APPENDIX C

Hydrographs Showing Initial Measurable Objectives and Initial Minimum Thresholds for the Representative Monitoring Well Network (Other than GDE Monitoring Wells)

Locations of Representative Monitoring Wells

Santa Clara River Valley
East Groundwater Basin
Groundwater Sustainability Plan

LEGEND

- Existing Production Well
- Existing Observation Well
- New Observation Well (to be constructed)

Existing Wells

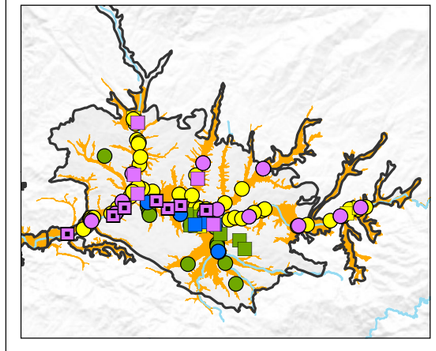
- Alluvial Aquifer
- Saugus Formation Aquifer

Representative Monitoring Well Network

- Alluvial Aquifer
- Saugus Formation Aquifer

All Other Features

- Santa Clara River Valley Groundwater Basin
- Alluvium
- Watershed Boundary
- Service Area Boundary for SCV Water
- Major Road
- Watercourse
- Waterbody



NOTE:
SCV Water: Santa Clarita Valley Water Agency

N

0 3,200 6,400 9,600
Feet

DRAFT

Date: February 5, 2021
Data Sources: USGS, DWR Bulletin 118

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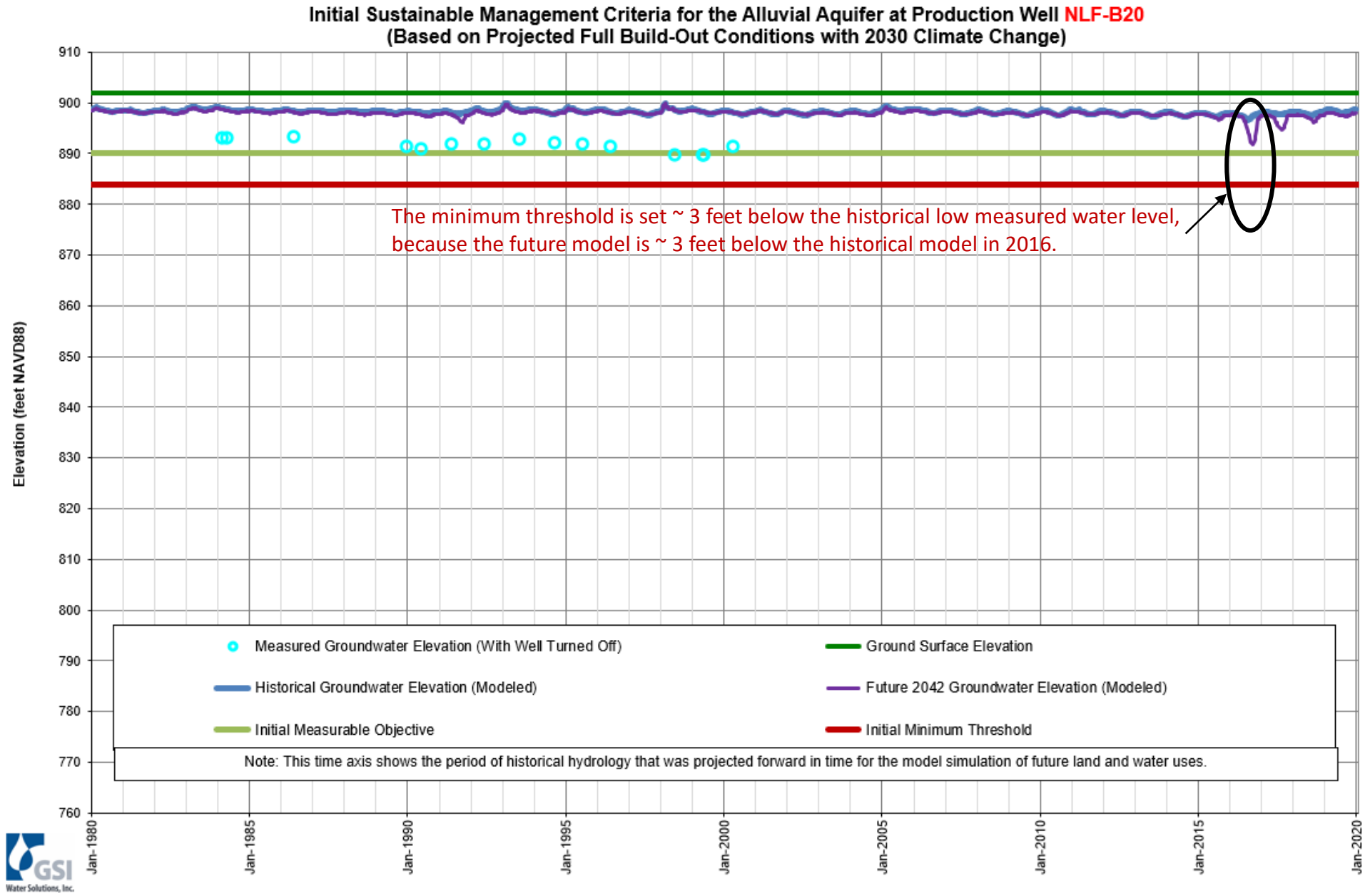
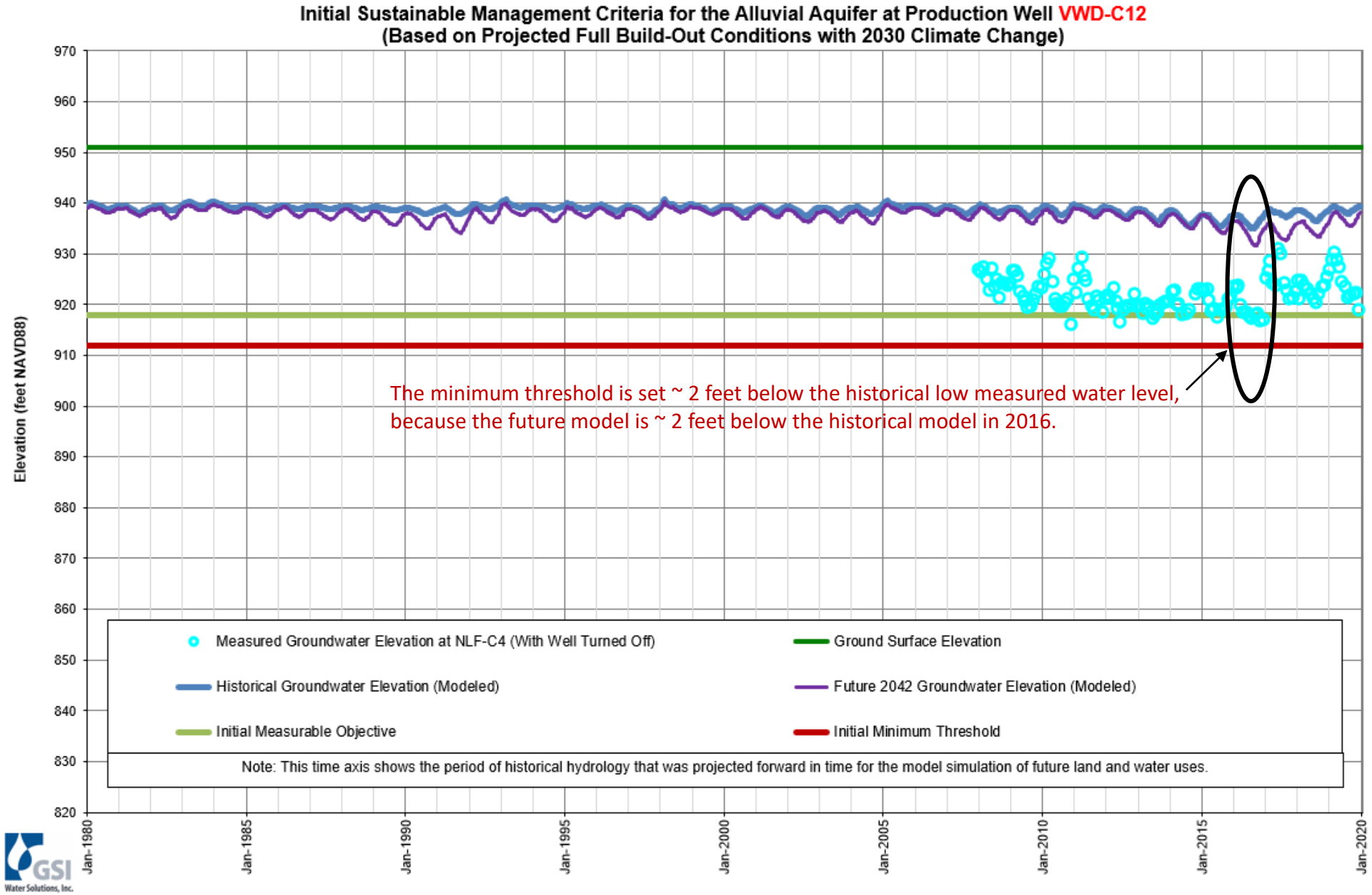
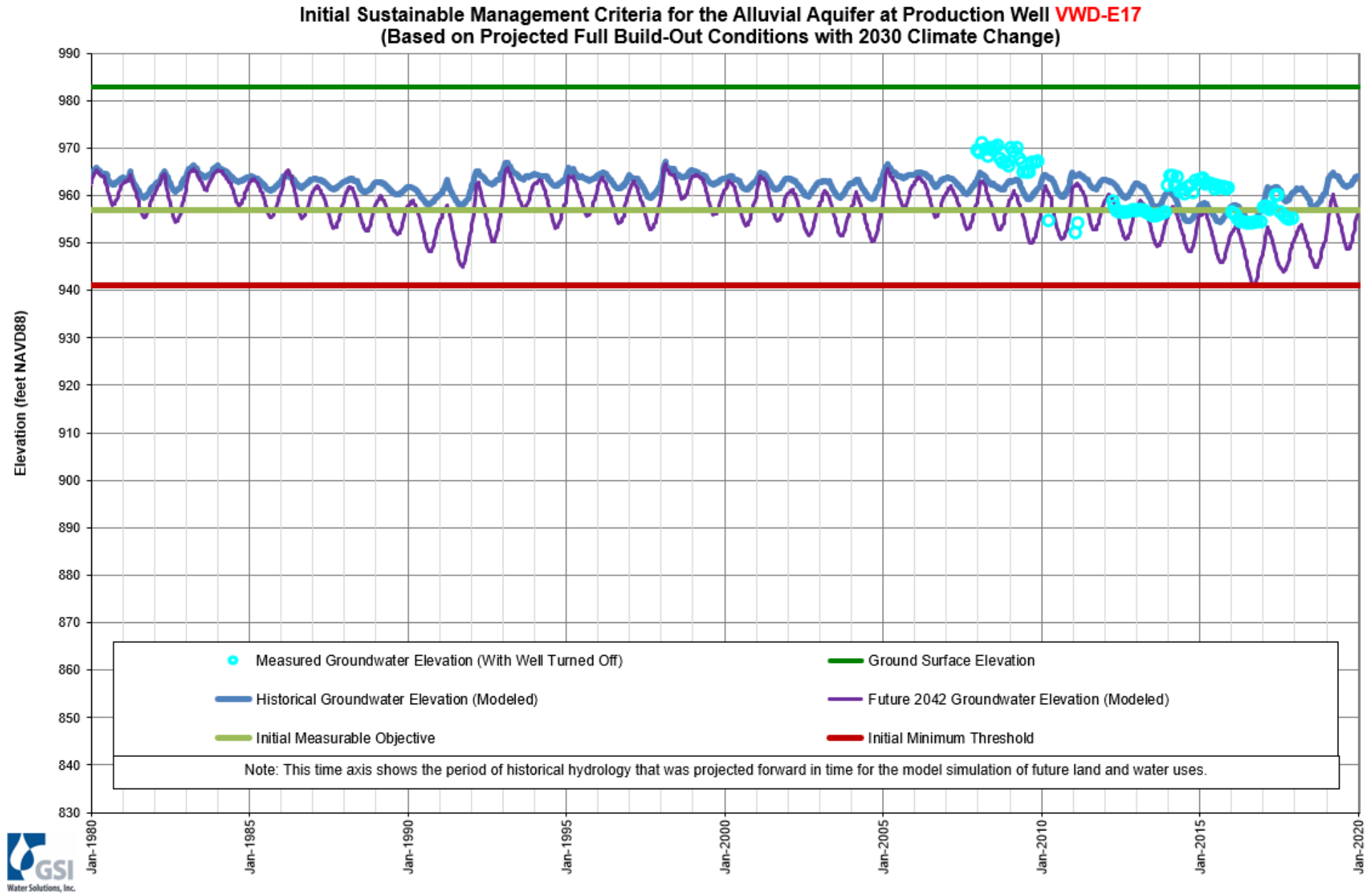
Document Path: Y:\0420_CLWA\Source_Figures\019_EastSubbasinGSP\SCV_Report\Figure7-X_Representative_MWs.mxd, abarry


Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well NLF-B20
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Elevation (feet NAVD88)
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
The minimum threshold is set ~ 3 feet below the historical low measured water level, because the future model is ~ 3 feet below the historical model in 2016.
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.


Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well VWD-C12
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Elevation (feet NAVD88)
970
960
950
940
930
920
910
900
890
880
870
860
850
840
830
820
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
The minimum threshold is set ~ 2 feet below the historical low measured water level,
because the future model is ~ 2 feet below the historical model in 2016.
Measured Groundwater Elevation at NLF-C4 (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.


Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well VWD-E17
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Elevation (feet NAVD88)
990
980
970
960
950
940
930
920
910
900
890
880
870
860
850
840
830
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.
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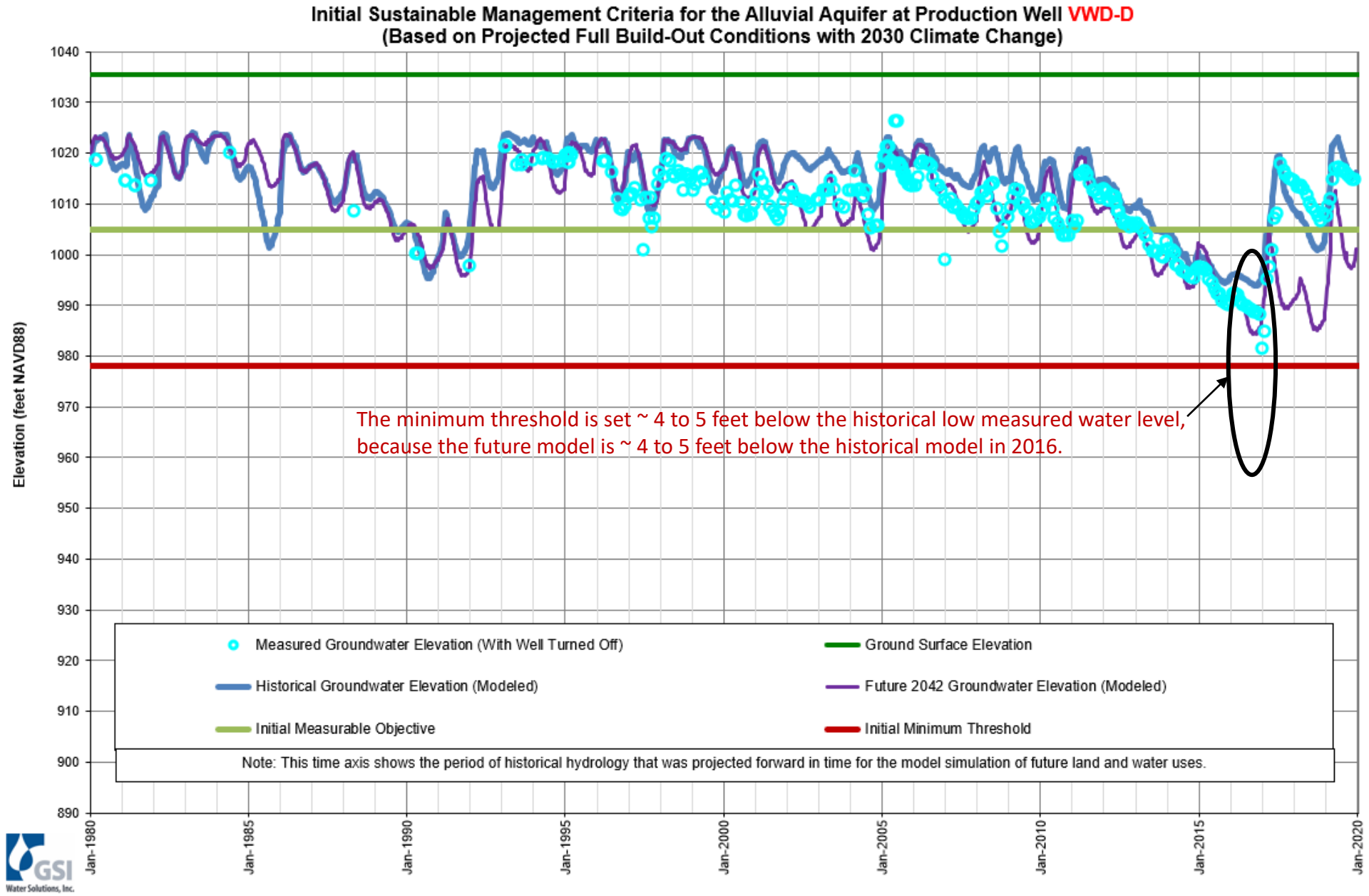
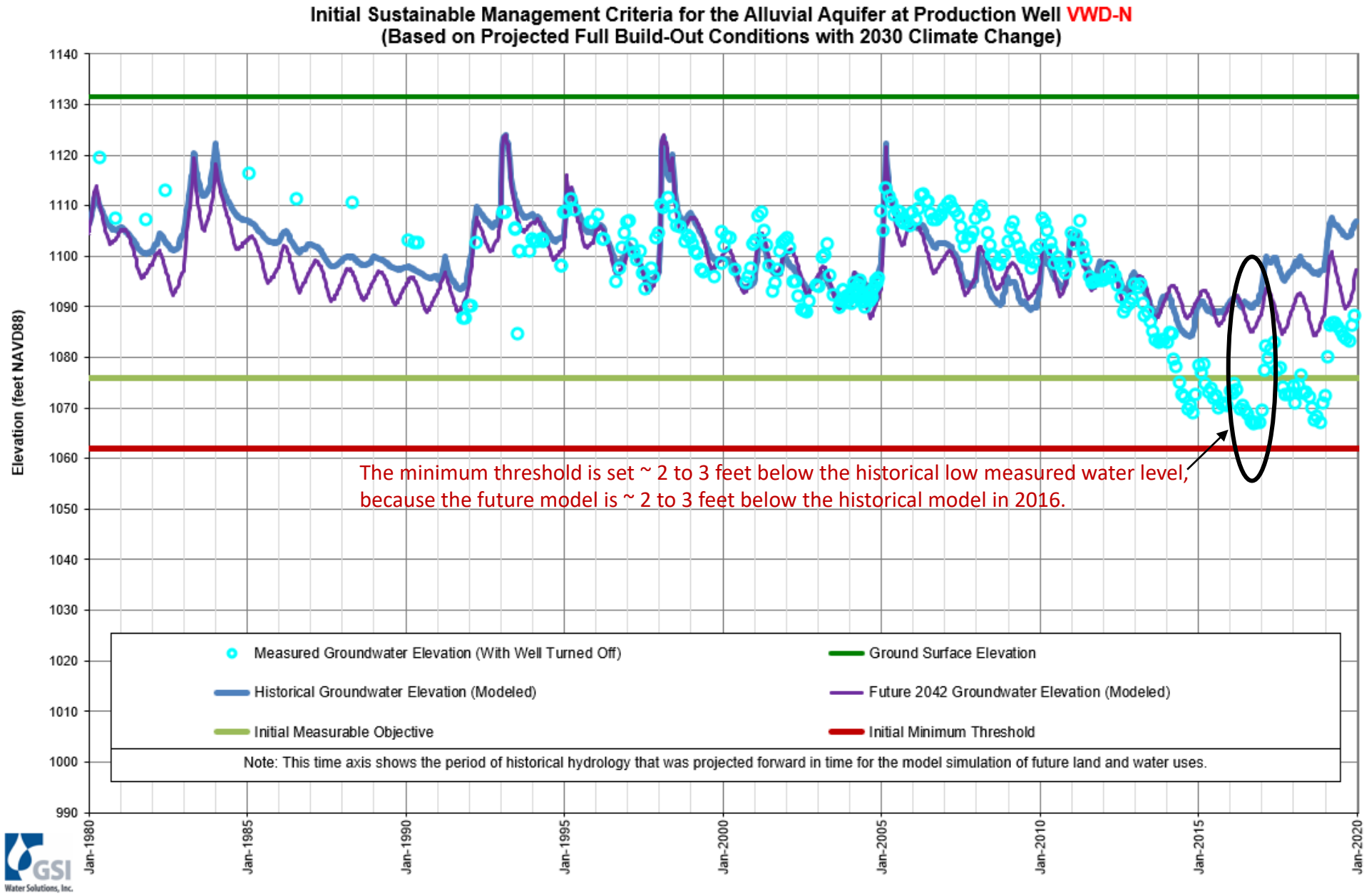
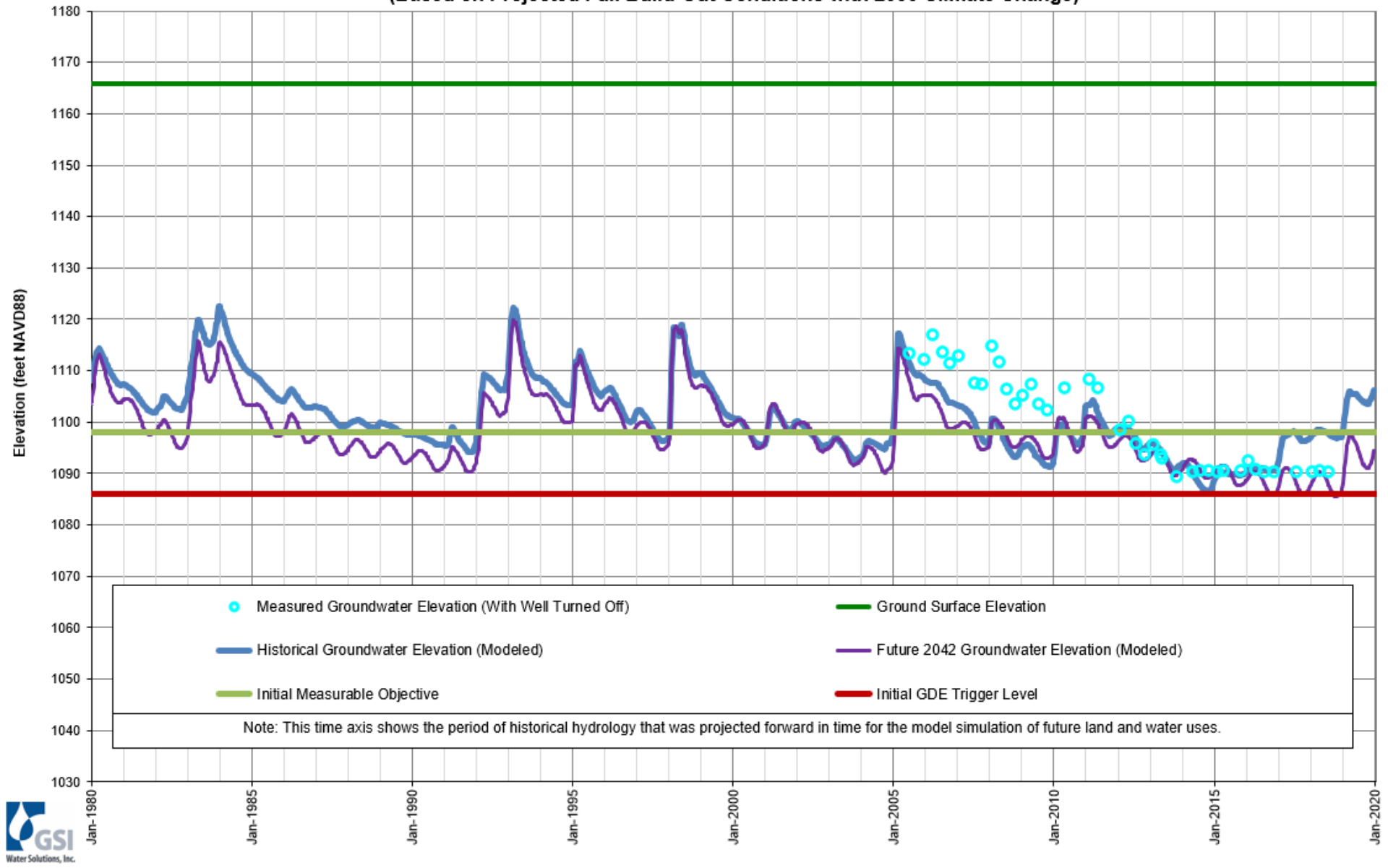

Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well VWD-D
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Elevation (feet NAVD88)
1040
1030
1020
1010
1000
990
980
970
960
950
940
930
920
910
900
890
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
The minimum threshold is set ~ 4 to 5 feet below the historical low measured water level,
because the future model is ~ 4 to 5 feet below the historical model in 2016.
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.


Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well VWD-N
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Elevation (feet NAVD88)
1140
1130
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000
990
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
The minimum threshold is set ~ 2 to 3 feet below the historical low measured water level, because the future model is ~ 2 to 3 feet below the historical model in 2016.
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.

Initial Sustainable Management Criteria for the Alluvial Aquifer at Non-Pumping Observation Well AL-12a
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)



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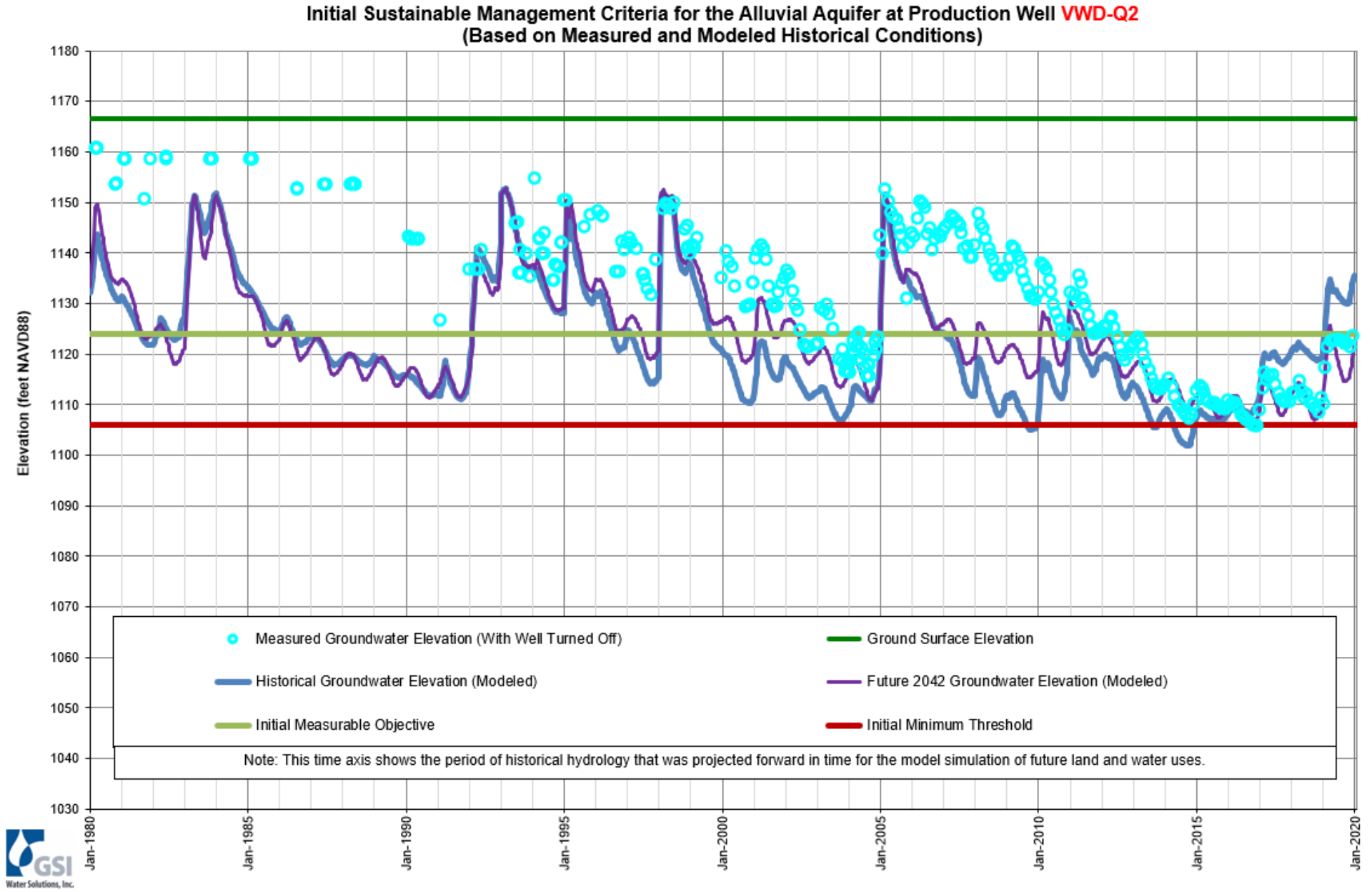
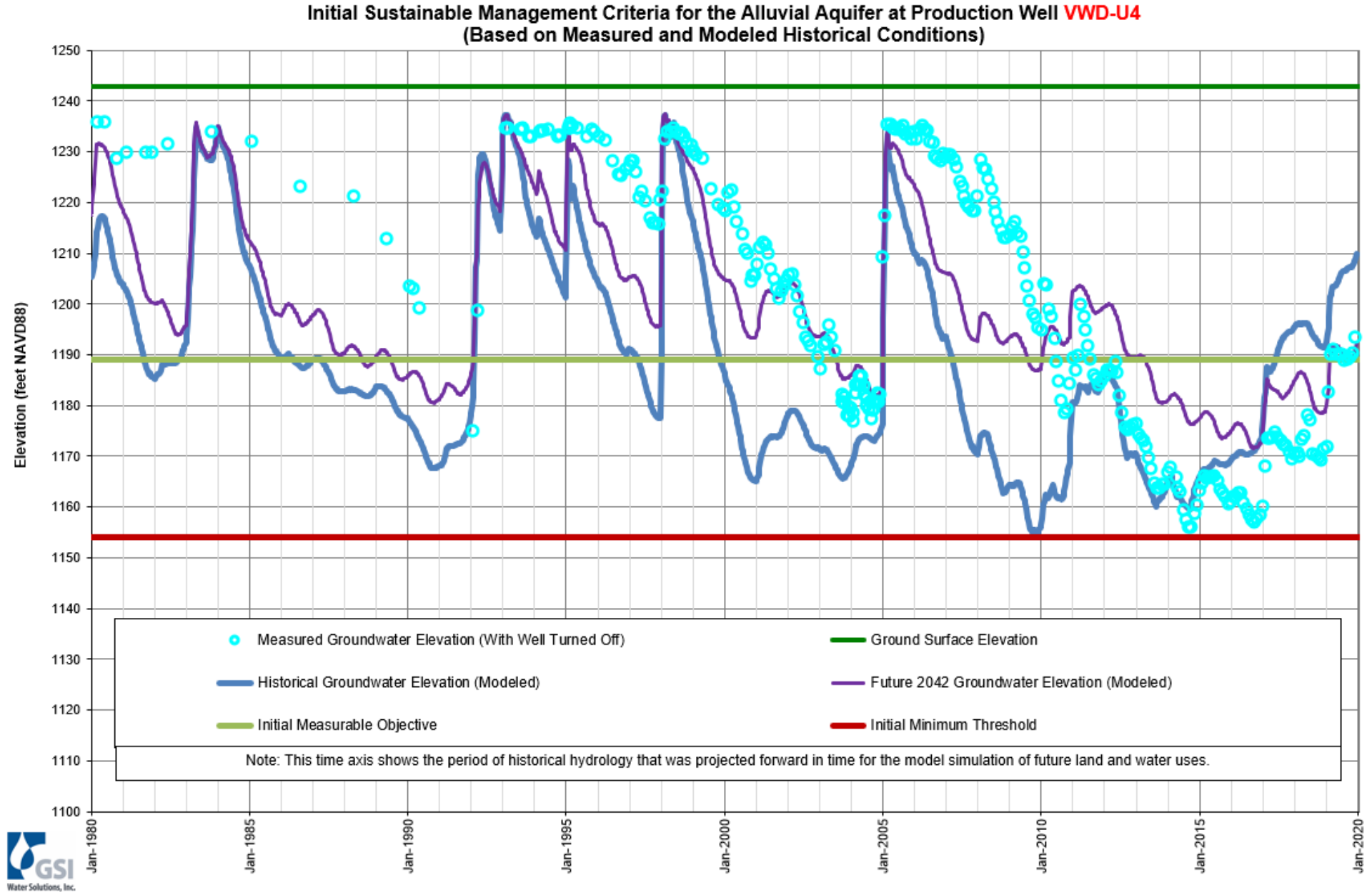

Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well VWD-Q2
(Based on Measured and Modeled Historical Conditions)
Elevation (feet NAVD88)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.


Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well VWD-U4
(Based on Measured and Modeled Historical Conditions)
Elevation (feet NAVD88)
1250
1240
1230
1220
1210
1200
1190
1180
1170
1160
1150
1140
1130
1120
1110
1100
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.
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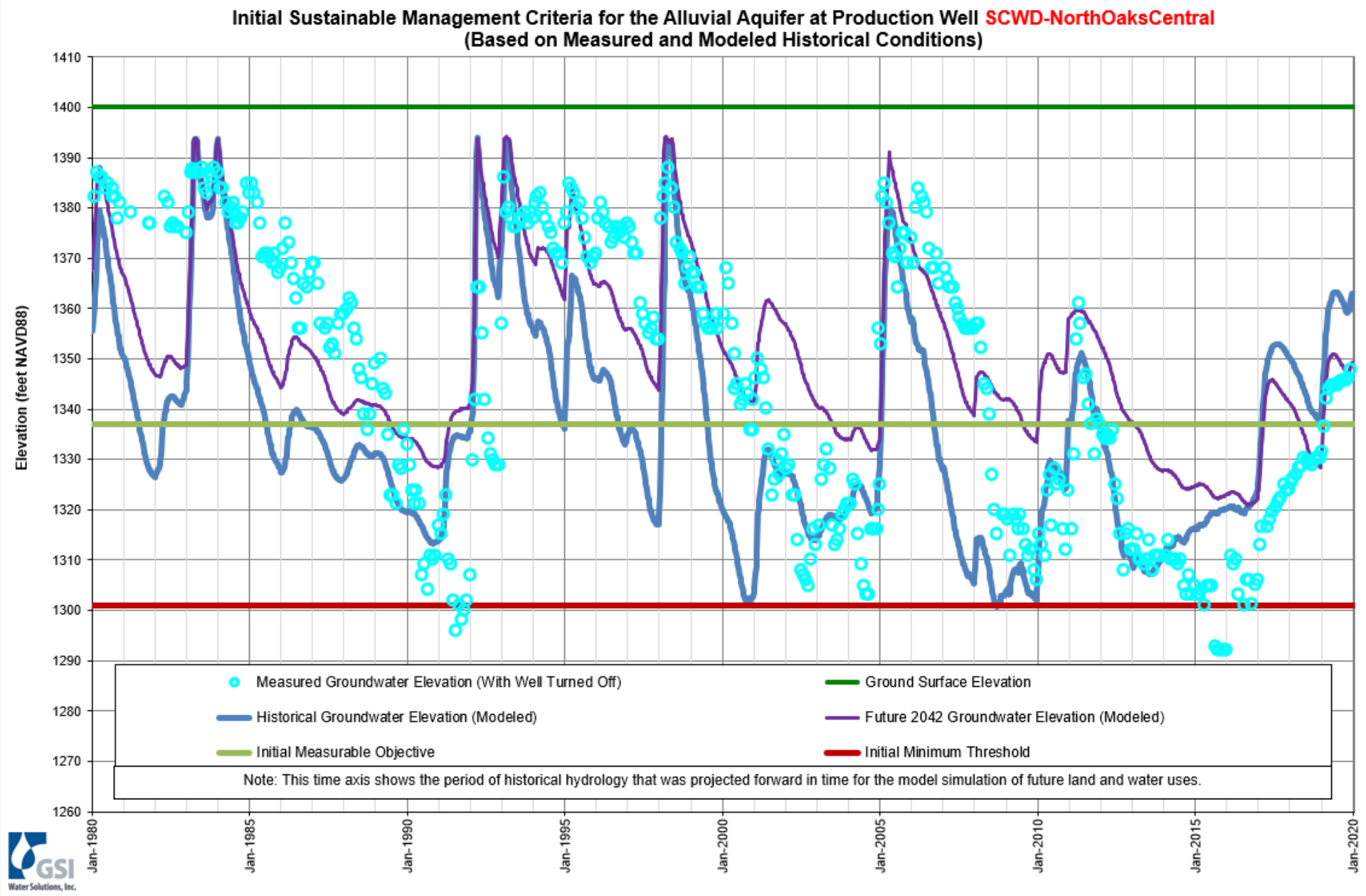
Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well SCWD-NorthOaksCentral
(Based on Measured and Modeled Historical Conditions)
Elevation (feet NAVD88)
1410
1400
1390
1380
1370
1360
1350
1340
1330
1320
1310
1300
1290
1280
1270
1260
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.
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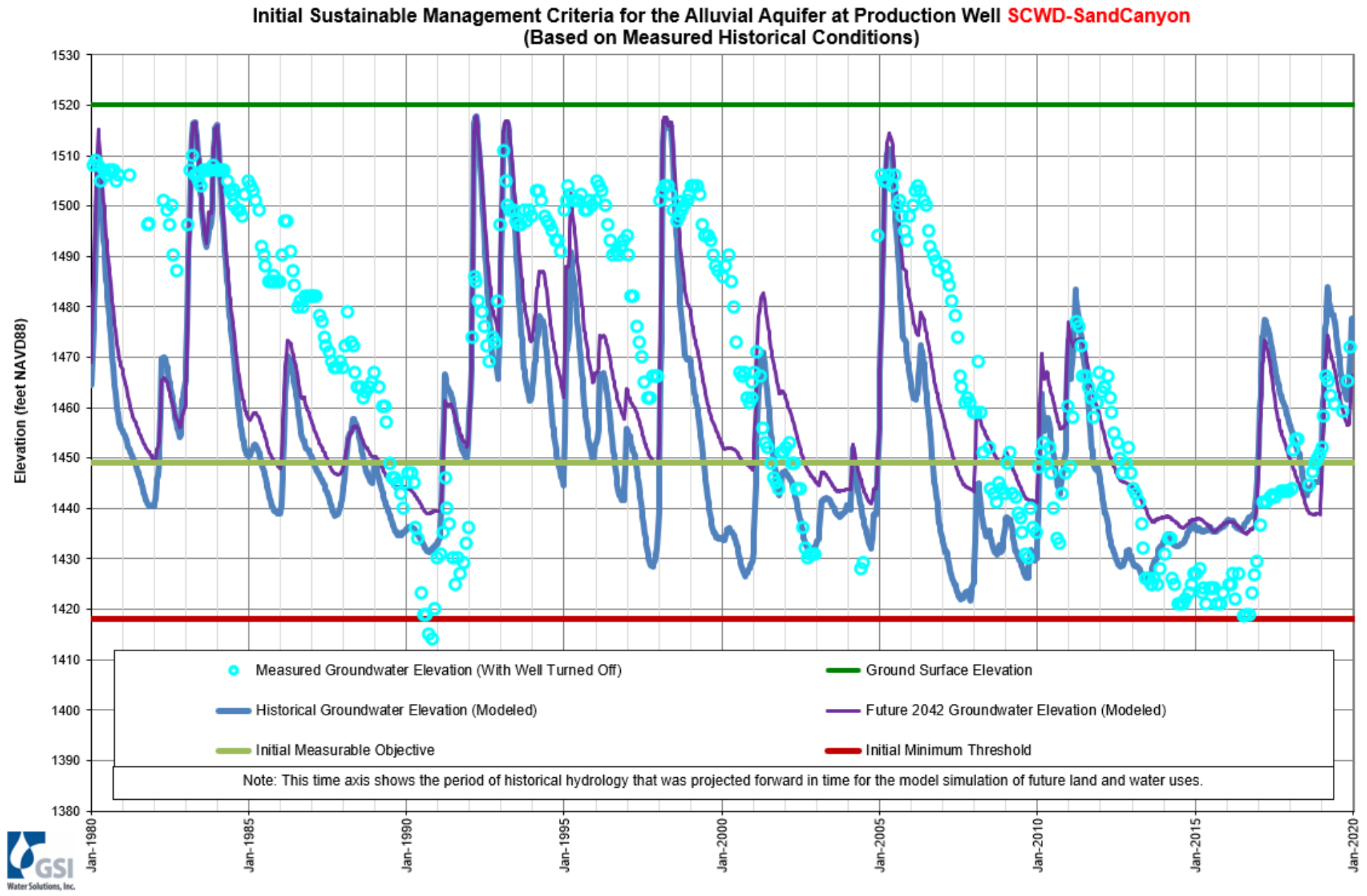
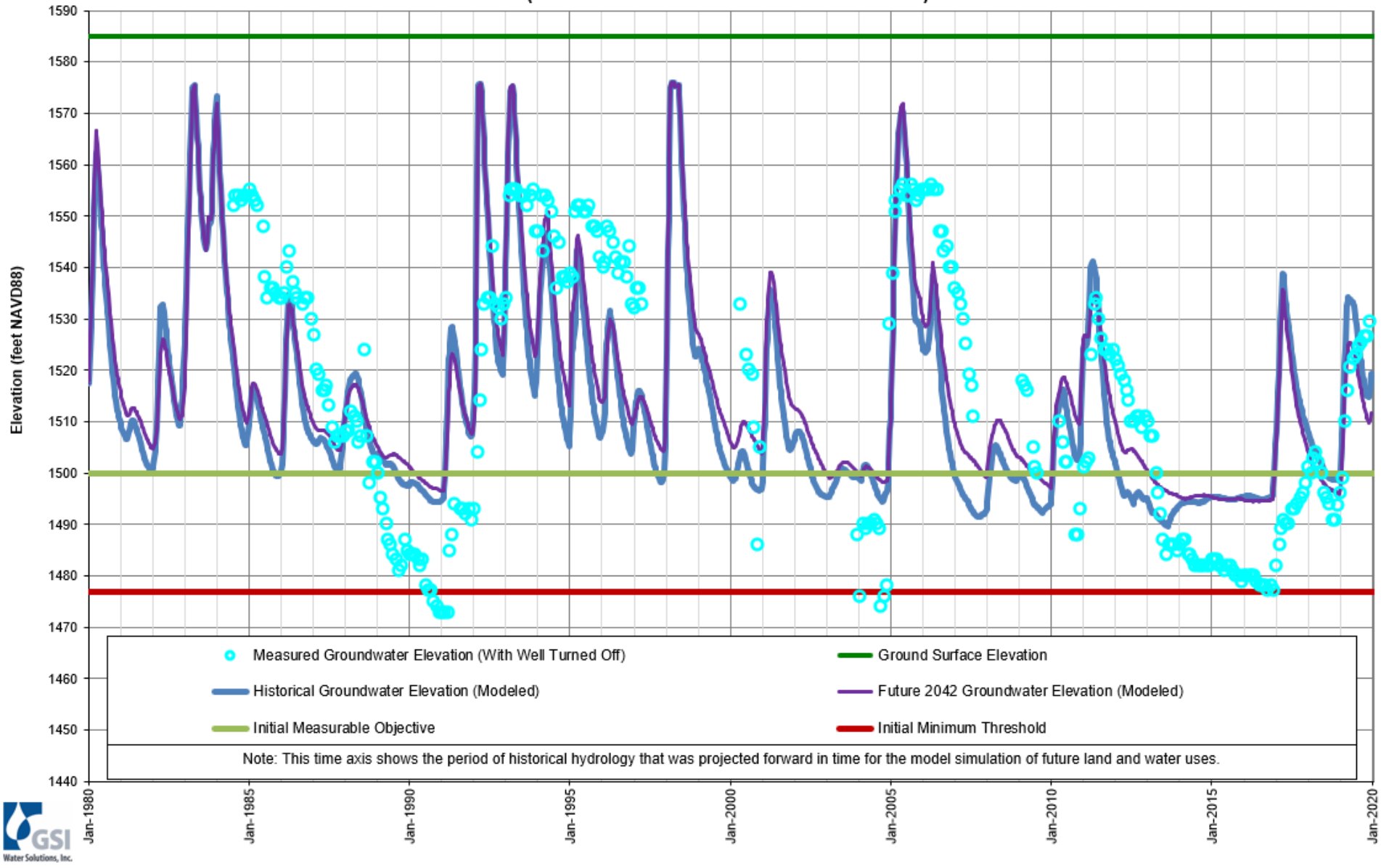

Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well SCWD-SandCanyon
(Based on Measured Historical Conditions)
Elevation (feet NAVD88)
1530
1520
1510
1500
1490
1480
1470
1460
1450
1440
1430
1420
1410
1400
1390
1380
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.

Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well NWD-Pinetree5
(Based on Measured Historical Conditions)



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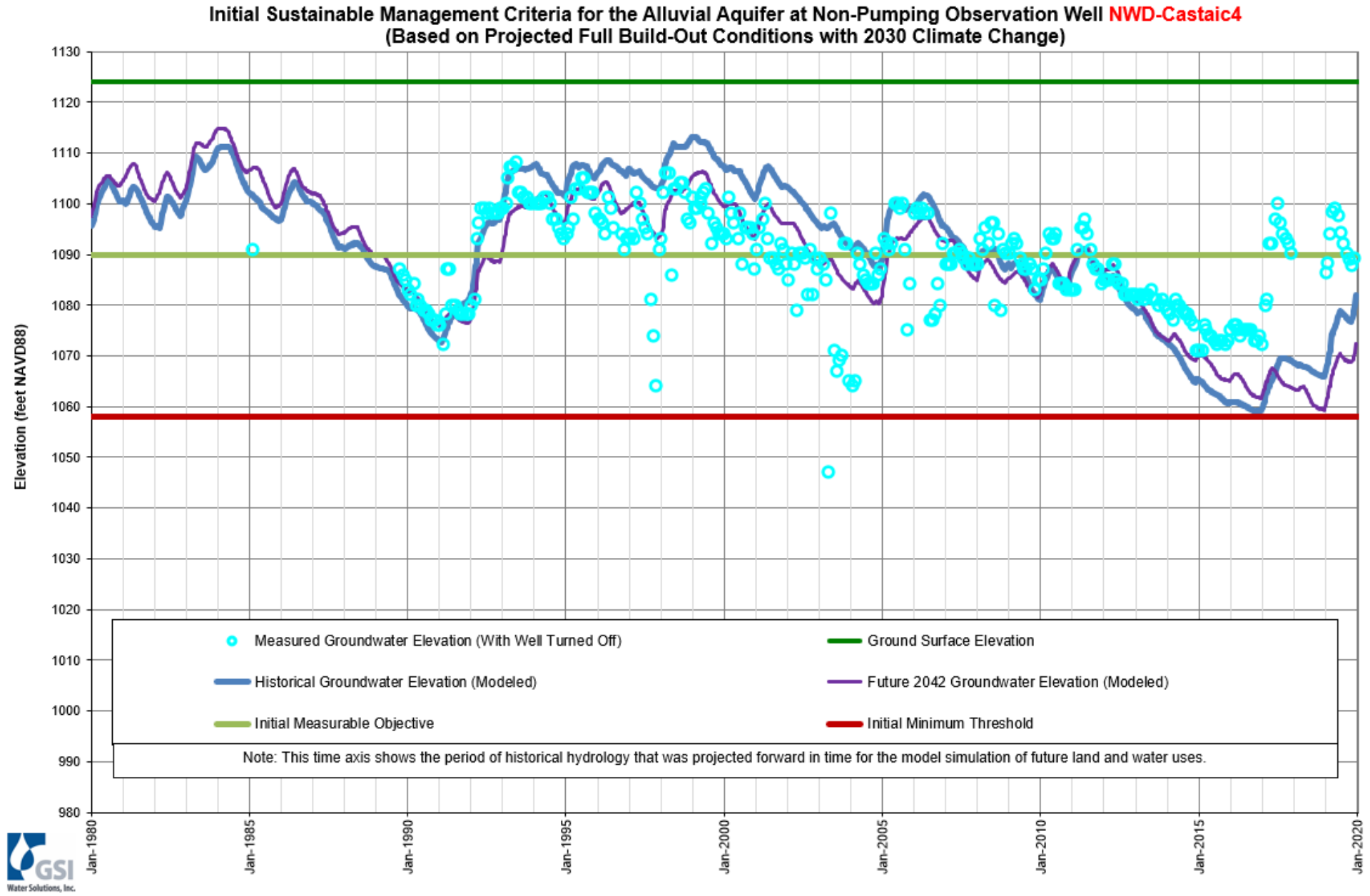
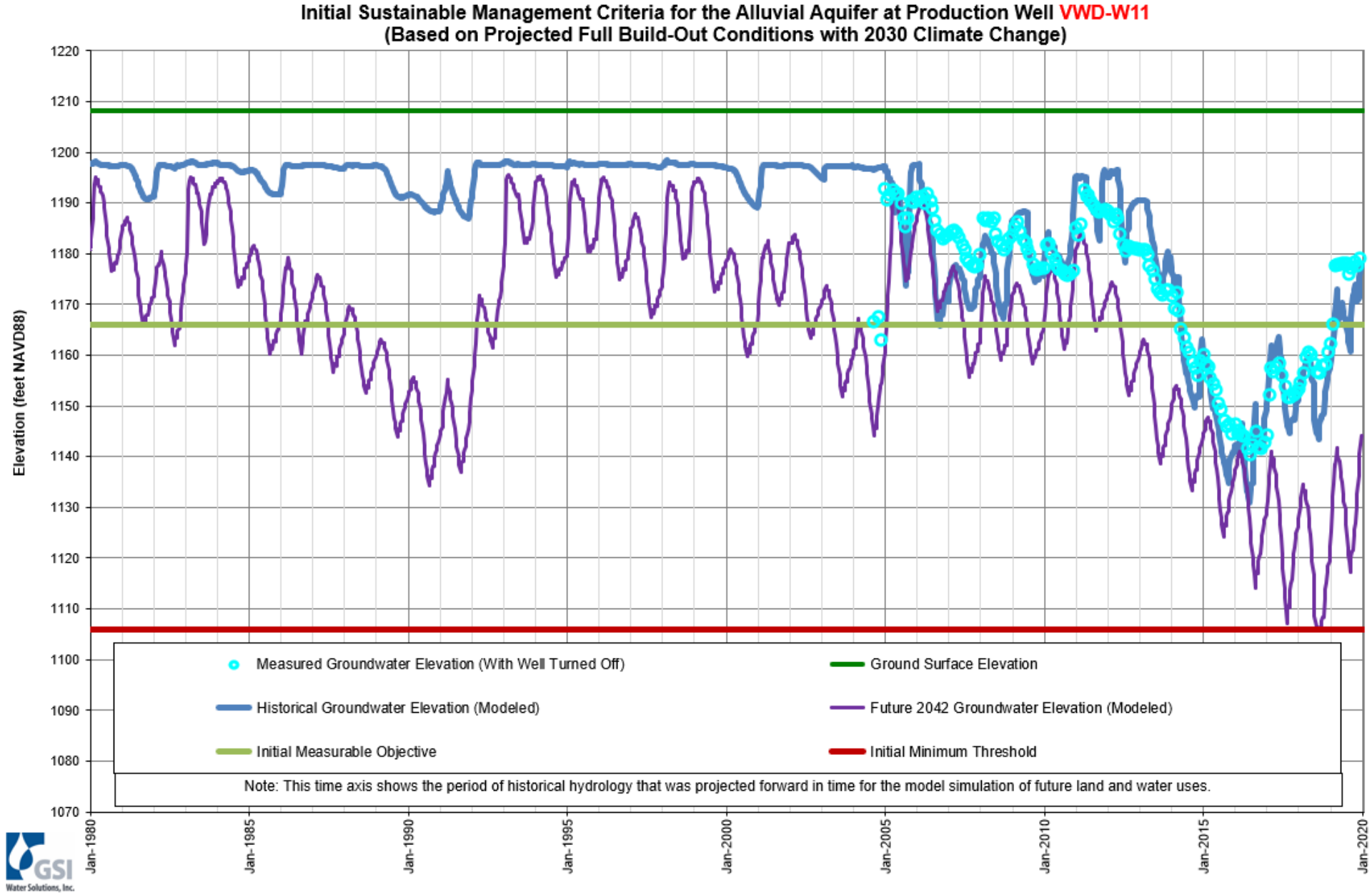

Initial Sustainable Management Criteria for the Alluvial Aquifer at Non-Pumping Observation Well NWD-Castaic4
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Elevation (feet NAVD88)
1130
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000
990
980
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.


Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well VWD-W11
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Elevation (feet NAVD88)
1220
1210
1200
1190
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
1070
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.
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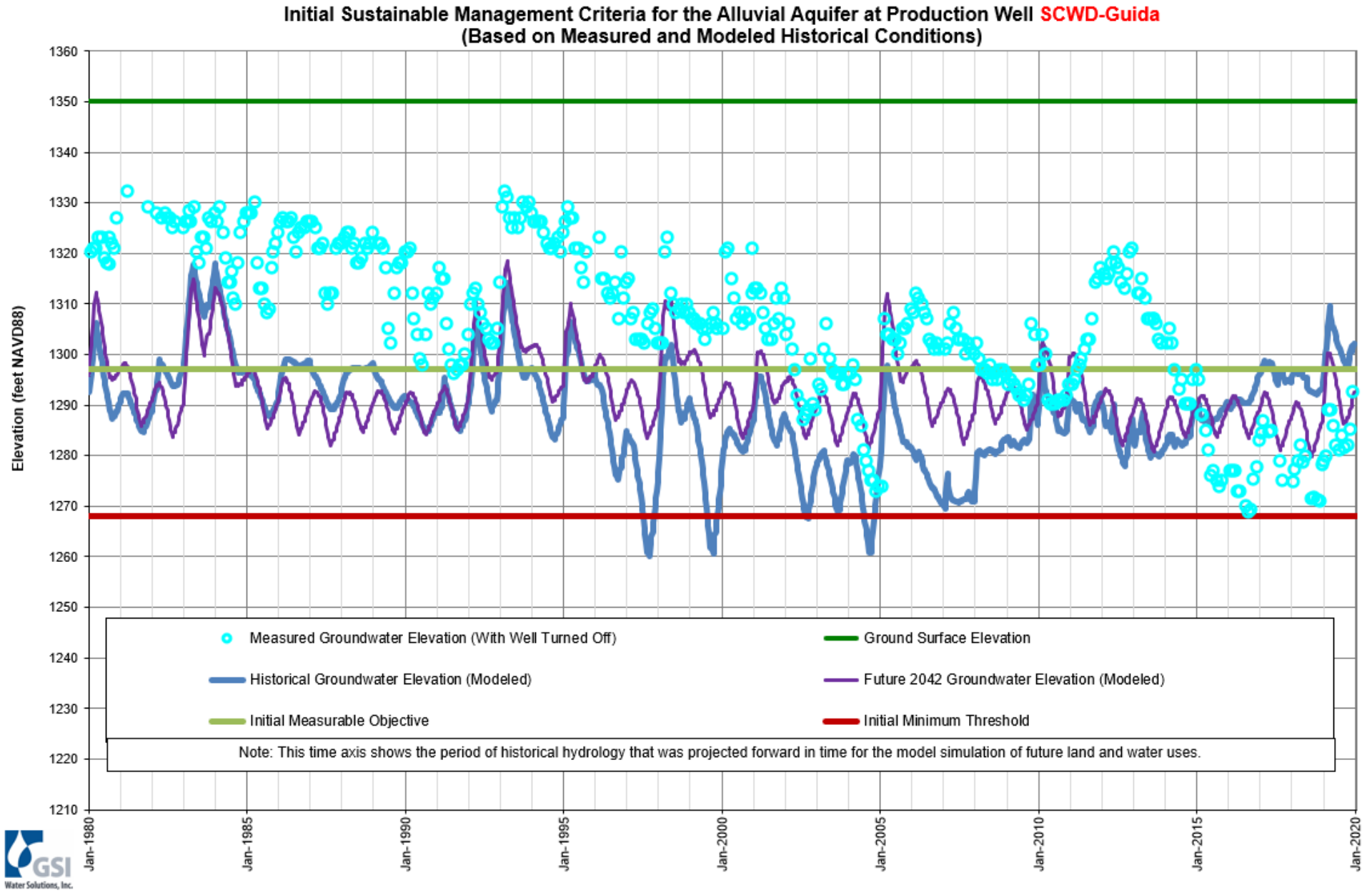
Initial Sustainable Management Criteria for the Alluvial Aquifer at Production Well SCWD-Guida
(Based on Measured and Modeled Historical Conditions)
Elevation (feet NAVD88)
1360
1350
1340
1330
1320
1310
1300
1290
1280
1270
1260
1250
1240
1230
1220
1210
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Ground Surface Elevation
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note: This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.
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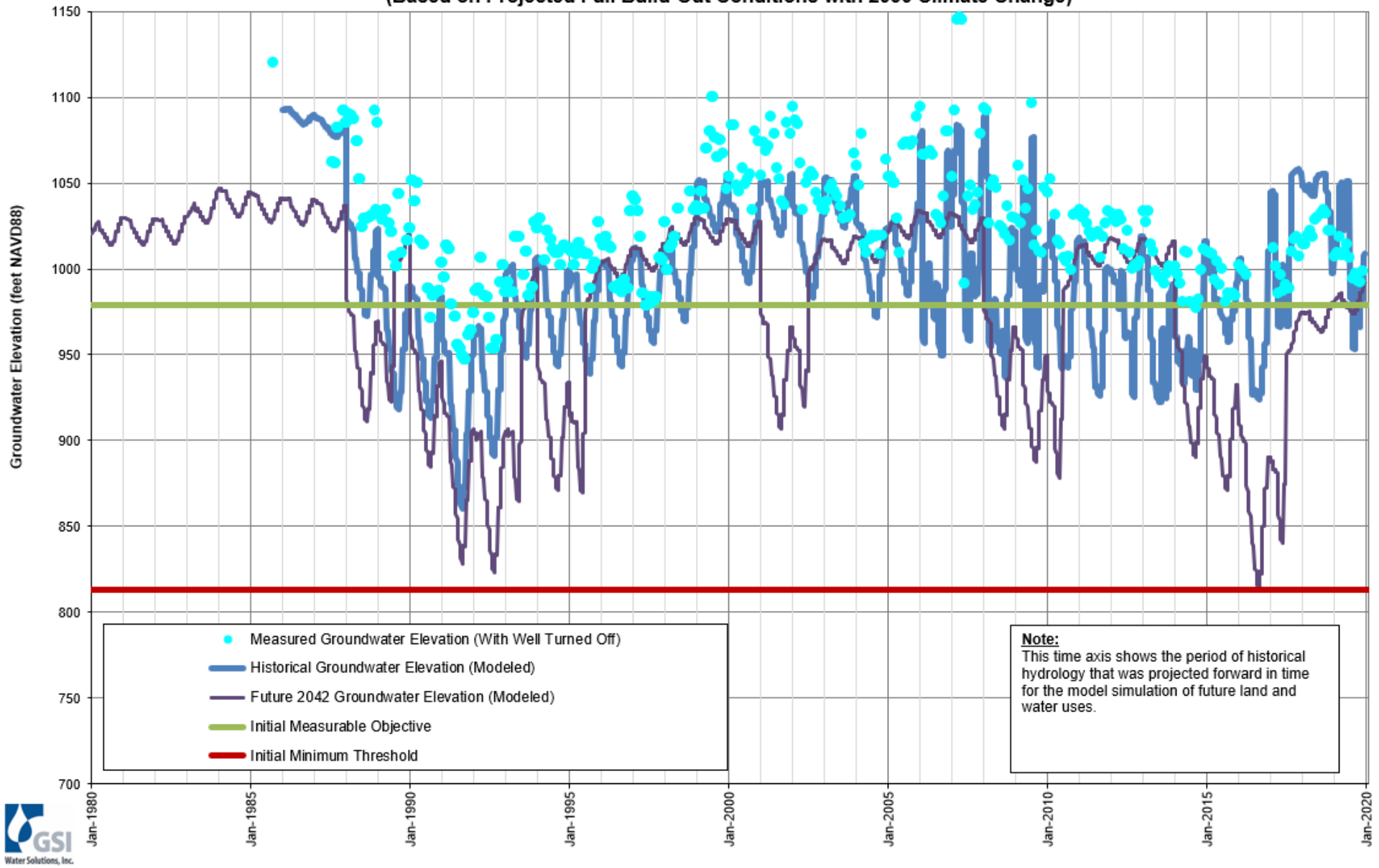
Initial Sustainable Management Criteria for the Saugus Formation at Production Well NWD-12
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)



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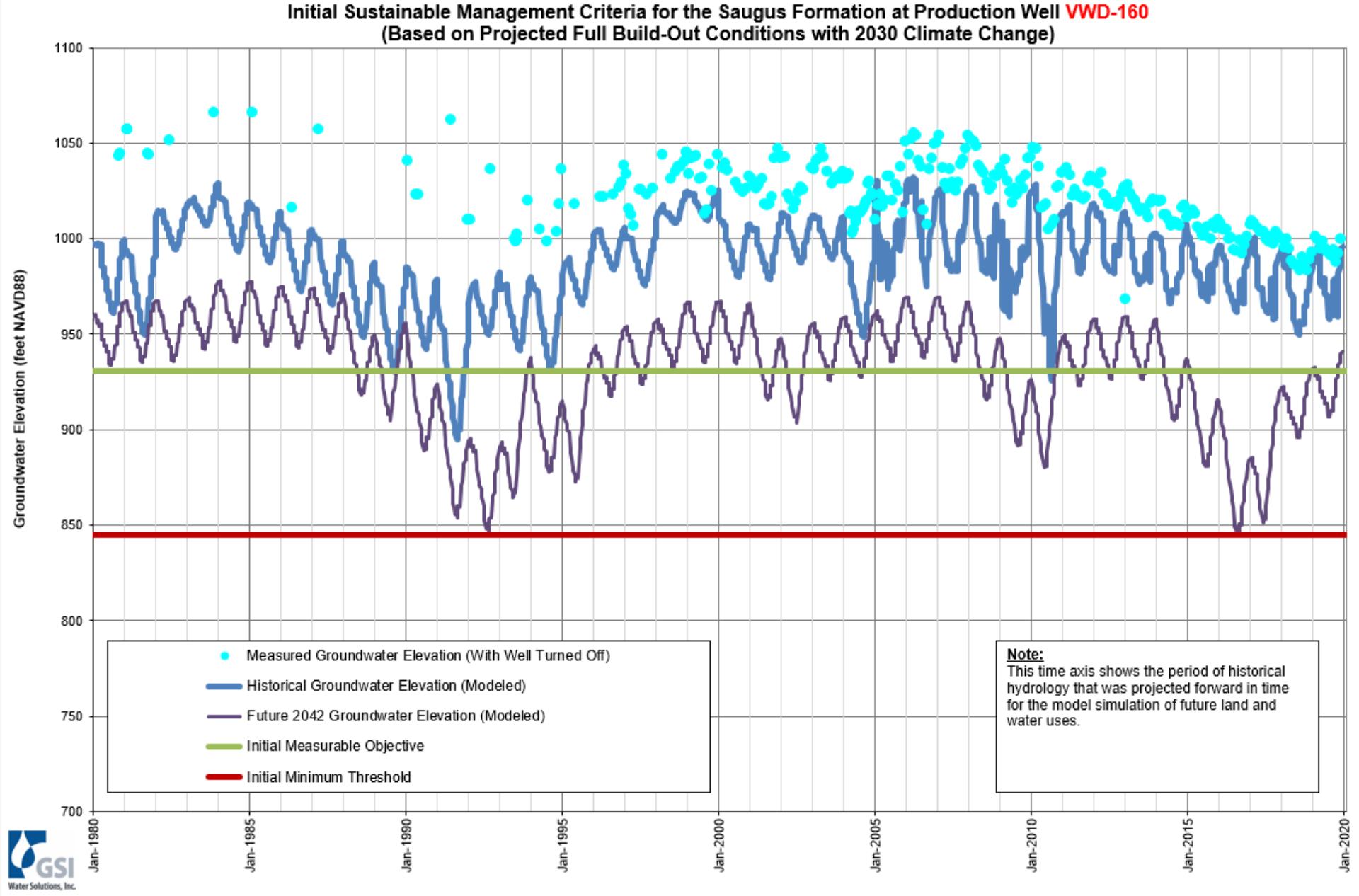
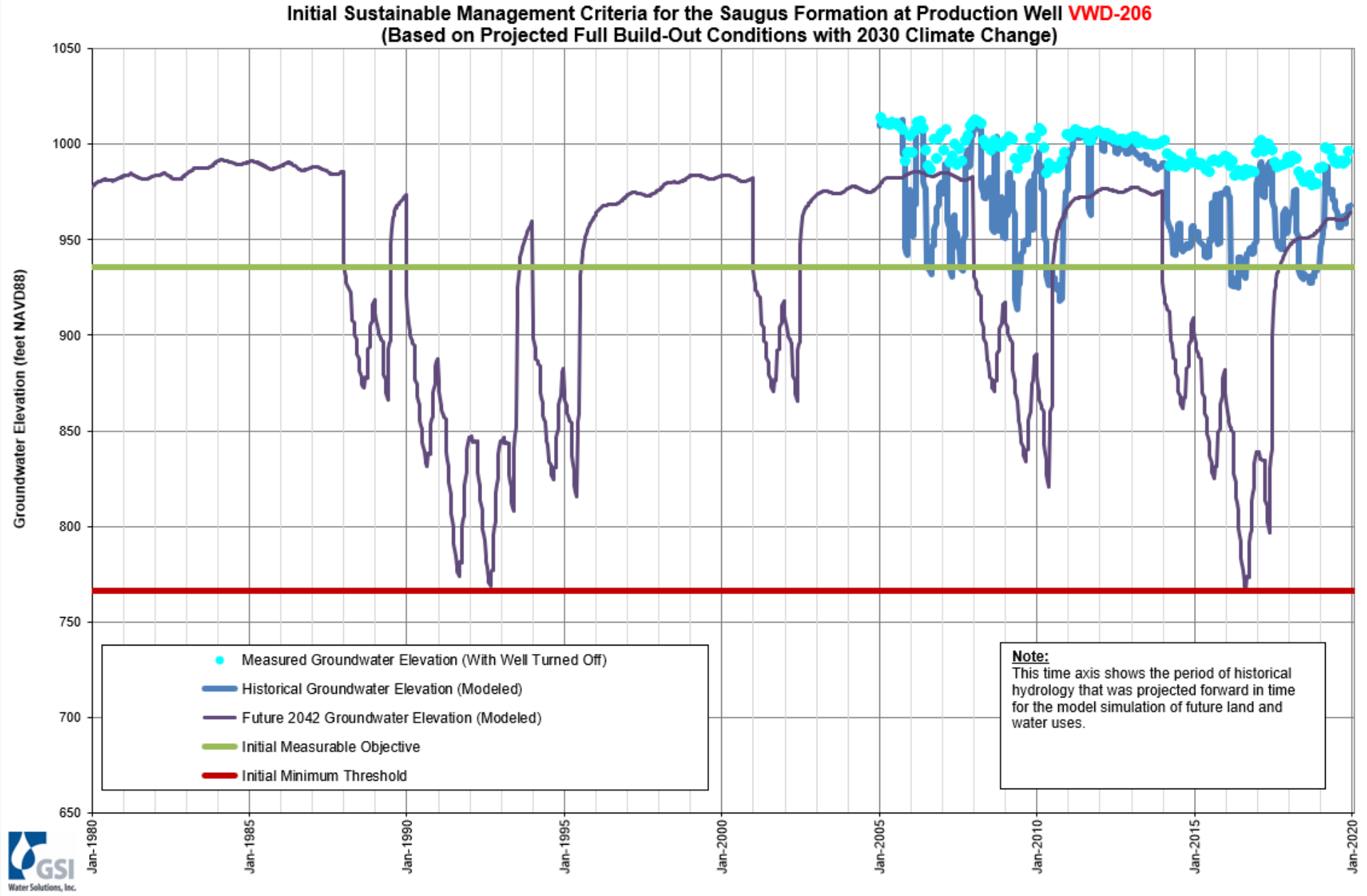
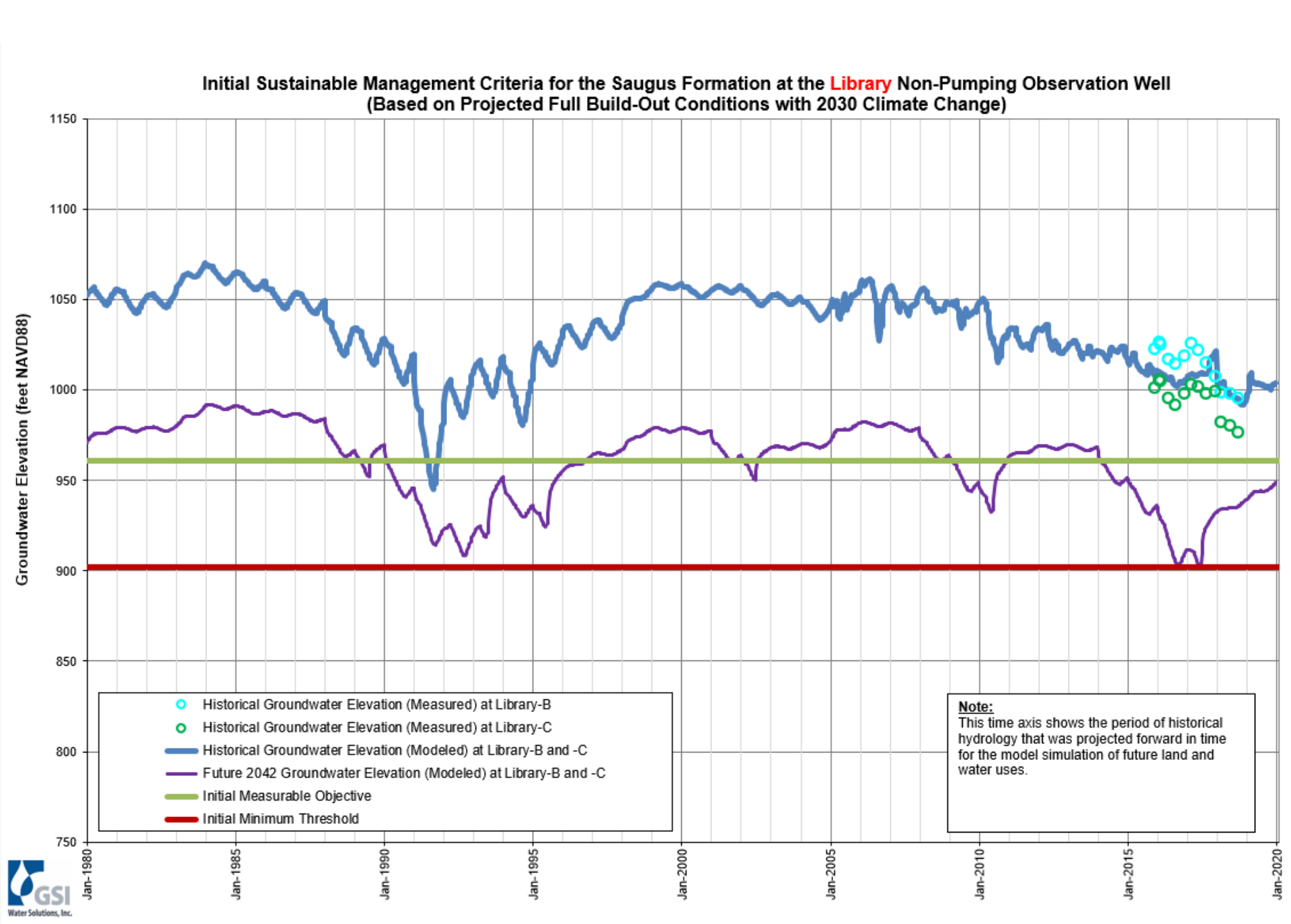

Initial Sustainable Management Criteria for the Saugus Formation at Production Well VWD-160
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Groundwater Elevation (feet NAVD88)
1100
1050
1000
950
900
850
800
750
700
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note:
This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.
GSI
Water Solutions, Inc.


Initial Sustainable Management Criteria for the Saugus Formation at Production Well VWD-206
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Groundwater Elevation (feet NAVD88)
1050
1000
950
900
850
800
750
700
650
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Measured Groundwater Elevation (With Well Turned Off)
Historical Groundwater Elevation (Modeled)
Future 2042 Groundwater Elevation (Modeled)
Initial Measurable Objective
Initial Minimum Threshold
Note:
This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.


Initial Sustainable Management Criteria for the Saugus Formation at the Library Non-Pumping Observation Well
(Based on Projected Full Build-Out Conditions with 2030 Climate Change)
Groundwater Elevation (feet NAVD88)
1150
1100
1050
1000
950
900
850
800
750
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Historical Groundwater Elevation (Measured) at Library-B
Historical Groundwater Elevation (Measured) at Library-C
Historical Groundwater Elevation (Modeled) at Library-B and -C
Future 2042 Groundwater Elevation (Modeled) at Library-B and -C
Initial Measurable Objective
Initial Minimum Threshold
Note:
This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.
GSI
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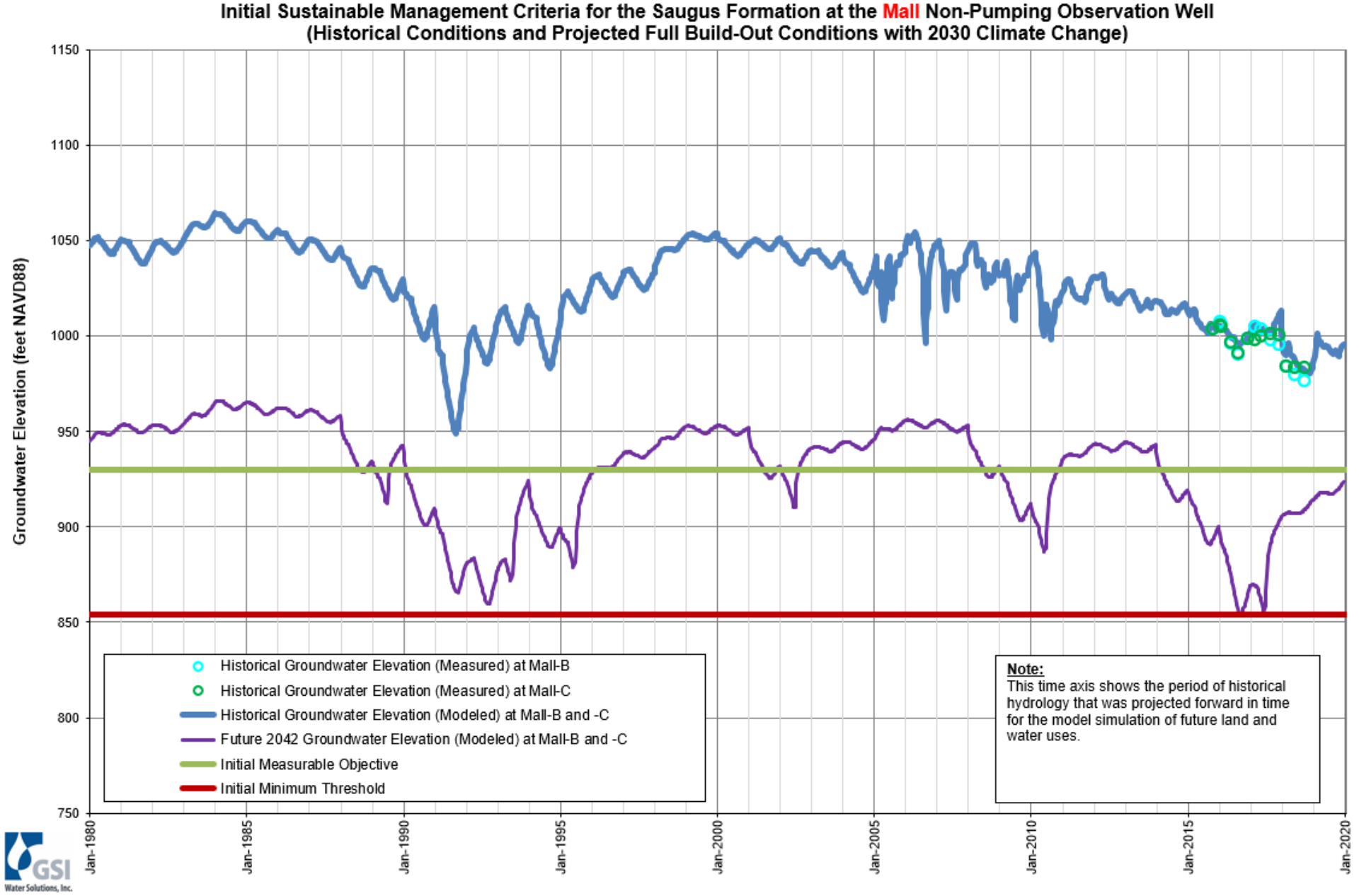
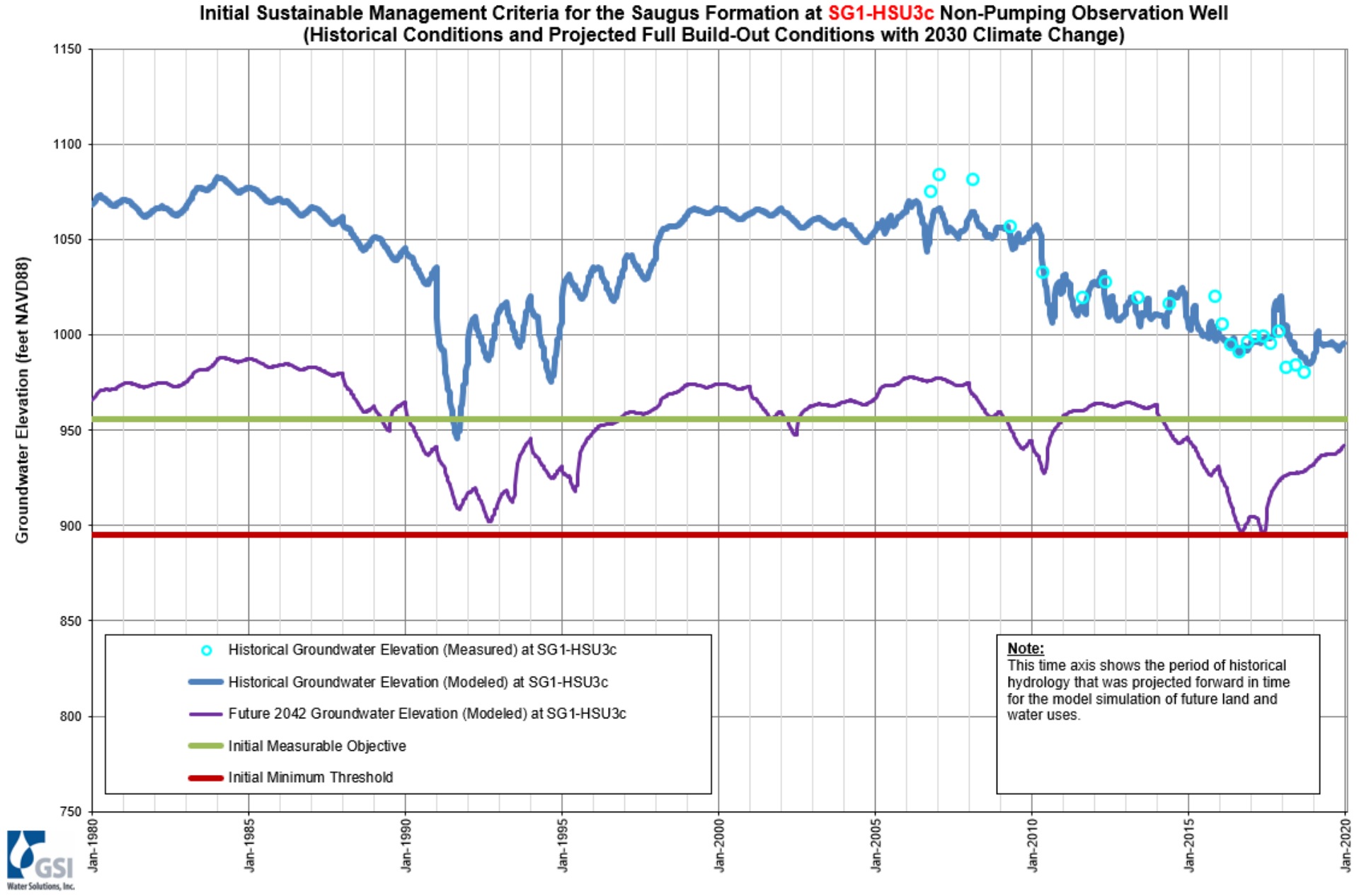

Initial Sustainable Management Criteria for the Saugus Formation at the Mall Non-Pumping Observation Well
(Historical Conditions and Projected Full Build-Out Conditions with 2030 Climate Change)
Groundwater Elevation (feet NAVD88)
1150
1100
1050
1000
950
900
850
800
750
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Historical Groundwater Elevation (Measured) at Mall-B
Historical Groundwater Elevation (Measured) at Mall-C
Historical Groundwater Elevation (Modeled) at Mall-B and -C
Future 2042 Groundwater Elevation (Modeled) at Mall-B and -C
Initial Measurable Objective
Initial Minimum Threshold
Note:
This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.


Initial Sustainable Management Criteria for the Saugus Formation at SG1-HSU3c Non-Pumping Observation Well
(Historical Conditions and Projected Full Build-Out Conditions with 2030 Climate Change)
Groundwater Elevation (feet NAVD88)
1150
1100
1050
1000
950
900
850
800
750
Jan-1980
Jan-1985
Jan-1990
Jan-1995
Jan-2000
Jan-2005
Jan-2010
Jan-2015
Jan-2020
Historical Groundwater Elevation (Measured) at SG1-HSU3c
Historical Groundwater Elevation (Modeled) at SG1-HSU3c
Future 2042 Groundwater Elevation (Modeled) at SG1-HSU3c
Initial Measurable Objective
Initial Minimum Threshold
Note:
This time axis shows the period of historical hydrology that was projected forward in time for the model simulation of future land and water uses.
GSI
Water Solutions, Inc.