

Butte Valley Groundwater Advisory Committee Meeting

Thursday April 29, 2021

LARRY
WALKER



ASSOCIATES

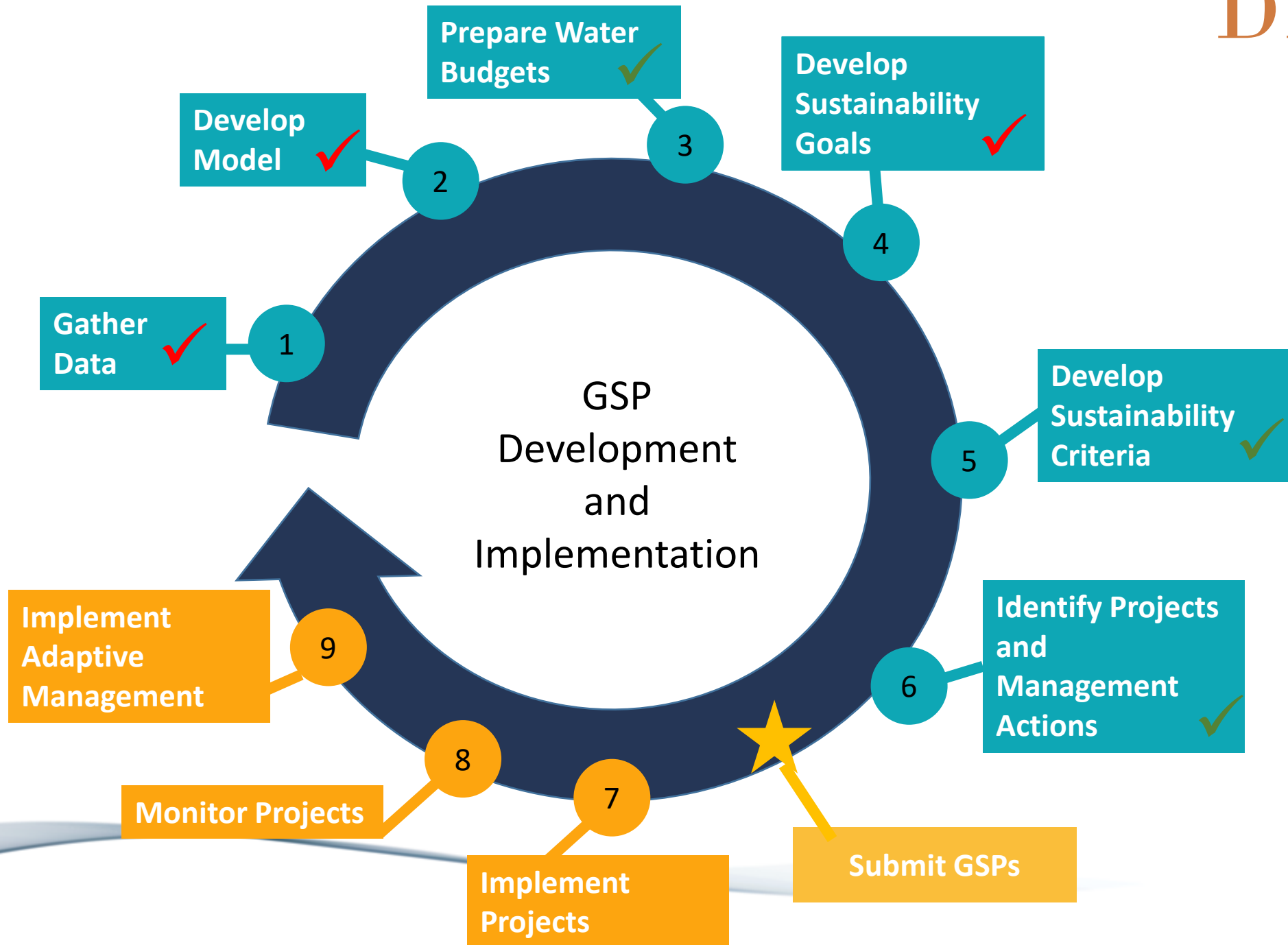


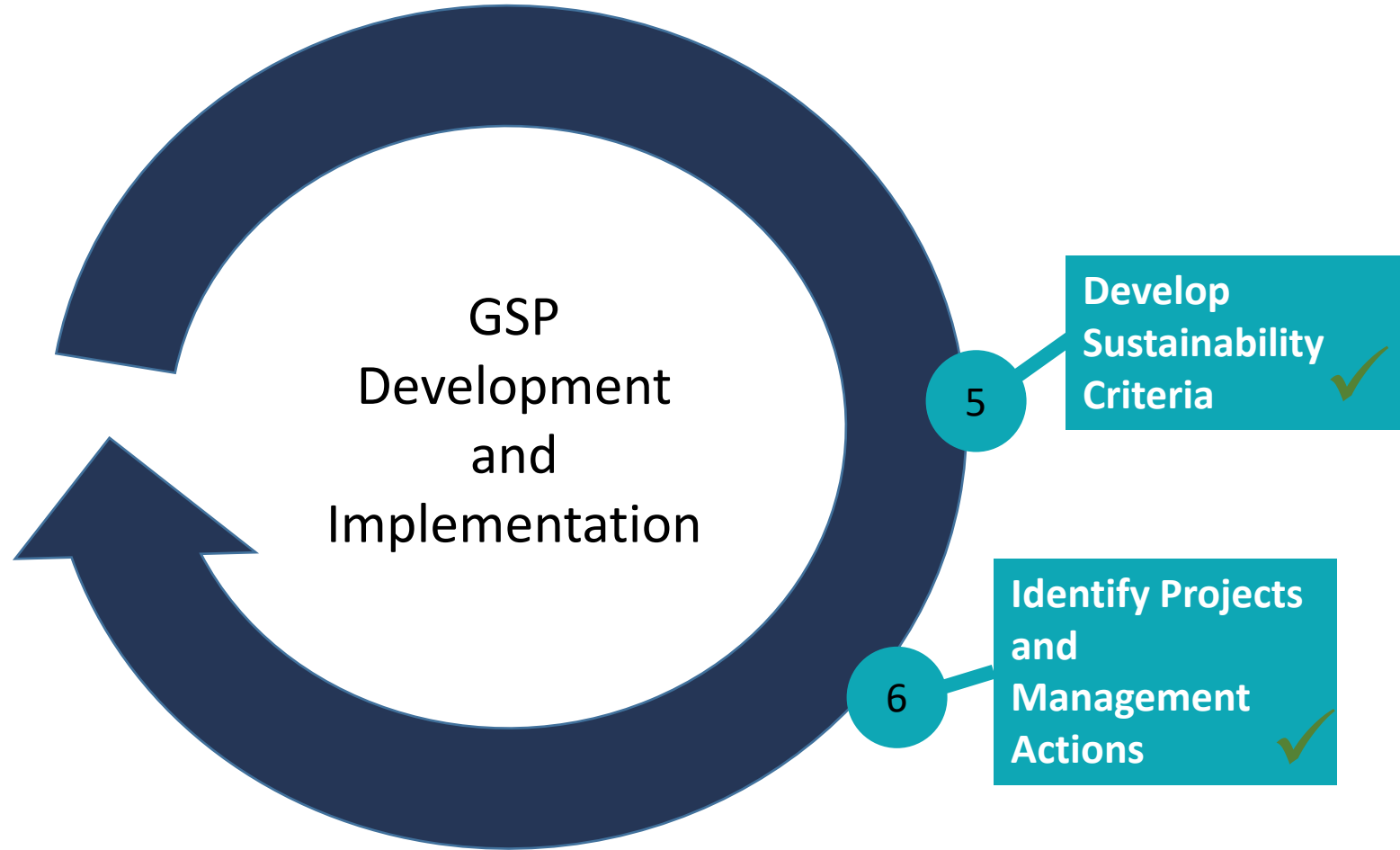
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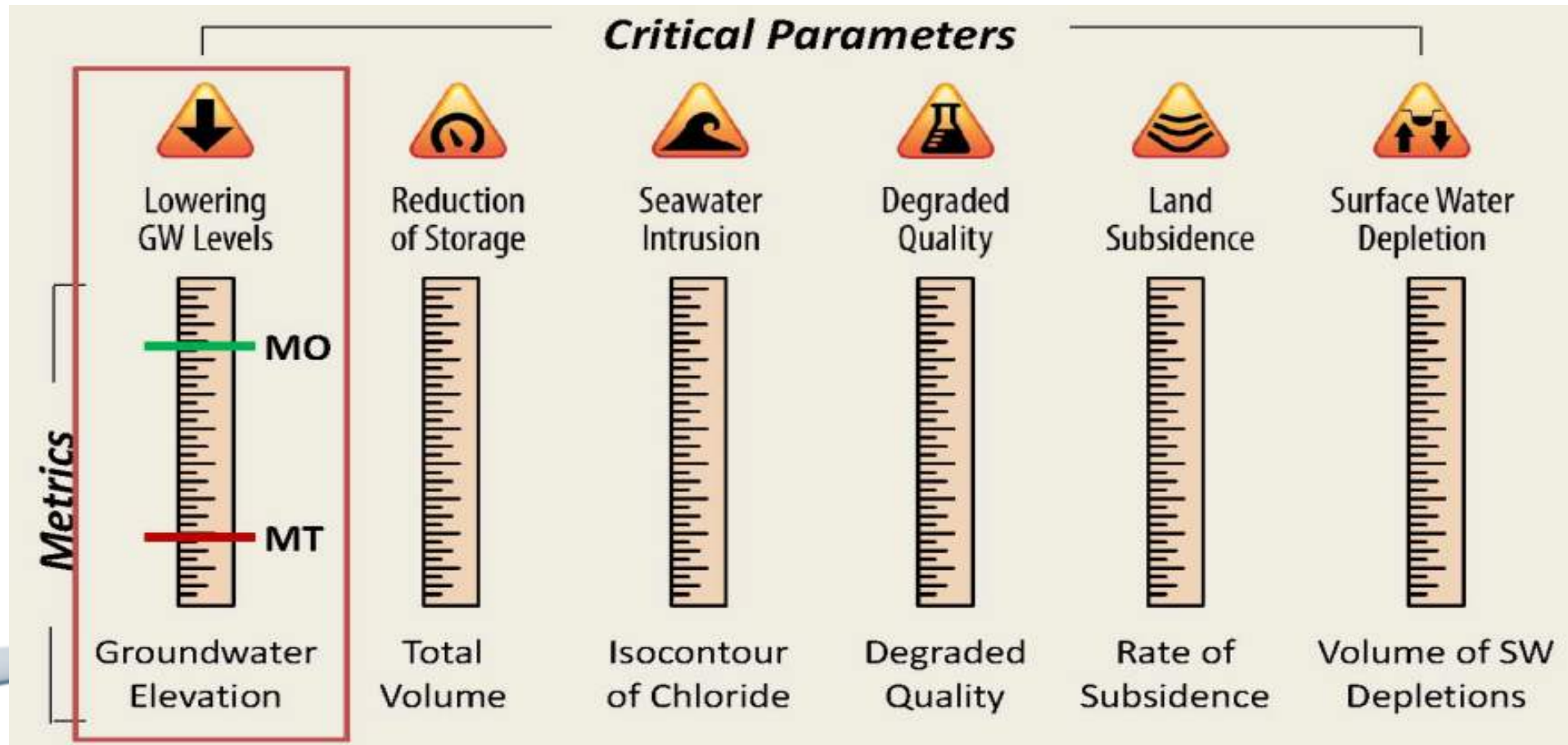


Step 5: Develop Sustainability Criteria (draft Chapter 3)

Sustainability Indicators and Undesirable Results

| Sustainability Indicators |  Lowering GW Levels |  Reduction of Storage |  Seawater Intrusion |  Degraded Quality |  Land Subsidence |  Surface Water Depletion |
|--------------------------------------|---|---|---|---|--|--|
| Metric(s) Defined in GSP Regulations | <ul style="list-style-type: none"> • Groundwater Elevation | <ul style="list-style-type: none"> • Extraction Volume | <ul style="list-style-type: none"> • Chloride concentration isocontour | <ul style="list-style-type: none"> • Migration of Plumes • Number of supply wells • Volume • Location of isocontour | <ul style="list-style-type: none"> • Rate and Extent of Land Subsidence | <ul style="list-style-type: none"> • Volume or rate of surface water depletion |

Sustainable Groundwater Management Act: Sustainable Management Criteria



Sustainable Management Criteria

Sustainability Goal

Undesirable Results

Minimum Threshold

Measurable Objectives

Acronyms:

UR – Undesirable Result

- Informed by Sustainability Goal, but must be tied to metric(s)

MT – Minimum (or Maximum) Threshold.

- The MT is the boundary beyond which a UR occurs.
- *Note:* MT and UR definitions are **linked**.

MO – Measurable Objective

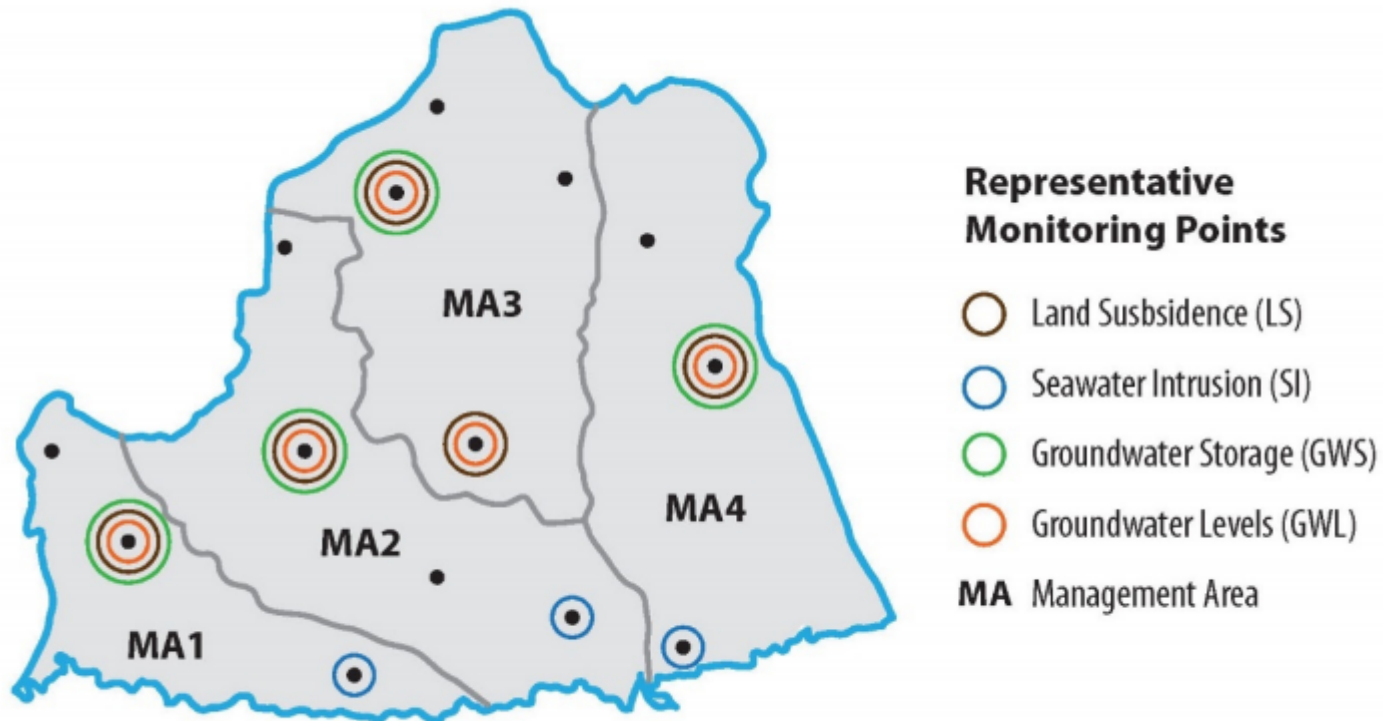
- Ideal operating range

SMC – Sustainable Management Criteria (includes URs, MO and MTs)

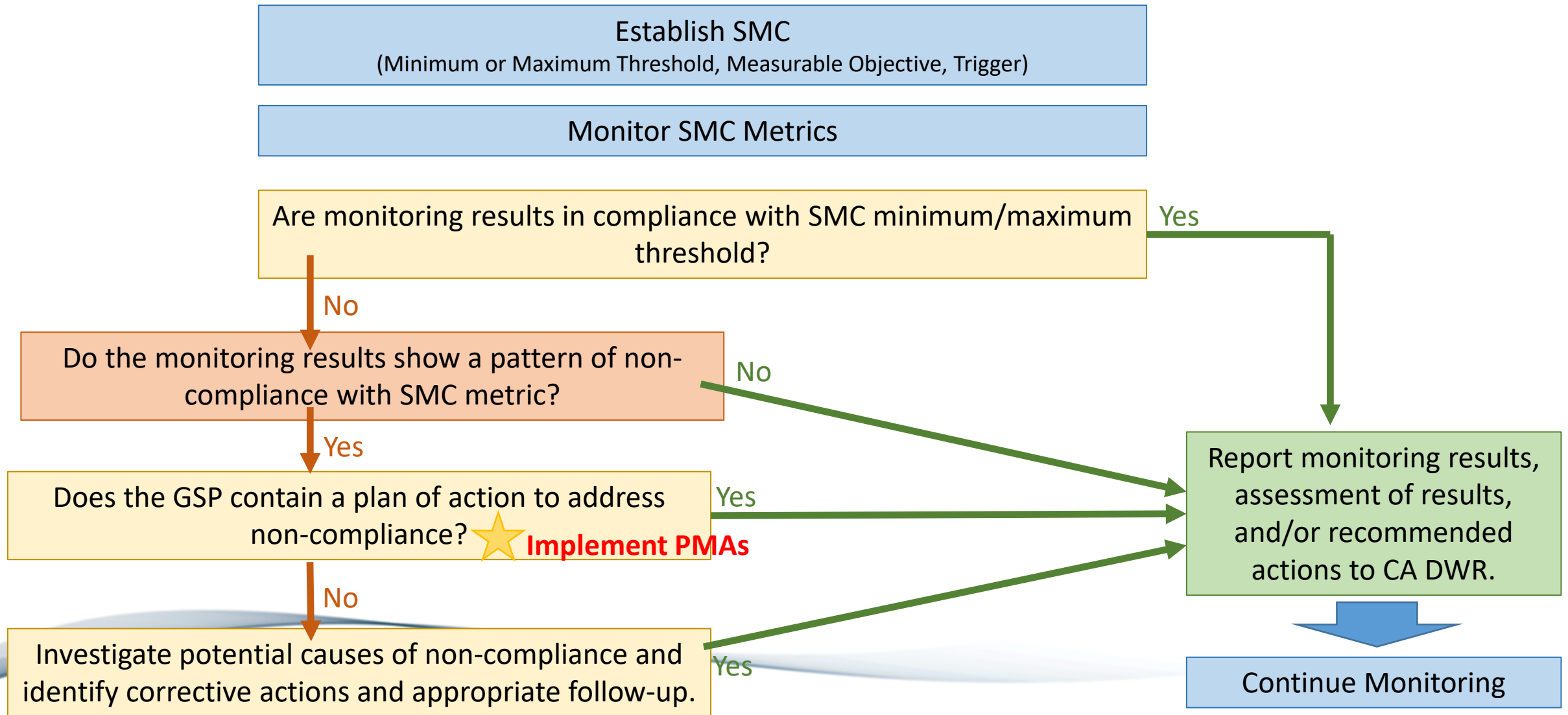
PMAs – Projects and Management Actions

Representative Monitoring Points and the Monitoring Network


Representative Monitoring Points or RMPs for each SMC represent a subset of the **complete monitoring network**.



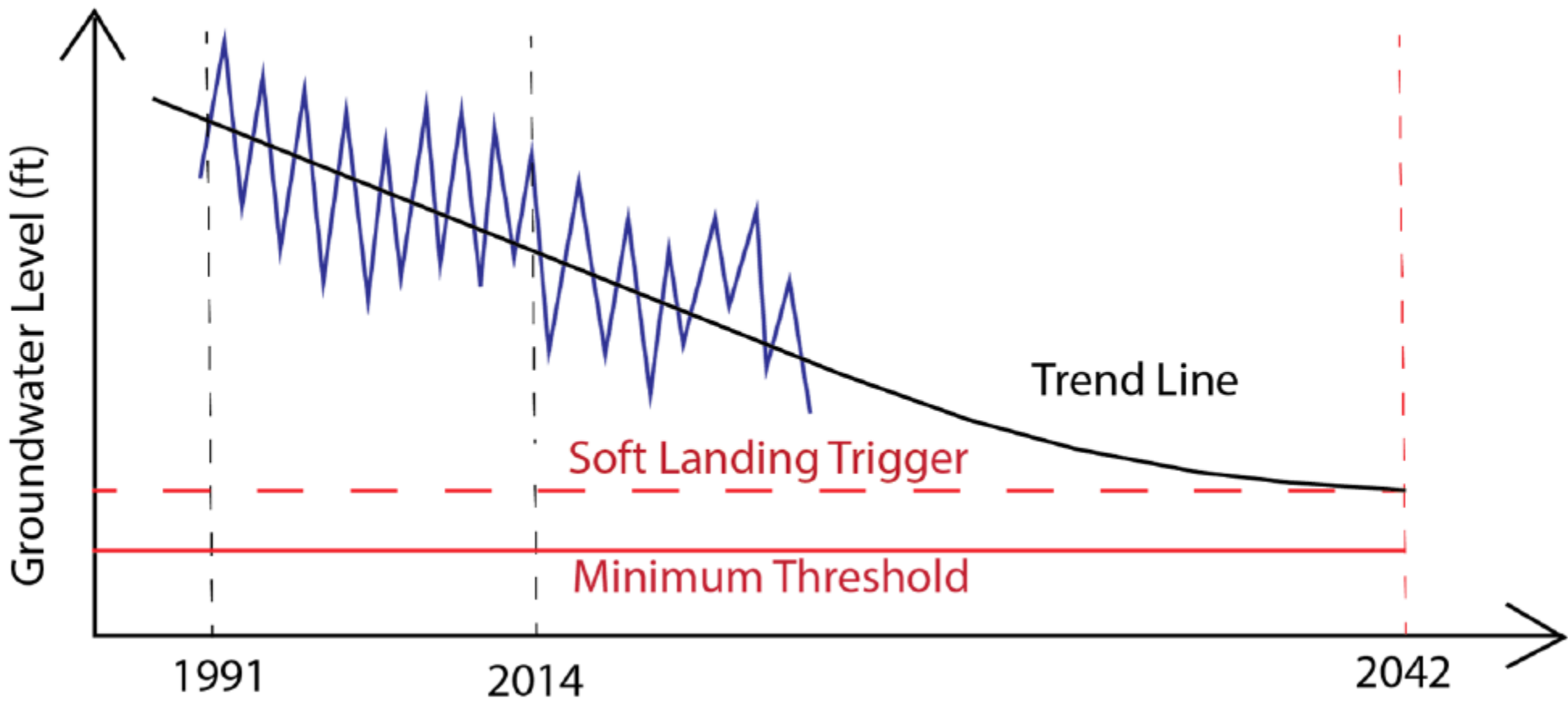
SMC Monitoring and Compliance Flow Chart

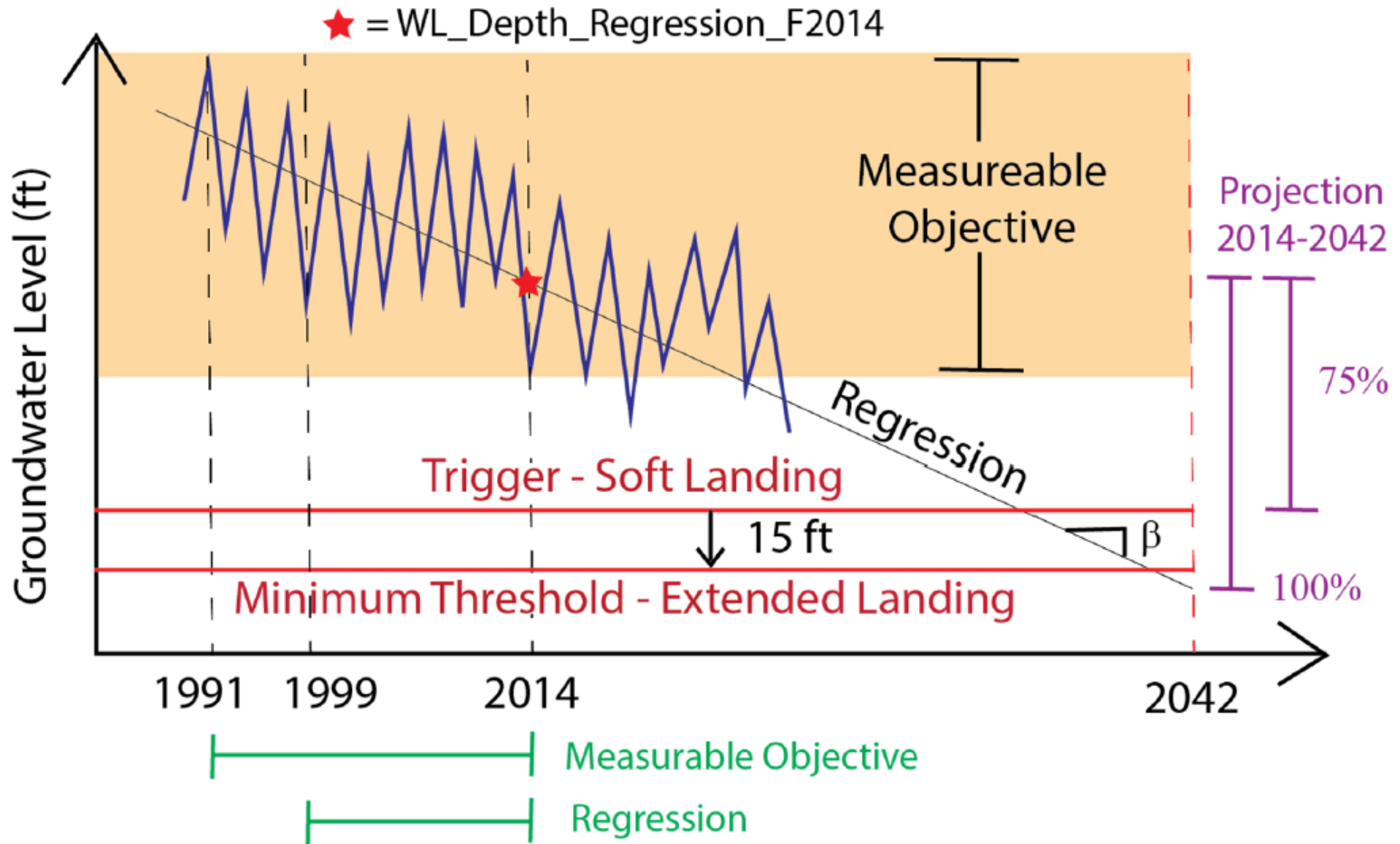


Step 6: Identify Projects and Management Actions (draft Chapter 4)

- **Projects:** Things you construct; new infrastructure
 - **Management Actions:** Plans, permits, policies, or other actions
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Review of Water Level SMC





Review of Projects and Management Actions

| Tier | Title | Description | Lead Agency | Category | Status | Anticipated Timeframe | Targeted Sustainability Indicator(s) / Benefits |
|------|---|---|--------------------|--------------------|------------------|-----------------------|---|
| I | Abandonment of Sam's Neck Flood Control Facility | Expand the wetlands in the Butte Valley Wildlife Area to store all Meiss Lake floodwater and eliminate the need for the Sam's Neck Flood Control Facility. | CDFW | Supply Enhancement | Active | Active | Groundwater levels |
| I | City of Dorris Water Conservation | Water conservation measures outlined in the City of Dorris Municipal Code | City of Dorris | Demand Management | Active | Active | Groundwater levels |
| I | Groundwater Use Restrictions | Prohibition of the use of groundwater underlying Siskiyou County for cannabis cultivation (Article 7, Chapter 13, Title 3 of Siskiyou County Code of Ordinances). | County of Siskiyou | Demand Management | Existing/Ongoing | N/A | Groundwater levels |
| I | Kegg Meadow Enhancement and Butte Creek Channel Restoration | Restoration of a properly functioning, resilient wetland ecosystem and aquatic habitat in Kegg Meadow by returning streamflow to the original meadow/channel elevations. Reverting stream to original channel will rewet overall meadow and restore riparian habitat. The site is 1 to 2 acres in size. | USFS | Supply Enhancement | Completed | Completed | 1. Habitat restoration 2. Groundwater recharge |
| I | Permit required for groundwater extraction for use outside the basin from which it was extracted (Siskiyou County Code of Ordinances) | Permit requirement for extraction of groundwater underlying the Basin for use outside the Basin. | County of Siskiyou | Demand Management | Active | Active | Groundwater levels |

| Tier | Title | Description | Lead Agency | Category | Status | Anticipated Timeframe | Targeted Sustainability Indicator(s) / Benefits |
|------|--|--|---|---------------------|----------------|---|--|
| I | Upland Management | Upland management includes removal of excess vegetation. This can occur on US Forest Service, Bureau of Land Management, or private land. | USFS | Supply Enhancement | Active | Active | <ol style="list-style-type: none"> 1. Improved groundwater recharge 2. Raise groundwater elevations 3. Improved habitat |
| I | Watermaster Butte Creek Flow Management | A Watermaster manages flow of Butte Creek into Butte Valley. | GSA/USFS | Supply Enhancement | Active | Active | <ol style="list-style-type: none"> 1. Groundwater Recharge 2. Flood control |
| | | | | | | | |
| II | Avoiding Expansion of Total Net Groundwater Use from the Basin | Avoid significant future expansion of total net consumptive water use within the Basin and its surrounding watershed through planning and coordination | GSA, County of Siskiyou, local land use zoning agencies | Demand Management | Planning Phase | No later than January 31, 2024 | Groundwater levels |
| II | Conservation Easements | Conservation easements in Butte Valley to stabilize water levels and to provide a viable instrument for urban or agricultural expansion while avoiding expansion of total net consumptive water use within the Basin and its surrounding watershed | TBD | Supply Augmentation | Planning Phase | Development expected over the next five years | Interconnected surface water |

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|------|--|--|----------------|--------------------|--|-----------------------|---|
| II | Dorris Water Meter Installation Project | The City of Dorris is upgrading their water system by installing water meters and replacing old pipelines. | City of Dorris | Demand Management | Invitation for Bids sent out Feb 2021. Contractor proposals due March 18, 2021 | Planning Phase | Groundwater levels |
| II | Irrigation Efficiency Improvements | Increase irrigation efficiency (and in some cases, yields) through infrastructure or equipment improvements. | GSA | Demand Management | Planning Phase | Planning Phase | Groundwater levels |
| II | Voluntary Land Repurposing (other than Conservation Easements) | Reduce water use through other voluntary land repurposing activities including term contracts, crop rotation, irrigated margin reduction, and other uses | GSA, TBD | Demand Management | Conceptual Phase | Conceptual phase | Groundwater levels |
| II | Well Replacement | Monetary compensation for replacing groundwater levels in cases of well outage due to dropping groundwater levels. This management action is intended to be activated in support of the groundwater level SMC. | GSA | Demand Management | Planning Phase | Planning Phase | Groundwater levels |
| | | | | | | | |
| III | Alternative, lower ET crops | Pilot programs on introducing alternative crops with lower ET but sufficient economic value. Incentivize and provide extension on long-term shift to lower ET crops. | GSA, UCCE, TBD | Demand Management | Conceptual Phase | Conceptual Phase | Groundwater levels |
| III | Butte Creek Diversion Relocation | Move the diversion of Butte Creek to Cedar Lake/Dry Lake | GSA/USFS | Supply Enhancement | Conceptual Phase | Conceptual Phase | Groundwater levels |

| Tier | Title | Description | Lead Agency | Category | Status | Anticipated Timeframe | Targeted Sustainability Indicator(s) / Benefits |
|------|--|---|--------------|-------------------|------------------|-----------------------|---|
| III | Butte Valley National Grassland Groundwater Recharge Project | Explore recharge benefits in National Grasslands from Meiss Lake overflow. | GSA/ USFS | Recharge | Conceptual Phase | Conceptual Phase | Groundwater levels |
| III | Strategic Groundwater Pumping Reductions | Strategic timing of groundwater pumping reductions. This management action is intended to be activated in support of the groundwater level SMC. | GSA | Demand Management | Conceptual Phase | Conceptual Phase | Groundwater levels |