

Ukiah Valley Basin Groundwater Sustainability  
Agency Board Meeting

# Ukiah Valley Groundwater Sustainability Plan Development Update

January 9, 2020

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# Outline

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- State of GSP Prior to This Meeting
- Water Budget: Integrated Hydrological Model
  - Hydrological Model (PRMS)
  - Root Zone Water Budget (IDC)
  - Groundwater Model (MODFLOW)
  - Integration (GSFLOW)
- Development of GSP Chapter 2
- Review and Commenting Process
- Preliminary Discussion on Sustainable Management Criteria

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## State of GSP Prior to this Meeting

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- First phase of DMS is conducted and ready to be delivered.
- Draft HCM was presented to the TAC for commenting and review.
- Preliminary results of the integrated hydrogeological model was presented for separate modeling parts: PRMS, IDC, MODFLOW.
- Overview of TSS was discussed and next steps need to be taken.

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# Integrated Hydrological Modelling (PRMS+IDC+MODFLOW: preliminary results)

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## *GSFLOW Integrated Hydrological Model*



***PRMS Rainfall  
Runoff Model***



***\*Soil (Root  
Zone Budget)***



***MODFLOW  
Groundwater Model***



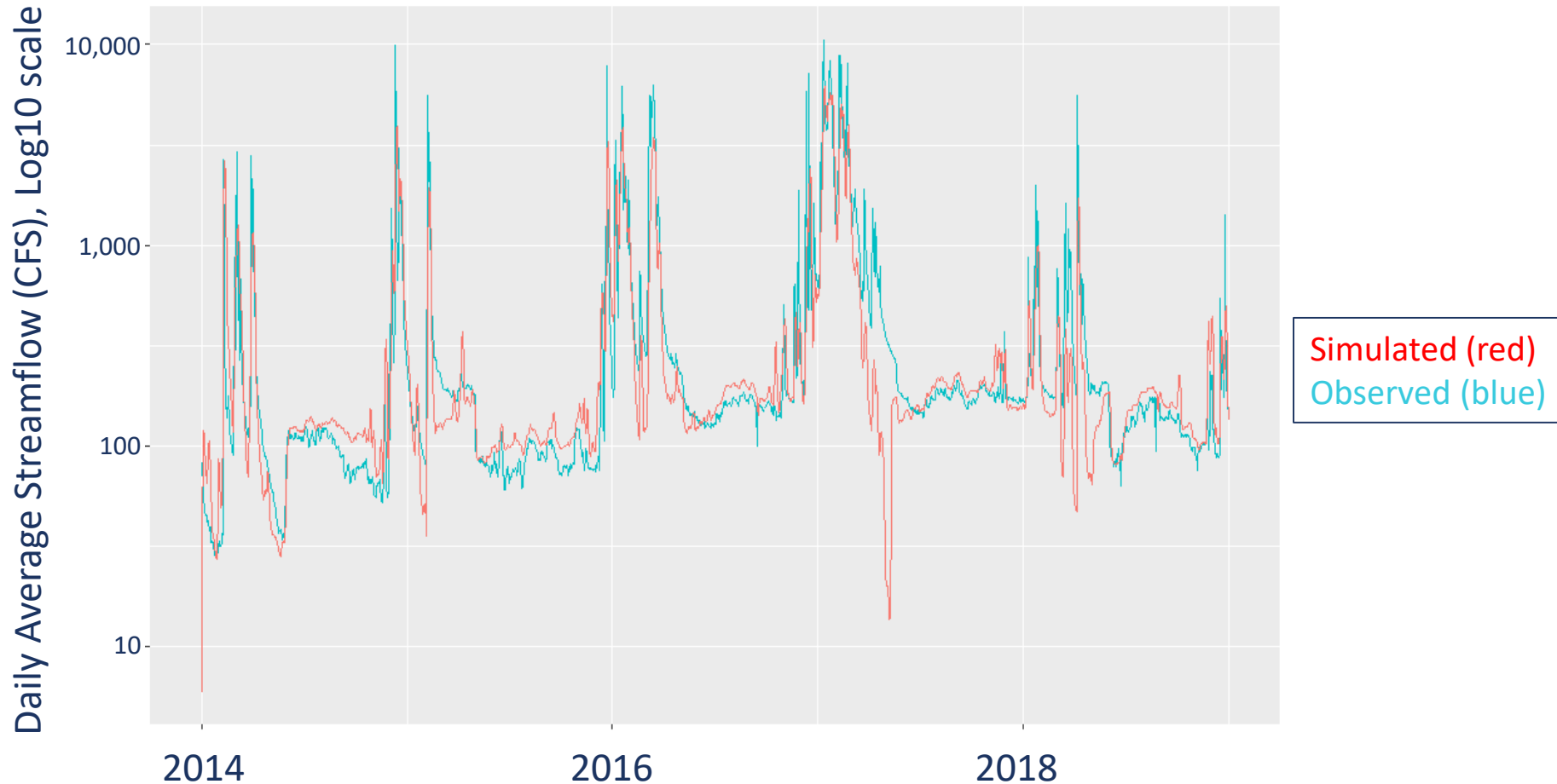
# Modeling: What is next?





# PRMS: Preliminary Results

Calibrated Simulated vs. Observed Flows at the Hopland Gage (PRMS)

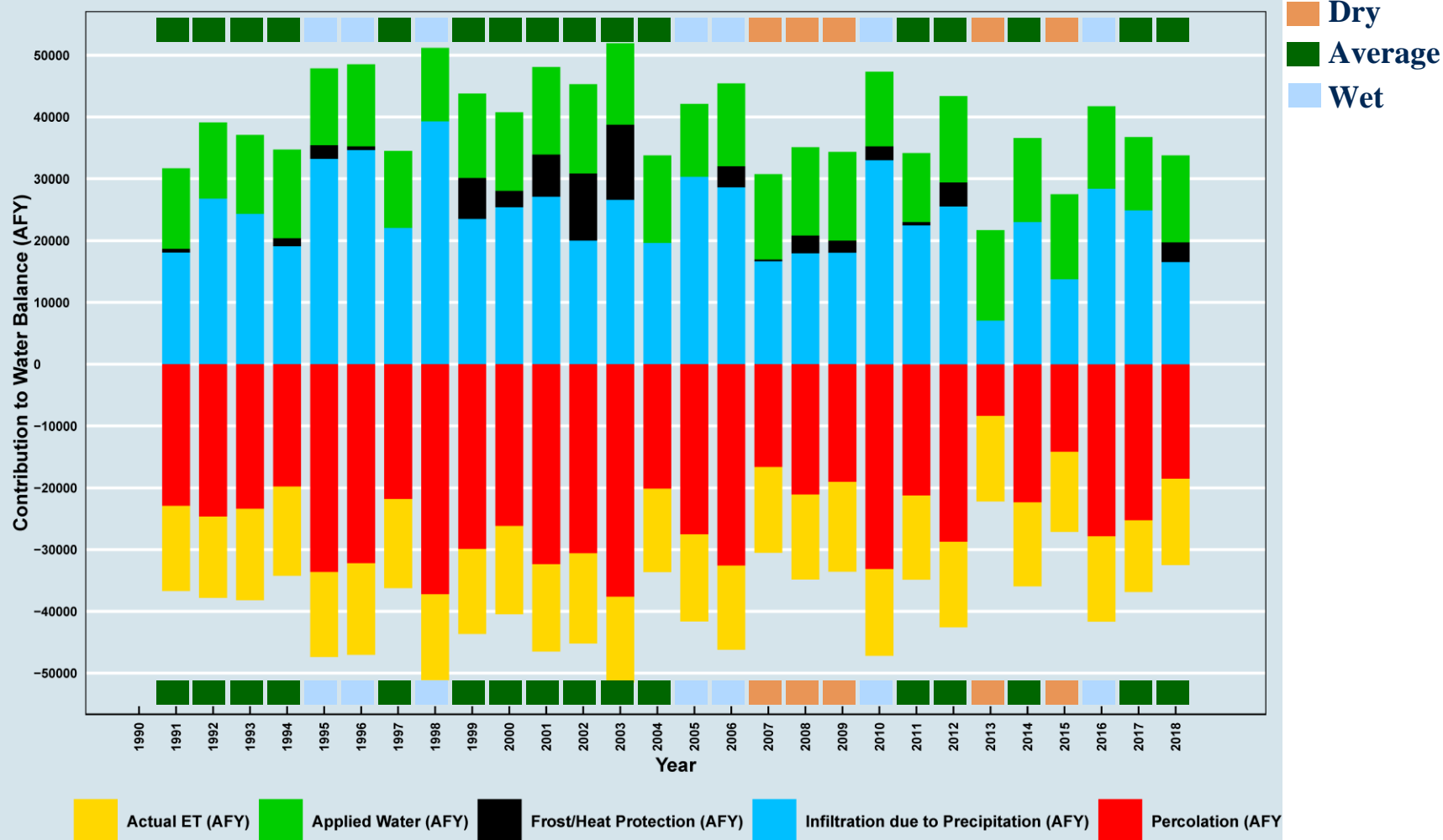






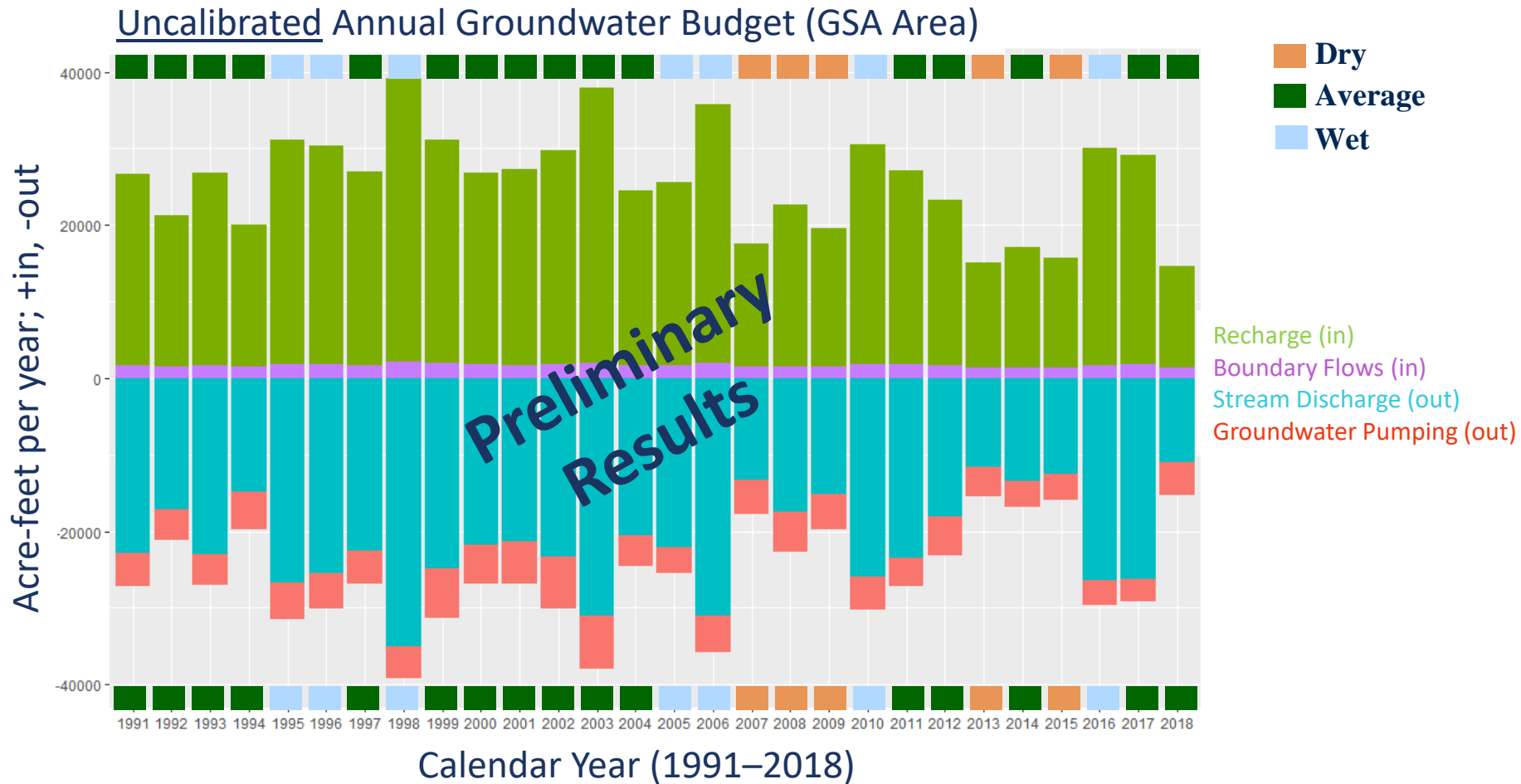
# IDC: Root Zone Budget in UVGB

Annual Basin Root Zone Budget Limited to Irrigated Lands  
Total Area: 10533 Acres





# MODFLOW: Preliminary Water Budget



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# Development of GSP Chapter 2

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- Overview of Chapter 2
  - Focus of Chapter 2
  - Information gaps for Chapter 2.1

# Review and Commenting Process

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A GSP has five chapters:

1. Introduction



2. Plan Area and Basin Setting



3. Sustainable Management Criteria



4. Projects and Management Actions



5. Plan Implementation



# **Review and Commenting Process**

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## **2.1. Description of Plan Area**

2.1.1. Summary of Jurisdictional Areas and Other Features

2.1.2. Water Resources Monitoring and Management Programs

2.1.3. Land Use Elements or Topic Categories of Applicable General Plans

2.1.4. Additional GSP Elements

2.1.5. Notice and Communication

# Information Needed for Ch 2 Section 2.1

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## 2.1. Description of Plan Area

### 2.1.1. Summary of Jurisdictional Areas and Other Features

- ❖ General information about the Russian River Watershed and PVP

### 2.1.2. Water Resources Monitoring and Management Programs

- ❖ Check monitoring entities and see if we should add or remove any programs listed
- ❖ Provide additional information, if available, for programs that are highlighted as needing feedback

# Information Needed for Ch 2 Section 2.1

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## 2.1. Description of Plan Area

### 2.1.2. Water Resources Monitoring and Management Programs

- ❖ Additional information regarding TMDLs would be helpful

### 2.1.3. Land Use Elements or Topic Categories of Applicable General Plans

- ❖ We need information regarding the County's zoning plan
- ❖ Any other relevant plans other than the General Plan and UVAP that should be included and is missing.



# Information Needed for Ch 2 Section 2.1

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## 2.1. Description of Plan Area

### 2.1.4. Additional GSP Elements

Anything to include in or add to the following sections :

- ❖ Migration of contaminated groundwater
- ❖ Groundwater cleanup sites Relationships with State and federal regulatory agencies.
- ❖ Impacts on groundwater dependent ecosystems

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# Review and Commenting Process

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- Reviewer forms are distributed. Instructions were provided in the first page of the form and examples are written in the form. In summary, including the following would be increasingly helpful:
  - For suggested text changes, please copy and paste the text you wish to change and place your suggested edits in track changes or strikethrough features in this document.
  - Please note the line number

# Example for reviewer form

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Reviewer name:

Submission date:

GSP sections reviewed:

Line number	Suggested revision ( <i>please delete example text below once you submit</i> )
69	Example: In the acknowledgements section, please add XXX as a partner
131	Example: Can you provide source of information, footnote or otherwise?
220	Example of how to make edits to original document text: In 2014, the State of California enacted the Sustainable Groundwater Management Act, which includes requirements that must be addressed in the Scott Valley Basin, as this area is considered a medium priority groundwater basin.

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# Preliminary Discussion on Sustainable Management Criteria

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# Key Elements of Groundwater Sustainability Plans

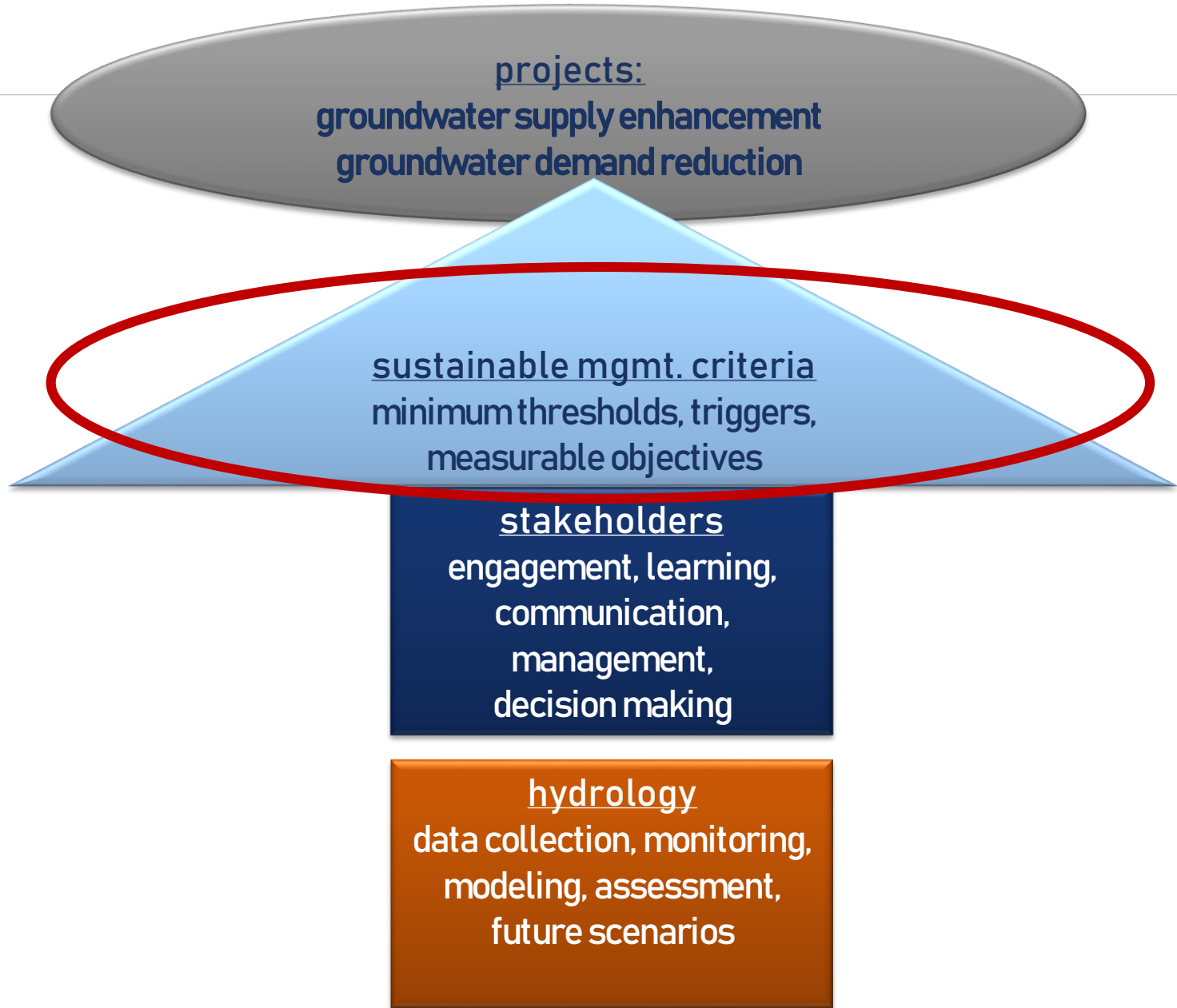
projects:  
groundwater supply enhancement  
groundwater demand reduction

sustainable mgmt. criteria  
minimum thresholds, triggers,  
measurable objectives

stakeholders  
engagement, learning,  
communication,  
management,  
decision making

hydrology  
data collection, monitoring,  
modeling, assessment,  
future scenarios

# Key Elements of Groundwater Sustainability Plans





## ■ Healthy

### Health Maintenance

- Nutrition
- Exercise
- Relationships/social engagement
- Monitoring & Assessment

## ■ Sustainable Groundwater

### Groundwater Management

- Adaptive supply management
- Adaptive demand management
- Stakeholder engagement
- Monitoring & Assessment

## ■ Ill

### Treatment Mode

- Medication / therapy
- Additional monitoring & Doctor's assessment

## ■ Reversible undesirable impacts

### Extraordinary Measures

- Supply enhancement / demand reduction
- Additional monitoring & assessment

## ■ Critically ill

### Emergency Mode

- Emergency Room
- Surgery

## ■ Major undesirable impacts

### Emergency Mode

- SGMA Chapter 11
- Probationary Status

## ■ Death

## ■ Groundwater unusable/unavailable

M  
E  
T  
R  
I  
C

TRIGGER(s)

THRESHOLD(s)

## ■ Healthy

### Health Maintenance

- Nutrition
- Exercise
- Relationships/social engagement
- Monitoring & Assessment

## ■ Sustainable Groundwater

### Groundwater Management

- Adaptive supply management
- Adaptive demand management
- Stakeholder engagement
- Monitoring & Assessment

**"Measurable Objective"**

TRIGGER(s)

## ■ Ill

### Treatment Mode

- Medication / therapy
- Additional monitoring & Doctor's assessment

## ■ Reversible undesirable impacts

### Extraordinary Measures

- Supply enhancement / demand reduction
- Additional monitoring & assessment

## ■ Critically ill

**"Minimum Threshold"**

## ■ Major undesirable impacts

### Emergency Mode

- Emergency Room
- Surgery

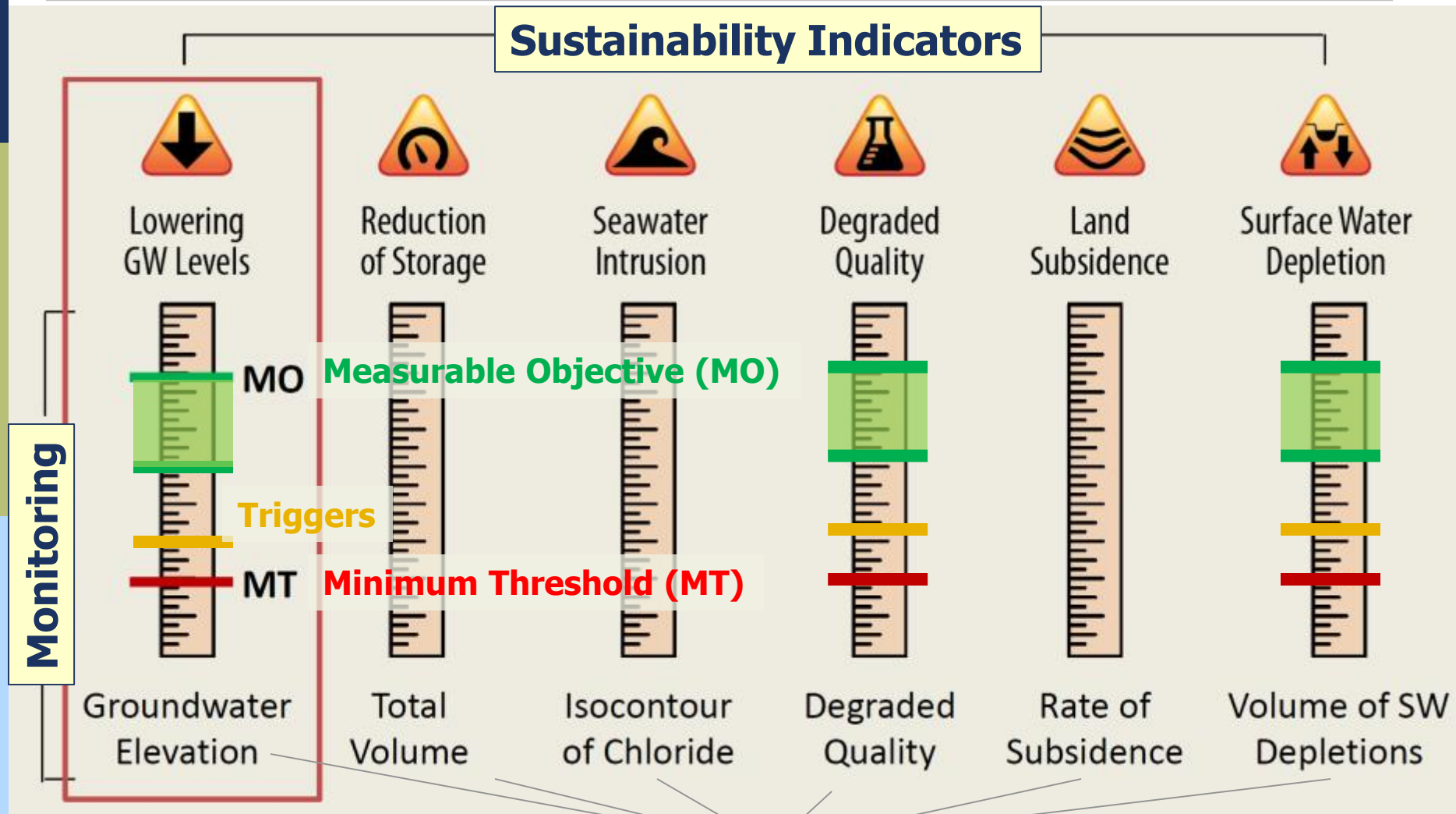
## ■ Death

### Emergency Mode

- SGMA Chapter 11
- Probationary Status

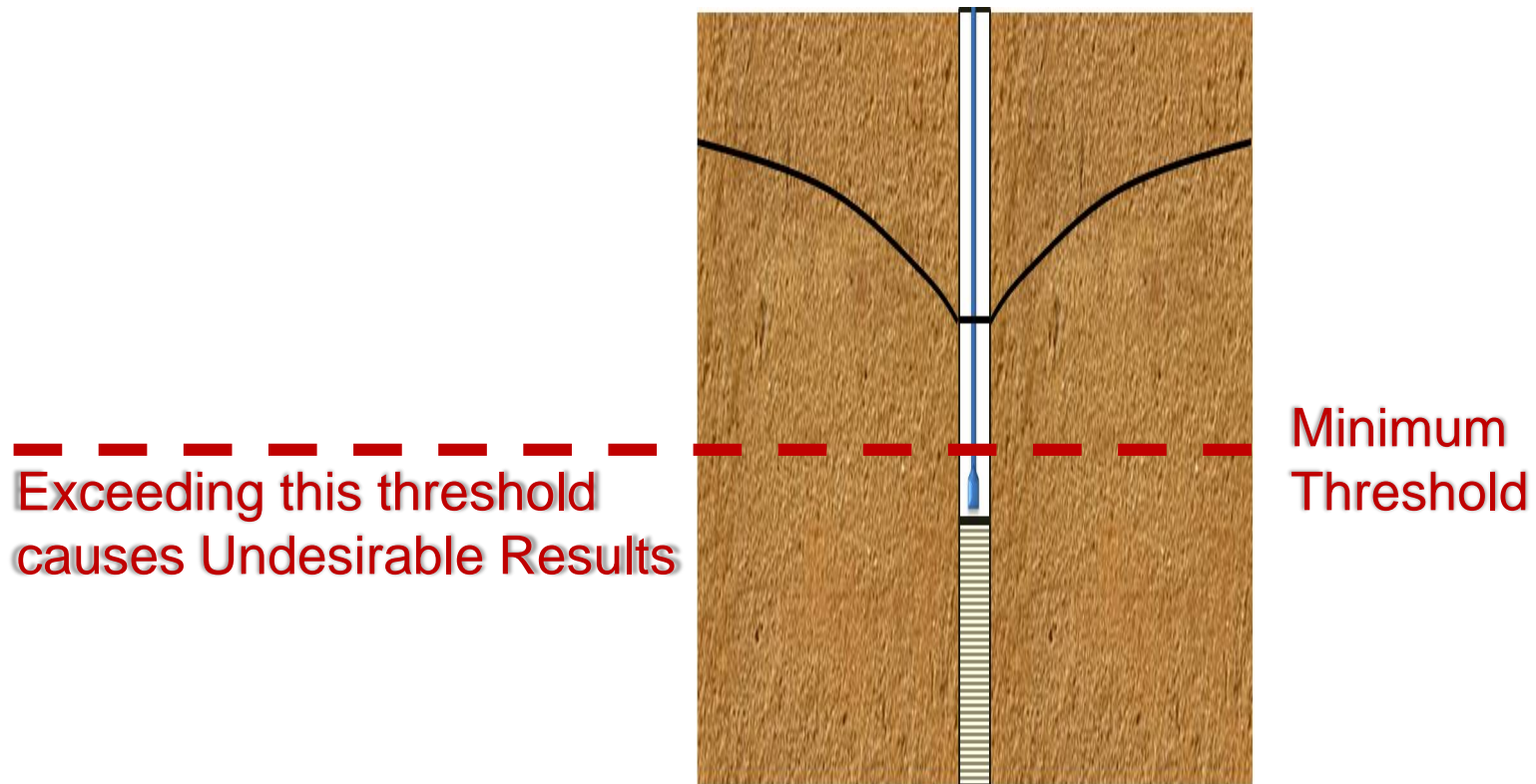
## ■ Groundwater unusable/unavailable

# GSP: Monitoring and Managing Sustainability



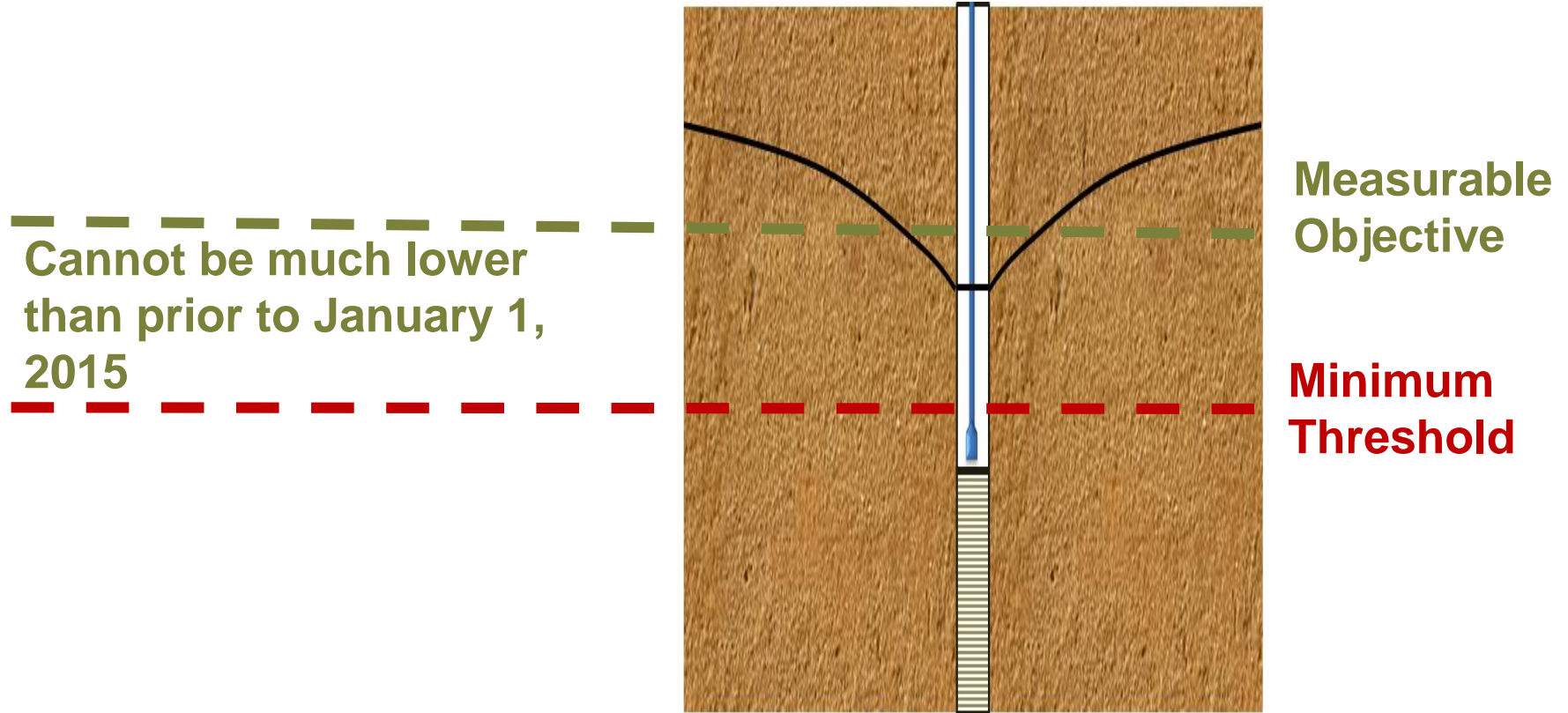
# Sustainable Management Criteria Components

- Sustainability Goal
- Undesirable Results (UR)
- Minimum Thresholds (MT)
- Measurable Objectives (MO)



# Sustainable Management Criteria Components

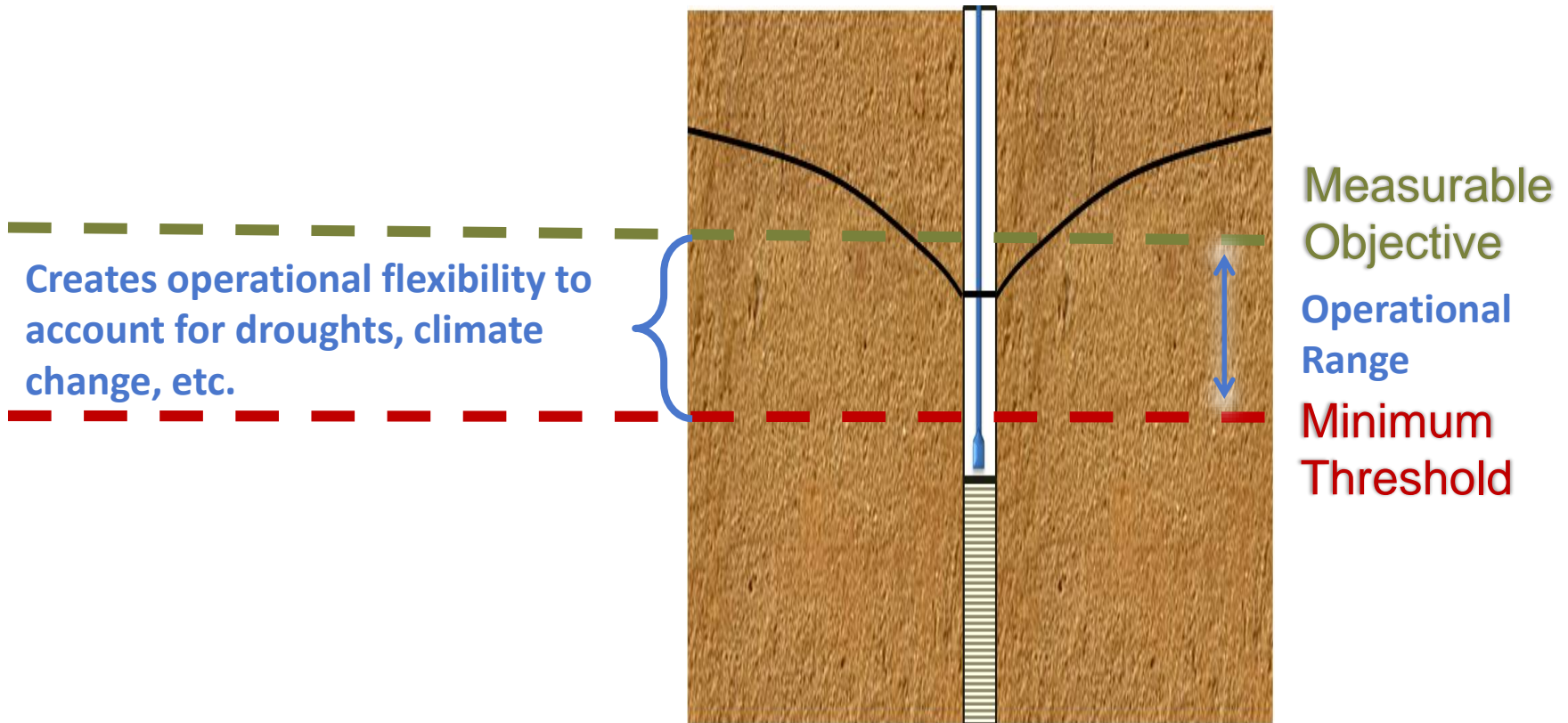
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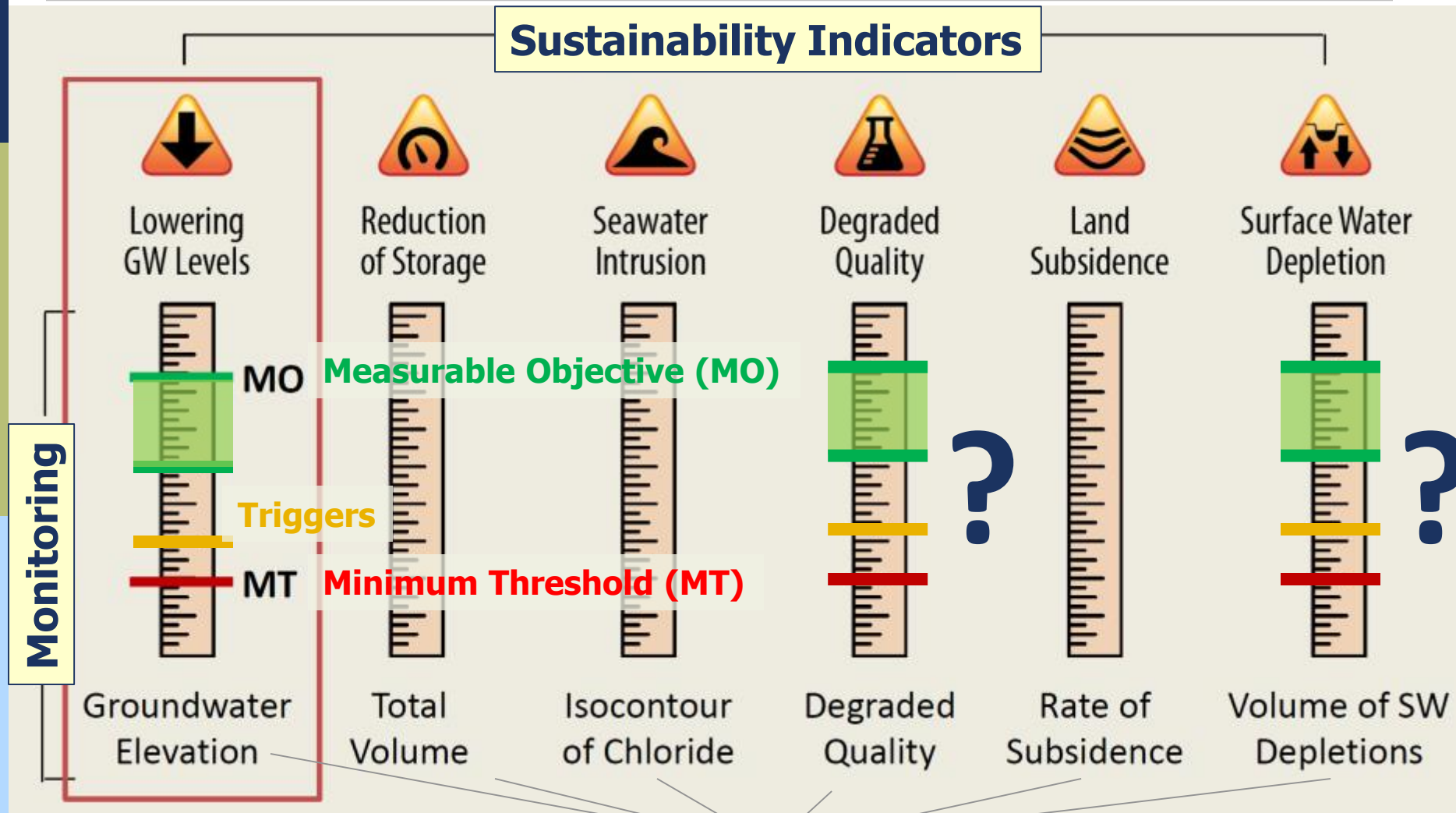


# Sustainable Management Criteria Components

- Sustainability Goal
- Undesirable Results (UR)
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# GSP: Monitoring and Managing Sustainability



[generalized examples of what to monitor]

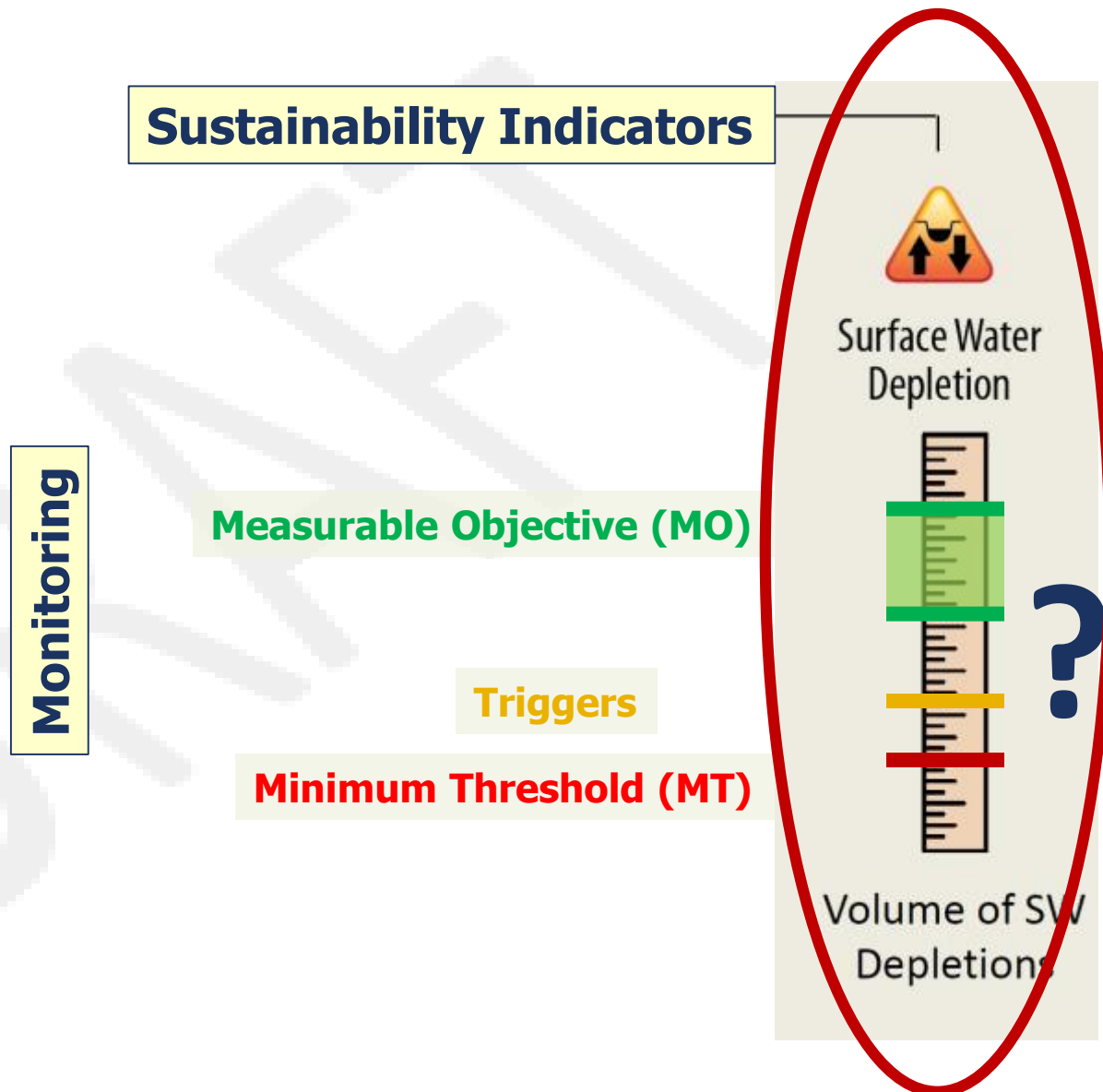
modified from Ca DWR 2016

## Some Guidance on Water Quality in GSPs:

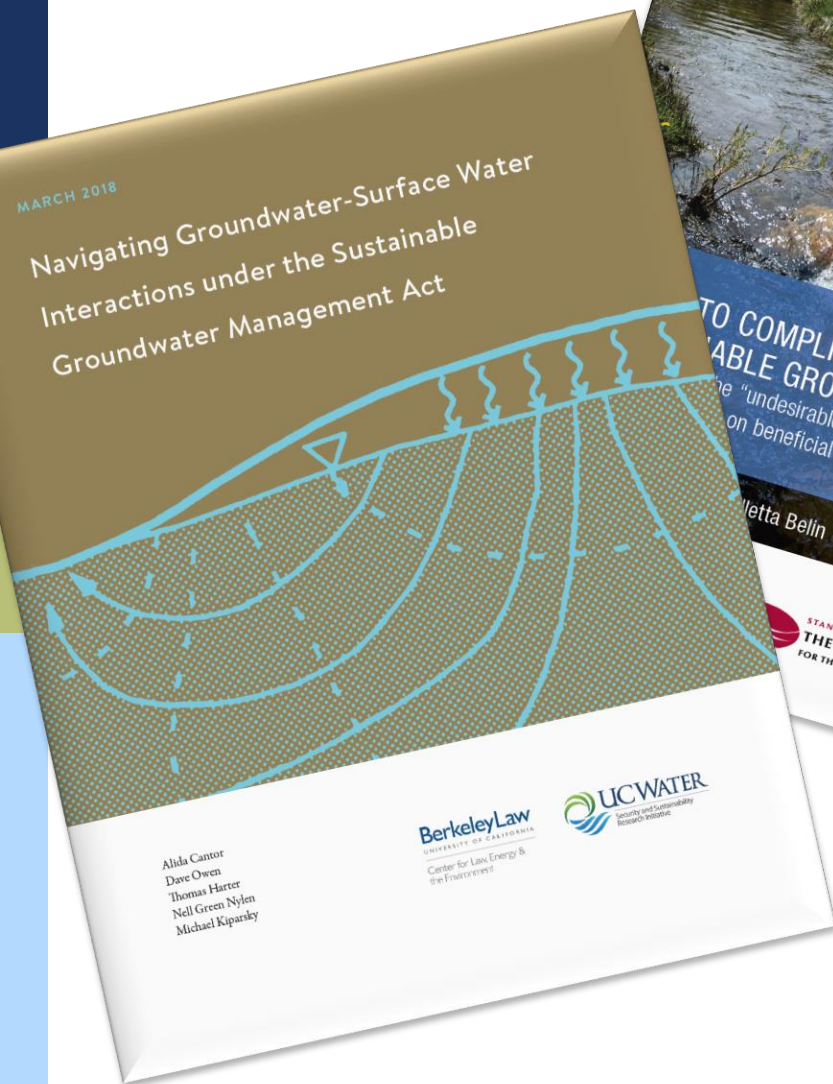




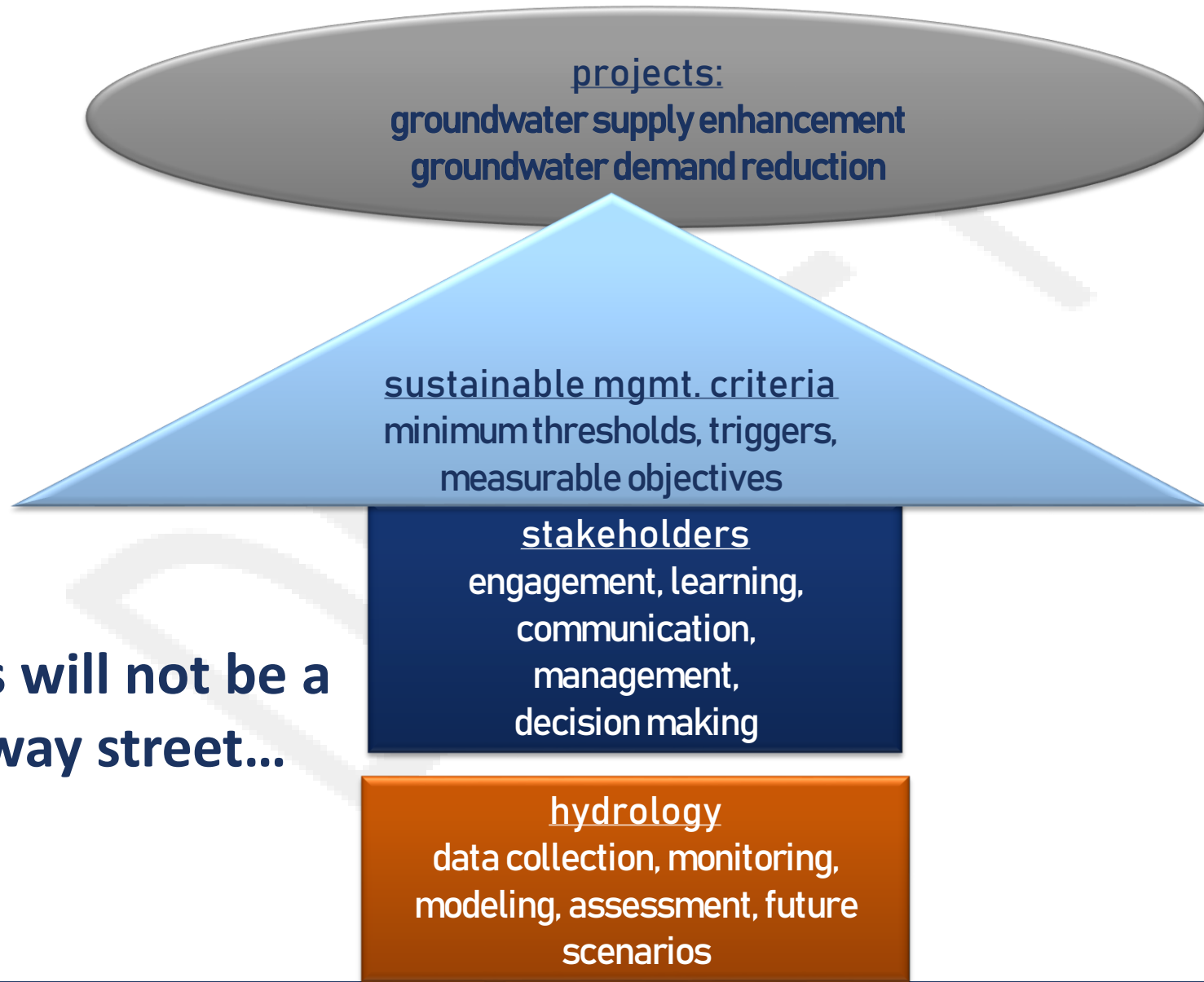
# GSP: Monitoring and Managing Sustainability



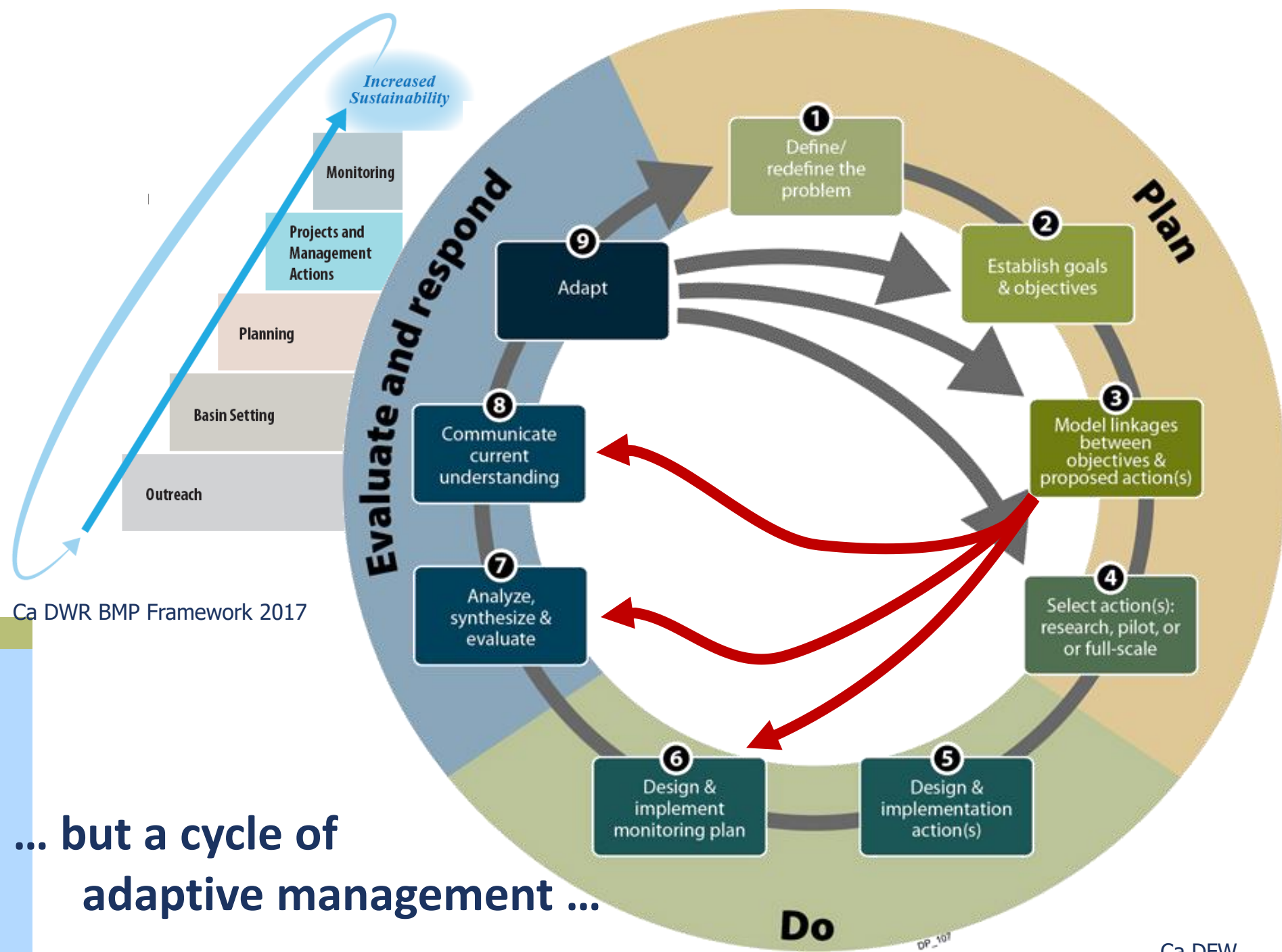
# Some Guidance on W-SW Interaction:



# Key Elements of Groundwater Sustainability Plans



...this will not be a  
one way street...



# Questions?

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Thank you!