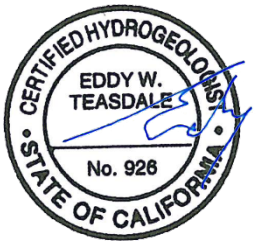
CORNING SUBBASIN GROUNDWATER SUSTAINABILITY PLAN ANNUAL REPORT – 2022

PREPARED FOR

TEHAMA COUNTY GSA

CORNING SUB-BASIN GSA

PREPARED BY



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LIST OF ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
af	acre-feet
af/ac	acre-feet per acre
bgs	below ground surface
CASGEM	California Statewide Groundwater Elevation Monitoring Online System
CVP	Central Valley Project
District	Tehama County Flood Control and Water Conservation District
DMS	data management system
DWR	Department of Water Resources
ET	evapotranspiration
eWRIMS	Electronic Water Rights Information Management System
ft	feet
GAMA	groundwater ambient monitoring and assessment program
GIS	geospatial information system
GPCD	gallons per capita per day
GSP	Groundwater Sustainability Plan
GSA	Groundwater Sustainability Agency
InSAR	Interferometric Synthetic Aperture Radar
km	kilometer
m	meter
MO	measurable objective
MT	minimum threshold
NAVD 88	North American Vertical Datum of 1988
NSac model	North Sacramento model
PMA	projects and management action
PRISIM	Parameter-elevation Regressions on Independent Slopes Model
RMP	representative monitoring point
SCADA	supervisory control and data acquisition
SGMA	Sustainable Groundwater Management Act
SMC	sustainable management criteria
Subbasin	Corning Subbasin
SWRCB	State Water Resource Control Board
TDS	total dissolved solids
Tehama IHM	Tehama Integrated Hydrogeological Model
Tehama County FCWCD	Tehama County Flood Control and Water Conservation District

Acronym	Meaning
TNC	The Nature Conservancy
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
WY	water year

EXECUTIVE SUMMARY

ES 1. Introduction

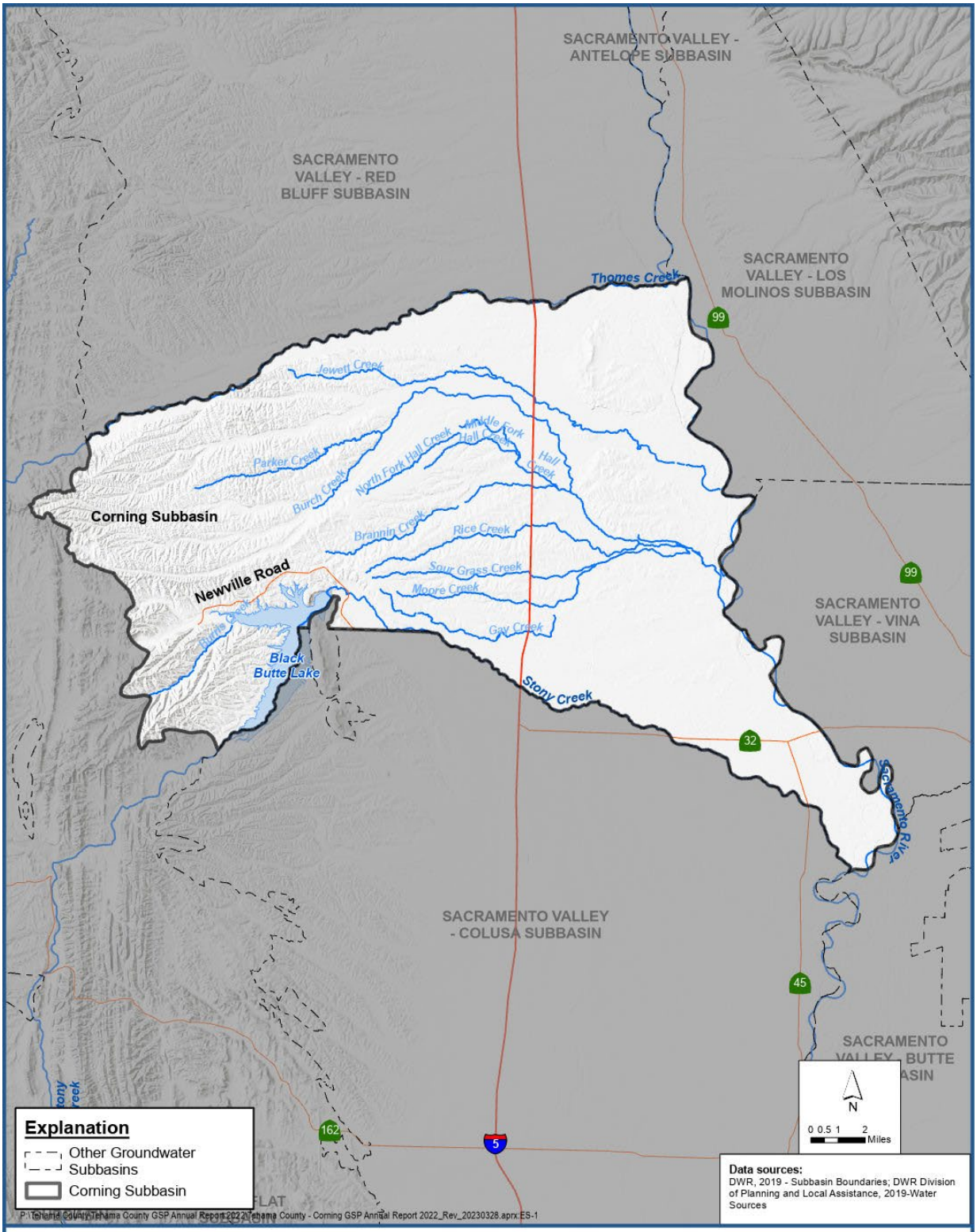
The annual report for the Corning Subbasin (Subbasin) (5-021.51) was prepared on behalf of the Corning Sub-basin Groundwater Sustainability Agency and the Tehama County Groundwater Sustainability Agency (GSA) to fulfill the statutory requirements of the Sustainable Groundwater Management Act (SGMA) legislation (Section 10728) and regulatory requirements developed by the California Department of Water Resources (DWR) included in the Groundwater Sustainability Plan (GSP) Regulations (Section 354.40 and Section 356.2). The Regulations require the GSAs to submit an Annual Report to DWR by April 1st following the reporting year (October through September).

The Corning Subbasin covers 207,342 acres and is in the Sacramento Valley Groundwater Basin (**Figure ES-1**). The Corning Subbasin is located in Tehama and Glenn Counties. The Corning Subbasin GSP was developed in a coordinated effort between the Tehama County FCWCD and the Corning Sub-basin GSA. The Tehama County FCWCD is also the exclusive GSA for six (6) other subbasins: Antelope, Bend, Bowman, Los Molinos, Red Bluff, and South Battle Creek.

This report is the second Annual Report prepared to support the adopted Corning Subbasin GSP submitted in January 2022. This Annual Report includes data elements for the current reporting Water Year (2022). Pursuant to GSP Regulations, the Annual Report includes:

1. Groundwater Elevation Data
2. Water Supply and Use
3. Change in Groundwater Storage
4. GSP Implementation Progress

This Annual Report coincides with one of the most severe and extensive droughts in the western United States' recorded history. In Water Year 2022, drought conditions in this subbasin were classified as ranging from "extreme" to "exceptional," the most extreme classification defined by the U.S. Drought Monitor. Historically, observed impacts during exceptional drought generally include: widespread water supply shortages, depleted surface water supplies, extremely low federal and state surface water deliveries, curtailment of water rights, extremely high surface water prices, increased groundwater pumping to satisfy water demands, dry groundwater wells, increased well drilling and deepening, increased pumping costs, wildfire, decreased recreational opportunities, and poor water quality, among other potential impacts reported by the U.S. Drought Monitor. All of these conditions were experienced to a degree across California in 2022 and, at least in part, within the Subbasin.



TEHAMA COUNTY
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CORNING SUB-BASIN GSA

Subbasin Area Map

Figure ES-1

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

ES 2. Groundwater Elevations

Groundwater elevation data in the shallow and deep portions of the principal aquifer for WY 2022 were analyzed. The Water Year is defined as October through September. Groundwater elevation contour maps for seasonal low and seasonal high-water levels were prepared for WY 2022. Thirty-five (35) representative monitoring point (RMP) wells exist that monitor groundwater levels in the shallow portion of the aquifer while nineteen (19) RMP wells are screened in deep portion of the aquifer. Seven (7) of the fifty-four (54) RMP wells had fall 2022 measurements below the minimum threshold (MT) value. Undesirable results occur when water levels in 20% of the RMP wells fall below the MT in two consecutive years. In WY 2022, 15% of RMP wells had two consecutive MT exceedances.

ES 3. Water Supply and Use

Table ES-1 includes groundwater use data by sector for WY 2022, numbers are rounded to two significant digits, except totals which are unrounded. The agricultural sector had the greatest decrease in use from approximately 250,000 acre-feet (af) in WY 2021 to 230,000 af in WY 2022. Urban and Rural Residential groundwater use saw a slight increase from 4,500 af in WY 2021 to about 4,800 af in WY 2022. In WY 2021 Urban use included the Rural Residential, Industrial and Small Water Systems sectors. The WY 2022 Annual Report presents Urban use and Rural Residential use separately. Native vegetation was not reported in the WY 2021 Annual Report.

Table ES-1. Groundwater Use by Water Use Sector

Sector	2022 (af)
Agricultural	230,000
Urban	4,600
Rural Residential	220
Native Vegetation (Plant groundwater uptake)	7,300
Total	**242,120**
Total (excluding Native Vegetation[1])	**234,820**

[1] *Excludes native vegetation which involves only natural plant uptake of shallow groundwater, not direct pumping, and extraction.*

Total surface water deliveries have been estimated from total surface water diversions by accounting for conveyance losses, reuse, and boundary outflows for WY 2022 are presented in **Table ES-2**, numbers are rounded to two significant digits, except totals which are unrounded. Total surface water deliveries for the Subbasin were estimated to be about 26,000 af in WY 2022.

Table ES-2. Surface Water Deliveries by Water Use Sector and Source		
Sector	2022 (af) Supply Source	
	CVP	Local
Agricultural	120	26,000
Urban	0	0
Native Vegetation	0	0
Total	**26,120**	

ES 4. Groundwater Storage

Changes in groundwater storage from Spring 2021 to Spring 2022 were calculated using measured groundwater levels and a storage coefficient for the aquifer. Change in groundwater levels from Spring 2021 to Spring 2022 at selected wells were interpolated to estimate the groundwater elevation change in areas where sufficient data were available. Estimated elevation change was multiplied by a storage coefficient (0.066) available from the Tehama Integrated Hydrogeological Model, detailed in the Red Bluff Subbasin GSP Appendix 2-J (Tehama County FCWCD, 2022), to estimate the groundwater storage change volume in the aquifer. The change in storage from spring 2021 to spring 2022 was -90,000 af.

ES 5. GSP Implementation Progress

ES 5.1 Progress Towards Achieving Sustainability

The measurements collected in WY 2022 to track groundwater conditions were at or above the MTs for a majority of the sustainability indicators. However, extensive drought conditions have resulted have groundwater elevations below the MTs in seven wells. Undesirable results occur when water levels in 20% of the representative monitoring point (RMP) wells fall below the MT in two consecutive years. In WY 2022, 15% of RMP wells had two consecutive MT exceedances. This percentage was calculated using RMP wells with one or more fall groundwater level measurements in the last two years (46 of the 54 RMP wells). The GSAs will continue to monitor and manage groundwater conditions in the Corning Subbasin (Subbasin) to meet the 5-year 2027 Interim Milestones. Groundwater conditions below the MT are likely to recover once the drought ends during wetter hydrological conditions.

ES 5.2 Progress Towards PMA Implementation

Updates and activities since the previous Annual Report include Corning Subbasin GSAs' coordination on a proposal for funding through DWR's SGM Grant Program in order to further develop and fund projects and management actions (PMAs) for monitoring, recharge, and conjunctive use. A draft awards list for the grant application is anticipated to be released by DWR in June 2023. The Corning Subbasin GSA's 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 will update the Corning Water District's supervisory control and data acquisition (SCADA) system and provide infrastructure and outreach to promote in-lieu and direct recharge. Other actions include well registration and well permitting efforts, monitoring and recording of groundwater levels and quality data, maintaining, and updating the data management system (DMS), annual reporting of subbasin conditions, and ongoing intra- and inter-basin coordination.

1. GENERAL INFORMATION

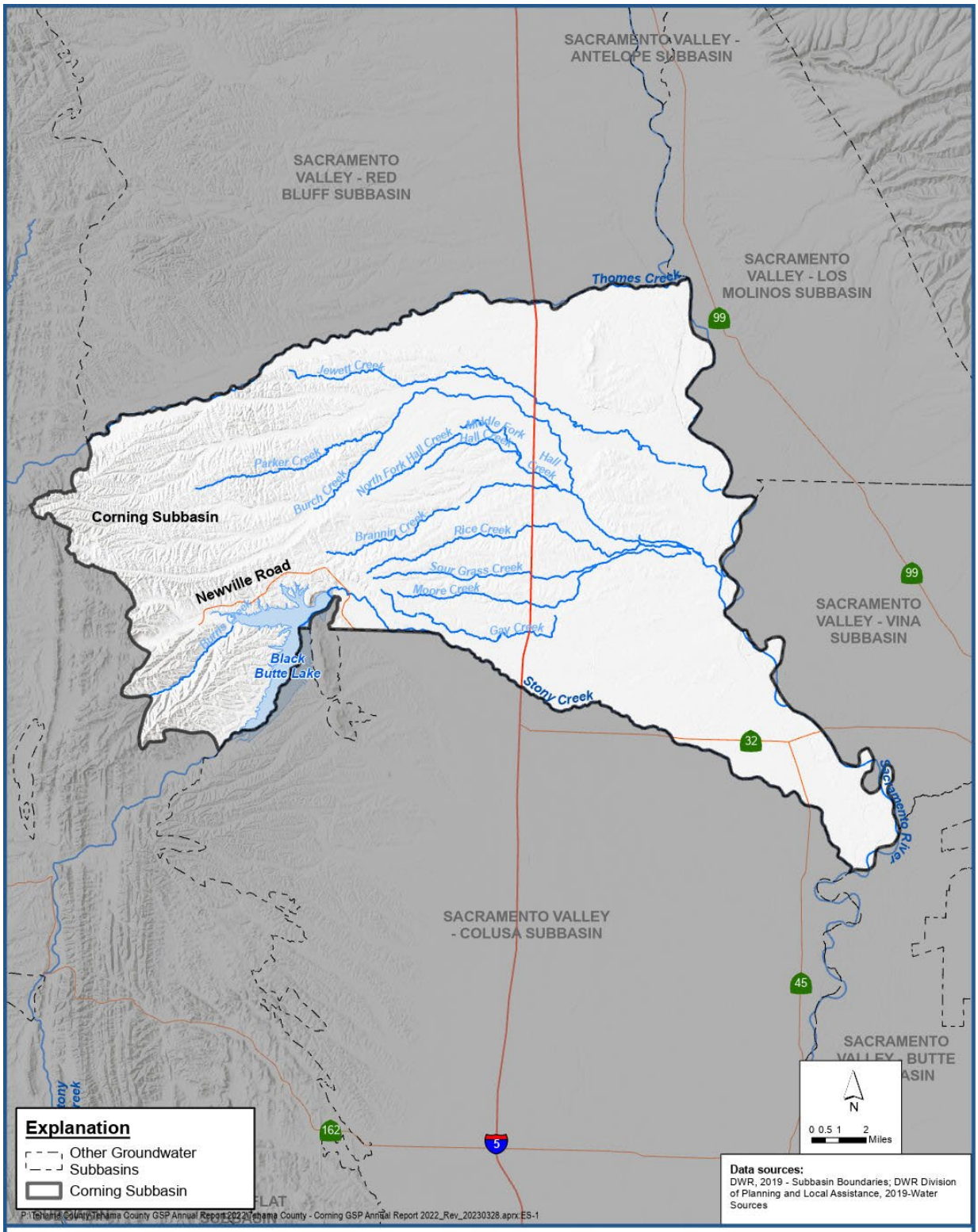
The annual report for the Corning Subbasin (Subbasin) (5-021.51) was prepared on behalf of the Corning Sub-basin Groundwater Sustainability Agency and the Tehama County Groundwater Sustainability Agency = to fulfill the statutory requirements of the Sustainable Groundwater Management Act (SGMA) legislation (Section 10728) and regulatory requirements developed by the California Department of Water Resources (DWR) included in the Groundwater Sustainability Plan (GSP) Regulations (Section 354.40 and Section 356.2). The Regulations require the GSAs to submit an Annual Report to DWR by April 1st following the reporting year (October through September).

1.1. Subbasin Setting

The Corning Subbasin (DWR Subbasin No. 5-021.51) covers 207,342 acres located in the Northern Sacramento Valley Groundwater Basin. The lateral extent of the Subbasin is defined by the Subbasin boundaries provided in Bulletin 118 (DWR, 2018). It is bounded on the north by the Red Bluff Subbasin (DWR Subbasin No. 5-021.50.01) on the east by the Los Molinos Subbasin (DWR Subbasin No. 5-021.56), and the Vina Subbasin (DWR Subbasin No. 5-021.57) on the south by the Colusa Subbasin (DWR Subbasin No. 5-021.52), and the Butte Subbasin (DWR Subbasin No. 5-021.70) and on the west by the Coastal Mountain Range. The eastern and western boundaries of the Subbasin generally follow the Sacramento River and Coastal Mountain Range, respectively, and the northern and southern boundaries generally follow Thomes Creek and Stony Creek, respectively. (**Figure 1-1**).

The Corning Subbasin GSP estimated that open space consisting of grassland, pasture, shrubland, open water, wetlands, barren land, or forested land is the leading source of land use within the Subbasin (70%), and the remaining land use consists of approximately 26% agricultural and less than 5% urban. Current data sources (discussed in **Section 3.2**) estimate 49% of the Subbasin is native vegetation, 40% is agricultural, and 1% is riparian vegetation. The Subbasin's agricultural water users rely on both surface water and groundwater to irrigate their crops. The Subbasin receives surface water supplies from the Central Valley Project (CVP) through the Corning Canal to the Corning Water District and Thomes Creek Water District, from the Orland Project Distribution System, and from the Hamilton City Sacramento River diversion to the Glenn Colusa Canal.

Fresh groundwater bearing geologic deposits in the Subbasin exist as a single principal aquifer which lacks a distinct laterally continuous aquitard (Corning Sub-basin GSA & Tehama County FCWCD, 2022). Water bearing geologic units in the aquifer include the Quaternary formations and the Tehama and Tuscan Formations. While these geologic units are generally free of laterally continuous aquitards, wells within the principal aquifer are divided into those screened in the shallow portion (generally screened from 100-450 feet [ft] below ground surface [bgs]) and the deep portion (screened deeper than 450 ft bgs). Wells screened in the shallow zone are largely for domestic purposes, while those screened in the deep zone or composite wells are generally for irrigation or municipal purposes. The base of the principal aquifer is defined as the base of freshwater Tehama and Tuscan formations, which varies between 500-2,000 ft bgs.



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CORNING SUB-BASIN GSA

Subbasin Area Map

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

Figure 1-1

1.2. Report Contents

This report is the second Annual Report prepared to support the adopted Corning Subbasin GSP submitted in January 2022. The Annual Report includes data elements for the current reporting Water Year (WY), 2022. Data elements presented in this report refer to the Water Year (the 12-month period from October through September) unless otherwise noted. Pursuant to of the GSP Regulations, the Annual Report includes:

1. Groundwater Elevation Data
2. Water Supply and Use
3. Change in Groundwater Storage
4. GSP Implementation Progress

2. GROUNDWATER ELEVATIONS – SECTION 356.2(B)(1)

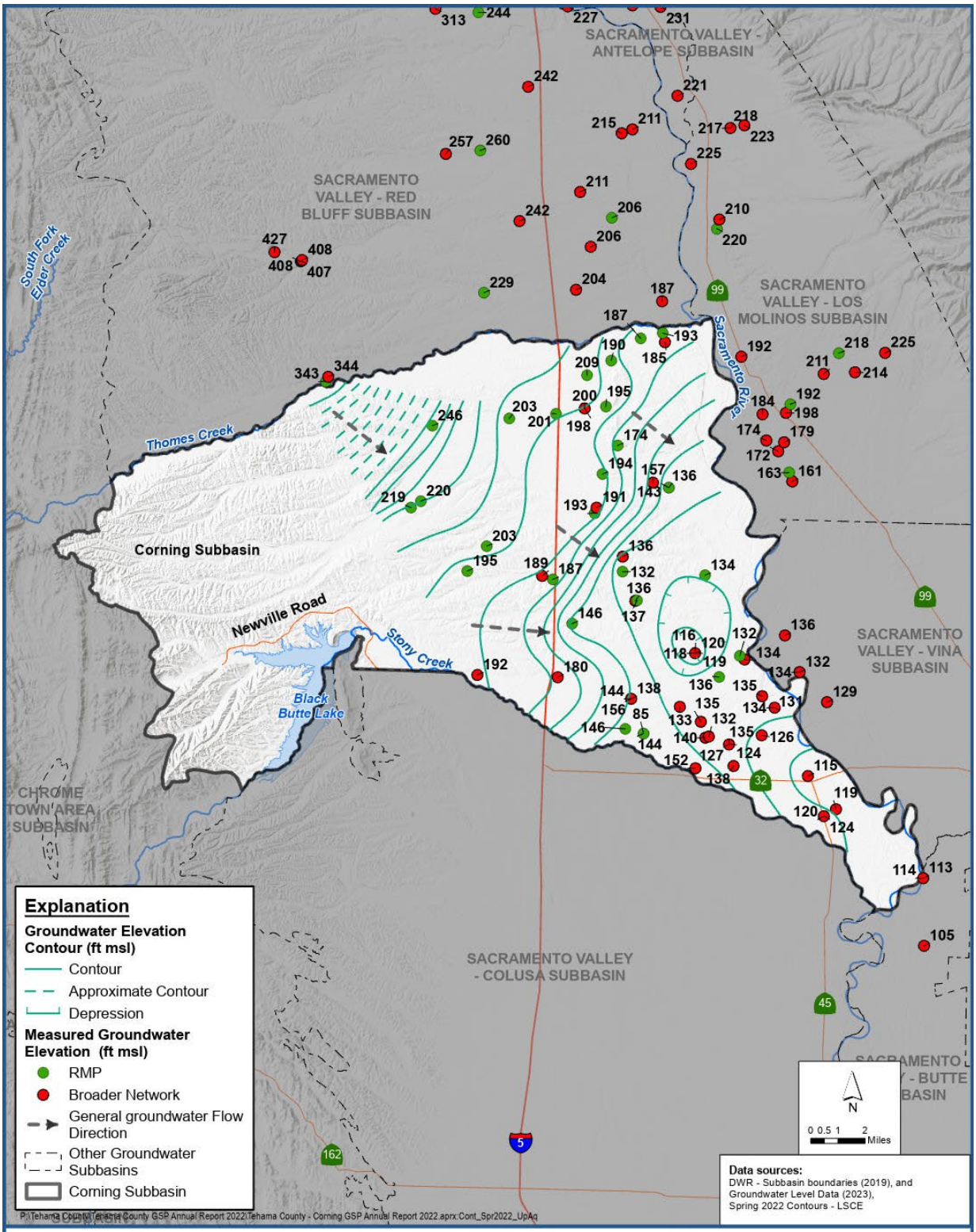
Currently, 94 wells are monitored as part of a broad network for groundwater levels and 54 are representative monitoring point (RMP) wells assigned Sustainable Management Criteria (SMC). The wells are usually measured three times per year, once each in the spring (March), summer (August), and fall (October) of each year. Groundwater elevation data in the principal Aquifer for WY 2022 were analyzed. Hydrographs for these wells are included in **Appendix A**. **Appendix B** includes a copy of the monitoring data used to generate this Annual Report pursuant to GSP regulations (Section 354.40). Groundwater elevation contour maps for seasonal low and seasonal high-water levels were prepared for WY 2022 (**Figure 2-1**; **Figure 2-2**). Groundwater level data collected at RMP and other wells used to develop groundwater contours and RMP well hydrographs are collected by DWR, United States Geological Survey (USGS), The Nature Conservancy (TNC), and the District and records are maintained by the State Water Resources Control Board (GAMA) and DWR (CASGEM). Records of groundwater elevations are also maintained in the GSA's data management system (DMS).

2.1. Groundwater Elevation Contours – Section 356.2(b)(1)(A)

Seasonal high and seasonal low groundwater elevation contour maps for WY 2022 are presented in **Figures 2-1** and **2-2**. The seasonal high contours were prepared based on observed maximum springtime (March) water levels, while the seasonal low contours were prepared based on minimum water levels measured in October. Due to the hydraulic connection between subbasins, wells neighboring the Corning subbasin were included in the contouring process. Wells were not displayed in contour maps if data did not exist at that well during the mapping period. Contours are shown solid if there is good confidence in the contour placement whereas contours are shown dashed if their position is inferred from data yet generally representative of the contour's true location. Contours are not drawn if confidence in contours is poor. Most notably this occurs on the western side of the subbasin where there is a lack of data. Groundwater elevations on the contour maps are shown as feet above mean sea level (ft amsl) based on the North American Vertical Datum of 1988 (NAVD 88).

The contour maps illustrate general features of the groundwater flow system in the Corning Subbasin, including:

- A general groundwater flow moving from the northwest to southeast within the subbasin.
- Movement of water towards the Sacrament River in both the fall and the spring.
- Steep groundwater gradients in the northwest and center of the subbasin with gradual gradients in the southeast part of the subbasin.



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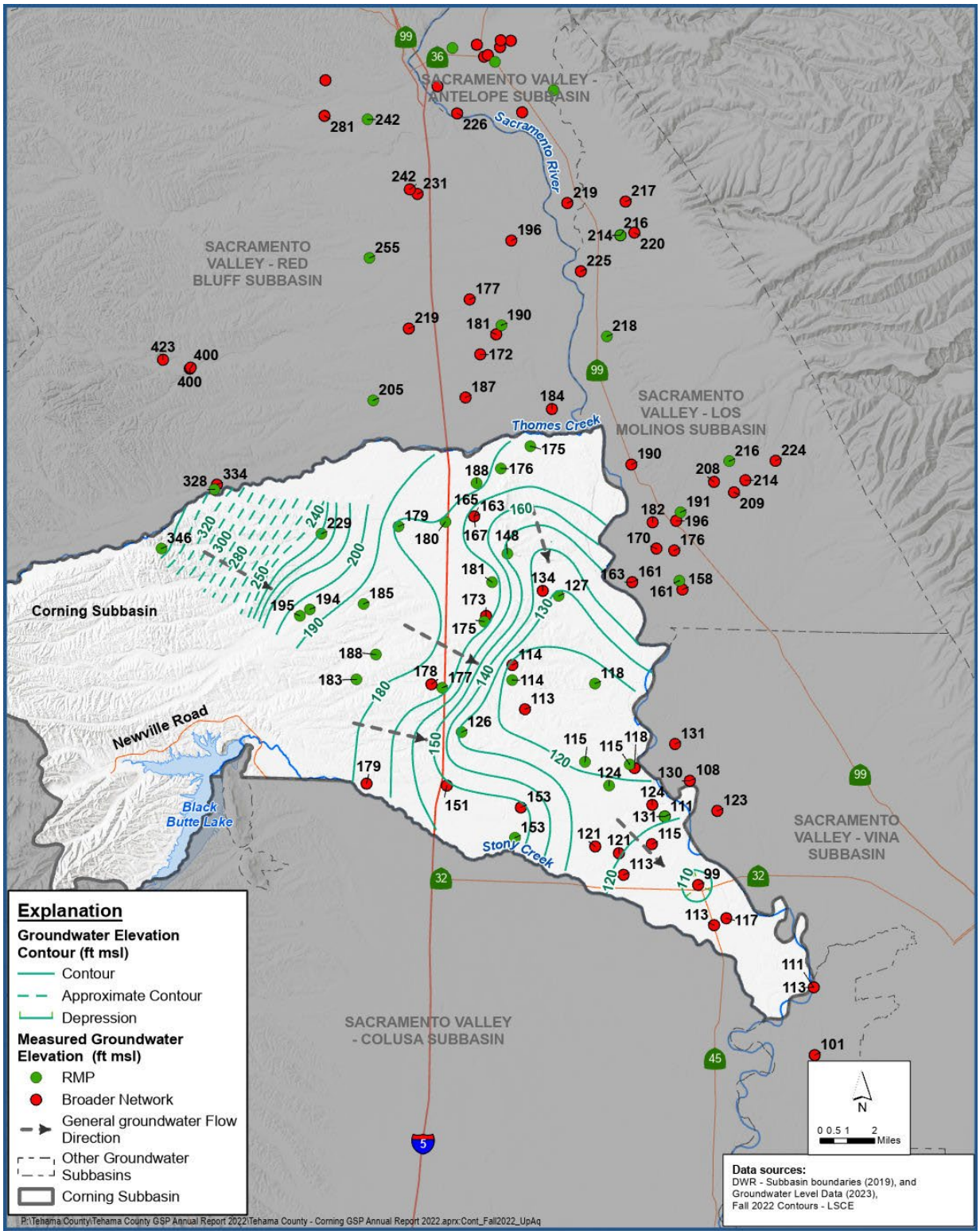
LSCE Team

Contours of Equal Groundwater Elevation, Spring 2022

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

Figure 2-1



TEHAMA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

LSCE Team

Contours of Equal Groundwater Elevation, Fall 2022

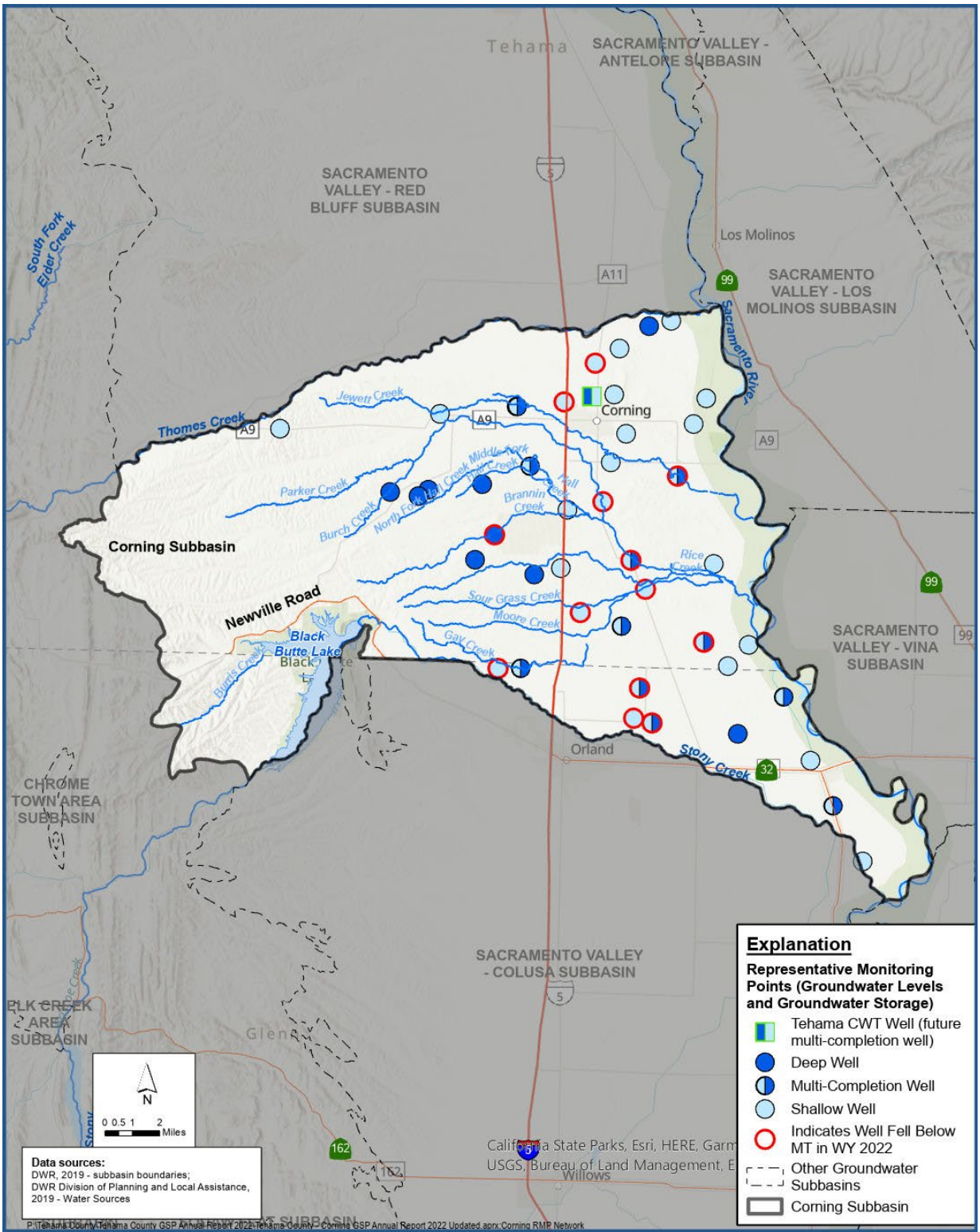
Figure 2-2

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

2.2. Groundwater Elevation Hydrographs – Section 356.2(b)(1)(B)

Hydrographs of groundwater elevations were prepared for the RMP wells in both the shallow and deep portions of the aquifer. RMP wells are distributed throughout the Subbasin to provide broad spatial coverage of the Subbasin. **Figure 2-3** shows the distribution of the current RMP wells. The process for selecting these sites is documented in the Corning Subbasin GSP. Long-term fluctuations in groundwater levels (and groundwater in storage) occur when there is an imbalance between the volume of water recharged into the aquifer and the volume of water removed from the aquifer, either by extraction or natural discharge to surface water bodies. If, over a period of years, the amount of water recharged to the aquifer exceeds the amount of water removed from the aquifer, then groundwater levels will increase and groundwater storage increases (i.e., positive change in storage). Conversely, if, over time, the amount of water removed from the aquifer exceeds the amount of water recharged then groundwater levels decline. These long-term changes can be linked to several factors including increased or decreased groundwater extraction or variations in recharge associated with wet or dry hydrologic cycles.

Thirty-five (35) RMP wells exist that monitor groundwater levels in the shallow portion of the aquifer while nineteen (19) RMP wells are screened in the deep portion of the aquifer. Seven (7) of the fifty-four (54) RMP wells had fall 2022 measurements below the minimum threshold (MT) value (22N02W18C003M, 22N03W06B001M, 22N03W12Q003M, 22N02W18C001M, 22N03W01R001M, 23N02W28N002M, and 23N03W13C004M). In the spring, water levels in these wells recover to above MT values.



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Corning Subbasin RMP Network

Figure 2-3

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

3. WATER SUPPLY AND USE

Water supply and use information are presented below. Water use data by sector (required per Section 356.2) is summarized in **Section 3** and categorized by groundwater extraction, surface water supply and total supply using the best data available. Water use sectors are broadly identified as agricultural, urban, and native vegetation land uses.

Groundwater use was taken from records where available and otherwise were estimated from 2022 land use data, climate conditions, and crop coefficients consistent with those used in the NSac model, a model modified from DWR's C2VSimFG model (DWR, 2020) which uses published crop coefficients. Surface water use was estimated from historic deliveries when records were not available.

3.1. Water Budget Approach

Water supply and use in the Subbasin were quantified using the best available data sources and information. Where available, groundwater extraction and surface water supplies were quantified directly from measured and reported groundwater pumping, surface water diversions, and deliveries data. However, groundwater extraction data has historically been limited, particularly for privately-owned wells. Thus, a water budget approach has been used to estimate the remaining, unmeasured volume of groundwater extraction that has occurred to meet demand in the Subbasin.

The NSac model was used to prepare water budgets for the Subbasin during GSP development. The model was adapted from C2VSimFG Version 1.0, developed by DWR (DWR, 2020). The base C2VSimFG model was revised during GSP development to better represent local land and water use, and to develop more accurate water budgets in the Subbasin (Montgomery & Associates, 2021). The first Annual Report for WY 2021 leveraged information from the NSac model to quantify subregion-scale water budgets in the Subbasin through WY 2021. More information about the model's development process can be found in the GSP, Appendix 4A. In WY 2022, a modified approach to the water budget calculation was used to enhance the resolution of the water budget. The method follows the framework laid out in Hessels et al. (2022).

Building on past work, the water budget approach used in this Annual Report utilizes available geospatial data and information to quantify crop water demand, precipitation, and other parameters with pixel-scale resolution (30-meter (m) x 30 m), corresponding to the spatial resolution of satellite imagery used in developing these inputs. In addition to geospatial data, available surface water supply and groundwater extraction data is incorporated into the water budget by distributing that water out to specific regions where that water is used (e.g., surface water supplier service areas). The remaining groundwater extraction needed to meet demand is then calculated based on the balance of water demand and available water supplies, with consideration for rainfall, irrigation, and soils characteristics. The result is a spatially distributed water budget calculated with a finer spatial resolution than was possible in the previous water budgets. The pixel-scale water budget results provide greater insight into where water use occurs in the Subbasin and the process is configurable to create water budget summaries for any region of the Subbasin.

This approach was used to calculate monthly water budgets by water use sector in the Subbasin during the current reporting year (WY 2022), as required in Title 23 of the California Code of Regulations Section 356.2.

Data and information used in the water budget approach generally includes:

- Actual Evapotranspiration (ET) estimates, extracted from OpenET remote sensing analyses. OpenET is a multi-agency web-based geospatial information system (GIS) utility that quantifies spatial ET using satellite imagery. While OpenET is a new utility, the underlying methodologies to quantify ET apply a variety of well-established modeling approaches that are widely used in government and research. OpenET results are available in the Subbasin with a spatial resolution of 30 m x 30 m (approximately 0.22 acres), allowing easily scalable ET quantification.
  - Additional information about the OpenET team, data sources, and methodologies are available at: https://openetdata.org/.
- Precipitation estimates, extracted from the Parameter-elevation Regressions on Independent Slopes Model (PRISM), developed by the PRISM Climate Group at Oregon State University. PRISM quantifies spatial precipitation estimates, among other climate parameters, based on available weather station data and modeled spatial relationships with topography and other factors influencing weather and climate. PRISM data is available in the Subbasin with a spatial resolution of 4-kilometer (km) x 4 km.
  - Additional information about the PRISM data and methodologies are available at: https://prism.oregonstate.edu.
- 2022 land use data, evaluated through two approaches. Both datasets were compared and evaluated to identify changes in land use as well as the spatial extent of water use sectors in the Subbasin.
  - Pixel-scale (30 m x 30 m) land use coverages of the Subbasin were prepared through analysis of the following datasets:
    - DWR 2019 statewide crop mapping dataset (https://data.cnra.ca.gov/dataset/statewide-crop-mapping)
    - United States Department of Agriculture (USDA) CropScape 2022 Cropland Data Layer coverage (https://nassgeodata.gmu.edu/CropScape/).
      - Measured surface water diversions data, reported from water supplier records, or collected from publicly available sources (water rights diversion records, etc.). Surface water diversions data are generally available at the supplier scale. In this water budget approach, diversions were distributed evenly across the irrigated pixels associated with that supplier's service area.
      - Measured groundwater extraction data, reported from municipal and agricultural water supplier pumping records and private pumping records, where available. Groundwater extraction data is generally available at the supplier scale and was distributed evenly across the urban or irrigated pixels associated with that supplier's service area.
    - Measured boundary water outflow data, reported from water supplier records where available.

  Additional details for groundwater extraction and surface water supply data sources are given in the sections below.

3.2. Groundwater Extraction – Section 356.2(b)(2)

Groundwater extraction in the Subbasin is summarized in Table 3-1. Groundwater extraction is reported from pumping records where available, while the remaining groundwater extraction in the Subbasin is estimated through the water budget approach described in the previous section.

The majority of the Subbasin is dependent on groundwater as the only available water source for agricultural irrigation. During dry and critically dry years, agricultural groundwater extraction increases relative to long-term average demand due to less rainfall, reduced soil moisture, increased evapotranspiration associated with hotter, drier conditions, and less surface water available for diversions. There are a total of 83,400 cropped acres in the Corning Subbasin, and the agricultural groundwater extraction for these lands (estimated through the water budget approach described above) for WY 2022 was 230,000 af. Agricultural groundwater extraction was estimated through the water budget approach described above.

All municipal suppliers in the Subbasin are reliant on groundwater for their municipal water supplies. The largest is the City of Corning; other municipal suppliers include Hamilton City and Richfield. In contrast to agricultural water use, municipal water use during drought years may decrease relative to long-term averages due to urban conservation efforts. Municipal water supplies in the Corning Subbasin are measured and were provided by each utility/water agency. The total volume during WY 2022 was 4,600 af.

Additionally, private domestic wells provide rural residential water needs throughout the Subbasin. Rural residential groundwater extraction through domestic wells was estimated based on the California Water Service Chico-Hamilton City District 2020 Urban Water Management Plan (UWMP) 2020 water use (Cal Water Chico-Hamilton City, 2020), which is representative of the area. Water use in 2020 was 184 gallons per capita per day (GPCD). In order to estimate Rural Residential groundwater extraction, the 2020 GPCD was applied to residential parcels located within the subbasin but outside of municipal service areas. To obtain this information, census data from 2020 was combined with parcel data obtained from county GIS portals. The census designated value of 2.63 persons per household for Tehama County, and 2.91 persons for Glenn County was multiplied by the selected residential parcels in each county to determine the number of people in those households. This value was then used to estimate water usage using GPCD. The total volume during WY 2022 was 220 af.

Environmental groundwater use in the Subbasin includes uptake of shallow groundwater from deeply-rooted plants. Although no groundwater is directly pumped or extracted for use in these areas, the consumptive use of shallow groundwater has been estimated through the water budget approach described above for areas classified as riparian vegetation. The estimated volumes are based on the evaporative demand unable to be met through precipitation that must instead be met through plant access to shallow groundwater. There are roughly 2,500 acres of riparian vegetation that had a total estimated groundwater use of 7,300 af, roughly 2.9 af per acre (af/ac). This method of estimating environmental groundwater use is dependent on both precipitation and ET estimates. Since environmental groundwater use is modeled over a large area, small changes or uncertainties in precipitation, ET, or ET from precipitation have a large impact on the overall estimated volume. Additionally, the method does not differentiate between evapotranspiration coming from changes in root zone soil moisture storage and the shallow groundwater system. As a result, a portion of the quantified environmental groundwater demand may be met through a depletion of root zone soil Moisture rather than uptake of shallow groundwater from the aquifer. All else being equal, larger depletions of root zone

soil moisture are more likely to occur (1) during below normal, dry, and critical water years and (2) in landscapes with deeply rooted vegetation.

Also, there are a total of 102,000 additional acres of native vegetation, which are primarily grasslands and oak woodlands in the western portion of the Subbasin. Potential shallow groundwater use from deeply-rooted plants in these areas has not been quantified for the Annual Report, but could be considered and further evaluated in future years.

The Corning Subbasin did not have managed recharge or groundwater extractions for managed wetlands in WY 2022. The municipal supplies do not distinguish between urban and industrial water uses.

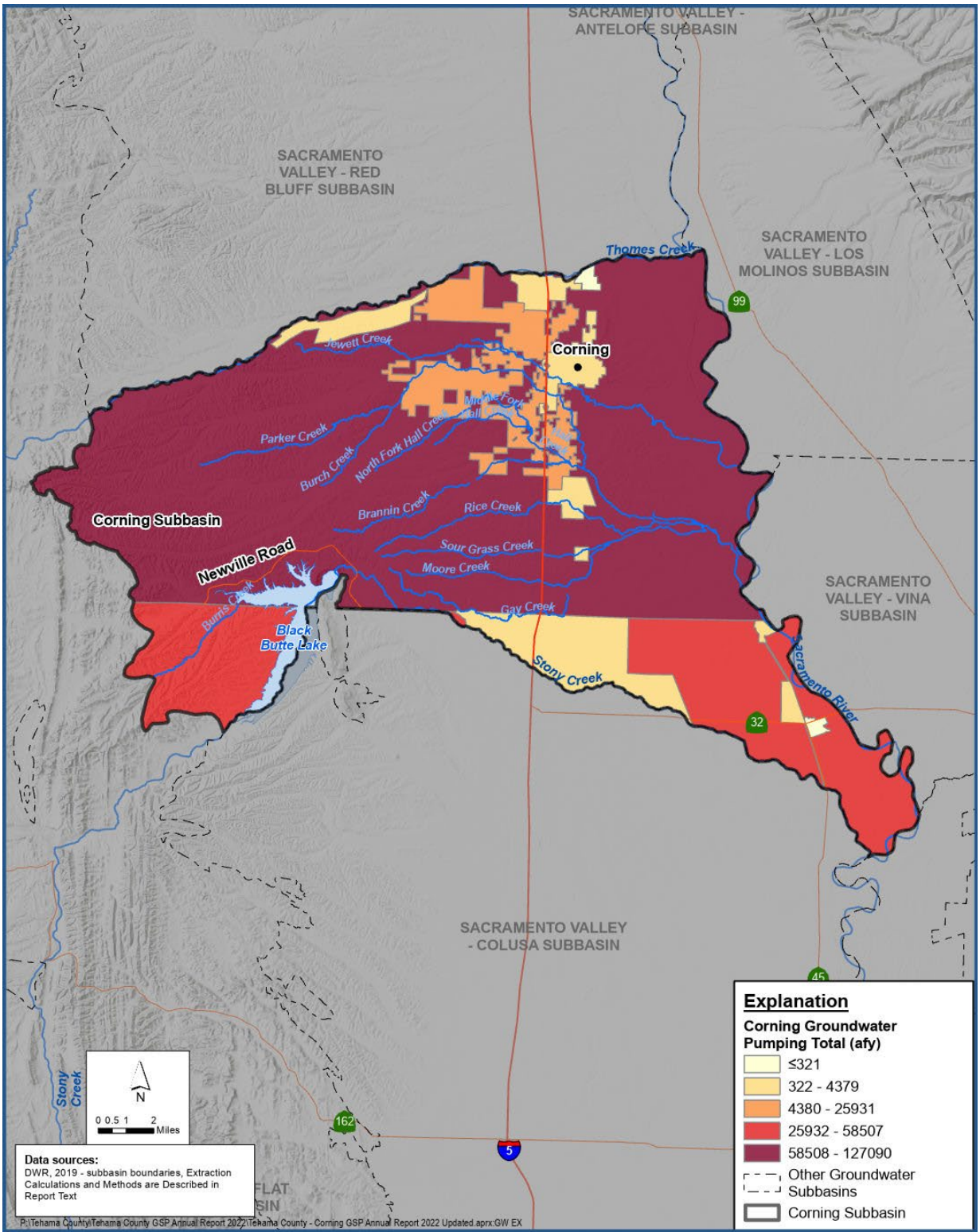
The total estimated groundwater extraction in WY 2022 was approximately 240,000 af. This is about 20,000 af less than WY 2021 total groundwater extraction of 260,000 af for the Subbasin reported in the last Annual Report (WY 2021). Figure 3-1 shows the locations and volumes of 2022 groundwater extractions in the Subbasin. **Table 3-1** shows groundwater use by sector. WY 2022 has been preliminarily classified as Critical by DWR (DWR, 2022).

The agricultural sector had the greatest decrease in use from approximately 250,000 af in WY 2021 to 230,000 af in WY 2022. Urban and Rural Residential groundwater use saw a slight increase from 4,500 af in WY 2021 to about 4,800 af WY 2022. In the WY 2021 Annual Report Urban use included the Rural Residential, Industrial and Small Water Systems sectors. The WY 2022 Annual Report presents Urban use and Rural Residential use separately. Native vegetation was not reported in the WY 2021 Annual Report. In WY 2022 the agricultural sector accounted for approximately 95% of the total groundwater extraction, while the remaining 5% was utilized for Urban, Rural Residential, and Native Vegetation water needs.

Table 3-1. Groundwater Use by Water Use Sector

Sector	2022 (af)
Agricultural	230,000
Urban	4,600
Rural Residential	220
Native Vegetation (Plant groundwater uptake)	7,300
Total	**242,120**
Total (excluding Native Vegetation[1])	**234,820**

[1] Excludes native vegetation which involves only natural plant uptake of shallow groundwater, not direct pumping, and extraction.



TEHAMA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

CORNING SUB-BASIN GSA

Groundwater Extraction in the Subbasin Water Year 2022

Figure 3-1

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

3.3. Surface Water Supply – Section 356.2(b)(3)

Surface water supplies used or available for use in the Subbasin are summarized in Table 3-2. Surface water supplies are reported directly from water supplier records or collected from publicly available sources (water rights diversion records, etc.) where available.

Surface water provided about 10% of the agricultural water demand in the Subbasin for WY 2022. Surface water supplies are either local supplies or supplies available through the Central Valley Project (CVP). Local Supplies were included diversions from Thomes Creek and Stony Creek were accessed from the State Water Resource Control Board's (SWRCB) Electronic Water Rights Information Management System (eWRIMS; SWRCB, 2023), and the United States Bureau of Reclamation (USBR) Central Valley Operations (CVO) delivery tables (USBR, 2023). CVP supplies included diversions taken from the Tehama-Colusa Canal, which were minimal in 2022. Local supplies constitute the large majority of supplies available within the Subbasin in WY 2022.

There are currently no surface water supplies for use by the urban or riparian/native vegetation sectors in the Subbasin; all surface water use is for agricultural purposes. Two surface water supply volumes are included and reported in this section. Table 3-2 depicts total diverted surface water, which are the volumes obtained from the sources described above. Total surface water diversions for the Subbasin were estimated to be about 31,000 af for WY 2022.

Table 3-2. Surface Water Diversions by Water Use Sector and Source

Sector	2022 (af) Supply Source	
	CVP	Local
Agricultural	140	31,000
Urban	0	0
Native Vegetation	0	0
Total	**31,140**	

Table 3-3 depicts total surface water deliveries, estimated from total surface water diversions by accounting for conveyance losses, reuse, and boundary outflows. Total surface water deliveries for the Corning Subbasin were estimated to be about 26,000 af for WY 2022, as shown in **Table 3-3**.

Table 3-3. Surface Water Deliveries by Water Use Sector and Source

Sector	2022 (af) Supply Source	
	CVP	Local
Agricultural	120	26,000
Urban	0	0
Native Vegetation	0	0
Total	**26,120**	

3.4. Total Water Use by Sector – Section 356.2(b)(4)

Total water use in the Subbasin was tabulated from groundwater extraction volumes reported in **Table 3-1** and the surface water supply deliveries reported in **Table 3-3**. Total water available is summarized in **Table 3-4** for WY 2022. The results are either based on measured data or estimates as described in the previous two sections.

In total, groundwater supplied approximately 92% of the agricultural water demand in the Subbasin and constituted approximately 89% of the total water supplies for all water demand sectors in WY 2022.

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
Total	**242,120**	**26,000**	**268,120**
Total (excluding Native Vegetation[1])	**234,820**	**26,000**	**260,820**

[1] *Excludes native vegetation which involves only natural plant uptake of shallow groundwater, not direct pumping, and extraction.*

3.5. Uncertainties in Water Use Estimates

Estimated uncertainties in the water budget components are presented in **Table 3-5**. The uncertainty of these water budget components is based on typical accuracies given in technical literature and the cumulative estimated accuracy of all inputs used to calculate the components.

Table 3-5 Estimated Uncertainty in Water Use Estimates			
Water Budget Component	**Data Source**	**Estimated Uncertainty (%)**	**Source**
Groundwater Water			
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.
Surface Water			
Agricultural	Calculation	10%[1]	Estimated from Senate Bill 88 (SB 88) measurement accuracy standards.

[1] *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.*

4. GROUNDWATER STORAGE

Changes in groundwater storage from Spring 2021 to Spring 2022 were calculated using measured groundwater levels and a storage coefficient for the aquifer. Spring (seasonal high) groundwater levels are less influenced by groundwater pumping compared to Fall (seasonal low) groundwater levels; therefore, they are more reliable to calculate groundwater storage change.

The groundwater elevation change, in areas where sufficient data is available, was estimated by interpolating measured groundwater level changes at monitoring wells using kriging interpolation method. The elevation change was multiplied by a storage coefficient (0.066) available from the Tehama Integrated Hydrogeological Model, detailed in the Red Bluff Subbasin GSP Appendix 2-J (Tehama County FCWCD, 2022), to estimate the groundwater storage change volume in the aquifer. The Tehama IHM model covers 96% of the Corning Subbasin (200,068 acres of 207,342 acres total area) which is adequate to estimate a representative storage coefficient for the aquifer. Additionally, the storage coefficient of 0.066 is similar to the DWR Bulletin 118 value of approximately 0.067 for the Corning Subbasin (DWR, 2006). The spatial extent of this estimate was limited to areas where measured groundwater levels were available (**Figure 4-2**). Therefore, an area-scaled adjustment was applied to the estimated storage to estimate the subbasin-wide change in storage. The change in storage from spring 2021 to spring 2022 was -90,000 af.

The approach of using measured groundwater elevation changes to estimate storage change is considered reasonable and cost effective for the purposes of the annual report. **Table 4-1** includes estimates of annual groundwater pumping, groundwater uptake, storage change and cumulative storage change for WYs

1990-2022. Change in storage and cumulative change in storage for WYs 2021-2022 was estimated based on the above method. Changes in storage values for WYs 1990-2020 as well as groundwater pumping and groundwater uptake values for WYs 1990-2021 were obtained from Appendix 4D of the Corning Subbasin GSP and the 2021 Corning Subbasin Annual Report. Groundwater uptake for the 1990-2021 period was estimated by subtracting applied groundwater values from evapotranspiration values given in Appendix 4D of the Corning Subbasin GSP. Groundwater pumping and uptake volumes in 2022 are significantly different compared to historical values, but the total of the two components is comparable to historical estimates (**Table 4-1**). No significant differences in land use characteristics were observed in 2022 and the large differences in groundwater pumping and uptake are attributed to the difference in methods used to estimate groundwater use. For 2022, groundwater use was estimated using a water balance method (presented in Section 3.1), and historical years used a numerical model. Future updates to the model may result in different estimates for groundwater storage changes.

Table 4-1. Change in Groundwater Storage

Water Year & Type[a]	Groundwater Pumping (af)	Groundwater Uptake (af)	Total Groundwater Pumping and Uptake (af)	Annual Groundwater Storage Change (af)	Cumulative Groundwater Storage Change (af)
1990 I	-150,000[b]	-75,000[b]	-230,000	-40,000[b]	-40,000
1991 (C)	-150,000[b]	-44,000[b]	-190,000	-50,000[b]	-90,000
1992 (C)	-150,000[b]	-80,000[b]	-230,000	12,000[b]	-78,000
1993 (AN)	-130,000[b]	-110,000[b]	-240,000	100,000[b]	22,000
1994 (C)	-150,000[b]	-80,000[b]	-230,000	-17,000[b]	5,000
1995 (W)	-140,000[b]	-100,000[b]	-240,000	110,000[b]	120,000
1996 (W)	-150,000[b]	-89,000[b]	-240,000	16,000[b]	140,000
1997 (W)	-160,000[b]	-85,000[b]	-250,000	-2,000[b]	140,000
1998 (W)	-120,000[b]	-140,000[b]	-260,000	120,000[b]	260,000
1999 (W)	-150,000[b]	-73,000[b]	-220,000	-16,000[b]	240,000
2000 (AN)	-150,000[b]	-74,000[b]	-220,000	-5,000[b]	240,000
2001 (D)	-150,000[b]	-70,000[b]	-220,000	-21,000[b]	220,000
2002 (D)	-150,000[b]	-40,000[b]	-190,000	6,500[b]	230,000
2003 (AN)	-140,000[b]	-91,000[b]	-230,000	43,000[b]	270,000
2004 (BN)	-160,000[b]	-46,000[b]	-210,000	11,000[b]	280,000
2005 (AN)	-110,000[b]	-130,000[b]	-240,000	53,000[b]	330,000
2006 (W)	-110,000[b]	-120,000[b]	-230,000	80,000[b]	410,000
2007 (D)	-130,000[b]	-43,000[b]	-170,000	-48,000[b]	360,000
2008 (C)	-140,000[b]	-22,000[b]	-160,000	-28,000[b]	330,000
2009 (D)	-140,000[b]	-79,000[b]	-220,000	-36,000[b]	290,000
2010 (BN)	-120,000[b]	-100,000[b]	-220,000	40,000[b]	330,000

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

All volumes are rounded to two significant digits.

a. Sacramento Valley Water Year Type is provided by DWR for WYs 1990-2021. Water Year 2022 has been preliminarily classified as Critical by DWR (DWR, 2022). Wet (W), Above Normal (AN, Below Normal (BN), Dry (D), Critical(C)

b. Groundwater pumping, groundwater uptake, and groundwater storage change values for WY 1990 through WY 2015 are from the Corning Subbasin GSP Appendix 4D (Historical water budget tables; estimated using a numerical model)

c. Groundwater pumping and groundwater uptake values for WY 2016 through WY 2021 are from the Corning Subbasin GSP Appendix 4D (Current water budget tables; estimated using a numerical model)

d. Groundwater storage change values for WY 2016 through WY 2020 are from the Corning Subbasin GSP Annual Report – 2021

e. Groundwater storage change values for WY 2021 and WY 2022 were estimated using measured groundwater elevation changes and average aquifer storage coefficient.

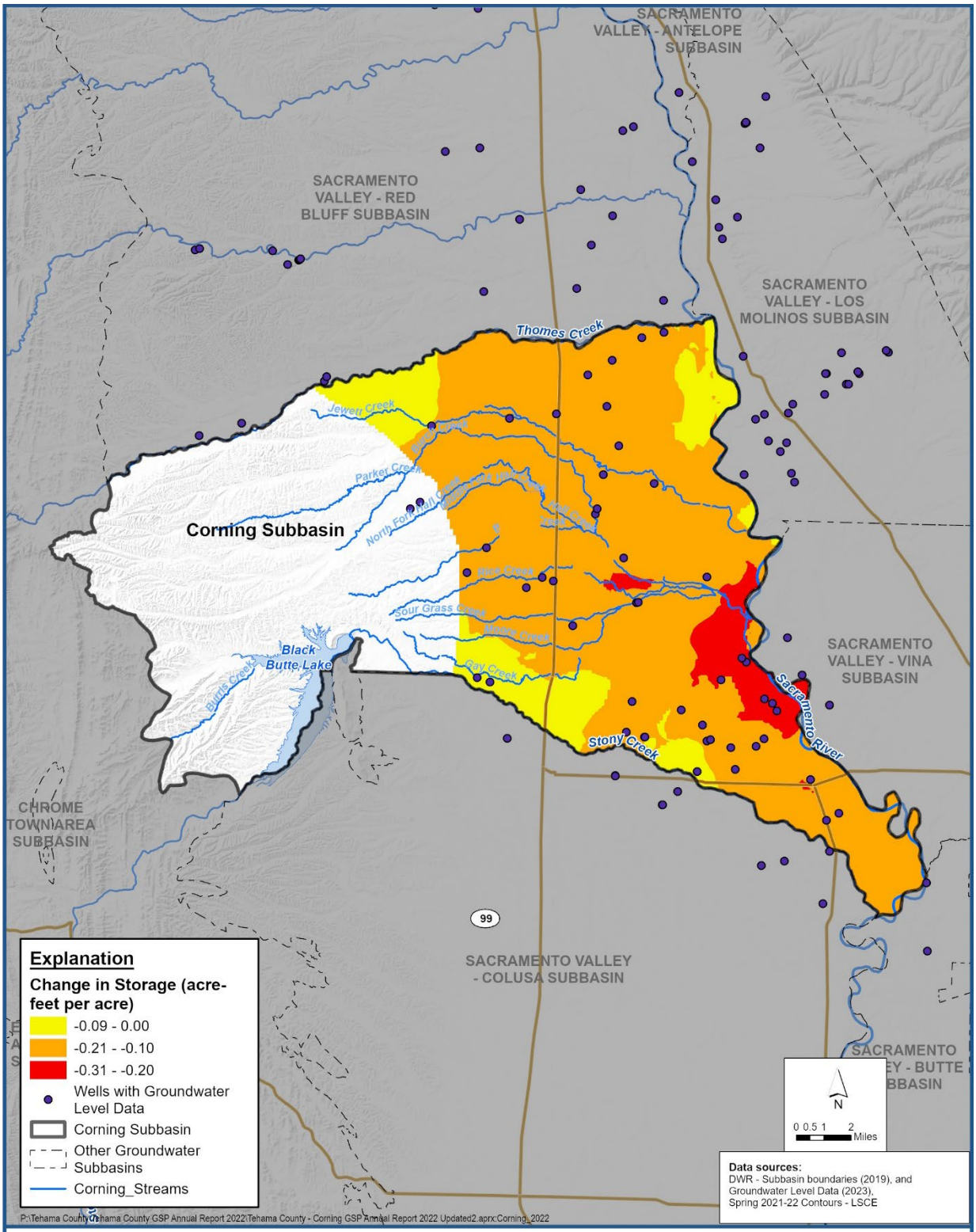
f. Groundwater pumping and groundwater uptake values for WY 2022 were estimated using a water balance method (presented in Section 3.1)

4.1. Groundwater Storage Maps – Section 356.2(b)(5)(A)

Figure 4-1 presents the distribution of storage change in the principal aquifer for WY 2022. The map includes the groundwater wells used to calculate the change in storage. Groundwater storage change is not shown outside the established monitoring area to avoid extrapolating beyond the control points (i.e., reliable monitoring well data). Approximately 60% of the total area in the Corning Subbasin has enough data available to estimate storage change.

4.2. Subbasin Water Budget – Section 356.2(b)(5)(B)

A graph depicting the Water Year type, groundwater pumping, groundwater uptake, the annual change in groundwater storage, and the cumulative change in groundwater storage is presented on **Figure 4-2**. The change in groundwater storage from Spring 2021 to Spring 2022 was calculated using measured groundwater levels and a storage coefficient for the aquifer. Previous years' water budget estimates use a different methodology, details of the methodology and annual water budgets are in **Table 4-1** (above).



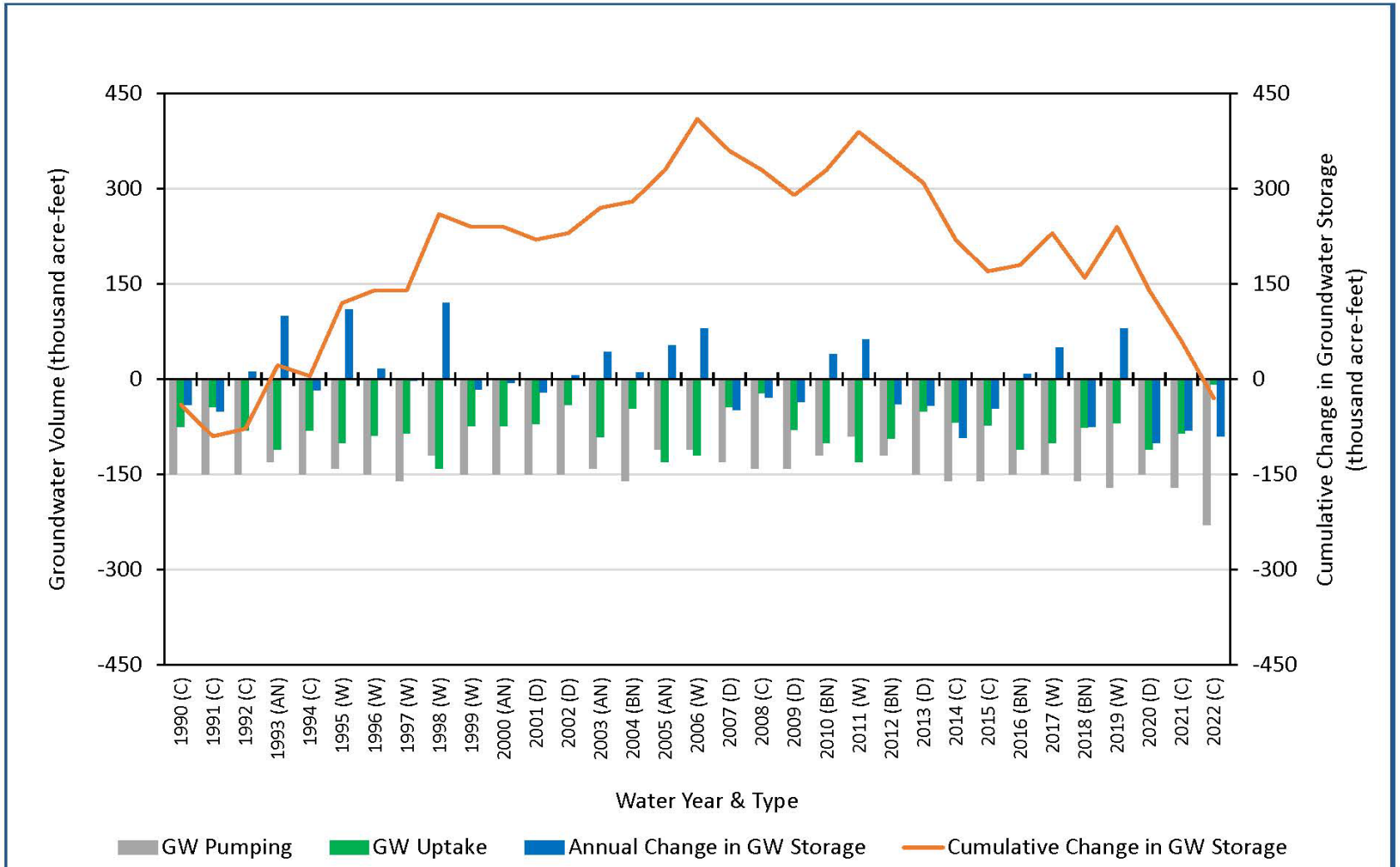
TEHAMA COUNTY
FLOOD CONTROL AND WATER CONSERVATION DISTRICT

LSCE Team

Change in Groundwater Storage, Spring 2021 to Spring 2022

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

Figure 4-1



Groundwater Extraction and Change in Groundwater Storage

Groundwater Sustainability Plan - Annual Report WY 2022
Corning Subbasin

Figure 4-2

5. GSP IMPLEMENTATION PROGRESS – SECTION 356.2(B)

The GSP for the Corning Subbasin was adopted by the GSAs in December 2021 and submitted to DWR in January 2022. This is the second annual report to be prepared since the GSP was submitted. The GSP implementation progress reported in this report covers ongoing work during WY 2022.

5.1. Progress Toward Achieving Sustainability

5.1.1. Chronic Lowering of Groundwater Levels and Reduction in Groundwater Storage SMC

The reduction in groundwater storage SMC uses the chronic lowering of groundwater levels SMC as a proxy. Thus, groundwater conditions related to storage and chronic lowering of groundwater levels are discussed together. In Fall 2022, most groundwater elevations were above the established MTs however, sixteen wells had groundwater elevations below the MTs (22N02W18C003M, 22N03W01R002M, 22N03W06B001M, 22N03W12Q003M, 23N03W13C006M, 23N03W22Q001M, 23N03W24A003M, 24N03W03R002M, 24N03W16A001M, 24N03W35P005M, 22N02W18C001M, 22N03W01R001M, 23N02W28N002M, 23N03W07F001M, 23N03W13C004M, 24N02W29N004M) (**Table 5-1**). Undesirable results occur when water levels in 20% of the representative monitoring point (RMP) wells fall below the MT in two consecutive years. In 2022, 15% of RMP wells had two consecutive MT exceedances. This percentage was calculated using RMP wells with one or more fall groundwater level measurements in the last two years (46 of the 54 RMP wells). The lower Fall 2022 levels were expected due to extended drought conditions, which have caused reductions in surface water supplies and increased demands for groundwater in the Subbasin. However, groundwater conditions below the MT are likely to recover once the drought ends during wetter hydrological conditions.

Table 5-1 Groundwater Level Measurements and MT Exceedances

Well ID	Minimum Threshold (ft amsl)	Measurable Objective (ft amsl)	2027 Interim Milestone (ft amsl)	Recent Fall Groundwater Level Measurements (ft amsl)		Fall 2022 MT Exceedance	Two Consecutive WY MT Exceedances
				2021	2022		
21N01W04N001M	89.3	116.1	113.5	108.58	NA	-	-
22N01W19E003M	97.7	128.1	127.7	118.79	NA	-	-
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
22N03W05F002M	177.9	204.5	199.7	NA	NA	-	-
22N03W06B001M	238.0	264.1	253.5	235	236.9	Yes	Yes

Table 5-1 Groundwater Level Measurements and MT Exceedances							
Well ID	Minimum Threshold (ft amsl)	Measurable Objective (ft amsl)	2027 Interim Milestone (ft amsl)	Recent Fall Groundwater Level Measurements (ft amsl)		Fall 2022 MT Exceedance	Two Consecutive WY MT Exceedances
				2021	2022		
22N03W12Q003M	163.2	174.8	174.8	143.44	153.04	Yes	Yes
23N02W16B001M	98.4	135.3	132.8	124.13	117.53	-	-
23N02W28N004M	104.3	142.7	139.3	124.58	114.69	-	-
23N02W34A003M	109.2	135.5	135.1	110.11	114.91	-	-
23N02W34N001M	111.8	145.9	145.9	127.92	123.92	-	-
23N03W04H001M	180.4	194.0	194.0	NA	NA	-	-
23N03W13C006M	123.1	145.6	145.3	125.24	113.84	Yes	No
23N03W16H001M	174.3	193.4	193.4	192.78	NA	-	-
23N03W22Q001M	129.9	152.7	152.7	132.55	125.52	Yes	No
23N03W24A003M	118.6	137.4	137.4	121.24	108.74	Yes	No
23N03W25M004M	122.7	150.3	150.3	127.98	NA	-	-
24N02W17A001M	150.9	170.9	170.9	167.55	NA	-	-
24N02W20B001M	150.3	173.4	173.3	NA	NA	-	-
24N02W29N003M	123.2	158.1	146.9	143.21	127.46	-	-
24N03W02R001M	172.6	188.6	188.6	181.23	176.45	-	-
24N03W03R002M	192.8	207.3	207.3	194.51	188.46	Yes	No
24N03W14B001M	175.5	195.3	195.3	NA	NA	-	-
24N03W16A001M	182.6	200.7	200.7	189.57	179.77	Yes	No
24N03W17M001M	190.5	216.3	216.3	NA	NA	-	-
24N03W24E001M	136.7	169.2	169.2	157.25	147.55	-	-
24N03W26K001M	172.6	191.1	191.1	177.66	181.06	-	-
24N03W29Q001M	179.3	211.6	210.5	196.06	NA	-	-
24N03W35P005M	180.1	192.0	192.0	180.71	175.34	Yes	No
24N04W14N002M	221.8	247.4	247.4	233.87	229.22	-	-
24N05W23L001M	312.0	345.8	345.8	NA	346.4	-	-
25N02W31G002M	169.3	191.4	191.4	NA	NA	-	-
22N04W01A004M	237.5	262.8	262.8	302.48	305.38	-	-
Tehama CWT Well	181.8	199.6	199.6	NA	NA	-	-
22N01W29N002M	77.2	121.9	120.0	98.21	94.68	-	-

Table 5-1 Groundwater Level Measurements and MT Exceedances							
Well ID	Minimum Threshold (ft amsl)	Measurable Objective (ft amsl)	2027 Interim Milestone (ft amsl)	Recent Fall Groundwater Level Measurements (ft amsl)		Fall 2022 MT Exceedance	Two Consecutive WY MT Exceedances
				2021	2022		
22N02W01N002M	74.5	134.7	134.7	98.86	86.71	-	-
22N02W15C002M	57.7	121.6	119.7	81.745	87.205	-	-
22N02W18C001M	63.5	90.4	90.4	59.39	48.34	Yes	Yes
22N03W01R001M	116.6	135.2	135.2	112.33	108.37	Yes	Yes
23N02W28N002M	100.0	133.9	127.1	95.62	86.84	Yes	Yes
23N03W07F001M	188.4	209.9	209.9	194.3	188	Yes	No
23N03W13C004M	107.2	131.1	126.7	98.03	88.78	Yes	Yes
23N03W17R001M	187.3	207.7	207.7	192	192.2	-	-
23N03W25M002M	111.6	151.5	145.3	124.6	NA	-	-
23N04W13G001M	159.7	198.6	198.6	188.9	183	-	-
24N02W29N004M	124.9	155.5	147.0	135.4	116.2	Yes	No
24N03W17M002M	172.8	196.8	196.8	187	178.8	-	-
24N03W29Q002M	174.9	212.6	207.5	188.85	NA	-	-
24N04W33P001M	183.5	240.0	227.7	200.26	NA	-	-
24N04W34K001M	184.4	223.9	223.9	201.8	193.8	-	-
24N04W34P001M	183.5	214.3	214.3	203.3	194.6	-	-
24N04W36G001M	183.2	214.4	214.4	193.2	185.2	-	-
25N03W36H001M	160.9	183.3	183.3	175.1	175.25	-	-
22N04W01A002M	149.3	184	184	161.4	154.88	-	-
Tehama CWT Well	160.3	186.1	186.1	NA	NA	-	-
21N01W04N001M	89.3	116.1	113.5	108.58	NA	-	-

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

5.1.2. Degraded Groundwater Water Quality SMC

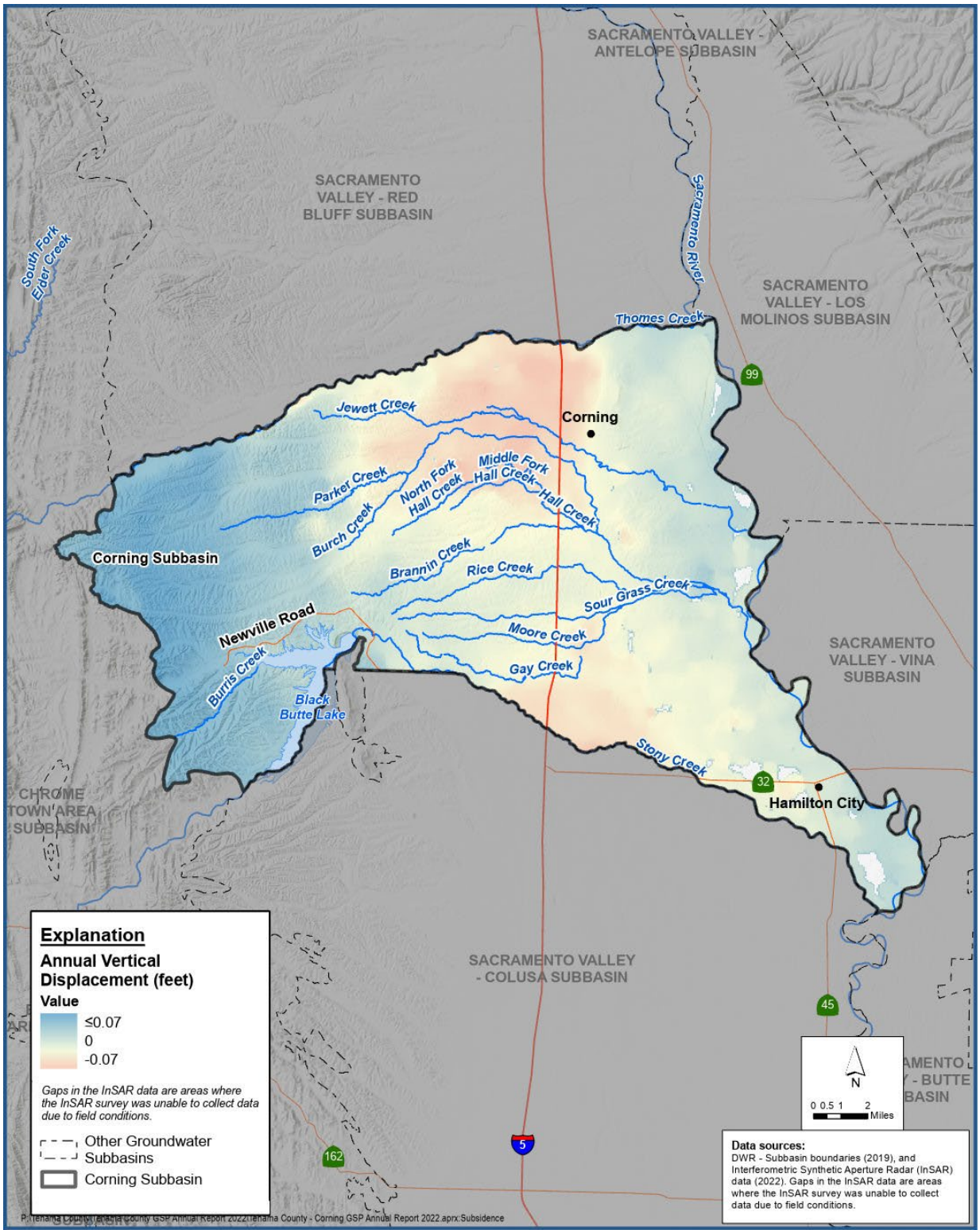
Groundwater quality is measured in public supply wells by the operational entities. Data is made available to the GSAs through publicly available sources. The most recent available total dissolved solids (TDS) concentrations from the water quality monitoring network are below the measurable objective (MO) (**Table 5-2**). Interim milestones are defined in the GSP as identical to current conditions if concentrations remain below the MO. The GSA is on track to stay below the MT for water quality.

Table 5-2 Most Recent Groundwater Quality RMP Data						
Program Site ID	Well Name	System Name	Most Recent TDS Measurement Date	Most Recent TDS Value (mg/L)	MO (mg/L)	MT (mg/L)
1110002-001	Well 01-01	Cal-Water Service Co – Hamilton City	6/24/2020	280	500	750
1110002-002	Well 02-01	Cal-Water Service Co – Hamilton City	4/14/2021	280	500	750
1110002-003	Well 02-02	Cal-Water Service Co – Hamilton City	6/6/2022	250	500	750
5200255-001	Well 01	Corning RV Park	9/12/2018	228	500	750
5200516-001	Well 01	Lazy Corral Mobile Home Park	7/12/2017	262	500	750
5200551-001	Well 01	Woodson Bridge Mobile Home Park	8/25/2010	220	500	750
5200556-001	Well 01	Maywood Mobile Home Park	5/23/2017	260	500	750
5210001-001	6th St Well	City of Corning	12/11/2019	196	500	750
5210001-002	Blackburn Ave Well	City of Corning	12/11/2019	214	500	750
5210001-003	Butte St Well	City of Corning	12/18/2019	209	500	750
5210001-005	Peach St Well	City of Corning	9/9/2020	230	500	750
5210001-008	Well 06 Edith Ave	City of Corning	12/18/2019	192	500	750
5210001-009	Fripp St Well	City of Corning	8/18/2021	209	500	750
5210001-010	Highway 99W Well	City of Corning	12/18/2019	165	500	750
5210001-019	Clark Park Well	City of Corning	5/16/2018	211	500	750

5.1.3. Land Subsidence SMC

The land subsidence MT is 0.5 feet per five years (i.e., 0.1 foot per year average) and the MO for land subsidence is zero throughout the subbasin. Only inelastic subsidence, solely due to lowered groundwater elevations, will be considered in this SMC. Due to the measurement error of 0.1 feet associated with the

Interferometric Synthetic Aperture Radar (InSAR) method, any measurements must be beyond the error to be considered inelastic subsidence. The type of subsidence, elastic or inelastic, is uncertain, later when water levels rise, during a wet period, the land response will define the subsidence type. Subsidence measured by InSAR in WY 2022 (**Figure 5-1**) ranged from 0.07 feet of subsidence to at least 0.07 feet of uplift. The total subsidence measured from WY 2015 through WY 2022 (**Figure 5-2**) ranged from 0.23 feet of subsidence to at least 0.23 feet of uplift. The areas of highest cumulative subsidence are located west of the town of Corning and along the Interstate 5 corridor. Subsidence measured during WY 2022 is greater than the measurement error of 0.1 feet. Cumulative subsidence remains below the five-year rate for the MT. The GSA is on track to stay above the MT for land subsidence.



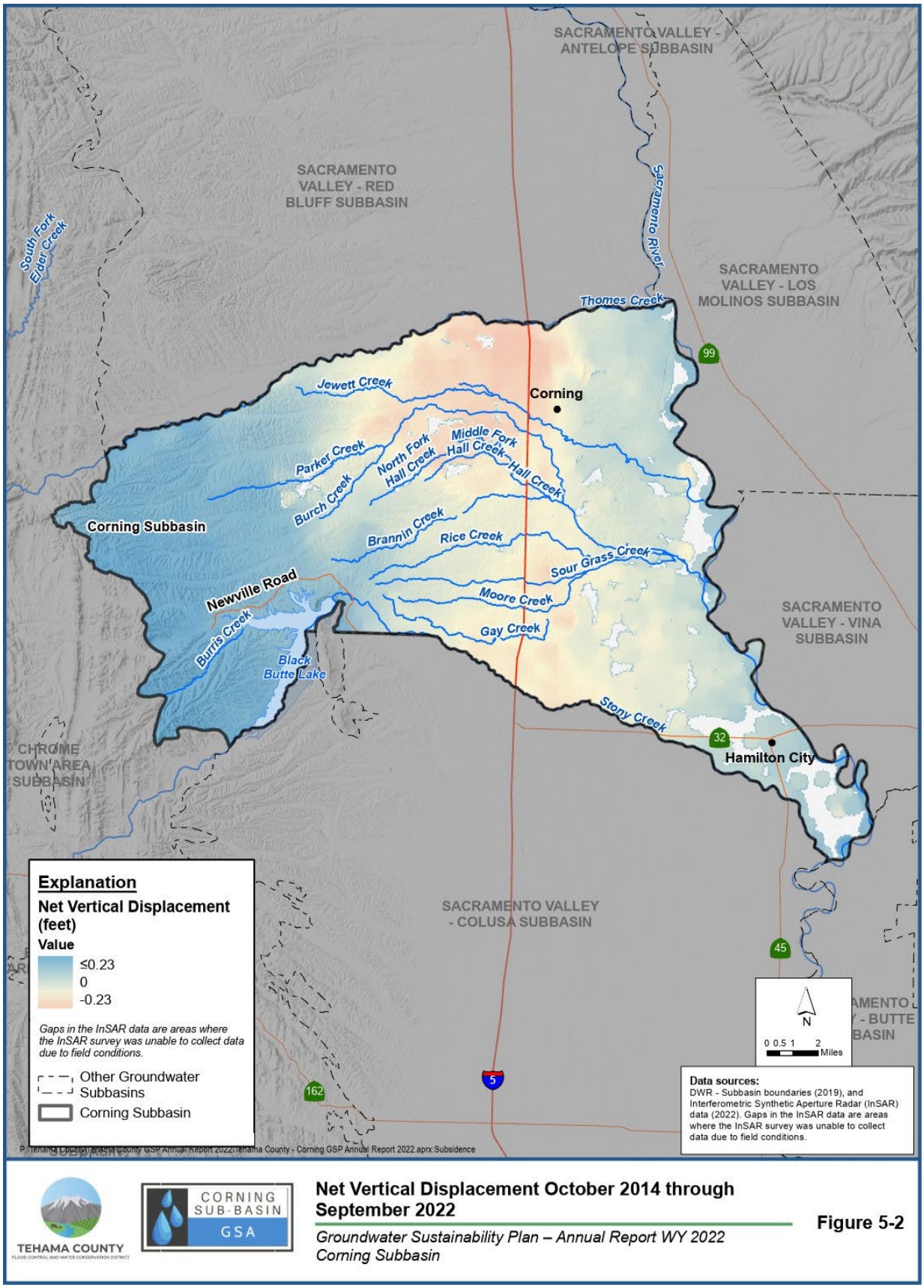
TEHAMA COUNTY
FLOOD CONTROL AND WATER CONSERVATION DISTRICT

CORNING SUB-BASIN GSA

Annual Vertical Displacement October 2021 through September 2022

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

Figure 5-1



TEHAMA COUNTY
FLOOD CONTROL AND WATER CONSERVATION DISTRICT

CORNING SUB-BASIN GSA

Net Vertical Displacement October 2014 through September 2022

Groundwater Sustainability Plan – Annual Report WY 2022
Corning Subbasin

Figure 5-2

5.1.4. Depletion of Interconnected Surface Water SMC

Depletion of Interconnected Surface Water SMC utilize fall groundwater elevations in the shallow wells within the groundwater level monitoring network nearest the interconnected streams. In Fall 2022, most groundwater elevations were above the established MTs. However, two wells (22N02W18C003M and 22N03W01R002M) had groundwater elevations below the MTs (**Table 5-3**). Undesirable results occur when water levels in 20% of the RMP wells fall below the MT in two consecutive years. In 2022, 13% of RMP wells had two consecutive MT exceedances.

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	-	-

5.2. Progress Toward PMA Implementation

The Corning Subbasin GSAs are pursuing grants through DWR's SGM Grant Program for funding to assist in the implementation of projects and management action (PMAs). The grant application was submitted in December 2022, and a draft awards list is anticipated to be released by DWR in June 2023. The grant application included four components, each fulfilling a different need of the GSAs:

- GSP Implementation Outreach and Compliance Activities
- Ongoing Monitoring, Data Gaps, and Enhancements
- Project and Management Action Implementation – Regional Conjunctive Use Projects
- Project and Management Action Implementation – Recharge Focused

Projects detailed in the components include creating a domestic well program that spans the Subbasin and two counties, and several recharge projects among other beneficial projects. Together, if funded, these projects will assist the GSAs in meeting the sustainability goals set forth in the GSP.

- In addition to the SGM grant funds, 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.

Lastly, Tehama County is making progress with a Well Registration Program (well inventory) and Glenn County is updating its well permitting process.

6. CONCLUSIONS

In WY 2022, groundwater conditions are sustainable. However, water levels fell below MTs, seven occurred in the water level RMP network and one occurred in the interconnected surface water network. Despite MT exceedances in 2022, definitions for undesirable results as set in the Corning Subbasin GSP were not met. The GSAs are committed to achieving the sustainability goals of the subbasin. If MTs continue to be exceeded, the GSAs may consider increasing the monitoring frequency or implementing PMAs or both. WY 2022 water quality data and land subsidence data indicate sustainable conditions and no MTs were exceeded. Recent progress made on all of the above-mentioned activities applicable to the GSAs since late 2021 demonstrates the commitment of the GSAs to implement the GSP by allocating the necessary time and resources to achieve long-term sustainable management of the groundwater resources in the Subbasin.

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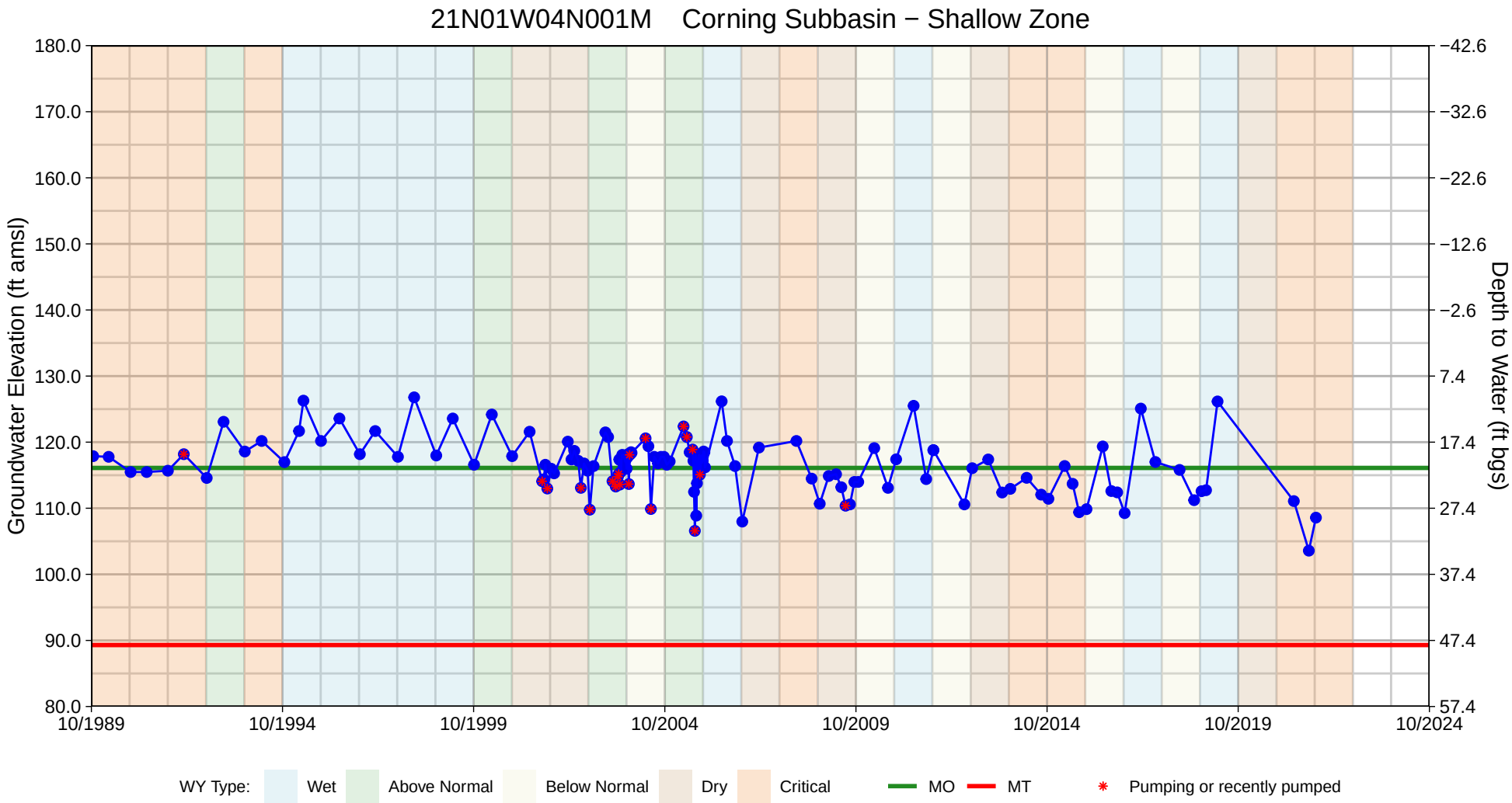
Appendix A

Water Level Hydrographs of Representative Monitoring Wells for Groundwater Level



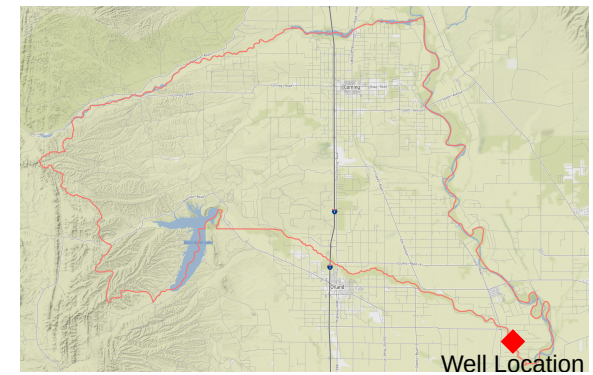
Site Code: 396971N1219893W001 Well Type: Residential

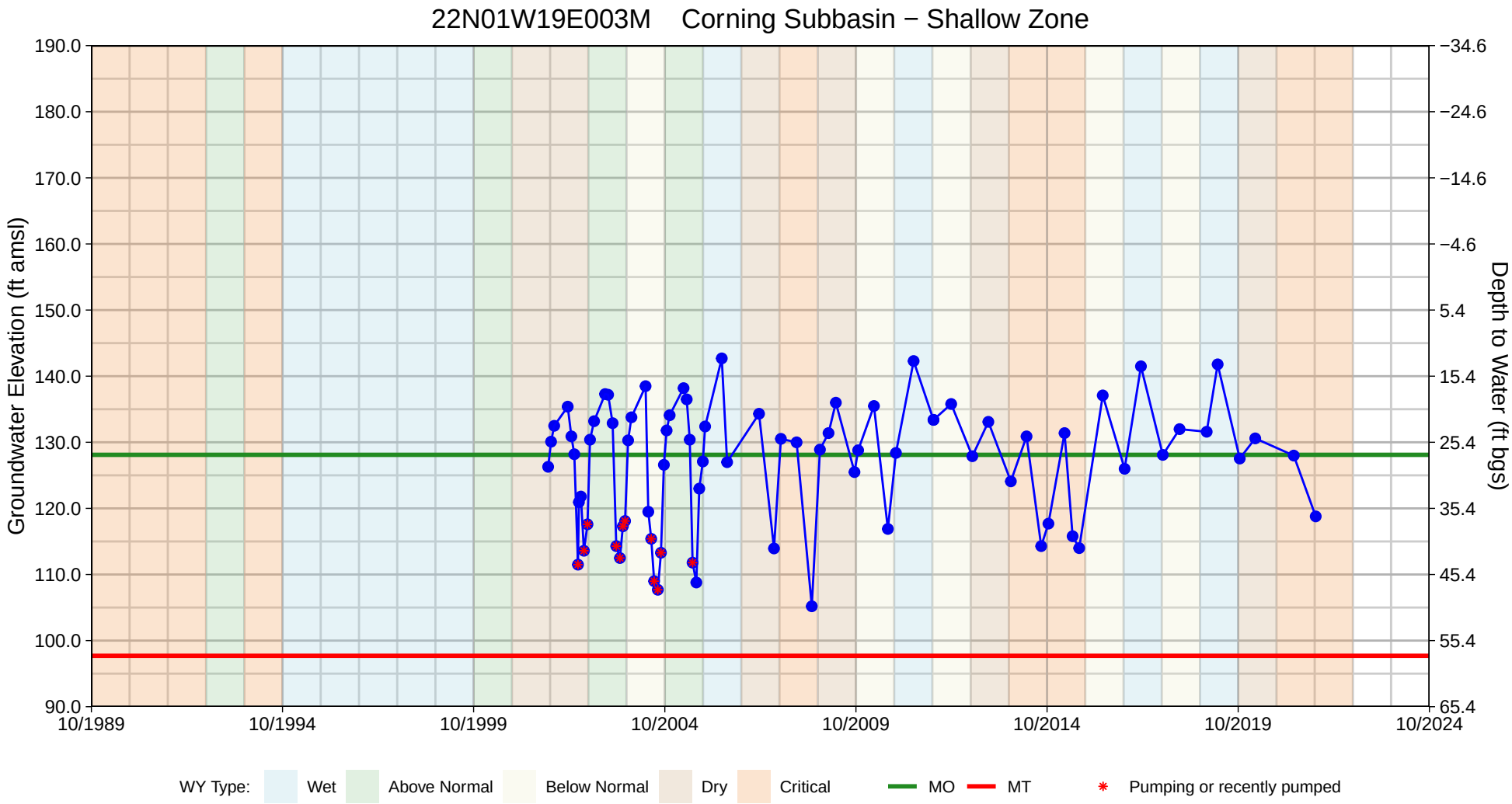
Total Depth (ft):100 GSE (ft amsl): 137.4

Perf. Top (ft bgs): NA Sustainable Management Criteria

Perf. Bottom (ft bgs): NA MO: 116.1 ft amsl (21.3 ft bgs)

MT: 89.3 ft amsl (48.1 ft bgs)





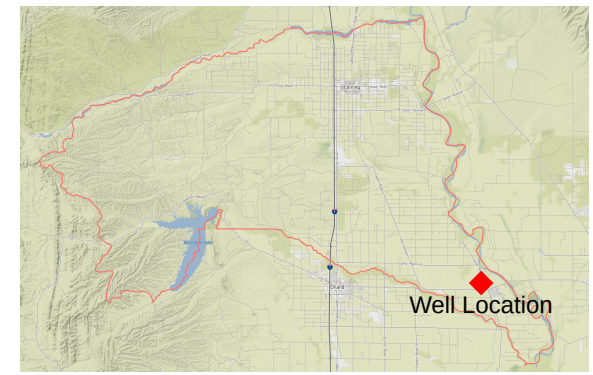
Site Code: 397501N1220267W001 Well Type: Irrigation

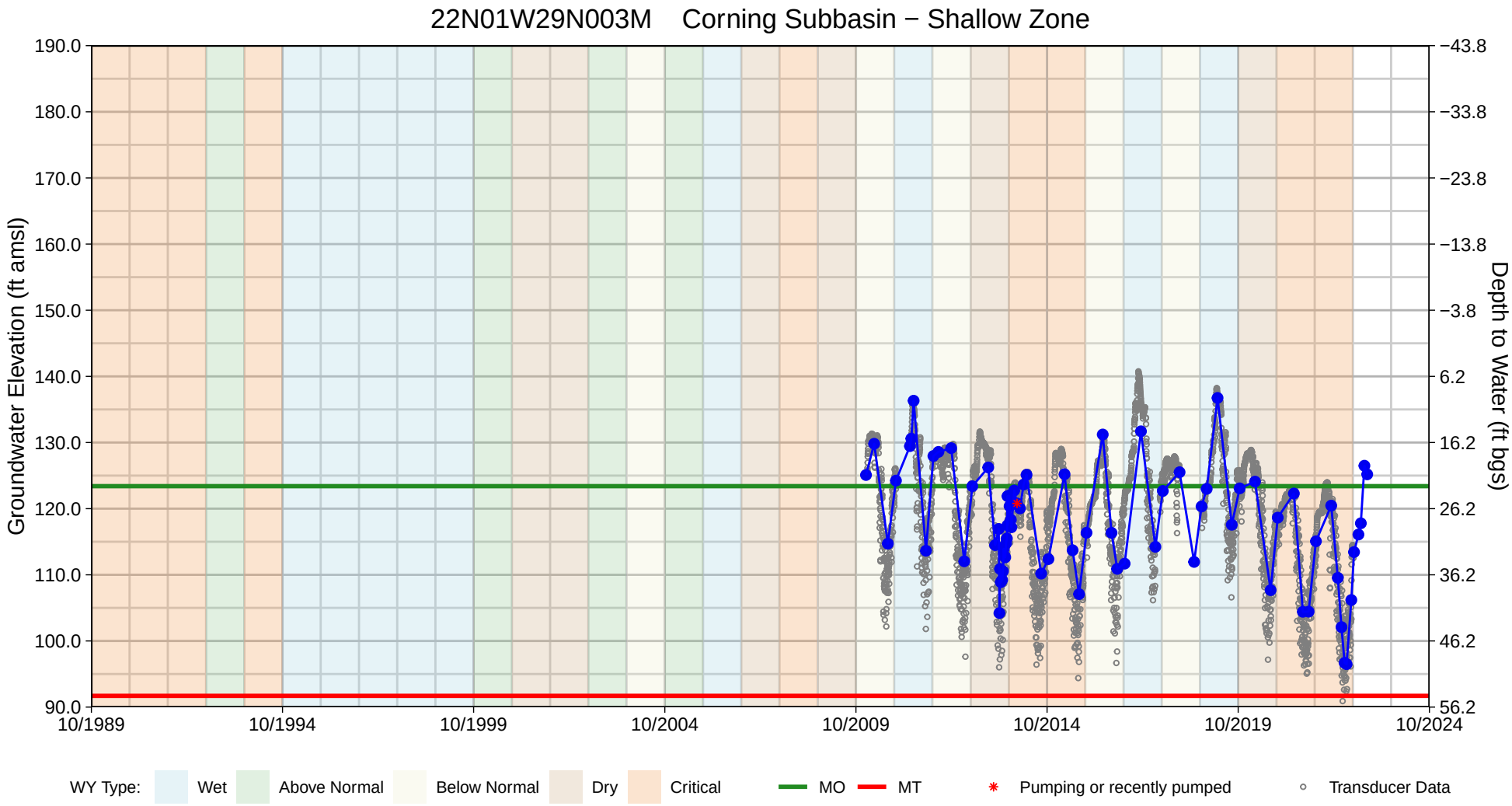
Total Depth (ft):500 GSE (ft amsl): 155.4

Perf. Top (ft bgs): 80 Sustainable Management Criteria

Perf. Bottom (ft bgs): 400 MO: 128.1 ft amsl (27.3 ft bgs)

MT: 97.7 ft amsl (57.7 ft bgs)





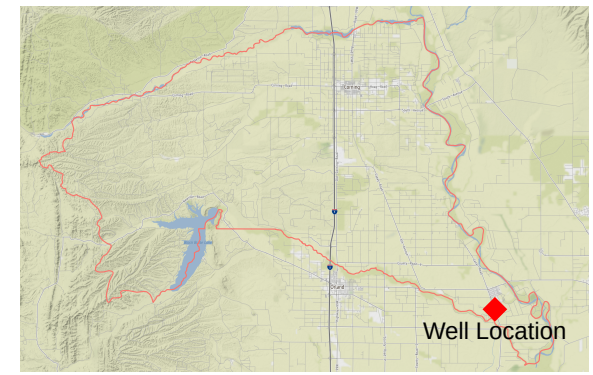
Site Code: 397263N1220105W003 Well Type: Observation

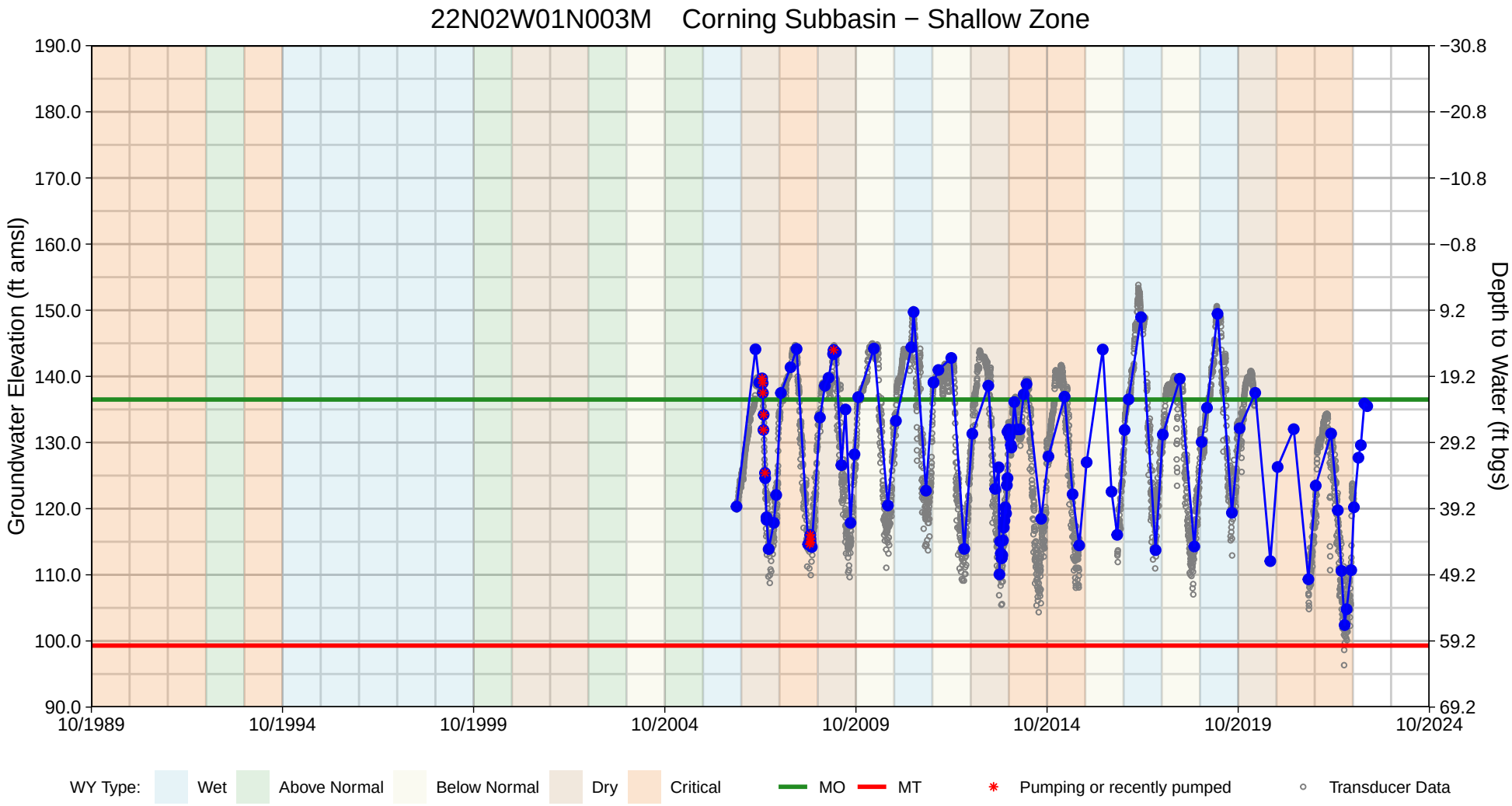
Total Depth (ft):400 GSE (ft amsl): 146.2

Perf. Top (ft bgs): 189 Sustainable Management Criteria

Perf. Bottom (ft bgs): 380 MO: 123.4 ft amsl (22.8 ft bgs)

MT: 91.7 ft amsl (54.5 ft bgs)





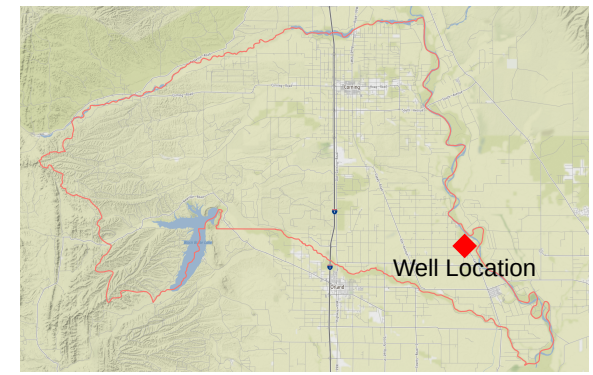
Site Code: 397836N1220461W003 Well Type: Observation

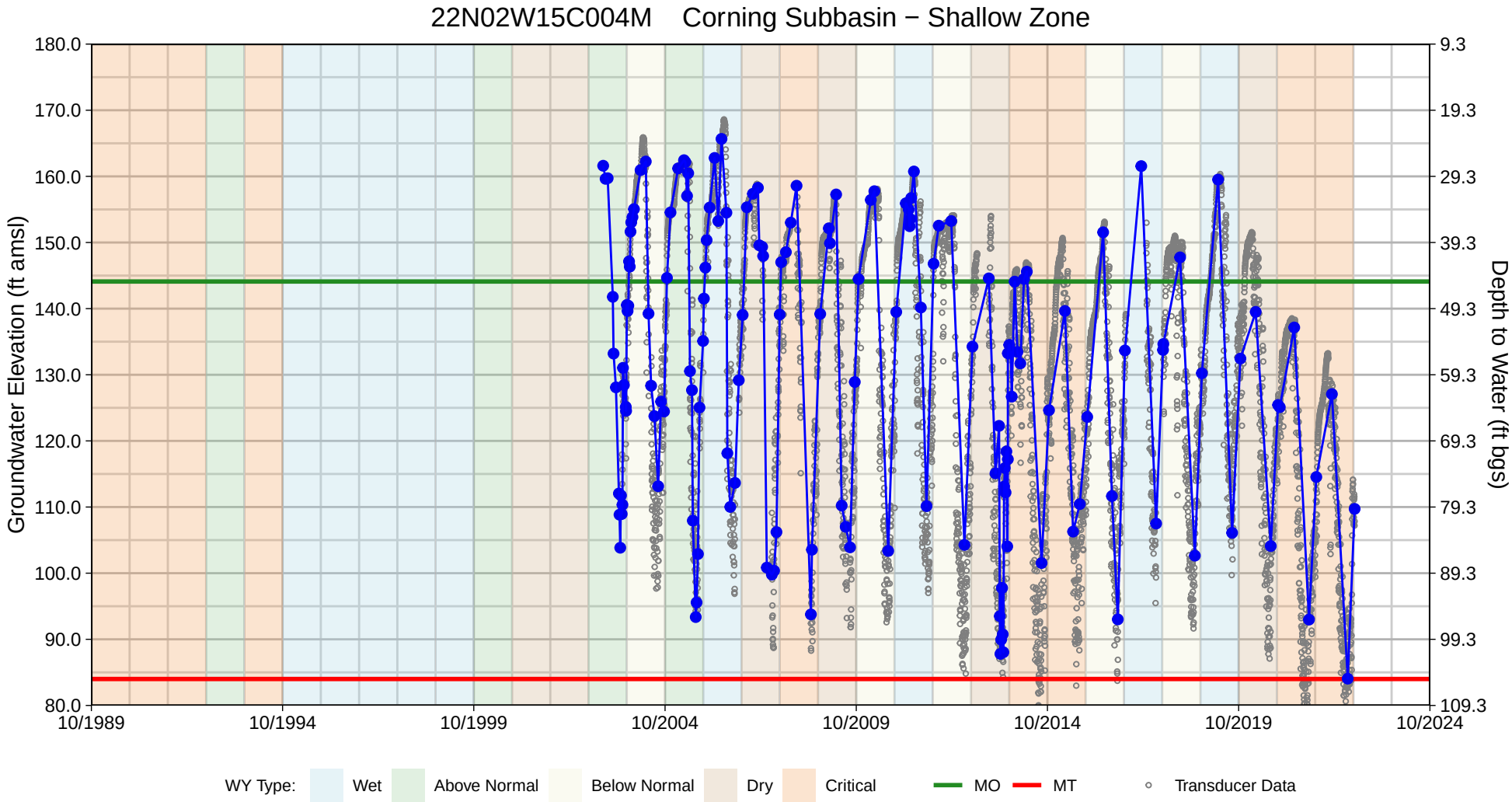
Total Depth (ft):440 GSE (ft amsl): 159.2

Perf. Top (ft bgs): 210 Sustainable Management Criteria

Perf. Bottom (ft bgs): 370 MO: 136.5 ft amsl (22.7 ft bgs)

MT: 99.3 ft amsl (59.9 ft bgs)





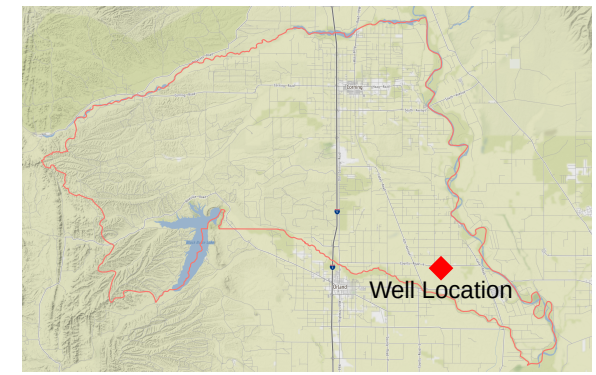
Site Code: 397634N1220771W003 Well Type: Observation

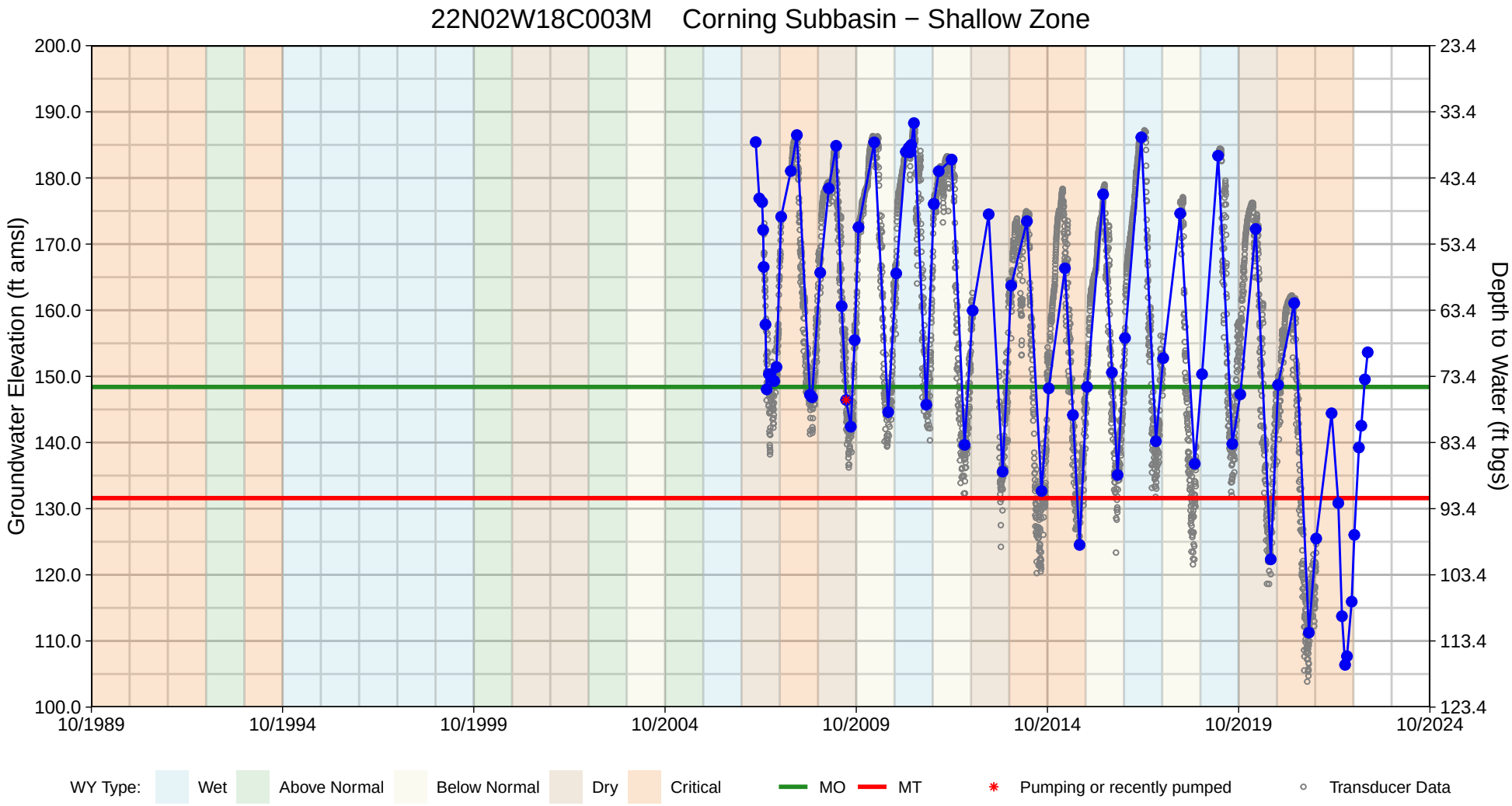
Total Depth (ft):258 GSE (ft amsl): 189.3

Perf. Top (ft bgs): 210 Sustainable Management Criteria

Perf. Bottom (ft bgs): 220 MO: 144.1 ft amsl (45.2 ft bgs)

MT: 84 ft amsl (105.3 ft bgs)





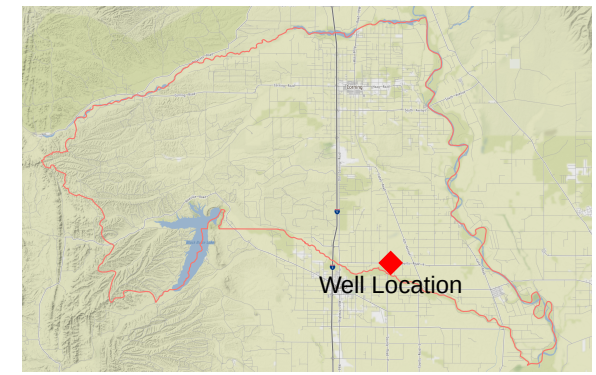
Site Code: 397682N1221364W003 Well Type: Observation

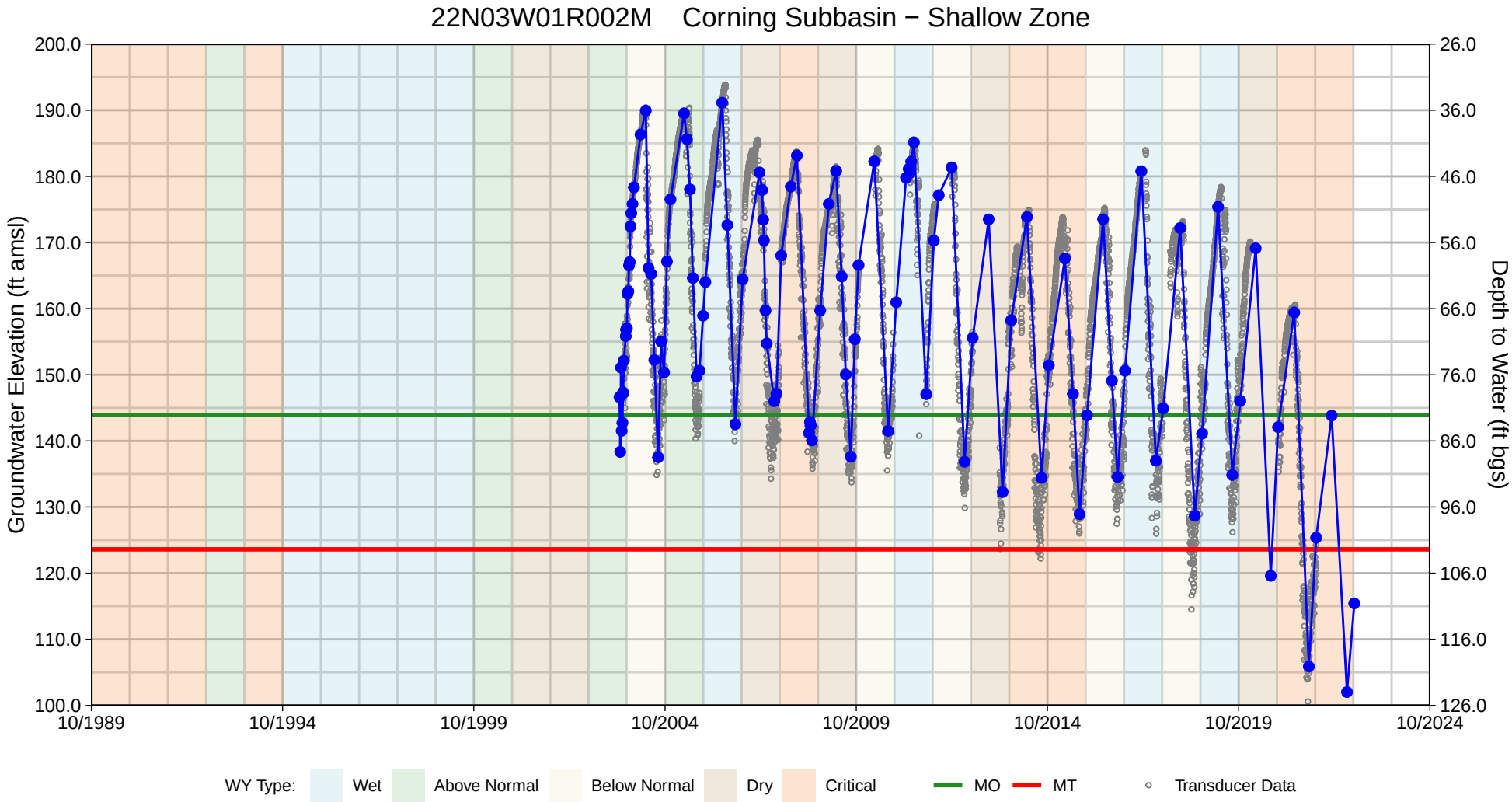
Total Depth (ft):188 GSE (ft amsl): 223.4

Perf. Top (ft bgs): 165 Sustainable Management Criteria

Perf. Bottom (ft bgs): 175 MO: 148.4 ft amsl (75 ft bgs)

MT: 131.6 ft amsl (91.8 ft bgs)





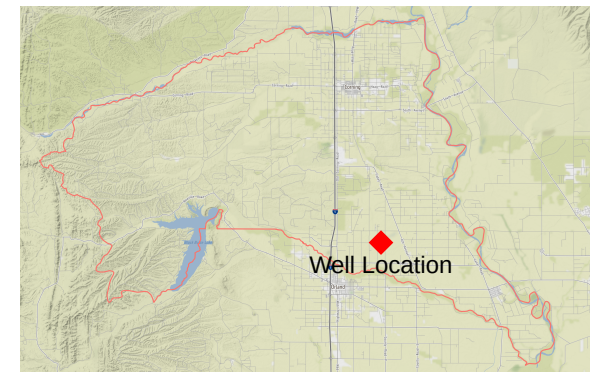
Site Code: 397866N1221455W002 Well Type: Observation

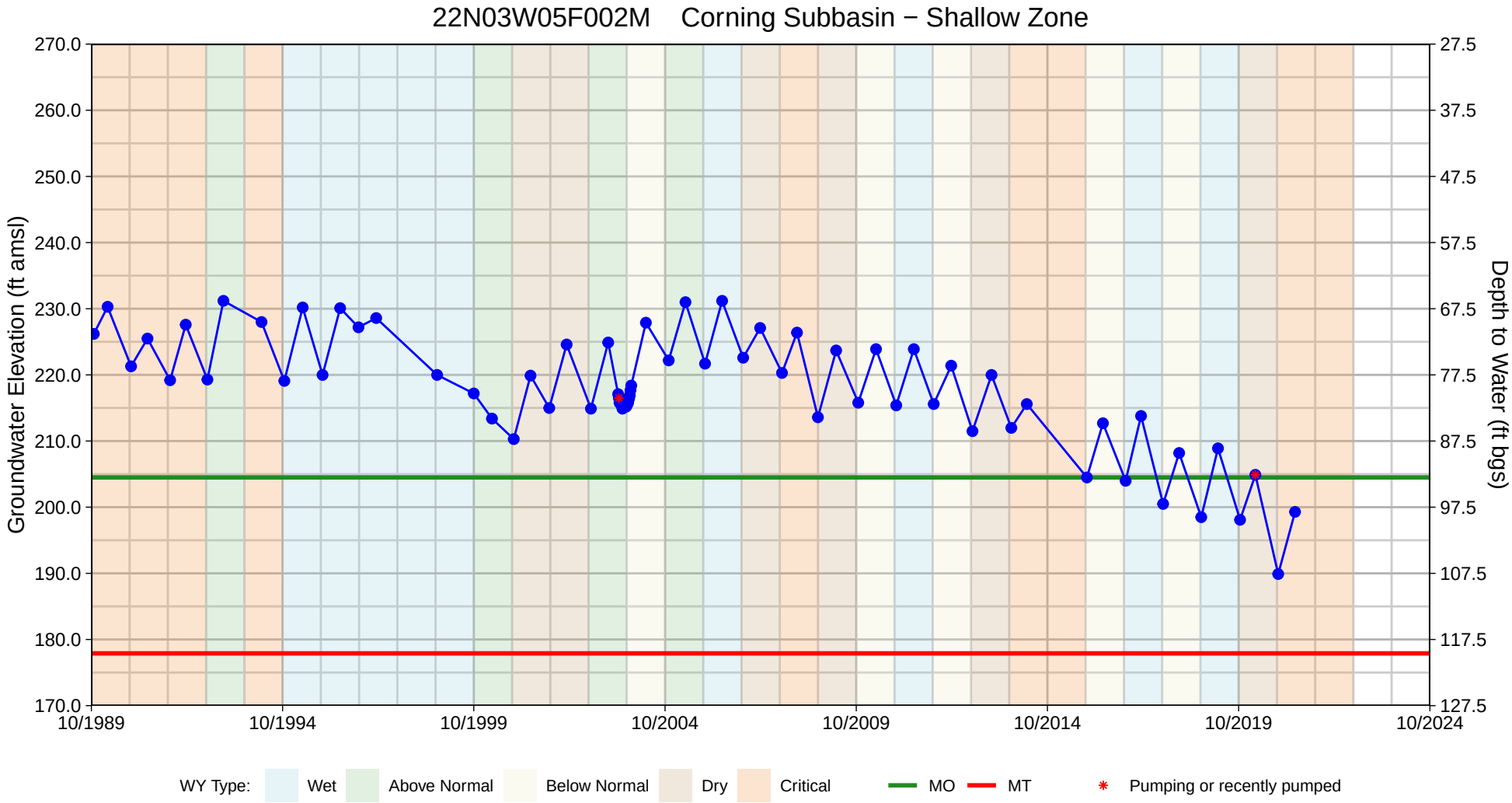
Total Depth (ft):314 GSE (ft amsl): 226

Perf. Top (ft bgs): 270 Sustainable Management Criteria

Perf. Bottom (ft bgs): 280 MO: 143.9 ft amsl (82.1 ft bgs)

MT: 123.6 ft amsl (102.4 ft bgs)





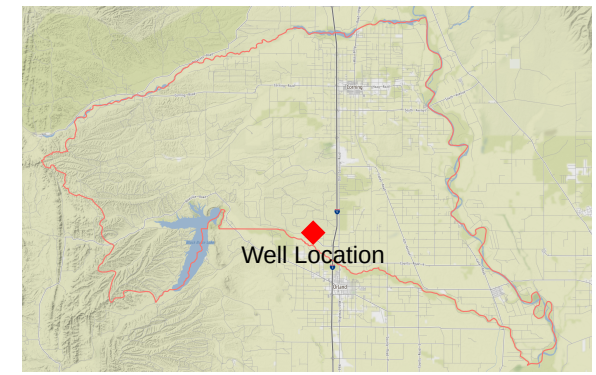
Site Code: 397956N1222278W001 Well Type: Irrigation

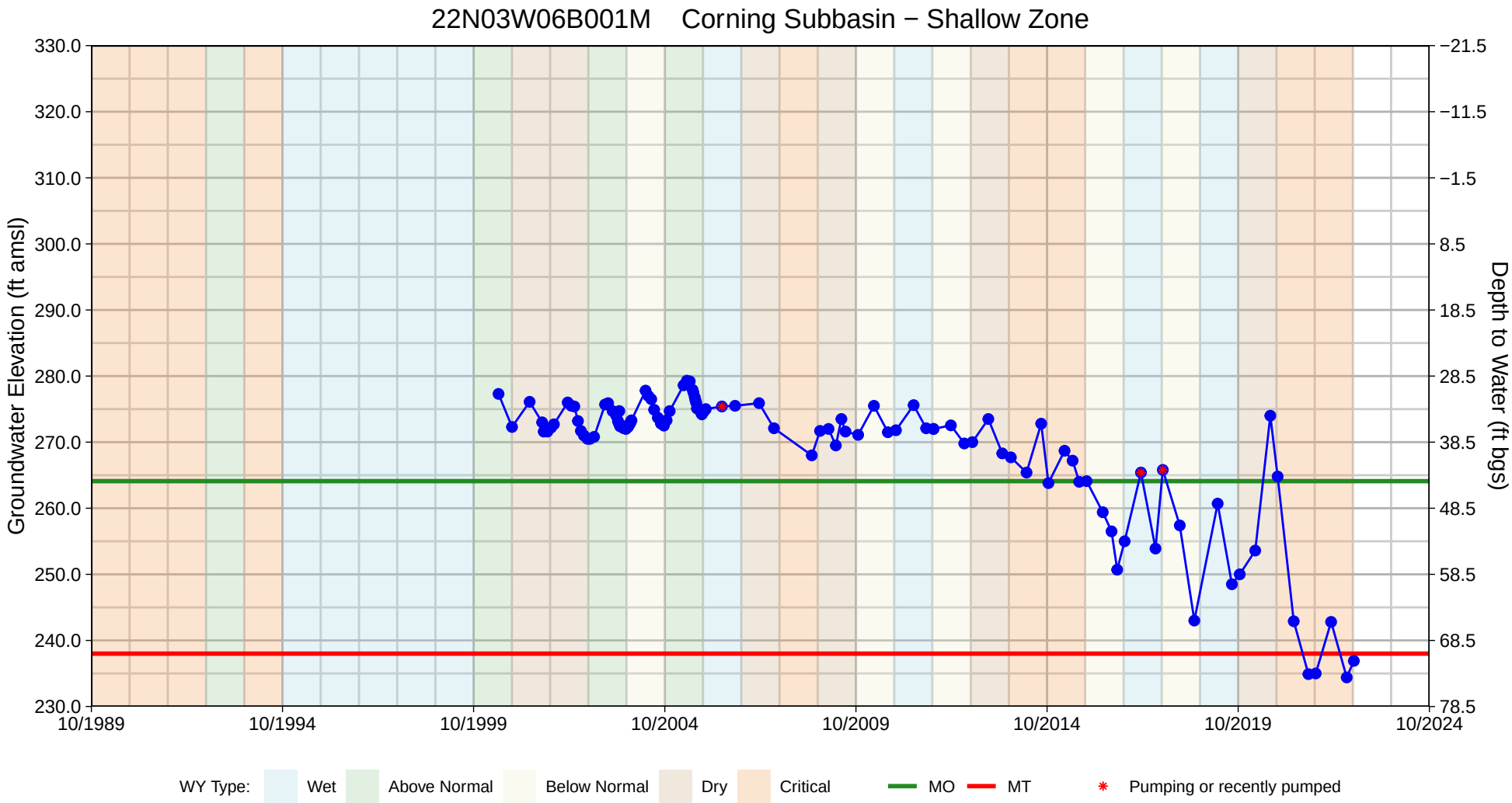
Total Depth (ft):218 GSE (ft amsl): 297.5

Perf. Top (ft bgs): 188 Sustainable Management Criteria

Perf. Bottom (ft bgs): 218 MO: 204.5 ft amsl (93 ft bgs)

MT: 177.9 ft amsl (119.6 ft bgs)





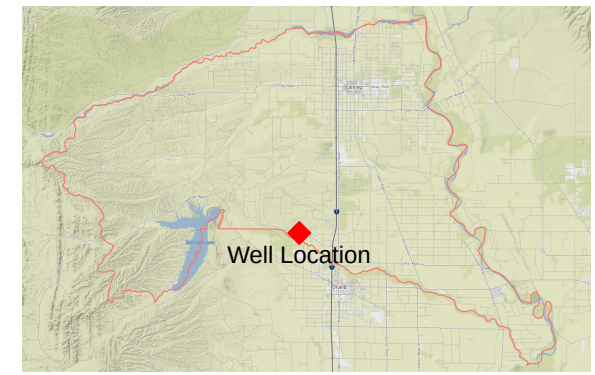
Site Code: 397953N1222433W001 Well Type: Residential

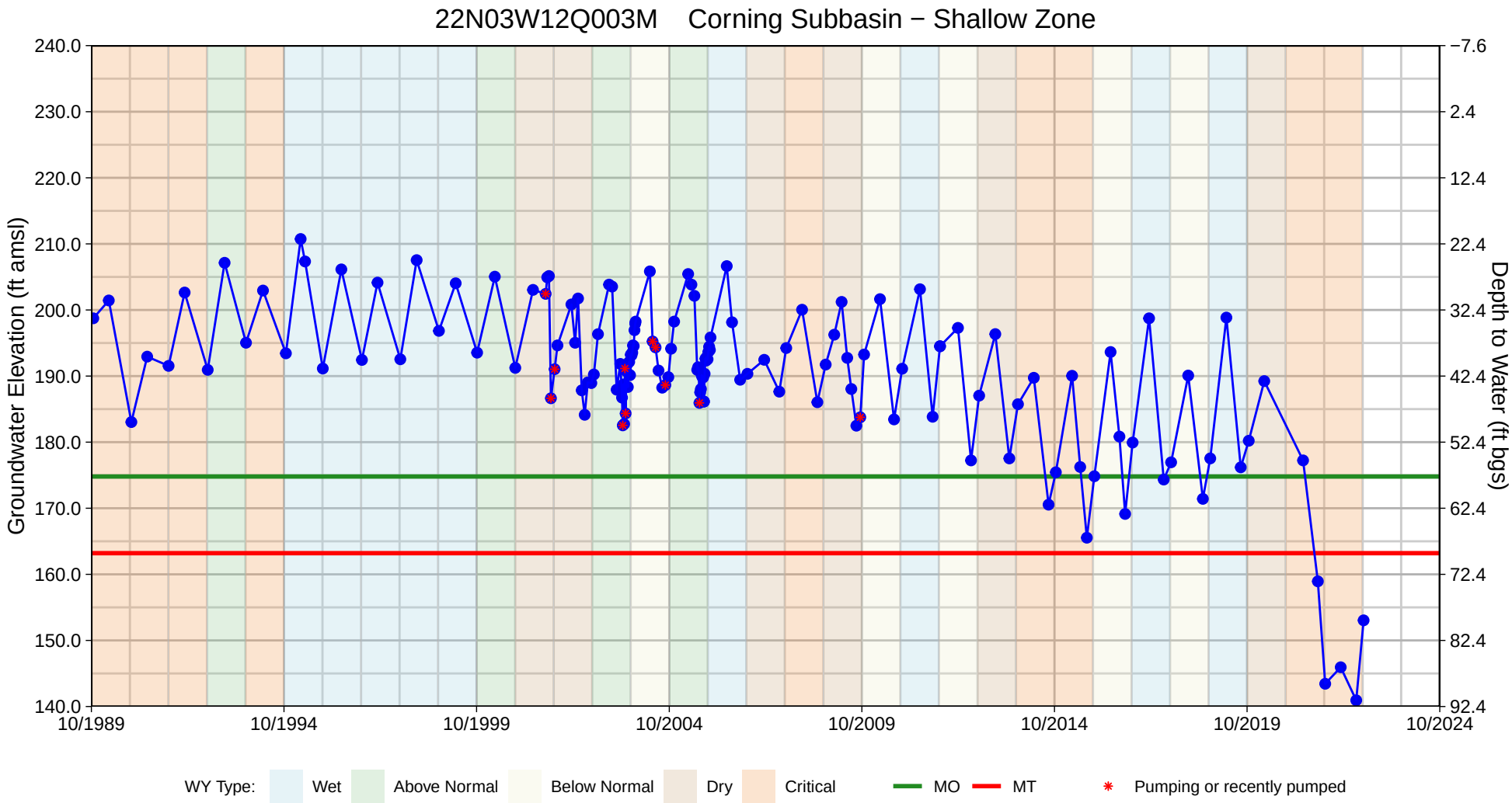
Total Depth (ft):210 GSE (ft amsl): 308.5

Perf. Top (ft bgs): 195 Sustainable Management Criteria

Perf. Bottom (ft bgs): 210 MO: 264.1 ft amsl (44.4 ft bgs)

MT: 238 ft amsl (70.5 ft bgs)





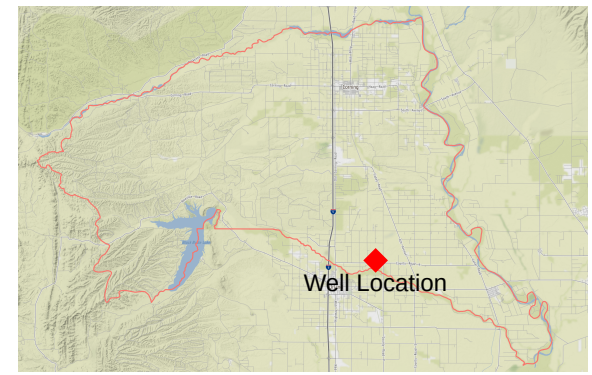
Site Code: 397705N1221491W001 Well Type: Residential

Total Depth (ft):124 GSE (ft amsl): 232.4

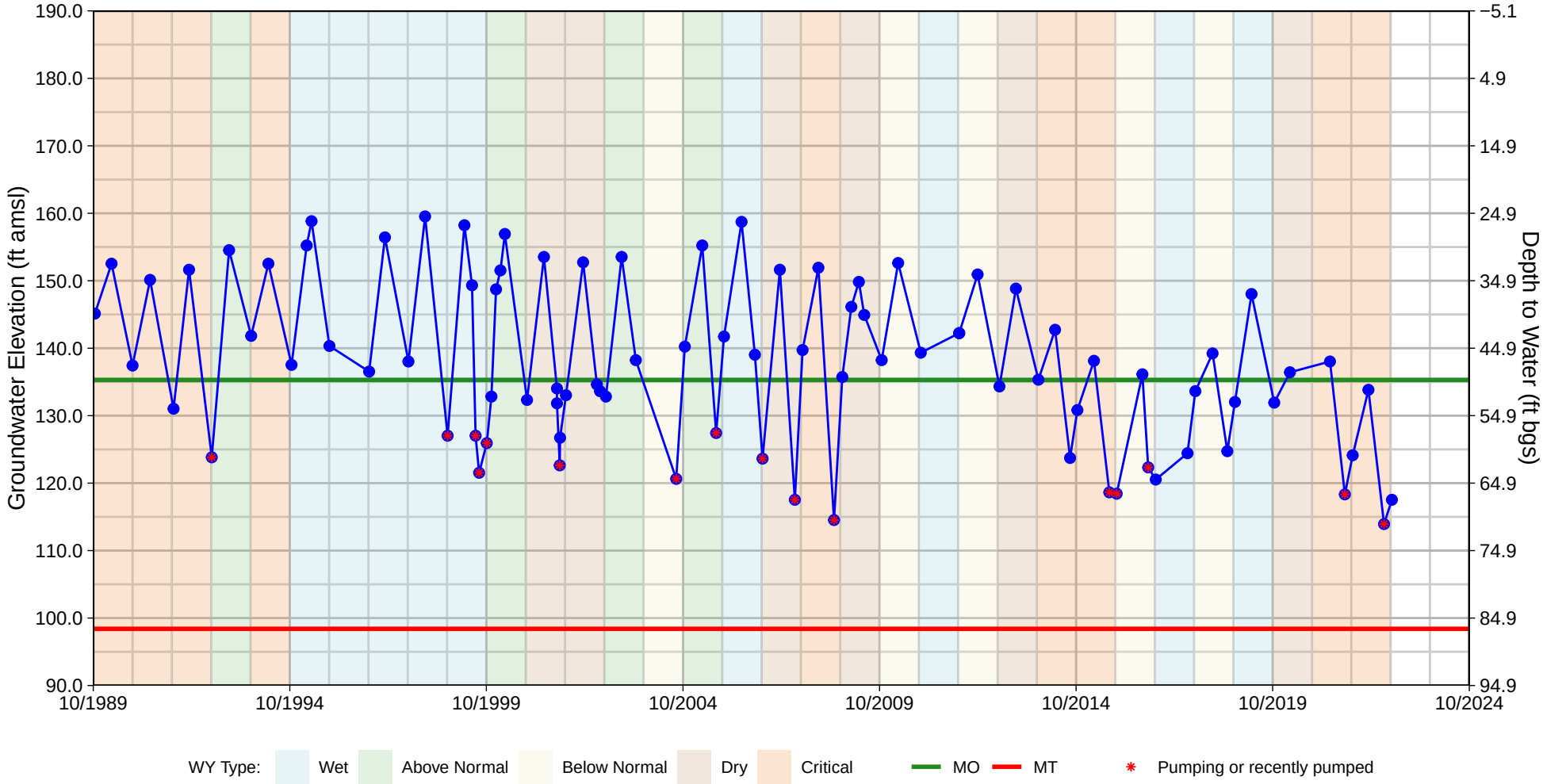
Perf. Top (ft bgs): 112 Sustainable Management Criteria

Perf. Bottom (ft bgs): 123 MO: 174.8 ft amsl (57.6 ft bgs)

MT: 163.2 ft amsl (69.2 ft bgs)



23N02W16B001M Corning Subbasin − Shallow Zone



Site Code: 398534N1220963W001

Well Type: Irrigation

Total Depth (ft):120

GSE (ft amsl): 184.9

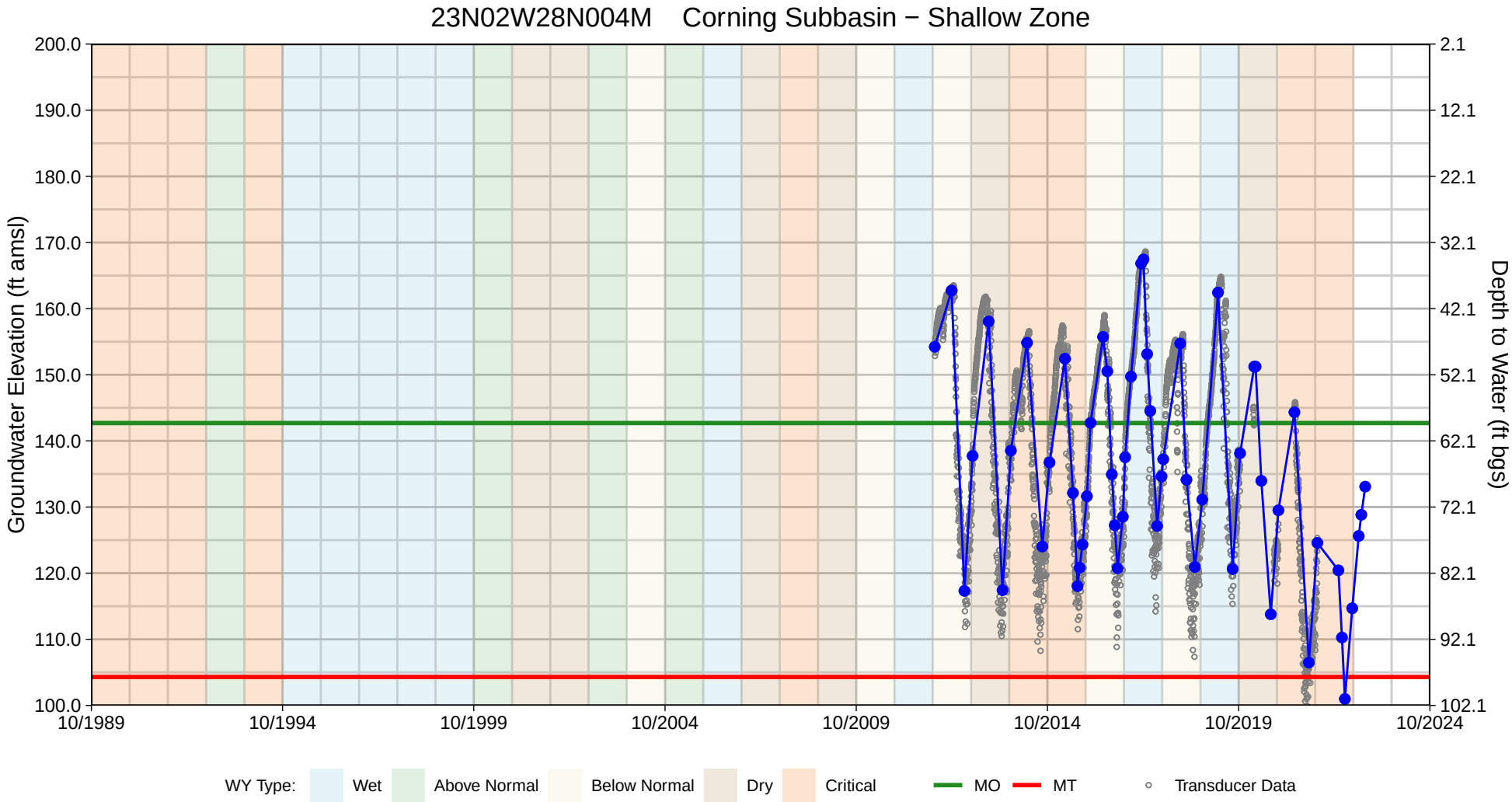
Perf. Top (ft bgs): 100

Sustainable Management Criteria

Perf. Bottom (ft bgs): 120

MO: 135.3 ft amsl (49.6 ft bgs)

MT: 98.4 ft amsl (86.5 ft bgs)



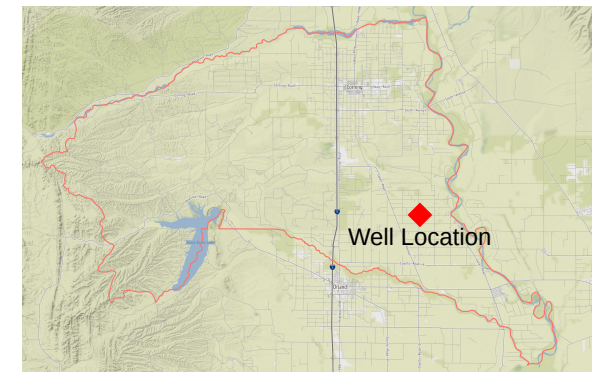
Site Code: 398117N1221020W001 Well Type: Observation

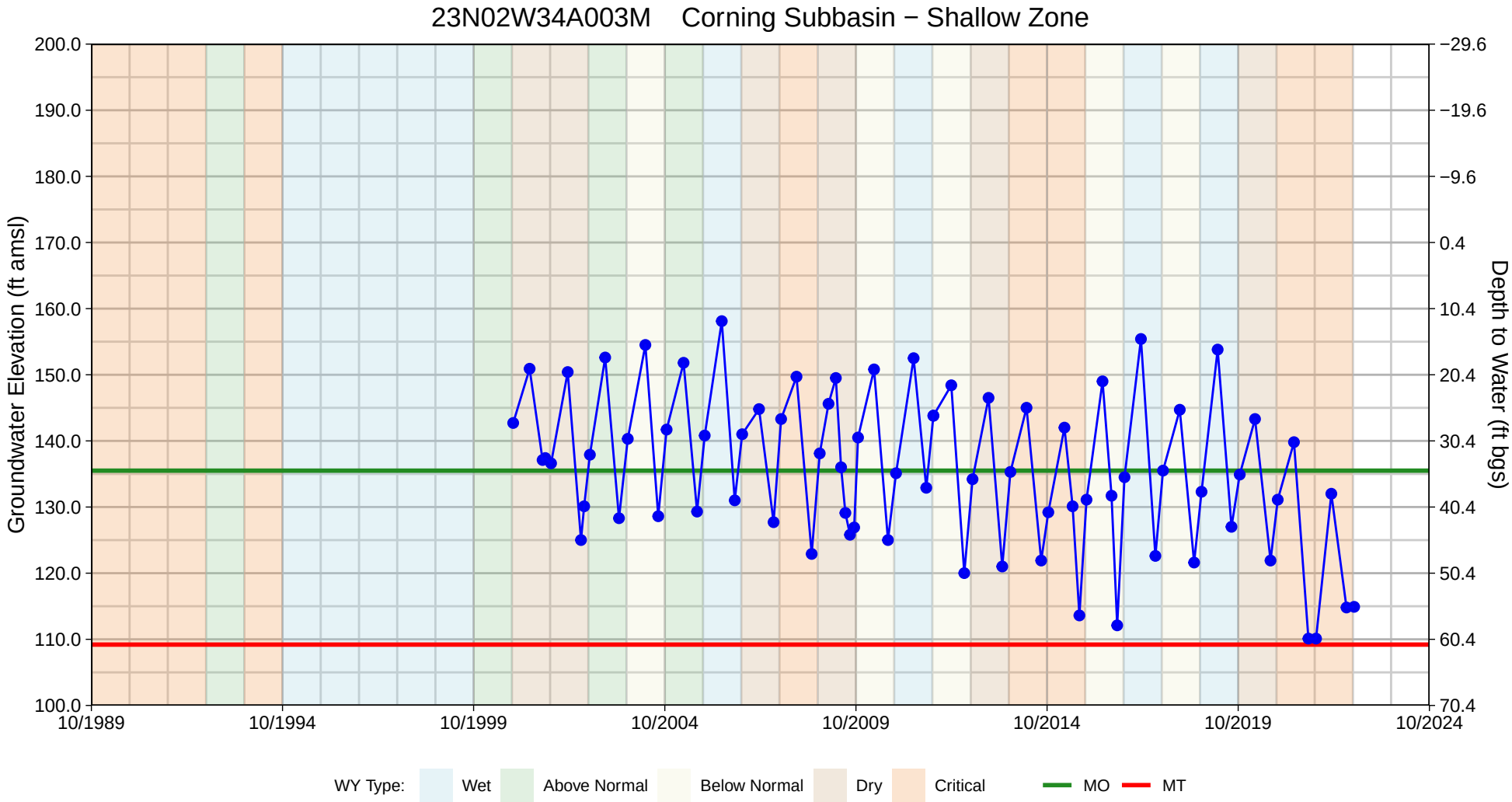
Total Depth (ft):205 GSE (ft amsl): 202.1

Perf. Top (ft bgs): 100 Sustainable Management Criteria

Perf. Bottom (ft bgs): 170 MO: 142.7 ft amsl (59.4 ft bgs)

MT: 104.3 ft amsl (97.8 ft bgs)





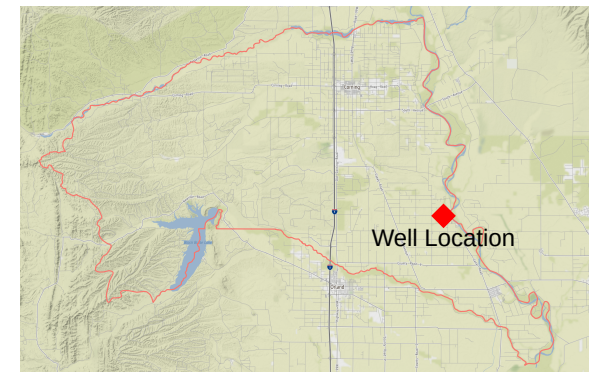
Site Code: 398108N1220711W001 Well Type: Irrigation

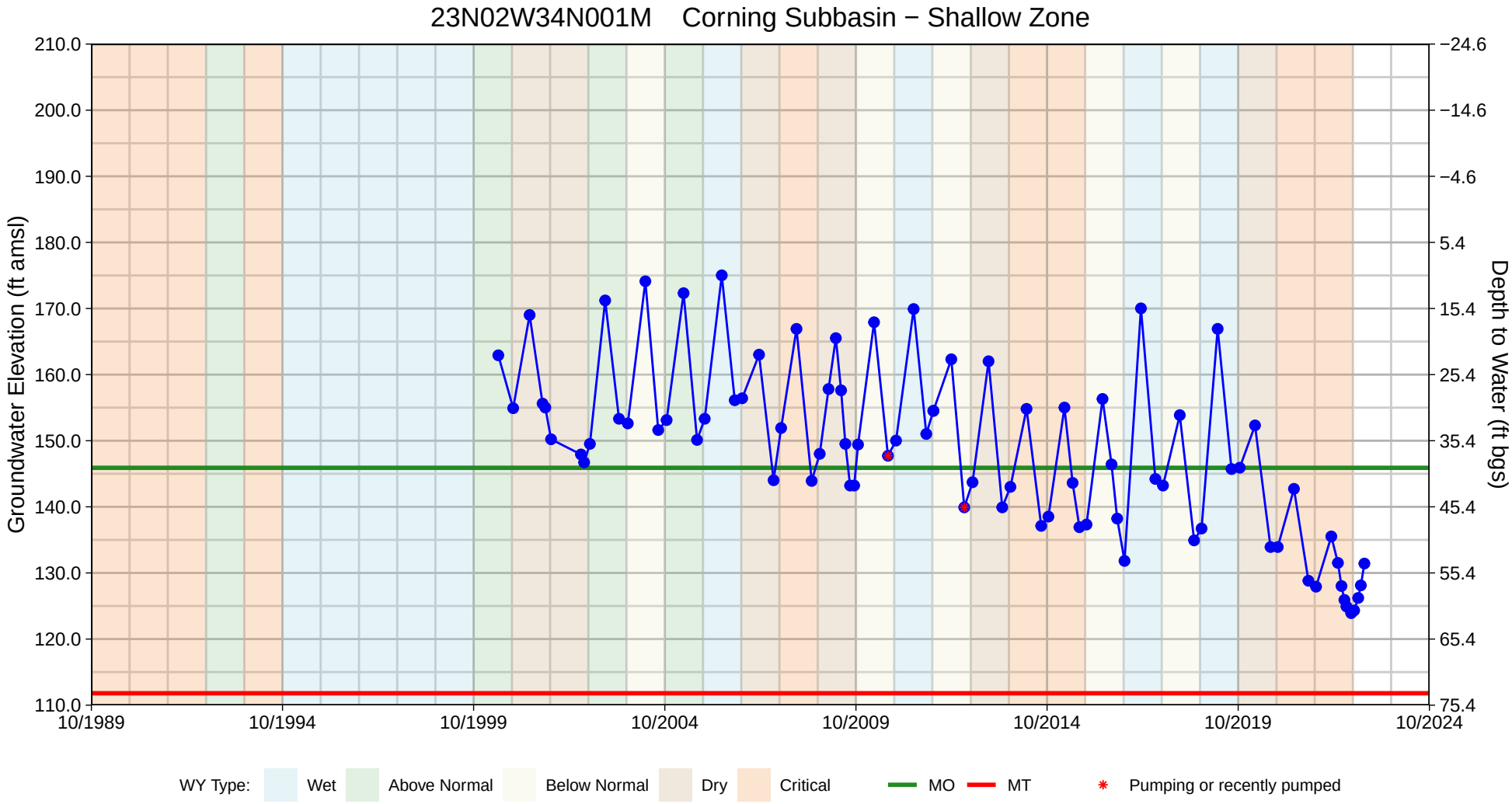
Total Depth (ft):125 GSE (ft amsl): 170.4

Perf. Top (ft bgs): 104 Sustainable Management Criteria

Perf. Bottom (ft bgs): 124 MO: 135.5 ft amsl (34.9 ft bgs)

MT: 109.2 ft amsl (61.2 ft bgs)





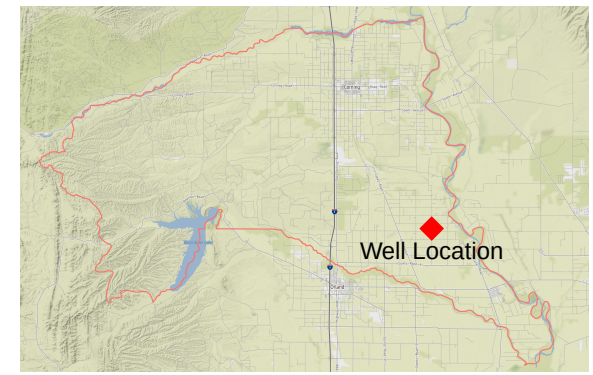
Site Code: 397993N1220850W001 Well Type: Industrial

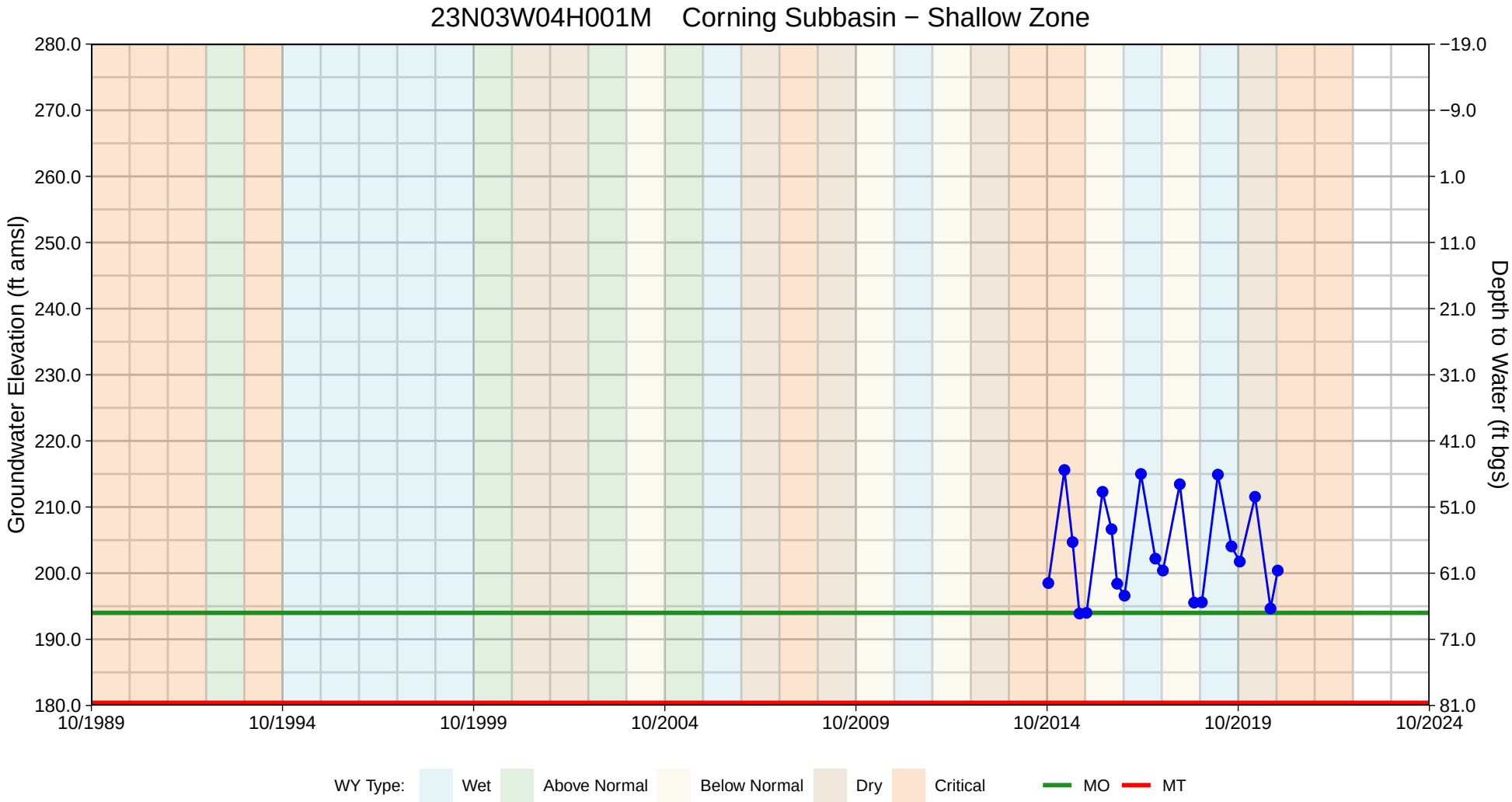
Total Depth (ft):100 GSE (ft amsl): 185.4

Perf. Top (ft bgs): 70 Sustainable Management Criteria

Perf. Bottom (ft bgs): 100 MO: 145.9 ft amsl (39.5 ft bgs)

MT: 111.8 ft amsl (73.6 ft bgs)





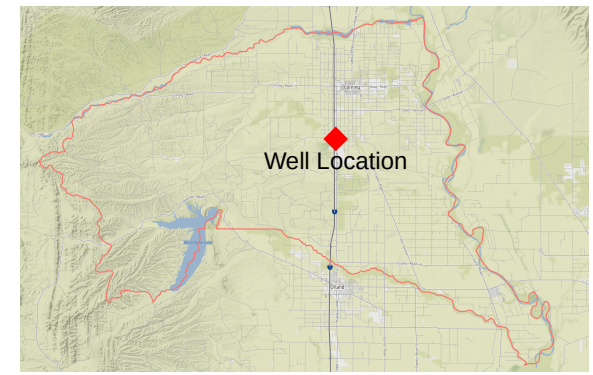
Site Code: 398804N1221981W001 Well Type: Irrigation

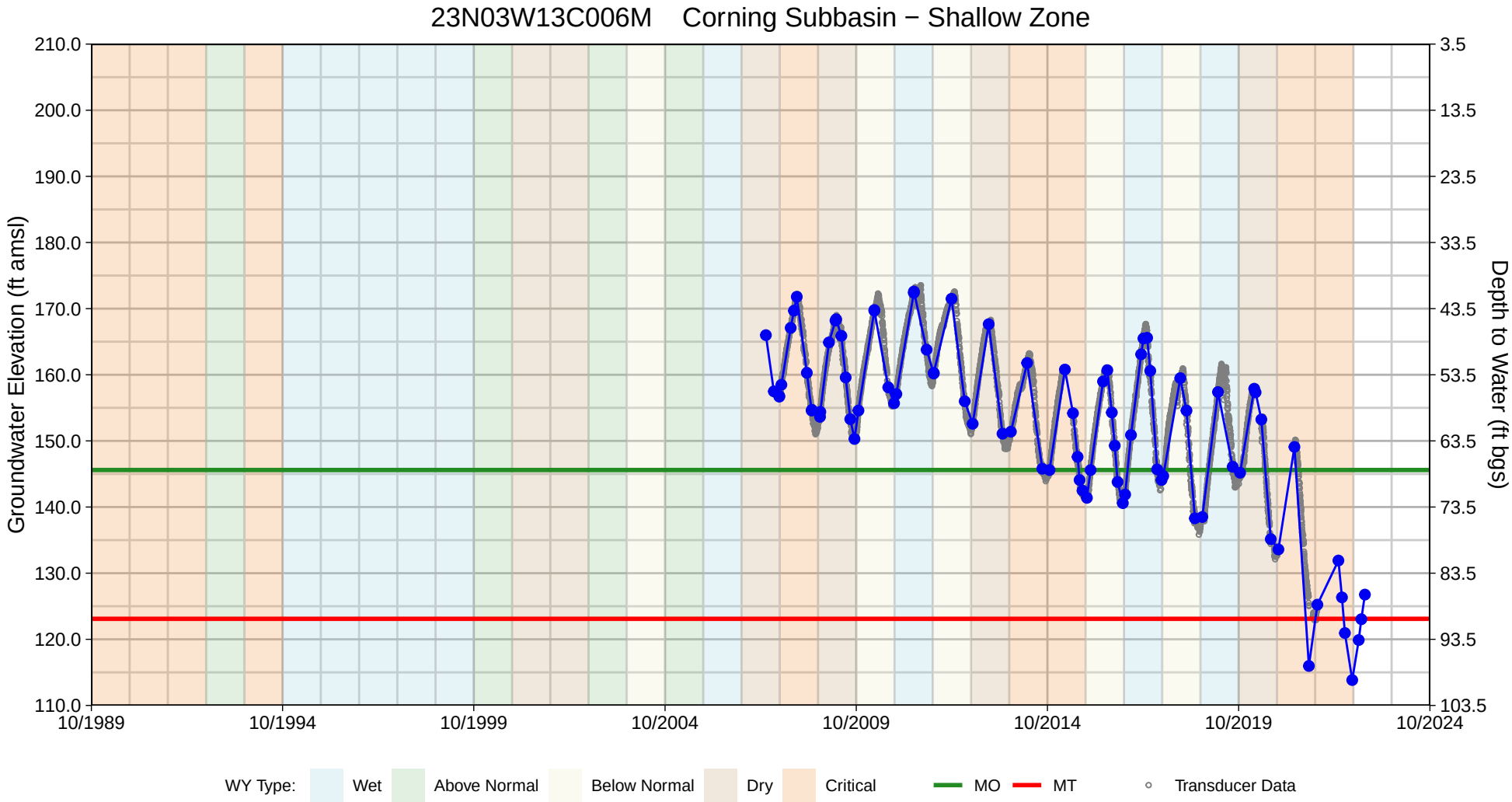
Total Depth (ft):270 GSE (ft amsl): 261

Perf. Top (ft bgs): 200 Sustainable Management Criteria

Perf. Bottom (ft bgs): 260 MO: 194 ft amsl (67 ft bgs)

MT: 180.4 ft amsl (80.6 ft bgs)





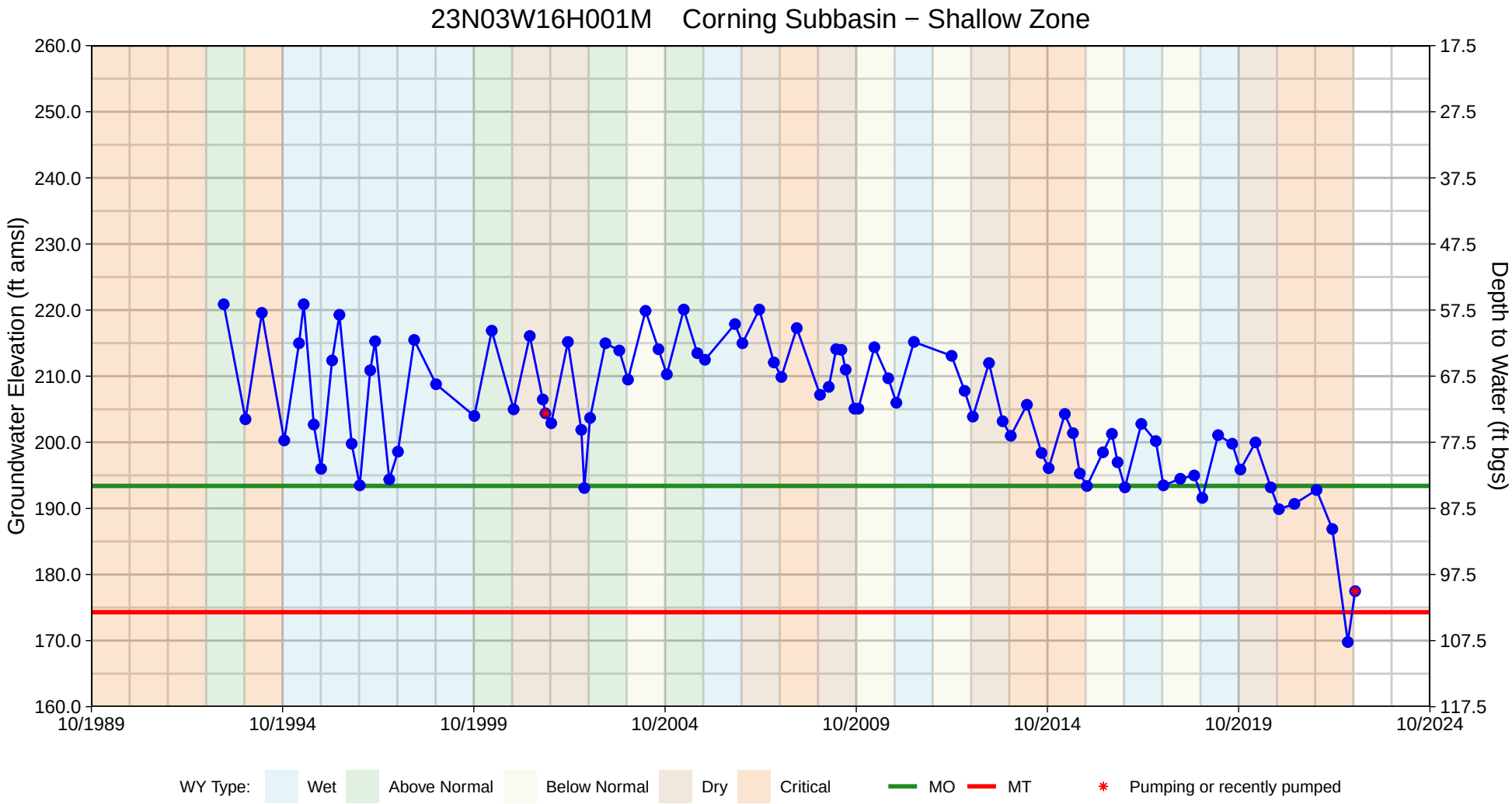
Site Code: 398543N1221535W004 Well Type: Observation

Total Depth (ft):182 GSE (ft amsl): 213.5

Perf. Top (ft bgs): 95 Sustainable Management Criteria

Perf. Bottom (ft bgs): 135 MO: 145.6 ft amsl (67.9 ft bgs)

MT: 123.1 ft amsl (90.4 ft bgs)



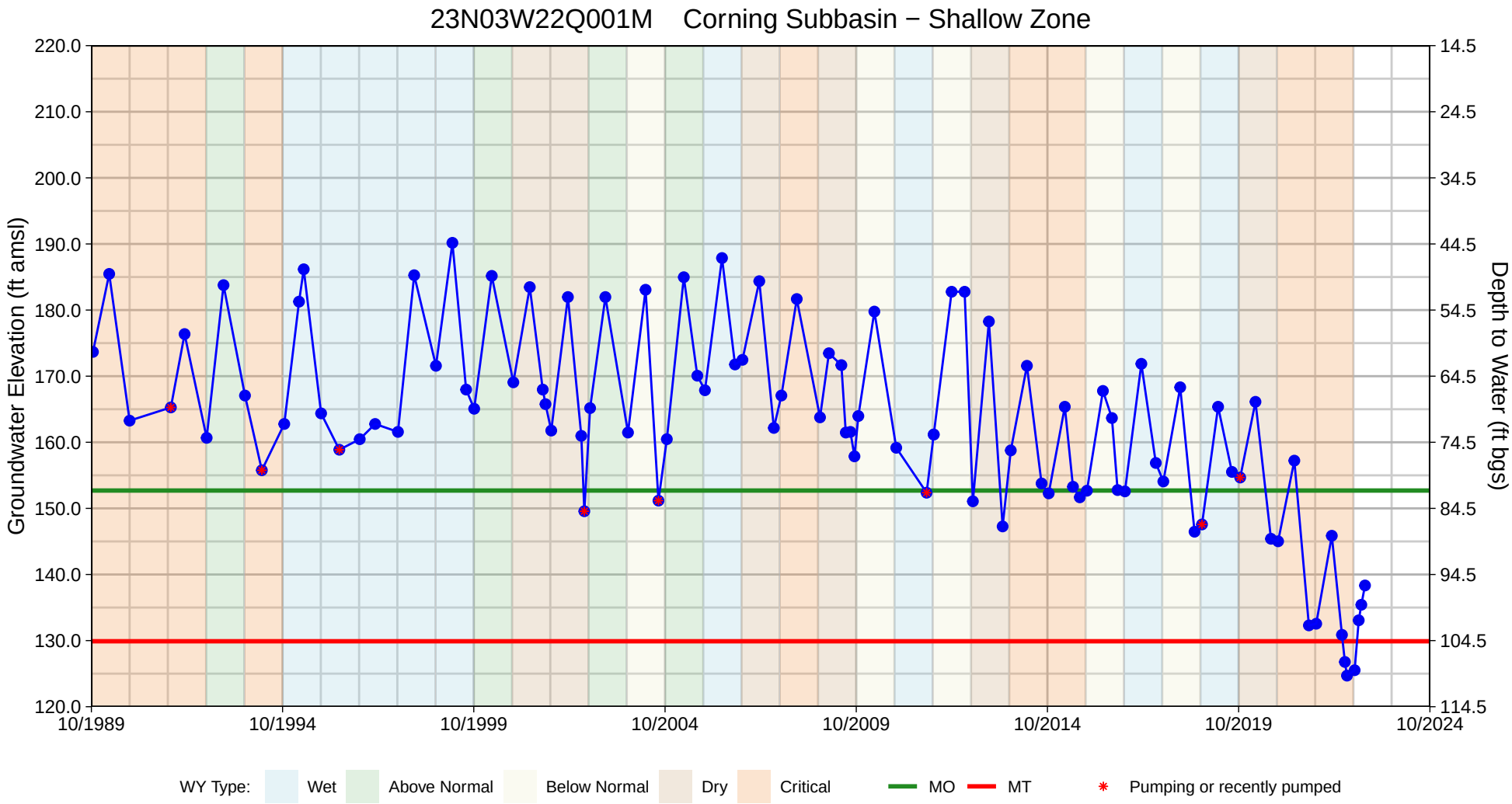
Site Code: 398493N1222016W001 Well Type: Residential

Total Depth (ft):150 GSE (ft amsl): 277.5

Perf. Top (ft bgs): 144 Sustainable Management Criteria

Perf. Bottom (ft bgs): 150 MO: 193.4 ft amsl (84.1 ft bgs)

MT: 174.3 ft amsl (103.2 ft bgs)



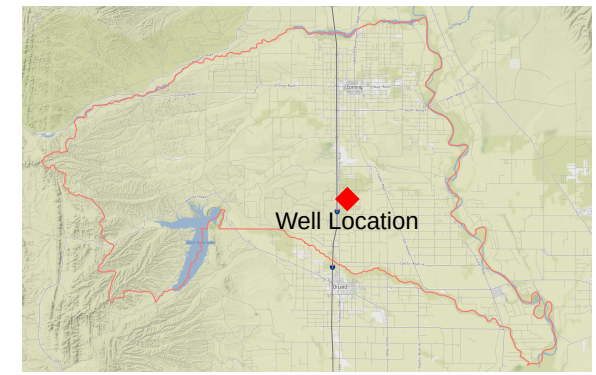
Site Code: 398260N1221876W001 Well Type: Irrigation

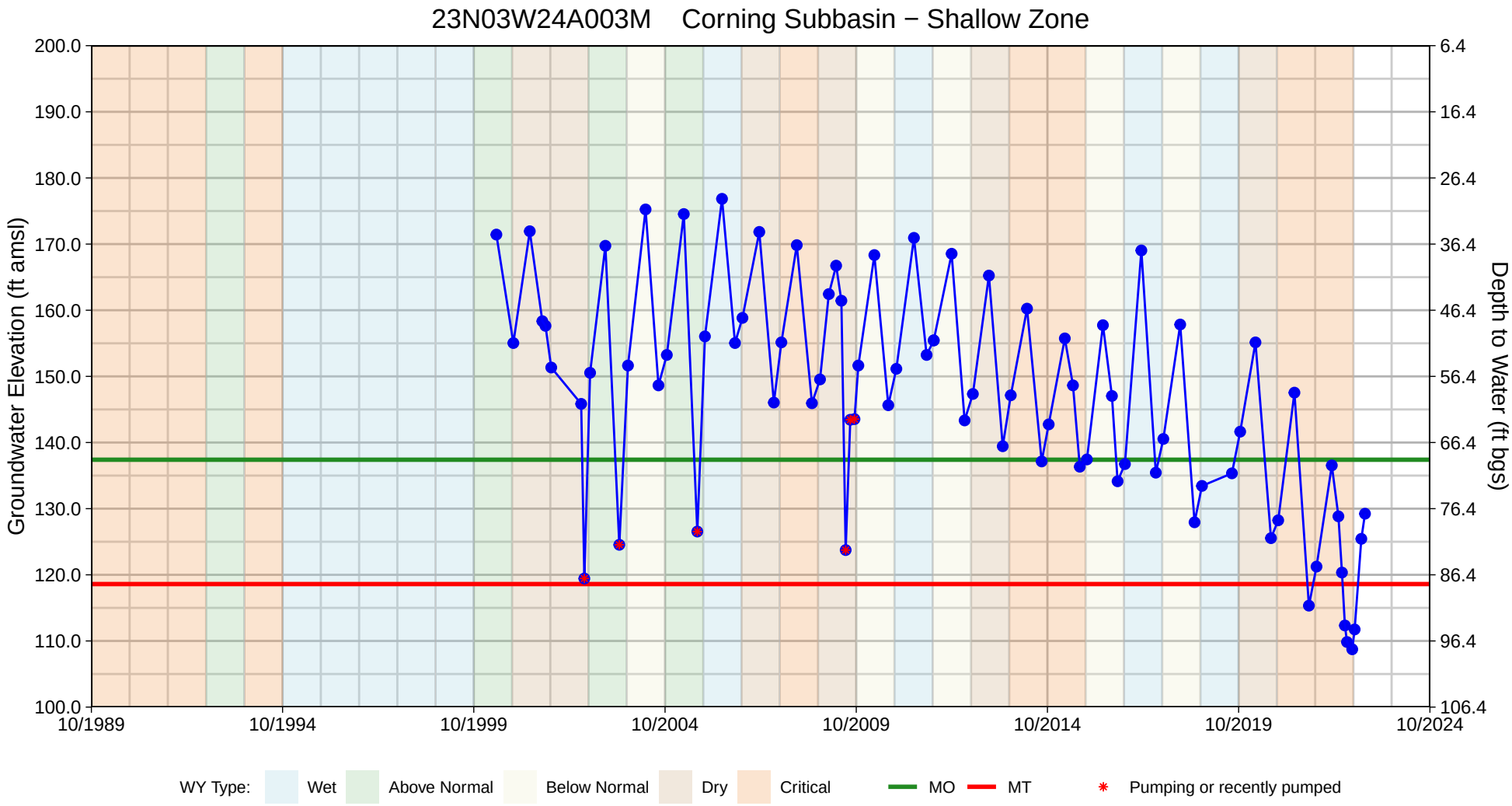
Total Depth (ft):380 GSE (ft amsl): 234.5

Perf. Top (ft bgs): NA Sustainable Management Criteria

Perf. Bottom (ft bgs): NA MO: 152.7 ft amsl (81.8 ft bgs)

MT: 129.9 ft amsl (104.6 ft bgs)





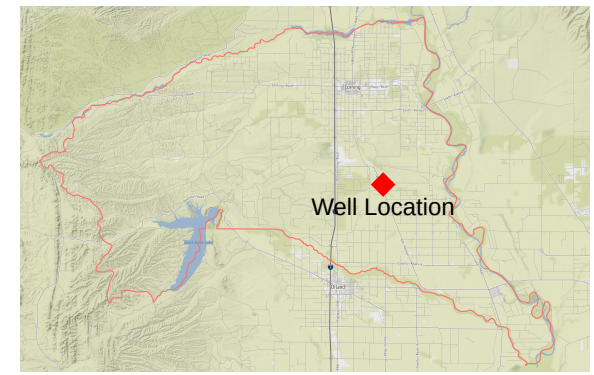
Site Code: 398392N1221430W001 Well Type: Residential

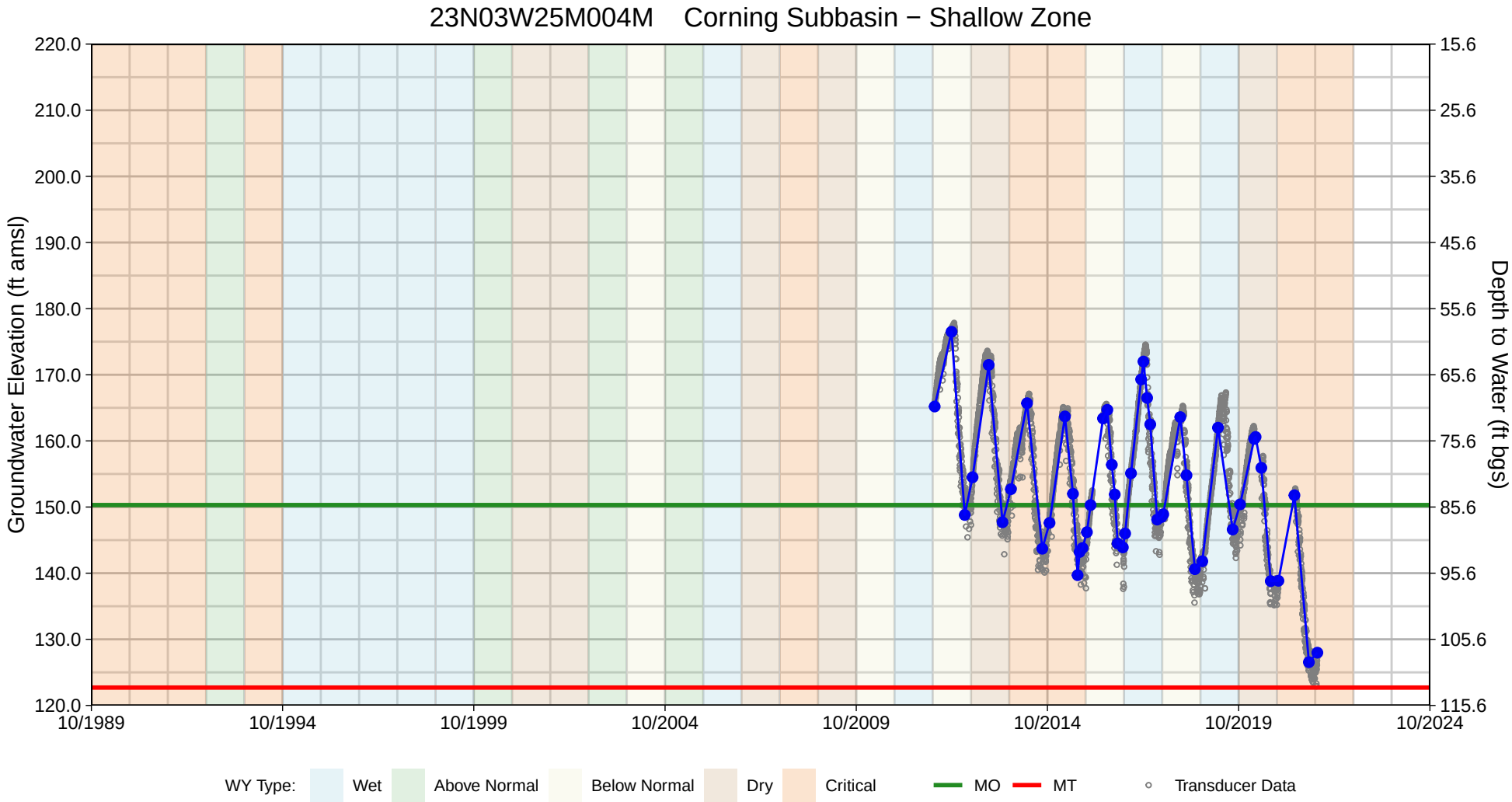
Total Depth (ft):199 GSE (ft amsl): 206.4

Perf. Top (ft bgs): 180 Sustainable Management Criteria

Perf. Bottom (ft bgs): 199 MO: 137.4 ft amsl (69 ft bgs)

MT: 118.6 ft amsl (87.8 ft bgs)





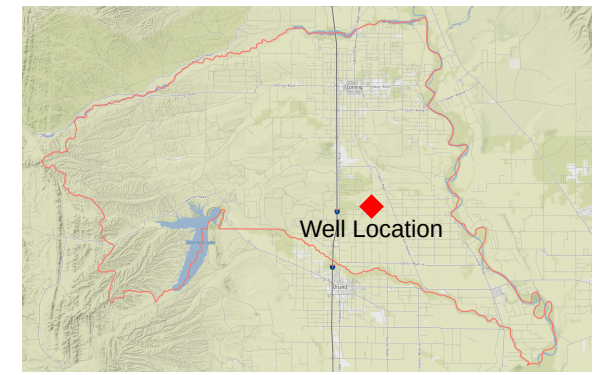
Site Code: 398193N1221590W001 Well Type: Observation

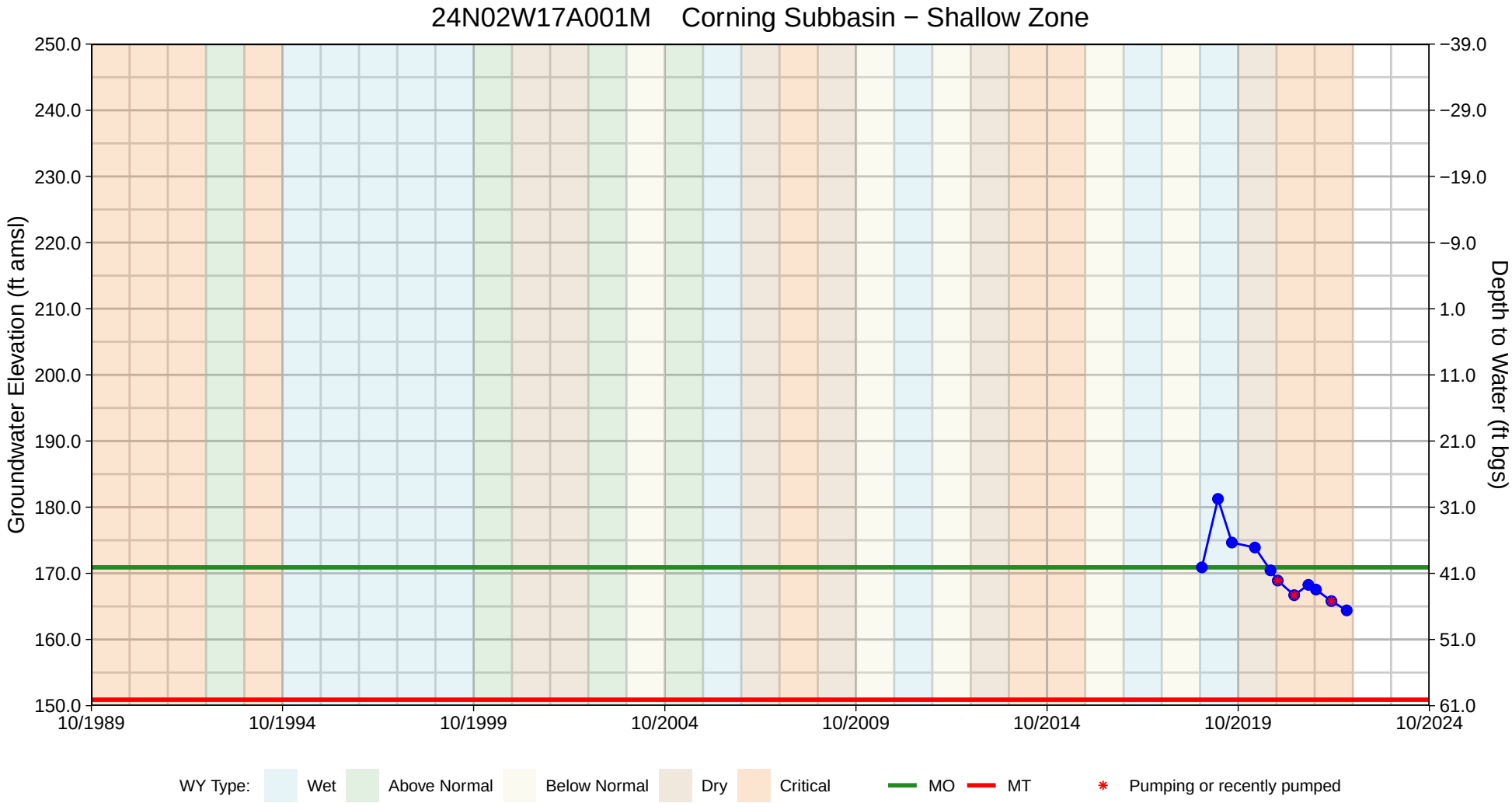
Total Depth (ft):155 GSE (ft amsl): 235.6

Perf. Top (ft bgs): 120 Sustainable Management Criteria

Perf. Bottom (ft bgs): 130 MO: 150.3 ft amsl (85.3 ft bgs)

MT: 122.7 ft amsl (112.9 ft bgs)





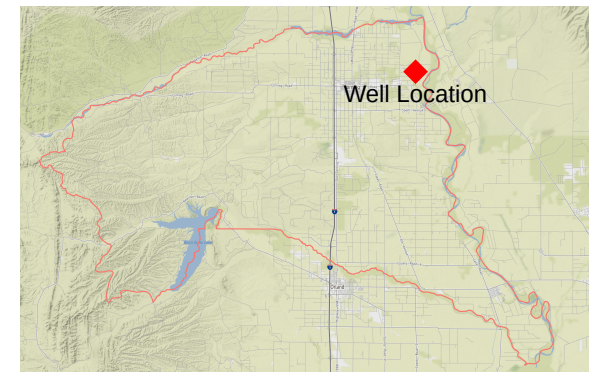
Site Code: 399412N1221040W002 Well Type: Residential

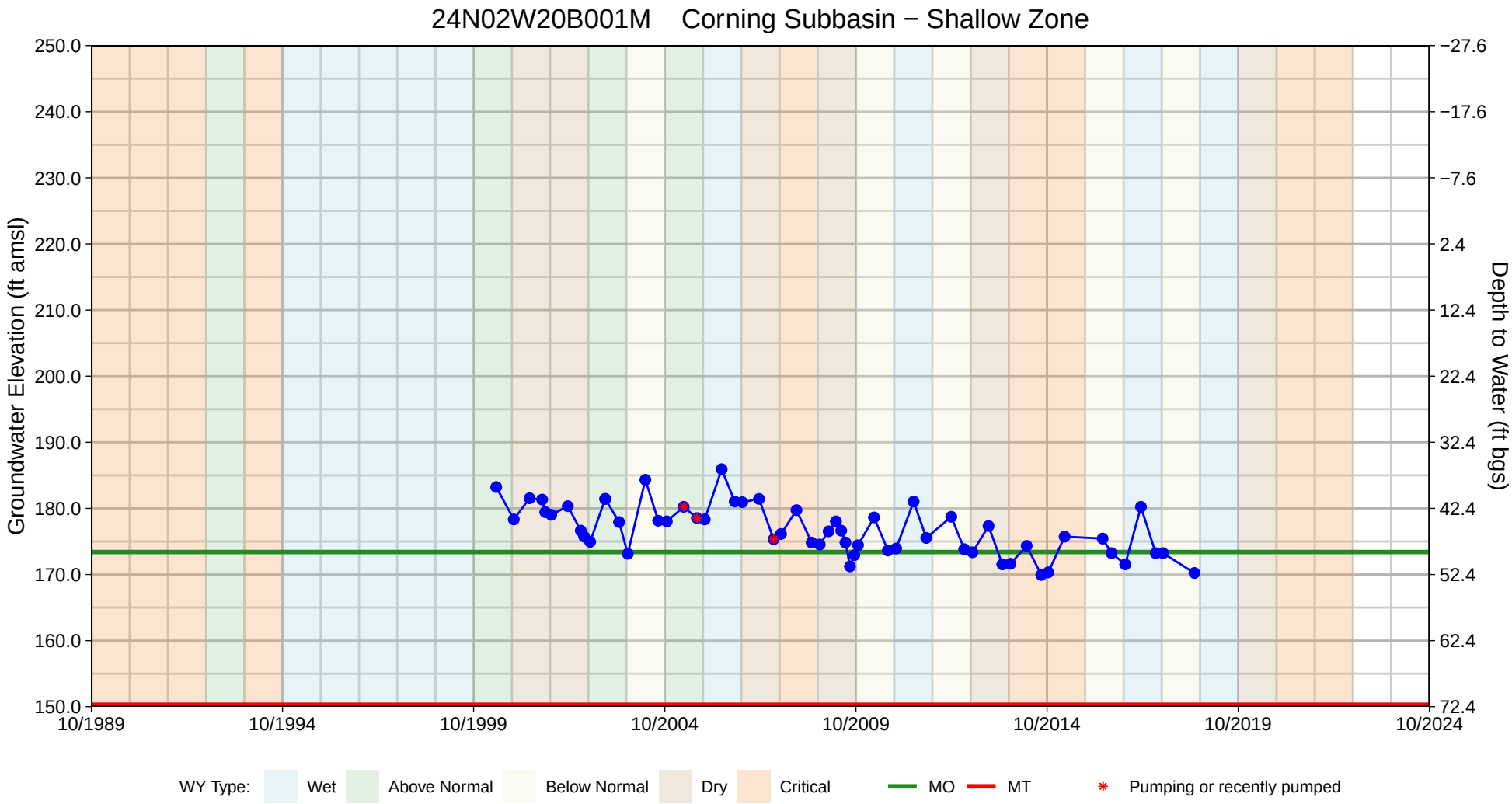
Total Depth (ft):140 GSE (ft amsl): 211

Perf. Top (ft bgs): 120 Sustainable Management Criteria

Perf. Bottom (ft bgs): 140 MO: 170.9 ft amsl (40.1 ft bgs)

MT: 150.9 ft amsl (60.1 ft bgs)





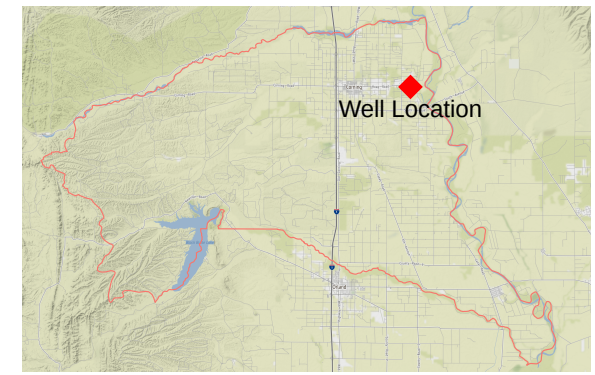
Site Code: 399274N1221123W001 Well Type: Residential

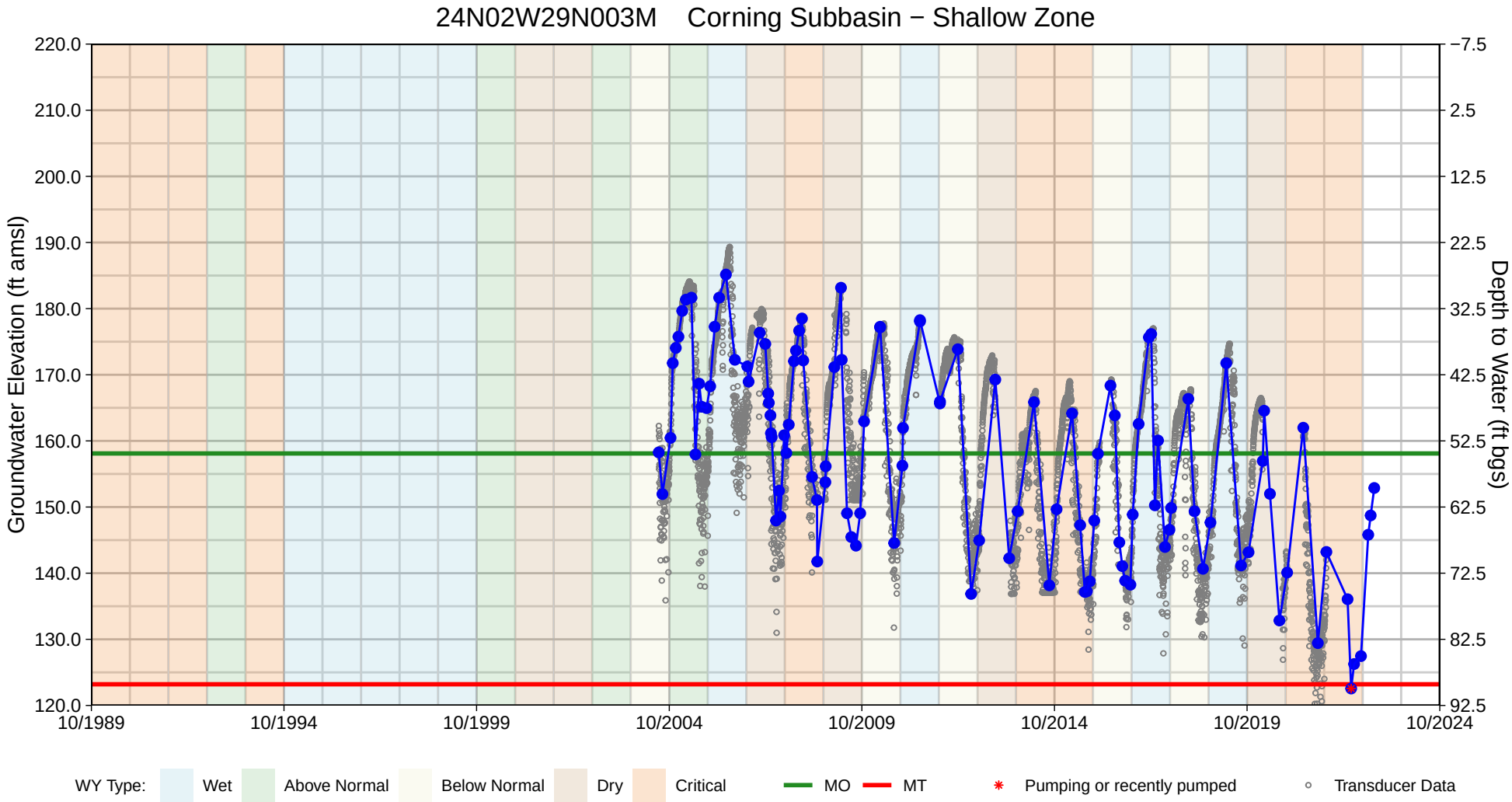
Total Depth (ft):120 GSE (ft amsl): 222.4

Perf. Top (ft bgs): 100 Sustainable Management Criteria

Perf. Bottom (ft bgs): 120 MO: 173.4 ft amsl (49 ft bgs)

MT: 150.3 ft amsl (72.1 ft bgs)





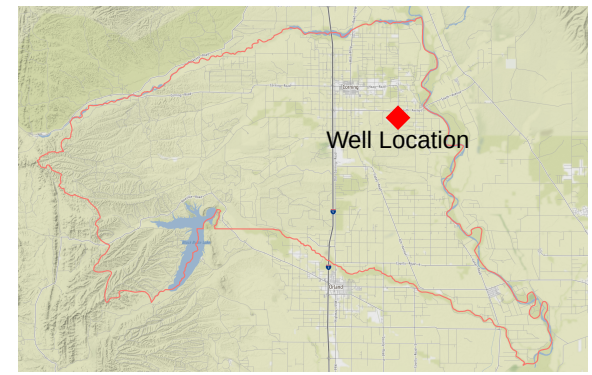
Site Code: 398996N1221227W001 Well Type: Observation

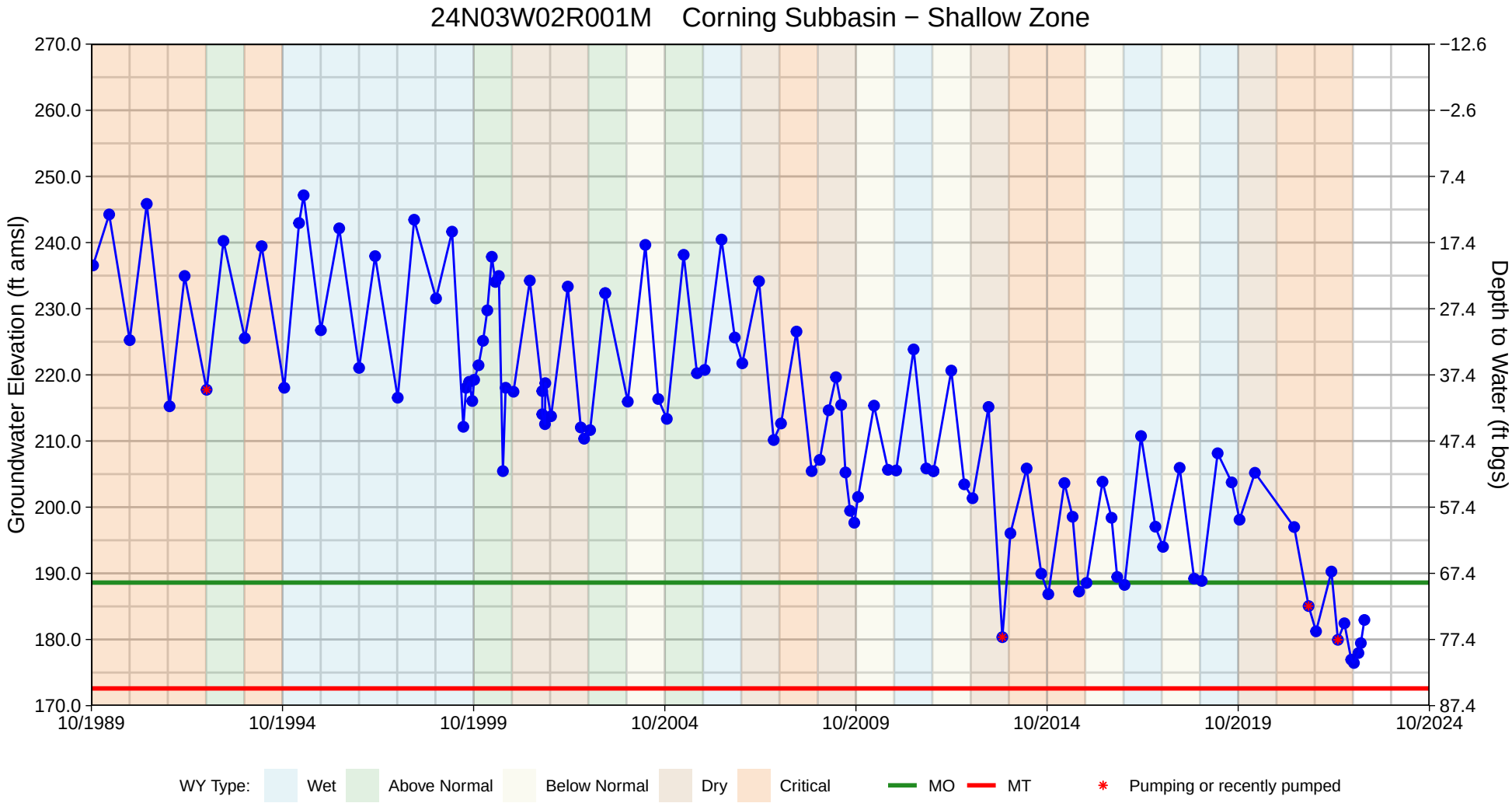
Total Depth (ft):388 GSE (ft amsl): 212.5

Perf. Top (ft bgs): 200 Sustainable Management Criteria

Perf. Bottom (ft bgs): 290 MO: 158.1 ft amsl (54.4 ft bgs)

MT: 123.2 ft amsl (89.3 ft bgs)





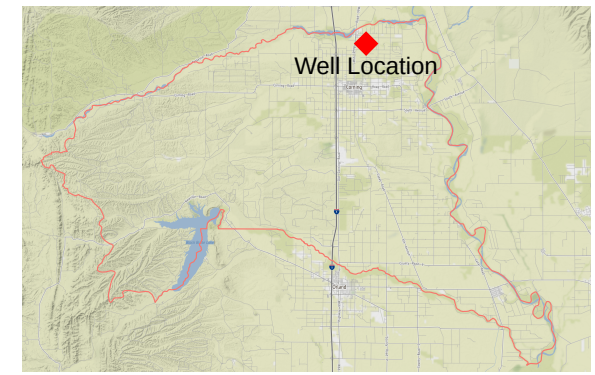
Site Code: 399666N1221647W001 Well Type: Residential

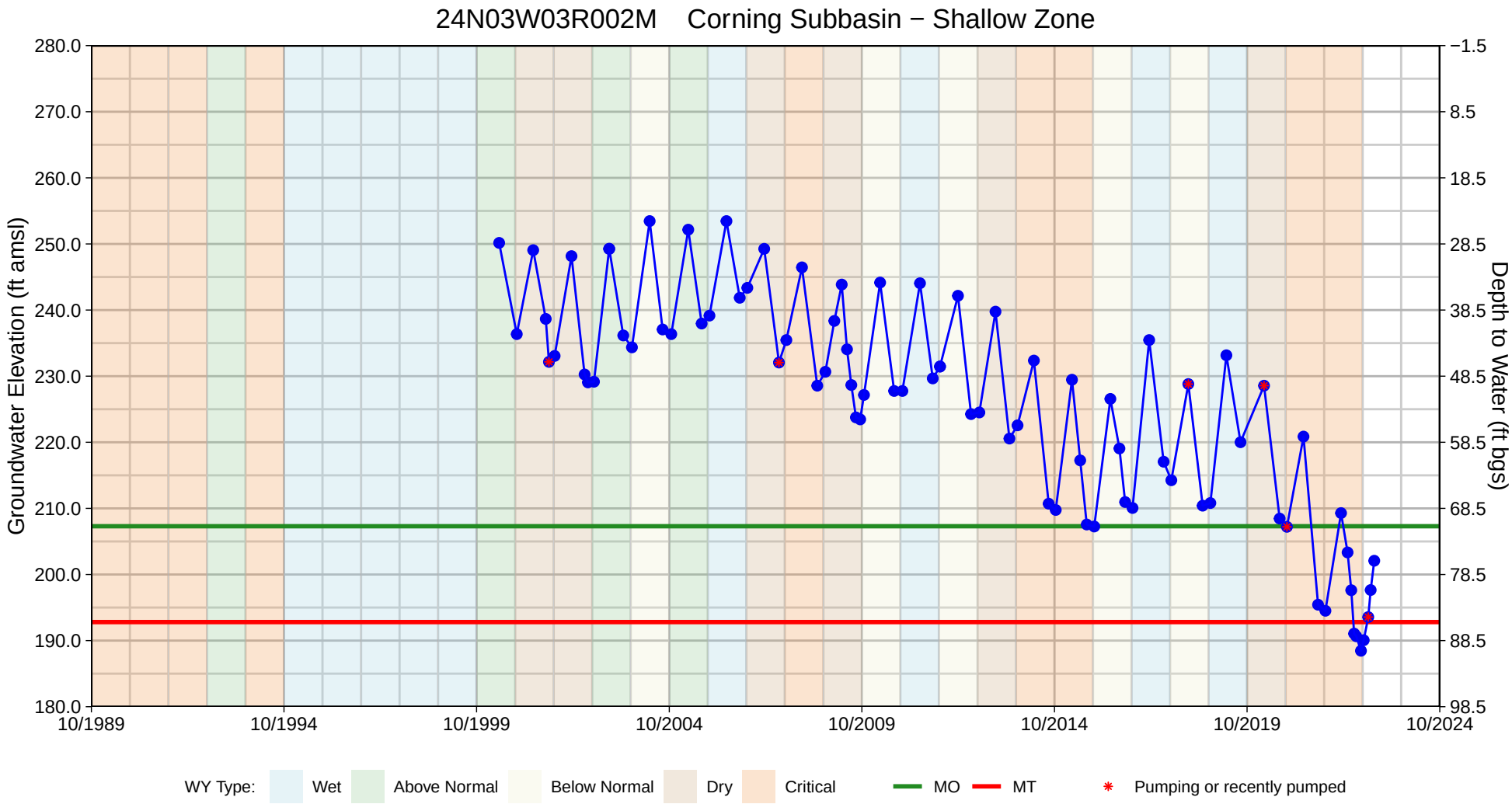
Total Depth (ft):270 GSE (ft amsl): 257.4

Perf. Top (ft bgs): NA Sustainable Management Criteria

Perf. Bottom (ft bgs): NA MO: 188.6 ft amsl (68.8 ft bgs)

MT: 172.6 ft amsl (84.8 ft bgs)





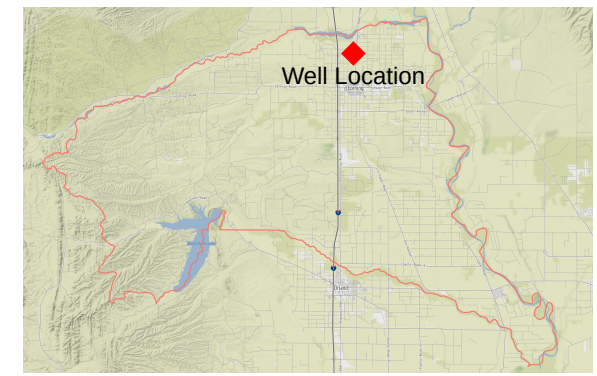
Site Code: 399586N1221812W001 Well Type: Residential

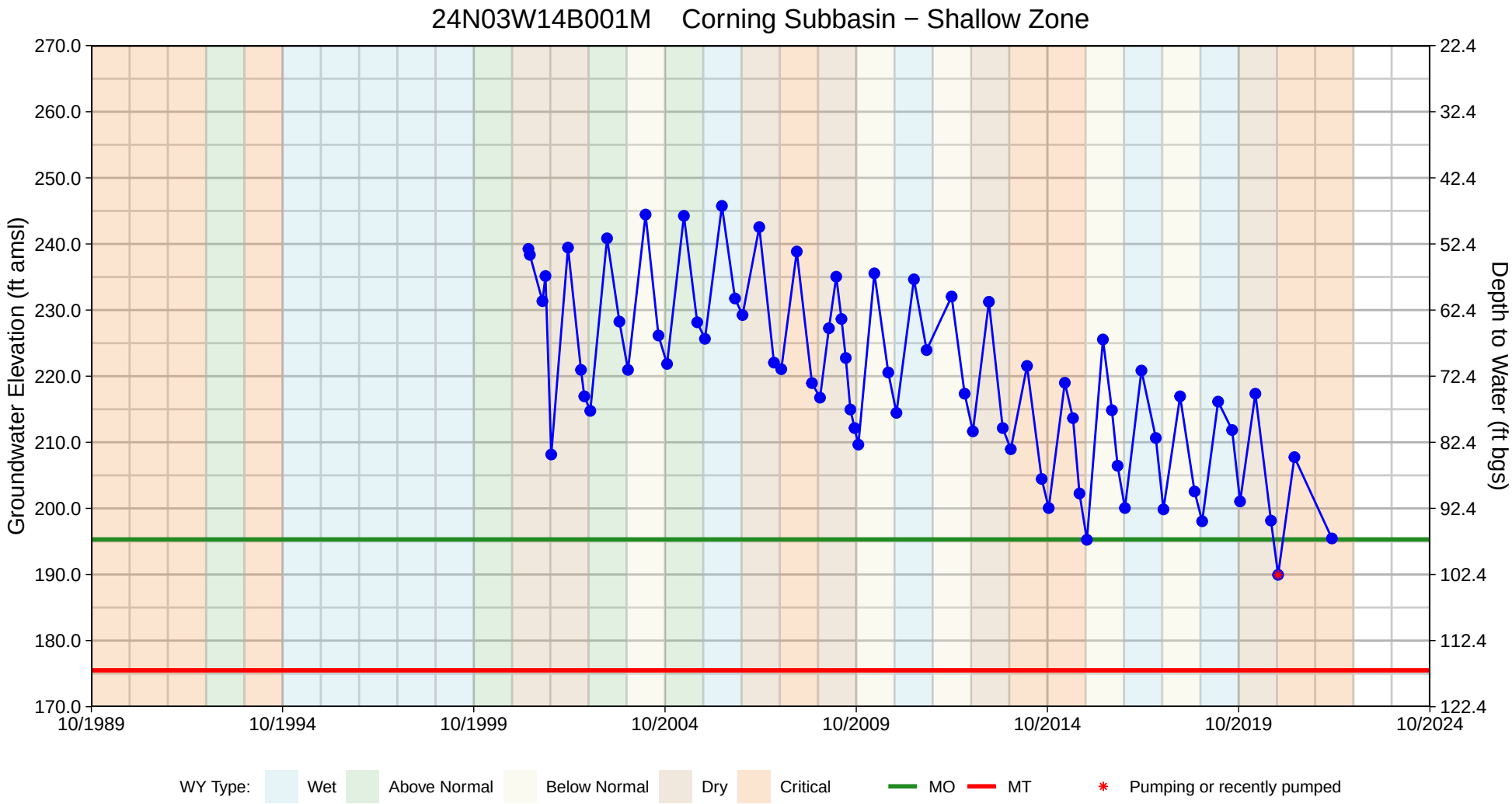
Total Depth (ft):132 GSE (ft amsl): 278.5

Perf. Top (ft bgs): 112 Sustainable Management Criteria

Perf. Bottom (ft bgs): 132 MO: 207.3 ft amsl (71.2 ft bgs)

MT: 192.8 ft amsl (85.7 ft bgs)





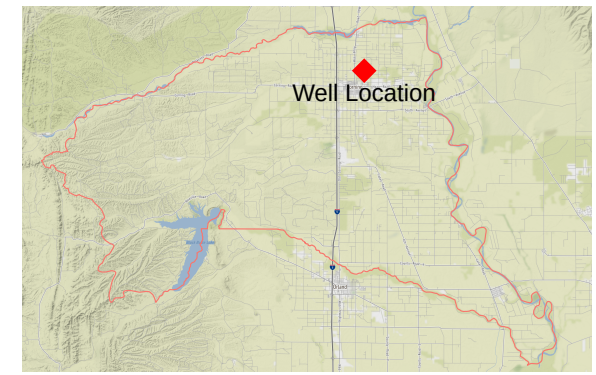
Site Code: 399421N1221676W001 Well Type: Industrial

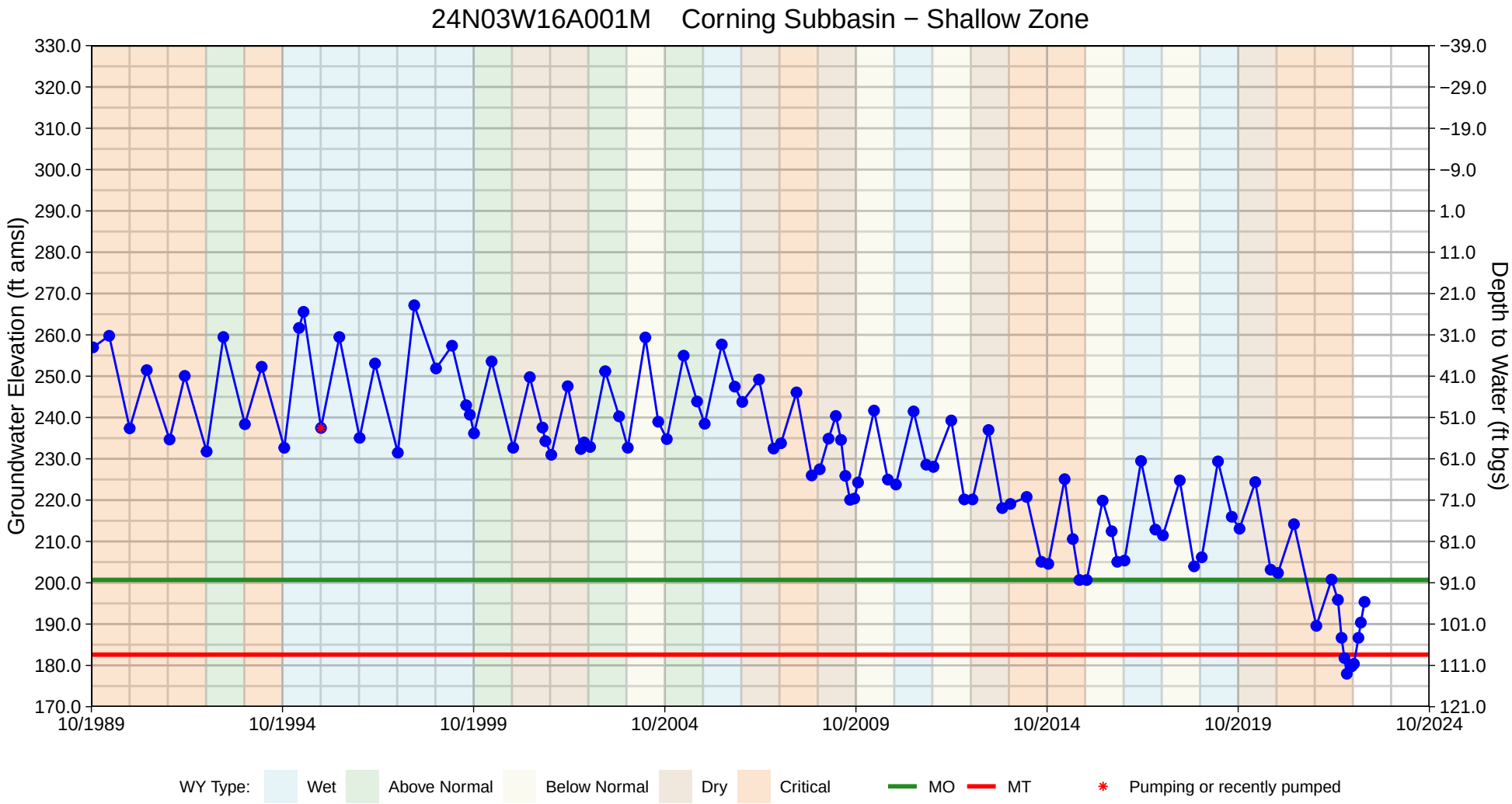
Total Depth (ft):140 GSE (ft amsl): 292.4

Perf. Top (ft bgs): 130 Sustainable Management Criteria

Perf. Bottom (ft bgs): 140 MO: 195.3 ft amsl (97.1 ft bgs)

MT: 175.5 ft amsl (116.9 ft bgs)





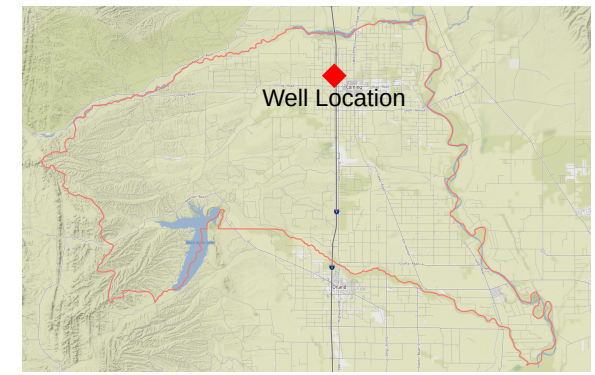
Site Code: 399376N1222021W001 Well Type: Irrigation

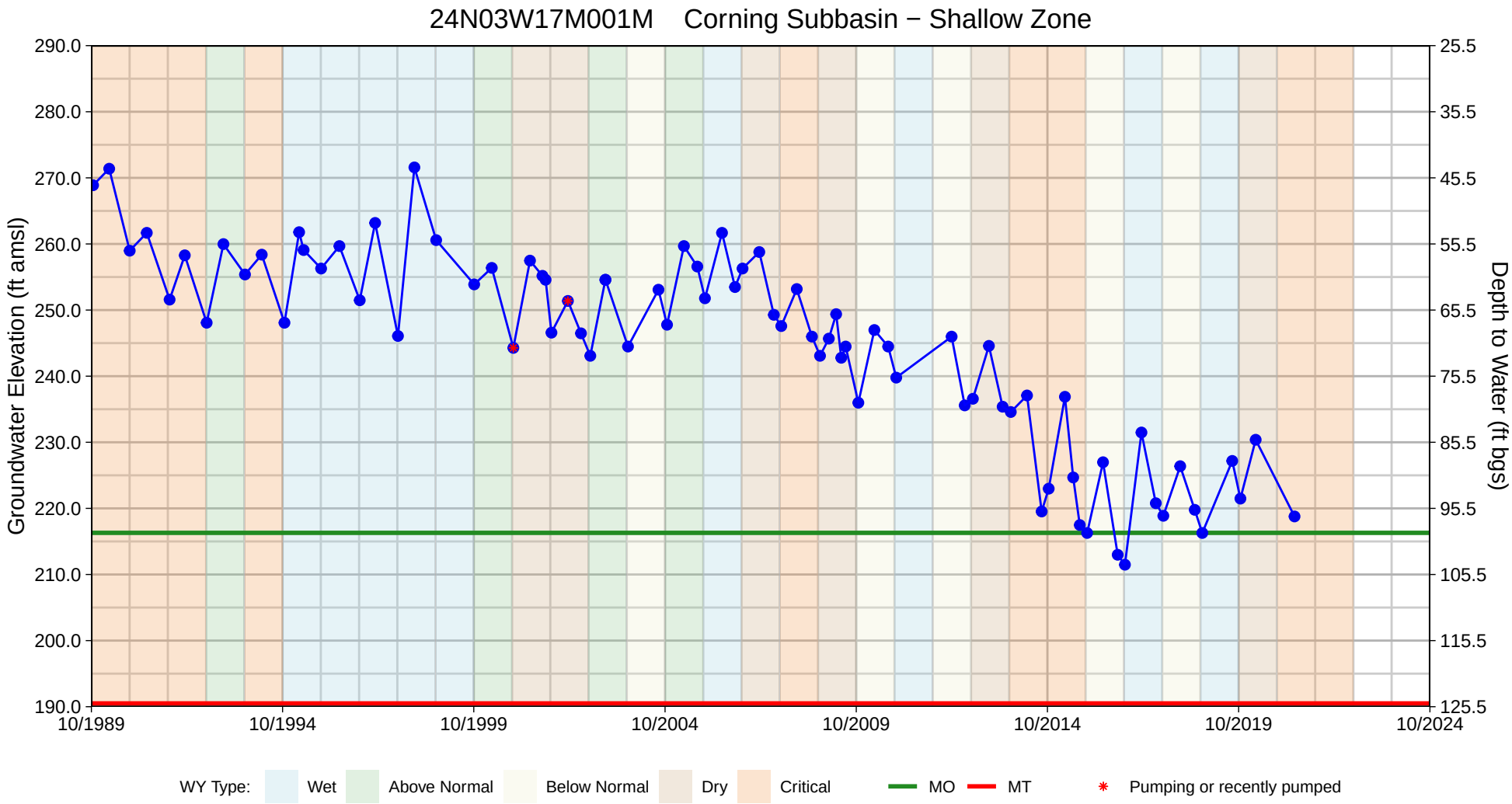
Total Depth (ft):195 GSE (ft amsl): 291

Perf. Top (ft bgs): 85 Sustainable Management Criteria

Perf. Bottom (ft bgs): 195 MO: 200.7 ft amsl (90.3 ft bgs)

MT: 182.6 ft amsl (108.4 ft bgs)





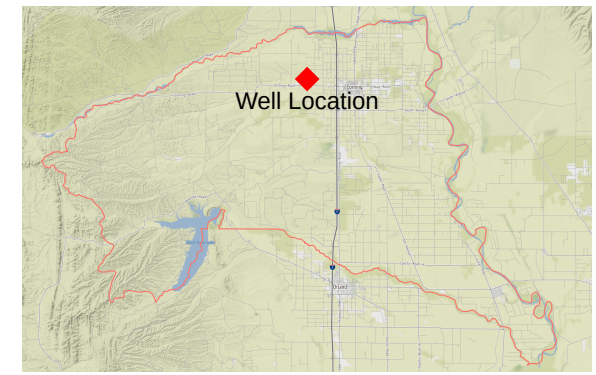
Site Code: 399346N1222349W001 Well Type: Residential

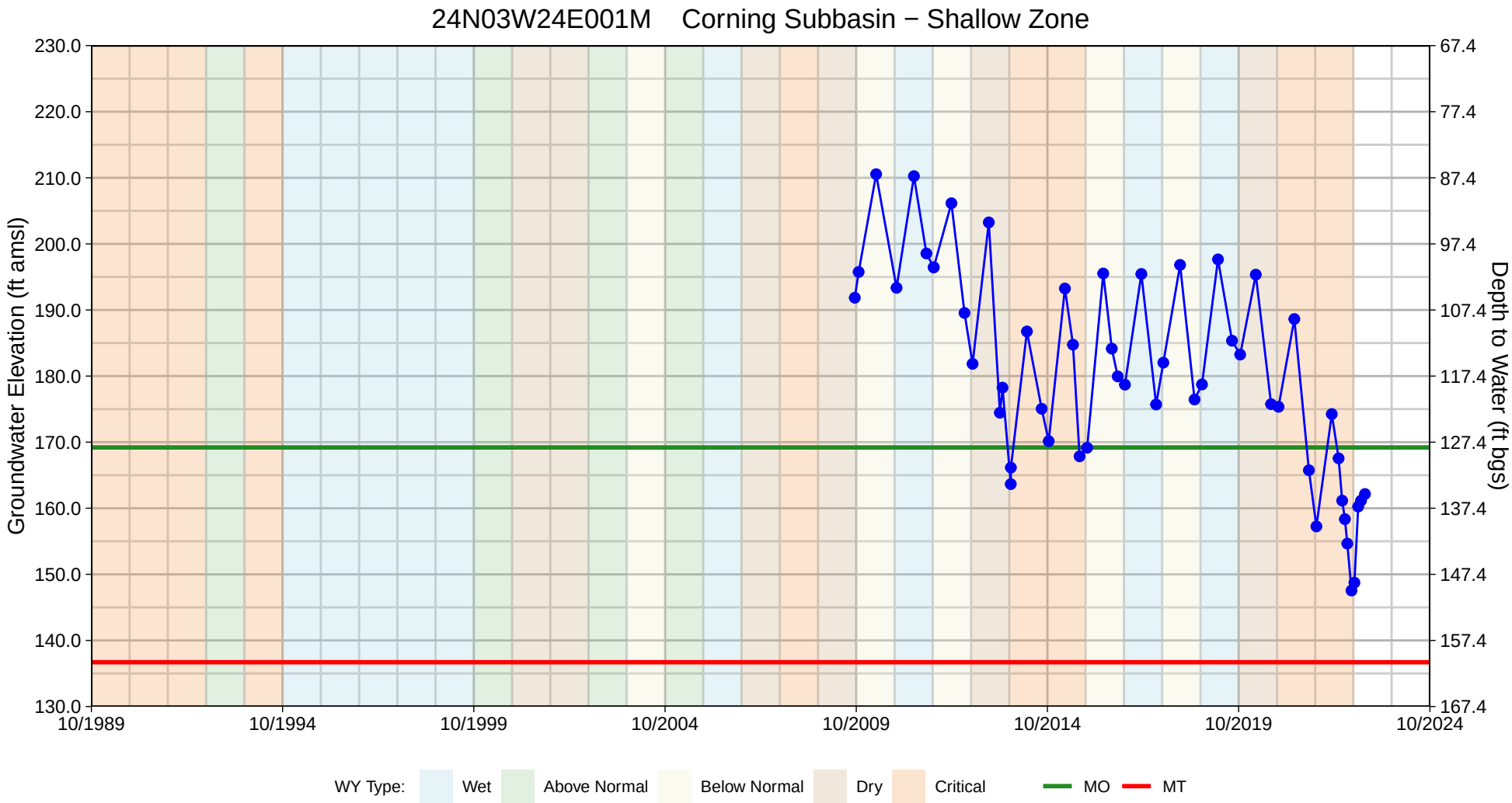
Total Depth (ft):108 GSE (ft amsl): 315.5

Perf. Top (ft bgs): 100 Sustainable Management Criteria

Perf. Bottom (ft bgs): 108 MO: 216.3 ft amsl (99.2 ft bgs)

MT: 190.5 ft amsl (125 ft bgs)





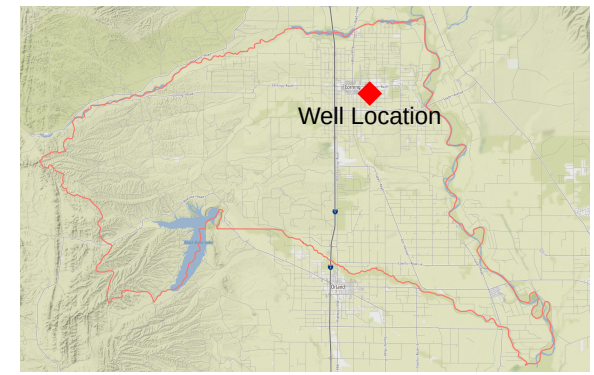
Site Code: 399215N1221588W001 Well Type: Residential

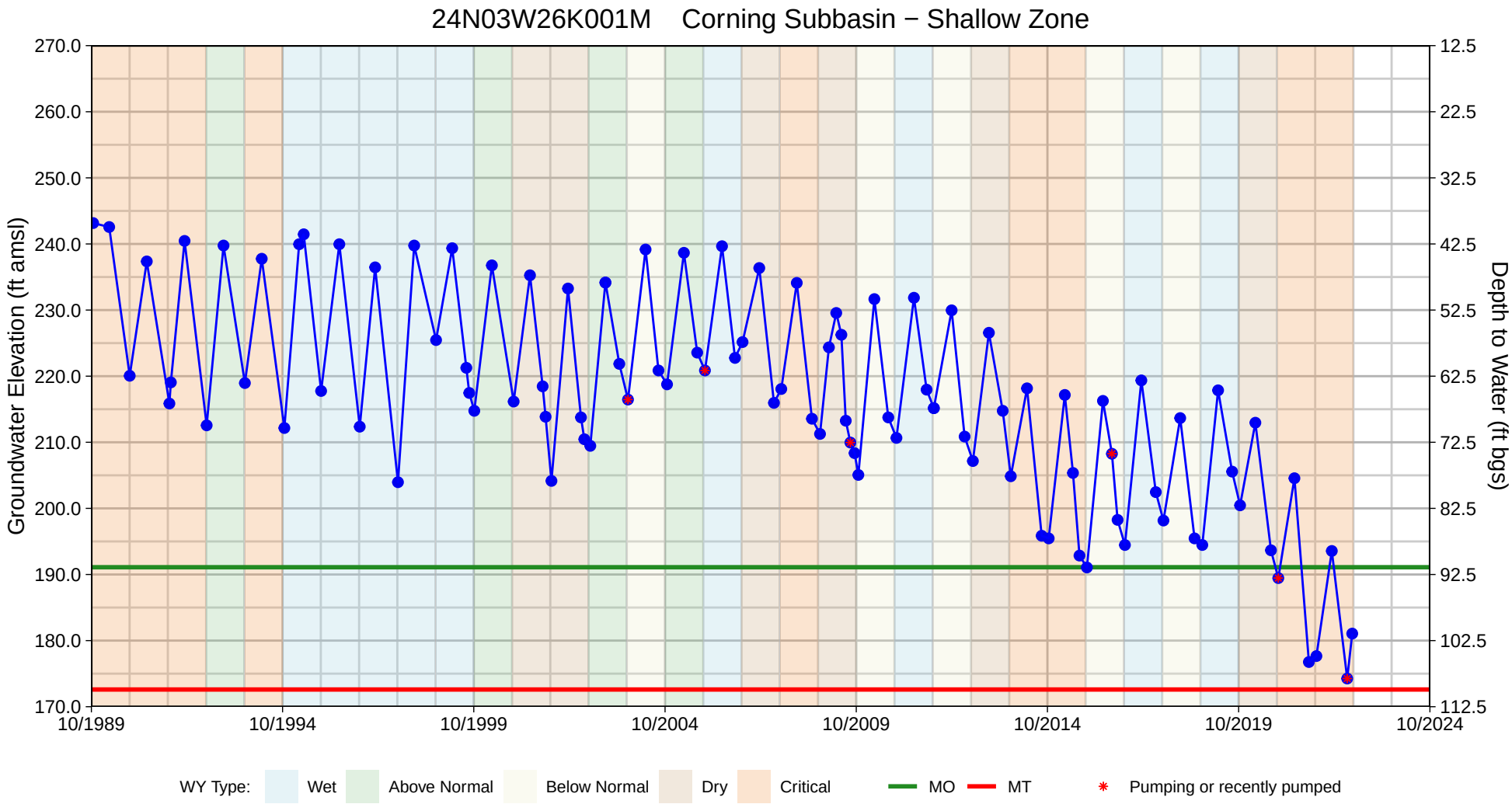
Total Depth (ft):224 GSE (ft amsl): 297.4

Perf. Top (ft bgs): 212 Sustainable Management Criteria

Perf. Bottom (ft bgs): 220 MO: 169.2 ft amsl (128.2 ft bgs)

MT: 136.7 ft amsl (160.8 ft bgs)





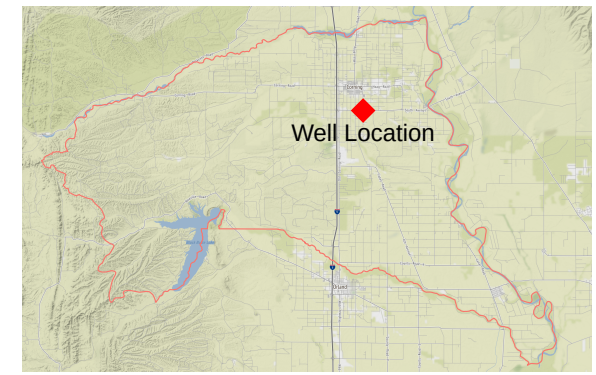
Site Code: 399061N1221689W001 Well Type: Irrigation

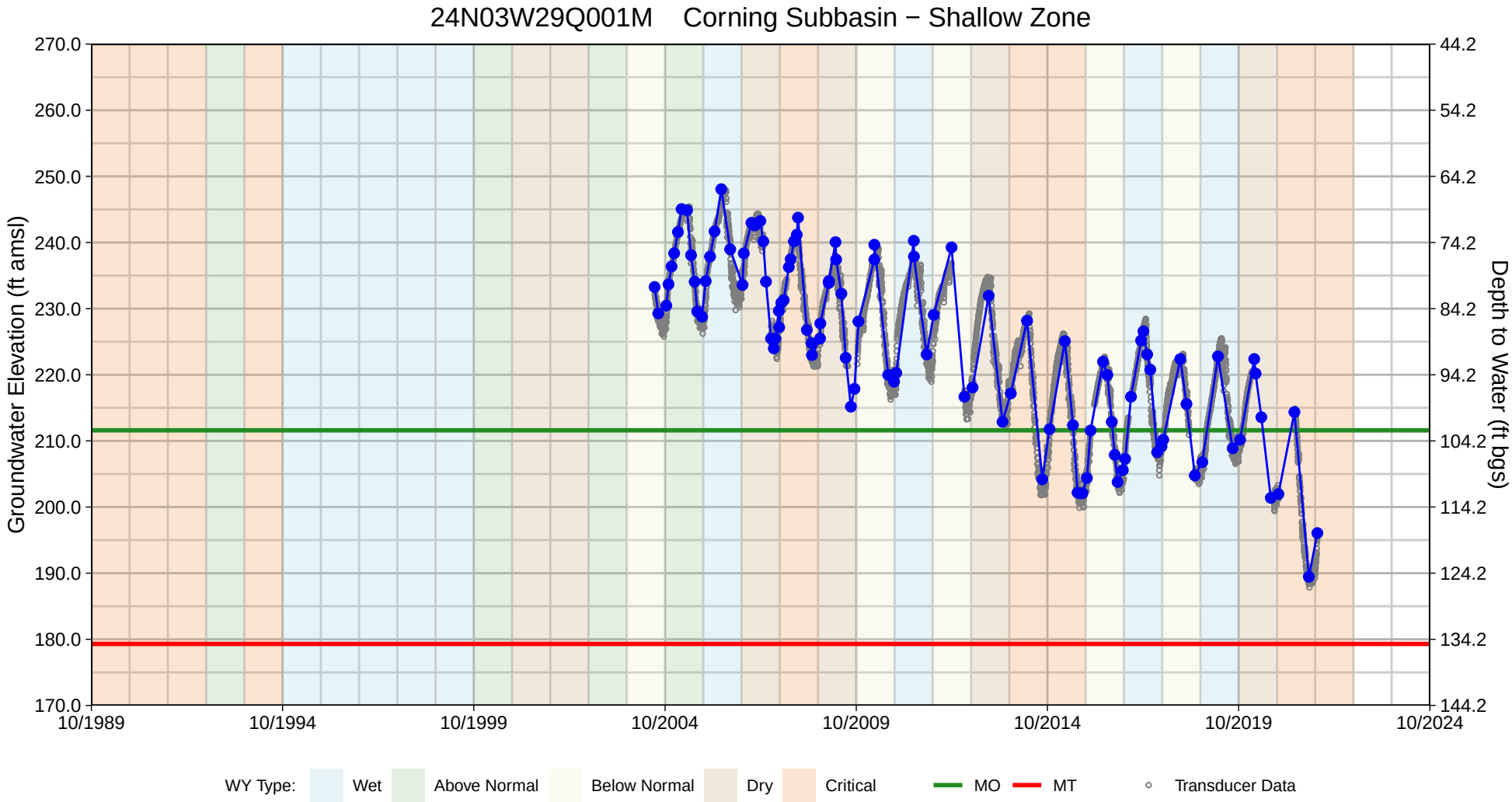
Total Depth (ft):245 GSE (ft amsl): 282.5

Perf. Top (ft bgs): 103 Sustainable Management Criteria

Perf. Bottom (ft bgs): 175 MO: 191.1 ft amsl (91.4 ft bgs)

MT: 172.6 ft amsl (109.9 ft bgs)





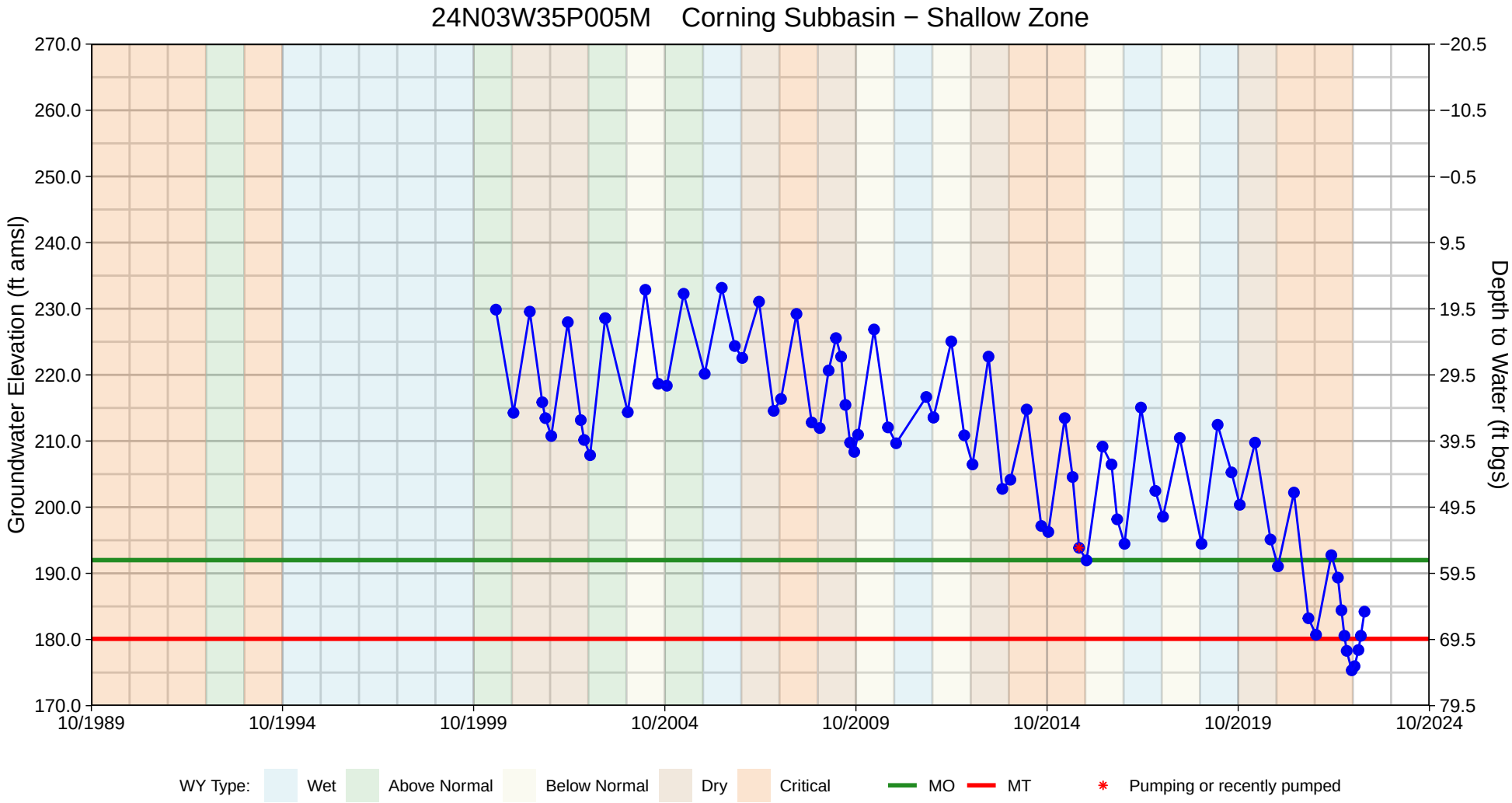
Site Code: 399030N1222246W001 Well Type: Observation

Total Depth (ft):372 GSE (ft amsl): 314.2

Perf. Top (ft bgs): 130 Sustainable Management Criteria

Perf. Bottom (ft bgs): 360 MO: 211.6 ft amsl (102.6 ft bgs)

MT: 179.3 ft amsl (134.9 ft bgs)



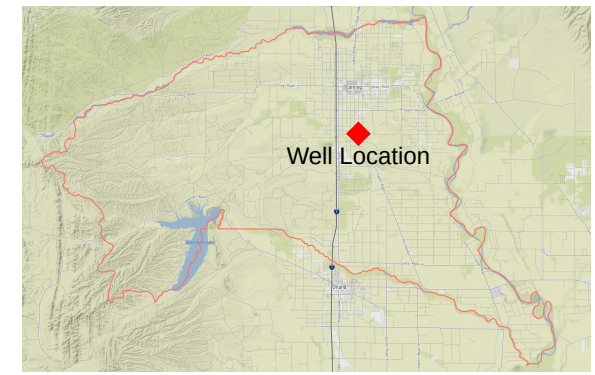
Site Code: 398851N1221737W001 Well Type: Residential

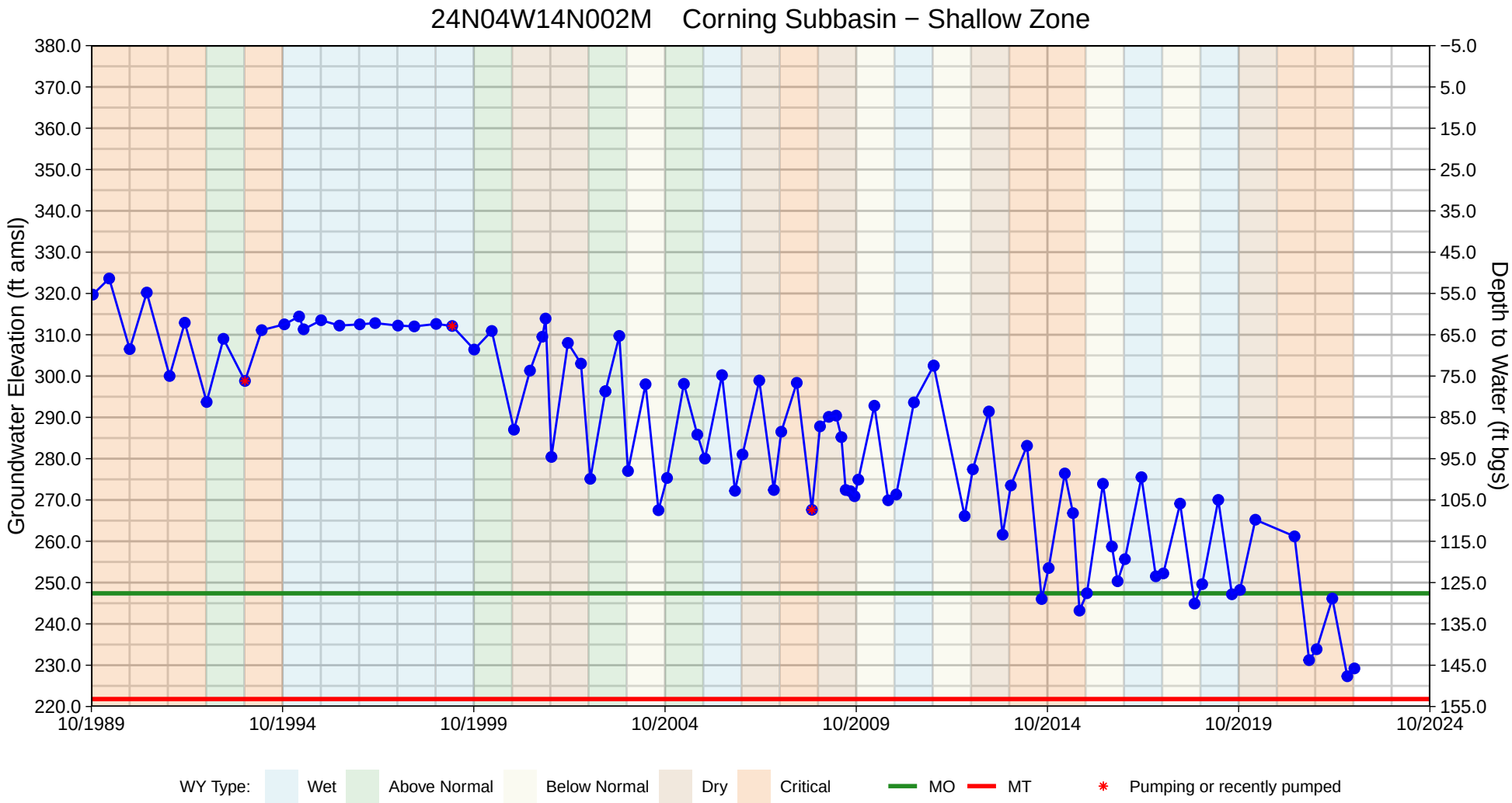
Total Depth (ft):120 GSE (ft amsl): 249.5

Perf. Top (ft bgs): 100 Sustainable Management Criteria

Perf. Bottom (ft bgs): 120 MO: 192 ft amsl (57.5 ft bgs)

MT: 180.1 ft amsl (69.4 ft bgs)





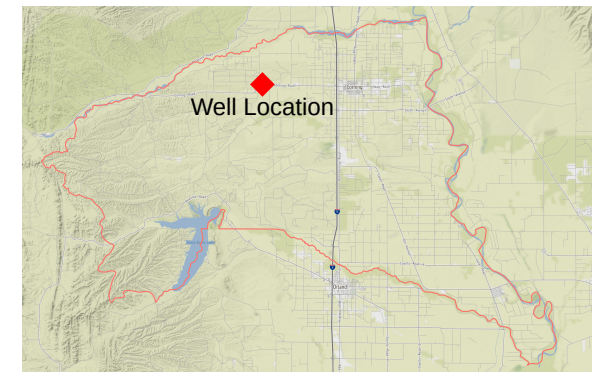
Site Code: 399305N1222865W001 Well Type: Residential

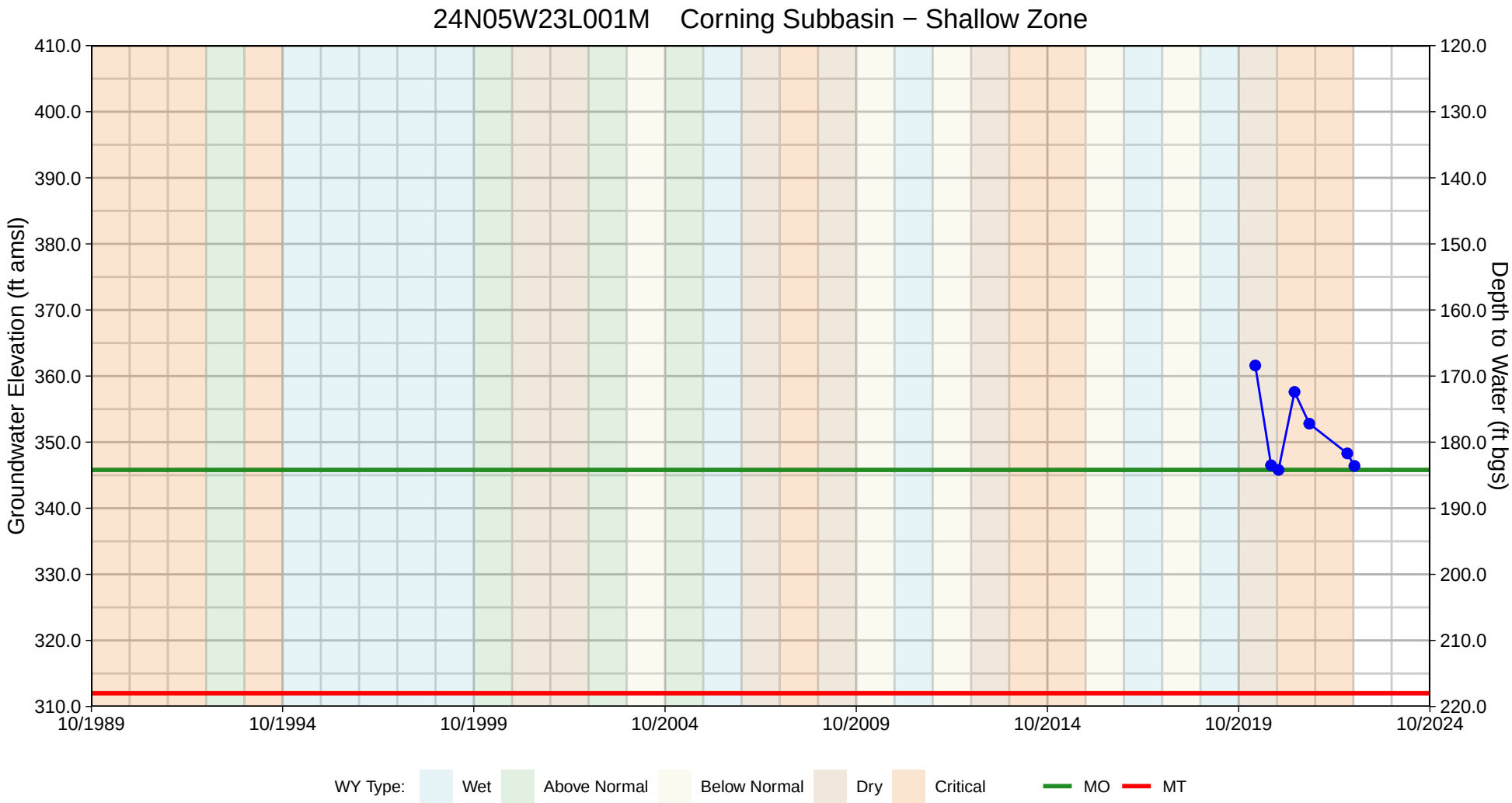
Total Depth (ft):180 GSE (ft amsl): 375

Perf. Top (ft bgs): NA Sustainable Management Criteria

Perf. Bottom (ft bgs): NA MO: 247.4 ft amsl (127.6 ft bgs)

MT: 221.8 ft amsl (153.2 ft bgs)





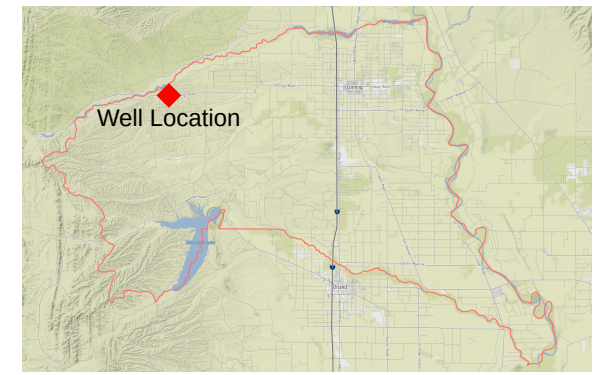
Site Code: 399198N1223978W002 Well Type: Stockwatering

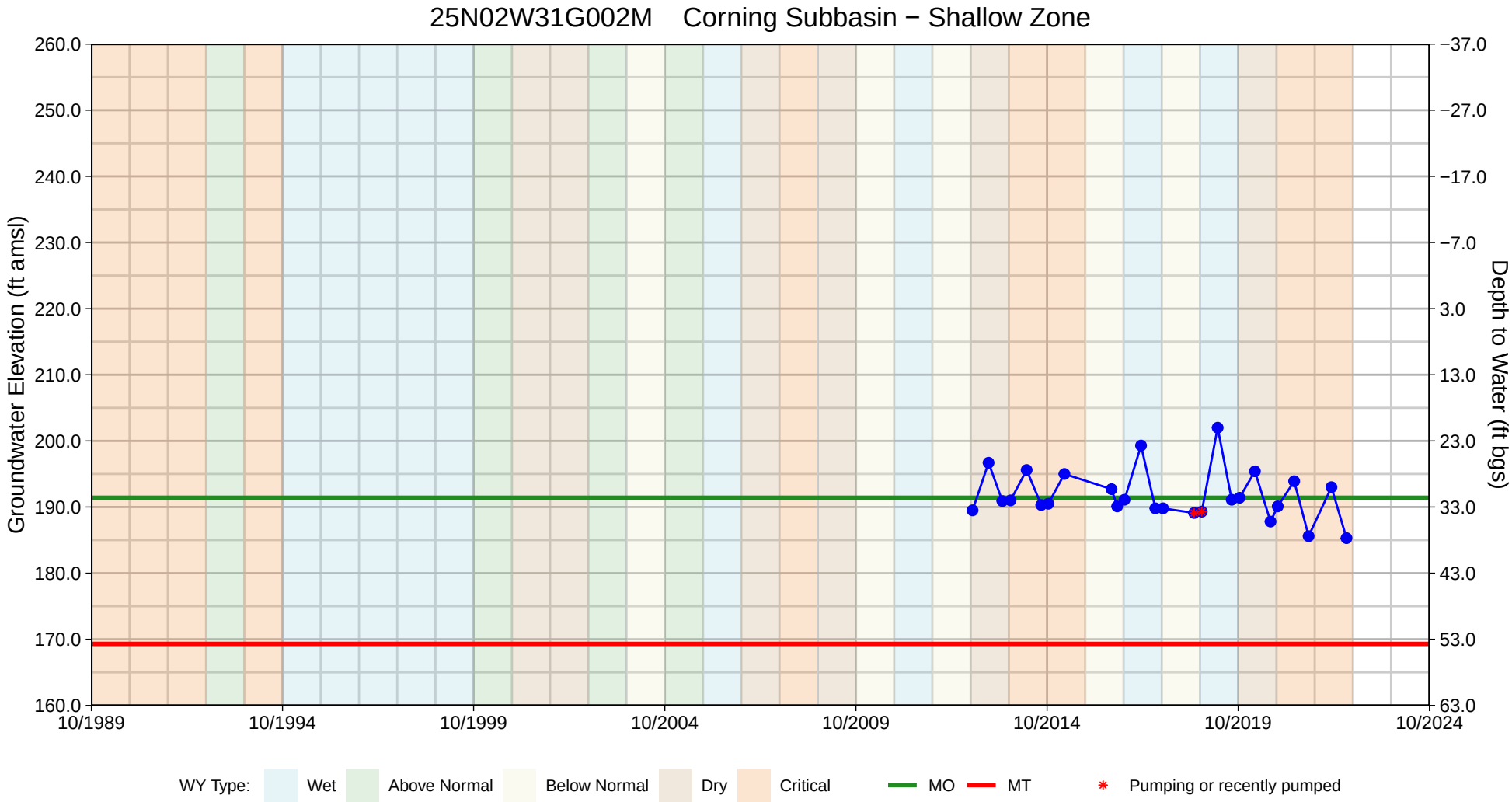
Total Depth (ft):235 GSE (ft amsl): 530

Perf. Top (ft bgs): NA Sustainable Management Criteria

Perf. Bottom (ft bgs): NA MO: 345.8 ft amsl (184.2 ft bgs)

MT: 312 ft amsl (218 ft bgs)





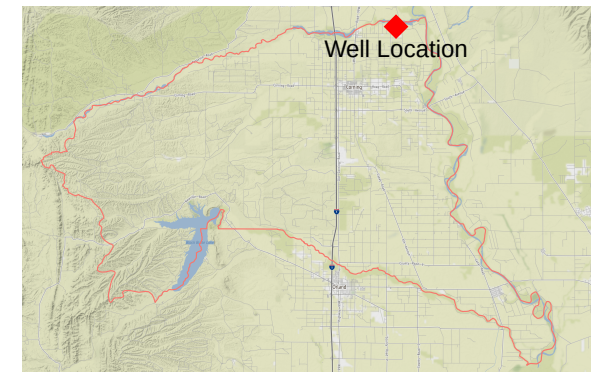
Site Code: 399820N1221294W001 Well Type: Irrigation

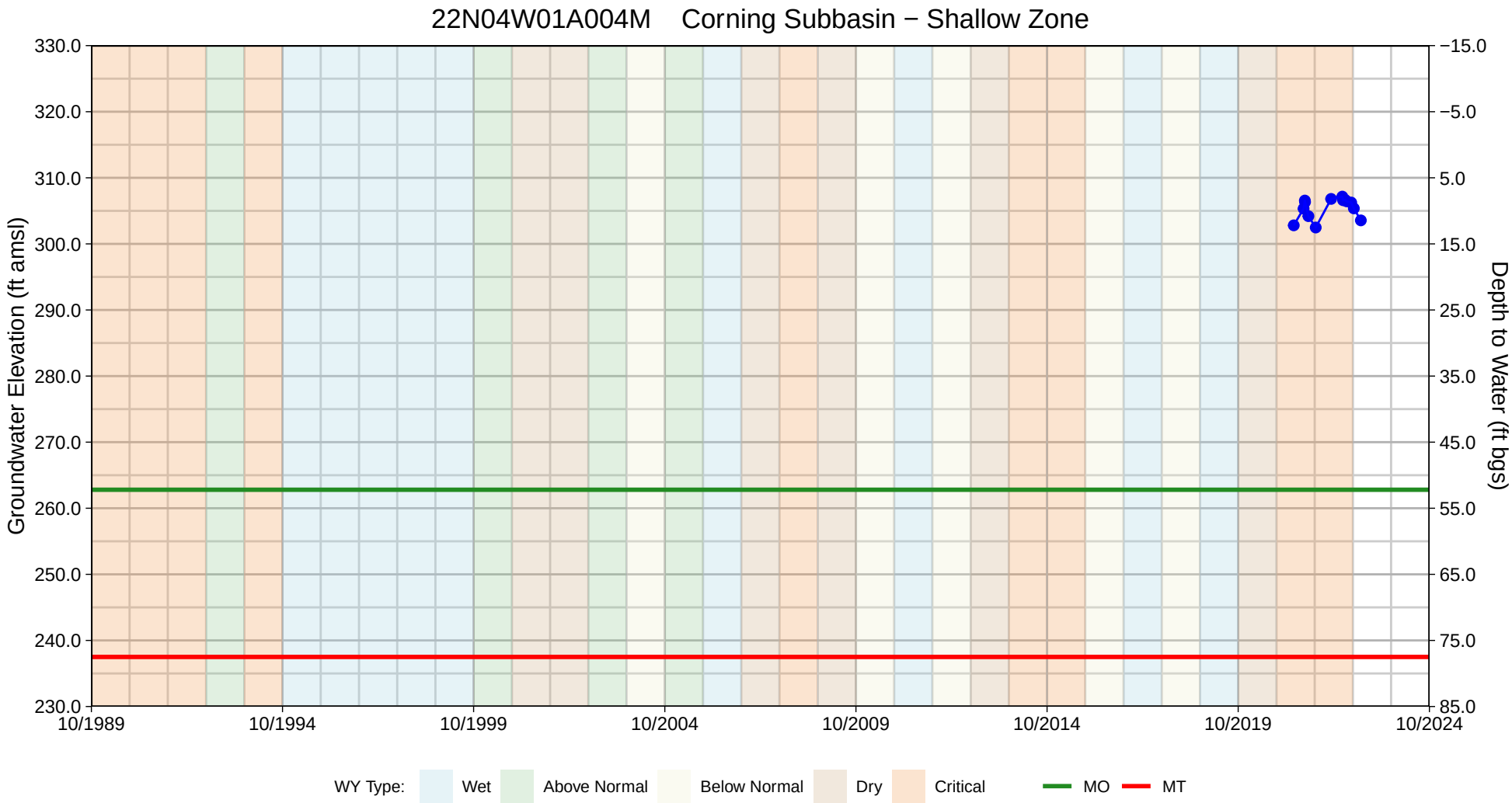
Total Depth (ft):115 GSE (ft amsl): 223

Perf. Top (ft bgs): 93 Sustainable Management Criteria

Perf. Bottom (ft bgs): 113 MO: 191.4 ft amsl (31.6 ft bgs)

MT: 169.3 ft amsl (53.7 ft bgs)





Site Code: 397974N1222523W004

Well Type: Monitoring

Total Depth (ft):70

GSE (ft amsl): 315

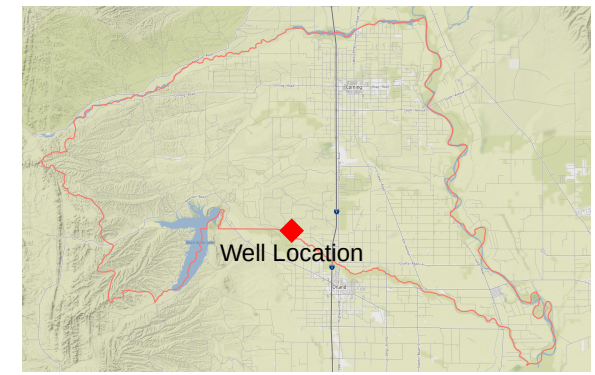
Perf. Top (ft bgs): 40

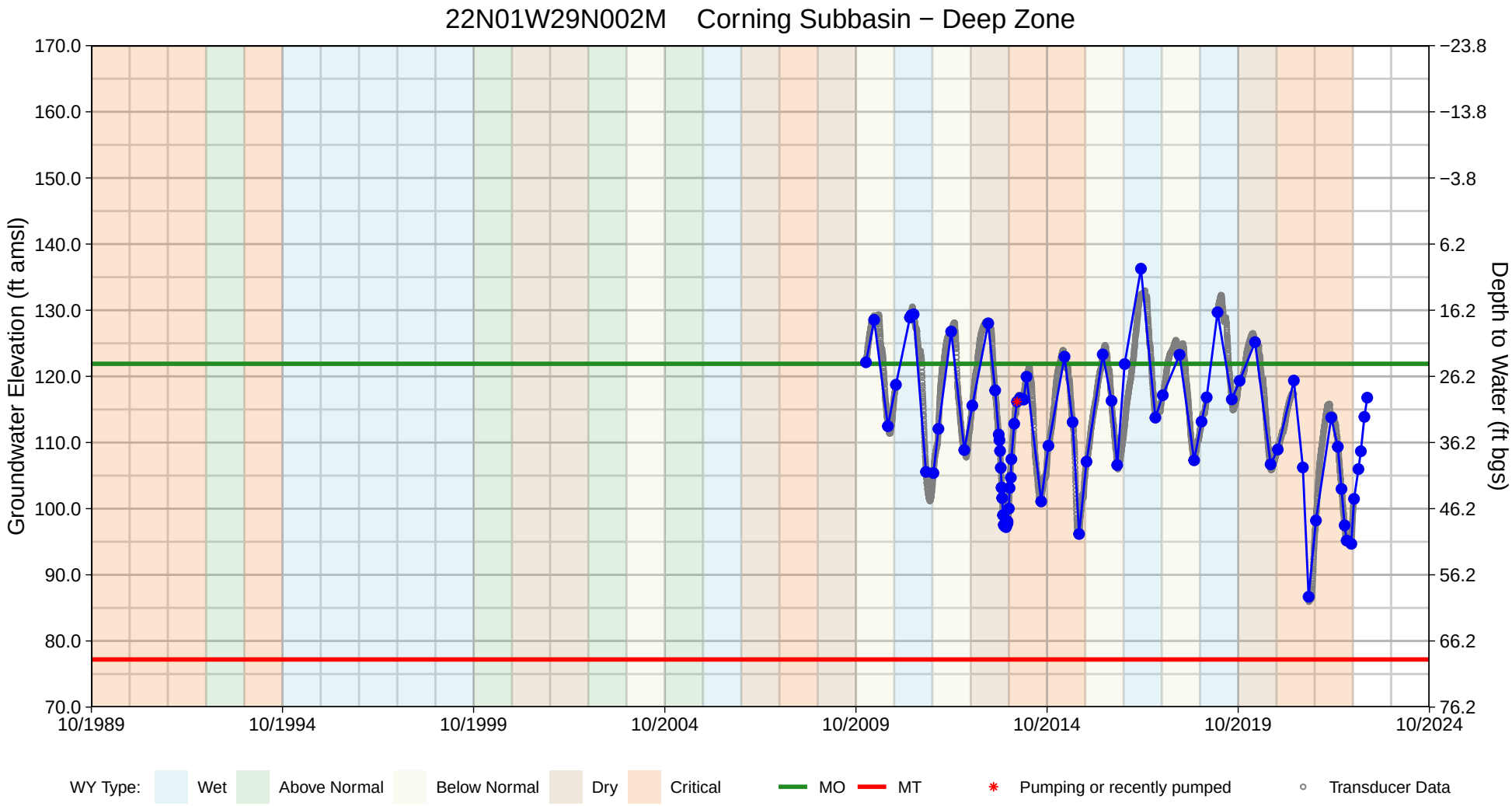
Sustainable Management Criteria

Perf. Bottom (ft bgs): 50

MO: 262.8 ft amsl (52.2 ft bgs)

MT: 237.5 ft amsl (77.5 ft bgs)





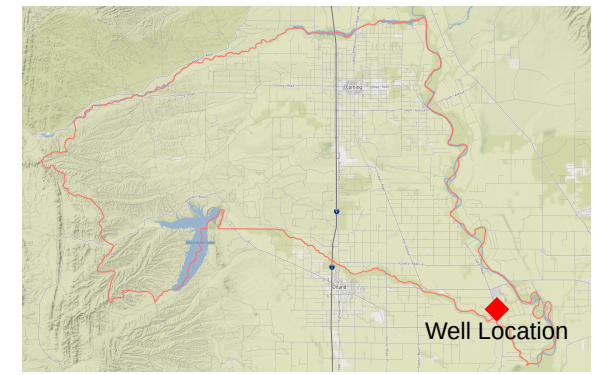
Site Code: 397263N1220105W002 Well Type: Observation

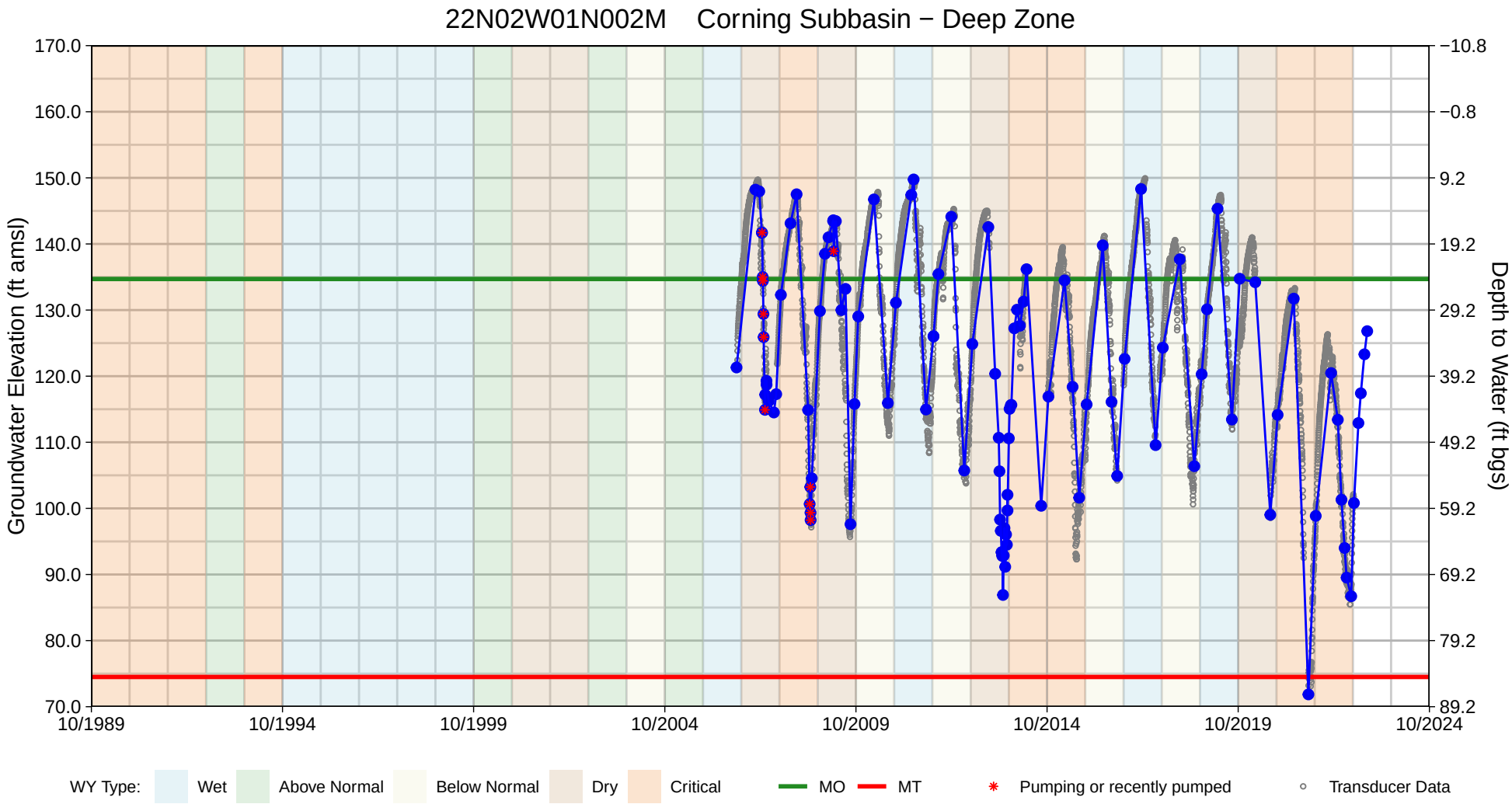
Total Depth (ft):670 GSE (ft amsl): 146.2

Perf. Top (ft bgs): 549 Sustainable Management Criteria

Perf. Bottom (ft bgs): 641 MO: 121.9 ft amsl (24.3 ft bgs)

MT: 77.2 ft amsl (69 ft bgs)





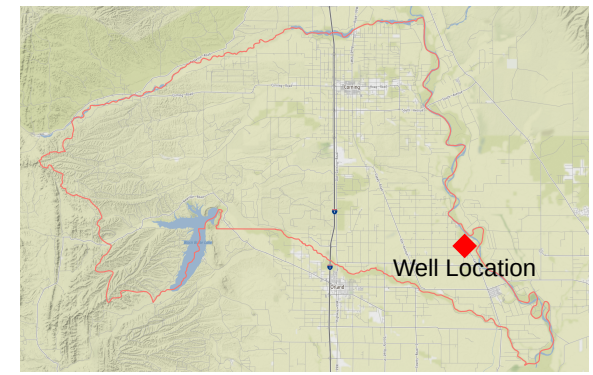
Site Code: 397836N1220461W002 Well Type: Observation

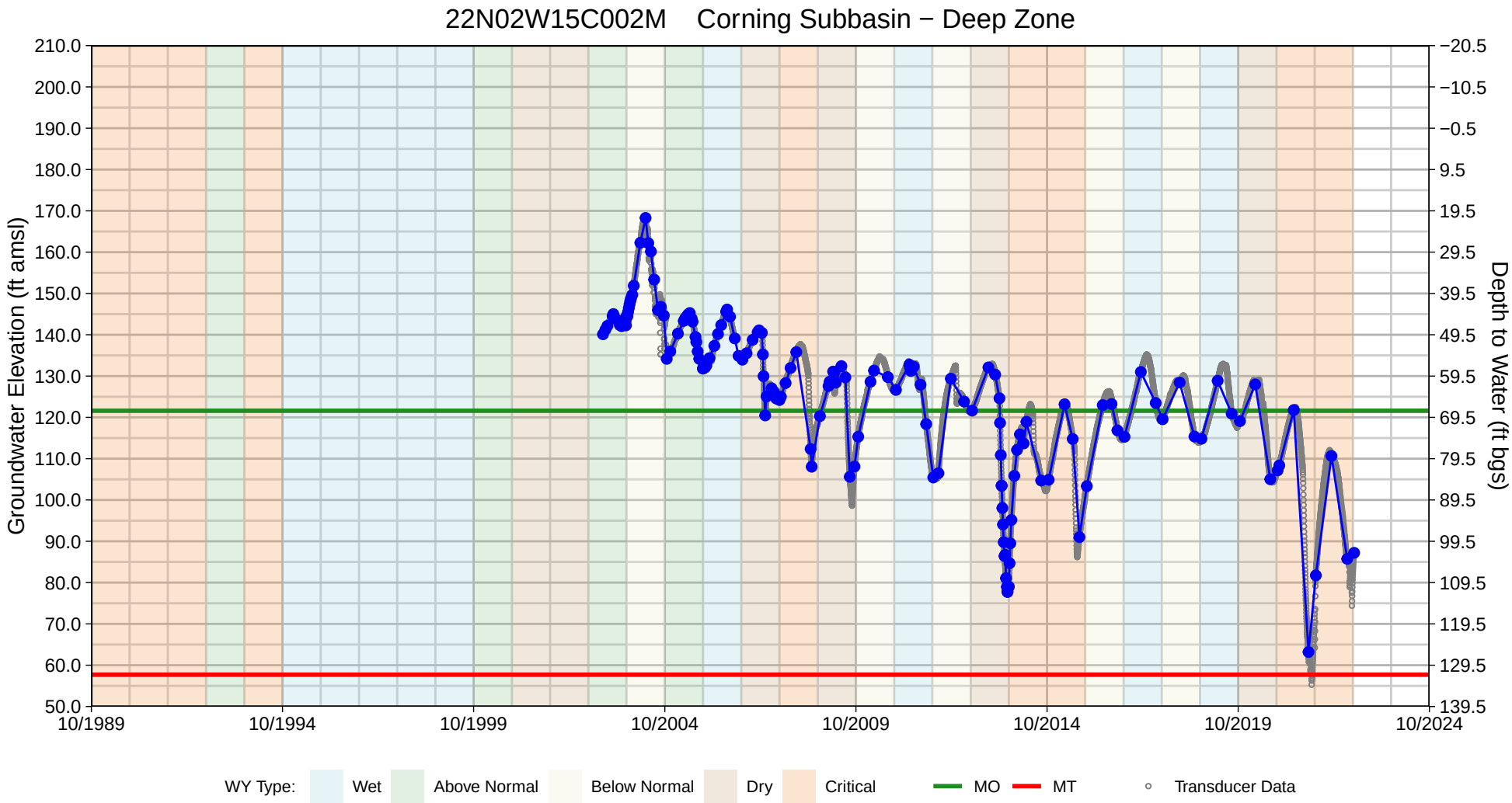
Total Depth (ft):730 GSE (ft amsl): 159.2

Perf. Top (ft bgs): 700 Sustainable Management Criteria

Perf. Bottom (ft bgs): 710 MO: 134.7 ft amsl (24.5 ft bgs)

MT: 74.5 ft amsl (84.7 ft bgs)





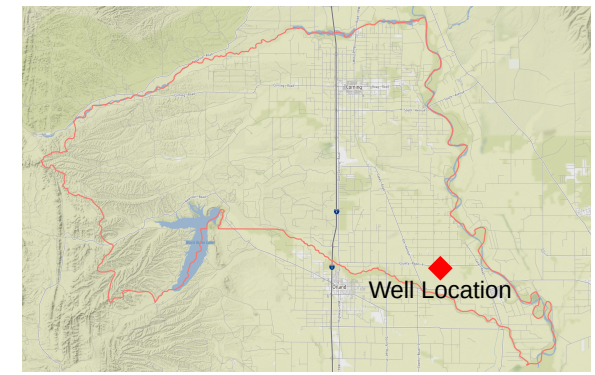
Site Code: 397634N1220771W001 Well Type: Observation

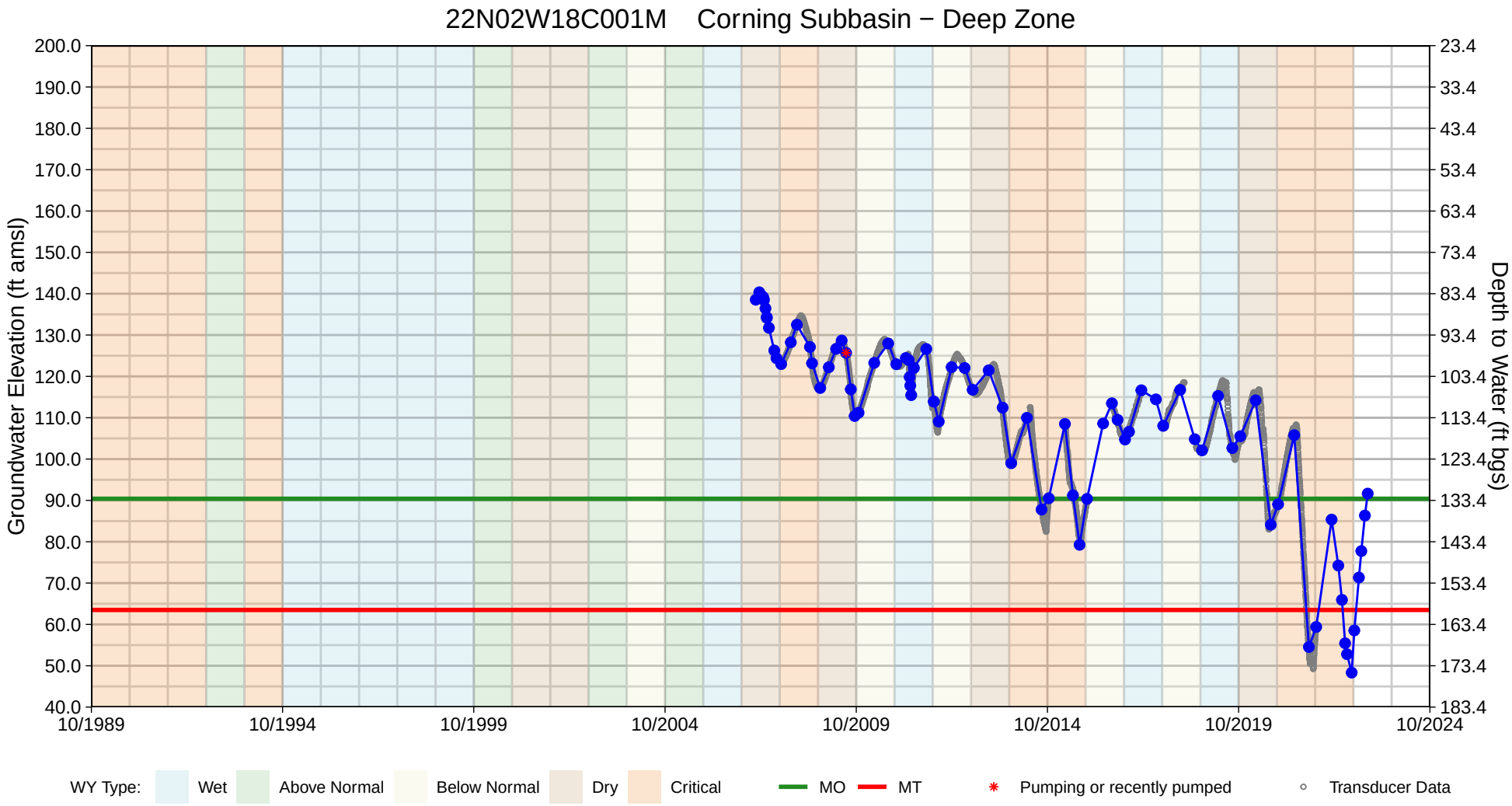
Total Depth (ft):825 GSE (ft amsl): 189.5

Perf. Top (ft bgs): 760 Sustainable Management Criteria

Perf. Bottom (ft bgs): 781 MO: 121.6 ft amsl (67.9 ft bgs)

MT: 57.7 ft amsl (131.8 ft bgs)





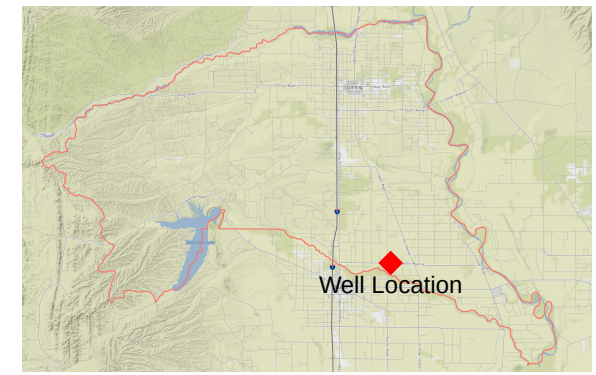
Site Code: 397682N1221364W001 Well Type: Observation

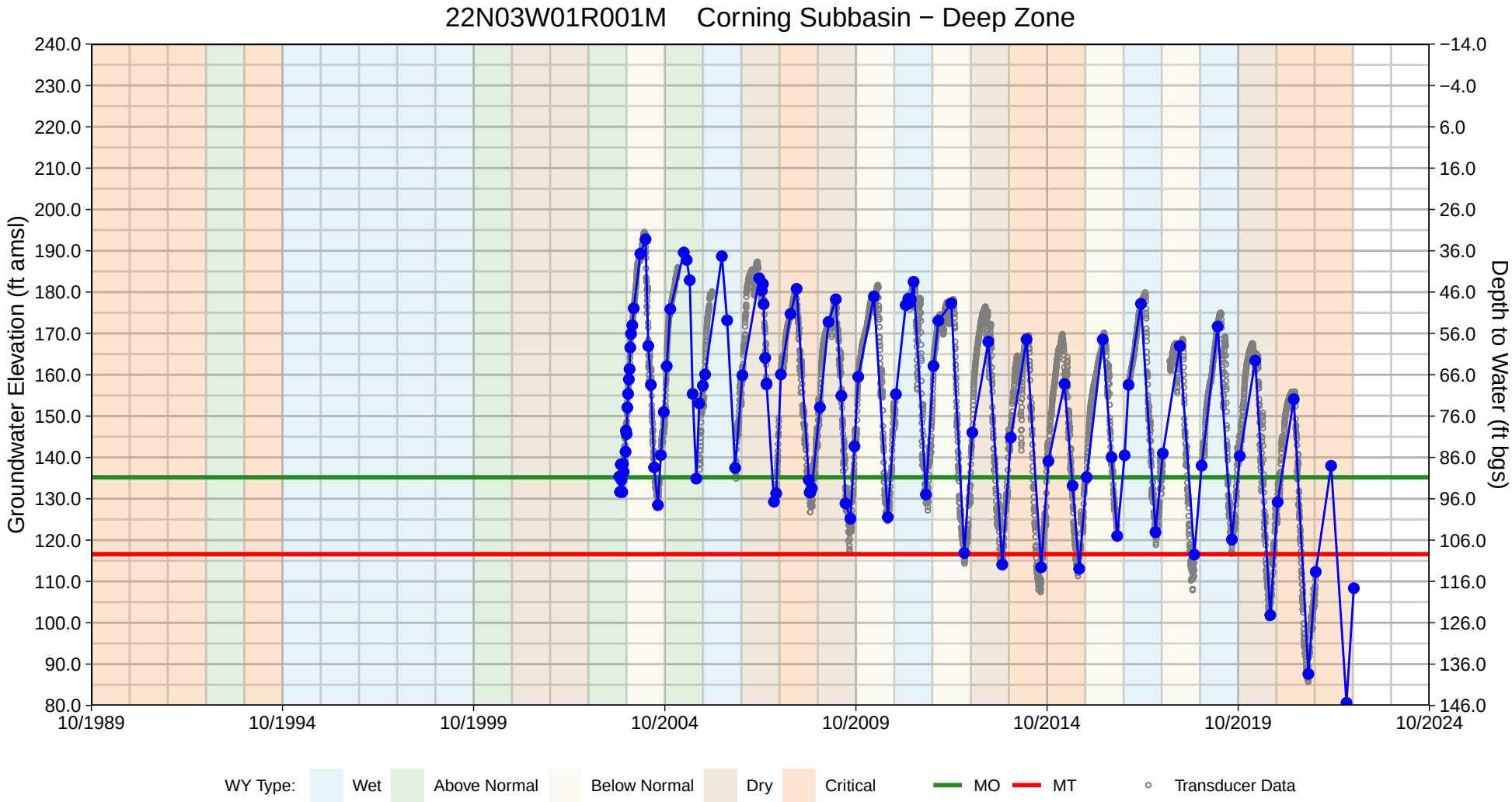
Total Depth (ft):1062 GSE (ft amsl): 223.4

Perf. Top (ft bgs): 841 Sustainable Management Criteria

Perf. Bottom (ft bgs): 1029 MO: 90.4 ft amsl (133 ft bgs)

MT: 63.5 ft amsl (159.9 ft bgs)





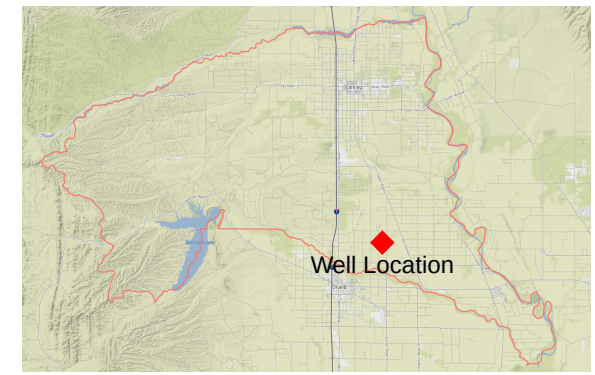
Site Code: 397866N1221455W001 Well Type: Observation

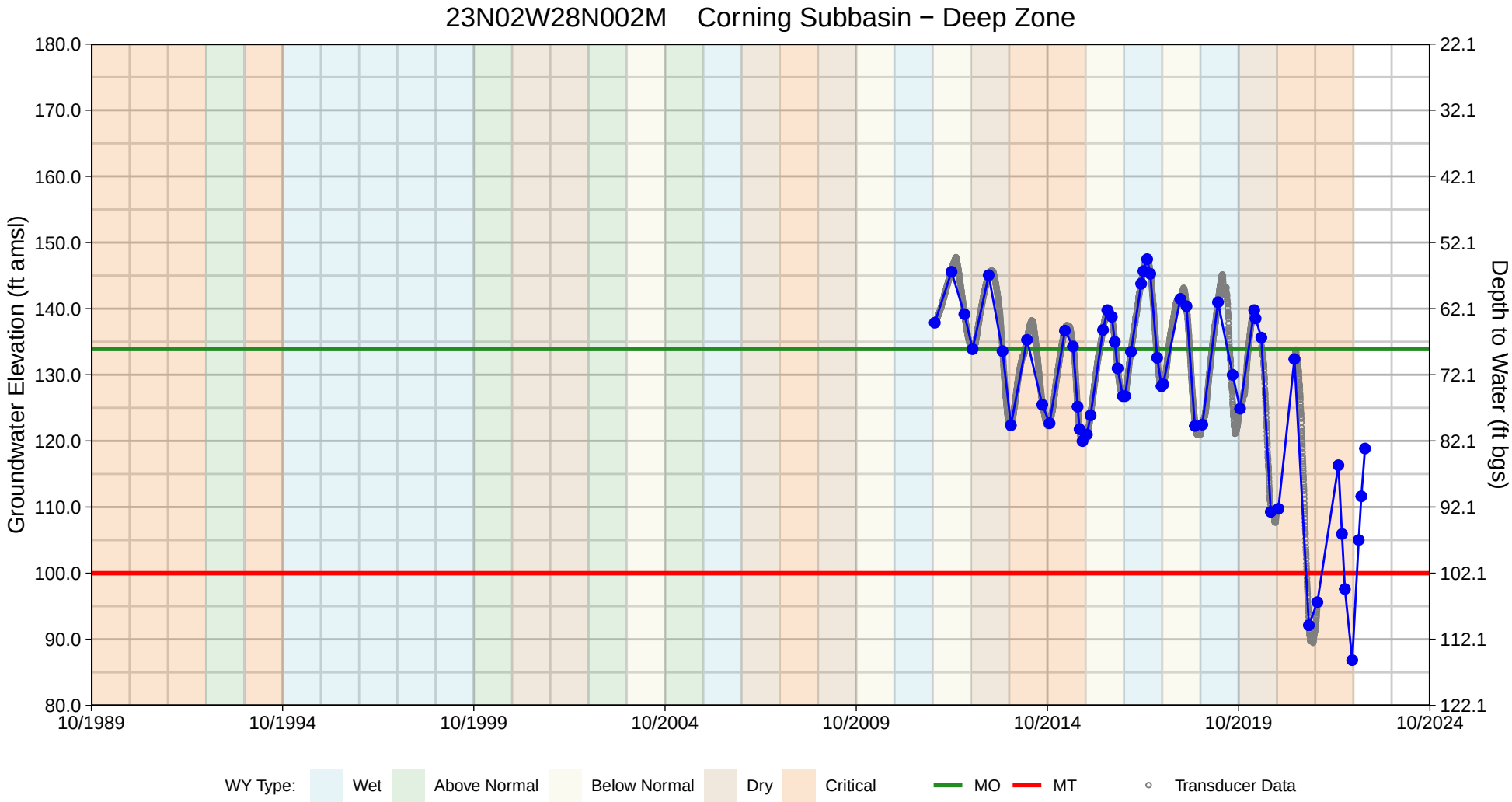
Total Depth (ft):515 GSE (ft amsl): 226

Perf. Top (ft bgs): 470 Sustainable Management Criteria

Perf. Bottom (ft bgs): 480 MO: 135.2 ft amsl (90.8 ft bgs)

MT: 116.6 ft amsl (109.4 ft bgs)





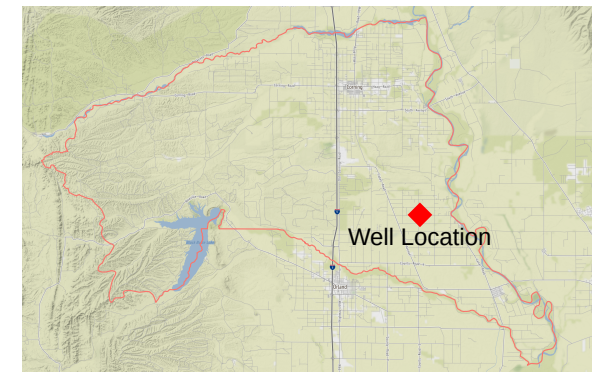
Site Code: 398117N1221020W003 Well Type: Observation

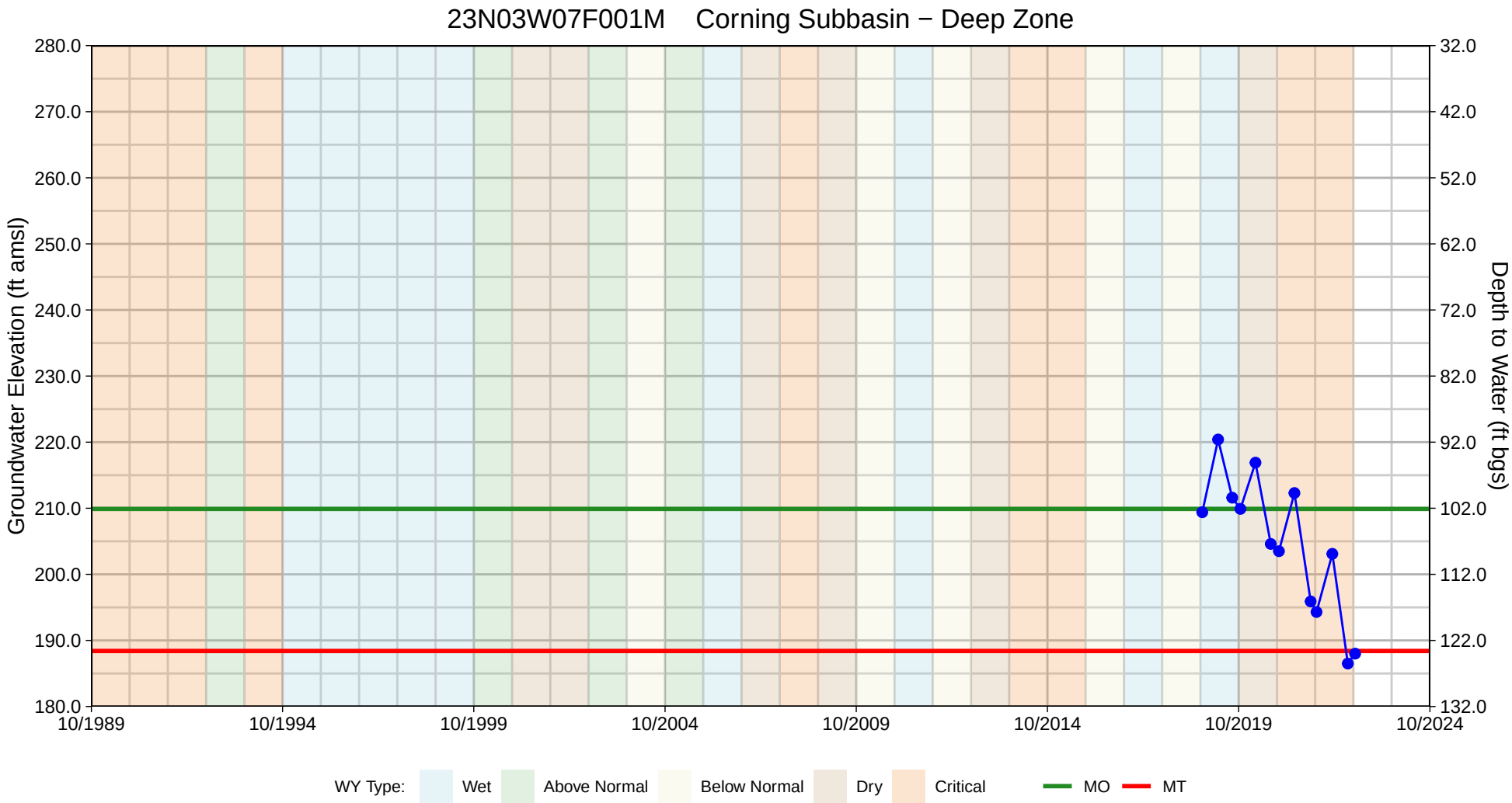
Total Depth (ft):580 GSE (ft amsl): 202.1

Perf. Top (ft bgs): 550 Sustainable Management Criteria

Perf. Bottom (ft bgs): 570 MO: 133.9 ft amsl (68.2 ft bgs)

MT: 100 ft amsl (102.1 ft bgs)





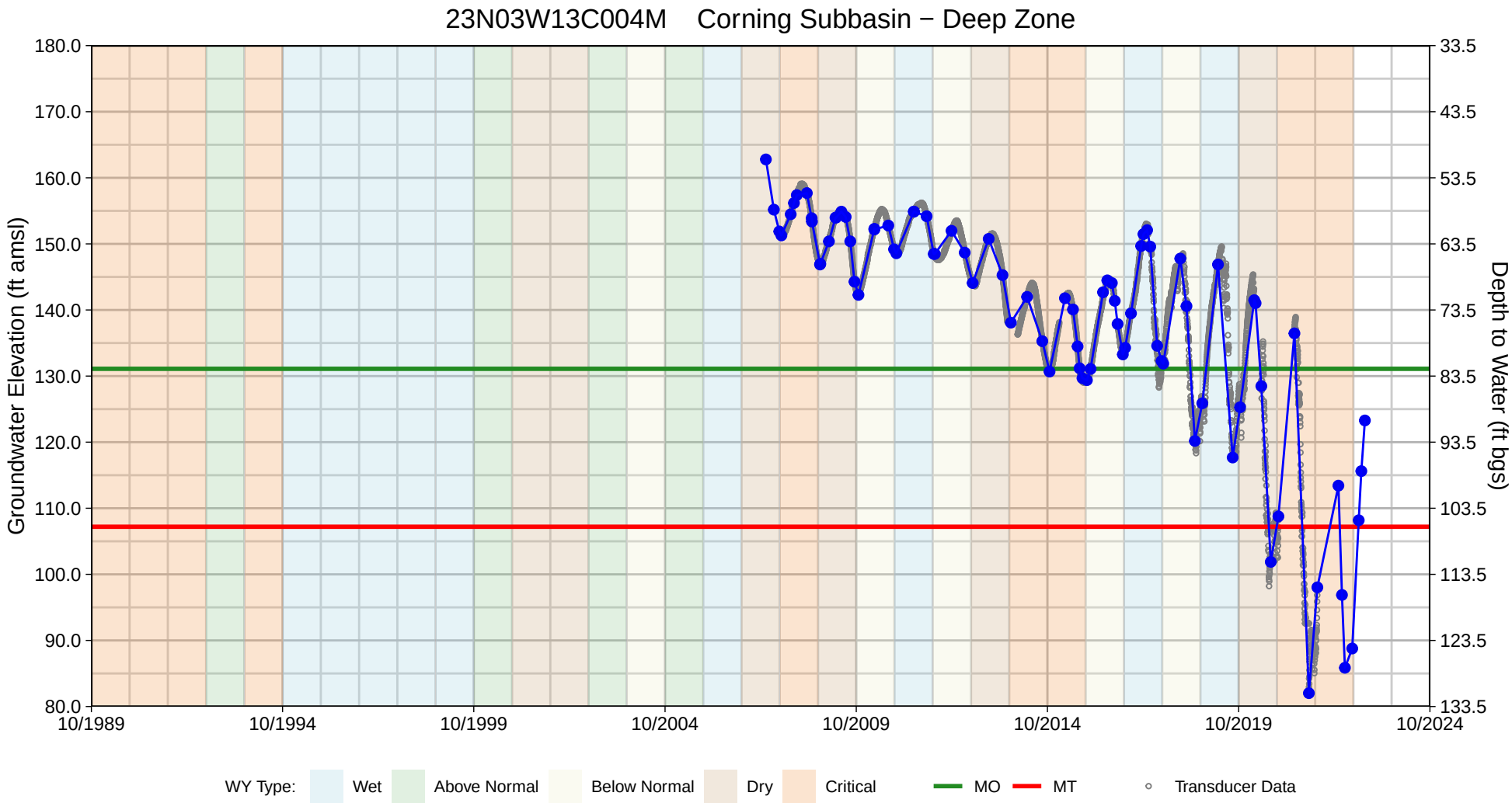
Site Code: 398662N1222480W002 Well Type: Irrigation

Total Depth (ft):790 GSE (ft amsl): 312

Perf. Top (ft bgs): 240 Sustainable Management Criteria

Perf. Bottom (ft bgs): 790 MO: 209.9 ft amsl (102.1 ft bgs)

MT: 188.4 ft amsl (123.6 ft bgs)



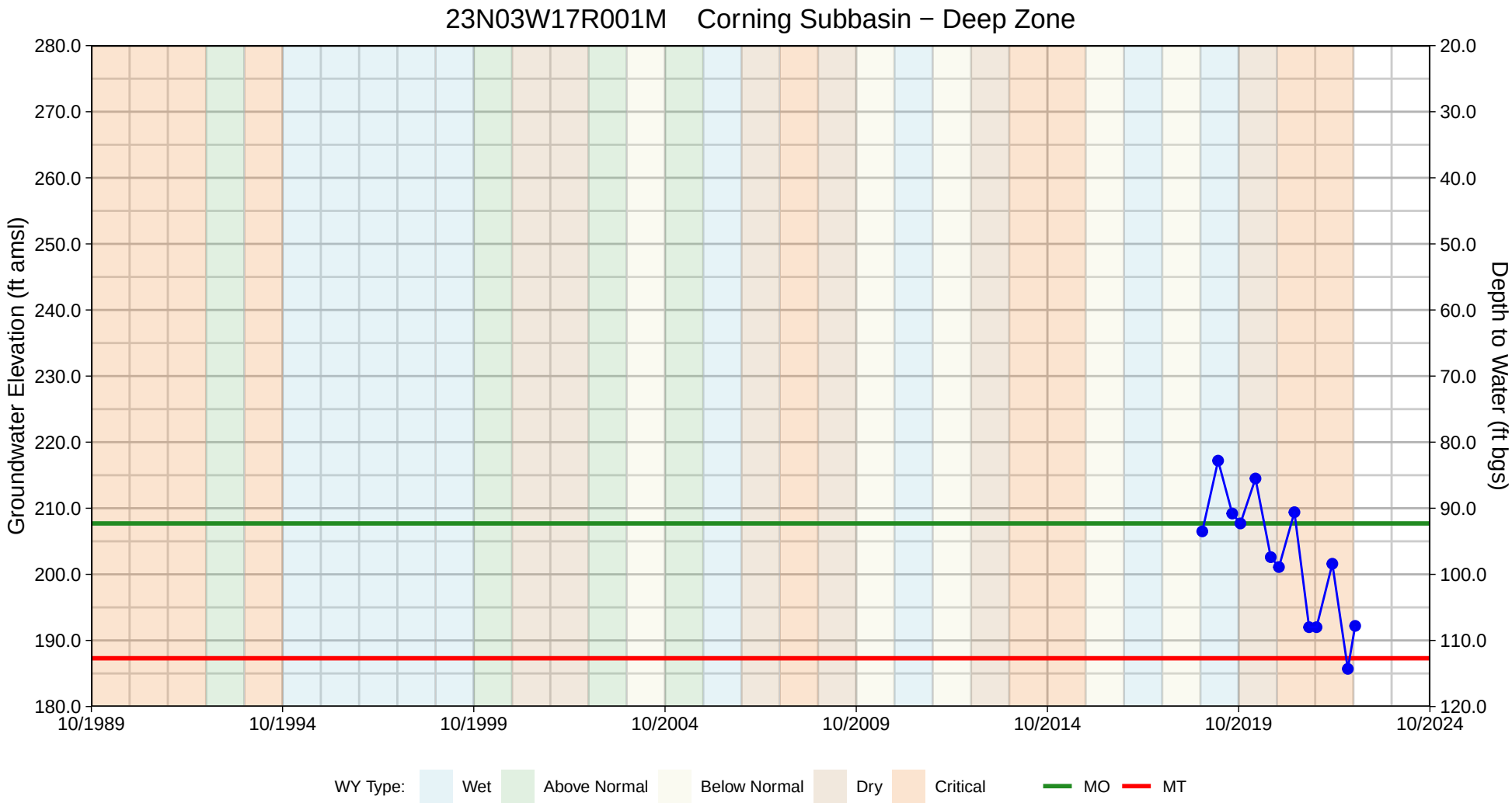
Site Code: 398543N1221535W002 Well Type: Observation

Total Depth (ft):835 GSE (ft amsl): 213.5

Perf. Top (ft bgs): 815 Sustainable Management Criteria

Perf. Bottom (ft bgs): 825 MO: 131.1 ft amsl (82.4 ft bgs)

MT: 107.2 ft amsl (106.3 ft bgs)



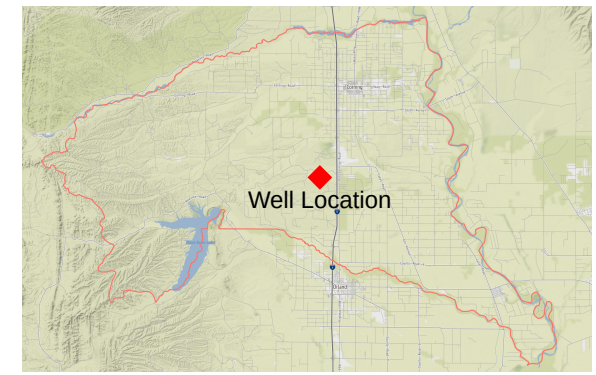
Site Code: 398456N1222199W002 Well Type: Irrigation

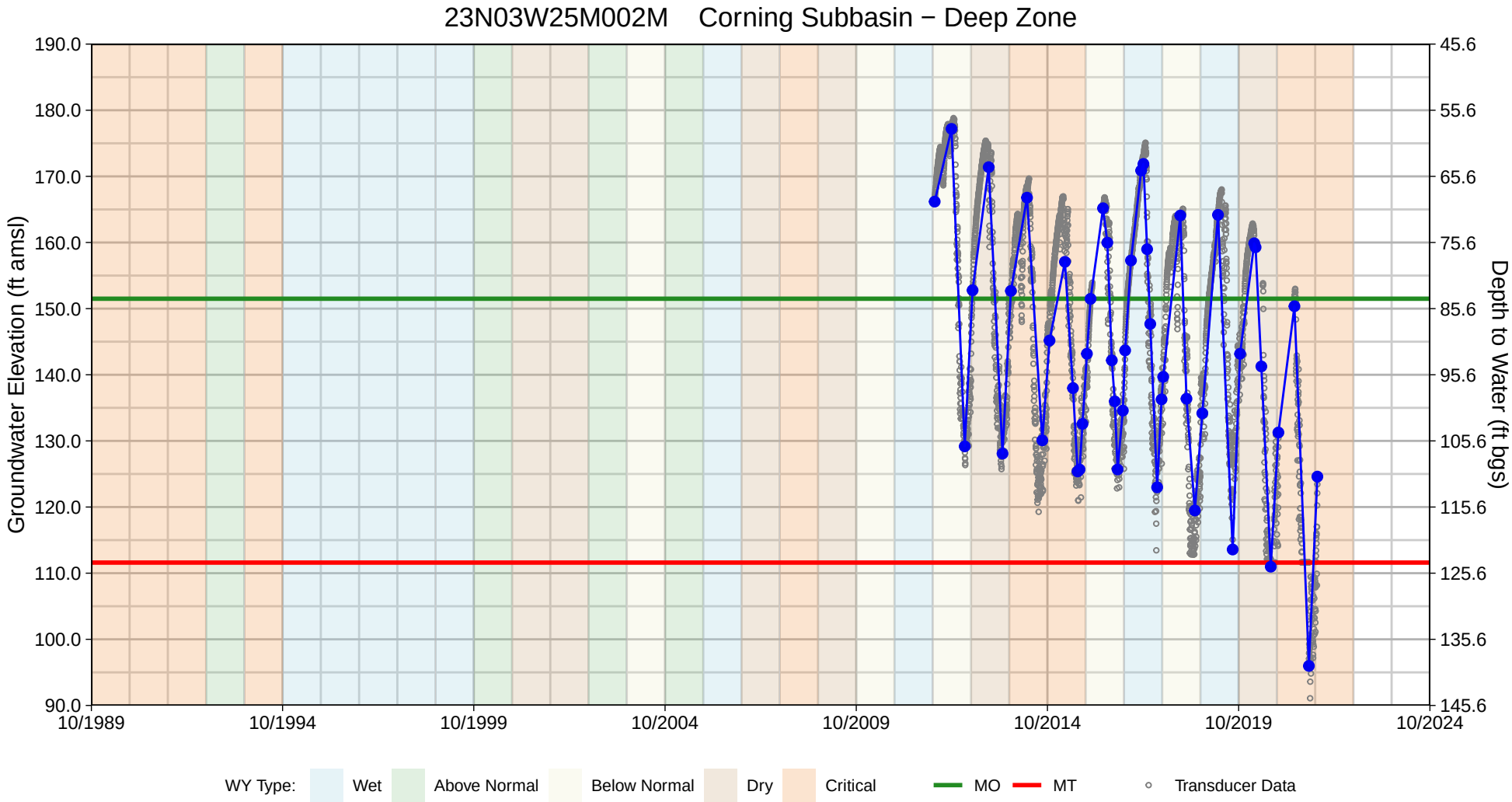
Total Depth (ft):720 GSE (ft amsl): 300

Perf. Top (ft bgs): 360 Sustainable Management Criteria

Perf. Bottom (ft bgs): 720 MO: 207.7 ft amsl (92.3 ft bgs)

MT: 187.3 ft amsl (112.7 ft bgs)





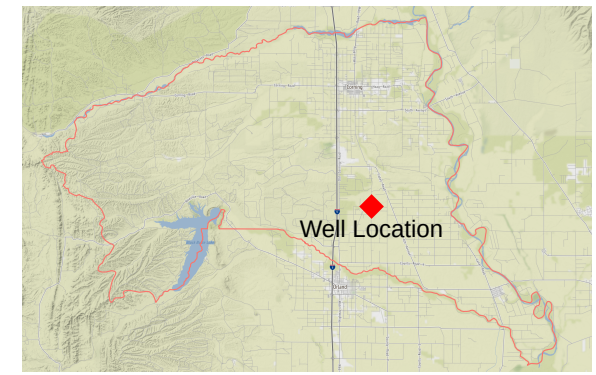
Site Code: 398193N1221590W003 Well Type: Observation

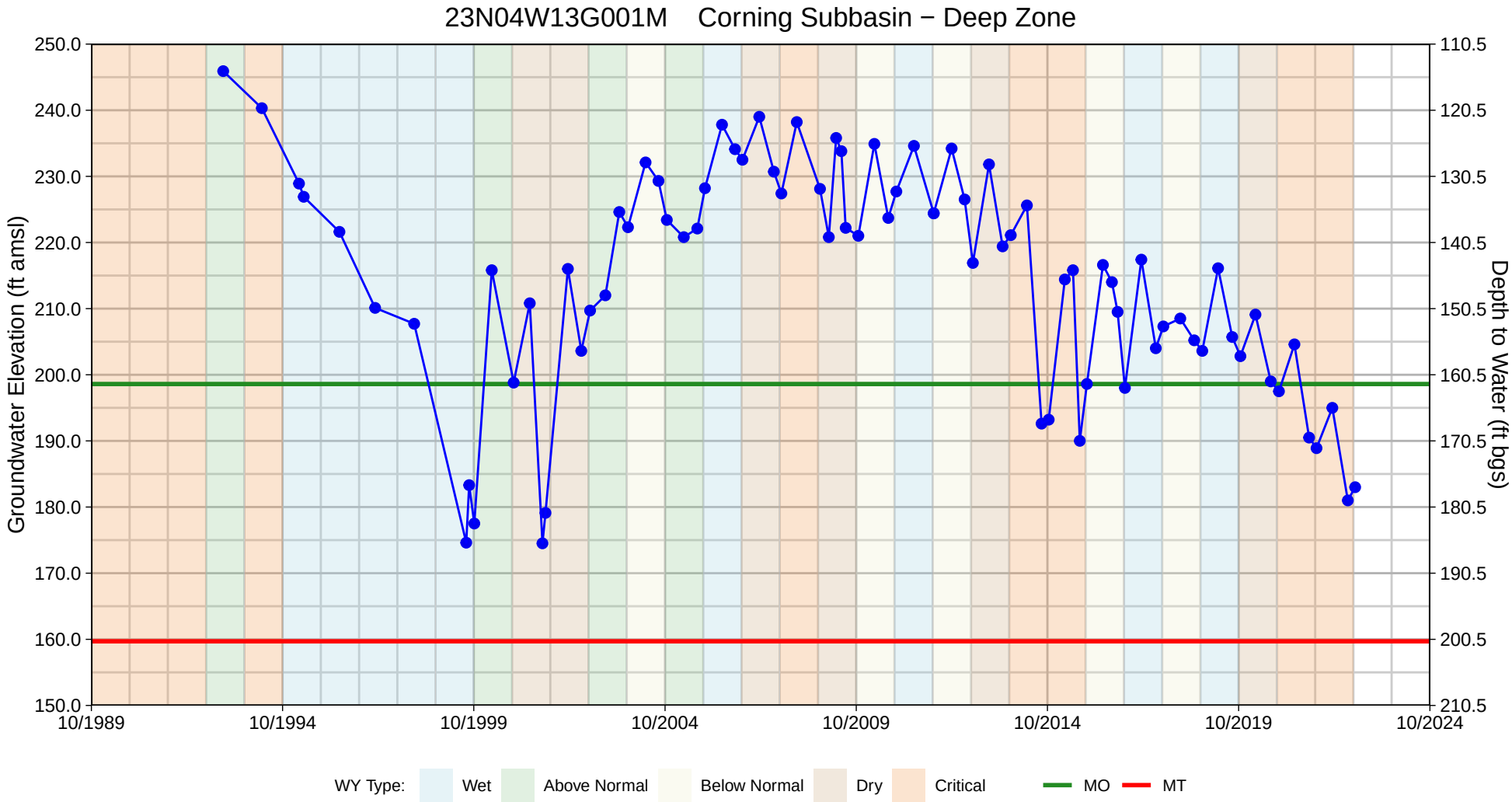
Total Depth (ft):513 GSE (ft amsl): 235.6

Perf. Top (ft bgs): 470 Sustainable Management Criteria

Perf. Bottom (ft bgs): 500 MO: 151.5 ft amsl (84.1 ft bgs)

MT: 111.6 ft amsl (124 ft bgs)





Site Code: 398527N1222610W001 Well Type: Irrigation

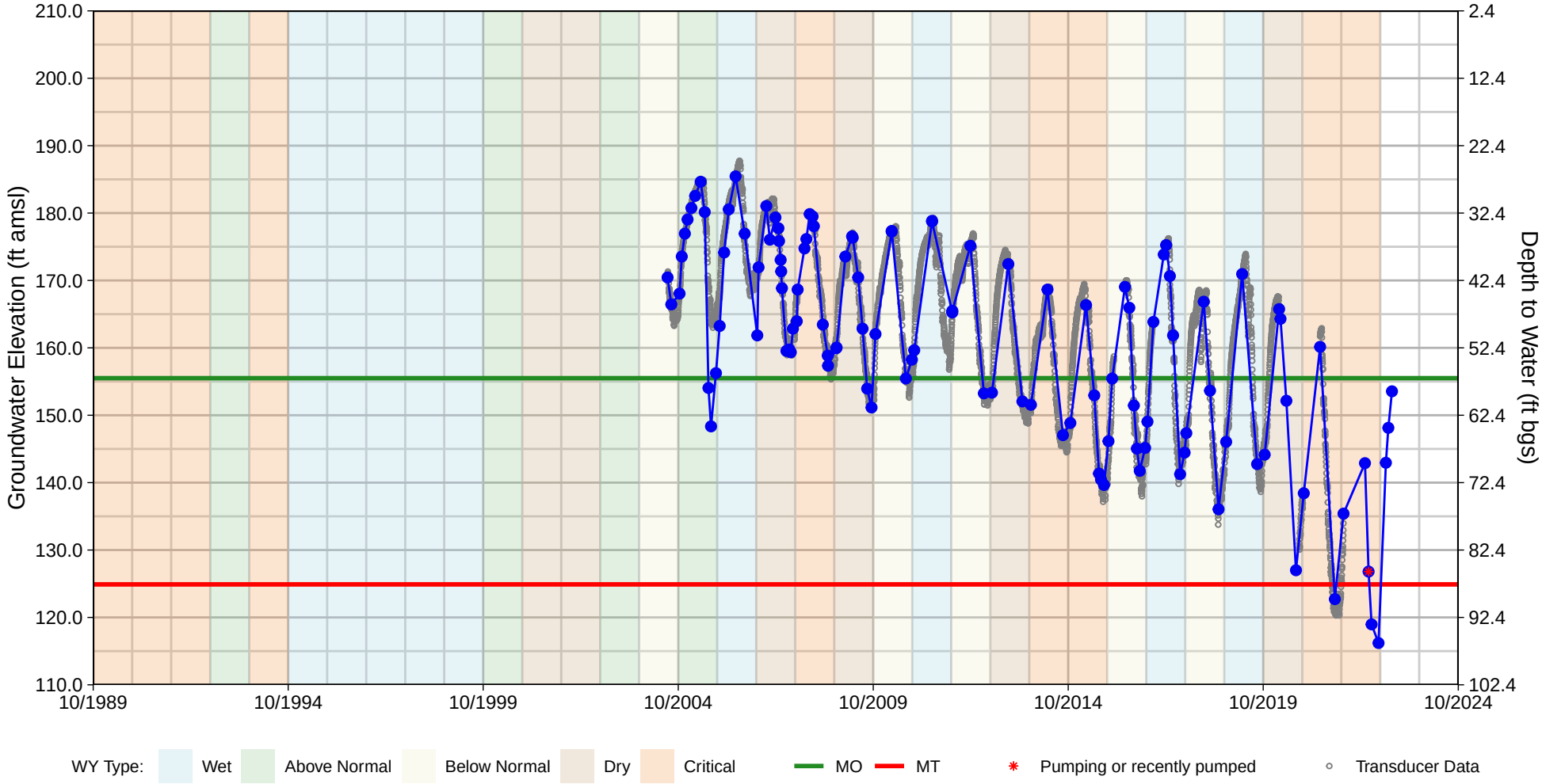
Total Depth (ft):560 GSE (ft amsl): 360.5

Perf. Top (ft bgs): NA Sustainable Management Criteria

Perf. Bottom (ft bgs): NA MO: 198.6 ft amsl (161.9 ft bgs)

MT: 159.7 ft amsl (200.8 ft bgs)

24N02W29N004M Corning Subbasin − Deep Zone



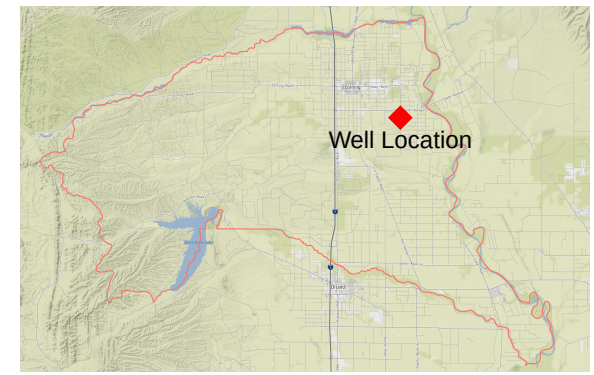
Site Code: 398996N1221227W002 Well Type: Observation

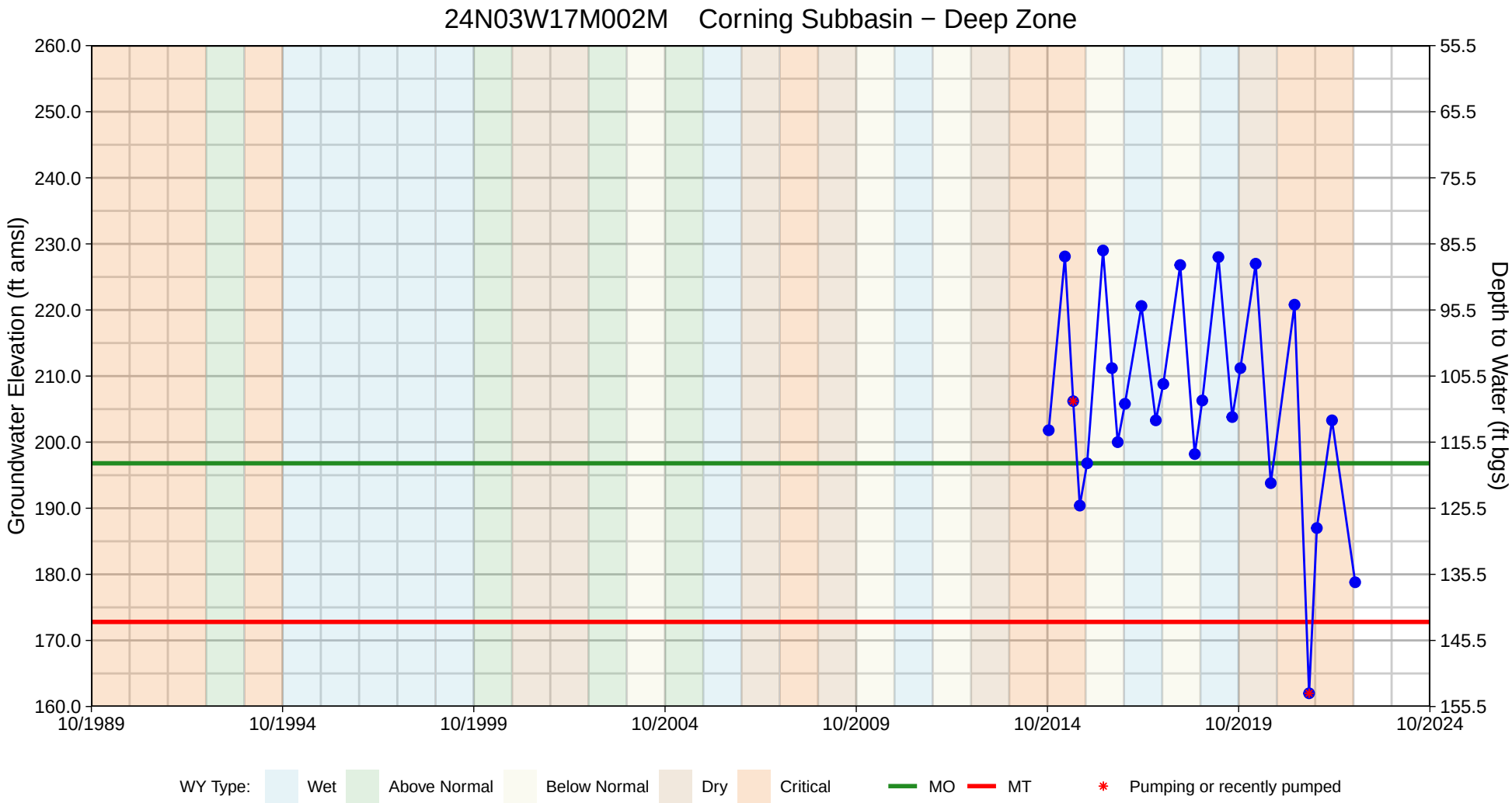
Total Depth (ft):741 GSE (ft amsl): 212.4

Perf. Top (ft bgs): 590 Sustainable Management Criteria

Perf. Bottom (ft bgs): 710 MO: 155.5 ft amsl (56.9 ft bgs)

MT: 124.9 ft amsl (87.5 ft bgs)





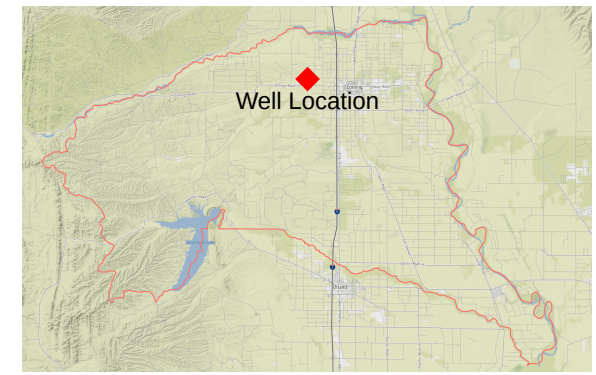
Site Code: 399346N1222344W001 Well Type: Irrigation

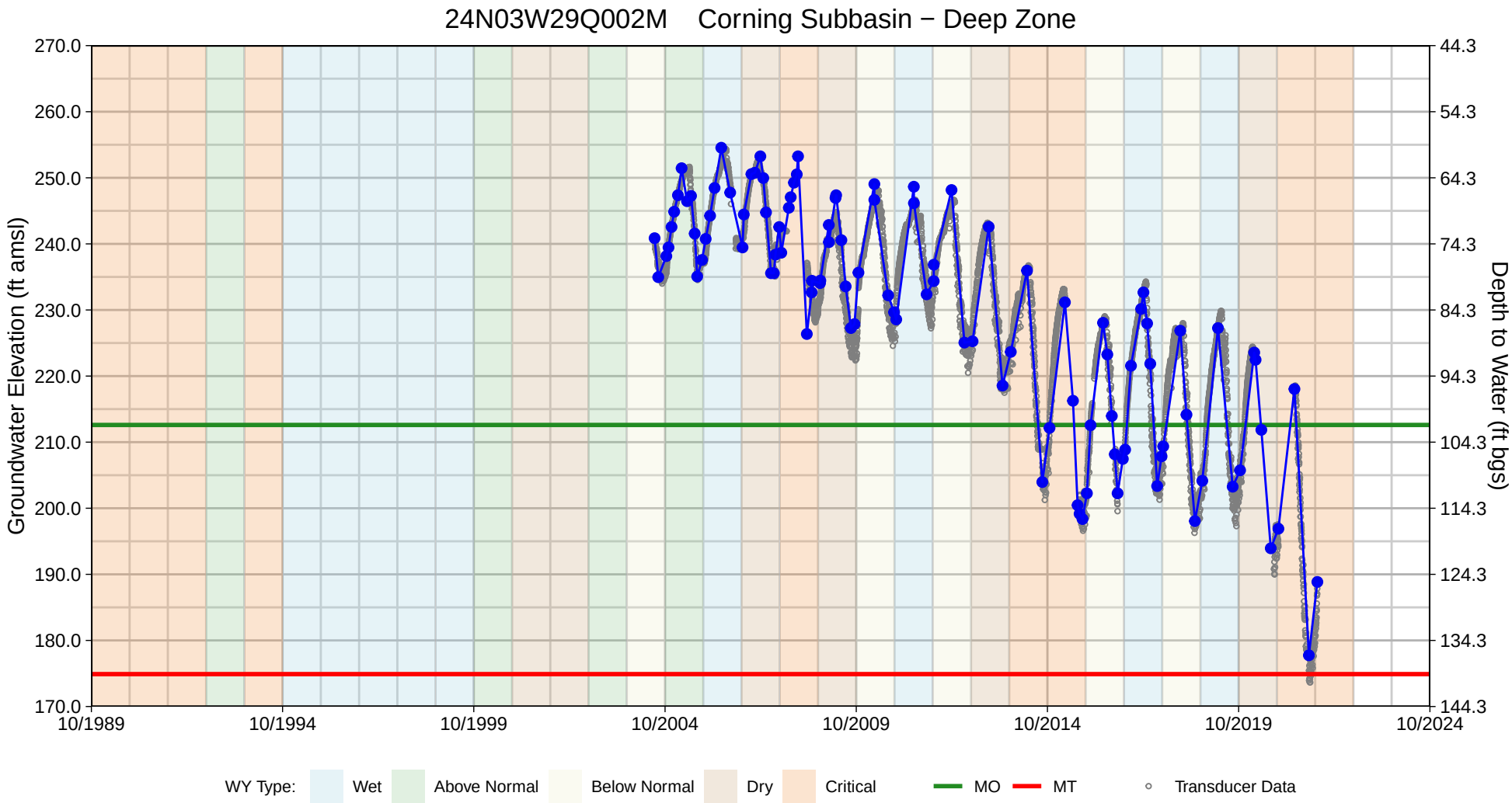
Total Depth (ft):505 GSE (ft amsl): 315.5

Perf. Top (ft bgs): 315 Sustainable Management Criteria

Perf. Bottom (ft bgs): 495 MO: 196.8 ft amsl (118.7 ft bgs)

MT: 172.8 ft amsl (142.7 ft bgs)





Site Code: 399030N1222246W002 Well Type: Observation

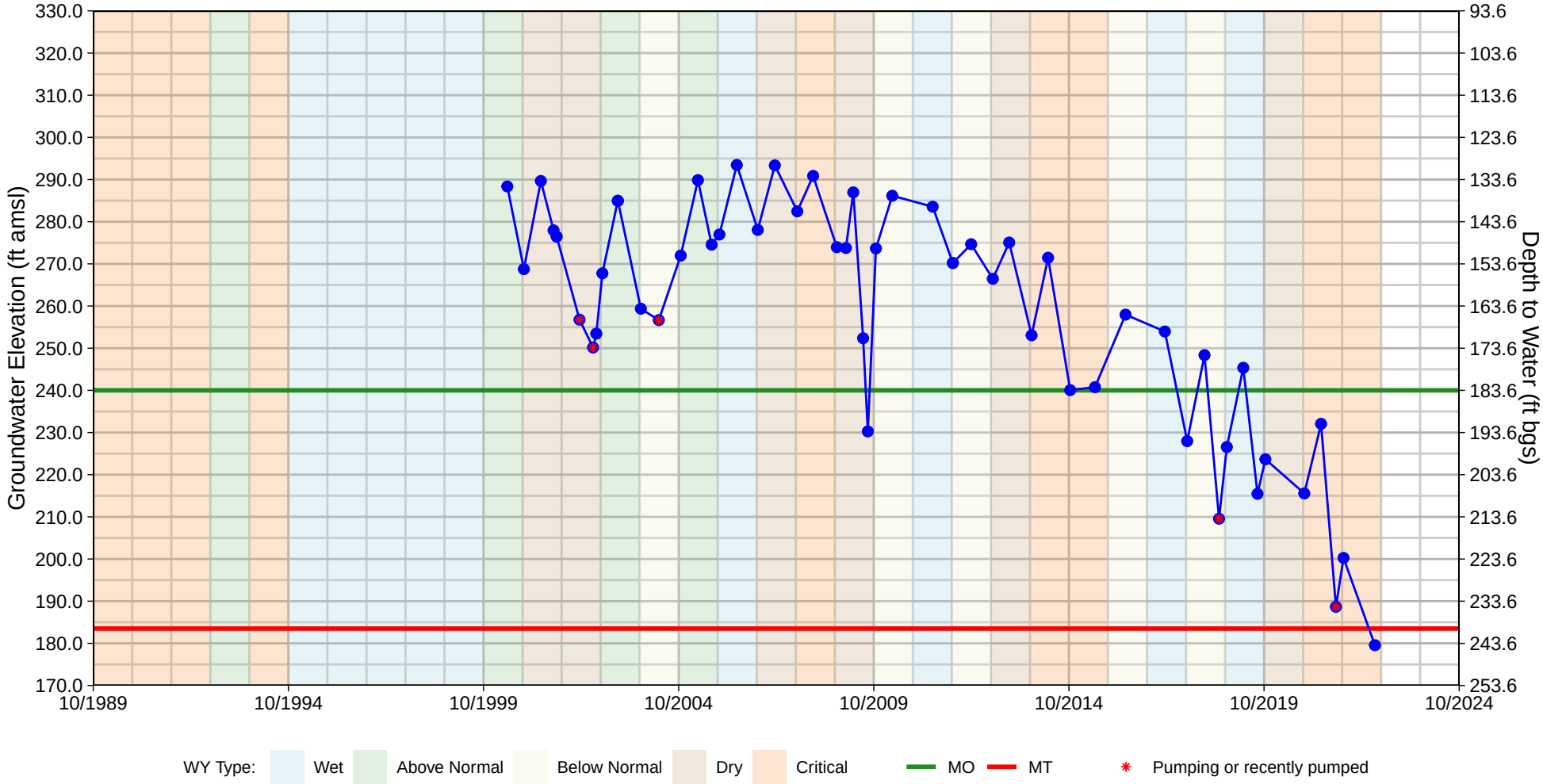
Total Depth (ft):575 GSE (ft amsl): 314.3

Perf. Top (ft bgs): 490 Sustainable Management Criteria

Perf. Bottom (ft bgs): 550 MO: 212.6 ft amsl (101.7 ft bgs)

MT: 174.9 ft amsl (139.4 ft bgs)

24N04W33P001M Corning Subbasin − Deep Zone



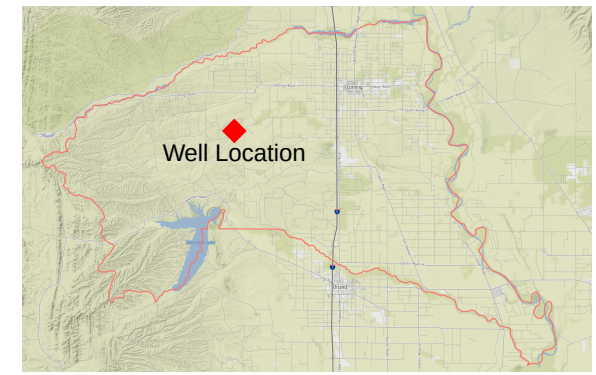
Site Code: 398876N1223207W001 Well Type: Irrigation

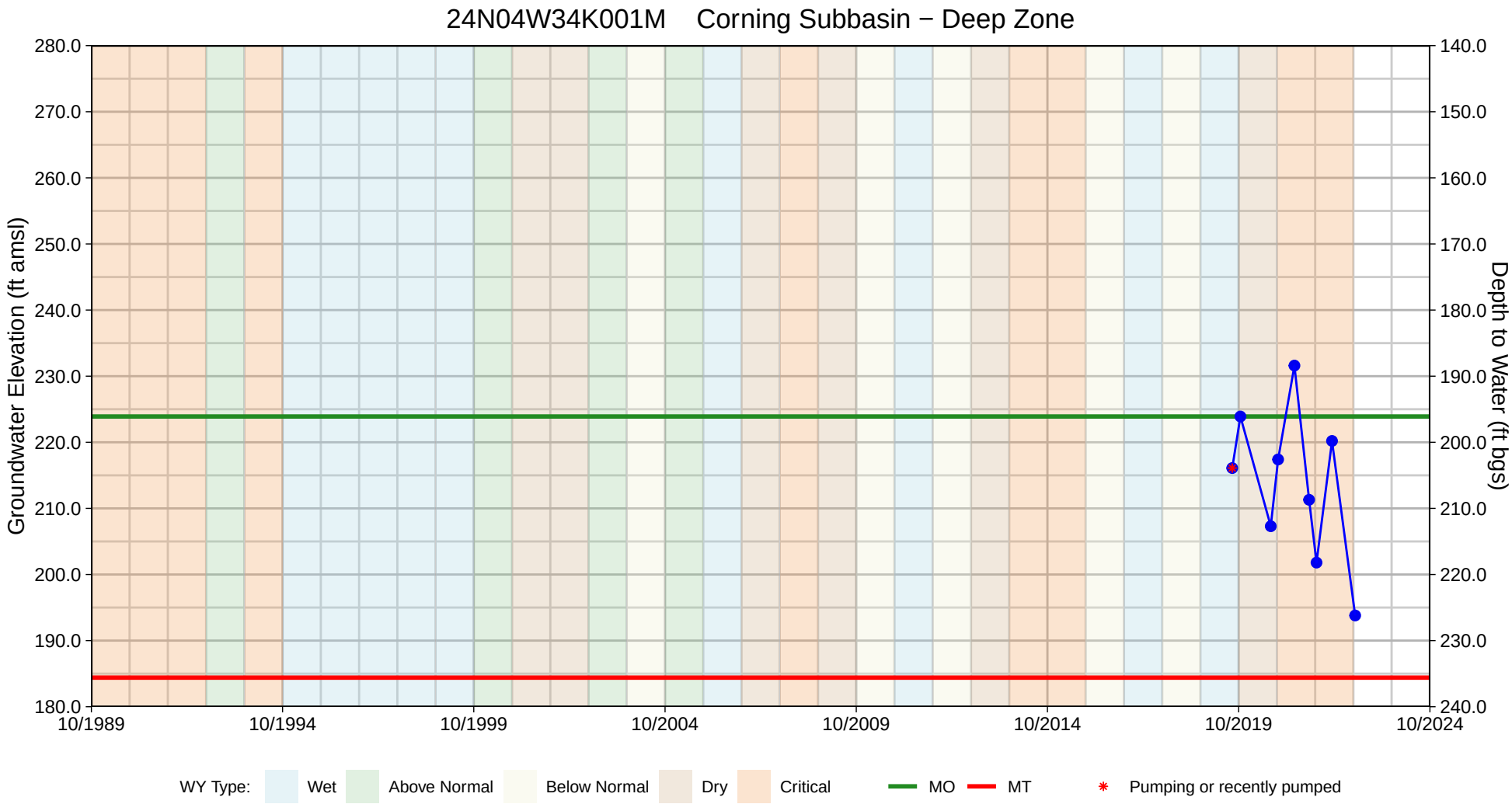
Total Depth (ft):780 GSE (ft amsl): 423.6

Perf. Top (ft bgs): 250 Sustainable Management Criteria

Perf. Bottom (ft bgs): 780 MO: 240 ft amsl (183.6 ft bgs)

MT: 183.5 ft amsl (240.1 ft bgs)





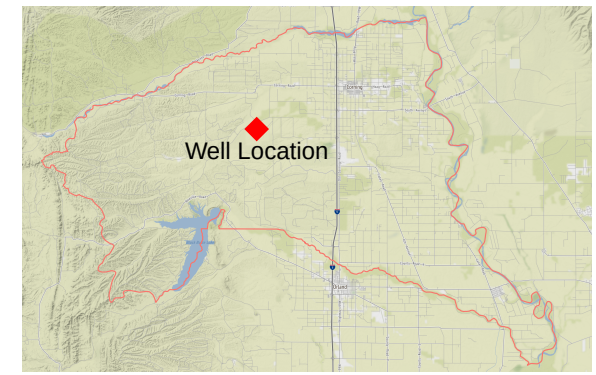
Site Code: 398893N1222943W002 Well Type: Irrigation

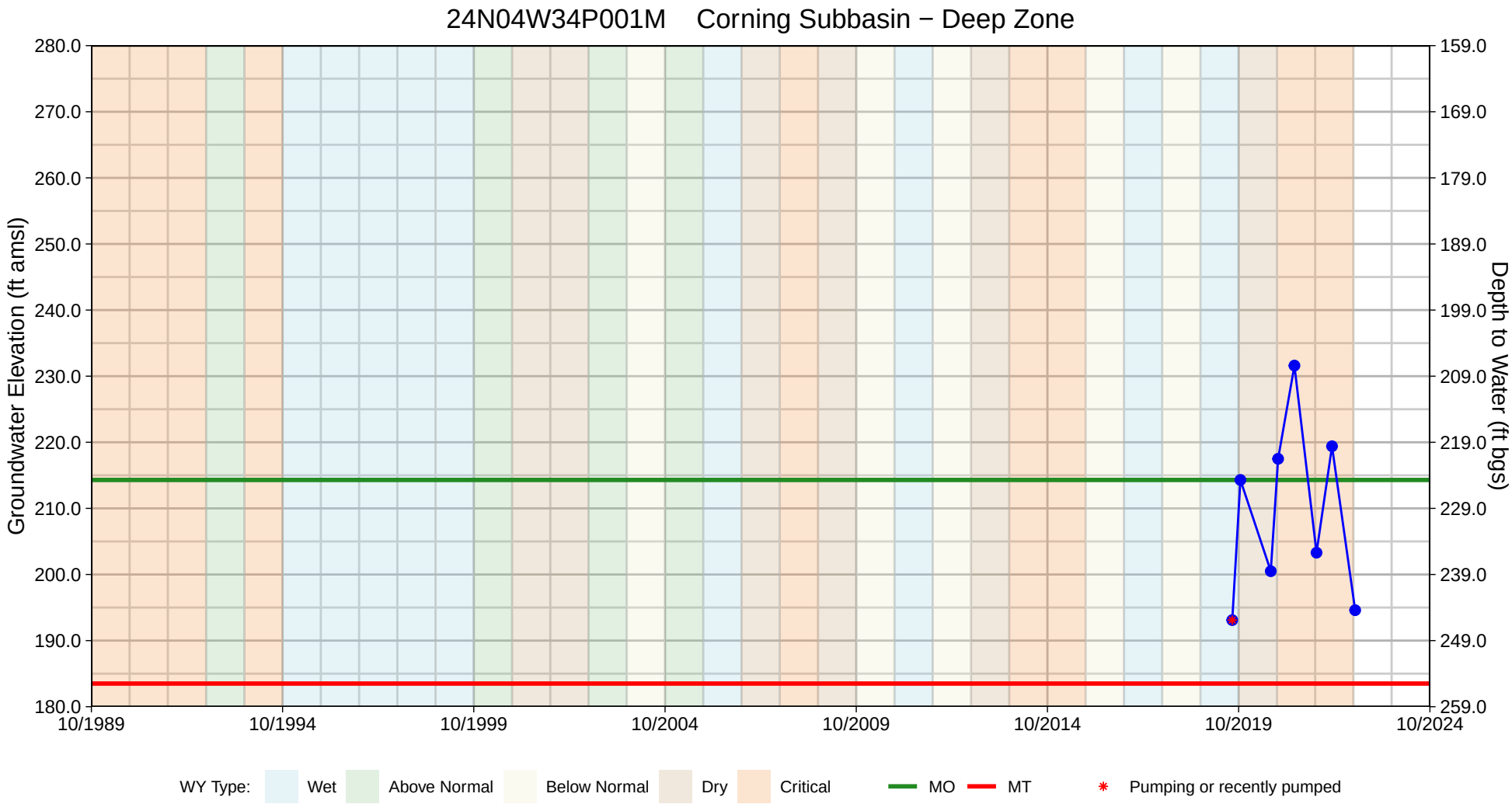
Total Depth (ft):750 GSE (ft amsl): 420

Perf. Top (ft bgs): 310 Sustainable Management Criteria

Perf. Bottom (ft bgs): 750 MO: 223.9 ft amsl (196.1 ft bgs)

MT: 184.4 ft amsl (235.6 ft bgs)





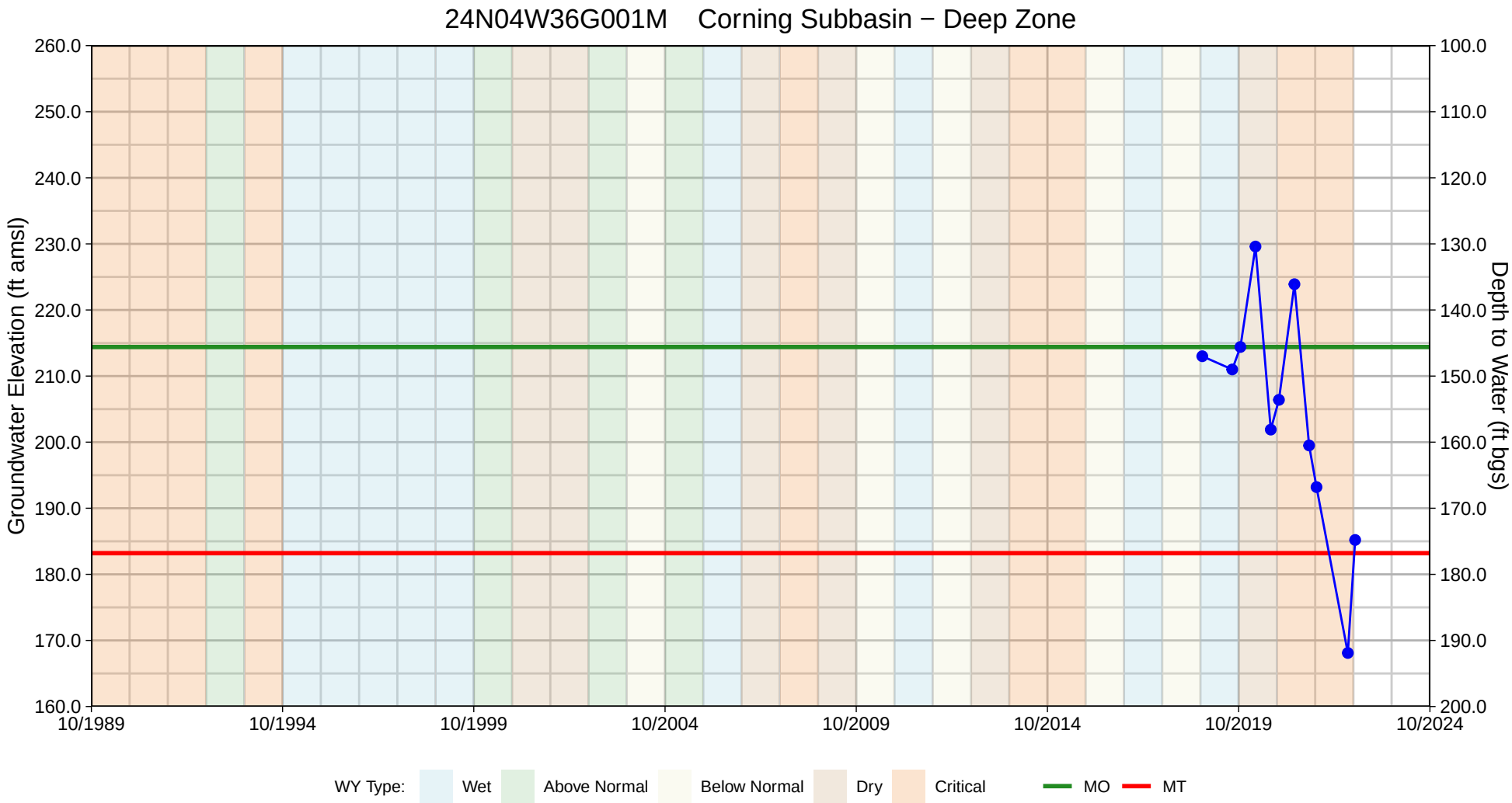
Site Code: 398858N1223011W002 Well Type: Irrigation

Total Depth (ft):535 GSE (ft amsl): 439

Perf. Top (ft bgs): 290 Sustainable Management Criteria

Perf. Bottom (ft bgs): 475 MO: 214.3 ft amsl (224.7 ft bgs)

MT: 183.5 ft amsl (255.5 ft bgs)



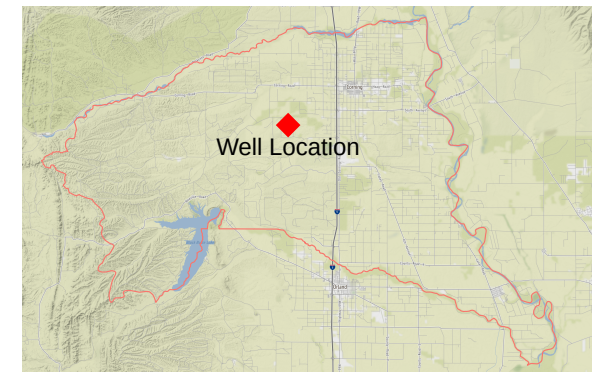
Site Code: 398929N1222573W002 Well Type: Irrigation

Total Depth (ft):750 GSE (ft amsl): 360

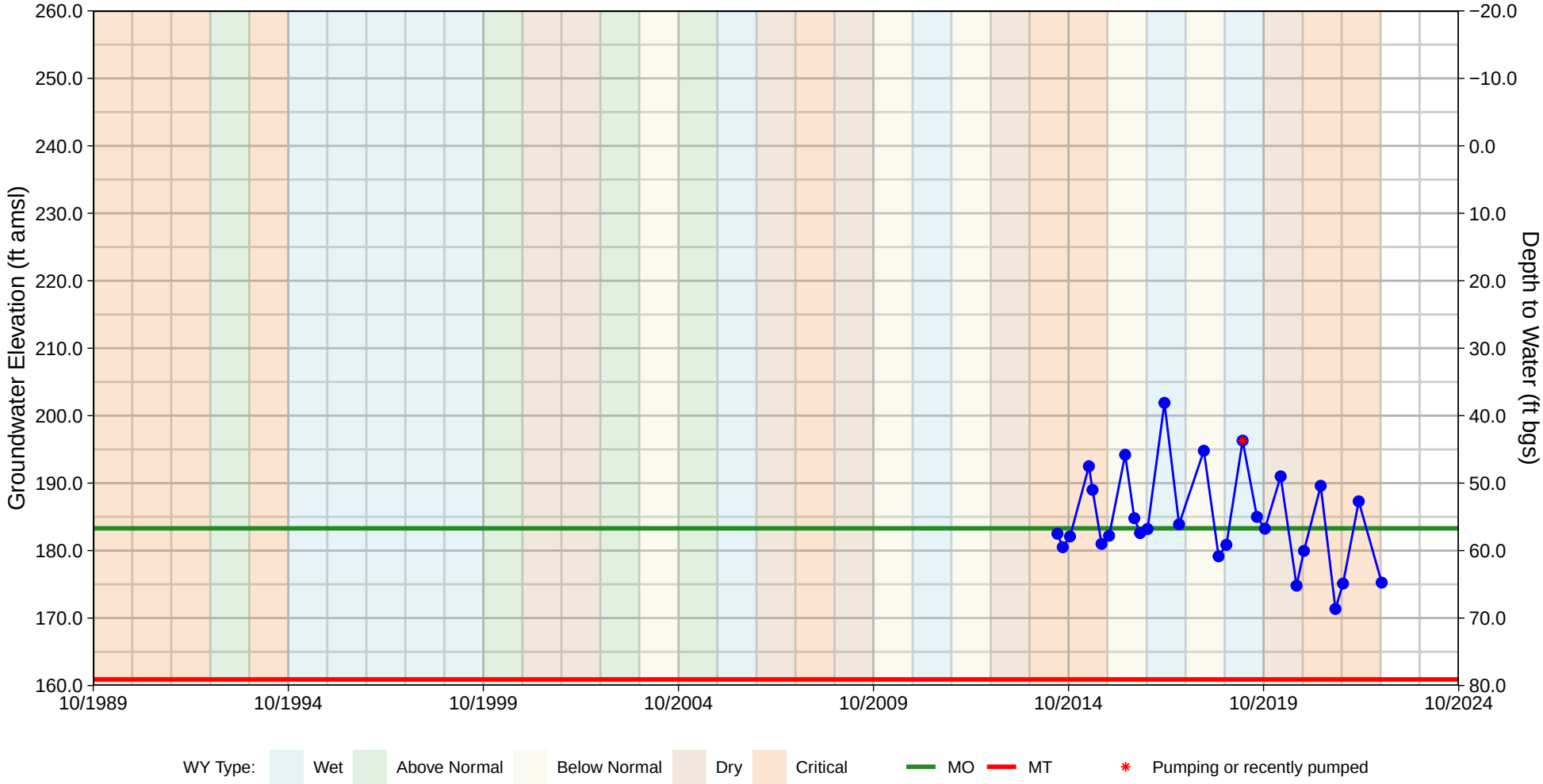
Perf. Top (ft bgs): 320 Sustainable Management Criteria

Perf. Bottom (ft bgs): 750 MO: 214.4 ft amsl (145.6 ft bgs)

MT: 183.2 ft amsl (176.8 ft bgs)



25N03W36H001M Corning Subbasin − Deep Zone



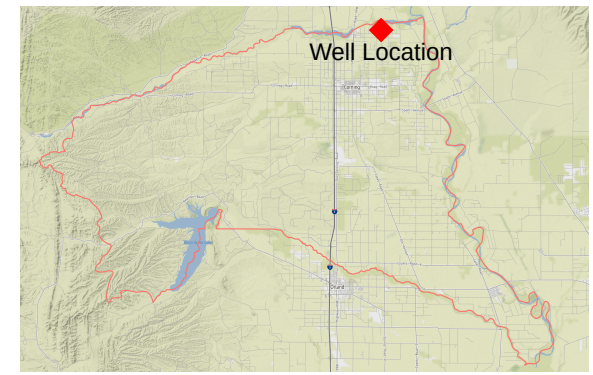
Site Code: 399789N1221446W001 Well Type: Irrigation

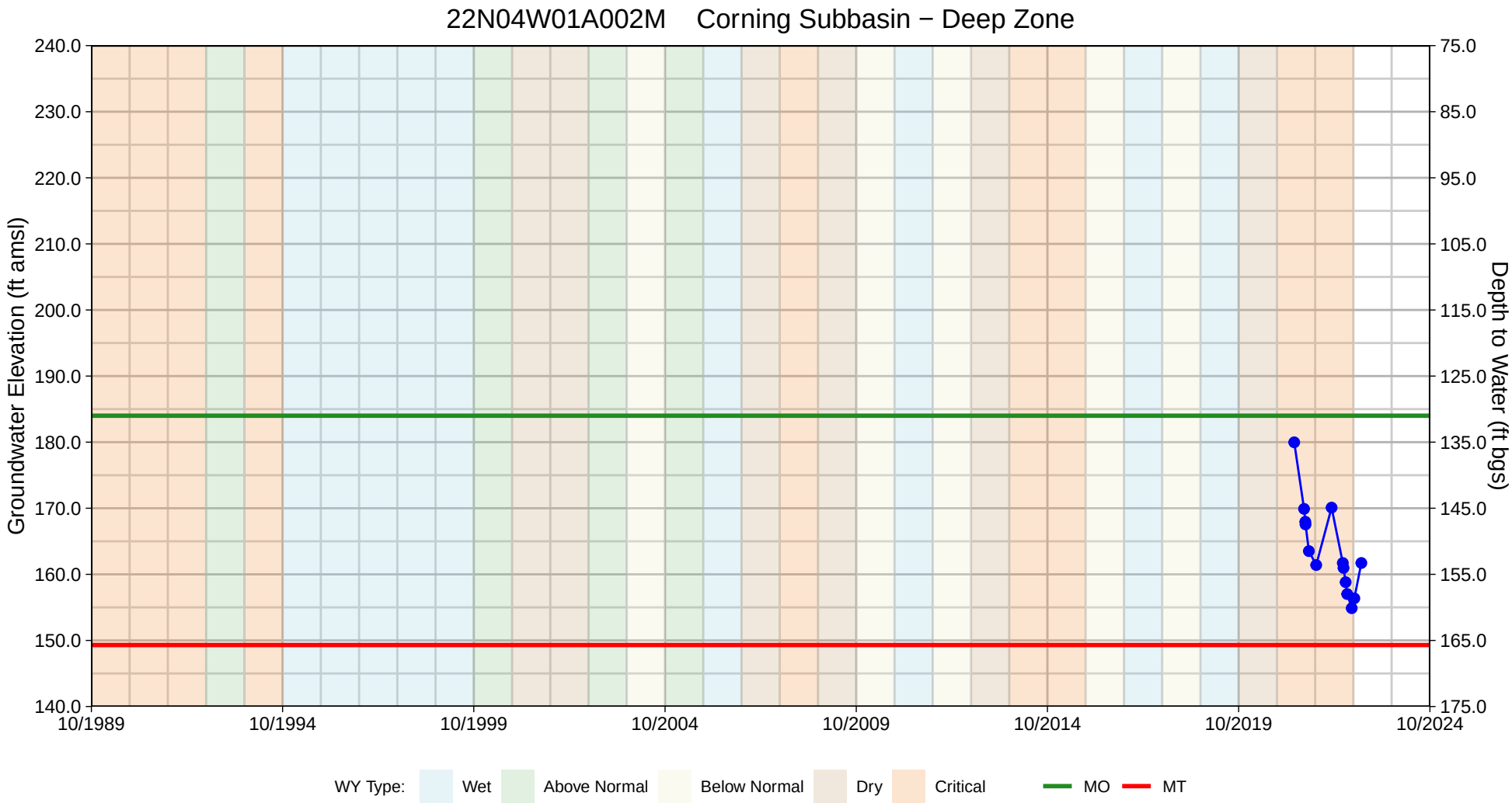
Total Depth (ft):524 GSE (ft amsl): 240

Perf. Top (ft bgs): NA Sustainable Management Criteria

Perf. Bottom (ft bgs): NA MO: 183.3 ft amsl (56.7 ft bgs)

MT: 160.9 ft amsl (79.1 ft bgs)





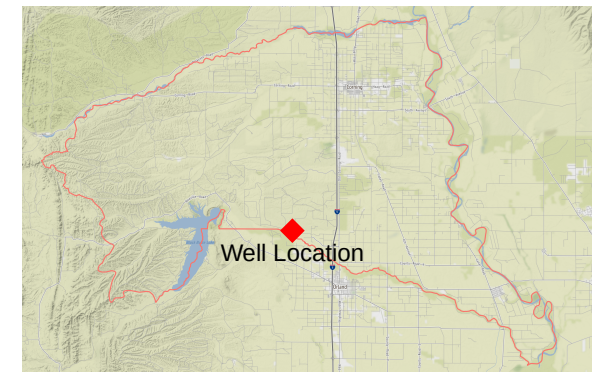
Site Code: 397974N1222523W002 Well Type: Monitoring

Total Depth (ft):550 GSE (ft amsl): 315

Perf. Top (ft bgs): 520 Sustainable Management Criteria

Perf. Bottom (ft bgs): 530 MO: 184 ft amsl (131 ft bgs)

MT: 149.3 ft amsl (165.7 ft bgs)



APPENDIX B

Annual Report Water Level Data

Data sources:

CA Department of Water Resources

LSCE

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N01W29N001M	3/8/2022	150.95	146.25	34.93	39.63	111.32		
22N01W29N001M	5/10/2022	150.95	146.25	36.25	40.95	110		
22N01W29N001M	6/14/2022	150.95	146.25	35.8	40.5	110.45		
22N01W29N001M	7/14/2022	150.95	146.25	45	49.7	101.25		
22N01W29N001M	8/2/2022	150.95	146.25	47.7	52.4	98.55		
22N01W29N001M	9/16/2022	150.95	146.25	51.3	56	94.95		Run 93
22N01W29N001M	10/12/2022	150.95	146.25	49	53.7	97.25		Run 13
22N01W29N001M	11/23/2022	150.95	146.25	45	49.7	101.25		Run 93
22N01W29N001M	12/16/2022	150.95	146.25	42.2	46.9	104.05		Run 93
22N01W29N002M	3/8/2022	150.68	146.25	32.47	36.9	113.78		
22N01W29N002M	5/10/2022	150.68	146.25	36.89	41.32	109.36		
22N01W29N002M	6/14/2022	150.68	146.25	43.27	47.7	102.98		
22N01W29N002M	7/14/2022	150.68	146.25	48.77	53.2	97.48		
22N01W29N002M	8/2/2022	150.68	146.25	51.07	55.5	95.18		
22N01W29N002M	9/16/2022	150.68	146.25	51.57	56	94.68		Run 93
22N01W29N002M	10/12/2022	150.68	146.25	44.77	49.2	101.48		Run 13
22N01W29N002M	11/23/2022	150.68	146.25	40.27	44.7	105.98		Run 93
22N01W29N002M	12/16/2022	150.68	146.25	37.57	42	108.68		Run 93
22N01W29N003M	3/8/2022	149.99	146.25	25.79	29.53	120.46		
22N01W29N003M	5/10/2022	149.99	146.25	36.71	40.45	109.54		
22N01W29N003M	6/14/2022	149.99	146.25	44.16	47.9	102.09		
22N01W29N003M	7/14/2022	149.99	146.25	49.56	53.3	96.69		
22N01W29N003M	8/2/2022	149.99	146.25	49.76	53.5	96.49		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N01W29N003M	9/16/2022	149.99	146.25	40.06	43.8	106.19		Run 93
22N01W29N003M	10/12/2022	149.99	146.25	32.81	36.55	113.44		Run 13
22N01W29N003M	11/23/2022	149.99	146.25	30.16	33.9	116.09		Run 93
22N01W29N003M	12/16/2022	149.99	146.25	28.46	32.2	117.79		Run 93
22N01W29N004M	3/8/2022	149.06	146.25	22.32	25.13	123.93		
22N01W29N004M	5/10/2022	149.06	146.25	27.19	30	119.06		
22N01W29N004M	6/14/2022	149.06	146.25	30.29	33.1	115.96		
22N01W29N004M	7/14/2022	149.06	146.25	32.59	35.4	113.66		
22N01W29N004M	8/2/2022	149.06	146.25	33.68	36.49	112.57		
22N01W29N004M	9/16/2022	149.06	146.25	32.99	35.8	113.26		Run 93
22N01W29N004M	10/12/2022	149.06	146.25	30.09	32.9	116.16		Run 13
22N01W29N004M	11/23/2022	149.06	146.25	28.79	31.6	117.46		Run 93
22N01W29N004M	12/16/2022	149.06	146.25	27.89	30.7	118.36		Run 93
22N01W29K001M	3/8/2022	144.88	144.38	25.1	25.6	119.28		
22N01W29K001M	8/2/2022	144.88	144.38	29.2	29.7	115.18		
22N01W29K001M	10/12/2022	144.88	144.38	27.25	27.75	117.13		Run 13
22N01W19K005M	3/7/2022	156.58	155.94	41.16	41.8	114.78	8	Oil like substance in well, bad smell. Nearby pumping?
22N01W19K005M	8/1/2022	156.58	155.94	35.66	36.3	120.28	8	Oil like substance in well, bad smell. Nearby pumping?
22N01W19K005M	10/11/2022	156.58	155.94	57.16	57.8	98.78		Run 13
22N02W21D001M	3/8/2022	200.92	200.42	48	48.5	152.42		
22N02W22B001M	3/7/2022	187.71	186.41	48.5	49.8	137.91	8	

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N02W22B001M	8/1/2022	187.71	186.41	94.8	96.1	91.61	8	
22N02W22B001M	10/11/2022	187.71	186.41	73.1	74.4	113.31	8	Run 13 oil
22N02W15C002M	3/10/2022	192.365	189.465	78.81	81.71	110.655		
22N02W15C002M	8/8/2022	192.37	189.465	103.725	106.63	85.74		
22N02W15C002M	10/13/2022	192.365	189.465	102.26	105.16	87.205		Run 22
22N02W15C003M	3/10/2022	192.01	189.3	65.45	68.16	123.85		
22N02W15C003M	8/8/2022	192.01	189.3	106.18	108.89	83.12		
22N02W15C003M	10/13/2022	192.01	189.3	85.45	88.16	103.85		Run 22
22N02W15C004M	3/10/2022	192.25	189.3	62.22	65.17	127.08		
22N02W15C004M	8/8/2022	192.25	189.3	105.25	108.2	84.05		
22N02W15C004M	10/13/2022	192.25	189.3	79.58	82.53	109.72		Run 22
22N02W15C005M	3/10/2022	192.71	189.3	54.21	57.62	135.09		
22N02W15C005M	8/8/2022	192.71	189.3	68.32	71.73	120.98		
22N02W15C005M	10/13/2022	192.71	189.3	68.43	71.84	120.87		Run 22
22N02W14C002M	3/7/2022	174	173.4	54.1	54.7	119.3	8	
22N02W14C002M	10/11/2022	174	173.4	67.9	68.5	105.5		Run 13
22N02W16B003M	3/7/2022	199.5	199	59.2	59.7	139.8		
22N02W16B003M	8/1/2022	199.5	199	85.3	85.8	113.7		
22N02W16B003M	10/10/2022	199.5	199	78.3	78.8	120.7		Run 13
22N02W16B002M	3/7/2022	199	198	66	67	132	8	
22N02W16B002M	10/10/2022	199	198	90	91	108	8	Run 13 oil
22N02W18C001M	3/7/2022	224.64	223.44	138.08	139.28	85.36		
22N02W18C001M	5/10/2022	224.64	223.44	149.2	150.4	74.24		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N02W18C001M	6/14/2022	224.64	223.44	157.5	158.7	65.94		
22N02W18C001M	7/14/2022	224.64	223.44	168	169.2	55.44		
22N02W18C001M	8/1/2022	224.64	223.44	170.65	171.85	52.79		
22N02W18C001M	9/15/2022	224.64	223.44	175.1	176.3	48.34		Run 93
22N02W18C001M	10/10/2022	224.64	223.44	164.9	166.1	58.54		Run 13
22N02W18C001M	11/23/2022	224.64	223.44	152.1	153.3	71.34		Run 93
22N02W18C001M	12/16/2022	224.64	223.44	145.7	146.9	77.74		Run 93
22N02W18C002M	3/7/2022	224.84	223.44	85.3	86.7	138.14		
22N02W18C002M	5/10/2022	224.84	223.44	95.55	96.95	127.89		
22N02W18C002M	6/14/2022	224.84	223.44	114.5	115.9	108.94		
22N02W18C002M	7/14/2022	224.84	223.44	126.6	128	96.84		
22N02W18C002M	8/1/2022	224.84	223.44	127.4	128.8	96.04		
22N02W18C002M	9/15/2022	224.84	223.44	123.6	125	99.84		Run 93
22N02W18C002M	10/10/2022	224.84	223.44	105.85	107.25	117.59		Run 13
22N02W18C002M	11/23/2022	224.84	223.44	90.3	91.7	133.14		Run 93
22N02W18C002M	12/16/2022	224.84	223.44	86.2	87.6	137.24		Run 93
22N02W18C003M	3/7/2022	225.54	223.44	79.02	81.12	144.42		
22N02W18C003M	5/10/2022	225.54	223.44	92.6	94.7	130.84		
22N02W18C003M	6/14/2022	225.54	223.44	109.7	111.8	113.74		
22N02W18C003M	7/14/2022	225.54	223.44	117.05	119.15	106.39		
22N02W18C003M	8/1/2022	225.54	223.44	115.75	117.85	107.69		
22N02W18C003M	9/15/2022	225.54	223.44	107.5	109.6	115.94		Run 93
22N02W18C003M	10/10/2022	225.54	223.44	97.4	99.5	126.04		Run 13

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N02W18C003M	11/23/2022	225.54	223.44	84.2	86.3	139.24		Run 93
22N02W18C003M	12/16/2022	225.54	223.44	80.9	83	142.54		Run 93
22N02W18C004M	3/7/2022	225.94	223.44	29.03	31.53	194.41		
22N02W18C004M	5/10/2022	225.94	223.44	25.5	28	197.94		
22N02W18C004M	6/14/2022	225.94	223.44	25.8	28.3	197.64		
22N02W18C004M	7/14/2022	225.94	223.44	21.8	24.3	201.64		
22N02W18C004M	8/1/2022	225.94	223.44	21.02	23.52	202.42		
22N02W18C004M	9/15/2022	225.94	223.44	20.8	23.3	202.64		Run 93
22N02W18C004M	10/10/2022	225.94	223.44	22.9	25.4	200.54		Run 13
22N02W18C004M	11/23/2022	225.94	223.44	24.2	26.7	199.24		Run 93
22N02W18C004M	12/16/2022	225.94	223.44	27.5	30	195.94		Run 93
22N02W11Q001M	3/7/2022	166.8	166.4	40.6	41	125.8		
22N02W11Q001M	8/2/2022	166.8	166.4	59.6	60	106.8		
22N02W11Q001M	10/11/2022	166.8	166.4	51.6	52	114.8		Run 13
22N03W12Q003M	3/7/2022	232.94	232.44	86.5	87	145.94		
22N03W12Q003M	8/1/2022	232.94	232.44	91.5	92	140.94		
22N03W12Q003M	10/10/2022	232.94	232.44	79.4	79.9	153.04		Run 13
22N02W09L003M	3/7/2022	198.12	197.42	62.1	62.8	135.32		
22N02W09L003M	10/10/2022	198.12	197.42	92.8	93.5	104.62		Run 13
22N02W08B002M	3/7/2022	208.43	207.43	73.95	74.95	133.48		
22N02W01N001M	3/7/2022	161.07	159.21	36.64	38.5	122.57		
22N02W01N001M	5/10/2022	161.07	159.21	40.64	42.5	118.57		
22N02W01N001M	6/14/2022	161.07	159.21	48.44	50.3	110.77		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N02W01N001M	7/14/2022	161.07	159.21	55.24	57.1	103.97		
22N02W01N001M	8/2/2022	161.07	159.21	59.29	61.15	99.92		
22N02W01N001M	9/15/2022	161.07	159.21	64.24	66.1	94.97		Run 93
22N02W01N001M	10/11/2022	161.07	159.21	57.04	58.9	102.17		Run 13
22N02W01N001M	11/23/2022	161.07	159.21	48.24	50.1	110.97		Run 93
22N02W01N001M	12/16/2022	161.07	159.21	43.54	45.4	115.67		Run 93
22N02W01N002M	3/7/2022	161.31	159.21	38.74	40.84	120.47		
22N02W01N002M	5/10/2022	161.31	159.21	45.8	47.9	113.41		
22N02W01N002M	6/14/2022	161.31	159.21	57.9	60	101.31		
22N02W01N002M	7/14/2022	161.31	159.21	65.2	67.3	94.01		
22N02W01N002M	8/2/2022	161.31	159.21	69.68	71.78	89.53		
22N02W01N002M	9/15/2022	161.31	159.21	72.5	74.6	86.71		Run 93
22N02W01N002M	10/11/2022	161.31	159.21	58.4	60.5	100.81		Run 13
22N02W01N002M	11/23/2022	161.31	159.21	46.3	48.4	112.91		Run 93
22N02W01N002M	12/16/2022	161.31	159.21	41.8	43.9	117.41		Run 93
22N02W01N003M	3/7/2022	161.5	159.21	27.86	30.15	131.35		
22N02W01N003M	5/10/2022	161.5	159.21	39.46	41.75	119.75		
22N02W01N003M	6/14/2022	161.5	159.21	48.61	50.9	110.6		
22N02W01N003M	7/14/2022	161.5	159.21	56.81	59.1	102.4		
22N02W01N003M	8/2/2022	161.5	159.21	54.41	56.7	104.8		
22N02W01N003M	9/15/2022	161.5	159.21	48.51	50.8	110.7		Run 93
22N02W01N003M	10/11/2022	161.5	159.21	39.01	41.3	120.2		Run 13
22N02W01N003M	11/23/2022	161.5	159.21	31.51	33.8	127.7		Run 93

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N02W01N003M	12/16/2022	161.5	159.21	29.61	31.9	129.6		Run 93
22N02W01N004M	3/7/2022	161.65	159.21	25.28	27.72	133.93		
22N02W01N004M	5/10/2022	161.65	159.21	27.01	29.45	132.2		
22N02W01N004M	6/14/2022	161.65	159.21	27.06	29.5	132.15		
22N02W01N004M	7/14/2022	161.65	159.21	32.06	34.5	127.15		
22N02W01N004M	8/2/2022	161.65	159.21	28.07	30.51	131.14		
22N02W01N004M	9/15/2022	161.65	159.21	27.76	30.2	131.45		Run 93
22N02W01N004M	10/11/2022	161.65	159.21	26.46	28.9	132.75		Run 13
22N02W01N004M	11/23/2022	161.65	159.21	26.06	28.5	133.15		Run 93
22N02W01N004M	12/16/2022	161.65	159.21	24.96	27.4	134.25		Run 93
22N03W01R001M	3/7/2022	228.17	226.04	88.07	90.2	137.97		
22N03W01R001M	8/1/2022	228.17	226.04	145.39	147.52	80.65		
22N03W01R001M	10/10/2022	228.17	226.04	117.67	119.8	108.37		Run 13
22N03W01R002M	3/7/2022	228.53	226.04	82.21	84.7	143.83		
22N03W01R002M	8/1/2022	228.53	226.04	124.01	126.5	102.03		
22N03W01R002M	10/10/2022	228.53	226.04	110.61	113.1	115.43		Run 13
22N03W01R003M	3/7/2022	229.04	226.04	70.4	73.4	155.64		Datalogger out of water.
22N03W01R003M	8/1/2022	229.04	226.04	78.65	81.65	147.39		Datalogger out of water.
22N03W01R003M	10/10/2022	229.04	226.04	73.25	76.25	152.79		Run 13
22N02W02J001M	3/7/2022	166.4	164.7	40.4	42.1	124.3		
22N02W02J001M	8/2/2022	166.4	164.7	62.6	64.3	102.1		
22N02W02J001M	10/11/2022	166.4	164.7	60.6	62.3	104.1		Run 13

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N03W06B001M	3/7/2022	309.9	308.5	65.7	67.1	242.8		Leaky casing. Field not flooded but it rained recently.
22N03W06B001M	8/3/2022	309.9	308.5	74.1	75.5	234.4		Field flooded.
22N03W06B001M	10/10/2022	309.9	308.5	71.6	73	236.9		Run 13 Field not flooded
22N03W03D001M	3/7/2022	270.97	270.47	107	107.5	163.47		
22N03W03D001M	5/10/2022	270.97	270.47	90.5	91	179.97		Leaky or wet casing?
22N03W03D001M	6/13/2022	270.97	270.47	89.8	90.3	180.67		
22N03W03D001M	7/14/2022	270.97	270.47	104	104.5	166.47		
22N03W03D001M	8/1/2022	270.97	270.47	103.5	104	166.97		
22N03W03D002M	9/15/2022	271.07	270.47	96.2	96.8	174.27		Run 93 Well sucking air via vent hole.
22N03W03D002M	10/10/2022	271.07	270.47	119.4	120	151.07		Run 13
22N04W01A001M	3/7/2022	318.265	315	205.435	208.7	109.565		
22N04W01A001M	6/22/2022	318.265	315	219.235	222.5	95.765		
22N04W01A001M	6/29/2022	318.265	315	219.135	222.4	95.865		
22N04W01A001M	7/19/2022	318.265	315	236.235	239.5	78.765		
22N04W01A001M	8/3/2022	318.265	315	230.735	234	84.265		
22N04W01A001M	9/15/2022	318.265	315	225.435	228.7	89.565		
22N04W01A001M	10/10/2022	318.265	315	220.635	223.9	94.365		
22N04W01A001M	12/16/2022	318.265	315	211.235	214.5	103.765		
22N04W01A002M	3/7/2022	318.315	315	144.905	148.22	170.095		
22N04W01A002M	6/22/2022	318.315	315	153.285	156.6	161.715		
22N04W01A002M	6/29/2022	318.315	315	154.035	157.35	160.965		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
22N04W01A002M	7/19/2022	318.315	315	156.185	159.5	158.815		
22N04W01A002M	8/3/2022	318.315	315	157.985	161.3	157.015		
22N04W01A002M	9/15/2022	318.315	315	160.125	163.44	154.875		
22N04W01A002M	10/10/2022	318.315	315	158.635	161.95	156.365		
22N04W01A002M	12/16/2022	318.315	315	153.285	156.6	161.715		
22N04W01A003M	3/7/2022	318.3	315	122.75	126.05	192.25		
22N04W01A003M	6/22/2022	318.3	315	132.3	135.6	182.7		
22N04W01A003M	6/29/2022	318.3	315	133.4	136.7	181.6		
22N04W01A003M	7/19/2022	318.3	315	134.4	137.7	180.6		
22N04W01A003M	8/3/2022	318.3	315	133.6	136.9	181.4		
22N04W01A003M	9/15/2022	318.3	315	136	139.3	179		
22N04W01A003M	10/10/2022	318.3	315	132.35	135.65	182.65		
22N04W01A003M	12/16/2022	318.3	315	127.2	130.5	187.8		
22N04W01A004M	3/7/2022	318.355	315	8.195	11.55	306.805		
22N04W01A004M	6/22/2022	318.355	315	7.845	11.2	307.155		
22N04W01A004M	6/29/2022	318.355	315	8.395	11.75	306.605		
22N04W01A004M	7/19/2022	318.355	315	8.345	11.7	306.655		
22N04W01A004M	8/3/2022	318.355	315	8.565	11.92	306.435		
22N04W01A004M	9/15/2022	318.355	315	8.745	12.1	306.255		
22N04W01A004M	10/10/2022	318.355	315	9.625	12.98	305.375		
22N04W01A004M	12/16/2022	318.355	315	11.445	14.8	303.555		
23N02W34N001M	3/9/2022	185.92	185.42	49.9	50.4	135.52		
23N02W34N001M	5/11/2022	185.92	185.42	53.9	54.4	131.52		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
23N02W34N001M	6/14/2022	185.92	185.42	57.4	57.9	128.02		
23N02W34N001M	7/12/2022	185.92	185.42	59.5	60	125.92		
23N02W34N001M	8/1/2022	185.92	185.42	60.5	61	124.92		
23N02W34N001M	9/15/2022	185.92	185.42	61.5	62	123.92		
23N02W34N001M	10/13/2022	185.92	185.42	61.1	61.6	124.32		
23N02W34N001M	11/21/2022	185.92	185.42	59.2	59.7	126.22		
23N02W34N001M	12/16/2022	185.92	185.42	57.3	57.8	128.12		
23N02W34A001M	3/9/2022	173.36	172.41	38.05	39	134.36		
23N02W34A001M	5/11/2022	173.36	172.41	45.75	46.7	126.66		
23N02W34A001M	6/14/2022	173.36	172.41	53.15	54.1	119.26		
23N02W34A001M	7/12/2022	173.36	172.41	57.55	58.5	114.86		
23N02W34A001M	8/1/2022	173.36	172.41	54.15	55.1	118.26		
23N02W34A001M	9/15/2022	173.36	172.41	54.05	55	118.36		
23N02W34A001M	10/13/2022	173.36	172.41	49.95	50.9	122.46		
23N02W34A001M	11/21/2022	173.36	172.41	40.85	41.8	131.56		
23N02W34A001M	12/16/2022	173.36	172.41	38.35	39.3	134.06		
23N02W34A003M	3/9/2022	171.01	170.41	38.4	39	132.01	8	
23N02W34A003M	8/1/2022	171.01	170.41	55.6	56.2	114.81	8	
23N02W34A003M	10/13/2022	171.01	170.41	55.5	56.1	114.91	8	
23N02W28N004M	5/11/2022	204.43	202.14	81.71	84	120.43		
23N02W28N004M	6/14/2022	204.43	202.14	91.87	94.16	110.27		
23N02W28N004M	7/12/2022	204.43	202.14	101.16	103.45	100.98		
23N02W28N004M	9/20/2022	204.43	202.14	87.45	89.74	114.69		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
23N02W28N004M	11/21/2022	204.43	202.14	76.51	78.8	125.63		
23N02W28N004M	12/16/2022	204.43	202.14	73.31	75.6	128.83		
23N02W28N001M	5/11/2022	204.09	202.14	84.15	86.1	117.99		
23N02W28N001M	6/14/2022	204.09	202.14	91.35	93.3	110.79		
23N02W28N001M	7/12/2022	204.09	202.14	98.6	100.55	103.54		
23N02W28N001M	9/20/2022	204.09	202.14	108.6	110.55	93.54		
23N02W28N001M	11/21/2022	204.09	202.14	97.68	99.63	104.46		
23N02W28N001M	12/16/2022	204.09	202.14	92.07	94.02	110.07		
23N02W28N002M	5/11/2022	204.37	202.14	85.82	88.05	116.32		
23N02W28N002M	6/14/2022	204.37	202.14	96.22	98.45	105.92		
23N02W28N002M	7/12/2022	204.37	202.14	104.54	106.77	97.6		
23N02W28N002M	9/20/2022	204.37	202.14	115.3	117.53	86.84		
23N02W28N002M	11/21/2022	204.37	202.14	97.12	99.35	105.02		
23N02W28N002M	12/16/2022	204.37	202.14	90.52	92.75	111.62		
23N02W28N003M	5/11/2022	204.5	202.14	83.49	85.85	118.65		
23N02W28N003M	6/14/2022	204.5	202.14	95.25	97.61	106.89		
23N02W28N003M	7/12/2022	204.5	202.14	105.22	107.58	96.92		
23N02W28N003M	9/20/2022	204.5	202.14	90.76	93.12	111.38		
23N02W28N003M	11/21/2022	204.5	202.14	76.69	79.05	125.45		
23N02W28N003M	12/16/2022	204.5	202.14	72.94	75.3	129.2		
23N03W22Q001M	3/9/2022	235.97	234.47	88.61	90.11	145.86	6	"Orchard was wet, nearby well could have been pumped recently. Ground was very wet.

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
"								
23N03W22Q001M	6/14/2022	235.97	234.47	103.6	105.1	130.87		Gate Closed
23N03W22Q001M	7/12/2022	235.97	234.47	107.7	109.2	126.77		
23N03W22Q001M	8/1/2022	235.97	234.47	109.77	111.27	124.7		
23N03W22Q001M	10/13/2022	235.97	234.47	108.95	110.45	125.52		
23N03W22Q001M	11/21/2022	235.97	234.47	101.4	102.9	133.07		
23N03W22Q001M	12/16/2022	235.97	234.47	99.05	100.55	135.42		
23N03W24A002M	3/9/2022	208.44	207.44	71	72	136.44		
23N03W24A002M	5/11/2022	208.44	207.44	76.5	77.5	130.94		
23N03W24A002M	6/14/2022	208.44	207.44	83.8	84.8	123.64		
23N03W24A002M	7/12/2022	208.44	207.44	88.9	89.9	118.54		
23N03W24A002M	8/1/2022	208.44	207.44	91	92	116.44		
23N03W24A002M	9/20/2022	208.44	207.44	94	95	113.44		
23N03W24A002M	10/13/2022	208.44	207.44	92.7	93.7	114.74		
23N03W24A002M	11/21/2022	208.44	207.44	88.4	89.4	119.04		
23N03W24A002M	12/16/2022	208.44	207.44	86.9	87.9	120.54		
23N03W24A003M	3/9/2022	207.44	206.44	69.9	70.9	136.54		
23N03W24A003M	5/11/2022	207.44	206.44	77.6	78.6	128.84		
23N03W24A003M	6/14/2022	207.44	206.44	86.1	87.1	120.34		
23N03W24A003M	7/12/2022	207.44	206.44	94.1	95.1	112.34		
23N03W24A003M	8/1/2022	207.44	206.44	96.6	97.6	109.84		
23N03W24A003M	9/20/2022	207.44	206.44	97.7	98.7	108.74		
23N03W24A003M	10/13/2022	207.44	206.44	94.7	95.7	111.74		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
23N03W24A003M	11/21/2022	207.44	206.44	24.2	25.2	182.24		
23N03W24A003M	12/16/2022	207.44	206.44	81	82	125.44		
23N03W17R001M	3/14/2022	302.5	300	98.4	100.9	201.6		
23N03W17R001M	8/9/2022	302.5	300	114.3	116.8	185.7		
23N03W17R001M	10/18/2022	302.5	300	107.8	110.3	192.2		
23N03W16H001M	3/14/2022	278.08	277.48	90.6	91.2	186.88		
23N03W16H001M	8/9/2022	278.08	277.48	107.7	108.3	169.78		
23N03W16H001M	10/18/2022	278.08	277.48	100	100.6	177.48	4	
23N03W16F002M	3/14/2022	256.98	256.48	67.3	67.8	189.18		
23N03W16F002M	8/9/2022	256.98	256.48	79.4	79.9	177.08		
23N03W16F002M	10/18/2022	256.98	256.48	78.2	78.7	178.28		
23N04W13G001M	3/14/2022	361.2	360.51	165.51	166.2	195		
23N04W13G001M	8/9/2022	361.2	360.51	179.51	180.2	181		
23N04W13G001M	10/18/2022	361.2	360.51	177.51	178.2	183		
23N02W16B001M	3/9/2022	186.53	184.93	51.1	52.7	133.83		
23N02W16B001M	8/1/2022	186.53	184.93	71	72.6	113.93	4	
23N02W16B001M	10/13/2022	186.53	184.93	67.4	69	117.53		
23N03W13C003M	5/11/2022	216.06	213.54	97.47	99.99	116.07		
23N03W13C003M	6/14/2022	216.06	213.54	112.56	115.08	100.98		
23N03W13C003M	7/12/2022	216.06	213.54	122.21	124.73	91.33		
23N03W13C003M	9/20/2022	216.06	213.54	125.68	128.2	87.86		
23N03W13C003M	11/21/2022	216.06	213.54	107.93	110.45	105.61		
23N03W13C003M	12/16/2022	216.06	213.54	100.74	103.26	112.8		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
23N03W13C004M	5/11/2022	215.88	213.54	100.12	102.46	113.42		
23N03W13C004M	6/14/2022	215.88	213.54	116.66	119	96.88		
23N03W13C004M	7/12/2022	215.88	213.54	127.68	130.02	85.86		
23N03W13C004M	9/20/2022	215.88	213.54	124.76	127.1	88.78		
23N03W13C004M	11/21/2022	215.88	213.54	105.36	107.7	108.18		
23N03W13C004M	12/16/2022	215.88	213.54	97.92	100.26	115.62		
23N03W13C005M	5/11/2022	215.73	213.54	93.06	95.25	120.48		
23N03W13C005M	6/14/2022	215.73	213.54	92.01	94.2	121.53		
23N03W13C005M	7/12/2022	215.73	213.54	106.95	109.14	106.59		
23N03W13C005M	9/20/2022	215.73	213.54	99.41	101.6	114.13		
23N03W13C005M	11/21/2022	215.73	213.54	87.66	89.85	125.88		
23N03W13C005M	12/16/2022	215.73	213.54	84.81	87	128.73		
23N03W13C006M	5/11/2022	215.59	213.54	81.63	83.68	131.91		
23N03W13C006M	6/14/2022	215.59	213.54	87.2	89.25	126.34		
23N03W13C006M	7/12/2022	215.59	213.54	92.59	94.64	120.95		
23N03W13C006M	9/20/2022	215.59	213.54	99.7	101.75	113.84		
23N03W13C006M	11/21/2022	215.59	213.54	93.65	95.7	119.89		
23N03W13C006M	12/16/2022	215.59	213.54	90.5	92.55	123.04		
23N03W13C007M	5/11/2022	215.25	213.55	21.08	22.78	192.47		
23N03W13C007M	6/14/2022	215.25	213.55	21.9	23.6	191.65		
23N03W13C007M	7/12/2022	215.25	213.55	22.45	24.15	191.1		
23N03W13C007M	9/20/2022	215.25	213.55	23.67	25.37	189.88		
23N03W13C007M	11/21/2022	215.25	213.55	24.45	26.15	189.1		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
23N03W13C007M	12/16/2022	215.25	213.55	24.23	25.93	189.32		
23N03W12L001M	3/9/2022	250.25	249.45	113.3	114.1	136.15		
23N03W12L001M	8/1/2022	250.25	249.45	123.3	124.1	126.15		
23N03W12L001M	10/13/2022	250.25	249.45	135.1	135.9	114.35	3	
23N03W07F001M	3/14/2022	314.4	312	108.9	111.3	203.1		
23N03W07F001M	8/9/2022	314.4	312	125.5	127.9	186.5		
23N03W07F001M	10/18/2022	314.4	312	124	126.4	188		
24N03W35P005M	3/9/2022	251.46	249.46	56.72	58.72	192.74		
24N03W35P005M	5/11/2022	251.46	249.46	60.11	62.11	189.35		
24N03W35P005M	6/14/2022	251.46	249.46	65.04	67.04	184.42		
24N03W35P005M	7/12/2022	251.46	249.46	68.9	70.9	180.56		
24N03W35P005M	8/3/2022	251.46	249.46	71.18	73.18	178.28		
24N03W35P005M	9/20/2022	251.46	249.46	74.12	76.12	175.34		
24N03W35P005M	10/17/2022	251.46	249.46	73.5	75.5	175.96		
24N03W35P005M	11/23/2022	251.46	249.46	71.05	73.05	178.41		
24N03W35P005M	12/16/2022	251.46	249.46	68.9	70.9	180.56		
24N04W34P001M	3/11/2022	440.8	439	219.6	221.4	219.4		
24N04W34P001M	10/18/2022	440.8	439	244.4	246.2	194.6		
24N04W33P001M	8/4/2022	424.56	423.56	244	245	179.56		
24N03W35P004M	3/9/2022	253.46	252.46	61.1	62.1	191.36		
24N03W35P004M	8/3/2022	253.46	252.46	75	76	177.46		
24N03W35P004M	10/17/2022	253.46	252.46	79	80	173.46		
24N04W34K001M	3/11/2022	421.5	420	199.8	201.3	220.2		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
24N04W34K001M	10/18/2022	421.5	420	226.2	227.7	193.8		
24N04W36G001M	8/9/2022	362.2	360	191.9	194.1	168.1		
24N04W36G001M	10/18/2022	362.2	360	174.8	177	185.2		
24N02W29N003M	5/11/2022	213.76	212.46	76.4	77.7	136.06		
24N02W29N003M	6/14/2022	213.76	212.46	89.9	91.2	122.56	2	
24N02W29N003M	7/12/2022	213.76	212.46	86.2	87.5	126.26		
24N02W29N003M	9/15/2022	213.76	212.46	85	86.3	127.46		
24N02W29N003M	11/23/2022	213.76	212.46	66.65	67.95	145.81		
24N02W29N003M	12/16/2022	213.76	212.46	63.73	65.03	148.73		
24N02W29N004M	5/11/2022	213.45	212.45	69.56	70.56	142.89		
24N02W29N004M	6/14/2022	213.45	212.45	85.65	86.65	126.8	2	
24N02W29N004M	7/12/2022	213.45	212.45	93.48	94.48	118.97		
24N02W29N004M	9/15/2022	213.45	212.45	96.25	97.25	116.2		
24N02W29N004M	11/23/2022	213.45	212.45	69.5	70.5	142.95		
24N02W29N004M	12/16/2022	213.45	212.45	64.32	65.32	148.13		
24N02W30P002M	3/9/2022	228.24	227.44	70.3	71.1	157.14		
24N02W30P002M	8/3/2022	228.24	227.44	106.1	106.9	121.34	2	
24N02W30P002M	10/17/2022	228.24	227.44	93.9	94.7	133.54		
24N03W26K001M	3/9/2022	283.46	282.46	88.9	89.9	193.56		
24N03W26K001M	8/3/2022	283.46	282.46	108.2	109.2	174.26	1	
24N03W26K001M	9/20/2022	283.46	282.46	101.4	102.4	181.06		
24N05W23L001M	8/4/2022	530.9	530	181.7	182.6	348.3		
24N05W23L001M	10/11/2022	530.9	530	183.6	184.5	346.4		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
24N03W24E001M	3/9/2022	298.45	297.45	123.2	124.2	174.25		
24N03W24E001M	5/13/2022	298.45	297.45	129.9	130.9	167.55		
24N03W24E001M	6/16/2022	298.45	297.45	136.3	137.3	161.15		
24N03W24E001M	7/12/2022	298.45	297.45	139.1	140.1	158.35		
24N03W24E001M	8/4/2022	298.45	297.45	142.8	143.8	154.65		
24N03W24E001M	9/13/2022	298.45	297.45	149.9	150.9	147.55		
24N03W24E001M	10/11/2022	298.45	297.45	148.7	149.7	148.75		
24N03W24E001M	11/16/2022	298.45	297.45	137.2	138.2	160.25		
24N03W24E001M	12/13/2022	298.45	297.45	136.3	137.3	161.15		
24N04W14N002M	3/14/2022	375.52	375.02	128.88	129.38	246.14		
24N04W14N002M	8/4/2022	375.52	375.02	147.7	148.2	227.32		
24N04W14N002M	10/11/2022	375.52	375.02	145.8	146.3	229.22		
24N03W17M002M	3/11/2022	316.8	315.5	112.2	113.5	203.3		
24N03W17M002M	10/18/2022	316.8	315.5	136.7	138	178.8		
24N03W16A001M	3/11/2022	290.47	290.97	90.2	89.7	200.77		
24N03W16A001M	5/11/2022	290.47	290.97	95.1	94.6	195.87		
24N03W16A001M	6/15/2022	290.47	290.97	104.3	103.8	186.67		
24N03W16A001M	7/12/2022	290.47	290.97	109.2	108.7	181.77		
24N03W16A001M	8/4/2022	290.47	290.97	113	112.5	177.97		
24N03W16A001M	9/20/2022	290.47	290.97	111.2	110.7	179.77		
24N03W16A001M	10/11/2022	290.47	290.97	110.6	110.1	180.37		
24N03W16A001M	11/23/2022	290.47	290.97	104.3	103.8	186.67		
24N03W16A001M	12/16/2022	290.47	290.97	100.6	100.1	190.37		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
24N03W15A001M	3/10/2022	280.8	278	78.45	81.25	199.55		
24N03W15A001M	5/11/2022	280.8	278	88	90.8	190		
24N03W15A001M	6/15/2022	280.8	278	97.25	100.05	180.75		
24N03W15A001M	7/12/2022	280.8	278	106.26	109.06	171.74		
24N03W15A001M	8/1/2022	280.8	278	106.28	109.08	171.72		
24N03W15A001M	9/15/2022	280.8	278	114.6	117.4	163.4		
24N03W15A001M	10/11/2022	280.8	278	110.07	112.87	167.93		
24N03W15A001M	10/19/2022	280.8	278	107.32	110.12	170.68		
24N03W15A002M	3/10/2022	280.9	278	79.55	82.45	198.45		
24N03W15A002M	5/11/2022	280.9	278	85.65	88.55	192.35		
24N03W15A002M	6/15/2022	280.9	278	95.48	98.38	182.52		
24N03W15A002M	7/12/2022	280.9	278	104.14	107.04	173.86		
24N03W15A002M	8/1/2022	280.9	278	106.29	109.19	171.71		
24N03W15A002M	9/15/2022	280.9	278	113.2	116.1	164.8		
24N03W15A002M	10/11/2022	280.9	278	107.28	110.18	170.72		
24N03W15A002M	10/19/2022	280.9	278	105.7	108.6	172.3		
24N03W15A003M	3/10/2022	281	278	79.59	82.59	198.41		
24N03W15A003M	5/11/2022	281	278	85.43	88.43	192.57		
24N03W15A003M	6/15/2022	281	278	94.95	97.95	183.05		
24N03W15A003M	7/12/2022	281	278	102.66	105.66	175.34		
24N03W15A003M	8/1/2022	281	278	106.13	109.13	171.87		
24N03W15A003M	9/15/2022	281	278	111.4	114.4	166.6		
24N03W15A003M	10/11/2022	281	278	106.67	109.67	171.33		

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
24N03W15A003M	10/19/2022	281	278	105.18	108.18	172.82		
24N03W15A004M	3/10/2022	281.2	278	79.68	82.88	198.32		
24N03W15A004M	5/11/2022	281.2	278	85.15	88.35	192.85		
24N03W15A004M	6/15/2022	281.2	278	94.3	97.5	183.7		
24N03W15A004M	7/12/2022	281.2	278	102.05	105.25	175.95		
24N03W15A004M	8/1/2022	281.2	278	105.54	108.74	172.46		
24N03W15A004M	9/15/2022	281.2	278	110.93	114.13	167.07		
24N03W15A004M	10/11/2022	281.2	278	106.58	109.78	171.42		
24N03W15A004M	10/19/2022	281.2	278	105.3	108.5	172.7		
24N02W17A001M	3/10/2022	212.2	211	45.2	46.4	165.8	1	
24N02W17A001M	8/3/2022	212.2	211	46.6	47.8	164.4		
24N03W14B001M	3/10/2022	294.05	292.45	97	98.6	195.45		
24N03W03R002M	3/10/2022	279.46	278.46	69.17	70.17	209.29		
24N03W03R002M	5/11/2022	279.46	278.46	75.12	76.12	203.34		
24N03W03R002M	6/15/2022	279.46	278.46	80.84	81.84	197.62		
24N03W03R002M	7/12/2022	279.46	278.46	87.4	88.4	191.06		
24N03W03R002M	8/1/2022	279.46	278.46	87.8	88.8	190.66		
24N03W03R002M	9/15/2022	279.46	278.46	90	91	188.46		
24N03W03R002M	10/11/2022	279.46	278.46	88.4	89.4	190.06		
24N03W03R002M	11/23/2022	279.46	278.46	84.9	85.9	193.56	1	
24N03W03R002M	12/16/2022	279.46	278.46	80.81	81.81	197.65		
24N03W02R001M	3/10/2022	257.45	257.45	67.18	67.18	190.27		
24N03W02R001M	5/11/2022	257.45	257.45	77.5	77.5	179.95	1	

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

Water Level Data for Water Year 2022								
Well ID	Measure Date	RPE (ft amsl)	GSE (ft amsl)	DTW (ft bgs)	DTW (ft brp)	WSE (ft amsl)	WL QM CD[1]	Comments
24N03W02R001M	7/12/2022	257.45	257.45	75	75	182.45		
24N03W02R001M	9/15/2022	257.45	257.45	80.5	80.5	176.95		
24N03W02R001M	10/11/2022	257.45	257.45	81	81	176.45		
24N03W02R001M	11/23/2022	257.45	257.45	79.5	79.5	177.95		
24N03W02R001M	12/16/2022	257.45	257.45	78	78	179.45		
25N02W31K001M	3/10/2022	234	233	48.04	49.04	184.96		
25N02W31K001M	8/1/2022	234	233	59.8	60.8	173.2	2	
25N03W36H001M	3/10/2022	241	240	52.7	53.7	187.3		
25N03W36H001M	10/11/2022	241	240	64.75	65.75	175.25		
25N02W31G002M	3/10/2022	224	223	30	31	193		
25N02W31G002M	8/1/2022	224	223	37.7	38.7	185.3		
22N02W02K001M	3/7/2022	172	171	36	37	135		
22N02W02K001M	8/2/2022	172	171	59	60	112		Nearby pumping? Tape hung up at ~68'
22N02W02K001M	10/11/2022	172	171	46.8	47.8	124.2		Run 13

[1]WL QM CD: 1-Pumping, 2-Nearby pump operating, 3-Casing leaking or wet, 4-Pumped recently, 6-Other, 8-Oil or foreign substance in casing

APPENDIX C

DWR Upload Tables

A. Groundwater Extractions

Total Groundwater Extractions (AF)	Water Use Sector Urban (AF)	Water Use Sector Industrial (AF)	Water Use Sector Agricultural (AF)	Water Use Sector Managed Wetlands (AF)	Water Use Sector Managed Recharge (AF)	Water Use Sector Native Vegetation (AF)	Water Use Sector Other (AF)	Water Use Sector Other Description
242,120	4,600	0	230,000	0	0	7,300	220	Rural Residential

B. Groundwater Extraction Methods

Meters Volume (AF)	Meters Description	Meters Type	Meters Accuracy (%)	Meters Accuracy Description	Electrical Records Volume (AF)	Electrical Records Description	Electrical Records Type	Electrical Records Accuracy (%)	Electrical Records Accuracy Description	Land Use Volume (AF)	Land Use Description	Land Use Type	Land Use Accuracy (%)	Land Use Accuracy Description	Groundwater Model Volume (AF)	Groundwater Model Description	Groundwater Model Type	Groundwater Model Accuracy (%)	Groundwater Model Accuracy Description	Other Method(s) Volume (AF)	Other Method(s) Description	Other Method(s) Type	Other Method(s) Accuracy (%)	Other Method(s) Accuracy Description
2,683	Metered municipal wells	Direct	5-10	Metered connections maintained by the City of Corning and Hamilton City	0					0					0					239,437	Where available, groundwater extraction and surface water supplies were quantified directly from measured and reported groundwater pumping, surface water diversions, and deliveries data. However, groundwater extraction data has historically been limited, particularly for privately-owned wells. Thus, a water budget approach has been used to estimate the remaining, unmeasured volume of groundwater extraction that has occurred to meet demand in the Subbasin. Water budget approach used in this Annual Report utilizes available geospatial data and information to quantify crop water demand, precipitation, and other parameters with pixel-scale resolution (30-meter (m) x 30 m), corresponding to the spatial resolution of satellite imagery used in developing these inputs. In addition to geospatial data, available surface water supply and groundwater extraction data is incorporated into the water budget by distributing that water out to specific regions where that water is used (e.g., surface water supplier service areas).	Estimate	20-30 %	The uncertainty of these water budget components is based on typical accuracies given in technical literature and the cumulative estimated accuracy of all inputs used to calculate the components.

C. Surface Water Supply

Total Surface Water Supply (AF)	Methods Used To Determine	Water Source Type Central Valley Project (AF)	Water Source Type State Water Project (AF)	Water Source Type Colorado River Project (AF)	Water Source Type Local Supplies (AF)	Water Source Type Local Imported Supplies (AF)	Water Source Type Recycled Water (AF)	Water Source Type Desalination (AF)	Water Source Type Other (AF)	Water Source Type Other Description
26,120	Surface water supplies are reported directly from water supplier records or collected from publicly available sources (water rights diversion records, etc.) where available.	120	0	0	26,000	0	0	0	0	

D. Total Water Use

Total Water Use (AF)	Methods Used To Determine	Water Source Type Groundwater (AF)	Water Source Type Surface Water (AF)	Water Source Type Recycled Water (AF)	Water Source Type Reused Water (AF)	Water Source Type Other (AF)	Water Source Type Other Description	Water Use Sector Urban (AF)	Water Use Sector Industrial (AF)	Water Use Sector Agricultural (AF)	Water Use Sector Managed Wetlands (AF)	Water Use Sector Managed Recharge (AF)	Water Use Sector Native Vegetation (AF)	Water Use Sector Other (AF)	Water Use Sector Other Description
268,120	Where available, groundwater extraction and surface water supplies were quantified directly from measured and reported groundwater pumping, surface water diversions, and deliveries data. However, groundwater extraction data has historically been limited, particularly for privately-owned wells. Thus, a water budget approach has been used to estimate the remaining, unmeasured volume of groundwater extraction that has occurred to meet demand in the Subbasin. water budget approach used in this Annual Report utilizes available geospatial data and information to quantify crop water demand, precipitation, and other parameters with pixel-scale resolution (30-meter (m) x 30 m), corresponding to the spatial resolution of satellite imagery used in developing these inputs. In addition to geospatial data, available surface water supply and groundwater extraction data is incorporated into the water budget by distributing that water out to specific regions where that water is used (e.g., surface water supplier service areas). Surface water supplies are reported directly from water supplier records or collected from publicly available sources (water rights diversion records, etc.) where available.	242,120	26,000	0	0	0		4,600	0	256,000	0	0	7,300	220	Rural Residential