DRAFT WORK PRODUCT

Borrego Valley Groundwater Basin
Borrego Springs Subbasin
Sustainability Criteria

Borrego Valley Groundwater Basin Sustainability Plan

November 27, 2017

Geosyntec consultants

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Sustainability Criteria and Reduction Concepts

Key Terms

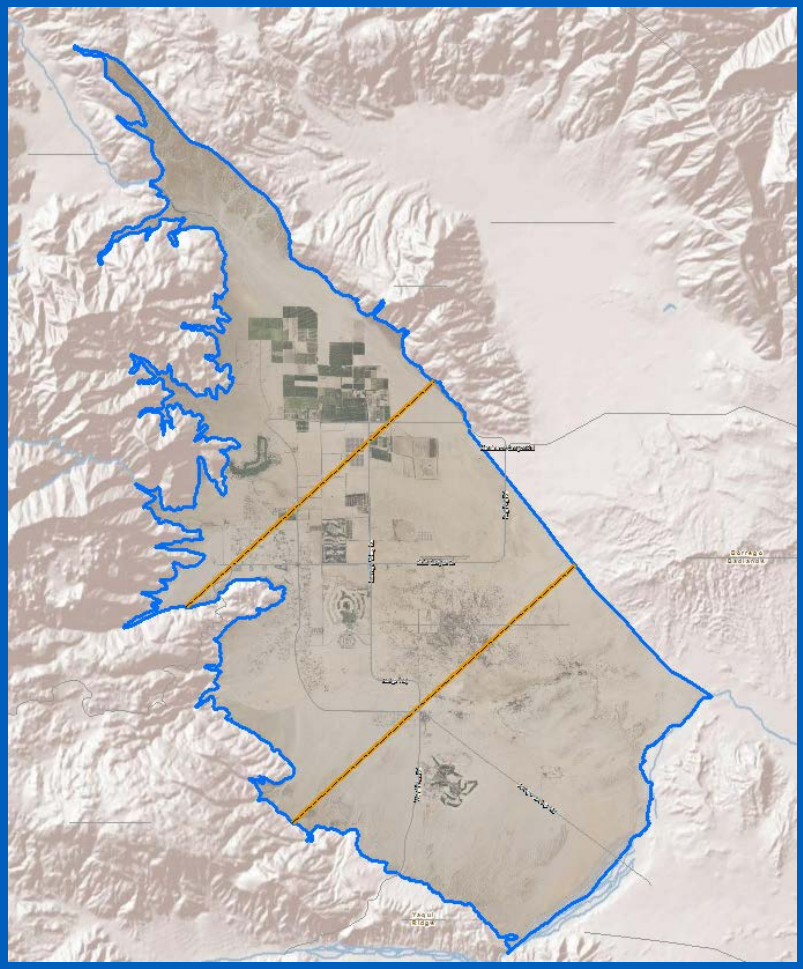
1. Management Areas
2. Sustainability Indicators
3. Representative Monitoring Site
4. Interim Milestones
5. Measurable Objectives
6. Minimum Thresholds
7. Undesirable Results
8. Significant and Unreasonable Conditions
9. Sustainability Goals

Sustainability Criteria

Example: Management Area

Management Areas: Three management areas have been proposed for the Subbasin.

- North Management Area
- Central Management Area
- South Management Area



For this example we will use the North Management Area (NMA). Each management area will be assessed for sustainability indicators

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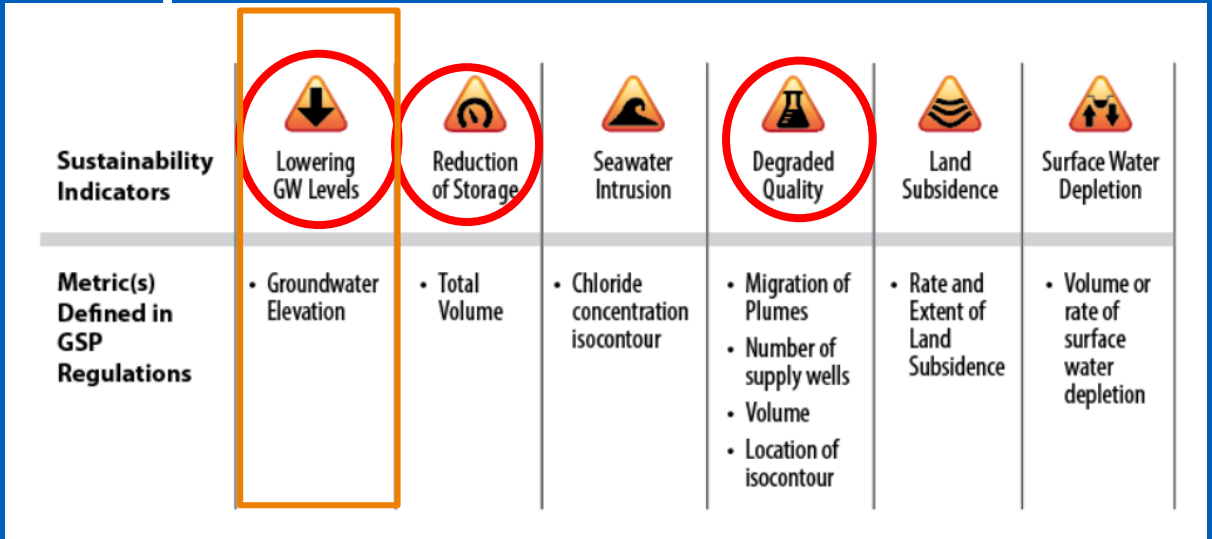
Example: Sustainability Indicators

- **Sustainability Indicators:** The GSA has identified three major Sustainability Indicators for the Subbasin.

1. Chronic lowering of groundwater levels
2. Reduction in groundwater storage
3. Degraded water quality

Of the three, lowing of groundwater levels will be used as an example.



Sustainability Indicators	Lowering GW Levels	Reduction of Storage	Seawater Intrusion	Degraded Quality	Land Subsidence	Surface Water Depletion
Metric(s) Defined in GSP Regulations	• Groundwater Elevation	• Total Volume	• Chloride concentration isocontour	• Migration of Plumes • Number of supply wells • Volume • Location of isocontour	• Rate and Extent of Land Subsidence	• Volume or rate of surface water depletion

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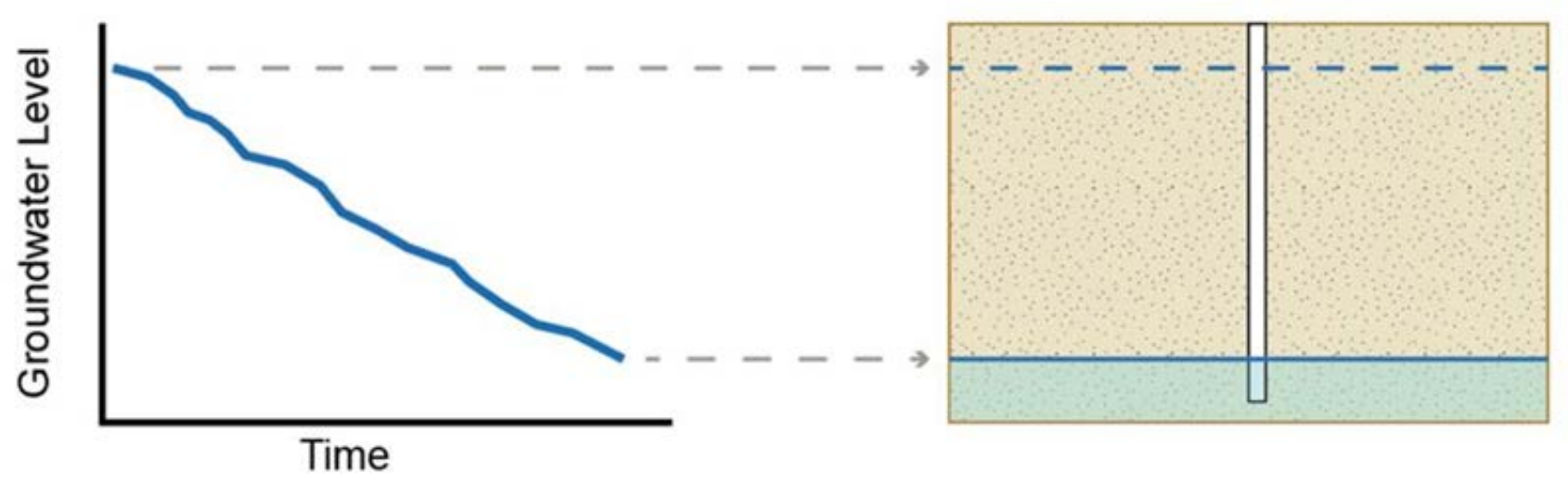
Example: Chronic Lowering of Groundwater Levels

Sustainability Indicator: Chronic Lowering of Groundwater Levels.

- Declining groundwater levels is a direct result of groundwater overdraft.
- For the Subbasin, this decline is caused by pumping.



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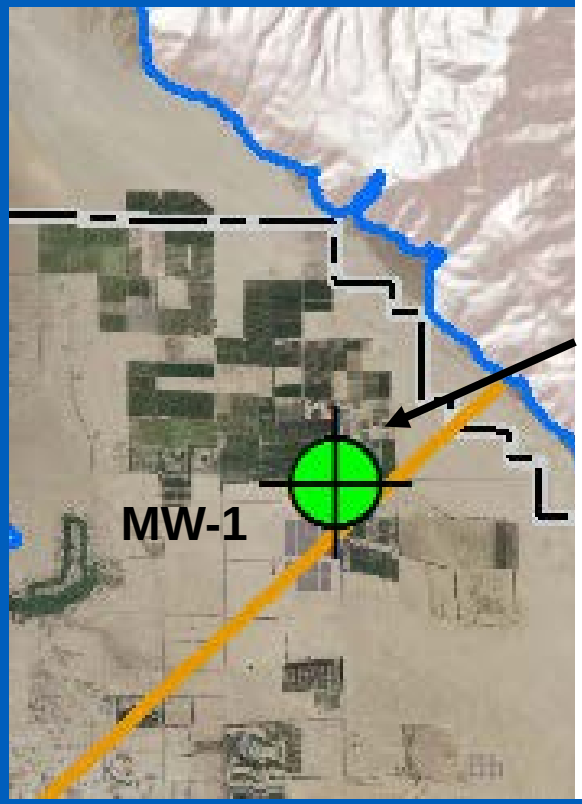
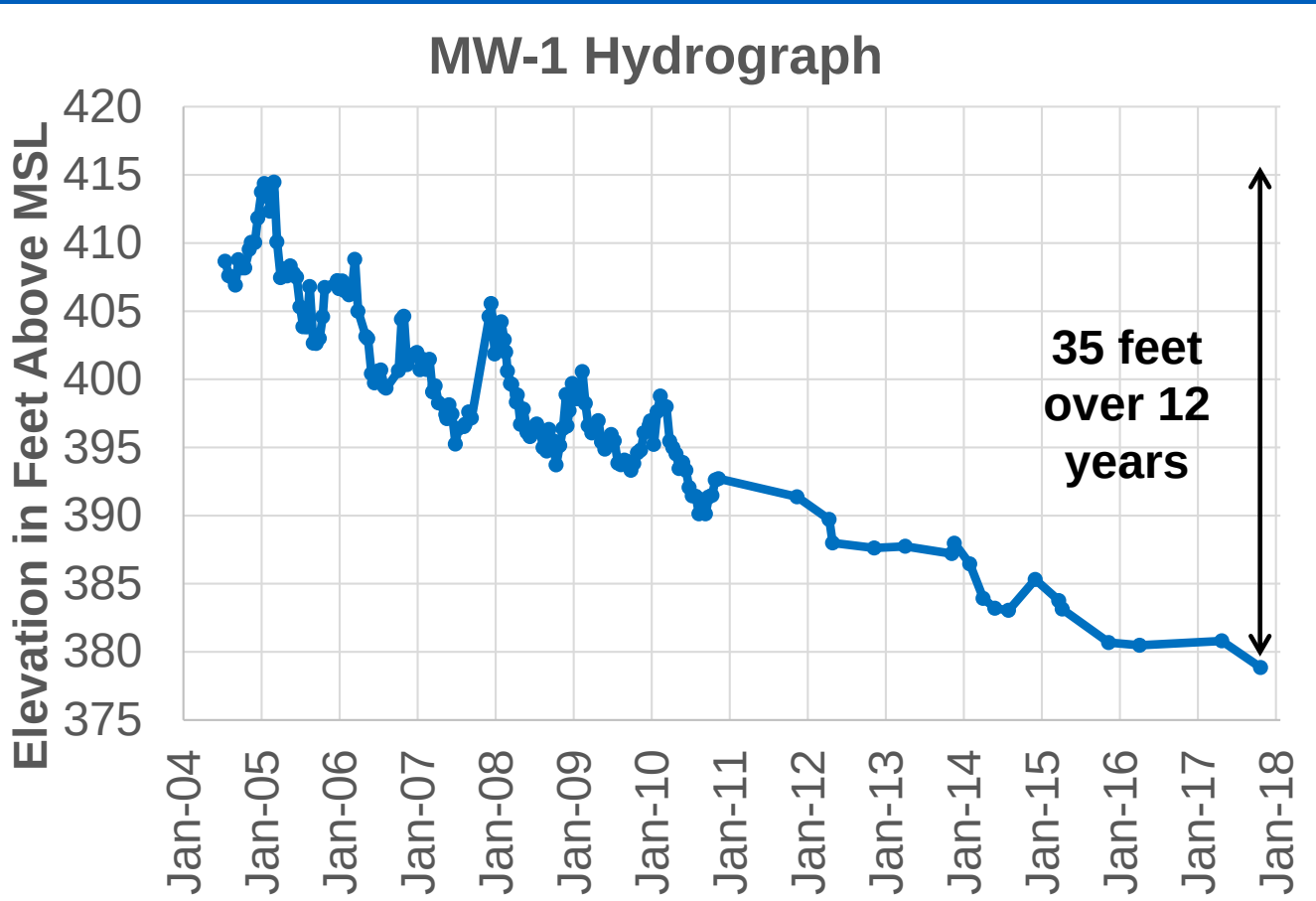
Example: Representative Monitoring Site

Representative Monitoring Site: In the NMA, monitoring well (MW-1), shows average groundwater level decline at a rate of ~3 feet per year.





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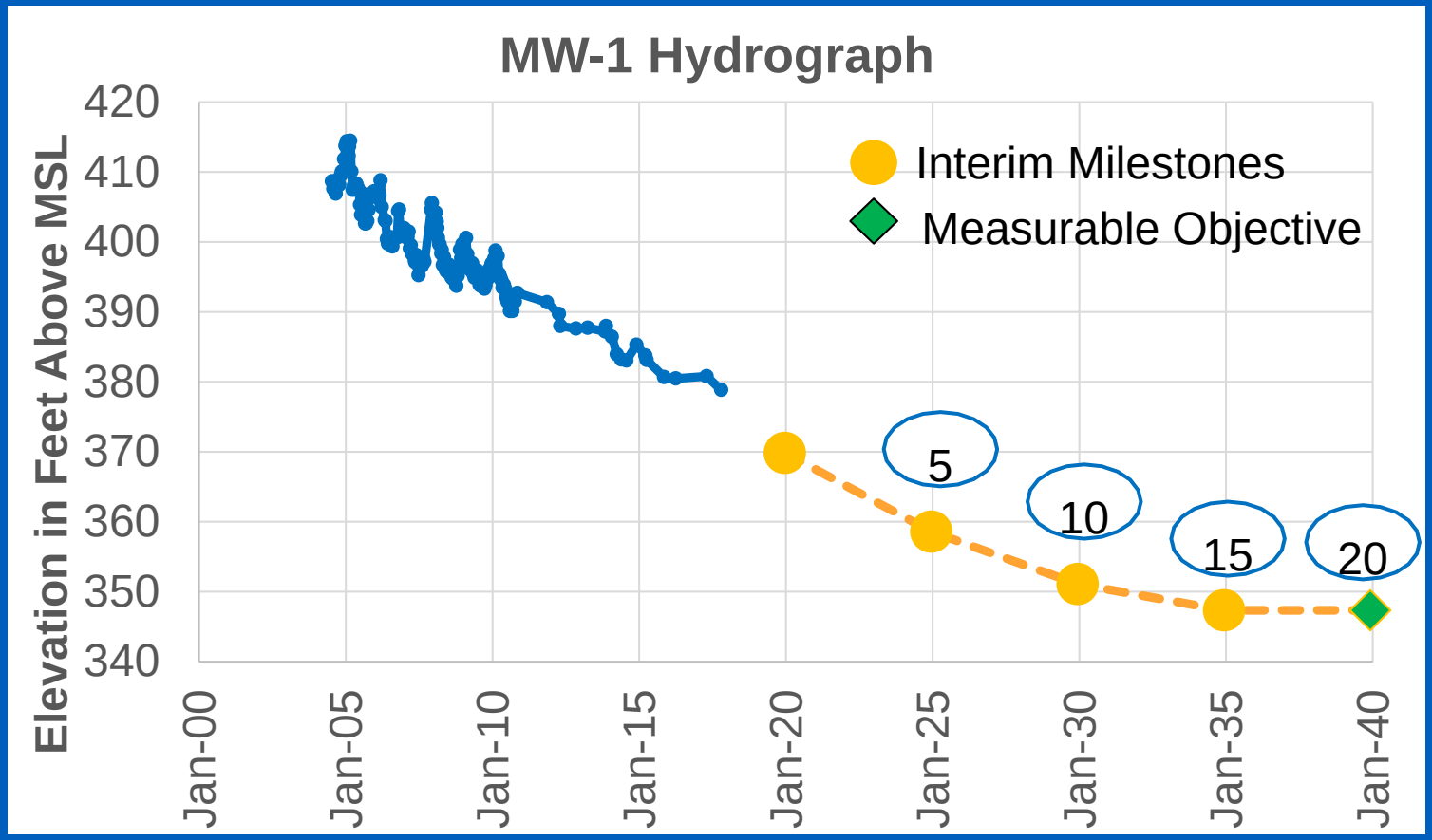
Example: Interim Milestones

Interim Milestones will be set at MW-1 to achieve the Measurable Objective of reducing groundwater level decline.



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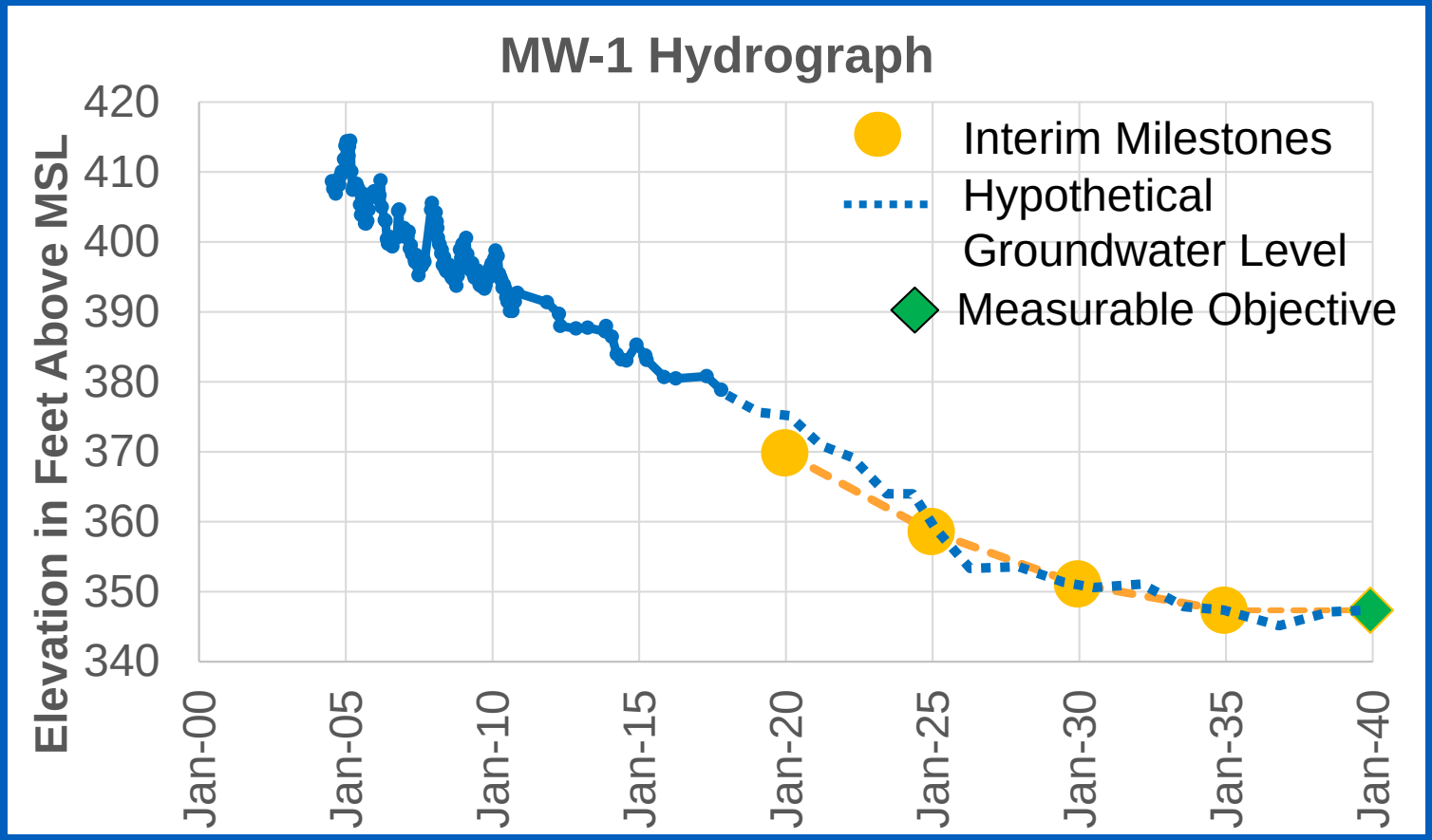
Example: Measurable Objective and Interim Milestones

The Measurable Objective will be based on meeting the Interim Milestones and Sustainability Goal



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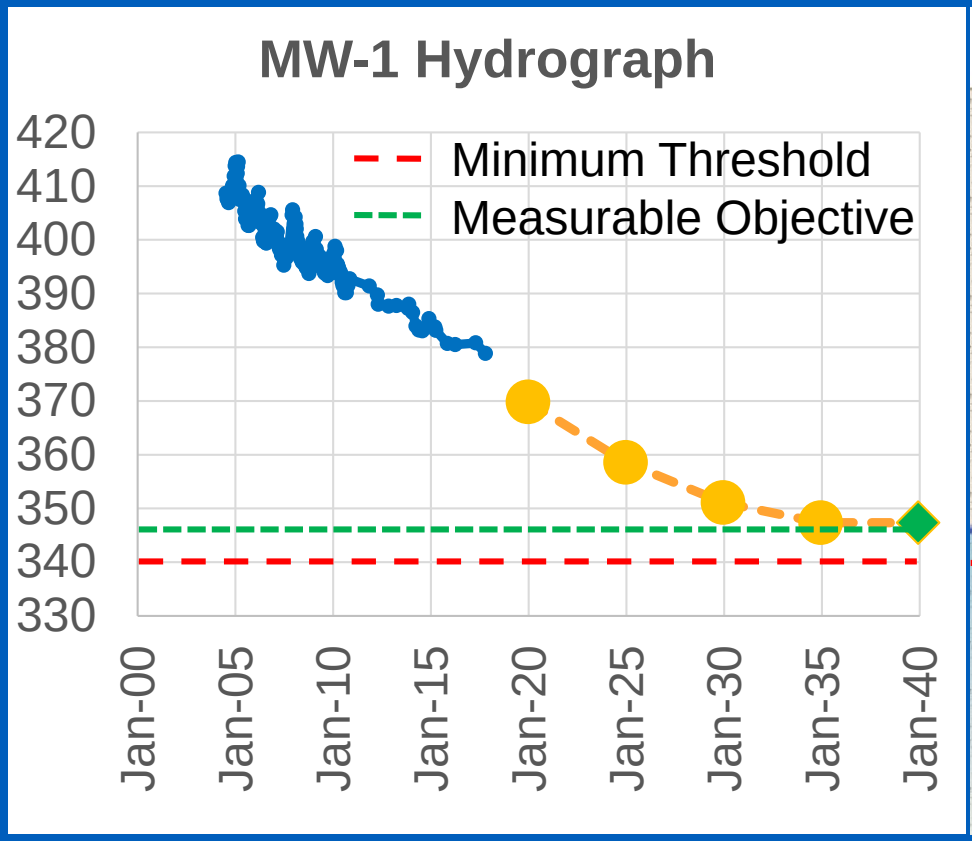
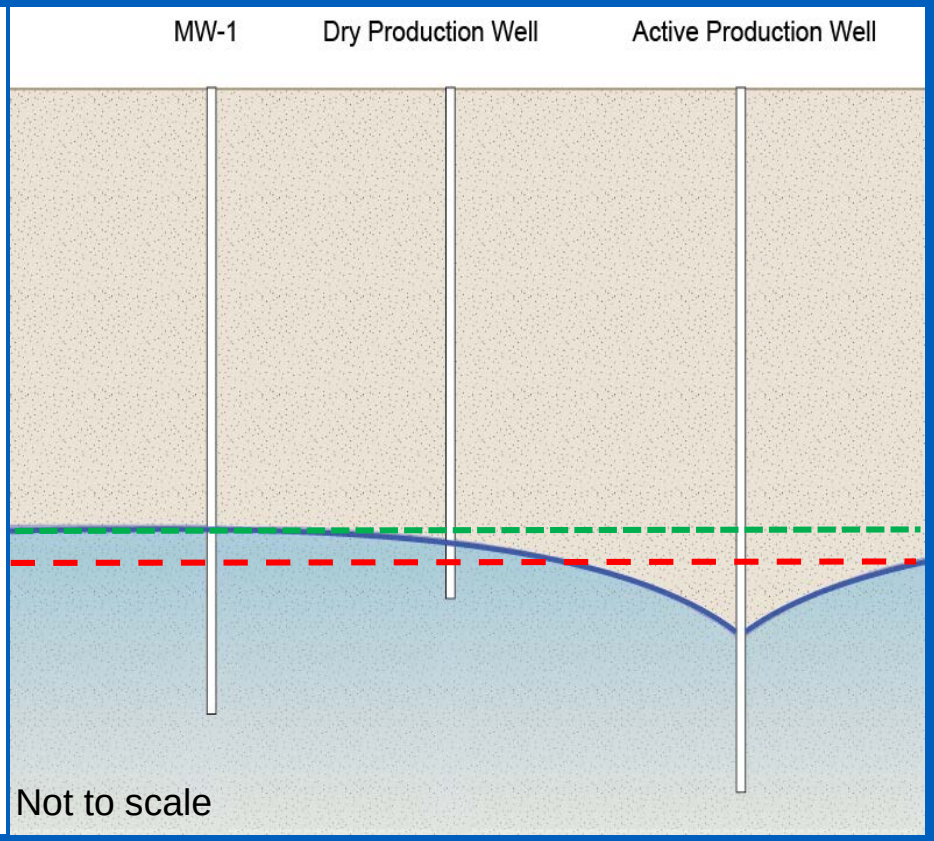
Example: Minimum Threshold

Minimum Threshold will be set based on what the GSA has determined to be Significant and Unreasonable. The Minimum Threshold for groundwater levels is a set groundwater level not to exceed.





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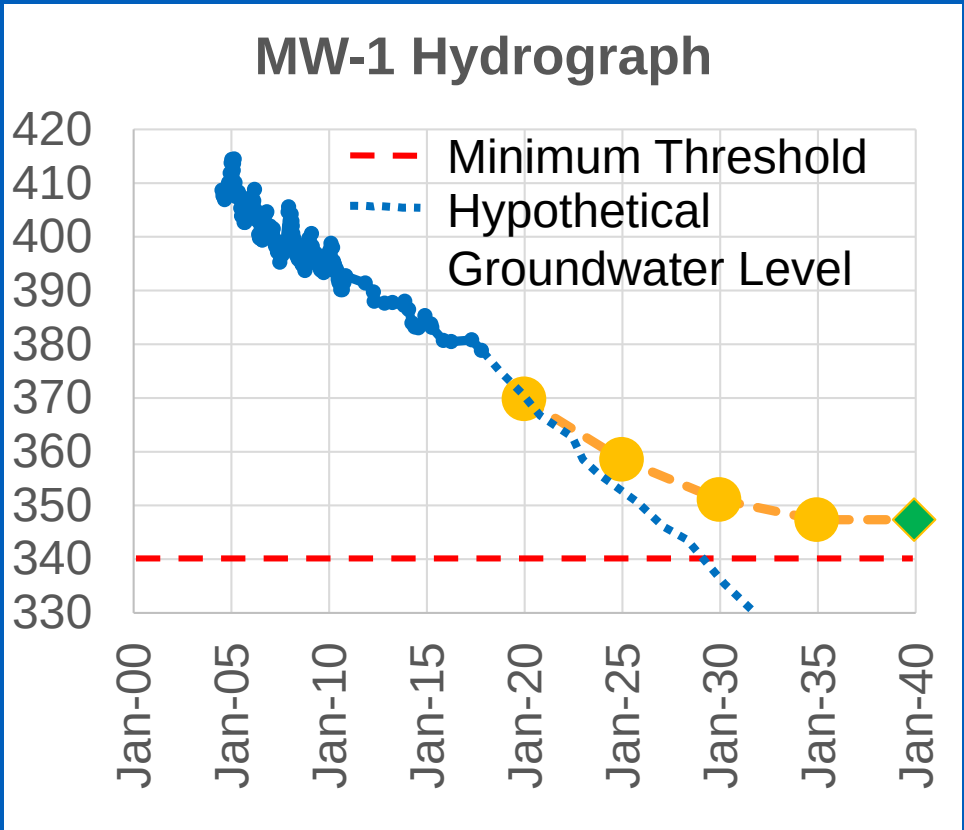
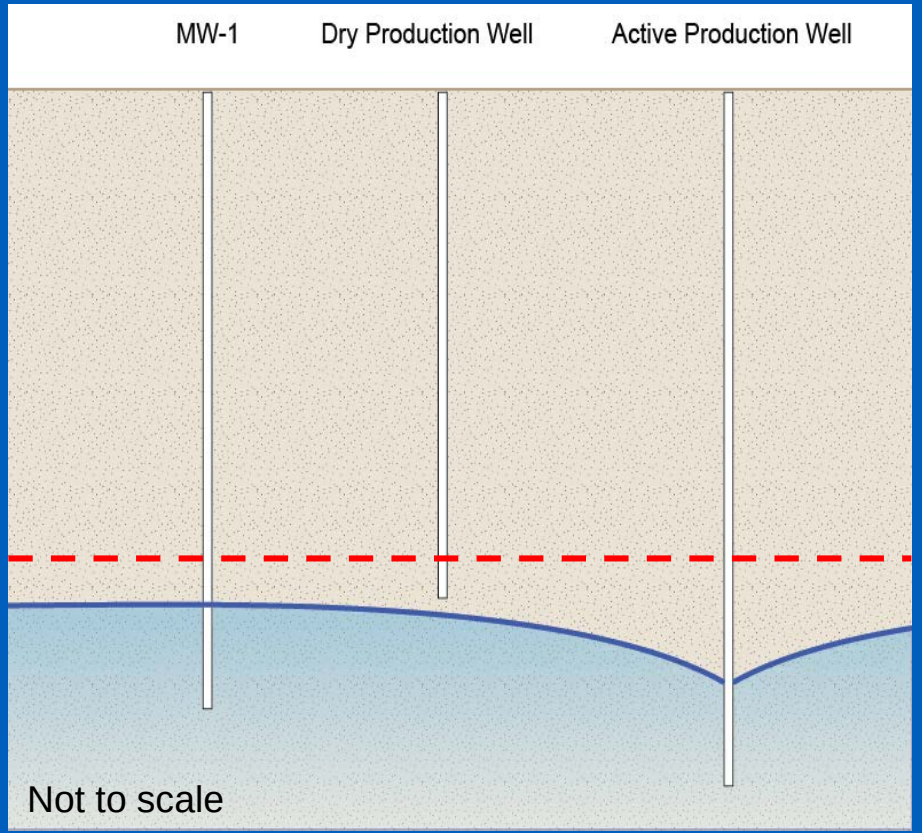
Example: Undesirable Result

An Undesirable Result could occur if the groundwater level did not meet the Minimum Threshold. As a result, production wells may go dry.





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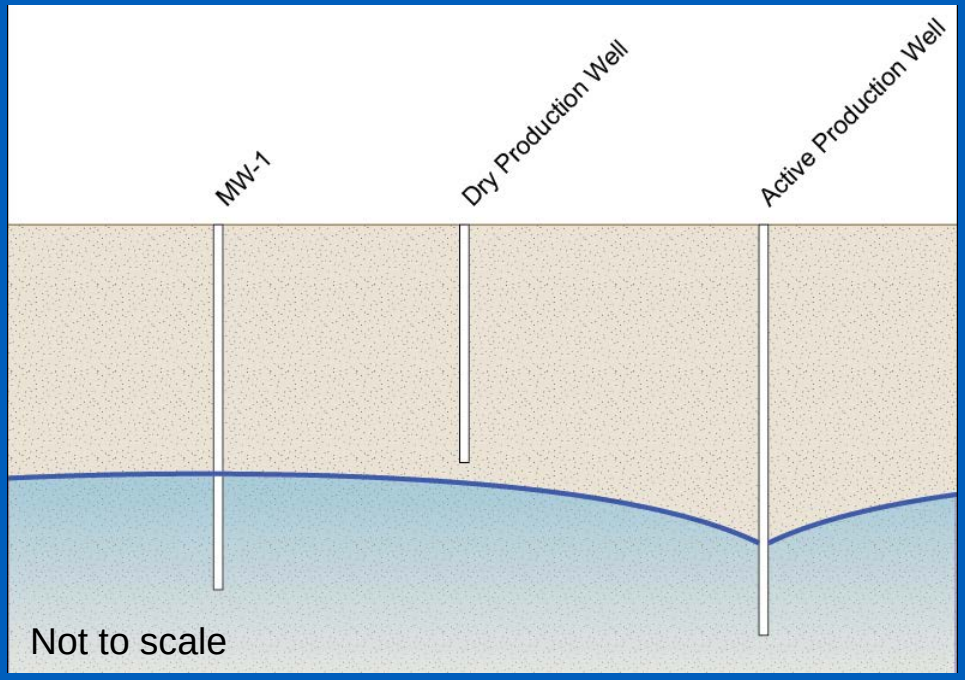
Example: Significant and Unreasonable Conditions

Significant and Unreasonable Conditions are a policy decision determined by the GSA

For this example, the Significant and Unreasonable Condition would be wells going dry due to lowering of groundwater levels .



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Example: Sustainability Goal

An Example of a Sustainability Goal as it applies to Chronic lower of groundwater levels:

- **Objective:** Reduce groundwater level decline over the 20-year GSP implementation period.
- **Desired Condition:** No average groundwater level decline.
- **How will the Subbasin meet objective?:** Decrease groundwater production over time to the sustainable yield.
- **Why measures will lead to success?:** The current rate of groundwater pumping leads to declining groundwater levels. A reduced rate of pumping over time will decrease the rate of groundwater level decline.

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