Sustainable Groundwater Management Act Update

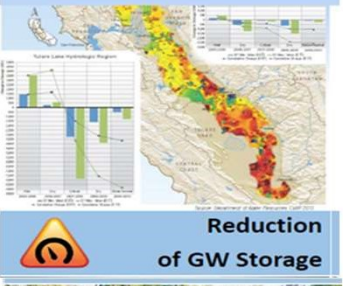
June 10, 2021

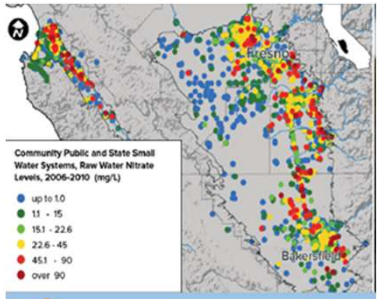
SGA

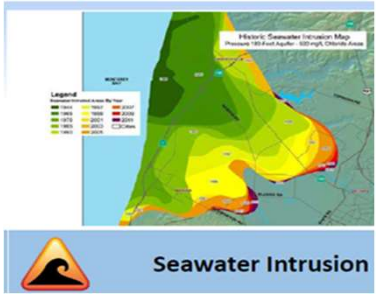
Current Status

- Held three NASb-wide public meetings
  - Sustainable Management Criteria (SMCs) on February 10
  - Model and Water Budget on March 10
  - Projects and Management Actions on May 12
- Continuing development of GSA Implementation Agreement
  - Working on Budget Estimate for GSP Implementation
- DWR released evaluations of four submitted GSPs
- Public Draft expected beginning of August

Demonstrating Sustainability Under SGMA







- In consideration of beneficial uses and users
- Establish criteria to track progress (measurable objectives and minimum thresholds)
- Define ***significant and unreasonable*** undesirable results for six indicators (five in our case)

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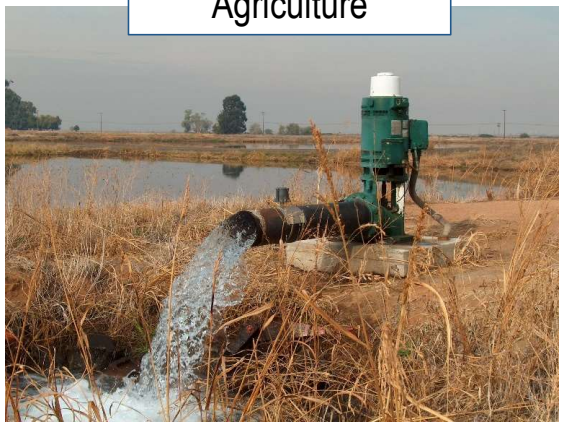
Beneficial Uses and Users

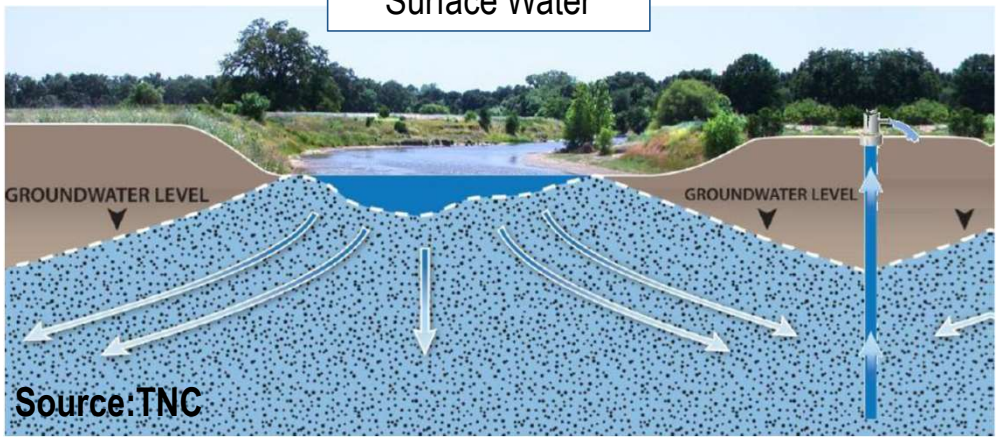
Agriculture



Municipal

Domestic

Surface Water



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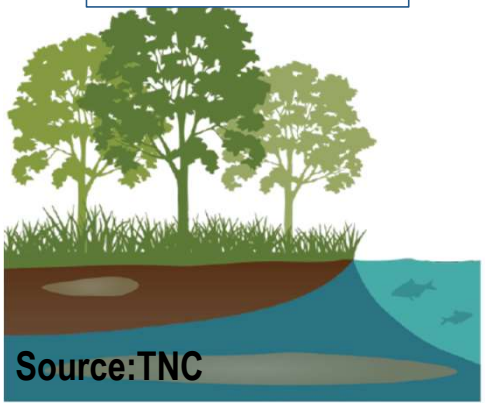

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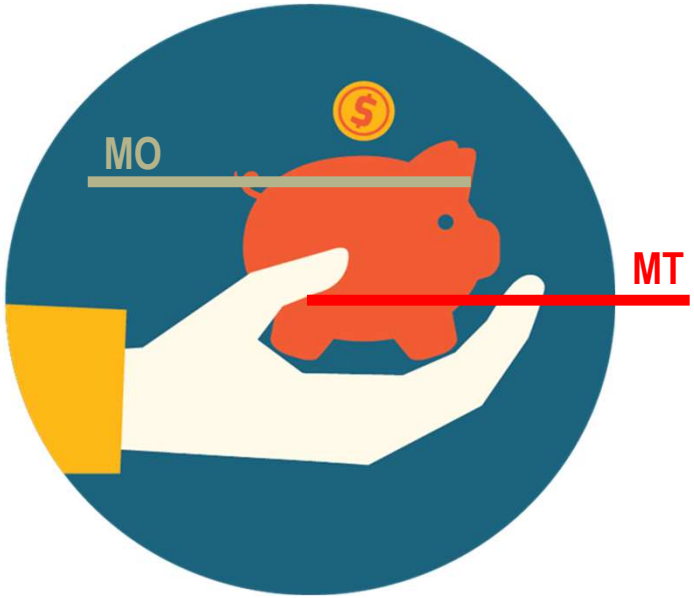
Sustainable Management Criteria (SMC)



Measurable Objective (MO) = levels that reflect desired conditions...that enable GSA to achieve sustainability

Minimum Threshold (MT) = levels at a site that when exceeded, either individually or at a combination of sites, may cause undesirable results

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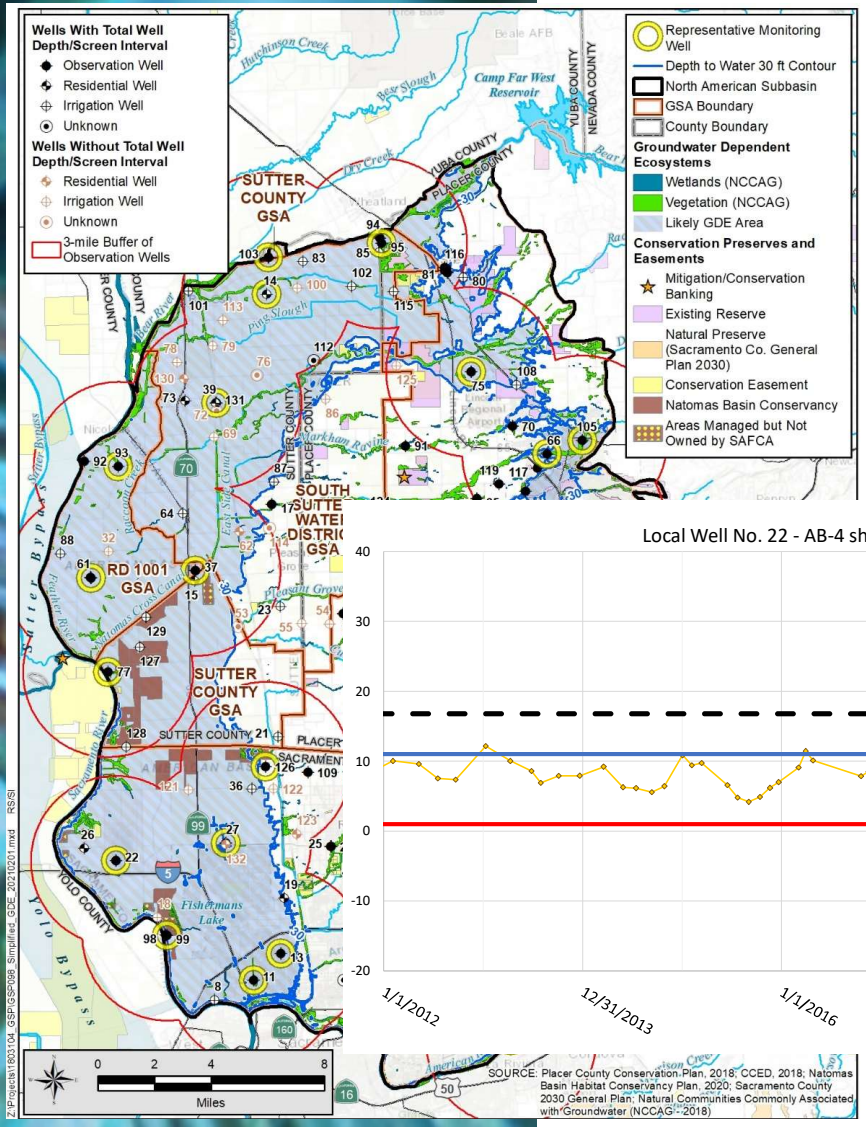
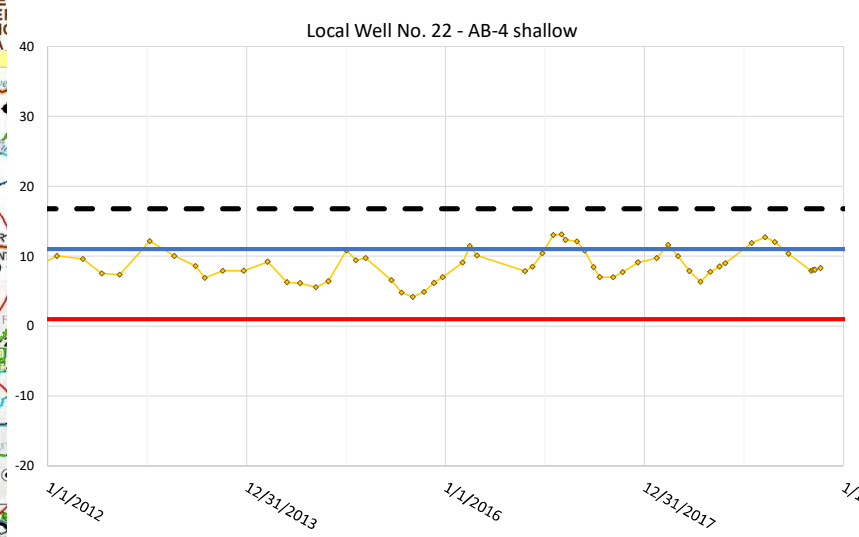
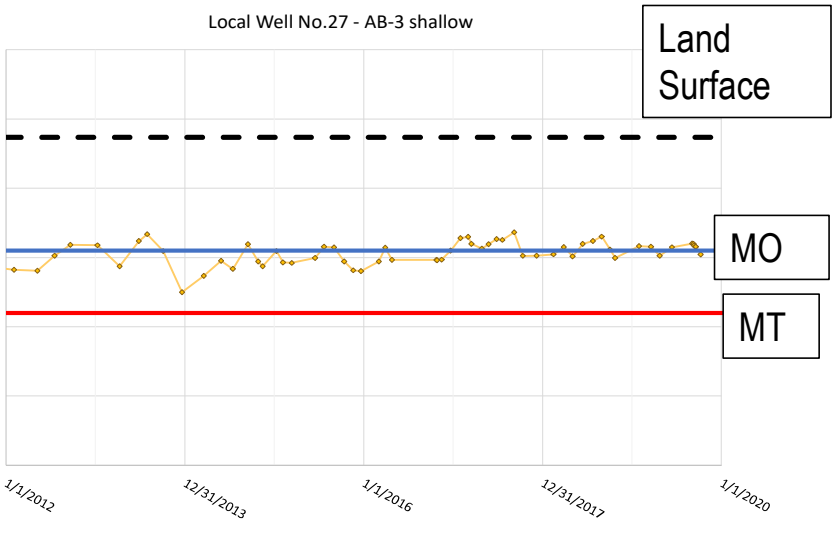
Original Draft MOs and MTs







Land Surface

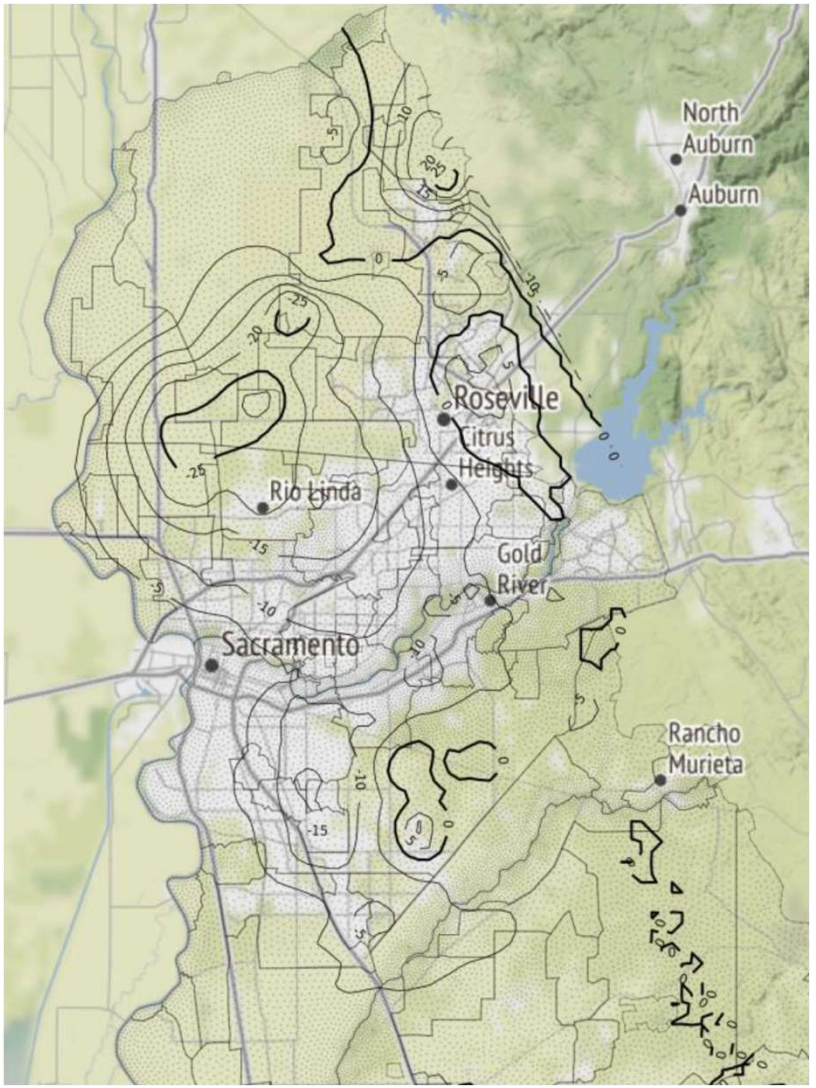
MO

MT

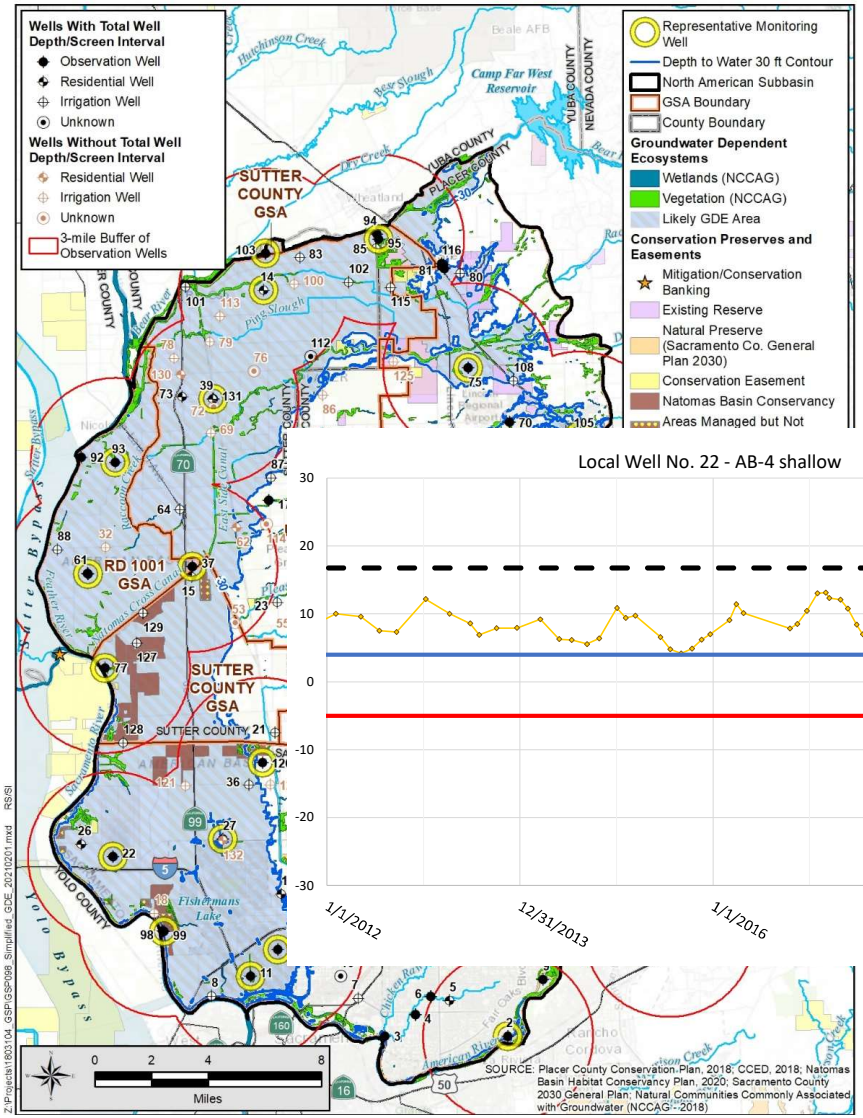
Groundwater Modeling Results

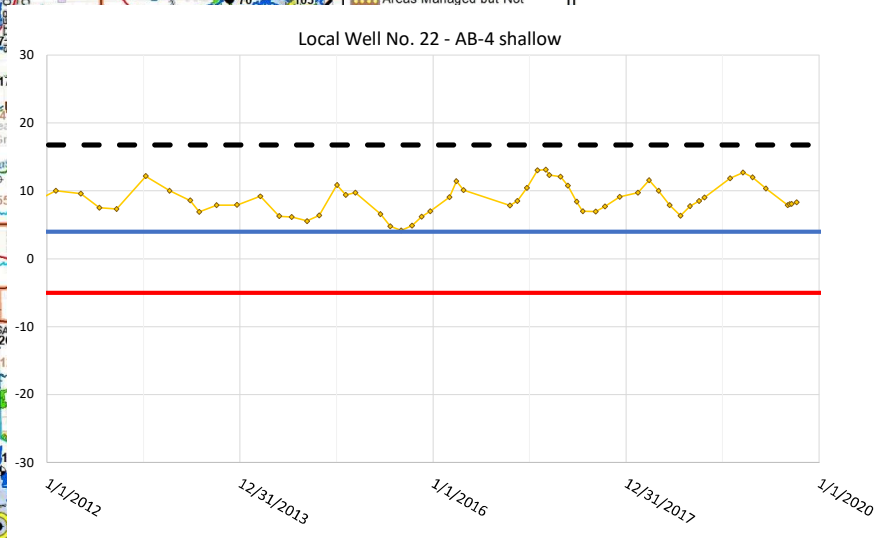
Projected Conditions compared to Current Conditions

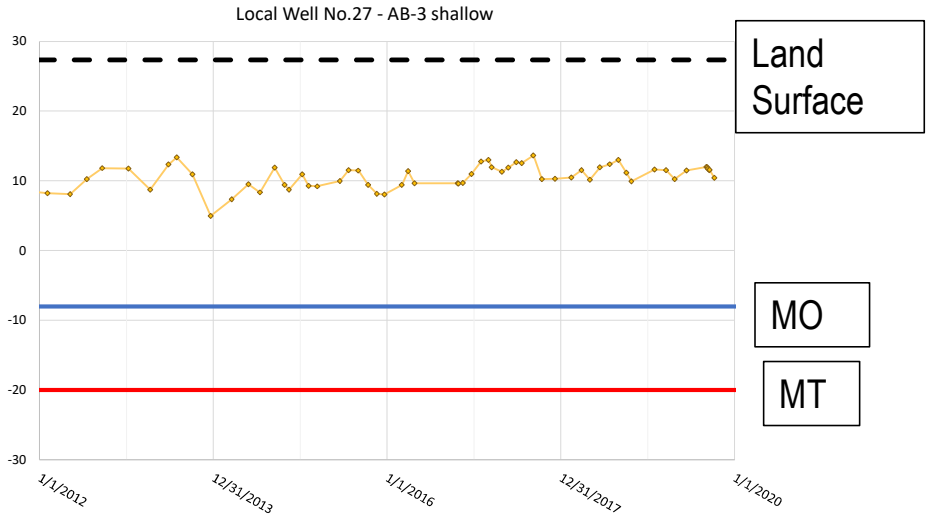
- Groundwater Storage under Projected Conditions is below sustainable yield of basin, but
- Some areas will experience groundwater level declines
- Whether those declines are a problem is subject to analysis of other beneficial uses and users



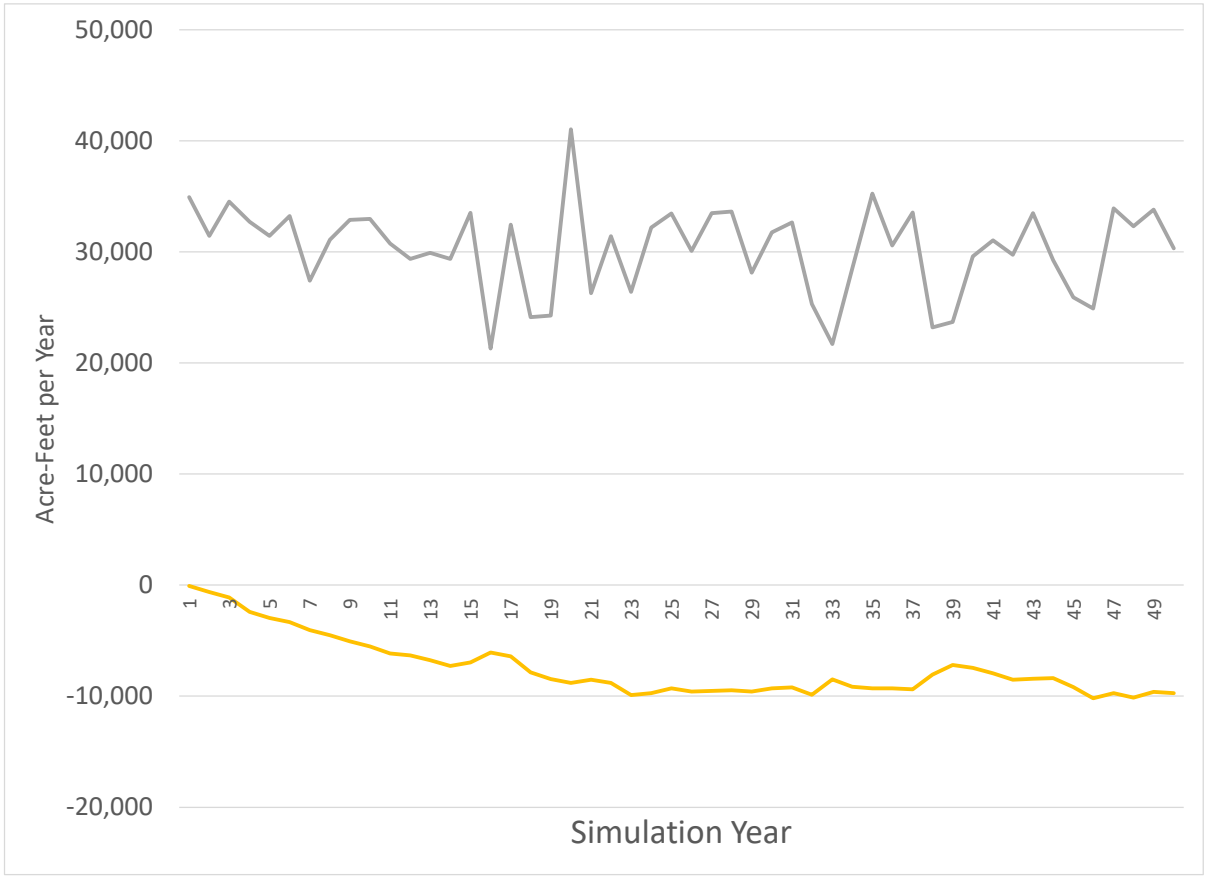
Revised Draft MOs and MTs







Projected Conditions - Sac River flow associated with revised MOs and MTs



Reduced diversions from river

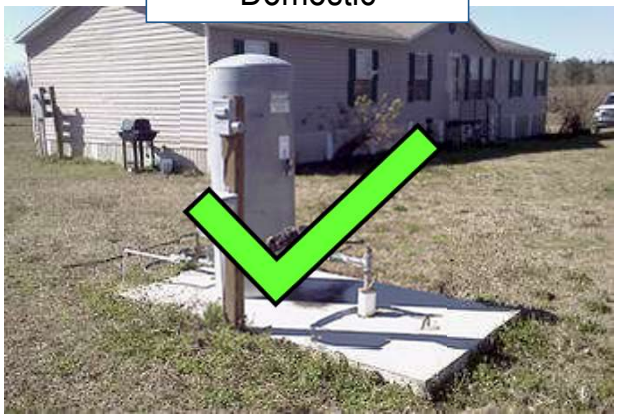
Seepage from river

Beneficial Uses and Users

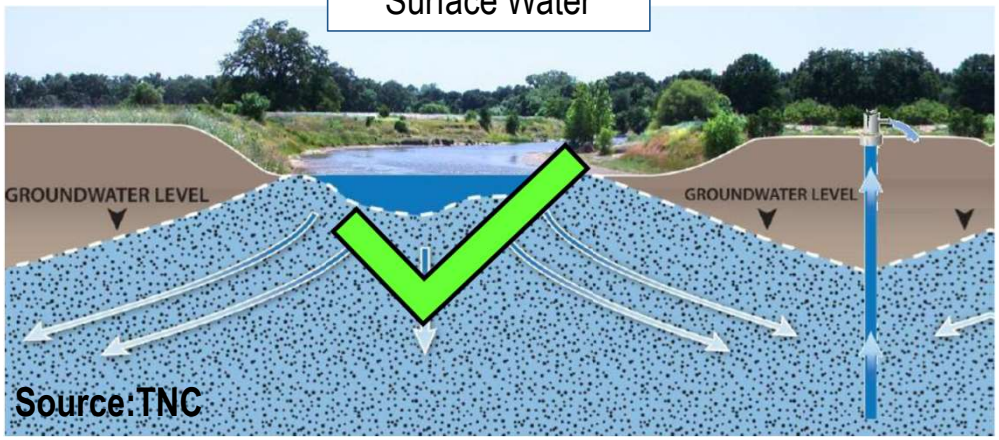
Agriculture

Municipal

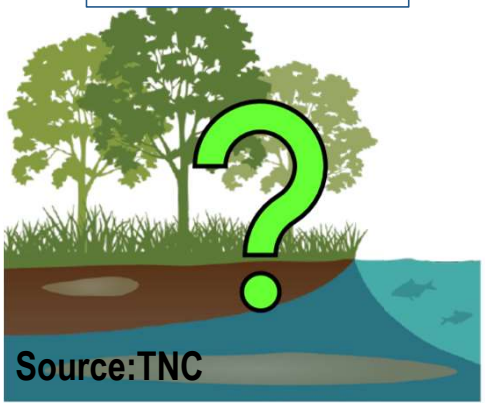
Domestic



Surface Water



Environment



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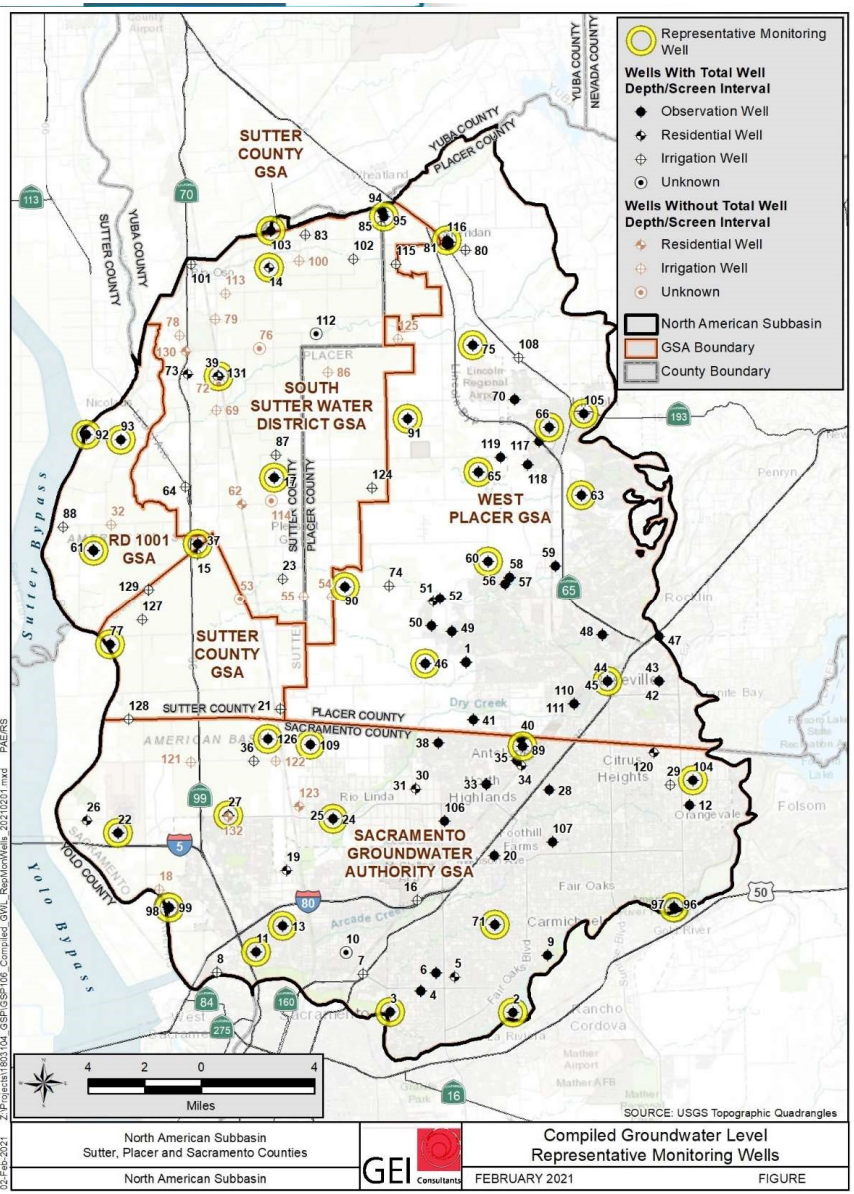


Approach to Undesirable Results – Water Levels

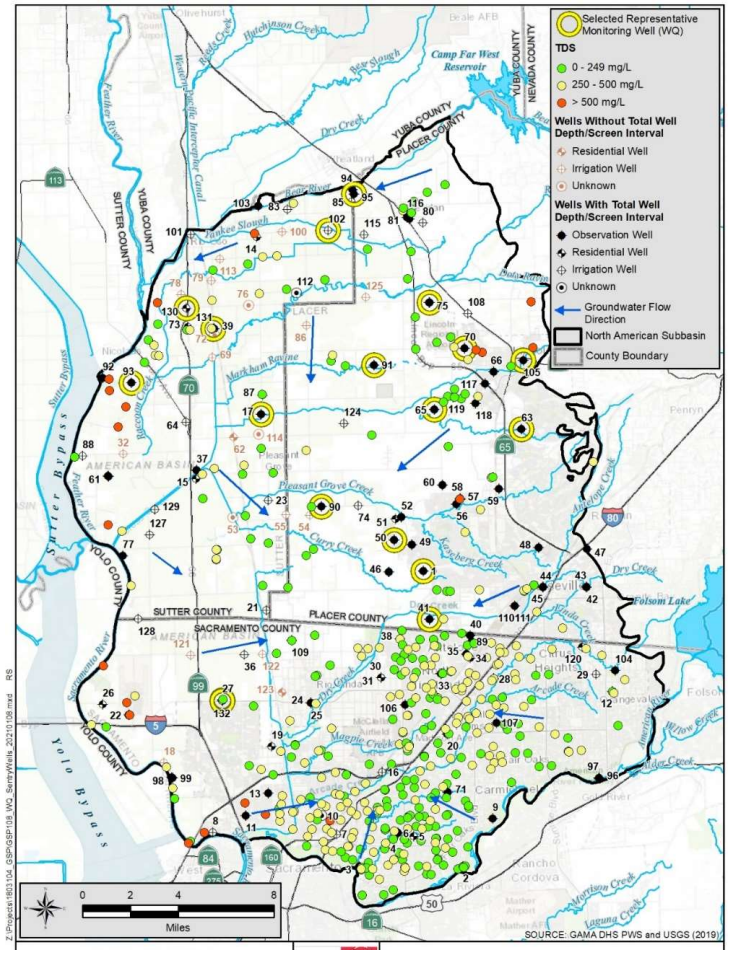
Potential URs

- Average annual change in water levels in all representative wells is negative in 2 consecutive years of above normal/wet hydrologic conditions
- 4 contiguous representative wells exceeding MT in 2 consecutive non-dry years, with an exception for years immediately following drought

Approach to Undesirable Results – Water Quality

Potential URs

- Basin-wide average concentration for TDS in active M&I wells exceeds baseline basin-wide average by 20%
- Basin-wide average in active M&I wells for nitrate (as nitrogen) exceeds concentration of 6 mg/L
- TDS of 500 mg/L or nitrate (as nitrogen) of 10 mg/L is observed in more than 10% of active public supply wells
- In sentry wells, TDS or nitrate concentrations show a consistently increasing trend over 5 consecutive years



GSP Regulations – Project & Management Action Requirements

Article 5: Plan Contents

Subarticle 5:
Projects and Management Actions

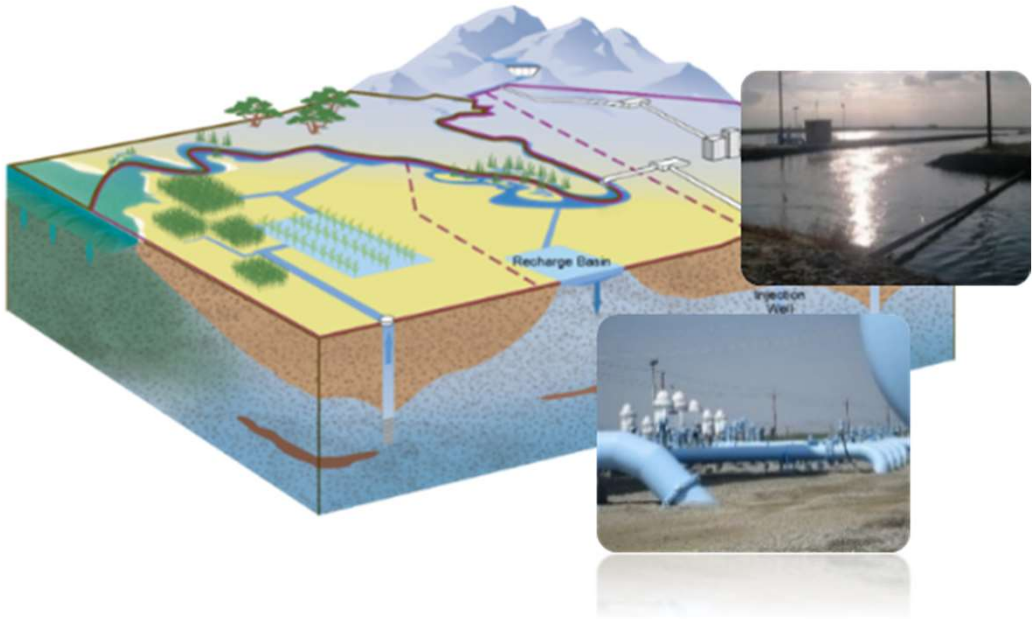
- Realistic and sufficient projects and actions to achieve sustainability.
- Developed to a level that demonstrates GSAs have the resources, knowledge, and stakeholder acceptance to implement them.
- Known timeframe and general cost.
- Projects do not need to be designed.
- Supplemental plans and actions to address future uncertainties.
- All projects and management actions do NOT have to be implemented just because they are listed in the GSP.

Source: California Department of Water Resources

NASb GSP - Projects & Management Actions

Project Categories

- **Planned** – Near-term projects or management actions to help ensure sustainability
- **Supplemental** – Longer-term projects that can help address uncertainty, not evaluated for this GSP



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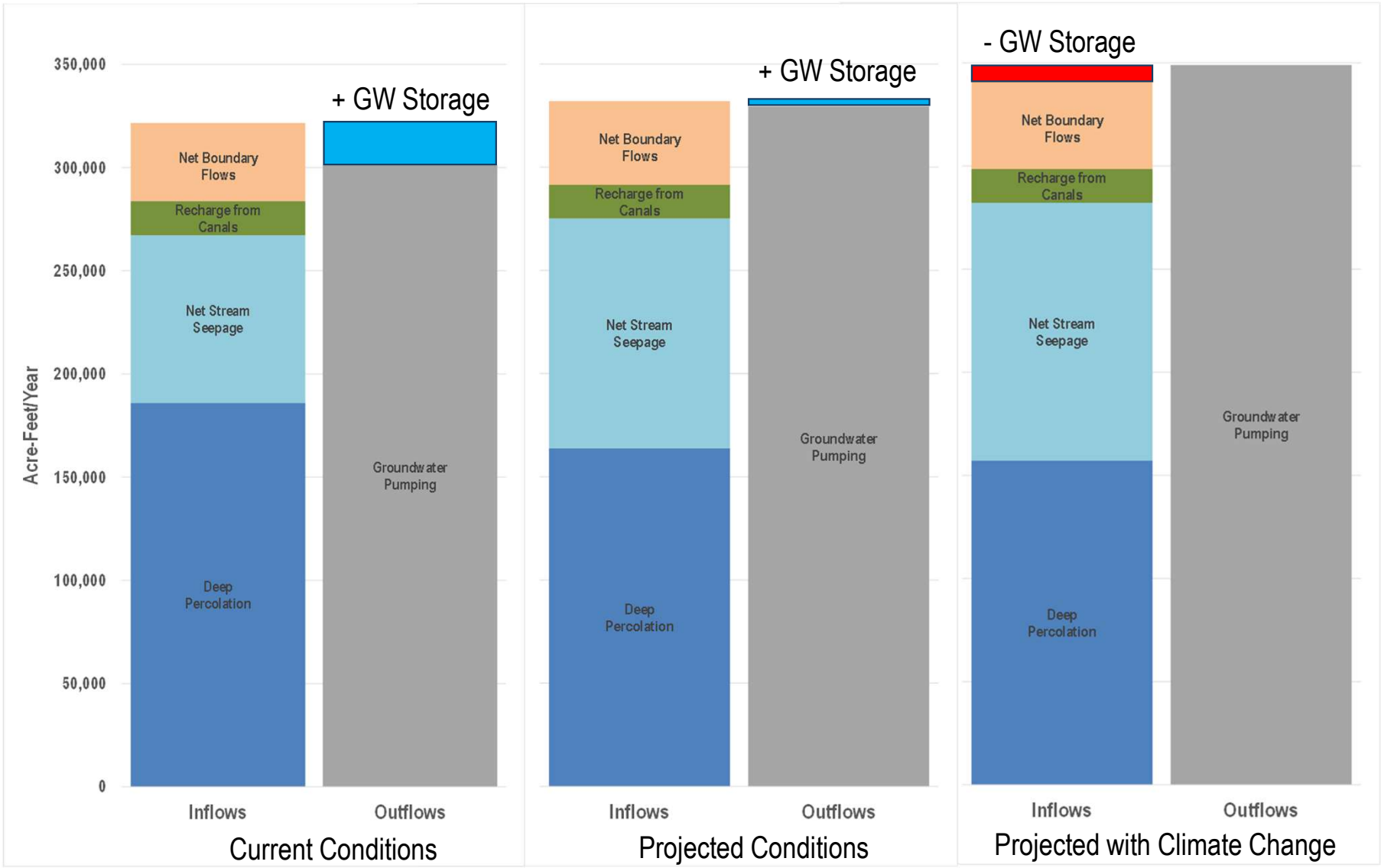
Acre-Feet/Year
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+ GW Storage
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Recharge from Canals
Net Stream Seepage
Deep Percolation
Groundwater Pumping
Inflows
Outflows
Current Conditions
+ GW Storage
Net Boundary Flows
Recharge from Canals
Net Stream Seepage
Deep Percolation
Groundwater Pumping
Inflows
Outflows
Projected Conditions
- GW Storage
Net Boundary Flows
Recharge from Canals
Net Stream Seepage
Deep Percolation
Groundwater Pumping
Inflows
Outflows
Projected with Climate Change

Proposed Planned Projects

<u>Evaluated in model</u>

Expansion of urban area conjunctive use – Phase 1

- Operational changes to existing system
- Delivered about 20,000 acre-feet of surface water in wet years to offset groundwater use
- Resulted in annual average reduction of groundwater pumping of just under 8,000 acre-feet

Proposed Planned Management Actions

1. Work with local well permitting agencies to receive notifications of well permit requests and to develop:
   - Minimum screen depth requirements near rivers, streams, and potential GDEs
   - Well spacing requirements for higher capacity wells
   - Consultations for wells constructed near GSP monitoring network well
2. Proactively work with land use planning agencies to ensure future development is consistent with groundwater sustainability efforts

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Proposed Supplemental Projects

Not evaluated in model

1. Expansion of urban area conjunctive use
   - Additional operational changes and system improvements
   - RiverArc (Sacramento River alternative for M&I supply)
2. West Placer recharge projects
3. Lincoln recycled water
4. South Sutter Water District conveyance system improvements
5. Natomas Mutual Water Company land annexation

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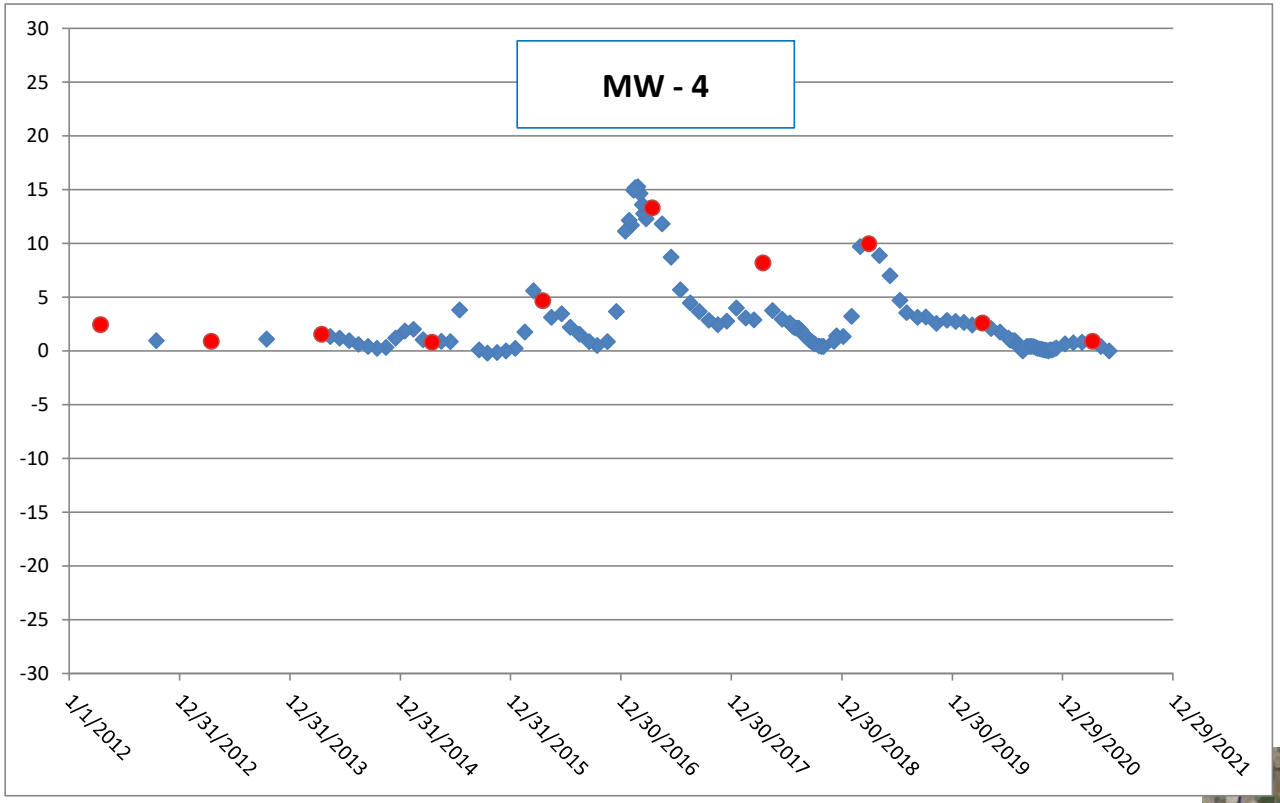
SGMA – Still Need to Complete

- Update SMCs based on model results
  - Review SMCs relative to beneficial uses and users and adjust as necessary
- Define and justify Undesirable Results
- Adjust completed sections of draft GSP to address DWR comments on evaluated GSPs that could be potential deficiencies
- Finish Draft GSP for public comment

Groundwater Management Program Update

June 10, 2021

SGA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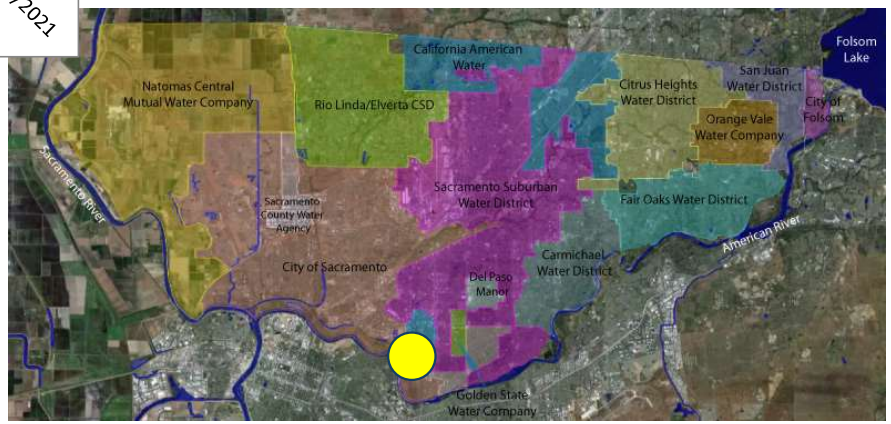
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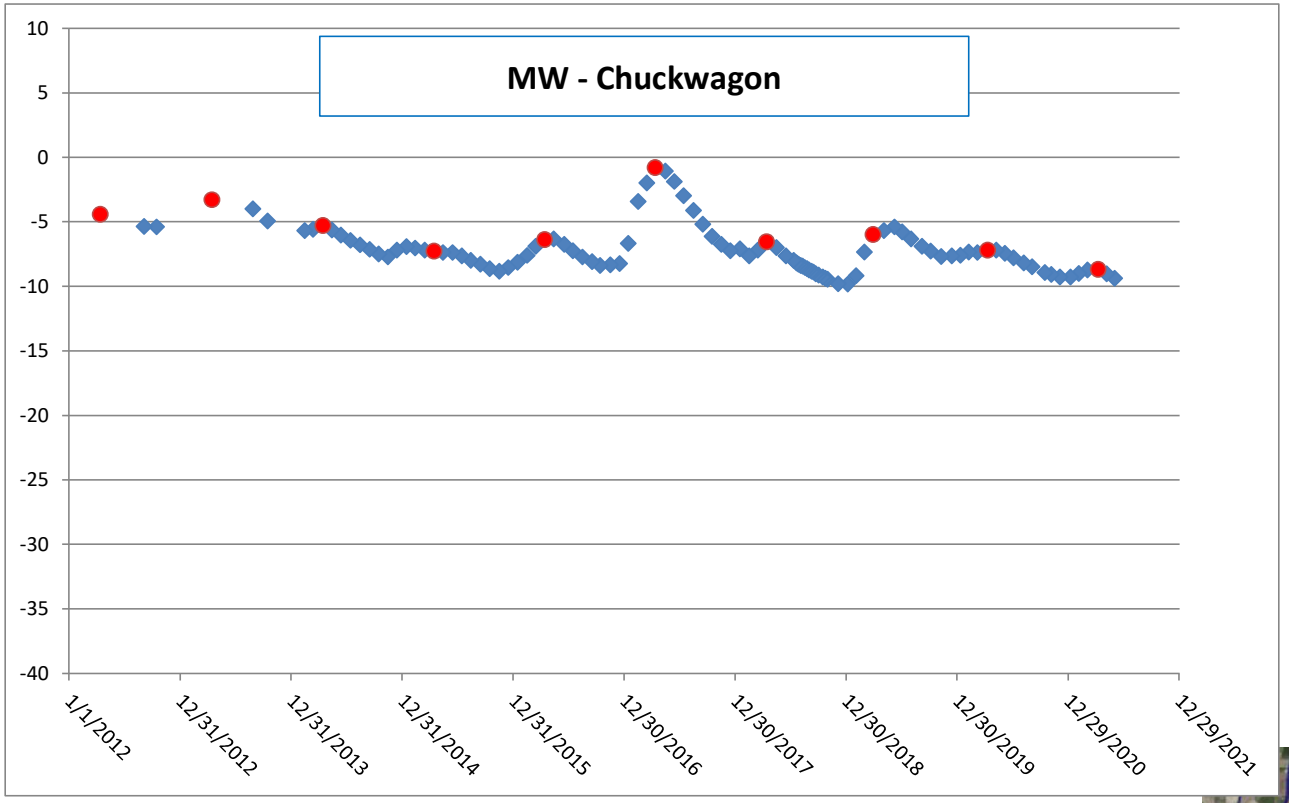
Rio Linda/Elverta CSD
Citrus Heights Water District
San Juan Water District
City of Folsom
Orange Vale Water Company
Sacramento River
Sacramento County Water Agency
Sacramento Suburban Water District
Fair Oaks Water District
American River
City of Sacramento
Del Paso Manor
Carmichael Water District
Golden State Water Company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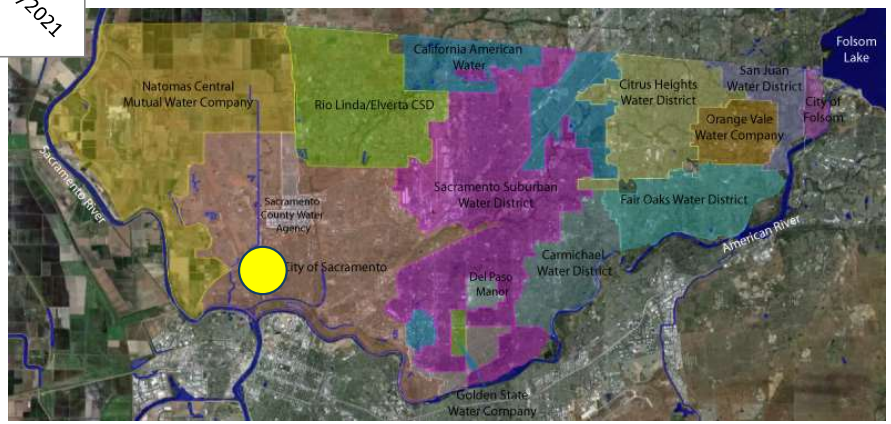
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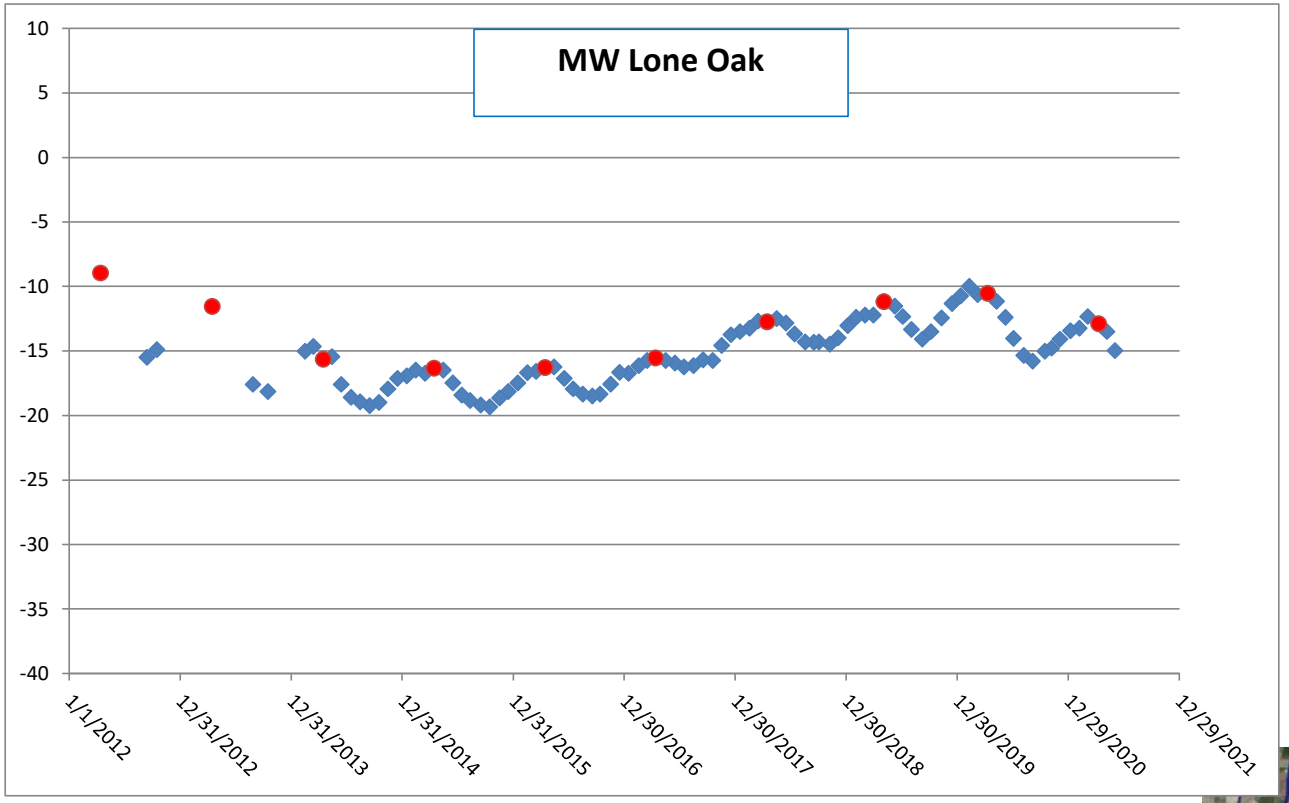
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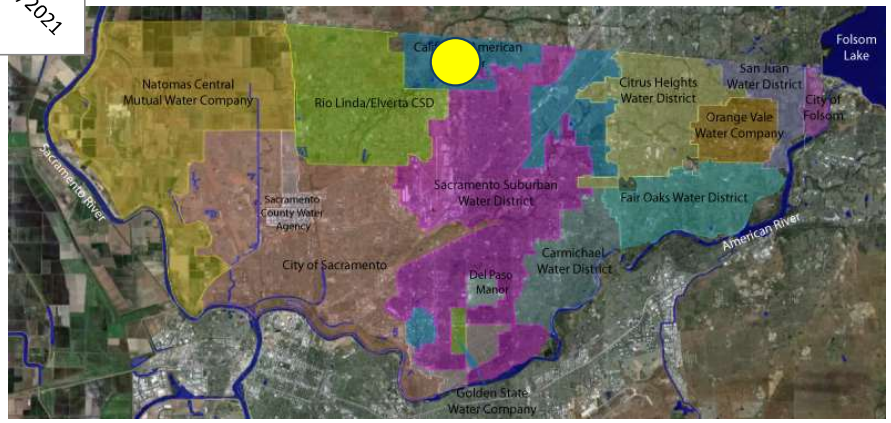
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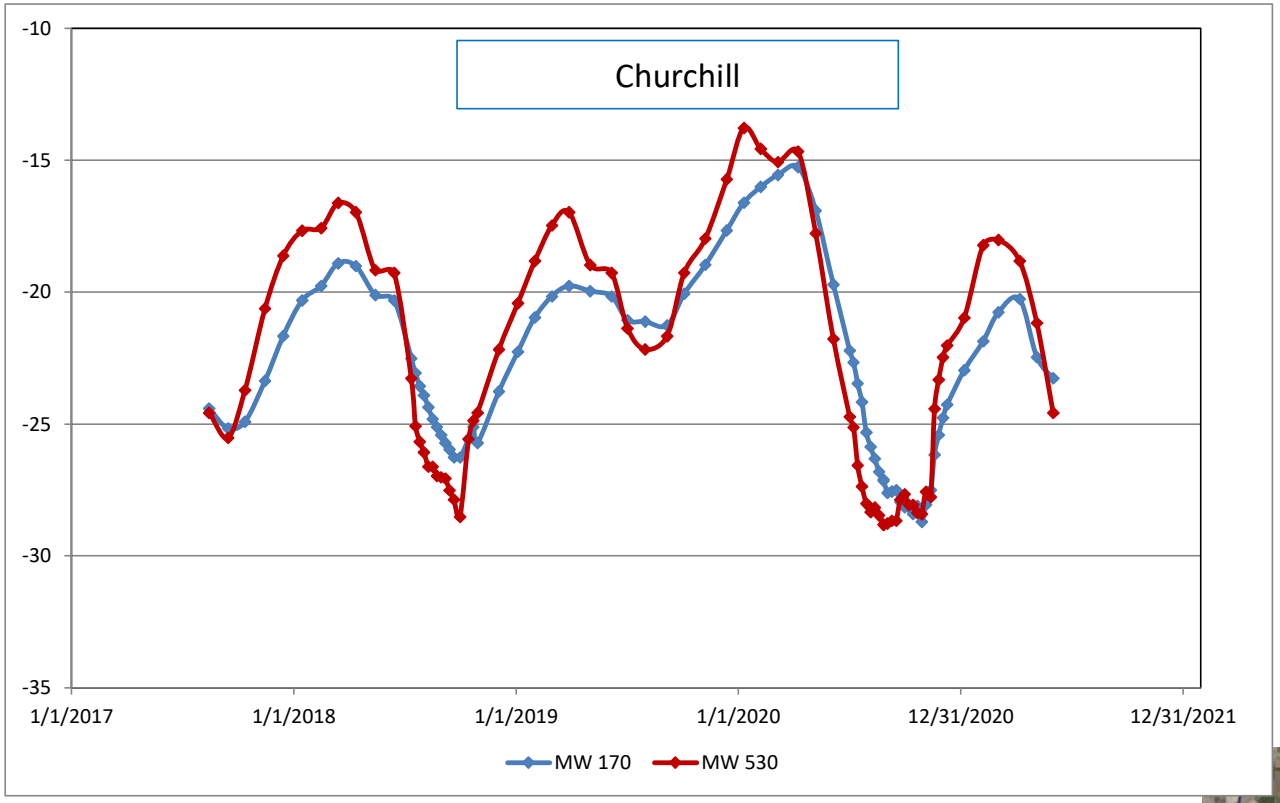
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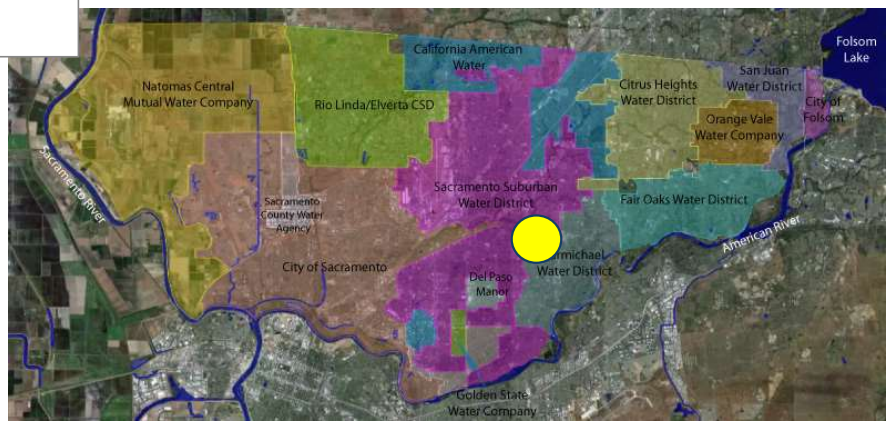
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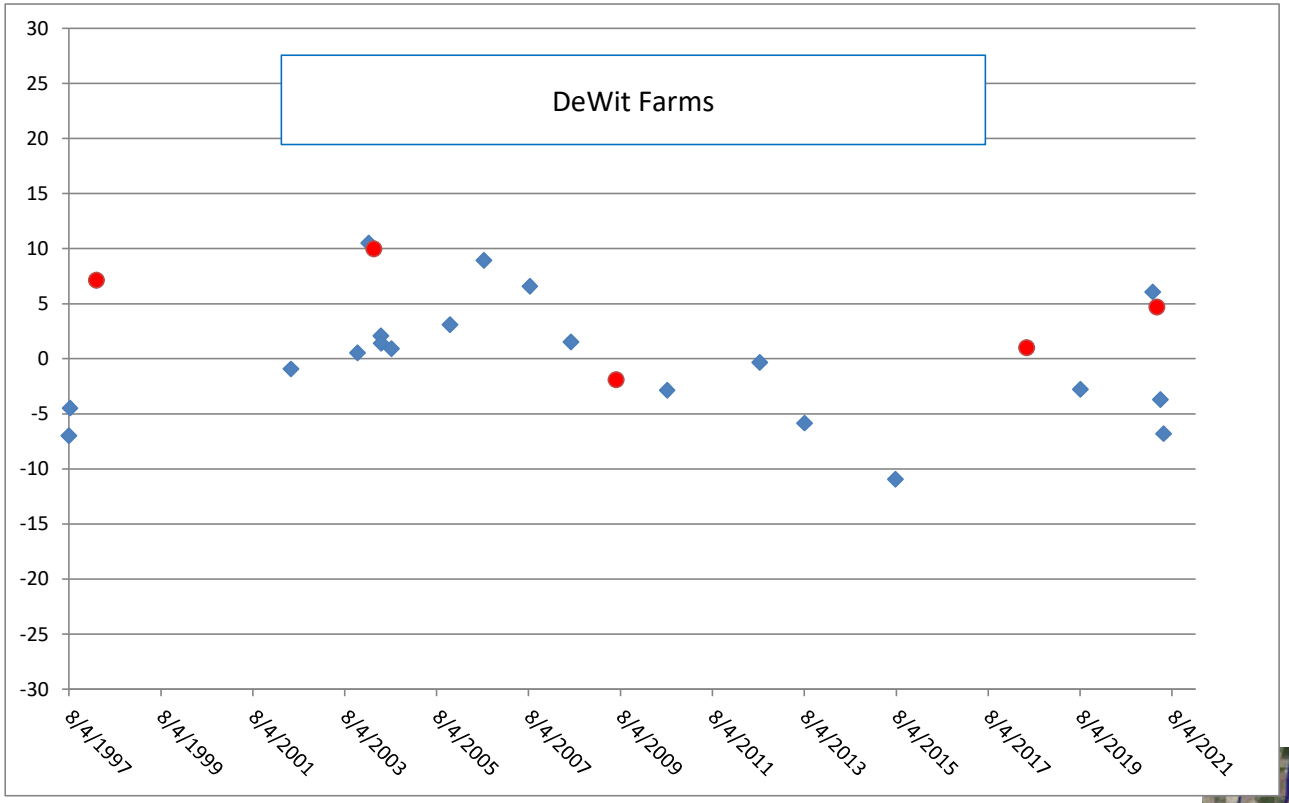
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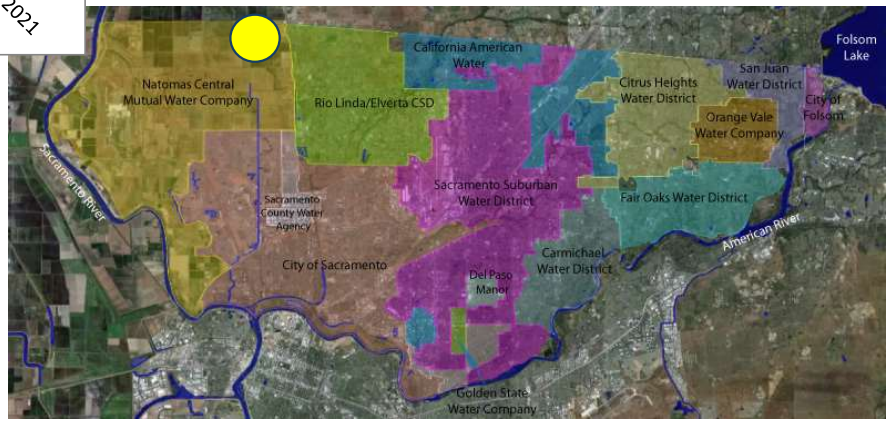
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