California's Sustainable Groundwater Management Act (SGMA)

"A central feature of these bills is the recognition that groundwater management in California is best accomplished locally."

Governor Jerry Brown, September 2014

DWR SGMA Assistance

Financial Assistance
- Prop 1

Planning Assistance
- Facilitation
- GSA Support

Technical Assistance
- Statewide Datasets, Analysis, and Tools
- Best Management Practices
- Water Available for Replenishment Report

Engagement and Advisory Role

DWR Evaluation of GSPs

Sustainable Groundwater Management

Regulatory Role

Data and Tools

New Data, Tools, and Reports Webpage

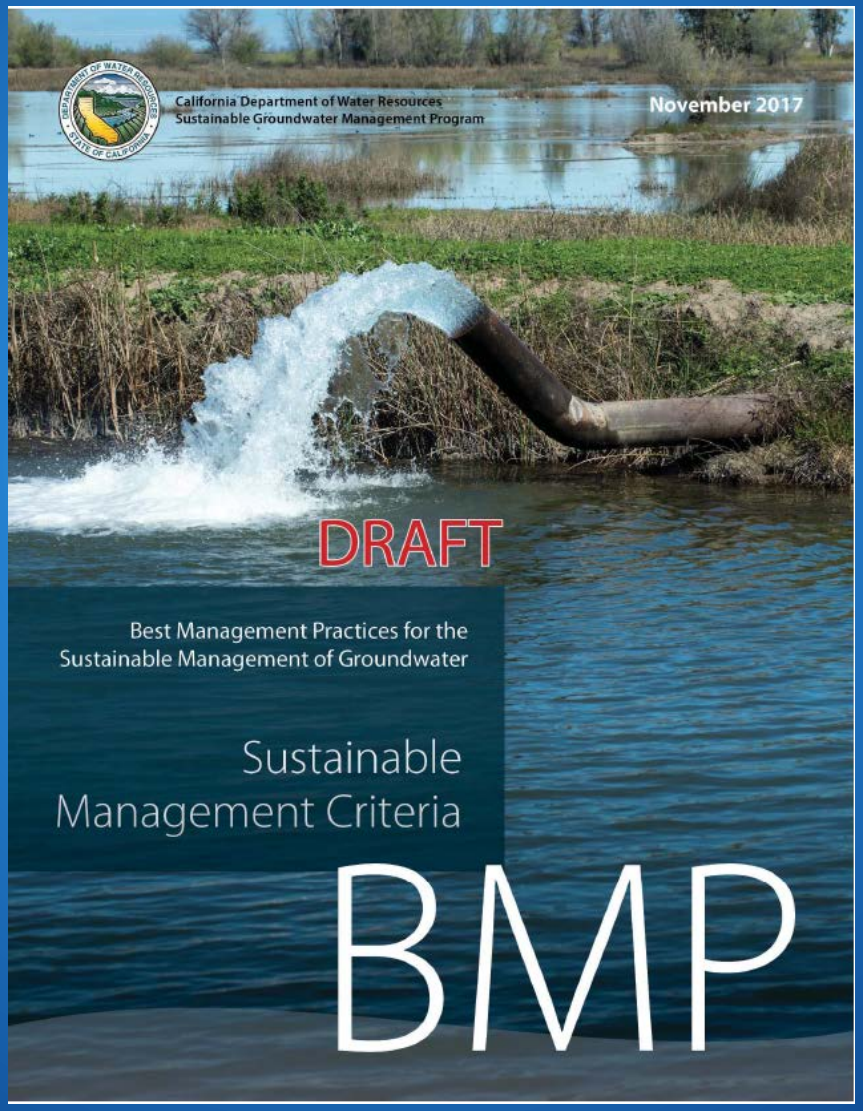
1. Download Data
2. Groundwater Tools
   - ➢Interactive Maps
   - ➢Modeling Tools
3. Maps and Reports
   - ➢SGMA BMPs
   - ➢Statewide GW Maps

http://www.water.ca.gov/groundwater/sgm/data_tools_reports.cfm

Local Technical Assistance

- Technical Assistance Website coming soon
- Data Contributing to GSP
  - Stream Gauging
  - Transducers in wells

Sustainable Management Criteria



Groundwater Sustainability Plans

Undesirable Results:
Significant and unreasonable…

Lowering of Groundwater Levels	Reduction of Groundwater Storage	Seawater Intrusion
Water Quality Degradation	Land Subsidence	Depletions of Surface Water

GSP Regulations Plan Contents

1. Administrative Information

§ 354.4. General Information

§ 354.6. Agency Information

§ 354.8. Description of Plan Area

§ 354.10. Notice & Communication

2. Basin Setting

§ 354.14. Hydrogeologic Conceptual Model

§ 354.16. Groundwater Conditions

§ 354.18. Water Budget

§ 354.20. Management Areas

3. Sustainable Management Criteria

§ 354.24. Sustainability Goal

§ 354.26. Undesirable Results

§ 354.28. Minimum Thresholds

§ 354.30. Measurable Objectives

4. Monitoring Networks

§ 354.34. Monitoring Network

§ 354.36. Representative Monitoring

§ 354.38. Assessment & Improvement

§ 354.40. Reporting Monitoring Data to the Department

5. Projects and Management Actions

§ 354.44. Projects & Management Actions

Undesirable Results

Significant and Unreasonable

Sustainable Management Criteria

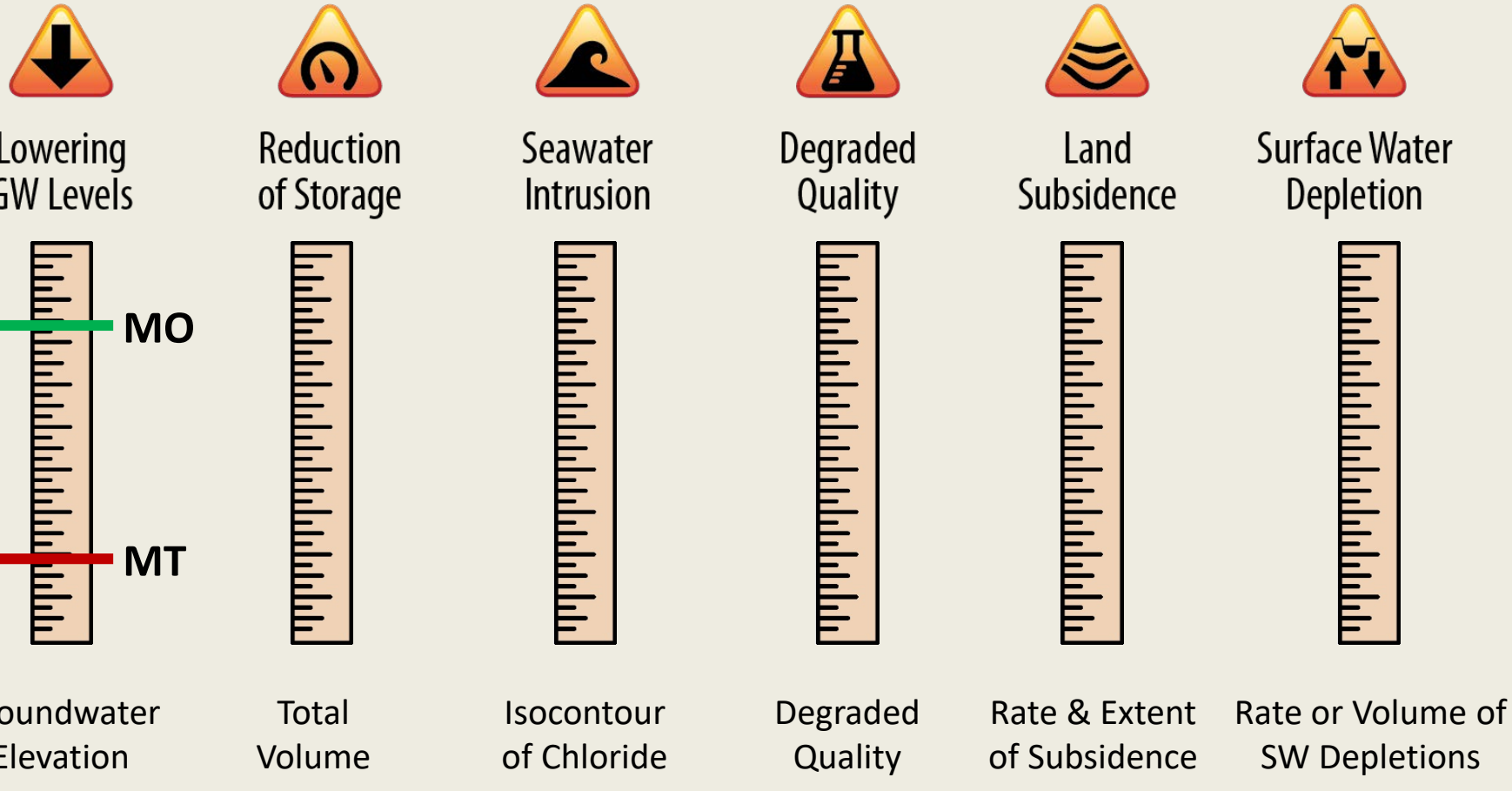
- Set by GSAs
- Must be quantitative and define conditions under which sustainable groundwater management occurs in the basin
- Based on information developed for *Administrative Information* and *Basin Setting*
- Supported by *Monitoring Networks*
- Achieved by *Projects and Management Actions*

Sustainable Management Criteria

1. Minimum Thresholds
2. Undesirable Results
3. Measurable Objective
4. Sustainability Goal

Minimum Threshold Metrics
- Statewide Framework -

Sustainability Indicators



***Groundwater Elevations - can be used for multiple minimum thresholds**

MO = Measurable Objective
MT = Minimum Threshold

1. Minimum Thresholds

- Point at a representative monitoring site where conditions could become significant and unreasonable
- Develop for each sustainability indicator

  -or-

  Use representative groundwater level for one or more sustainability indicator(s) (supported by a demonstration that the proxy is a reasonable substitute)
- Extent: representative monitoring sites

2. Undesirable Results

- The quantitative combination of minimum threshold exceedances that constitute a significant and unreasonable condition
- Extent: basin-wide definition, based on minimum threshold exceedances at GSA-specified spatial scales

3. Measurable Objective (and Interim Milestones)

- Quantitative objectives that take into account a reasonable margin of operational flexibility
- Interim milestones are set every five years
- MO is achieved in 20 years
- Extent: same network of representative monitoring sites used for minimum thresholds

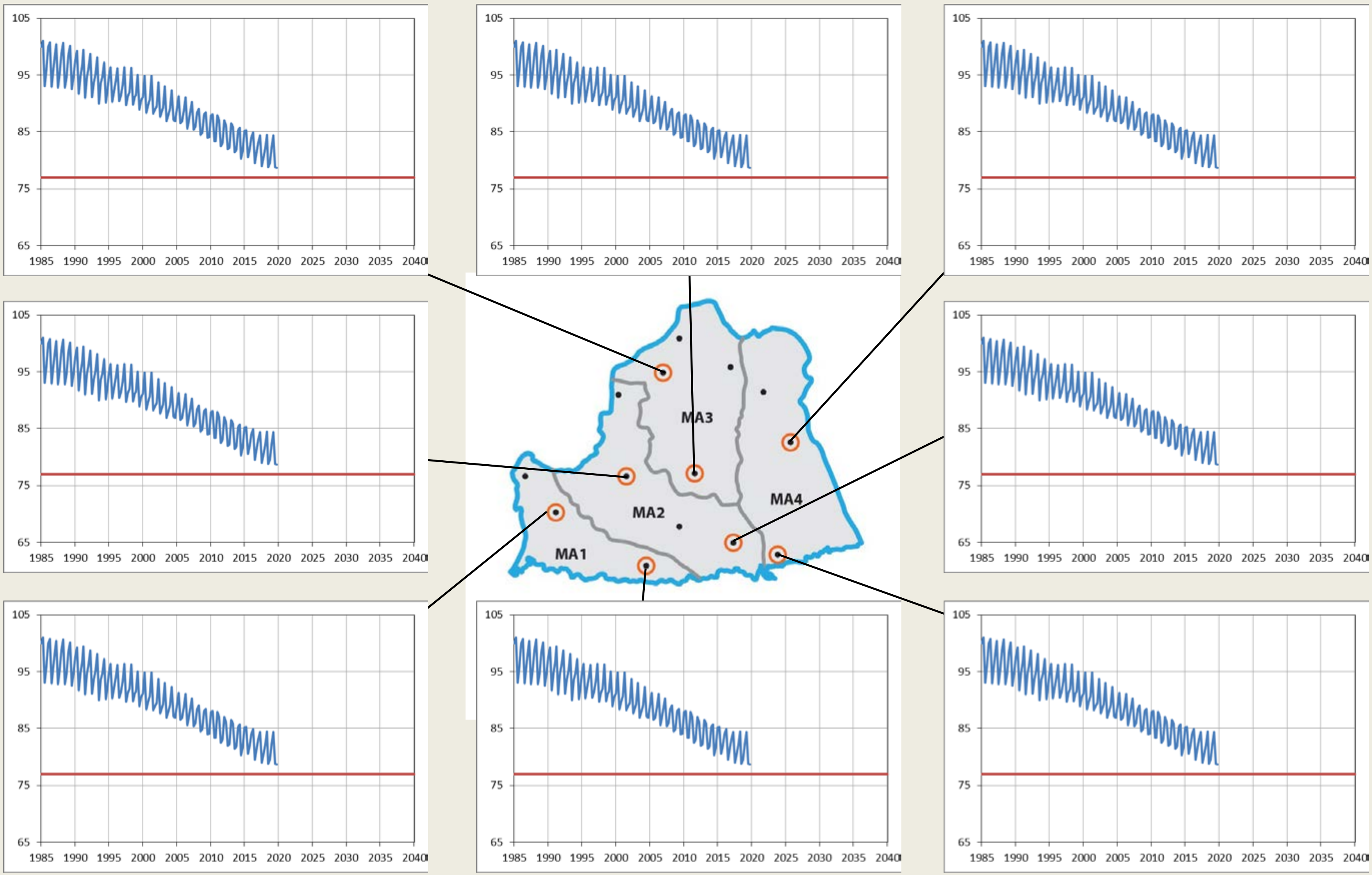
4. Sustainability Goal

- The sustainability goal states:
  - The objectives and desired conditions of the groundwater basin,
  - Measures the GSA(s) will take to get to that desired condition, and
  - How the measures planned will lead to success
- Ultimately, must result in elimination and avoidance of undesirable results
- Extent: single, basin-wide goal

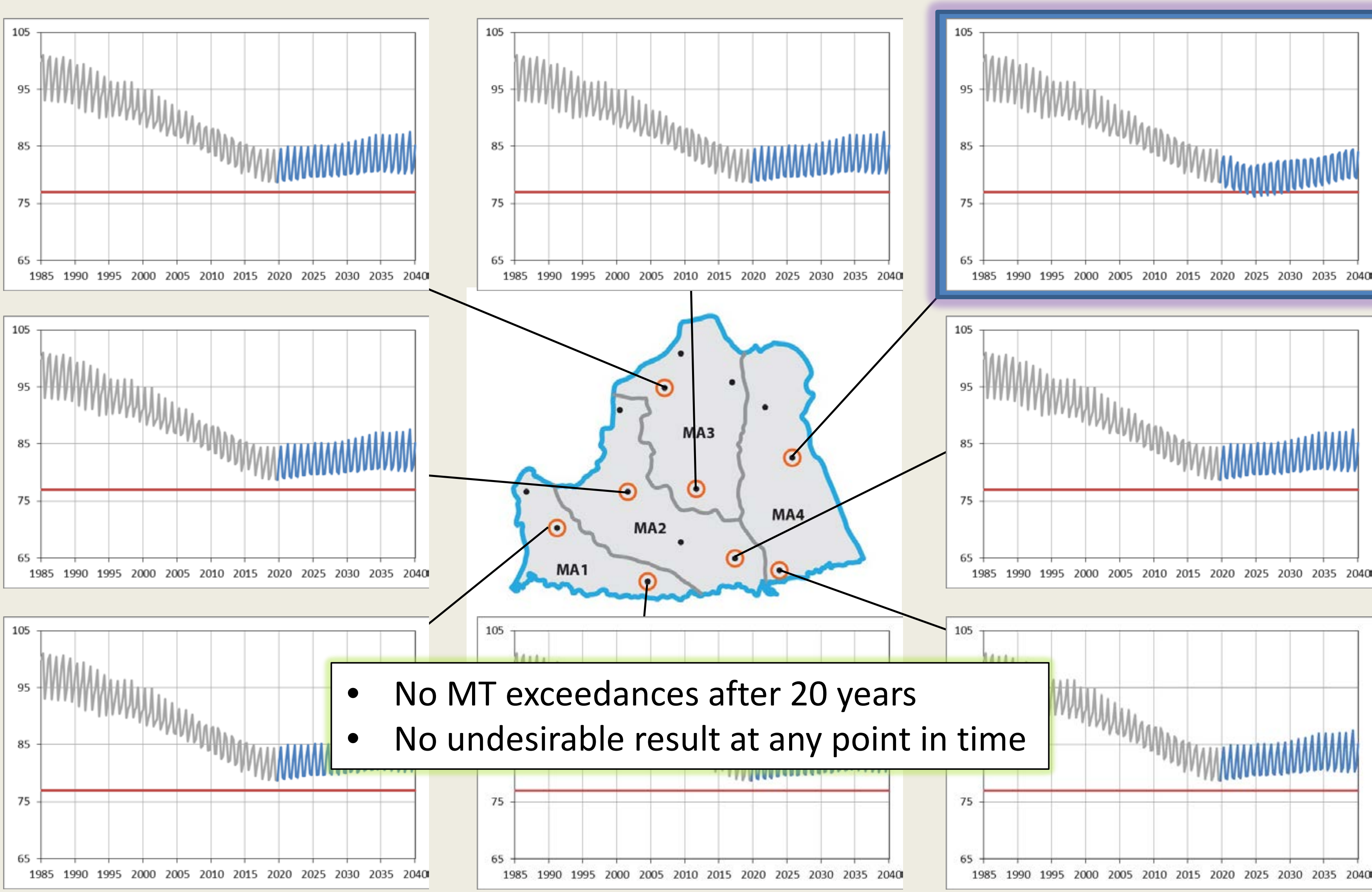
Example

- 8 minimum thresholds (MT) established

- GSA decides that 3 MT exceedances = undesirable result



Example – Scenario 1

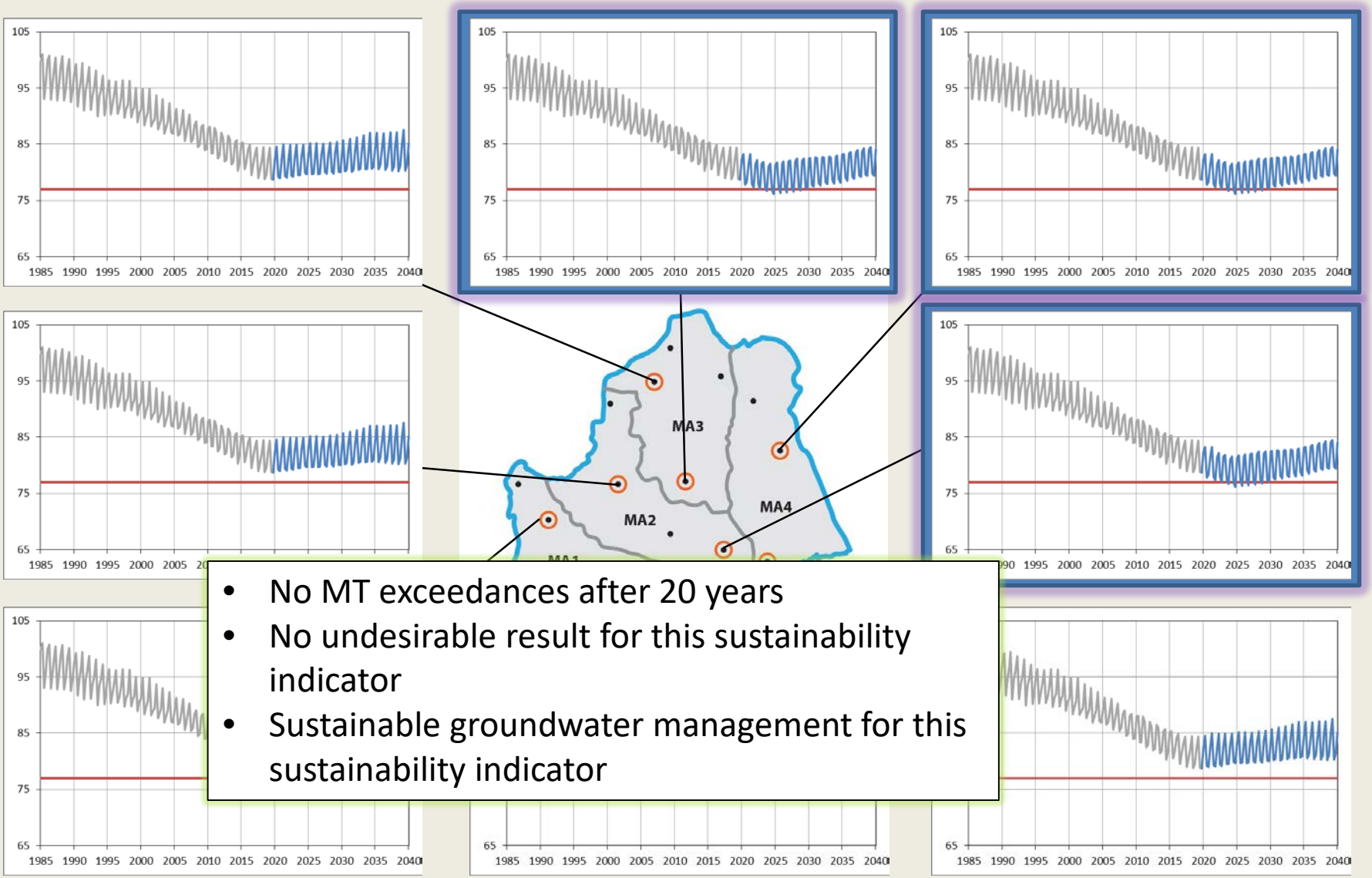


- No MT exceedances after 20 years
- No undesirable result at any point in time

Example – Scenario 2

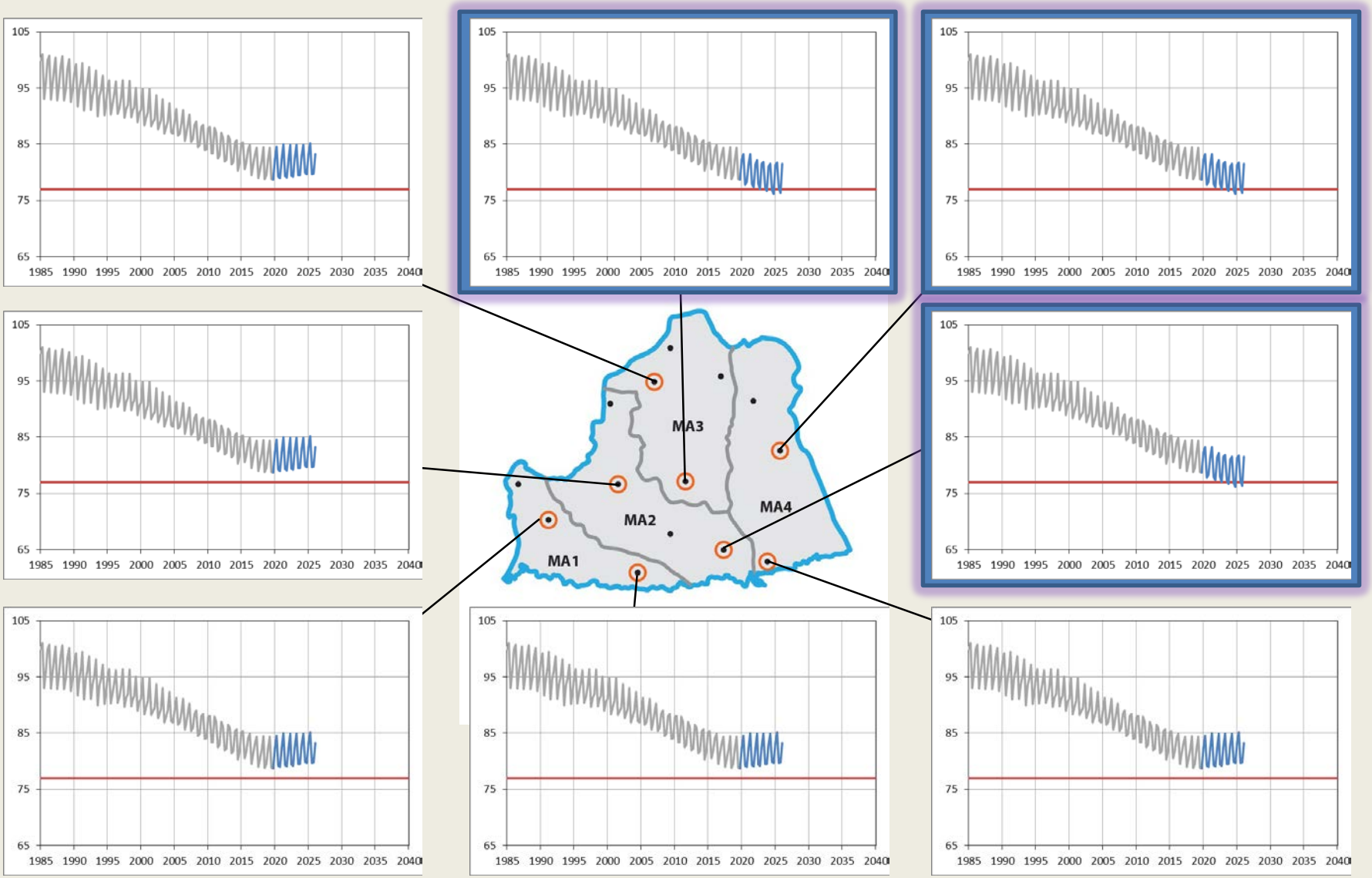
- Three wells with MT exceedances after 5 years
- Undesirable result for this sustainability indicator
- If not planned (i.e., through appropriate interim milestones and measurable objectives) could indicate that sustainable groundwater management is not likely to be achieved
- GSA should address in 5-year update

Example – Scenario 2

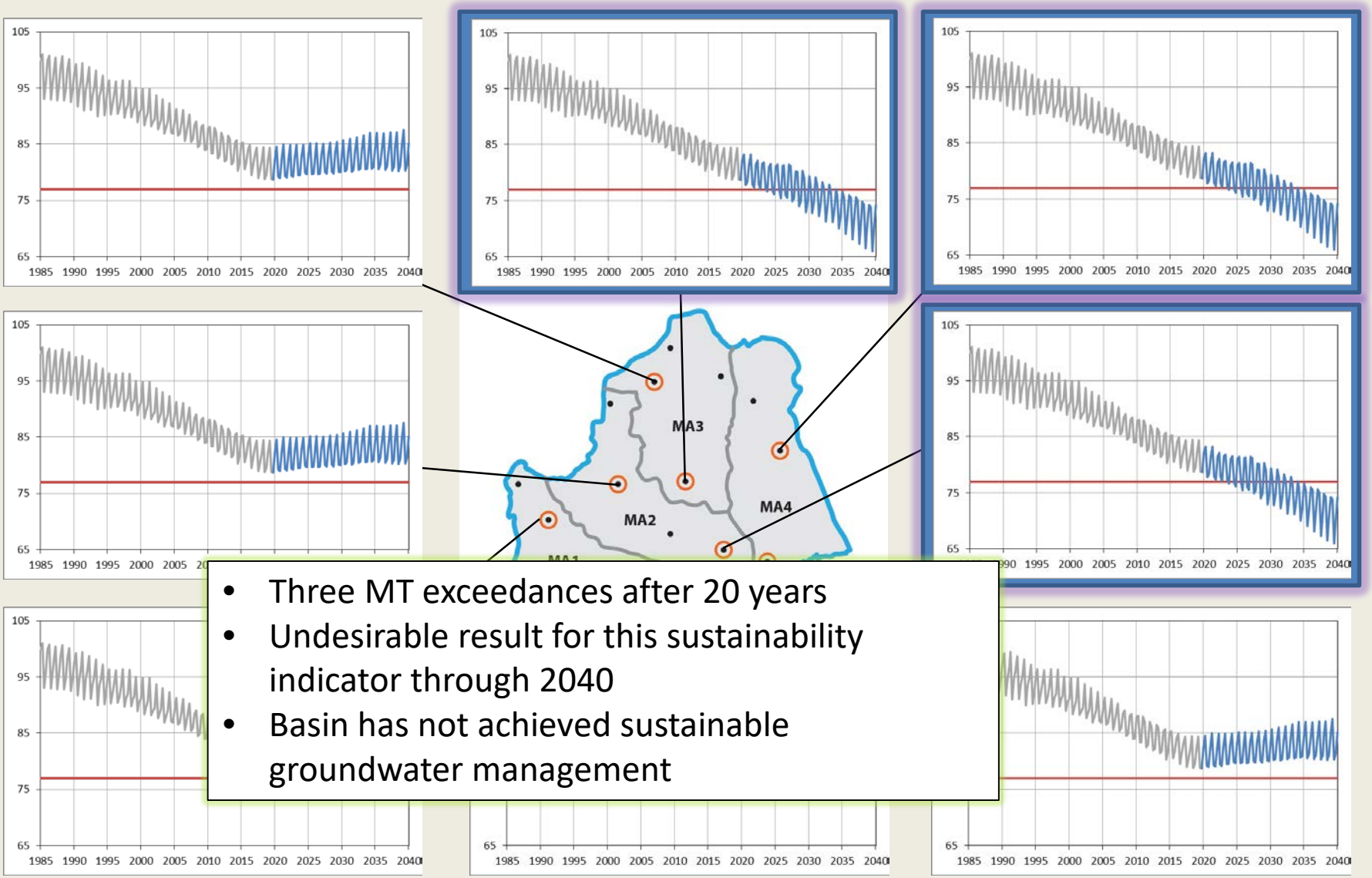


- No MT exceedances after 20 years
- No undesirable result for this sustainability indicator
- Sustainable groundwater management for this sustainability indicator

Example – Scenario 3



Example – Scenario 3



- Three MT exceedances after 20 years
- Undesirable result for this sustainability indicator through 2040
- Basin has not achieved sustainable groundwater management

DWR Groundwater Resources

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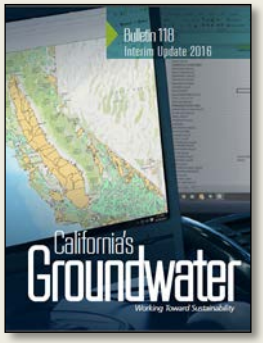


Groundwater Resources

- **DWR Groundwater Information Center**

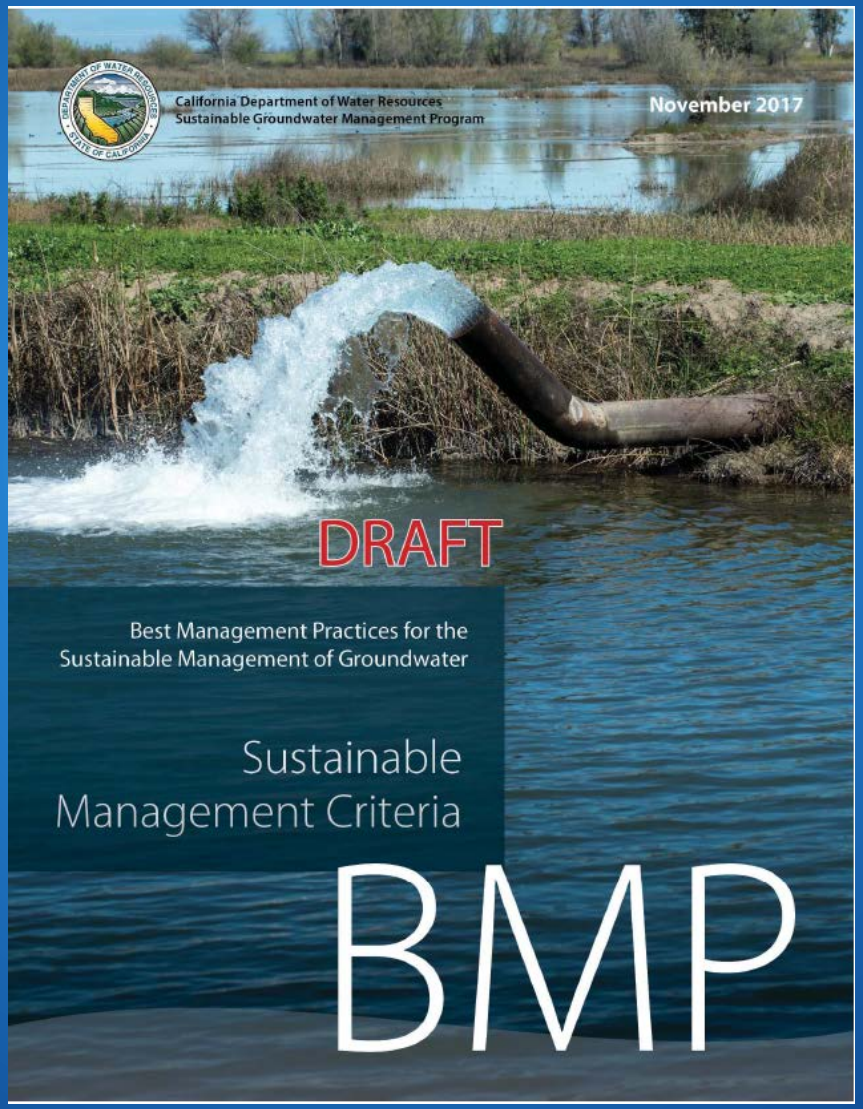
  www.water.ca.gov/groundwater/gwinfo/index.cfm
- **SGMA Data, Tools, And Reports (links to mapping tools)**

  http://www.water.ca.gov/groundwater/sgm/data_tools_reports.cfm

Best Management Practices and Guidance Documents

http://www.water.ca.gov/groundwater/sgm/bmps.cfm

Thank You


California Department of Water Resources
Sustainable Groundwater Management Program
November 2017
DRAFT
Best Management Practices for the
Sustainable Management of Groundwater
Sustainable
Management Criteria
BMP