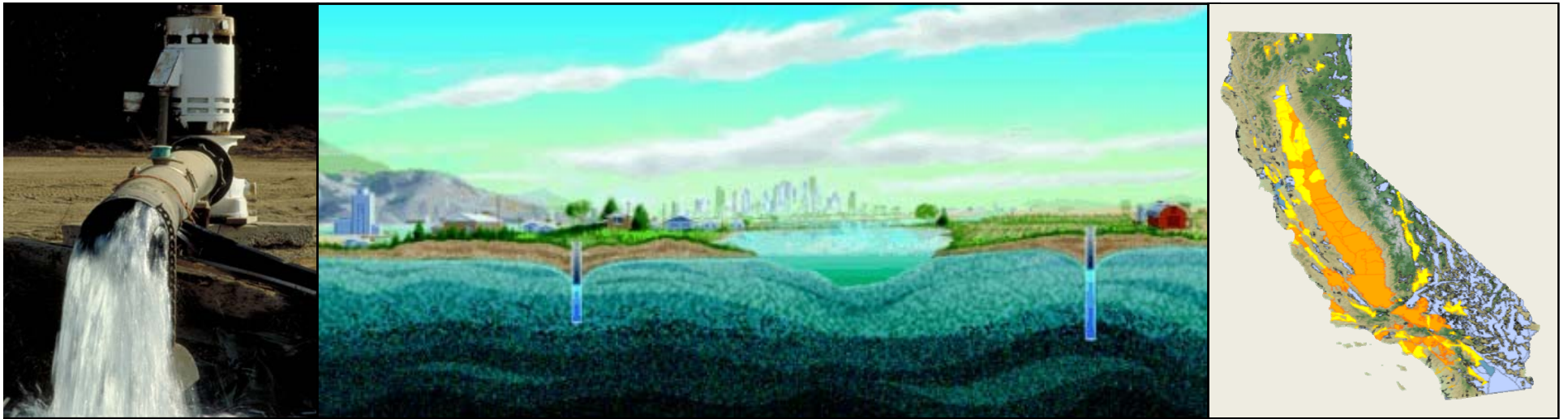


SGMA Technical Assistance

- Building Capacity to Achieve Sustainability -



WEF Land Subsidence Workshop

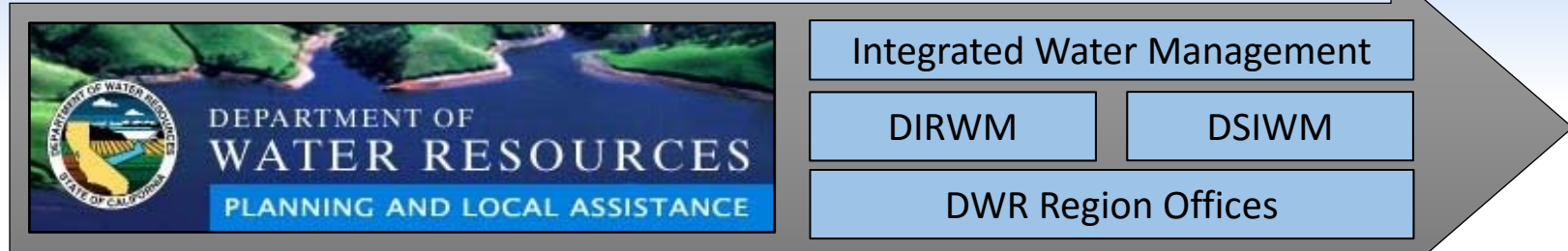
August 16th, 2017

Presentation Overview

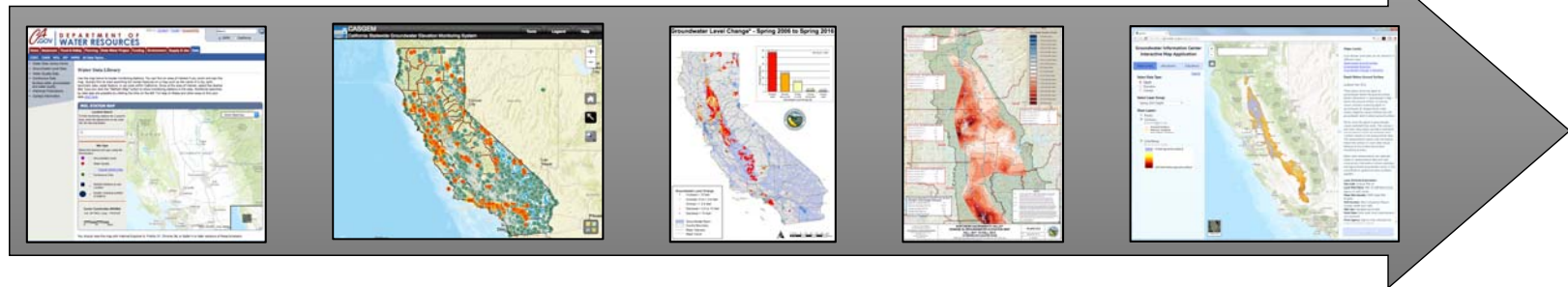
- Technical Assistance Background
- Approach to SGMA Technical Assistance
- Next Steps
- Feedback

History of Technical Assistance

Technical Expertise



Data, Tools, and Analysis



Reports



DWR SGMA Assistance

“A central feature of SGMA is the recognition that groundwater management in California is best accomplished locally.”

Governor Jerry Brown, September 2014



Financial Assistance

- Prop 1

Planning Assistance

- Facilitation

- GSA Support

Technical Assistance

- Statewide Datasets, Analysis, and Tools

- Best Management Practices

- Water Available for Replenishment Report

Advisory Role

**DWR
Evaluation of
GSPs**

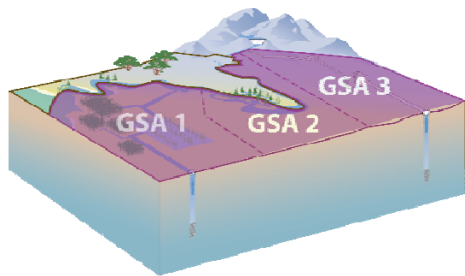
**Sustainable
Groundwater
Management**

Evaluation Role

General GSP Components

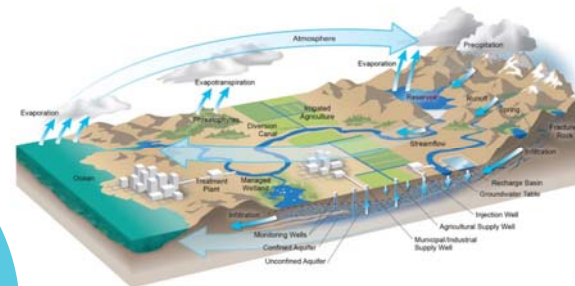
Who

- Administrative Information -



What

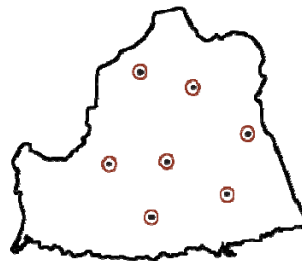
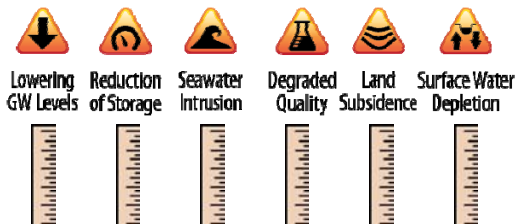
- Basin Setting -



GSP

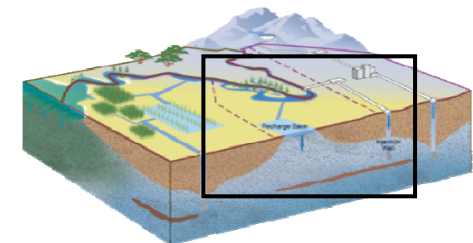
Where

- Sustainable Management Criteria -
- Monitoring Network -



How

- Projects & Management Actions -



SGMA Technical Assistance

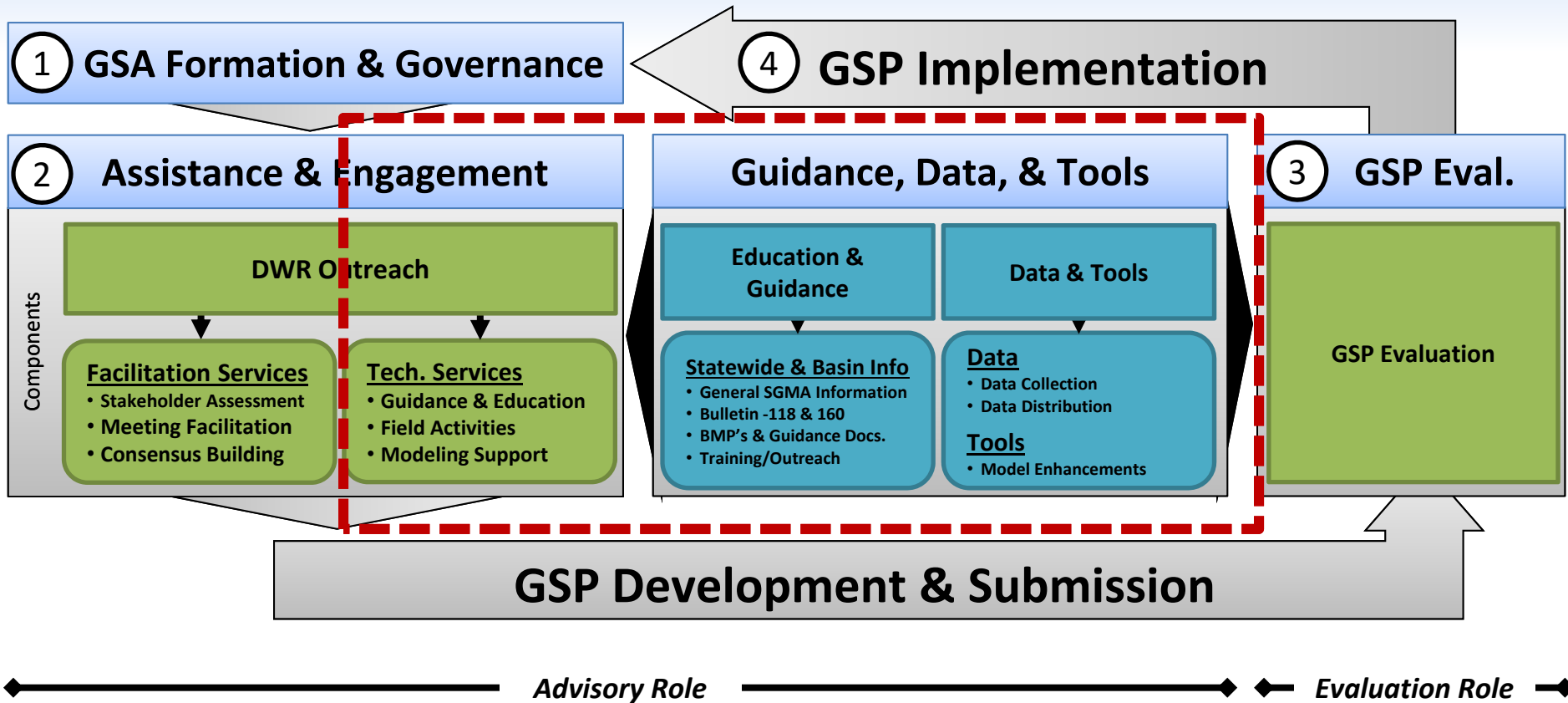
SGMA - Chapter 7 (§ 10729)

- The department ***may provide technical assistance to any GSA in response to that agency's request*** for assistance in the development and implementation of a GSP. The department shall use its best efforts to provide the requested assistance.
 - ✓ Water Available for Replenishment of Groundwater (Dec. 31, 2016)
 - ✓ Best Management Practices (Jan. 1, 2017)

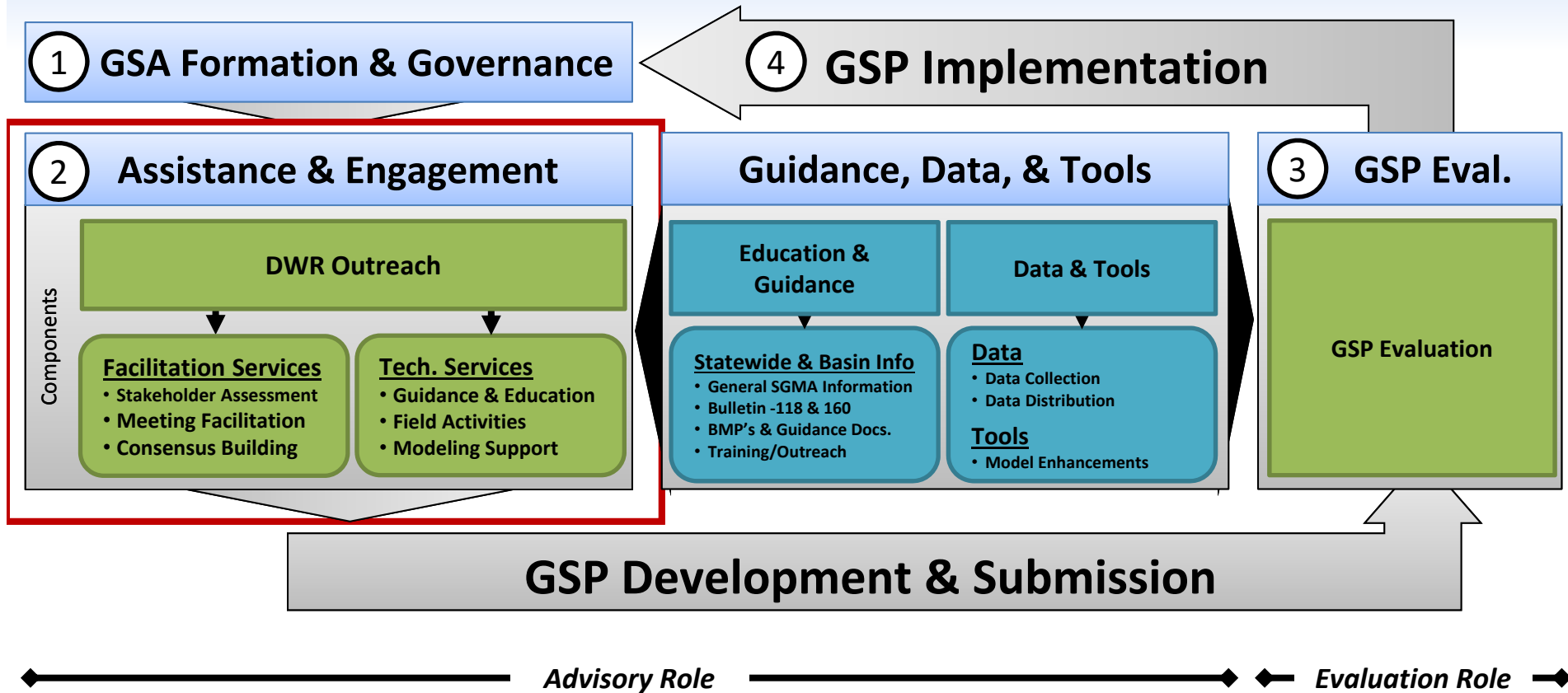
GSP Regulations – (Article 5 - § 354.18)

- GSA's shall utilize ***information provided***, as available, ***by the Department***...or other data of comparable quality, to develop the water budget
- The ***Department shall provide*** the California Central Valley Groundwater-Surface Water Simulation Model (C2VSIM) and the ***Integrated Water Flow Model*** (IWFM) for use by Agencies in developing the water budget.

SGM Program Implementation



SGM Program Implementation



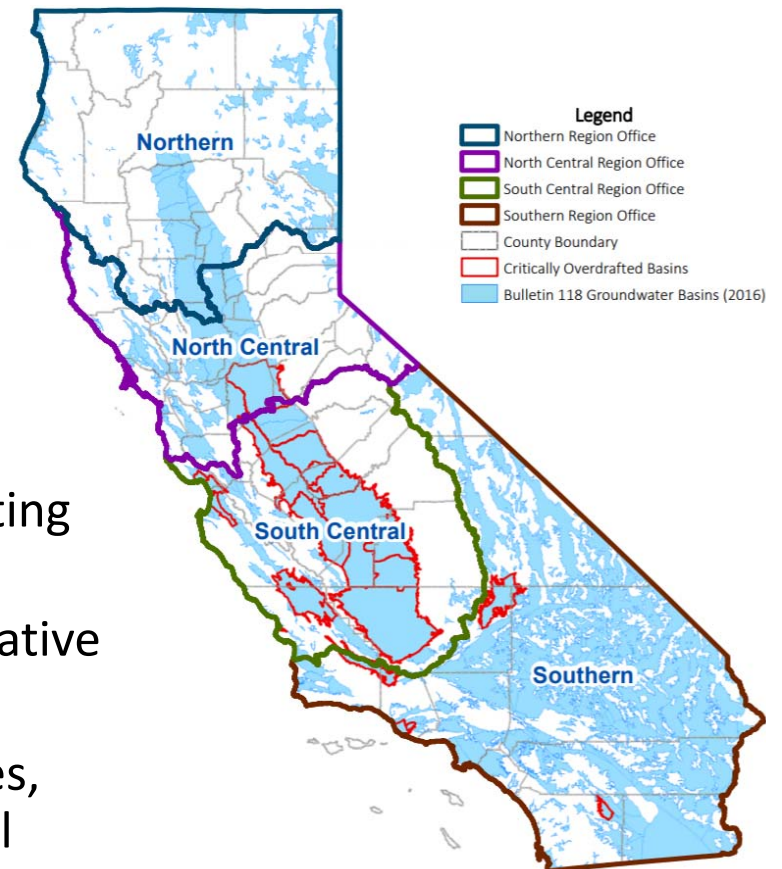
Assistance & Engagement - Facilitation Support Services (FSS) -

Services Offered through DWR funded Professional Facilitators

- Stakeholder identification and engagement
- Meeting facilitation
- Interest-based negotiation/consensus building
- Public outreach facilitation

Who is Eligible?

- GSAs developing GSPs, or other groups coordinating with the GSAs in developing GSPs,
- Agree to work in an open, inclusive, and collaborative manner toward the development of a GSP.
- Support an inclusive process that seeks, promotes, encourages, and welcomes the involvement of all stakeholders and interested parties.



FSS Resources

1. DWR FSS Website

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

Facilitation Support Services

Department of Water Resources' (DWR) Facilitation Support Services (FSS) aim to help local agencies work through challenging water management situations. Professional facilitators are sometimes needed to help foster discussions among diverse water management interests and local agencies as they strive to implement the Sustainable Groundwater Management Act (SGMA). From April 2015 to June 2017, DWR's FSS resources were primarily allocated to assist with Groundwater Sustainability Agency (GSA) formation. Beginning July 1, 2017, DWR will be focusing its available FSS resources on supporting the development of Groundwater Sustainability Plans (GSPs). Under the requirements of SGMA, all beneficial uses and users of groundwater must be considered in the development of GSPs, and GSAs must encourage the active involvement of diverse social, cultural, and economic element of the population.

The goal of the FSS related to GSP development is to assist GSAs in reaching consensus on potentially contentious water management topics arising from the diverse beneficial uses and users of groundwater. Priorities of this funding are given to the critically overdrafted basins.

Services Offered through DWR funded Professional Facilitators

- Stakeholder identification and engagement
- Meeting facilitation
- Interest-based negotiation/consensus building
- Public outreach facilitation

Who is Eligible?

GSAs developing GSPs, or other groups coordinating with the GSAs in developing GSPs, are eligible to apply for FSS if they meet all of the following obligations:

- Agree to work in an open, inclusive, and collaborative manner toward the development of a GSP.
- Support an inclusive process that seeks, promotes, encourages, and welcomes the involvement of all stakeholders and interested parties.
- Commit to meet regularly and work diligently toward a clear and defined goal.
- Commit to providing a meeting space that is suitably located and sized.

Applications for FSS will be evaluated on a continuous basis as funding allows. Applications must be submitted through the online application system. Contact the DWR at facilitation@water.ca.gov

GROUNDWATER HOME

SUSTAINABLE GROUNDWATER MANAGEMENT

- Adjudicated Basin Reporting
- Alternative Submittals
- Basin Boundary Modifications
 - BBAT - Basin Boundary Assessment Tool
 - BBMRS - Basin Boundary Modification Request System
- Best Management Practices
- Critically Overdrafted Basins
- Communication and Outreach
 - Advisory Groups
 - Calendar
 - Subscribe for Email Updates
- Groundwater Sustainability Agencies
 - GSA Notices and Map
 - Withdrawals and Opt-Out Notices
- Groundwater Sustainability Plan Regulations
 - Initial Notifications
- Initial Basin Prioritization
- Water Available For Replenishment
 - WAFR Public Comments
- Resources
 - Water Mgmt. Planning Tool

2. FSS Application Portal

https://www.surveymonkey.com/r/FSS_application01

Department of Water Resources
Facilitation Support Services Application
Groundwater Sustainability Plan (GSP) Development

I. Applicant Background
(Questions 1-6 of 17)

The Department of Water Resources is offering facilitation support services to help GSAs and local water management groups foster discussions among diverse water management interests and jurisdictions in support of developing Groundwater Sustainability Plans.

For questions or assistance with this online application, please contact Simar Dhanota at Simarjit.Dhanota@water.ca.gov or (916) 651-0889.

* 1) Applicant Information

Applicant Name:

Point of Contact:

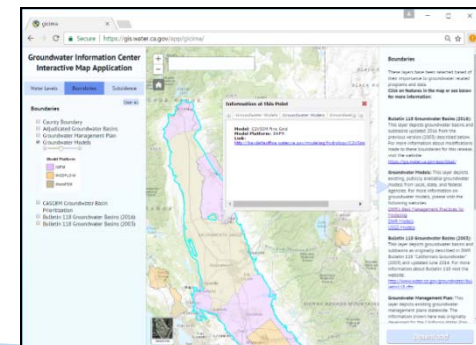
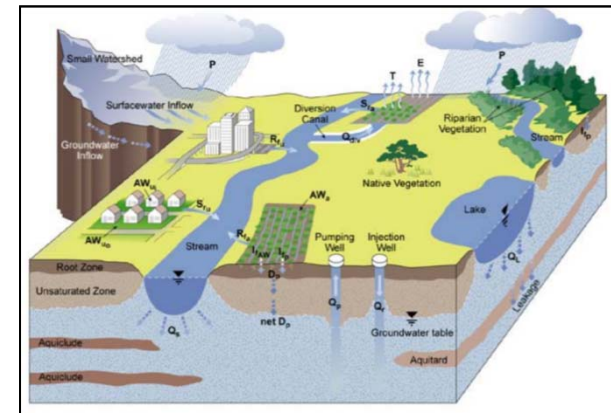
Phone Number:

Email Address:

* 2) For which groundwater basin/subbasin is the applicant applying for facilitation services?

Assistance & Engagement - Draft Technical Support Services (TSS) -

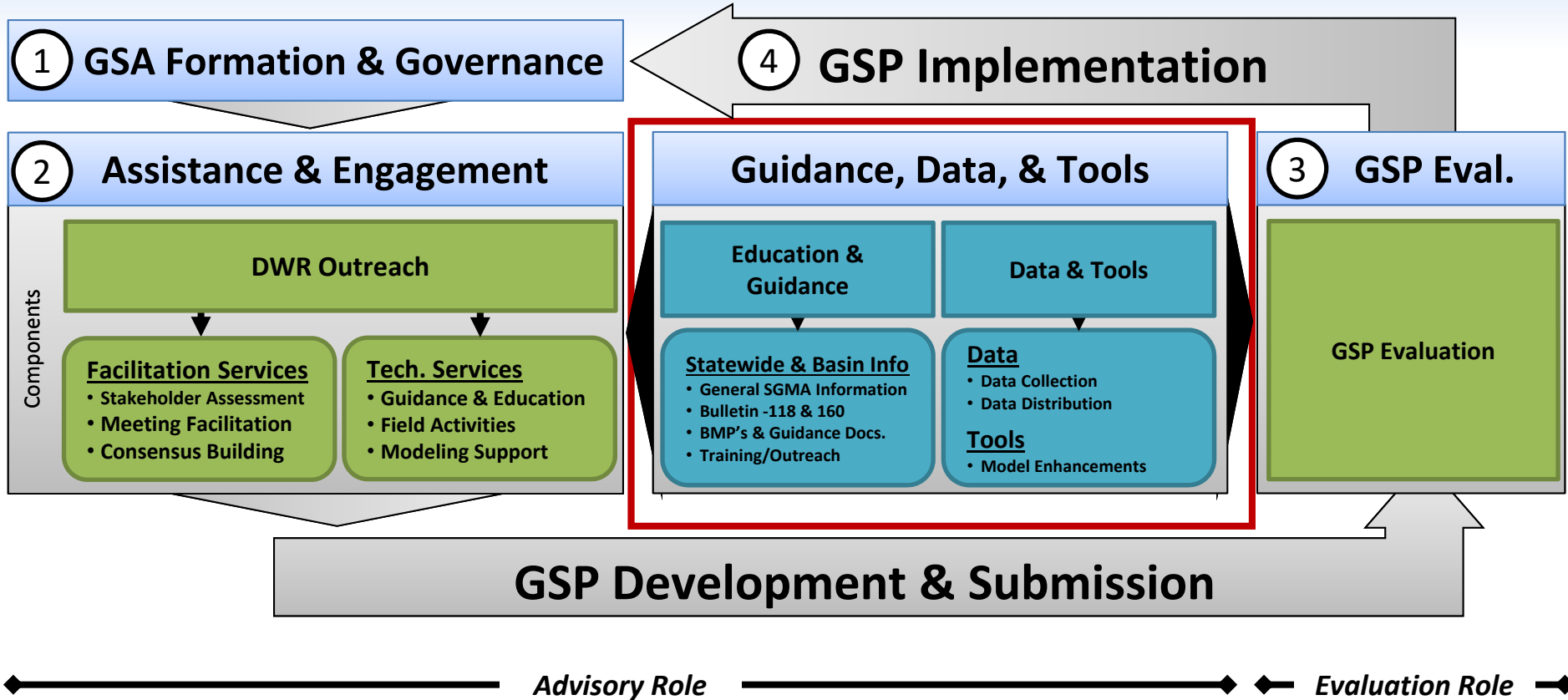
- Guidance and Education
- Field Activities
 - Groundwater Level Training
 - Well Video Logging
 - Geophysical Logging
 - Monitoring Well Installation
- Modeling and Tools
 - Modeling Questions
 - Training
 - IWFM and IDC Workshops – Sep/Oct 2017
 - <http://cwemf.org>



Draft Subject to Change

<https://gis.water.ca.gov/app/gicima/>

SGM Program Implementation



Education and Guidance

- Statewide & Regional References
 - DWR's SGMA Webpages
 - Bulletin 118
 - Bulletin 160 – GW Content
- SGMA References
 - Water Available for Replenishment



Best Management Practices

- BMP 1: Monitoring Protocols, Standards, Sites
- BMP 2: Monitoring Networks and Identification of Data Gaps
- BMP 3: Hydrologic Conceptual Model
- BMP 4: Water Budget
- BMP 5: Modeling

Guidance Documents

- Preparation Checklist for GSP submittal
- GSP Annotated Outline
- Engagement with Tribal Governments
- Stakeholder Comm. & Engagement

Future BMP

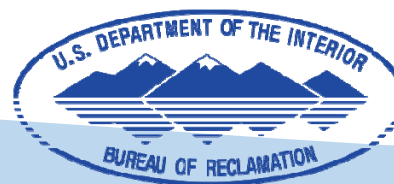
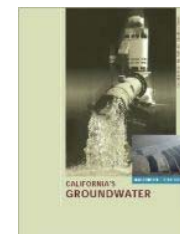
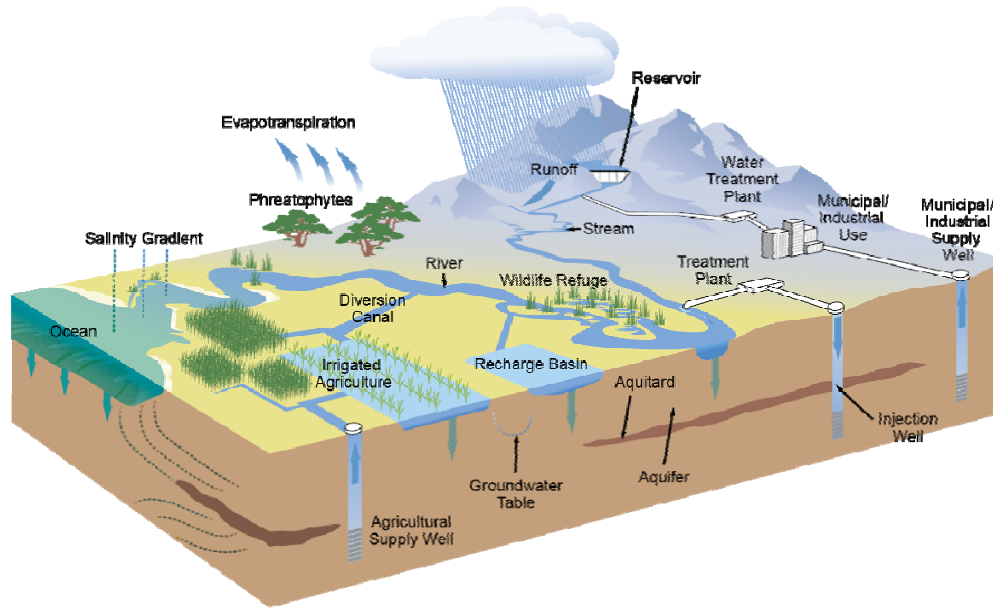
- Sustainable Management Criteria

Data and Tools

Existing Data Challenges

>80 – GSP Requirements to Compile Data

>20 – Websites Containing SGMA Data



Department of Water Resources
CALIFORNIA DATA EXCHANGE CENTER

Data and Tools

New Data, Tools, and Reports Webpage

1. Download Data

2. Groundwater Tools

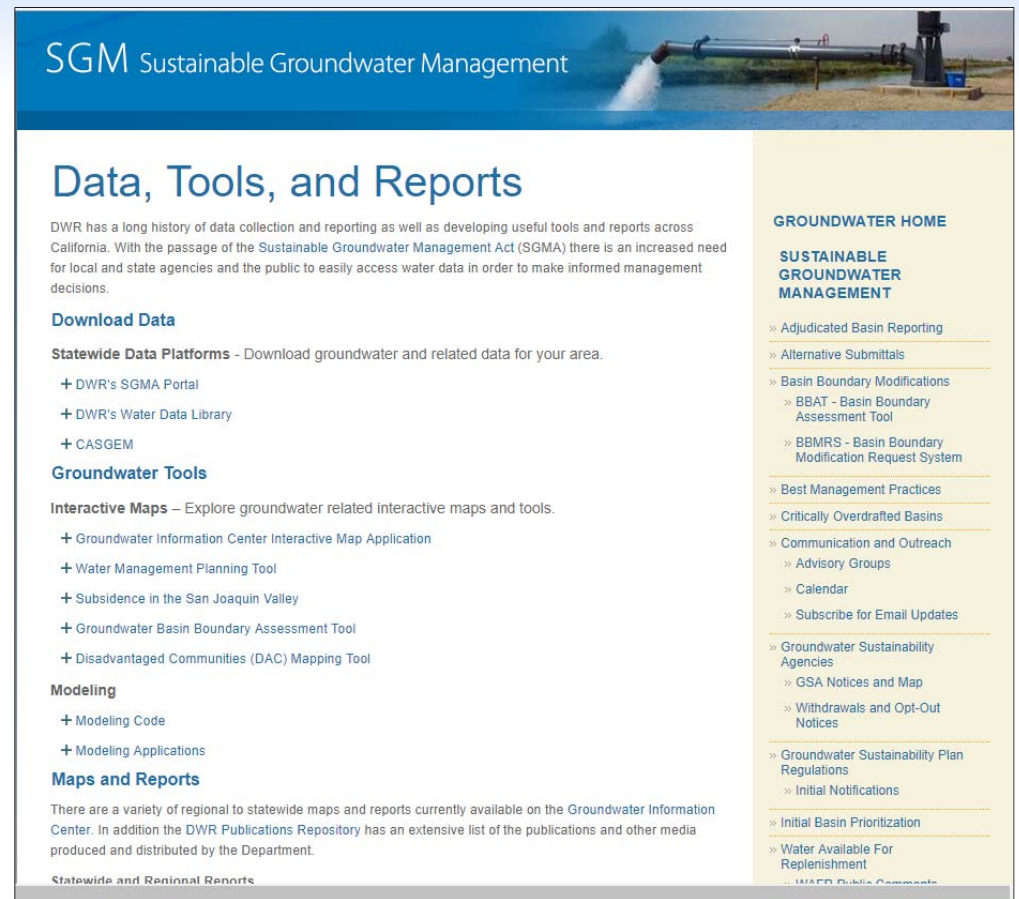
➤ Interactive Maps

➤ Modeling Tools

3. Maps and Reports

➤ SGMA BMPs

➤ Statewide GW Maps



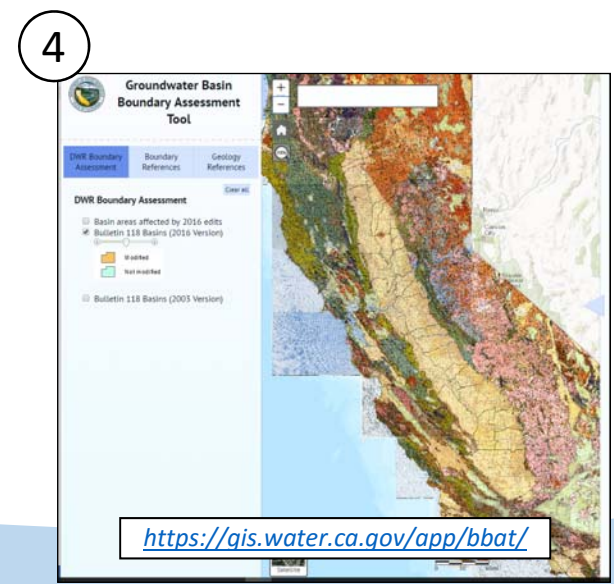
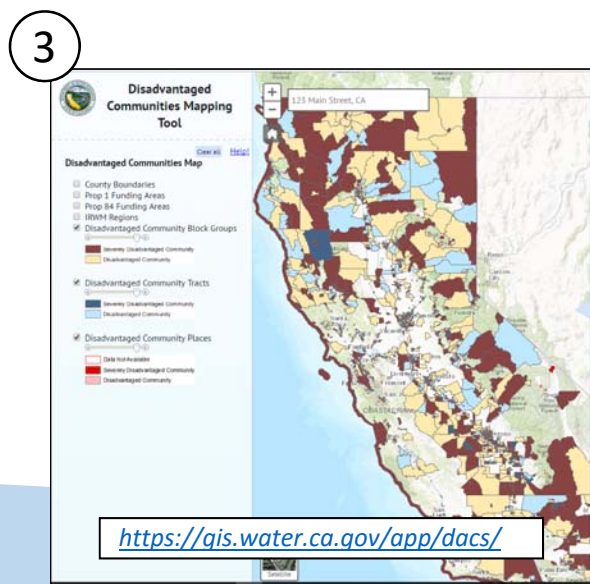
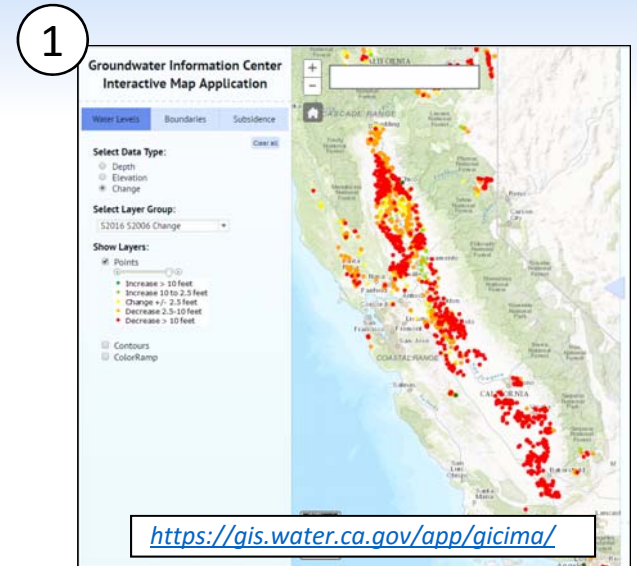
The screenshot shows the 'Data, Tools, and Reports' webpage for Sustainable Groundwater Management (SGM). The page features a blue header with the SGM logo and a background image of a water pipe. The main content area is divided into several sections: 'Download Data' (including Statewide Data Platforms like DWR's SGMA Portal, DWR's Water Data Library, and CASGEM), 'Groundwater Tools' (including Interactive Maps like Groundwater Information Center and Water Management Planning Tool), 'Modeling' (including Modeling Code and Modeling Applications), and 'Maps and Reports' (including Statewide and Regional Reports). A right-hand sidebar titled 'GROUNDWATER HOME' lists various resources such as 'SUSTAINABLE GROUNDWATER MANAGEMENT', 'Adjudicated Basin Reporting', 'Alternative Submittals', 'Basin Boundary Modifications', 'Best Management Practices', 'Communication and Outreach', 'Groundwater Sustainability Agencies', and 'Water Available For Replenishment'.

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

Data & Tools

Tools - Interactive Maps

1. Groundwater Information Center
 2. Water Management Planning Tool
 3. Disadvantaged Communities Tool
 4. Basin Boundary Tool
- More Tools will be added soon



Existing Statewide Datasets & Tools

Secure | <https://gis.water.ca.gov/app/boundaries/> Currently Available

Water Management Planning Tool

[Clear all](#) [Help!](#)

Boundaries Map

- County Boundaries
- Region Office Service Areas
- Hydrologic Regions
- Prop 1 Funding Areas
- Prop 84 Funding Areas
- Regional Water Quality Control Board Boundaries
- Tribal Lands
- Military Installations, Ranges, and Training Areas
- CDFW Lands
- CA State Park Lands
- CA Coastal Commission Lands
- Regional Flood Planning Boundaries
- Reclamation Districts
- Adjudicated Groundwater Basins
- Critically Overdrafted Basins
- CASGEM Designated Monitoring Entities
- CASGEM Groundwater Basin Prioritization
- Groundwater Management Plans
- Bulletin 118 Groundwater Basins (2016)
- Bulletin 118 Groundwater Basins (2003)
- IRWM Regions
- US Forest Service Land
- Federal Lands

Critically Overdrafted Basins

CASGEM GW Basin Priority

- High
- Medium
- Low
- Very Low

Groundwater Basins

Satellite

Boundaries Map

Click on features in the map or see below for more information:

DATA DISCLAIMER

All information provided by the Department of Water Resources on its Web pages and Internet sites, is made available to provide immediate access for the convenience of interested persons. While the Department believes the information to be reliable, human or mechanical error remains a possibility. Therefore, the Department does not guarantee the accuracy, completeness, timeliness, or correct sequencing of the information. Neither the Department of Water Resources nor any of the sources of the information shall be responsible for any errors or omissions, or for the use or results obtained from the use of this information.

Below are brief descriptions to the layers contained in the map:

County Boundaries This layer depicts the boundaries of California's Counties as developed by CAL FIRE.

Region Office Service Areas This layer depicts The coverage Area of DWR's Region Offices. [More Info...](#)

Hydrologic Regions This layer depicts the 10 areas representing the major California watersheds and is used by a variety of DWR programs including the CA Water Plan. [More Info...](#)

Prop 1 Funding Areas This layer depicts the 12 funding areas called out in Proposition 1. [More Info...](#)

Prop 84 Funding Areas This layer depicts the 11 funding areas called out in Proposition 84. [More Info...](#)

Regional Water Quality Control Board Boundaries This layer depicts the boundaries of the 9 Regional Water Quality Control Boards. [More Info...](#)

Tribal Lands This layer depicts Tribal Lands

Unavailable

Potential Statewide Datasets – Aligned to SGMA



Lowering
GW Levels



Reduction
of Storage

gicima x

Secure | <https://gis.water.ca.gov/app/gicima/>

Currently Available

Groundwater Information Center

GWL and GWS

GW Data

Boundaries

These layers have been selected based of their importance to groundwater related programs and data.
Click on features in the map or see below for more information:

Bulletin 118 Groundwater Basins (2016):
This layer depicts groundwater basins and subbasins updated 2016 from the previous version (2003) described below. For more information about modifications made to these boundaries for this release, visit the website:
<https://gis.water.ca.gov/app/bbat/>

Groundwater Models: This layer depicts existing, publicly available groundwater models from local, state, and federal agencies. For more information on groundwater models, please visit the following websites.
[DWR's Best Management Practices for Modeling](#)
[DWR Models](#)
[USGS Models](#)

Bulletin 118 Groundwater Basins (2003):
This layer depicts groundwater basins and subbasins as originally described in DWR Bulletin 118 "California's Groundwater" (2003) and updated June 2014. For more information about Bulletin 118 visit the website:
<http://www.water.ca.gov/groundwater/bulletin118.cfm>

Groundwater Management Plan: This layer depicts existing groundwater

[Download](#)

Satellite

Draft Subject to Change

Potential Statewide Datasets – Aligned to SGMA

Estimated Availability: Q3 - 2017

**Groundwater Information Center
Interactive Map Application**

GWL and GWS

- USGS GW Data
- Well Data
 - Domestic
 - Production

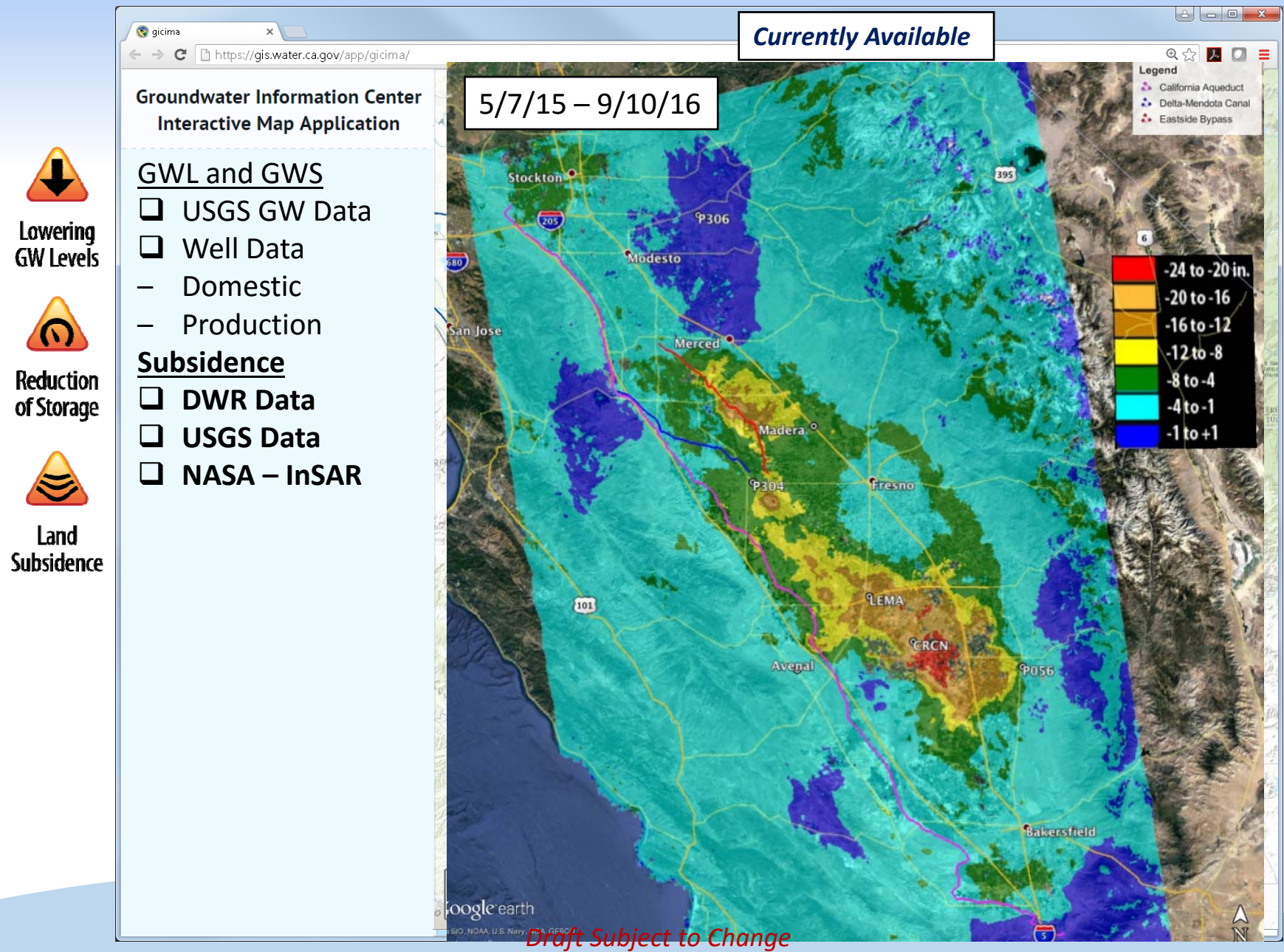
Lowering GW Levels

Reduction of Storage

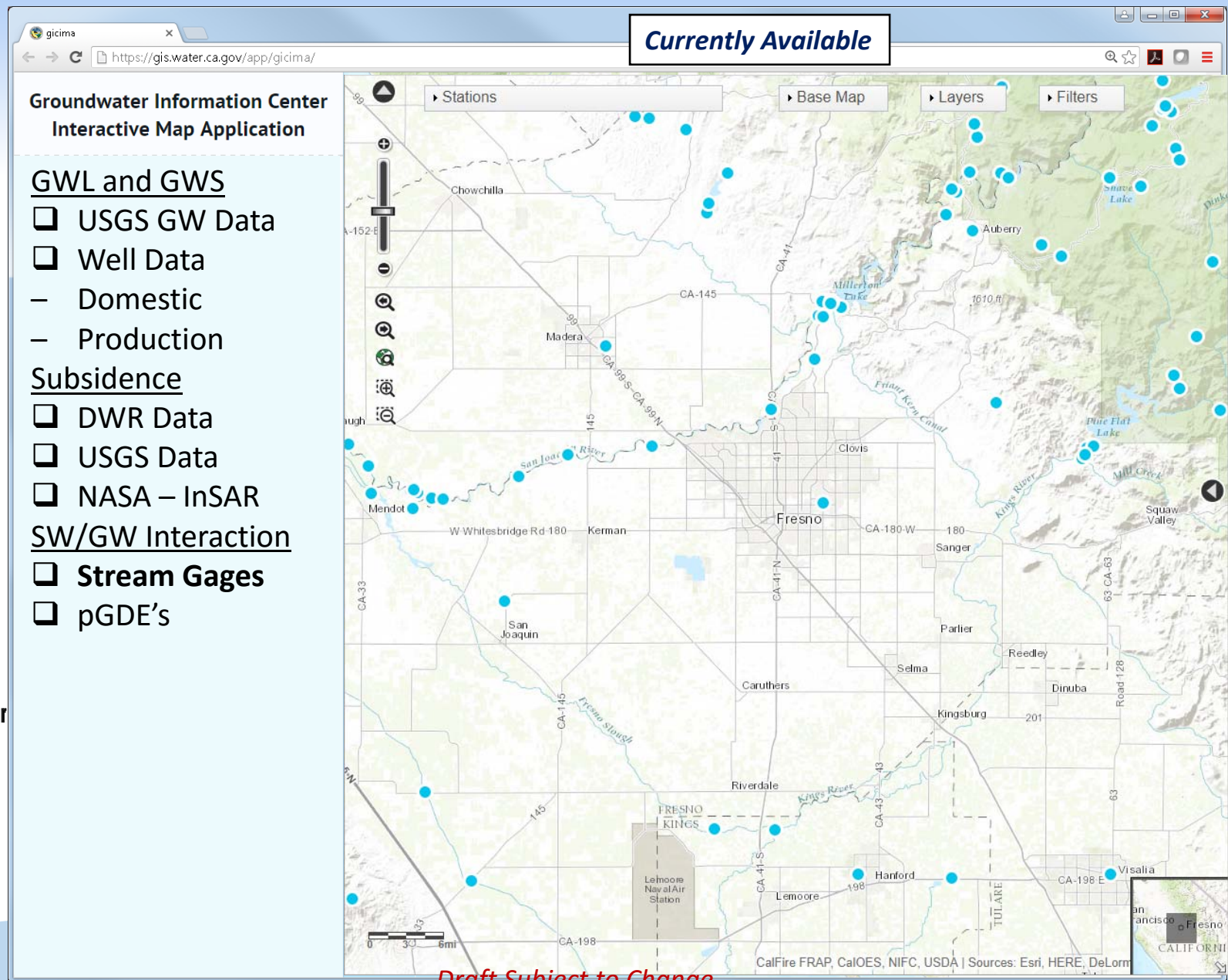
Draft Subject to Change

Draft Subject to Change

Potential Statewide Datasets – Aligned to SGMA



Potential Statewide Datasets – Aligned to SGMA



Draft Subject to Change

Potential Statewide Datasets – Aligned to SGMA

Estimated Availability: Q3 - 2017

Groundwater Information Center Interactive Map Application

GWL and GWS

- USGS GW Data
- Well Data
 - Domestic
 - Production

Subsidence

- DWR Data
- USGS Data

SW/GW Interaction

- Stream Gages
- pGDE's

Water Budget

- Land Use
- Climate Change



Lowering
GW Levels



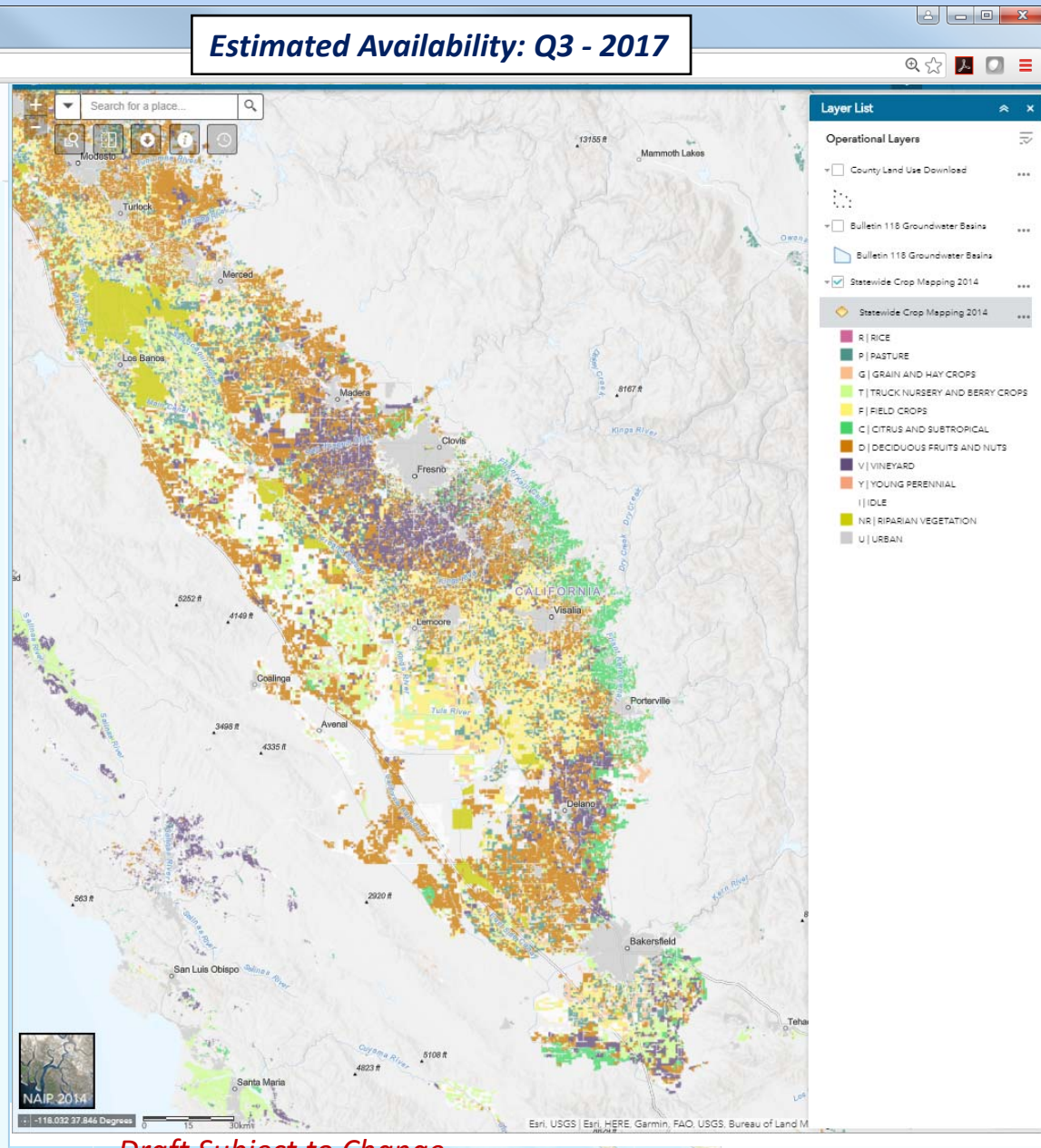
Reduction
of Storage



Land
Subsidence



Surface Water
Depletion



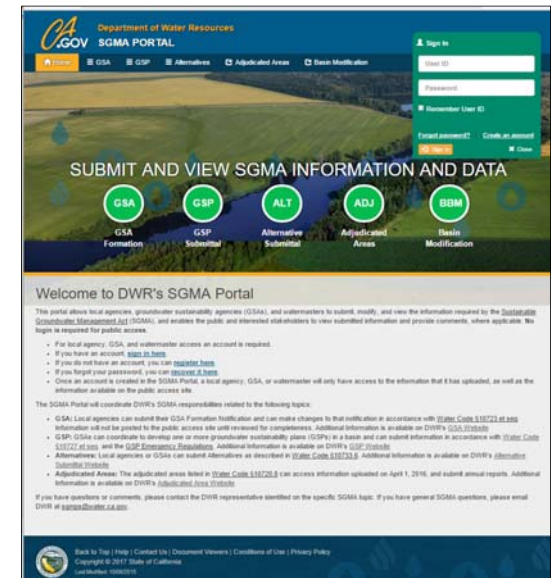
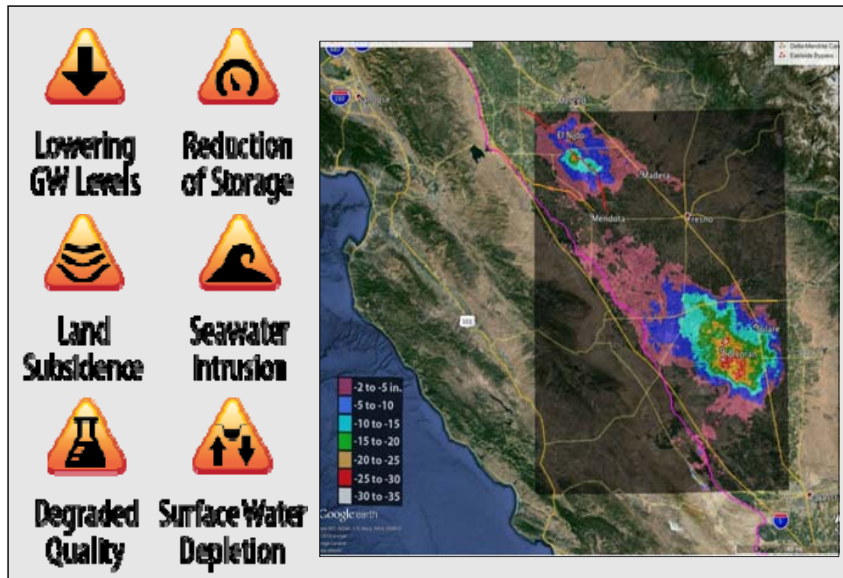
Draft Subject to Change

Flow of SGMA Information

+ Local Data

1. Data Access

2. Data Submittal



50 Yr Planning Horizon

Data and Tools

Tools – Models

- C2VSim – Fine Grid (Q1 2018)
- IWFM – (Currently Available)

	Coarse Grid	Fine Grid
Nodal Spacing		
Minimum	0.6 mi	0.4 mi on rivers
Maximum	9.4 mi	1.5 mi on edge
Average	14.4 mi ²	0.6 mi ²
Model Grid		
Nodes	1,393	30,179
Elements	1,392	32,537
River nodes	449	4,529
Run Time		
88 years	3-6 min	Appx 6 hrs

Suggested uses:

- CG region-scale analyses
- FG local-scale analyses



Next Steps

- **Develop** – Scope, Capacity, Partnerships
- **Engage** – Practitioners and Stakeholders
 - GSP Workshop in Clovis, September 20, 2017
- **Prioritize** – Datasets, Tools, Analysis, Funding
- **Build & Expand** – Technical Assistance Capacity
- **Maintain** – Data Collection, Distribution, Funding

DWR Contacts & SGMA Resources

DWR Sacramento:

- **Steven Springhorn**

Steven.Springhorn@water.ca.gov

SGMA Resources

- **DWR SGMP Webpage**

www.water.ca.gov/groundwater/sgm/index.cfm

- **Subscribe to DWR SGMP Email List**

www.water.ca.gov/groundwater/sgm/subscribe.cfm

- **DWR Data, Tools, and Reports Webpage**

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

DWR Regional Offices:

