	-37,000	-340,000
2016 (BN)	-92,000	-3,400	19,000	-330,000
2017 (W)	-84,000	-6,600	88,000	-240,000
2018 (BN)	-100,000	-4,200	-74,000	-310,000
2019 (W)	-82,000	-6,300	75,000 <sup>b</sup>	-240,000
2020 (D)	-126,000	-3,300	-49,000 <sup>b</sup>	-290,000

Groundwater  
Conditions –  
Groundwater  
Storage  
Antelope  
Subbasin

**Table 4-1. Change in Groundwater Storage Based on Seasonal High Groundwater Levels**

Aquifer	2022 (af)
Upper Aquifer	-3,000
Lower Aquifer	-2,000
<b>Total</b>	<b>-5,000</b>

**Table 4-2. Change in Groundwater Storage**

Water Year & Type <sup>a</sup>	Groundwater Pumping (af)	Groundwater Uptake (af)	Annual Groundwater Storage Change <sup>b</sup> (af)	Cumulative Groundwater Storage Change (af)
2021 (C)	-27,000	-460	-15,000 <sup>b</sup>	-33,000
2022 (C)	-25,000	-1,300	-5,000 <sup>b</sup>	-38,000
<b>Average</b>	<b>-14,000</b>	<b>-1,400</b>	<b>-1000</b>	-
2015 (C)	-21,000	-490	-4,800	-26,000
2016 (BN)	-15,000	-570	4,400	-21,000
2017 (W)	-15,000	-1,200	9,600	-12,000
2018 (BN)	-18,000	-600	-6,300	-18,000
2019 (W)	-13,000	-920	7,700 <sup>b</sup>	-10,000
2020 (D)	-21,000	-590	-8,000 <sup>b</sup>	-18,000

Groundwater  
Conditions –  
Groundwater  
Storage  
Los Molinos  
Subbasin

**Table 4-1. Change in Groundwater Storage Based on  
Seasonal High Groundwater Levels**

Aquifer	2022 (af)
Upper Aquifer	-12,000
Lower Aquifer	-2,000
<b>Total</b>	<b>-14,000</b>

**Table 4-2. Change in Groundwater Storage**

Water Year (Type <sup>a</sup> )	Groundwater Pumping (af)	Groundwater Uptake (af)	Annual Groundwater Storage Change <sup>b</sup> (af)	Cumulative Groundwater Storage Change (af)
2022 (C)	-49,000	-5,900	-14,000 <sup>b</sup>	-108,000
<b>Average</b>	<b>-18,000</b>	<b>-16,000</b>	<b>-3,300</b>	
2015 (C)	-35,000	-4,200	-30,000	-130,000
2016 (BN)	-23,000	-4,100	23,000	-110,000
2017 (W)	-17,000	-8,700	73,000	-35,000
2018 (BN)	-24,000	-7,800	-38,000	-73,000
2019 (W)	-16,000	-9,300	47,000 <sup>b</sup>	-26,000
2020 (D)	-16,000	-17,000	-2,500 <sup>b</sup>	-28,000
2021 (C)	-41,000	-2,500	-66,000 <sup>b</sup>	-94,000

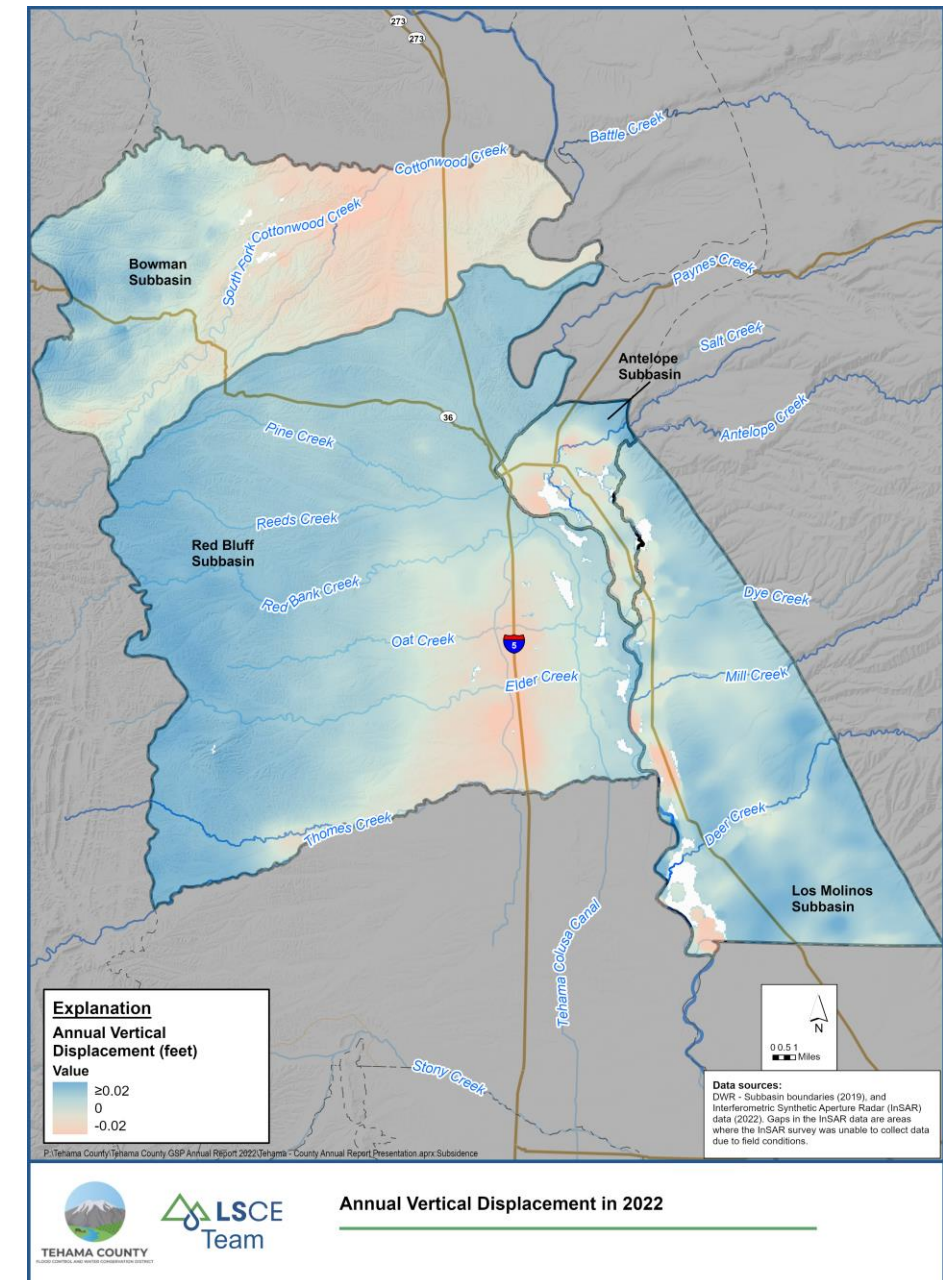
## Groundwater Conditions – Groundwater Storage Corning Subbasin

Table 4-1. Change in Groundwater Storage					
Water Year & Type <sup>a</sup>	Groundwater Pumping (af)	Groundwater Uptake (af)	Total Groundwater Pumping and Uptake (af)	Annual Groundwater Storage Change (af)	Cumulative Groundwater Storage Change (af)
2011 (W)	-90,000 <sup>b</sup>	-130,000 <sup>b</sup>	-220,000	63,000 <sup>b</sup>	390,000
2012 (BN)	-120,000 <sup>b</sup>	-93,000 <sup>b</sup>	-210,000	-39,000 <sup>b</sup>	350,000
2013 (D)	-150,000 <sup>b</sup>	-51,000 <sup>b</sup>	-200,000	-41,000 <sup>b</sup>	310,000
2014 (C)	-160,000 <sup>b</sup>	-68,000 <sup>b</sup>	-230,000	-92,000 <sup>b</sup>	220,000
2015 (C)	-160,000 <sup>b</sup>	-72,000 <sup>b</sup>	-230,000	-46,000 <sup>b</sup>	170,000
2016 (BN)	-150,000 <sup>c</sup>	-110,000 <sup>c</sup>	-260,000	8,000 <sup>d</sup>	180,000
2017 (W)	-150,000 <sup>c</sup>	-100,000 <sup>c</sup>	-250,000	50,000 <sup>d</sup>	230,000
2018 (BN)	-160,000 <sup>c</sup>	-76,000 <sup>c</sup>	-240,000	-75,000 <sup>d</sup>	160,000
2019 (W)	-170,000 <sup>c</sup>	-69,000 <sup>c</sup>	-240,000	80,000 <sup>d</sup>	240,000
2020 (D)	-150,000 <sup>c</sup>	-110,000 <sup>c</sup>	-260,000	-100,000 <sup>d</sup>	140,000
2021 (C)	-170,000 <sup>c</sup>	-85,000 <sup>c</sup>	-260,000	-80,000 <sup>e</sup>	60,000
2022 (C)	-230,000 <sup>f</sup>	-7,300 <sup>f</sup>	-240,000	-90,000 <sup>e</sup>	-30,000
<b>Average</b>	<b>-150,000</b>	<b>-81,000</b>	<b>-230,000</b>	<b>-1,000</b>	

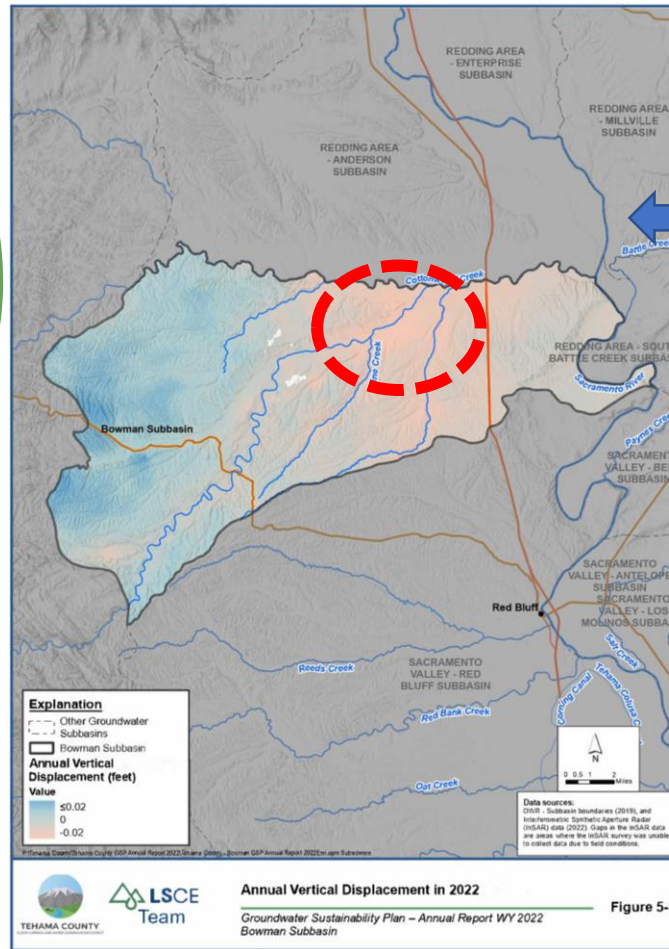
*All volumes are rounded to two significant digits.*

## Groundwater Conditions – Land Subsidence

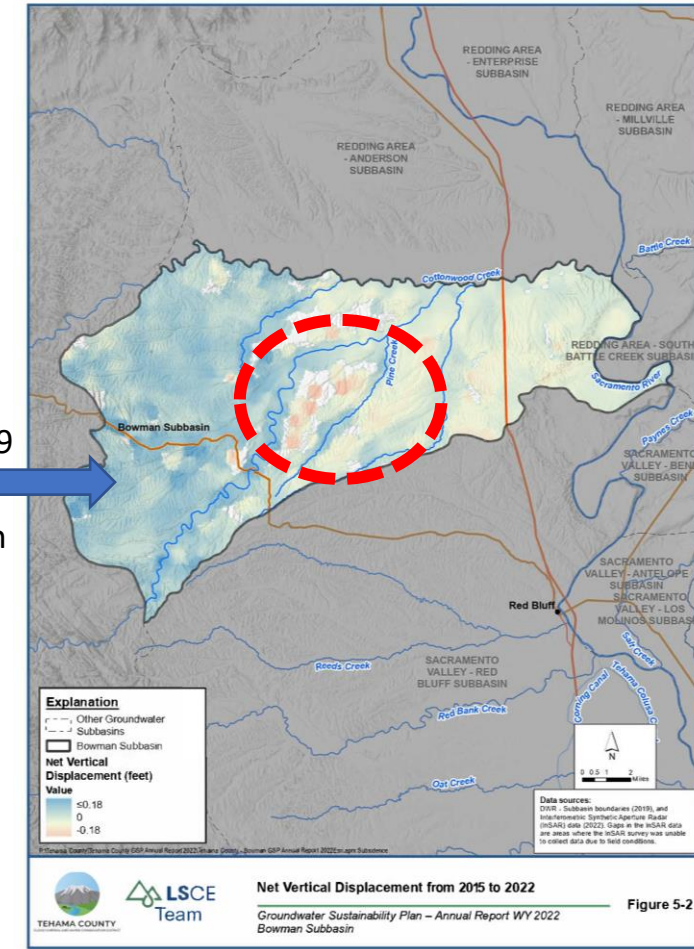
- Land Subsidence
  - Utilizing Interferometric Synthetic Aperture Radar (InSAR)
- Minimum Threshold (MT) = 0.5 feet per five years (0.1 foot per year)
- Measurable Objective = Zero Subsidence



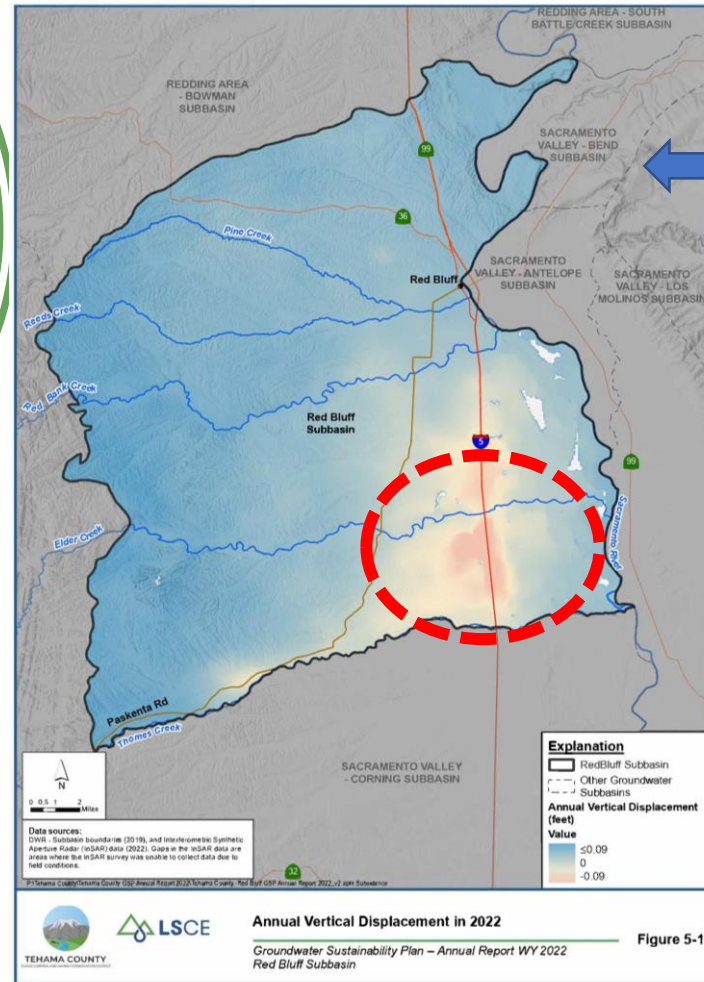
# Groundwater Conditions – Land Subsidence Bowman SB



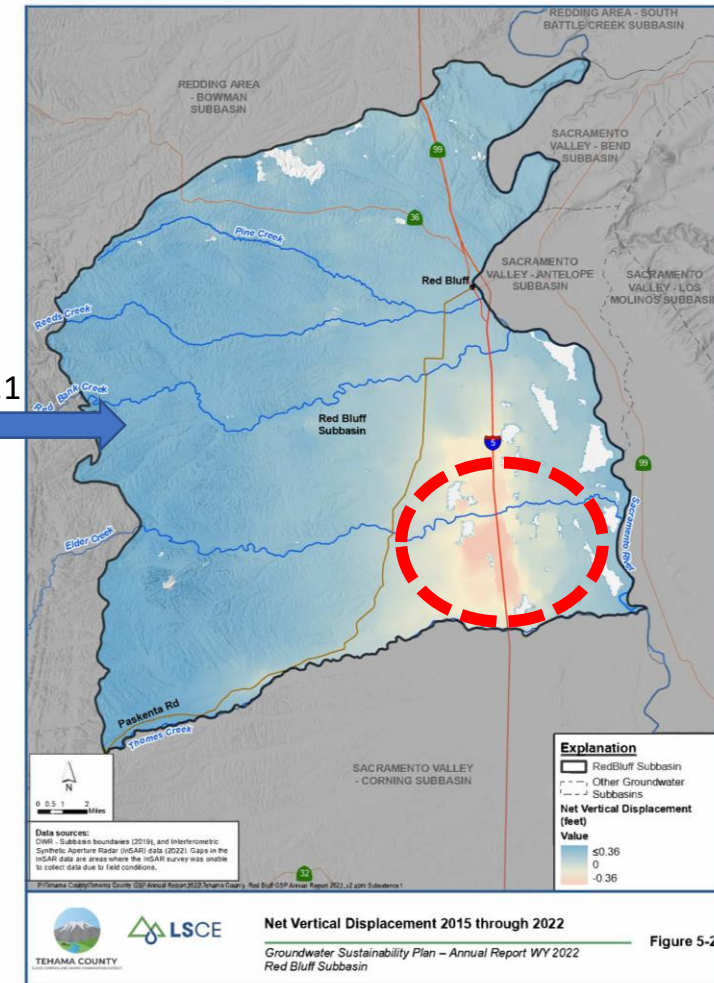
- WY 2022 (InSAR) = -0.02 to 0.04
- WY2015 – WY2022 (InSAR) = -0.18 to 0.09
- Highest Subsidence in Center of Subbasin



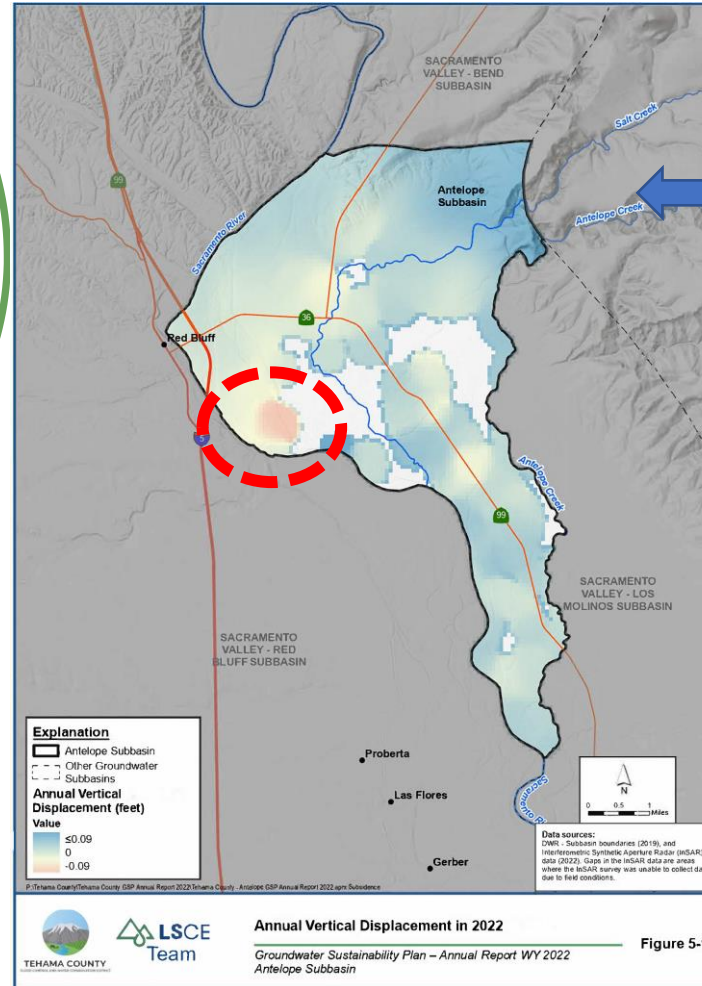
# Groundwater Conditions – Land Subsidence Red Bluff SB



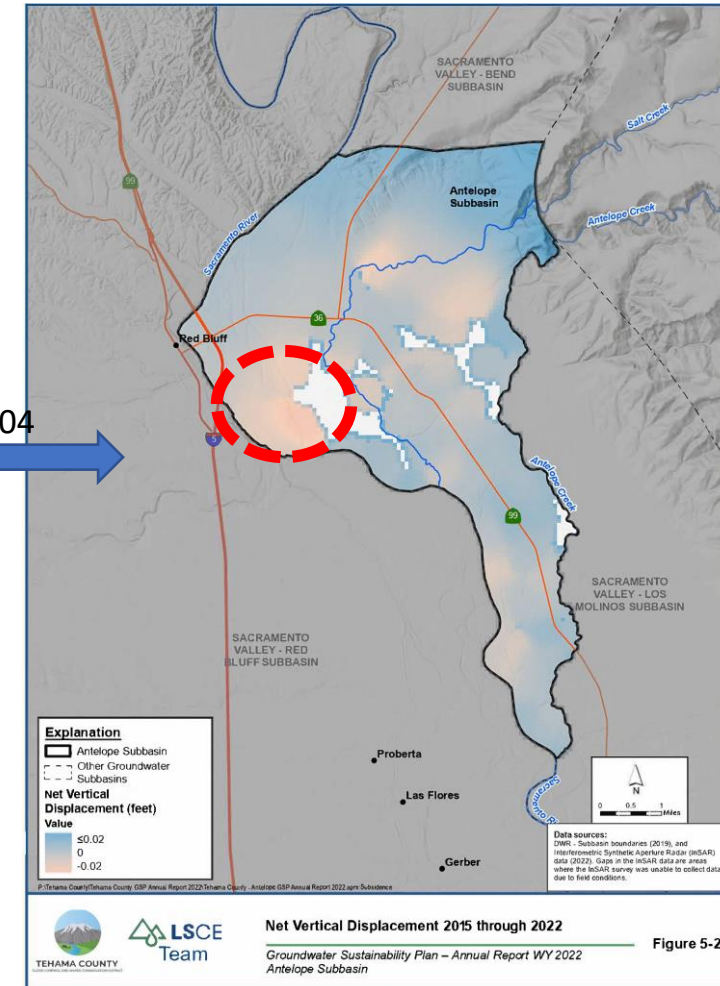
- WY 2022 (InSAR) = -0.09 to 0.02
- WY2015 – WY2022 (InSAR) = -0.36 to 0.1
- Highest Subsidence North of Corning



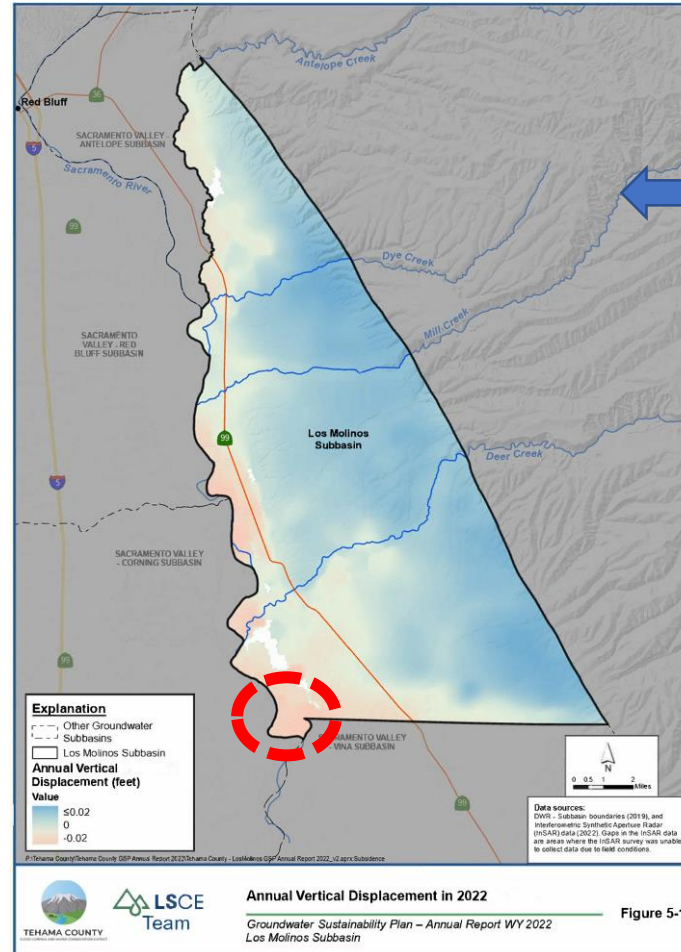
# Groundwater Conditions – Land Subsidence Antelope SB



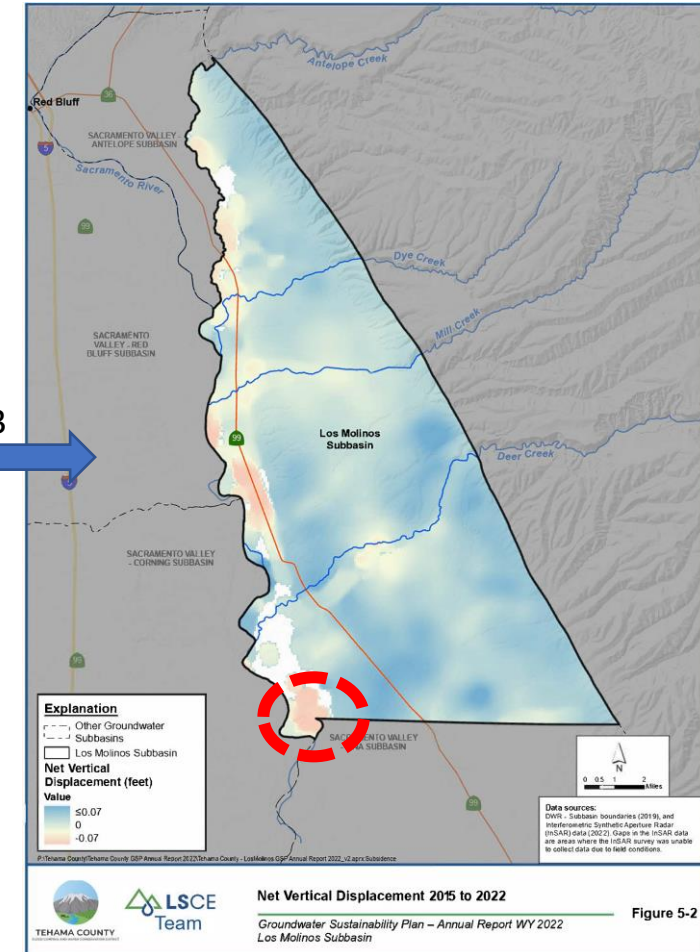
- WY 2022 (InSAR) = -0.02 to 0.00
- WY2015 – WY2022 (InSAR) = -0.09 to 0.04
- Highest Subsidence South of Red Bluff



# Groundwater Conditions – Land Subsidence Los Molino SB

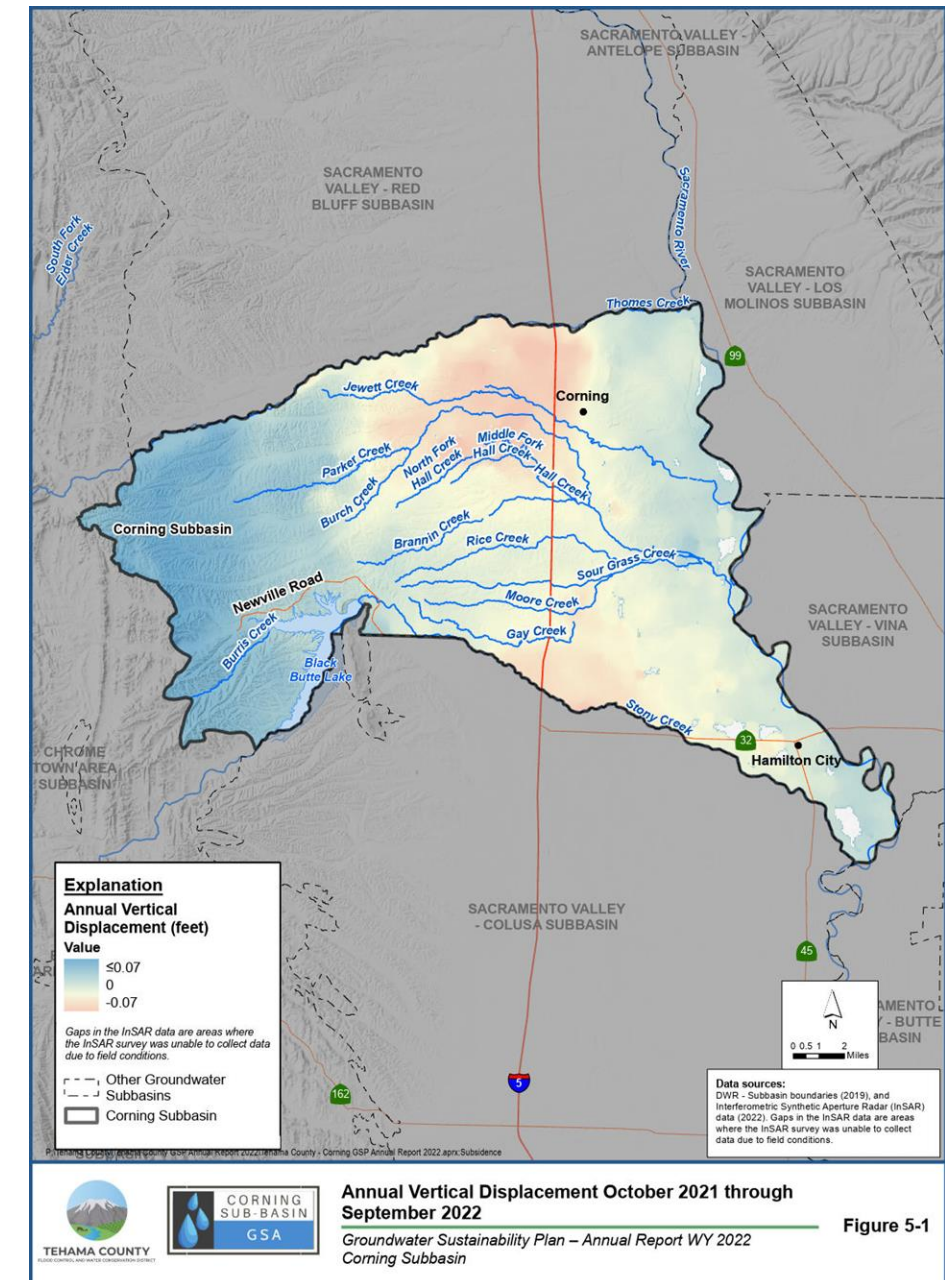


- WY 2022 (InSAR) = -0.02 to 0.01
- WY2015 – WY2022 (InSAR) = -0.07 to 0.03
- Highest Subsidence in the Southwest

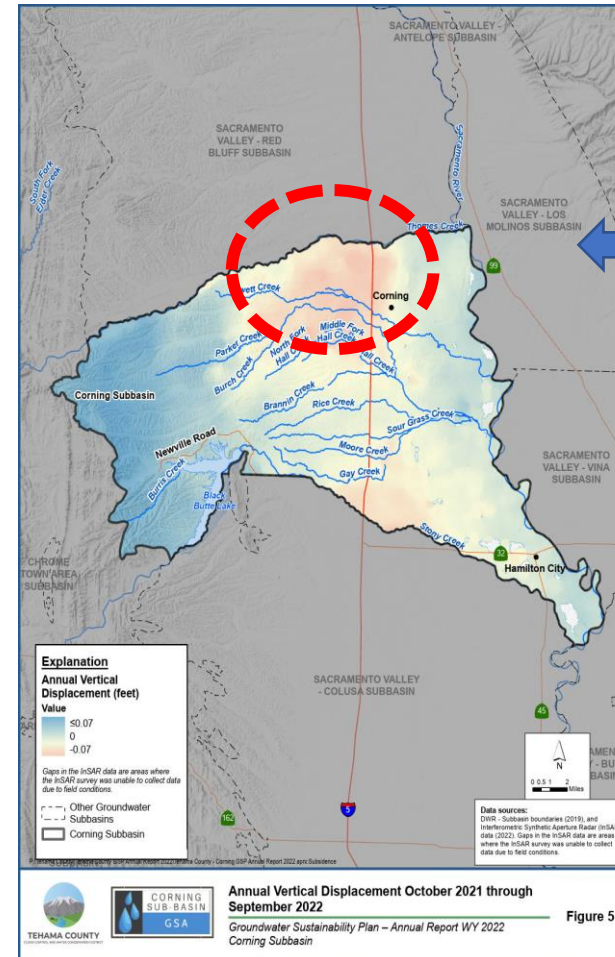


## Groundwater Conditions – Land Subsidence

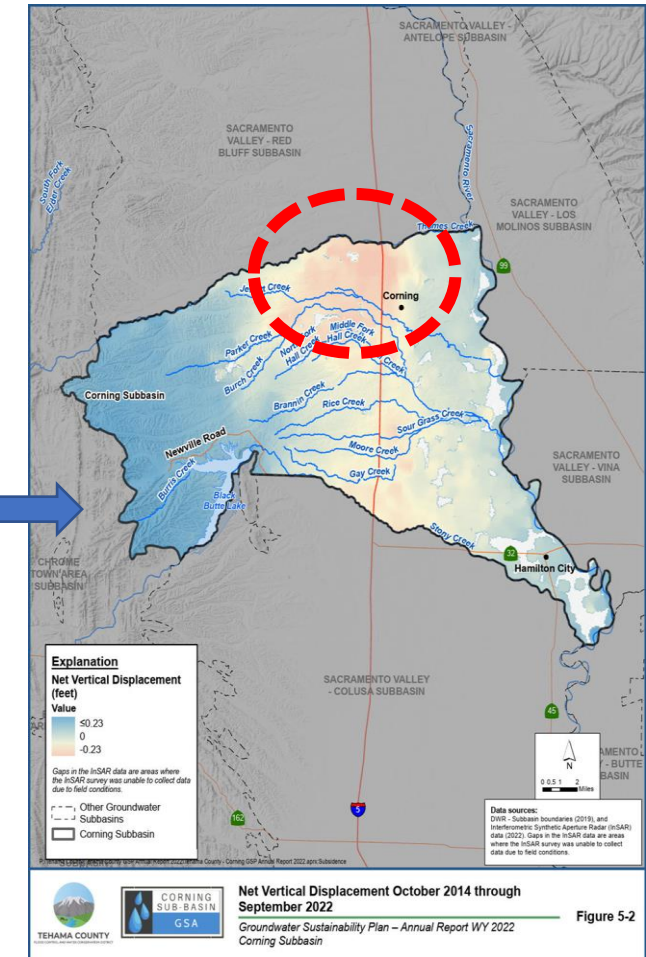
- Land Subsidence
  - Utilizing Interferometric Synthetic Aperture Radar (InSAR)
- Minimum Threshold (MT) = 0.5 feet per five years (0.1 foot per year)
- Measurable Objective = Zero Subsidence



# Groundwater Conditions – Land Subsidence



- WY 2022 (InSAR) = -0.07 to 0.07
- WY2015 – WY2022 (InSAR) = -0.23 to 0.23
- Highest Subsidence West of Corning



Groundwater  
Conditions –  
Surface Water  
Depletion  
Bowman  
Subbasin

Table 5-2. Depletion of Interconnected Surface Water Data and SMC								
Well ID	State Well Number	MT	MO	2027 IM	Recent Spring Groundwater Level Measurements		Spring 2022 MT Exceedance	Two Consecutive WY MT Exceedances
					2021	2022		
Upper Aquifer								
Bow-1U	29N03W18M001M	318.5	386.3	391.8	393.5	NA	NA	NA
Bow-2U	29N04W28D001M	372.5	395.1	399.1	400.4	399.0	No	No
Bow-3U	29N05W33A004M	419.6	484.9	490.9	492.9	490.0	No	No
Bow-4U	28N04W04P001M	377.5	404.8	412.2	414.6	411.6	No	No

NA = Measurement is not reliable (i.e. well was pumping, recently pumped, or had access issues)

- Spring 2022, all groundwater elevations were above the established MT

Groundwater  
Conditions –  
Surface Water  
Depletion  
Red Bluff  
Subbasin

Table 5-2. Depletion of Interconnected Surface Water Data and SMC								
Well ID	State Well Number	MT	MO	2027 IM	Recent Fall Groundwater Level Measurements		Fall 2022 MT Exceedance	Undesirable Result (Two Consecutive WY MT Exceedances)
					2021	2022		
Upper Aquifer								
RB-1U	27N04W05G002M	302.5	432.4	433.9	434.3	430.8	-	-
RB-2U	27N04W36G001M	207.4	241.5	245.8	247.3	244.3	-	-
RB-3U	26N04W25J001M	223.5	257.1	262	263.6	259.8	-	-
RB-4U	25N03W11B001M	152.1	203.0	213.9	217.5	206.4	-	-
RB-5U	25N03W19N001M	177.5	224.2	238.1	242.8	228.6	-	-
RB-6U	25N05W24D001M	355.6	401.3	408.5	395.9	408.2	-	-
RB-7U	NA	276.0	329.1	347.6	353.8	342.8	-	-

- Spring 2022, all groundwater elevations were above the established MT

Groundwater  
Conditions –  
Surface Water  
Depletion  
Antelope  
Subbasin

Table 5-1. Groundwater Level Measurements and MT Exceedances								
Well ID	State Well Number	MT	MO	2027 IM	Recent Spring Groundwater Level Measurements		Spring 2022 MT Exceedance	Two Consecutive WY MT Exceedances
					2021	2022		
Ant-1U	27N03W1 6K003M	193.4	231.1	234.3	235.3	233.1	-	-
Ant-2U	27N03W2 3D001M	181.4	231.2	236.0	237.6	234.1	-	-
Ant-3U	27N02W3 0C003M	193.0	231.1	244.8	243.2	241.8	-	-

- Spring 2022, all groundwater elevations were above the established MT
- \*Antelope subbasin uses the same monitoring network for GWL and ISW

# Groundwater Conditions – Surface Water Depletion Los Molinos Subbasin

Table 5-2. Depletion of Interconnected Surface Water Data and SMC								
Well ID	State Well Number	MT	MO	2027 IM	Recent Spring Groundwater Level Measurements		Spring 2022 MT Exceedance	Two Consecutive WY MT Exceedances
					2021	2022		
Upper Aquifer								
LM-1U	26N02W1 6C001M	172.4	218.9	217.9	NA	NA	NA	NA
LM-2U	25N02W0 9G001M	174.4	219.9	220.6	220.8	220.4	No	No
LM-3U	25N01W3 2P001M	163.4	205.8	216.6	220.2	218.1	No	No
LM-4U	24N02W1 2P001M	118.4	182.7	191.1	193.9	192.1	No	No
LM-5U	24N02W2 5G001M	114.4	157.1	164.1	166.4	163.4	No	No
LM-6U	26N02W2 2E006M	TBD	TBD	TBD	NA	218.4	NA	NA

NA = Measurement is not reliable (i.e., well was pumping, recently pumped, or had access issues)

- Spring 2022, all groundwater elevations were above the established MT

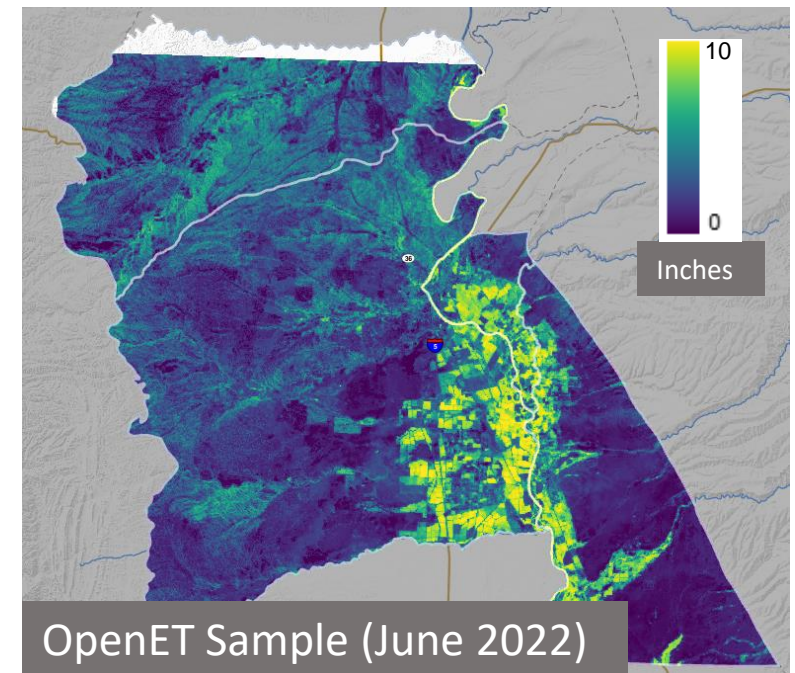
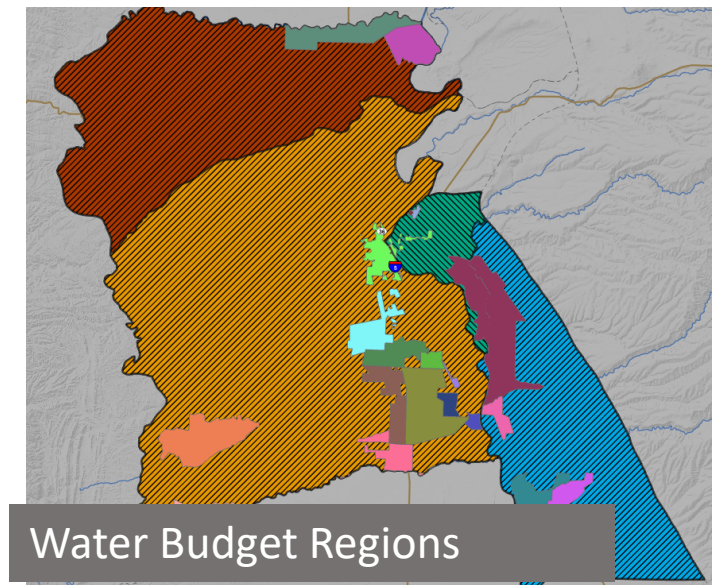
## Groundwater Conditions – Surface Water Depletion Corning Subbasin

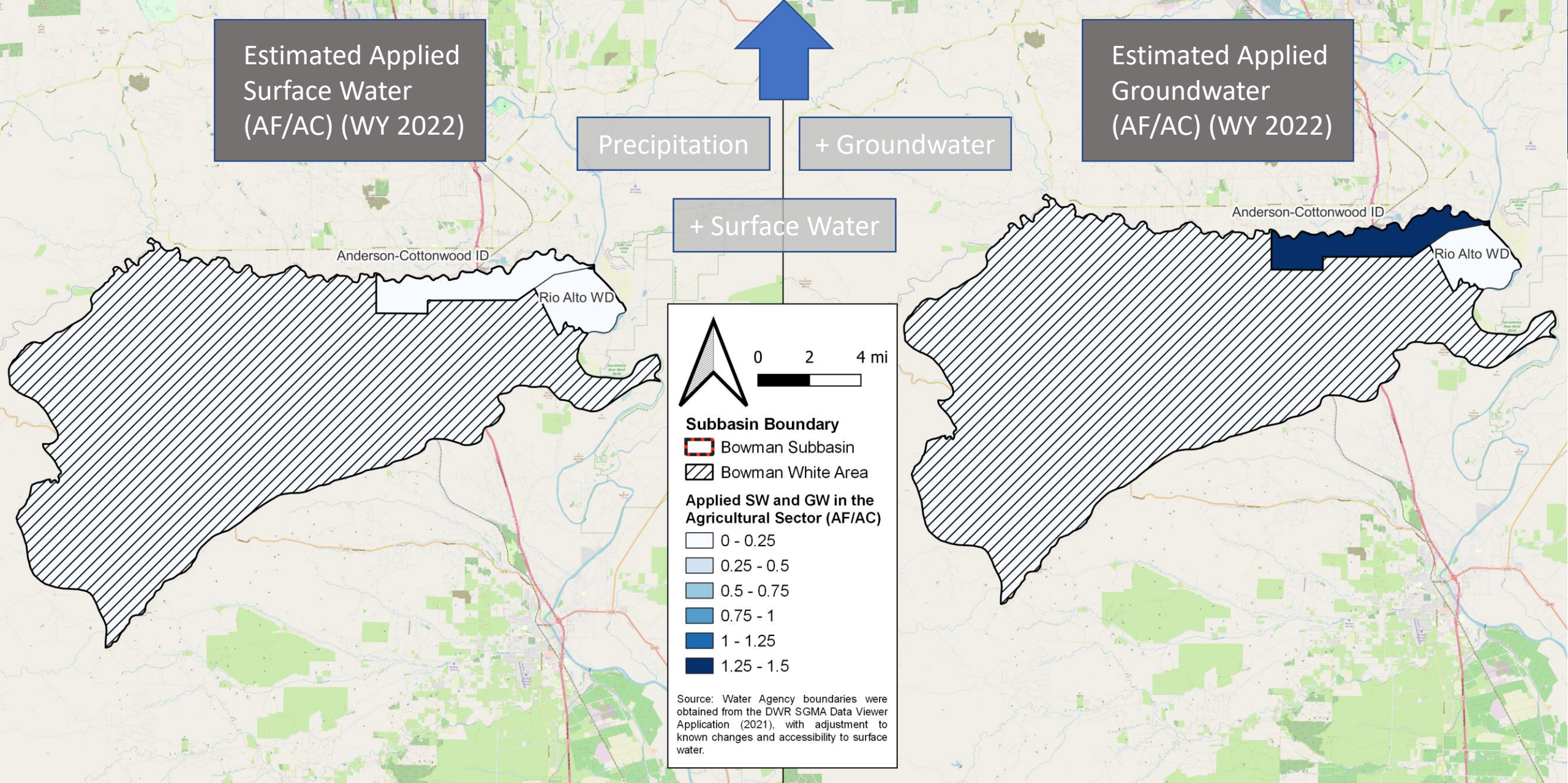
Table 5-3 Depletion of Interconnected Surface Water Data and SMC							
Well ID	MT (ft NAVD88)	MO (ft NAVD88)	2027 Interim Milestone (ft NAVD88)	Fall Maximum Groundwater Elevations		Fall 2022 MT Exceedance	Two Consecutive WY MT Exceedances
				2021	2022		
22N01W29N003M	91.7	123.4	123.2	115.07	106.19	-	-
22N02W01N003M	99.3	136.5	133.2	123.48	110.7	-	-
22N02W15C004M	84.0	144.1	135.4	114.54	109.72	-	-
22N02W18C003M	131.6	148.4	147.6	125.48	115.94	Yes	Yes
22N03W01R002M	123.6	143.9	143.9	125.37	115.43	Yes	No
23N02W28N004M	104.3	142.7	139.3	124.58	114.69	-	-
24N02W29N003M	123.2	158.1	146.9	143.21	127.46	-	-
Glenn TSS Well	237.5	262.8	262.8	302.48	305.38	-	-

- Fall 2022, most groundwater elevations were above the established MT
- Two Wells had groundwater elevations below the MT
- Undesirable results occur when water levels in 20% of the RMP wells fall below the MT in two consecutive years
- 13% (1 out of 8 wells) have measurements (over a two-year period below the MT)

## Water Supply and Water Use (Water Budget)

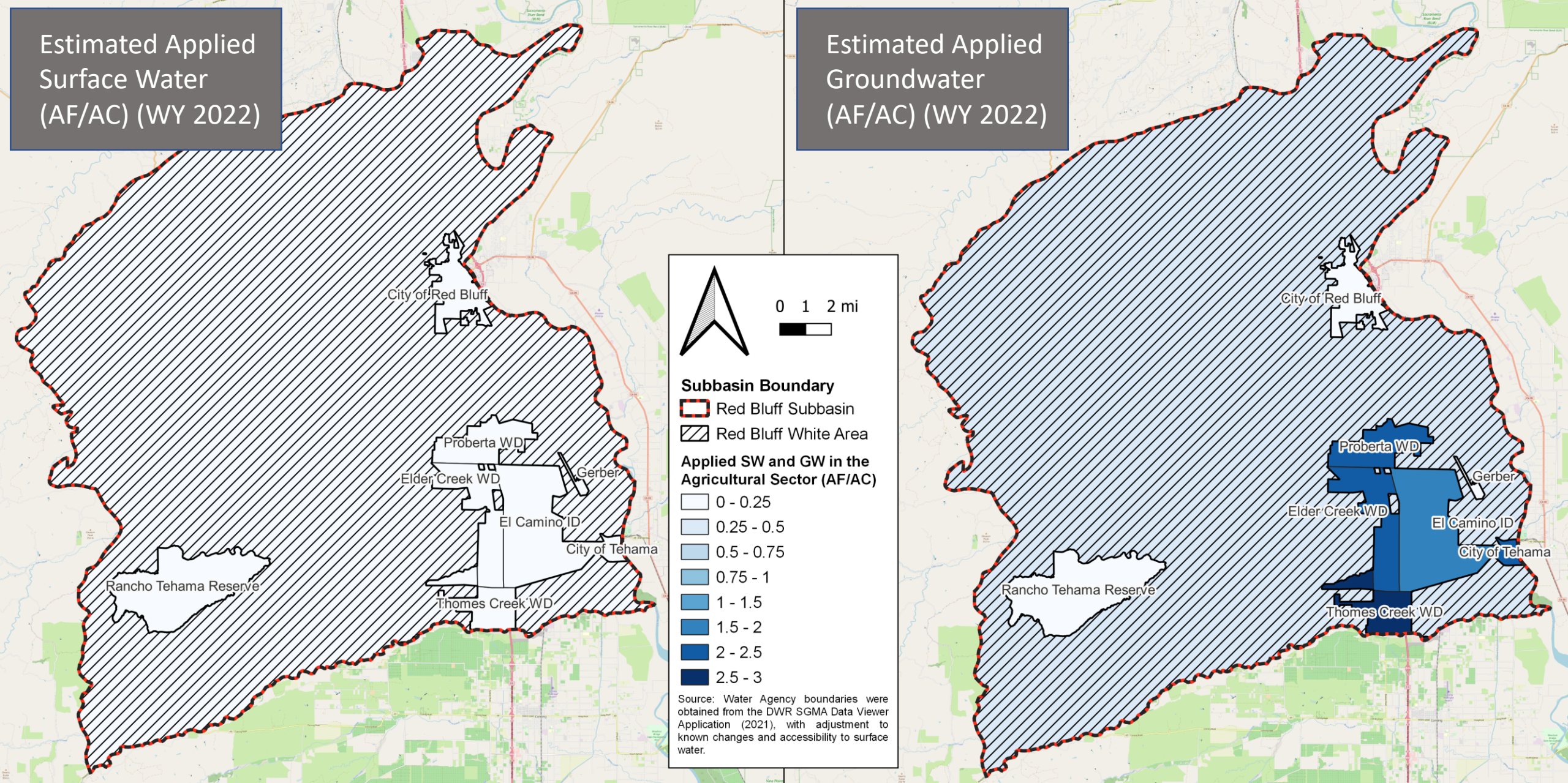
- Monthly timestep
- Based on Evapotranspiration (ET) from OpenET and Precipitation from PRISM
- Aggregated by with land use (DWR 2020 and CropScape 2022)
- Reported USBR Central Valley Operations (CVO) Reported SW Deliveries
- Measured Groundwater Extraction (Municipal)
- Domestic estimated from Urban Water Management Plans (UWMPs)
- Results summarized by water budget regions and land use
- Can be refined to field scale application

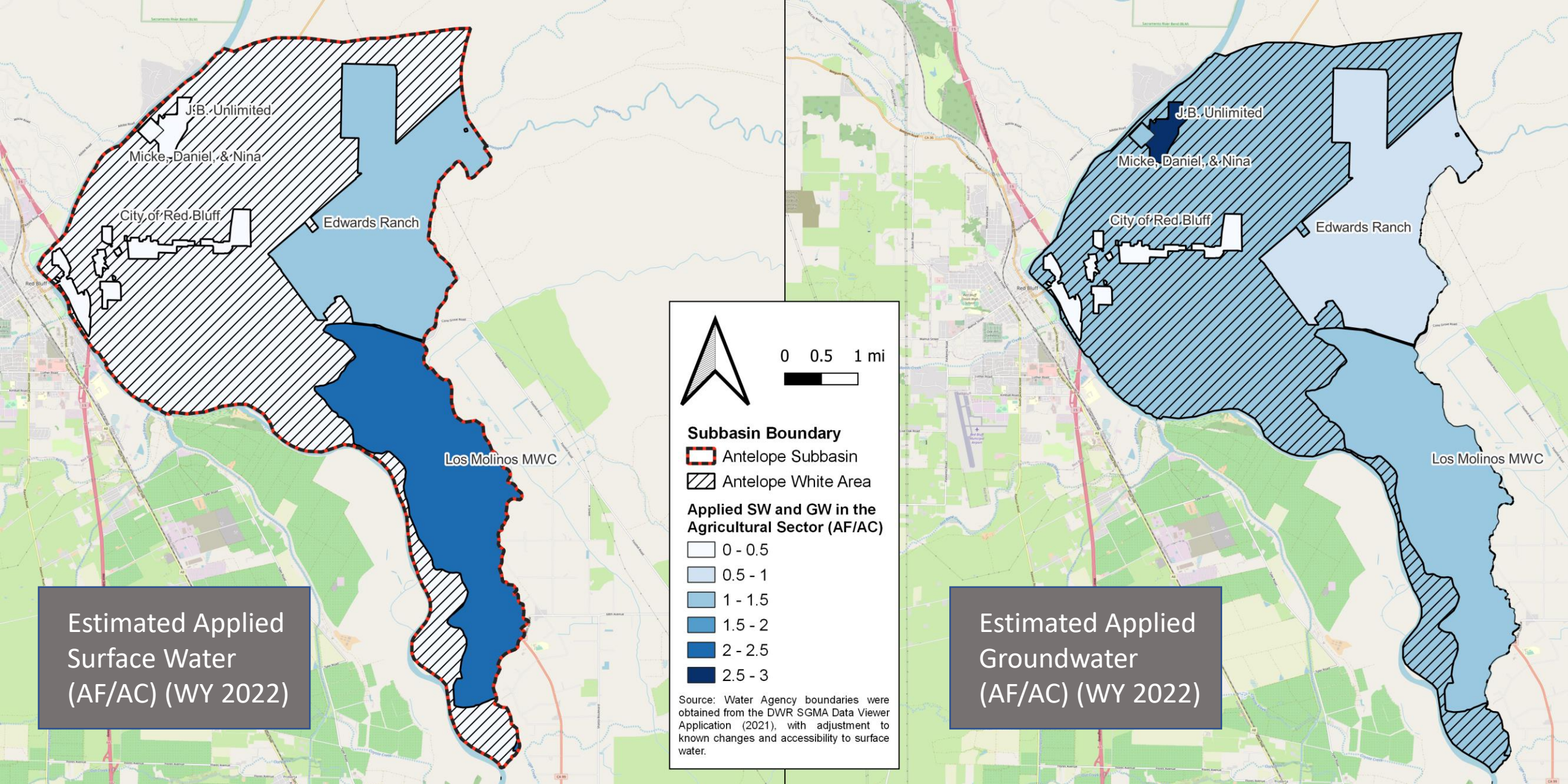




Estimated Applied  
Surface Water  
(AF/AC) (WY 2022)

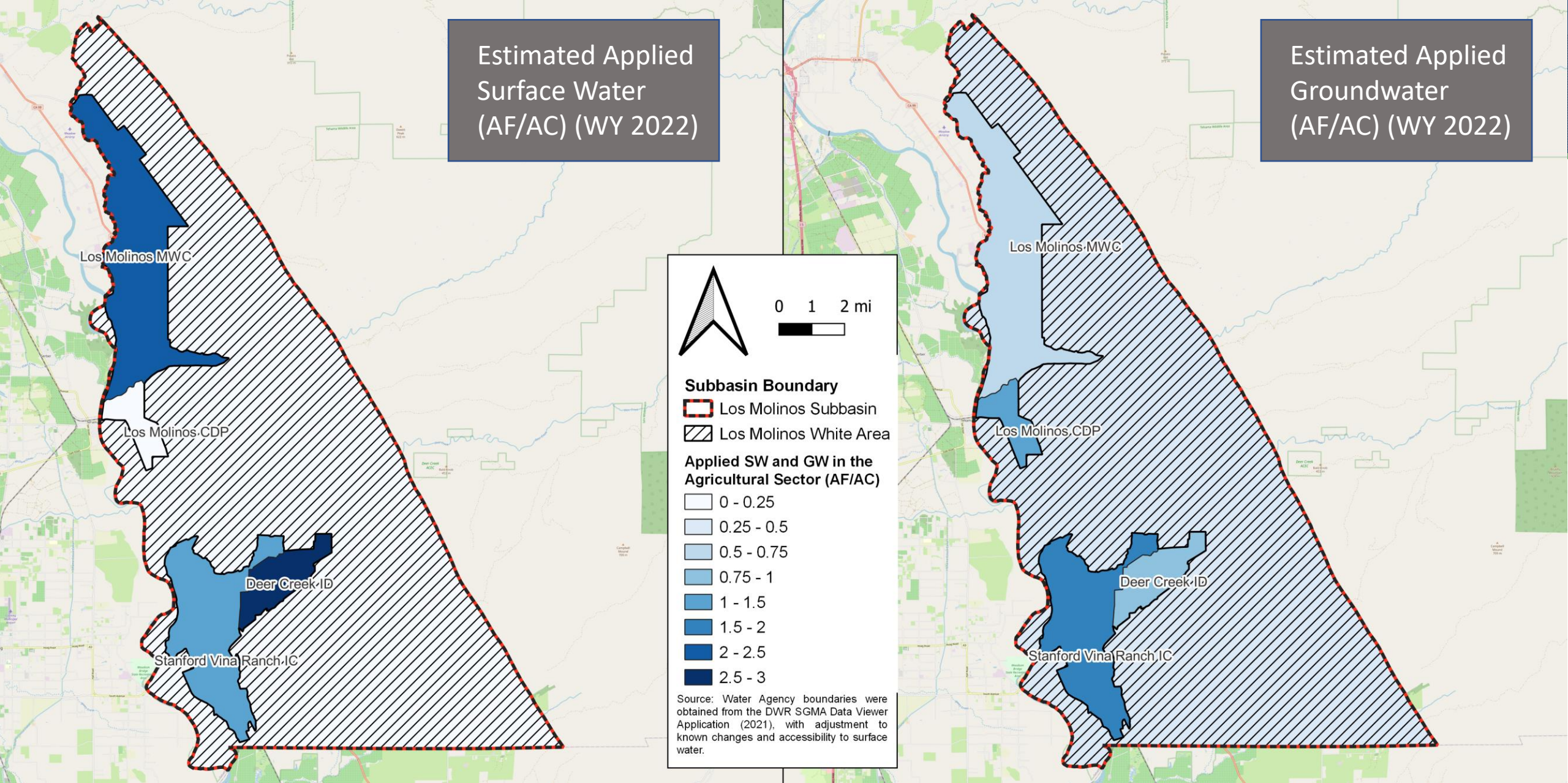
Estimated Applied  
Groundwater  
(AF/AC) (WY 2022)

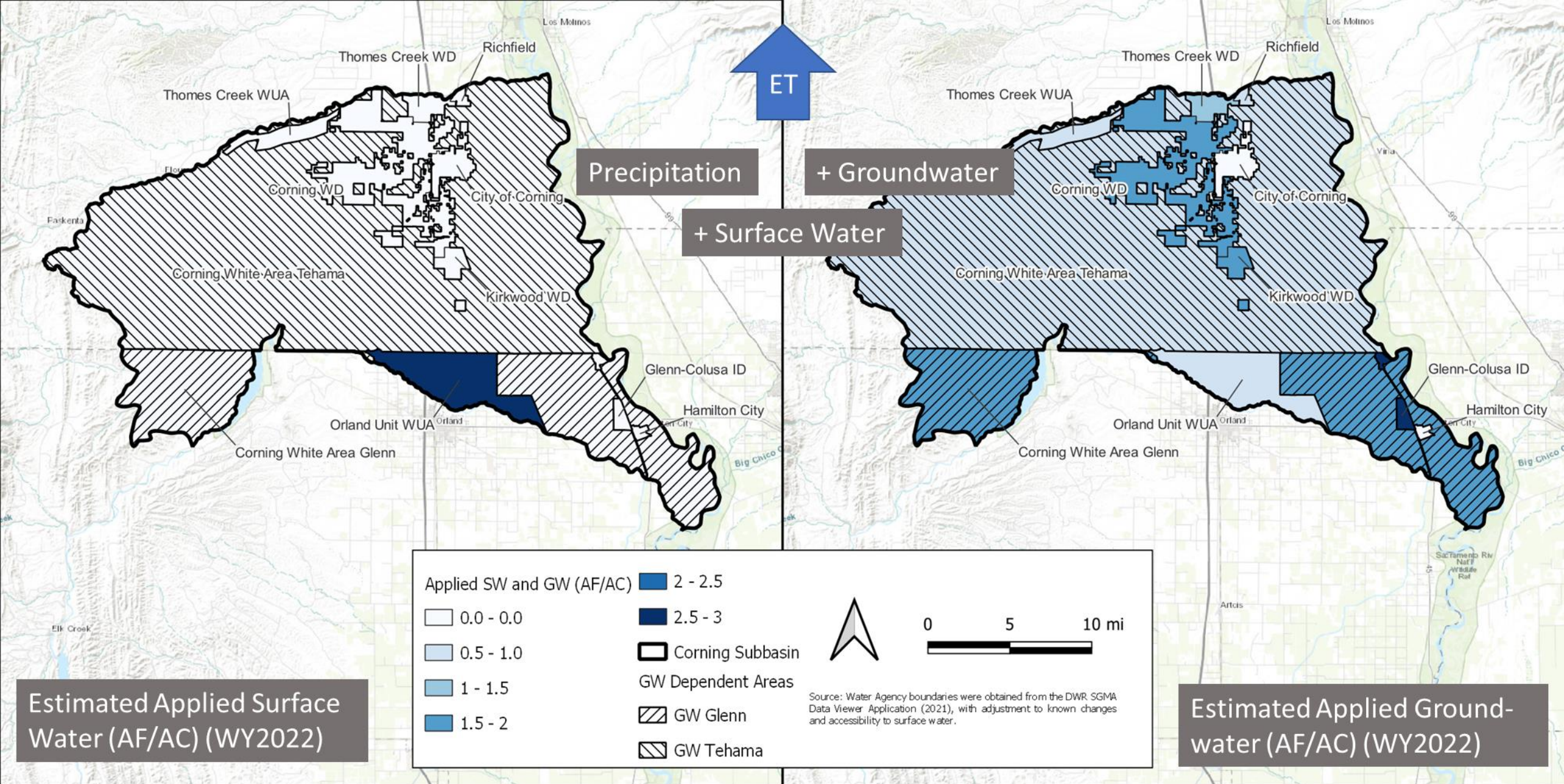




Estimated Applied  
Surface Water  
(AF/AC) (WY 2022)

Estimated Applied  
Groundwater  
(AF/AC) (WY 2022)





## Water Supply and Water Use (Water Budget)

Table 3-5 Estimated Uncertainty in Water Use Estimates			
Water Budget Component	Data Source	Estimated Uncertainty (%)	Source
<b>Groundwater Water</b>			
Agricultural	Measurement	20%	Typical uncertainty from water balance calculation.
Urban	Measurement/Estimate	5%	Typical accuracy of urban water system reporting.
Rural Residential	Calculation	15%	Estimated from per capita water use and Census information.
Native Vegetation (Plant groundwater uptake)	Calculation	25%	Estimated based on land use classification, precipitation, and ET.
<b>Surface Water</b>			
Agricultural	Calculation	10% <sup>1</sup>	Estimated from Senate Bill 88 (SB 88) measurement accuracy standards.

<sup>1</sup> Higher uncertainty of 10%-20% is typical for estimated surface water inflows, including un-gaged inflows from small watersheds into creeks that enter the Basin.

# Water Supply and Water Use (Water Budget) Bowman Subbasin

Table 3-4. Total Water Use by Water Use Sector			
Sector	2022 (af)		
	Groundwater	Surface Water	Total
Agricultural	12,000	210	12,210
Urban	580	0	580
Rural Residential	430	0	430
Native Vegetation (Plant groundwater uptake)	2,100	0	2,100
<b>Total</b>	<b>15,110</b>	<b>210</b>	<b>15,320</b>
<b>Total (excluding Native Vegetation<sup>1</sup>)</b>	<b>13,010</b>	<b>210</b>	<b>13,220</b>

<sup>1</sup> Excludes native vegetation which involves only natural plant uptake of shallow groundwater, not direct pumping, and extraction.

# Water Supply and Water Use (Water Budget) Red Bluff Subbasin

**Table 3-4. Total Water Use by Water Use Sector**

Sector	2022 (af)		
	Groundwater	Surface Water	Total
Agricultural	110,000	35	110,035
Urban	6,400	0	6,400
Rural Residential	980	0	980
Riparian Vegetation (Plant groundwater uptake)	5,400	0	5,400
<b>Total</b>	<b>122,780</b>	<b>35</b>	<b>122,815</b>
<b>Total (excluding Riparian Vegetation<sup>1</sup>)</b>	<b>117,380</b>	<b>35</b>	<b>117,415</b>

<sup>1</sup> Excludes native vegetation which involves only natural plant uptake of shallow groundwater, not direct pumping, and extraction.

# Water Supply and Water Use (Water Budget) Antelope Subbasin

Table 3-4. Total Water Use by Water Use Sector			
Sector	2022 (af)		
	Groundwater	Surface Water	Total
Agricultural	23,000	12,000	35,000
Urban	1,700	0	1,700
Rural Residential	130	0	130
Native Vegetation (Plant groundwater uptake)	1,300	0	1,300
<b>Total</b>	<b>26,130</b>	<b>12,000</b>	<b>38,130</b>
<b>Total (excluding Native Vegetation<sup>1</sup>)</b>	<b>24,830</b>	<b>12,000</b>	<b>36,830</b>

<sup>1</sup> Excludes native vegetation which involves only natural plant uptake of shallow groundwater, not direct pumping, and extraction.

# Water Supply and Water Use (Water Budget) Los Molinos Subbasin

**Table 3-4. Total Water Use by Water Use Sector**

Sector	2022 (af)		
	Groundwater	Surface Water	Total
Agricultural	48,000	33,000	81,000
Urban	750	0	750
Rural Residential	3	0	3
Native Vegetation (Plant groundwater uptake)	5,900	0	5,900
Total	54,653	33,000	87,653
Total (excluding Native Vegetation <sup>1</sup> )	48,753	33,000	81,753

<sup>1</sup> Excludes native vegetation which involves only natural plant uptake of shallow groundwater, not direct pumping, and extraction.

# Water Supply and Water Use (Water Budget) Corning Subbasin

Table 3-4 Total Water Use by Water Use Sector			
Sector	2022 (af)		
	Groundwater	Surface Water	Total
Agricultural	230,000	26,000	256,000
Urban	4,600	0	4,600
Rural Residential	220	0	220
Native Vegetation (Plant groundwater uptake)	7,300	0	7,300
<b>Total</b>	<b>242,120</b>	<b>26,000</b>	<b>268,120</b>
<b>Total (excluding Native Vegetation<sup>1</sup>)</b>	<b>234,820</b>	<b>26,000</b>	<b>260,820</b>

<sup>1</sup> Excludes native vegetation which involves only natural plant uptake of shallow groundwater, not direct pumping, and extraction.

# Water Budget Results by Water Budget Region (Bowman)

Water Budget Region	Area (AC)	Estimated Groundwater Extraction <sup>1</sup> (AF)	Estimated Groundwater Extraction <sup>1</sup> (AF/AC)
Anderson-Cottonwood ID	5,588	7,900	1.4
Rio Alto WD	4,195	800	0.2
Bowman White Area	113,080	3,200	0.0
<b>Totals</b>	<b>122,862</b>	<b>11,800</b>	<b>0.1</b>

<sup>1</sup>Groundwater extraction in the agricultural water use sector is shown; other water use sectors are not included in these results.

# Water Budget Results by Land Use (Bowman)

Land Use Classification	Area (AC)	Estimated Groundwater Extraction <sup>1</sup> (AF)	Estimated Groundwater Extraction <sup>1</sup> (AF/AC)
Miscellaneous Pasture	2,301	6,200	2.68
Miscellaneous Deciduous	645	4,600	1.98
Grain and Hay	602	500	2.03
Walnuts	581	13,500	2.77
Wheat	79	100	2.27
Almonds	53	900	3.63
Alfalfa	47	100	2.47
Safflower	31	200	2.16
Others <sup>2</sup>	118,524	200	0.00
<b>Totals</b>	<b>122,862</b>	<b>11,800</b>	<b>0.10</b>

<sup>1</sup>Groundwater extraction in the agricultural water use sector is shown; other water use sectors are not included in these results.

<sup>2</sup>Includes native vegetation, urban, idle land, and crops with low groundwater use.

# Water Budget Results by Water Budget Region (Red Bluff)

Water Budget Region	Area (AC)	Estimated Groundwater Extraction <sup>1</sup> (AF)	Estimated Groundwater Extraction <sup>1</sup> (AF/AC)
El Camino ID	7,571	12,500	1.7
Rancho Tehama Reserve	7,499	0	0.0
Elder Creek WD	3,835	9,400	2.4
Proberta WD	2,940	6,100	2.1
City of Red Bluff	2,823	0	0.0
Thomes Creek WD	2,645	6,900	2.6
City of Tehama	504	1,100	2.3
Gerber	239	0	0.0
Red Bluff White Area	243,704	77,500	0.3
<b>Totals</b>	<b>271,759</b>	<b>113,600</b>	<b>0.4</b>

<sup>1</sup>Groundwater extraction in the agricultural water use sector is shown; other water use sectors are not included in these results.

# Water Budget Results by Land Use (Red Bluff)

Land Use Classification	Area (AC)	Estimated Groundwater Extraction <sup>1</sup> (AF)	Estimated Groundwater Extraction <sup>1</sup> (AF/AC)
Walnuts	10,799	41,100	3.8
Almonds	7,455	28,300	3.8
Miscellaneous Deciduous	6,992	18,100	2.6
Miscellaneous Pasture	2,906	8,500	2.9
Grain and Hay	2,692	5,400	2.0
Citrus and Subtropical	2,344	6,000	2.5
Miscellaneous Field Crop	513	1,600	3.1
Wheat	488	1,000	2.0
Others <sup>2</sup>	237,571	3,700	0.0
<b>Totals</b>	<b>271,759</b>	<b>113,600</b>	<b>0.4</b>

<sup>1</sup>Groundwater extraction in the agricultural water use sector is shown; other water use sectors are not included in these results.

<sup>2</sup>Includes native vegetation, urban, idle land, and crops with low groundwater use.

# Water Budget Results by Water Budget Region (Antelope)

Water Budget Region	Area (AC)	Estimated Groundwater Extraction (AF)	Estimated Groundwater Extraction (AF/AC)
Los Molinos MWC	3,696	3,800	1.0
Edwards Ranch	3,591	2,700	0.8
City of Red Bluff	466	100	0.2
J.B. Unlimited	152	400	2.9
Micke, Daniel, & Nina	40	100	1.4
Antelope White Area	11,146	15,900	1.4
<b>Totals</b>	<b>19,091</b>	<b>23,000</b>	<b>1.2</b>

<sup>1</sup>Groundwater extraction in the agricultural water use sector is shown; other water use sectors are not included in these results.

# Water Budget Results by Land Use (Antelope)

Land Use Classification	Area (AC)	Estimated Groundwater Extraction <sup>1</sup> (AF)	Estimated Groundwater Extraction <sup>1</sup> (AF/AC)
Walnuts	4,856	13,500	2.8
Miscellaneous Deciduous	2,342	4,600	2.0
Miscellaneous Pasture	1,200	2,600	2.2
Miscellaneous Field Crop	472	500	1.1
Grain and Hay	248	500	2.0
Almonds	242	900	3.6
Safflower	81	200	2.2
Wheat	33	100	2.3
Others <sup>2</sup>	9,616	200	0.0
<b>Totals</b>	<b>19,091</b>	<b>23,000</b>	<b>1.2</b>

<sup>1</sup>Groundwater extraction in the agricultural water use sector is shown; other water use sectors are not included in these results.

<sup>2</sup>Includes native vegetation, urban, idle land, and crops with low groundwater use.

# Water Budget Results by Water Budget Region (Los Molinos)

Water Budget Region	Area (AC)	Estimated Groundwater Extraction <sup>1</sup> (AF)	Estimated Groundwater Extraction <sup>1</sup> (AF/AC)
Los Molinos MWC	9,340	5,200	0.6
Stanford Vina Ranch IC	6,482	11,100	1.7
Deer Creek ID	2,170	2,100	0.9
Los Molinos CDP	1,397	1,600	1.2
Los Molinos White Area	80,041	28,200	0.4
<b>Totals</b>	<b>99,431</b>	<b>48,200</b>	<b>0.5</b>

<sup>1</sup>Groundwater extraction in the agricultural water use sector is shown; other water use sectors are not included in these results.

# Water Budget Results by Land Use (Los Molinos)

Land Use Classification	Area (AC)	Estimated Groundwater Extraction <sup>1</sup> (AF)	Estimated Groundwater Extraction <sup>1</sup> (AF/AC)
Walnuts	8,296	22,100	2.7
Miscellaneous Pasture	5,920	11,900	2.0
Miscellaneous Deciduous	4,711	9,400	2.0
Alfalfa	1,455	2,000	1.4
Almonds	1,115	1,700	1.5
Grain and Hay	228	400	1.9
Pistachios	95	100	1.2
Miscellaneous Field Crop	93	100	1.1
Others <sup>2</sup>	77,518	500	0.0
<b>Totals</b>	<b>99,431</b>	<b>48,200</b>	<b>0.5</b>

<sup>1</sup>Groundwater extraction in the agricultural water use sector is shown; other water use sectors are not included in these results.

<sup>2</sup>Includes native vegetation, urban, idle land, and crops with low groundwater use.

# Water Budget Results by Water Budget Region (Corning)

Water Budget Region	Area (AC)	Estimated Groundwater Extraction (AF)	Estimated Groundwater Extraction (AF/AC)
Corning WD	13,614	25,900	1.9
Kirkwood WD	1,273	2,400	1.9
Orland Unit WUA	8,592	4,300	0.5
Thomes Creek WD	1,407	1,700	1.2
Thomes Creek WUA	2,212	1,900	0.9
Glenn-Colusa ID	920	2,600	2.8
City of Corning	2,239	1,100	0.5
Hamilton City	282	0	0.0
Richfield	348	300	0.9
Corning White Area Glenn	36,091	58,500	1.6
Corning White Area Tehama	140,436	126,600	0.9
<b>Totals</b>	<b>207,414</b>	<b>233,000</b>	<b>1.1</b>

# Water Budget Results by Land Use (Corning)

Land Use Classification	Area (AC)	Estimated Groundwater Extraction (AF)	Estimated Groundwater Extraction (AF/AC)
Citrus and Subtropical	18,250	40,000	2.2
Almonds	17,537	55,000	3.1
Miscellaneous Deciduous	16,108	37,000	2.3
Walnuts	13,466	48,000	3.6
Miscellaneous Pasture	7,504	19,000	2.5
Grain and Hay	6,083	12,000	2.0
Idle	5,864	0	0.0
Urban	5,243	0	0.0
Open Urban	4,964	0	0.0
Native Vegetation	99,256	0	0.0
Riparian Vegetation	2,525	7,000	2.8
Others	10,612	14,000	1.3
<b>Totals</b>	<b>207,414</b>	<b>233,000</b>	<b>1.1</b>

# GSP Implementation

- Updates discussed in the annual report (Section 5.2)
- Highlights in 2022:
  - Submitted SGMA Implementation Round 2 grant application in December 2022

# GSP Implementation

	Grant Administration		GSP Implementation, Outreach, and Compliance Activities		Ongoing Monitoring, Data Gaps, and Enhancements		Project and Management Action Implementation - Recharge Focused		Project and Management Action Implementation - Regional Conjunctive Use Project		Total	
	Requested	Recommended Award	Requested	Recommended Award	Requested	Recommended Award	Requested	Recommended Award	Requested	Recommended Award	Requested	Recommended Award
<b>Corning</b>	\$734,600.00	\$734,600.00	\$1,370,000.00	\$1,370,000.00	\$3,019,000.00	\$3,019,000.00	\$1,742,000.00	\$1,742,000.00	\$1,215,000.00	\$1,215,000.00	\$8,080,600.00	\$8,080,600.00
<b>Red Bluff</b>	\$564,600.00	\$323,500.00	\$1,288,000.00	\$1,288,000.00	\$2,401,500.00	\$0.00	\$1,956,500.00	\$1,956,500.00	N/A	N/A	\$6,210,600.00	\$3,568,000.00
<b>Los Molinos</b>	\$375,400.00	\$165,000.00	\$1,228,000.00	\$1,228,000.00	\$2,096,500.00	\$0.00	\$430,000.00	\$430,000.00	N/A	N/A	\$4,129,900.00	\$1,823,000.00
<b>Antelope</b>	\$313,050.00	\$142,950.00	\$1,128,000.00	\$0.00	\$1,429,500.00	\$1,429,500.00	\$430,000.00	\$0.00	N/A	N/A	\$3,300,550.00	\$1,572,450.00

Eligible for reimbursed expenses from Oct. 2022 (i.e., grant applications, WY 2022 Annual Reports, Well Registration Support, GSA Administration Time

# GSP Implementation (Continued)

The Corning Subbasin GSAs have also supported a proposal for a project to be submitted for funding through the **United States Bureau of Reclamation's WaterSMART Environmental Water Resources Projects grant opportunity**. The proposed project is to enhance the Corning Water District's (CWD) Supervisory Control and Data Acquisition (SCADA) system and provide infrastructure and outreach to promote in-lieu and direct recharge. The objectives of the program are to:

- Upgrade CWD's SCADA system in accordance with their 2020 Water Management Plan,
- Configure a new water information system to collect meter readings and provide landowners access to water use,
- Provide required infrastructure to conduct groundwater recharge in accordance with the Corning Subbasin Groundwater Sustainability Plan (GSP), and
- Conduct landowner and stakeholder outreach to promote in-lieu and direct groundwater recharge.
- Tehama County is making progress with a Well Registration Program (well inventory) and Glenn County is updating its well permitting process.

# GSP Implementation (Continued)

The Los Molinos Subbasin has also made progress on the Deer Creek Instream Flow Planning and Design Project. Trout Unlimited has secured grant funding to implement four distinct projects estimated to be completed by the end of 2025. The projects will collectively:

- Support water diverter's ability to implement voluntary on-farm and stream flow enhancements to benefit instream habitat and fish passage,
- Produce opportunities for physical water savings and utilize those savings to meet both ecological and agricultural needs through integrated surface water and groundwater management,
- Evaluate recharge opportunities including in-lieu and direct groundwater recharge and Flood-Managed Aquifer Recharge (Flood-MAR)