



Update on:
SCGA

Hydrologic Data Management System

Presented to: SCGA Board



March 10, 2010

Outline

- Needs and Vision
- Current Status
 - Data and Data Gaps
 - Administrative Tools
 - Public Tools
 - Policy-Level Tools
 - Technical-Level Tools
- Next Steps

**Policy
Decisions**

**Technical
Studies**

Hydrologic Model

HDMS: SacIWRIS

Monitoring and Data Collection

Needs and Vision

- Consistent, common database
- Public outreach and education
- Easy access to data
- Analysis of data
- Streamline reporting/
BMO compliance

Table 3 Water Use in the Central Basin, 2005-2008

Groundwater Water Usage (Acre-Feet)				
Water Purveyors ¹	2005	2006	2007	2008
Elk Grove Water Service	5,397	6,365	6,963	6,460
Cal-Am	23,391	22,775	23,651	24,769
GSWC	12,639	13,129	9,754	9,162
SCWA	27,685	29,019	30,450	34,220
Agricultural ²	167,062	166,148	165,234	164,320
Agricultural – Residential ²	7,852	7,946	8,041	8,136
SUBTOTAL	244,026	245,382	244,093	247,067
Surface Water Usage (Acre-Feet)				
City of Sacramento	94,762	97,370	103,971	n/a
GSWC	5,228	5,343	9,124	9,437
SCWA	5,454	4,330	5,403	3,345
Rancho Munieta CSD	1,840	1,938	1,946	1,873
SUBTOTAL	107,284	108,981	120,444	n/a
Recycled Water Usage (Acre-Feet)				
SCWA	1,121	1,056	1,052	1,008
Rancho Munieta CSD	600	600	600	600
SUBTOTAL	1,721	1,656	1,652	1,608
Remediated Groundwater Pumping (Acre-Feet)				
Aerojet ³	11,682	16,356	17,105	17,793
Mather Field ⁴	-	-	-	-
Kiefer Landfill ⁵	-	-	-	-
SUBTOTAL	11,682	16,356	17,105	17,793

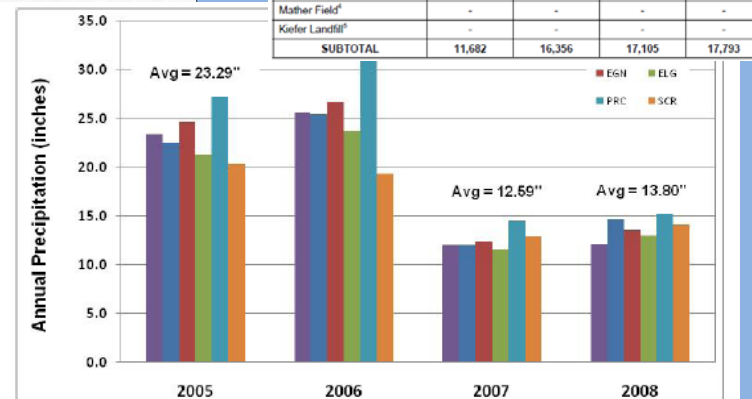


Figure 3 Annual Precipitation for CDEC Stations in SCGA Vicinity, 2005-2008

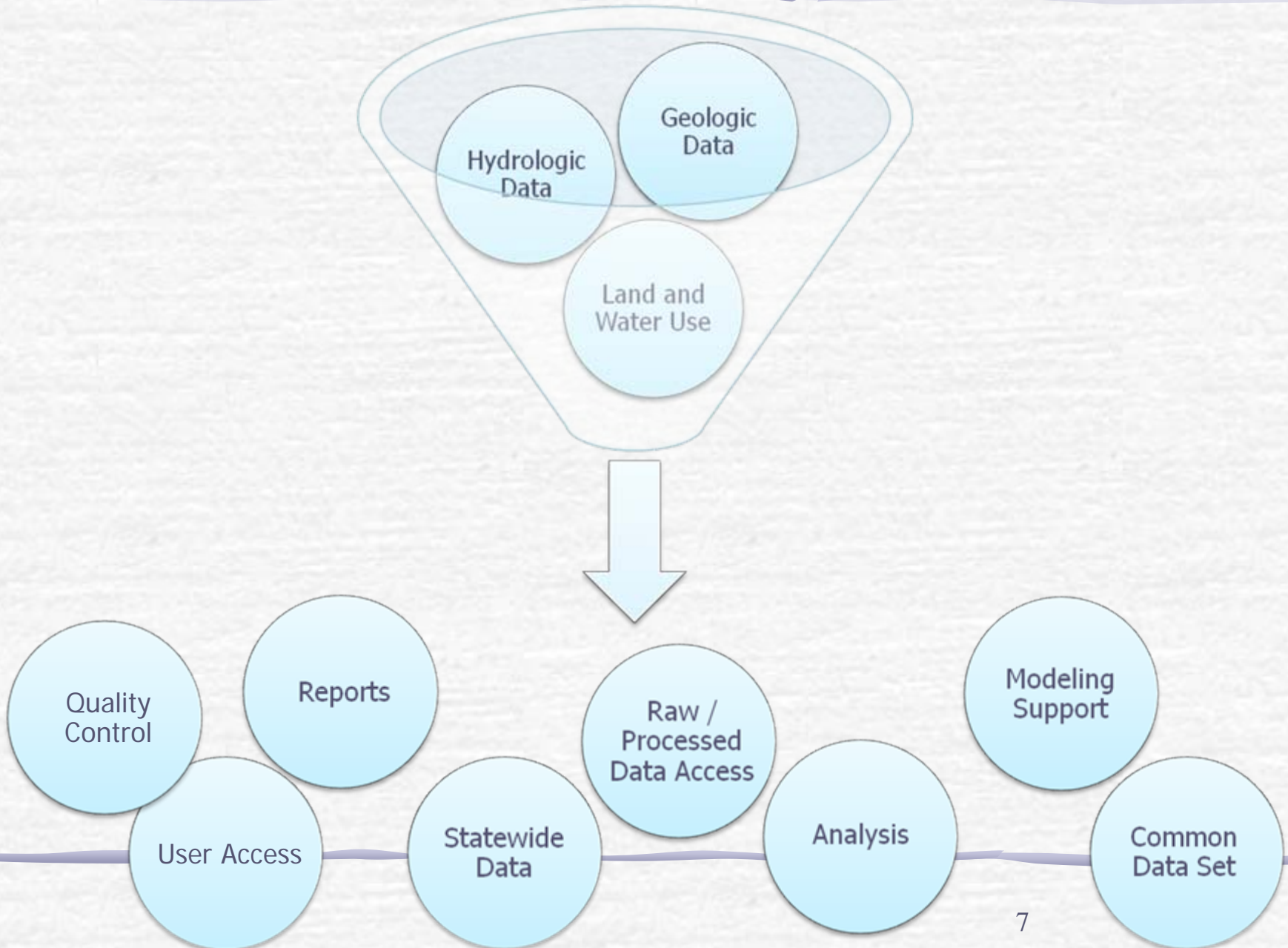
Database

- Compiling and quality control of data
 - Pumping (monthly)
 - Municipal Production
 - Remediation Operations
 - Water levels
 - Water quality
 - Lithology data
 - Scanned Images
 - Interpreted Well Logs

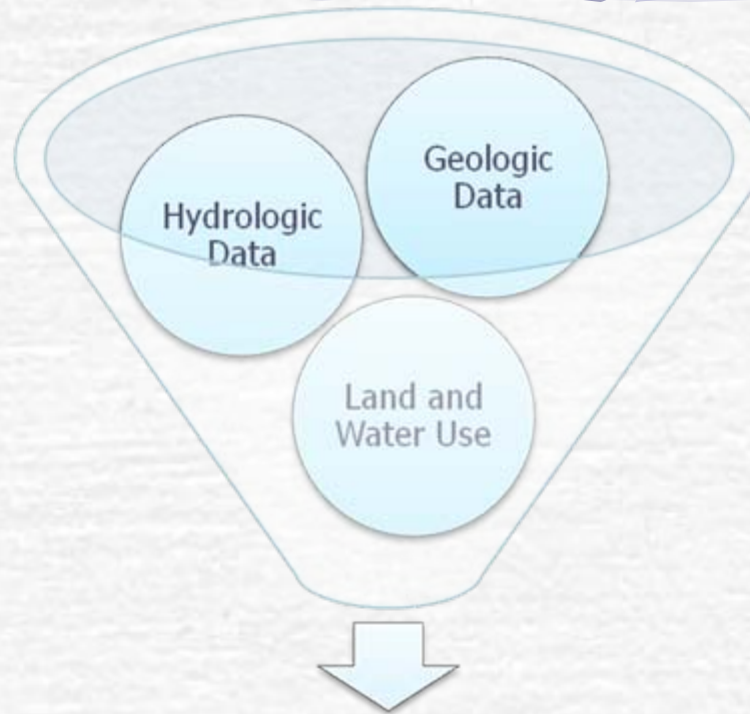
Data Gaps

- ☞ California DPH – X,Y location data for wells
- ☞ Local Purveyors – Production
 - CalAm
 - Elk Grove Water Service
 - Florin County
 - Fruitridge Vista
 - City of Sacramento

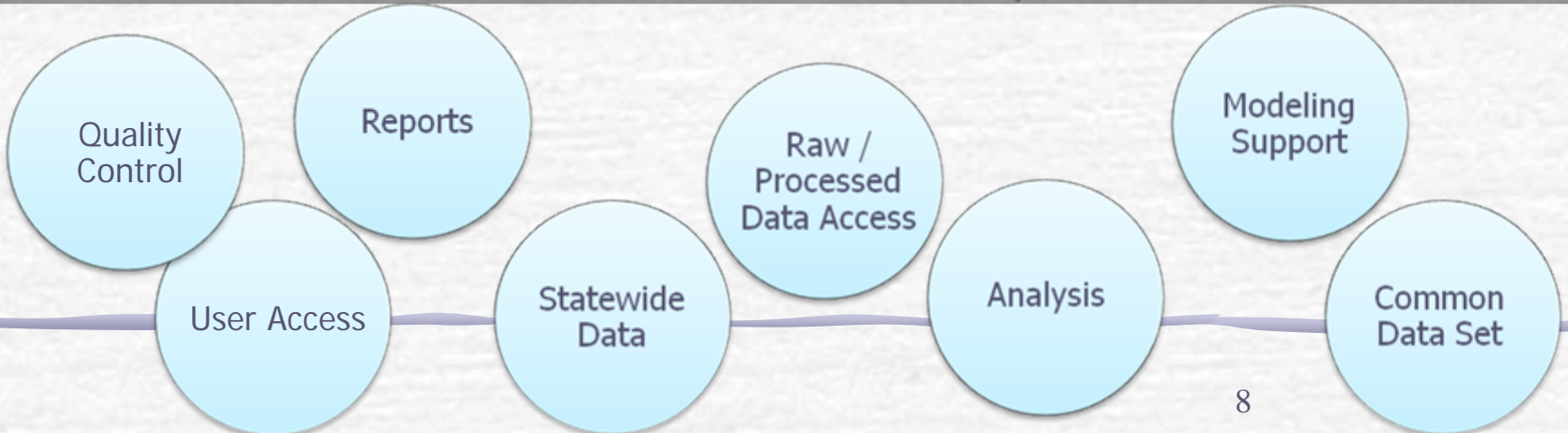
Interfaces



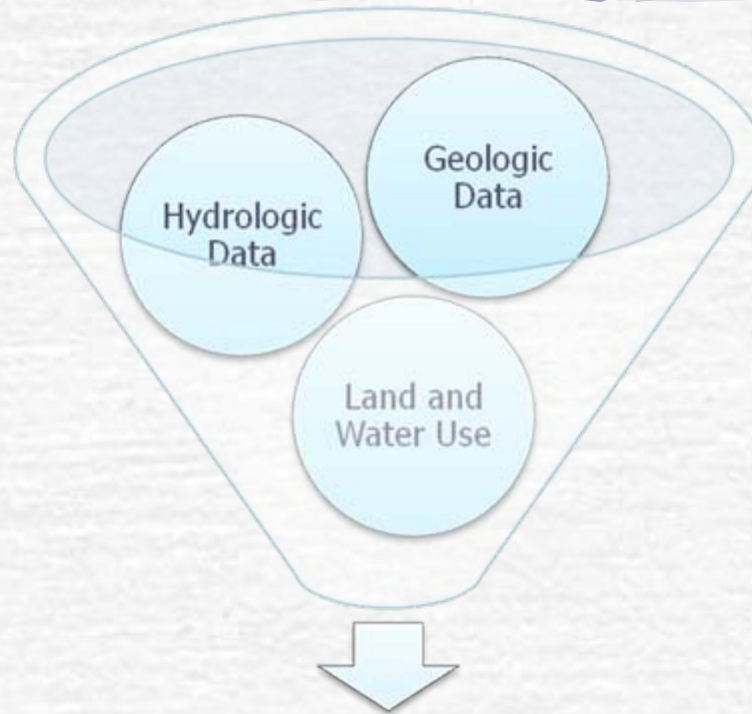
Interfaces



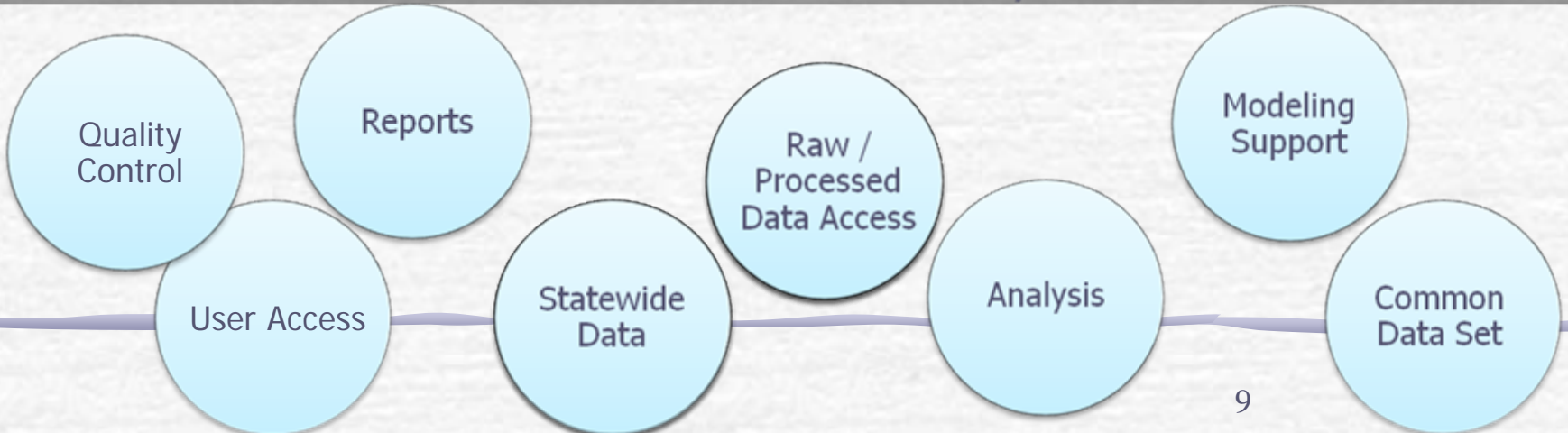
Public Admin Policy Technical



Interfaces



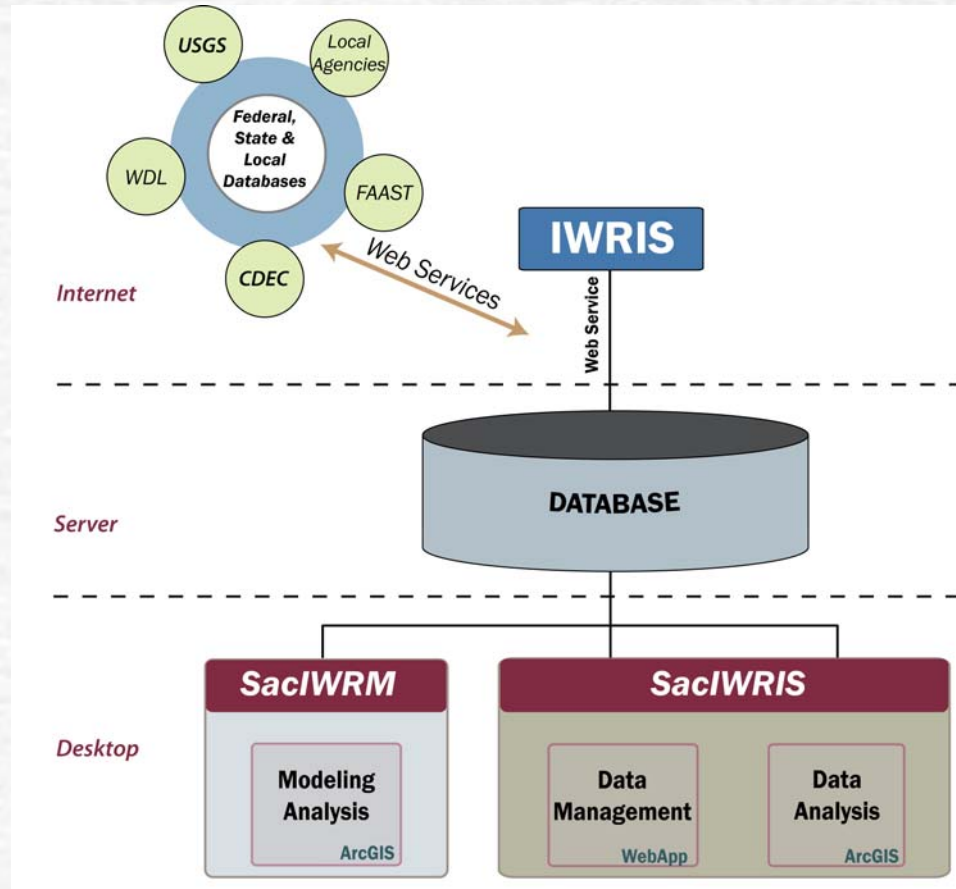
Public Admin Policy Technical



Interfaces

- Technical Interface: GIS enabled for complex analysis purposes
- Administrative Interface: Intuitive for user management, data entry, and data validation
- Decision-Makers and Public Interfaces: Easy access to relevant data and analyses
- All relate to data from the common database

SacIWRIS Architecture

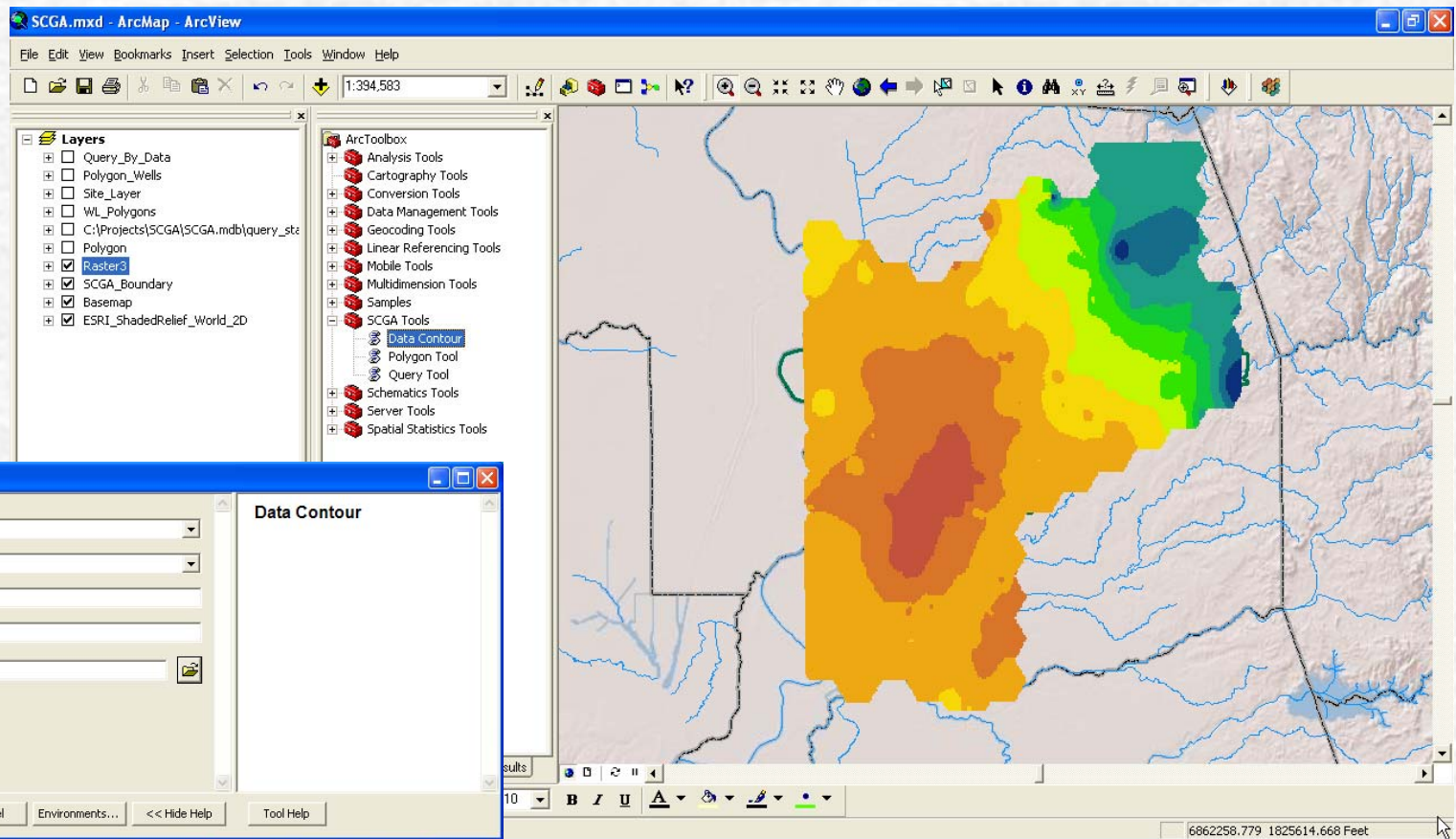


Technical Interface

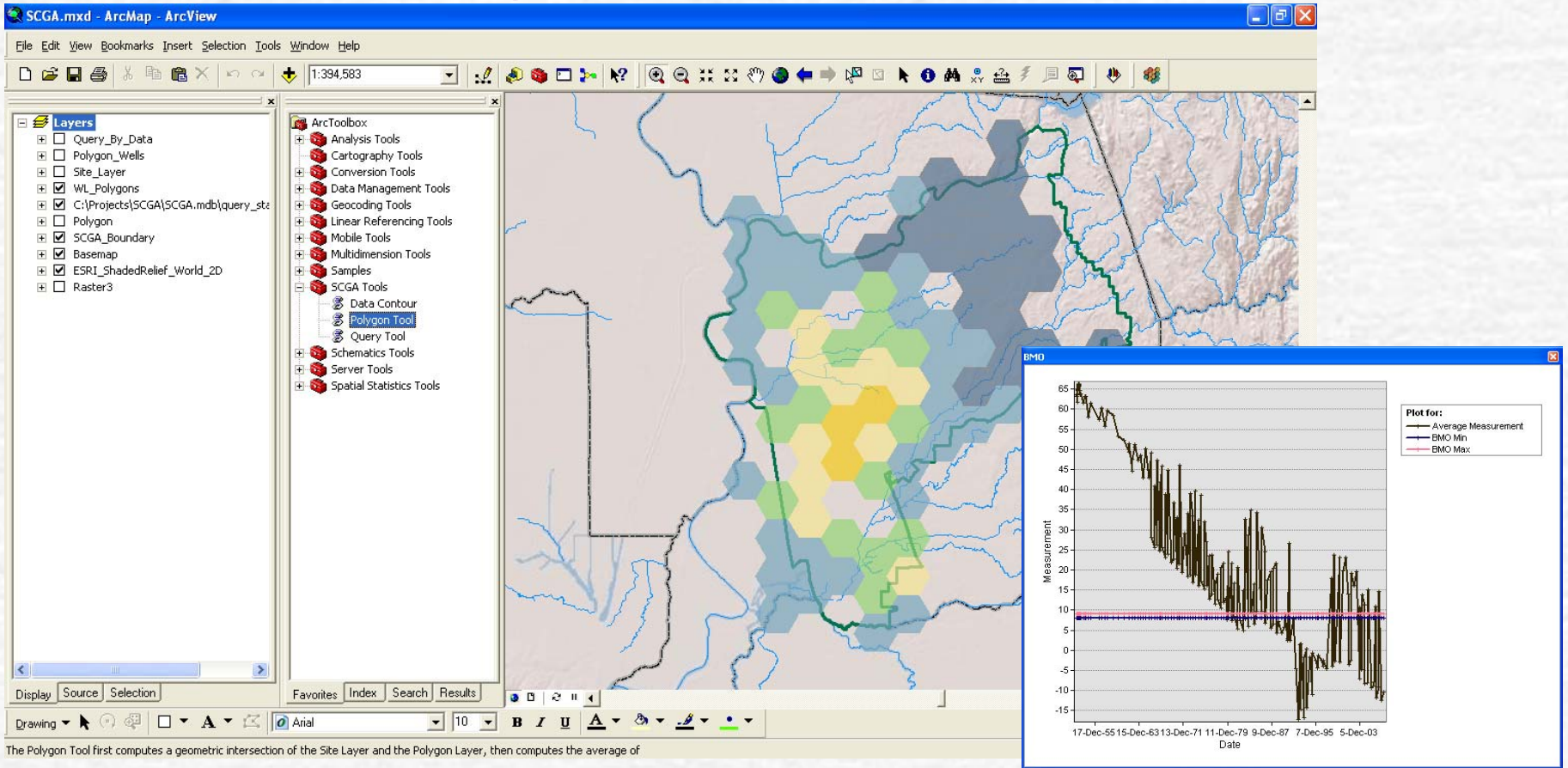
ESRI ArcGIS-based interface

- Create contours
- Polygon analysis
- Query tool
- Graphing tools

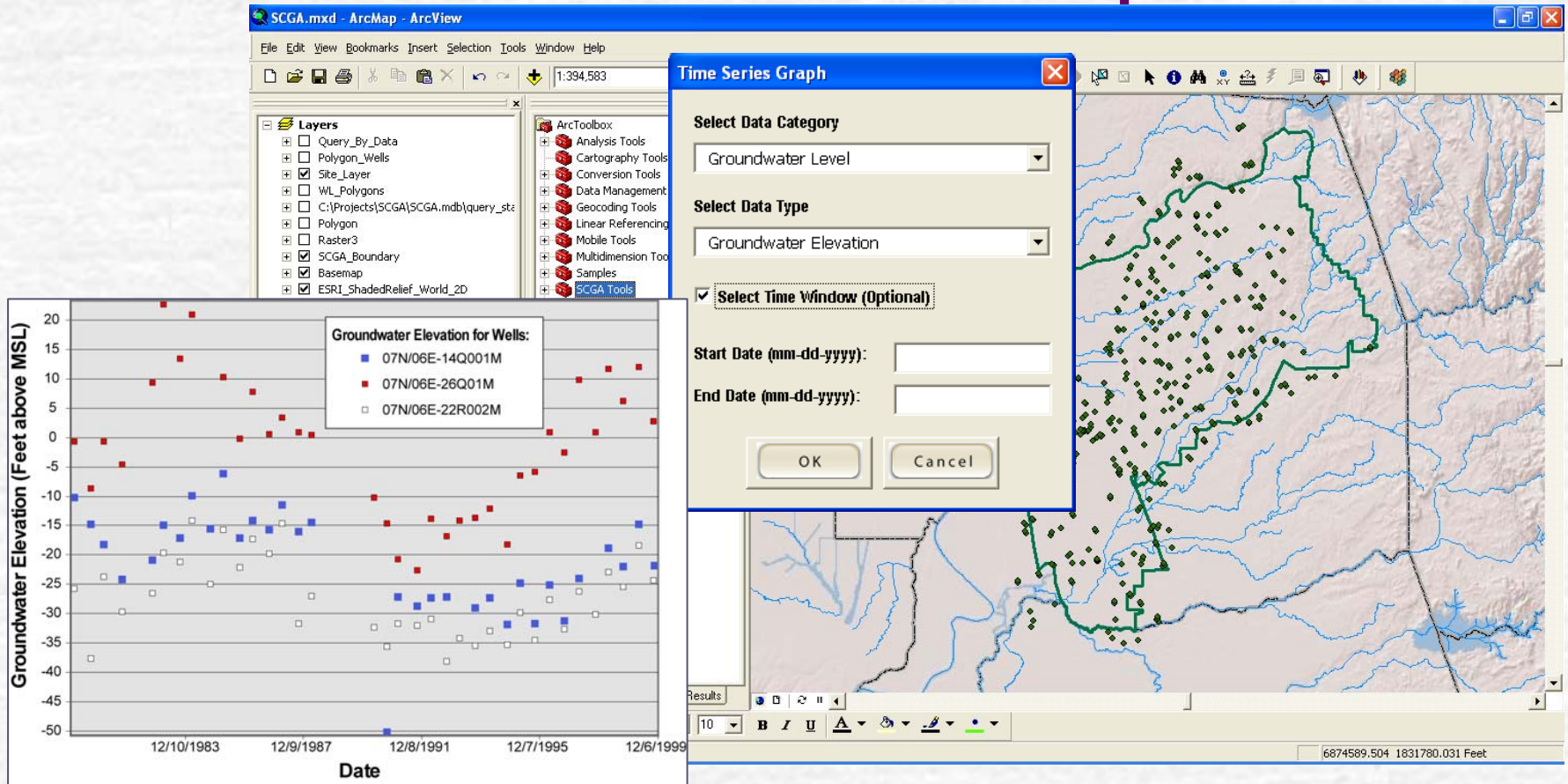
Data Contour Tool



Polygon Analysis Tool





Time Series Graph



Administrative Interface

- Manage User Accounts and Permissions
- Enter and Upload data
- Validate data
- Publish data to Statewide IWRIS

Administrator Home Page

Logged in as System Administrator |  |  Logout

SCGA | **Sacramento Central Groundwater Authority**
Hydrologic Database

Administrator Home



Account Manager



Database Manager



Model Manager



Publish Manager



Database Manager

Click on the Database Manager icon to:

- 1. Enter new data**
- 2. Validate entered data**
- 3. Import data using templates**
- 4. View data**

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Manage User Accounts and Permissions

Logged in as System Administrator   [Logout](#)

SCGA | **Sacramento Central Groundwater Authority**
Hydrologic Database

[Administrator Home](#) » [Account Manager](#)


Account Manager

User ID	Name	Email	Phone	Account Type	Action
1	Local DB Admin			System Administrator	
5	Jeanna Long	jlong@wrime.com	916-546-2236	Data Administrator	

▸ Inactive Users

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Enter Data

Logged in as System Administrator |  Logout


SCGA | Sacramento Central Groundwater Authority Hydrologic Database


[Administrator Home](#) » [Database Manager](#) » [Select Data Group](#) » [Select/Enter Site](#) » Enter Measurement Data


Enter Measurement Data for Groundwater Level


Site Name: [14N/03E-14E002M](#)


Type Of Data 

Groundwater Elevation 

Groundwater Elevation 


Groundwater Elevation 

Groundwater Elevation 

Groundwater Elevation 

Add New Row

Date 

March 

S	M	T	W	T	F	S
28	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10
2009 2010 2011						

Measurement Value

Feet above

Feet above

Feet above

Feet above

Feet above

Quality Flag 

Data Collector

Cancel

Save

Validate Data

The screenshot displays a web application interface for data management. The main page is titled "Data Validation - View as graph" and shows a line graph of "Groundwater Elevation at site # 14N/03E-14E002M". The y-axis represents "Groundwater Elevation (Feet above MS)" ranging from 0 to 120. The x-axis represents "Date" from 12/30/1899 to 10/28/1995. A legend indicates that red dots represent "Needs Validation" and yellow dots represent "Validated".


Below the graph, a "Site Statistics" window is open, displaying the following information:

Site Statistics	
Purveyor Name:	STATE DEPT WATER RESOURCES
Site Name:	14N/03E-14E002M
Validating :	1 New Entries
Time Period :	03/03/2010 to 03/03/2010

The window also shows a "Data Type" of "Groundwater Elevation" and a "View" button with a graph icon. A "Close" button is located at the bottom of the window.

The background interface includes the SCGA logo, a navigation menu with "Administrator Home" and "Database Mana...", and a "Groundwater Level Data Pendi" section with a checkbox for "14N/03E-14E002M" and a "Select All" option. The user is logged in as "System Administrator" and can click "Logout".

Publish to Statewide IWRIS

Logged in as System Administrator  |  [Logout](#)



Sacramento Central Groundwater Authority Hydrologic Database

[Administrator Home](#) » [Publish Manager](#) » Publish to IWRIS

Publish to IWRIS

Data Group	IWRIS Layer Name	Accessibility	Upload	Publish Status
Groundwater Level	<input type="text" value="Groundwater Level"/>	<input type="text" value="public"/> ▼		Published
Groundwater Quality	<input type="text" value="Groundwater Quality"/>	<input type="text" value="restricted"/> ▼		Published
Well Log	<input type="text" value="Well Log"/>	<input type="text" value="restricted"/> ▼		

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Decision-Maker and Public Interface

☞ Statewide IWRIS

Ease of Use, incorporation of statewide database, incorporation of local analysis uploaded by staff/consultants.

☞ Public access limited:

- No well logs
- No production well locations
- No preliminary data or analysis

Statewide IWRIS

IWRIS Integrated Water Resources Information System
PUBLIC BETA

[Account](#) | [Help](#) | [Comments](#) | [Logout](#)

Zoom In

Zoom Out

Zoom Full

Zoom Last

Hyperlink

Identify

Pan

Index Map

SQL Query

Search

Measure

Buffer

Select Box

Select Line

Clear

Print

Extract

GNIS Find by GNIS

XY Find by XY

Set Scale

Save Image

SCGA Surface Water Quality is now the Active Layer

Scale: 1:312,602
Active Layer: SCGA Surface Water Quality

Layers Legend Quick Start

- SCGA Remediation Operation
- SCGA Groundwater Production
- SCGA Groundwater Quality
- SCGA Surface Water Quality
- SCGA Groundwater Level
- SadGSM Calibration Wells
- SadGSM Rainfall Stations

Database

Sacramento Central Groundwater Authority

Station Name	Consumnes River @ Twin Cities Road
Station Type	Surface Water Quality
Agency	DWR Water Data Library
Latitude	38.2908 °N
Longitude	-121.379 °W
Links to Other Data:	?
N/A	

Search Station:

Map Sat Hyb Ter

Map data ©2010 Google - [Terms of Use](#)

Select	Time Series Category	Available Data Types
<input checked="" type="radio"/>	Surface Water Quality	Dissolved Organic Carbon

[CSV](#)

[Neighborhood Data Selection](#)

Done

Statewide IWRIS

http://gis.wrime.com/IWRIS/htdocs/viewer.asp

IWRIS Integrated Water Resources Information System
PUBLIC BETA

Account | Help | Comments | Logout

Water Data Library (WDL)

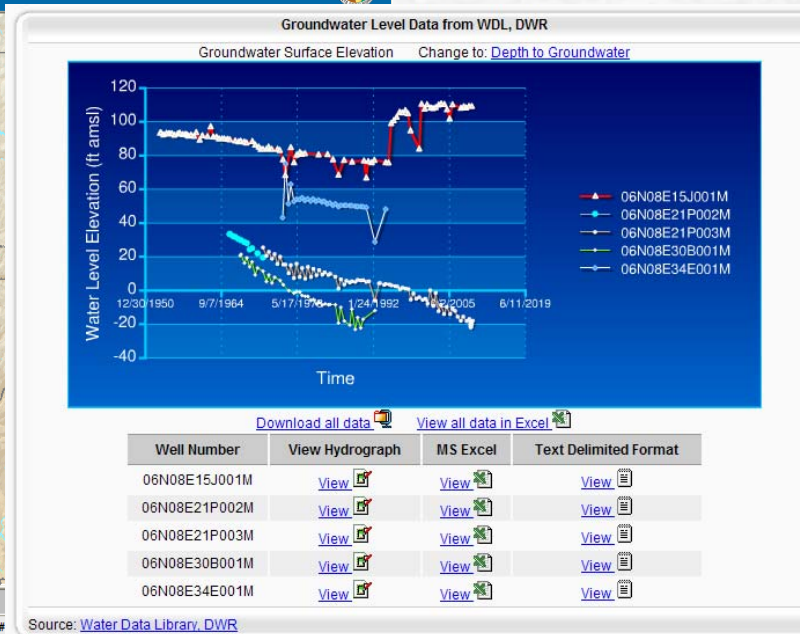
Rec	X	Y	WELLNUMBER	NUM_RECROD	COUNTY	BASIN	SUBBASIN	BAS_SBSIN	#SHAPE#	#ID#
1	667958	4248638	06N08E15J001M	102	SACRAMENTO	5-22	5-22.16	5-22.16	[point]	25841
2	665443	4246447	06N08E21P002M	28	SACRAMENTO	5-22	5-22.16	5-22.16	[point]	25842
3	665405	4246443	06N08E21P003M	67	SACRAMENTO	5-22	5-22.16	5-22.16	[point]	25843
4	662719	4246738	06N08E30B001M	56	SACRAMENTO	5-22	5-22.16	5-22.16	[point]	25844

Scale: 1:392,703
Active Layer: Water Data Library (WDL)

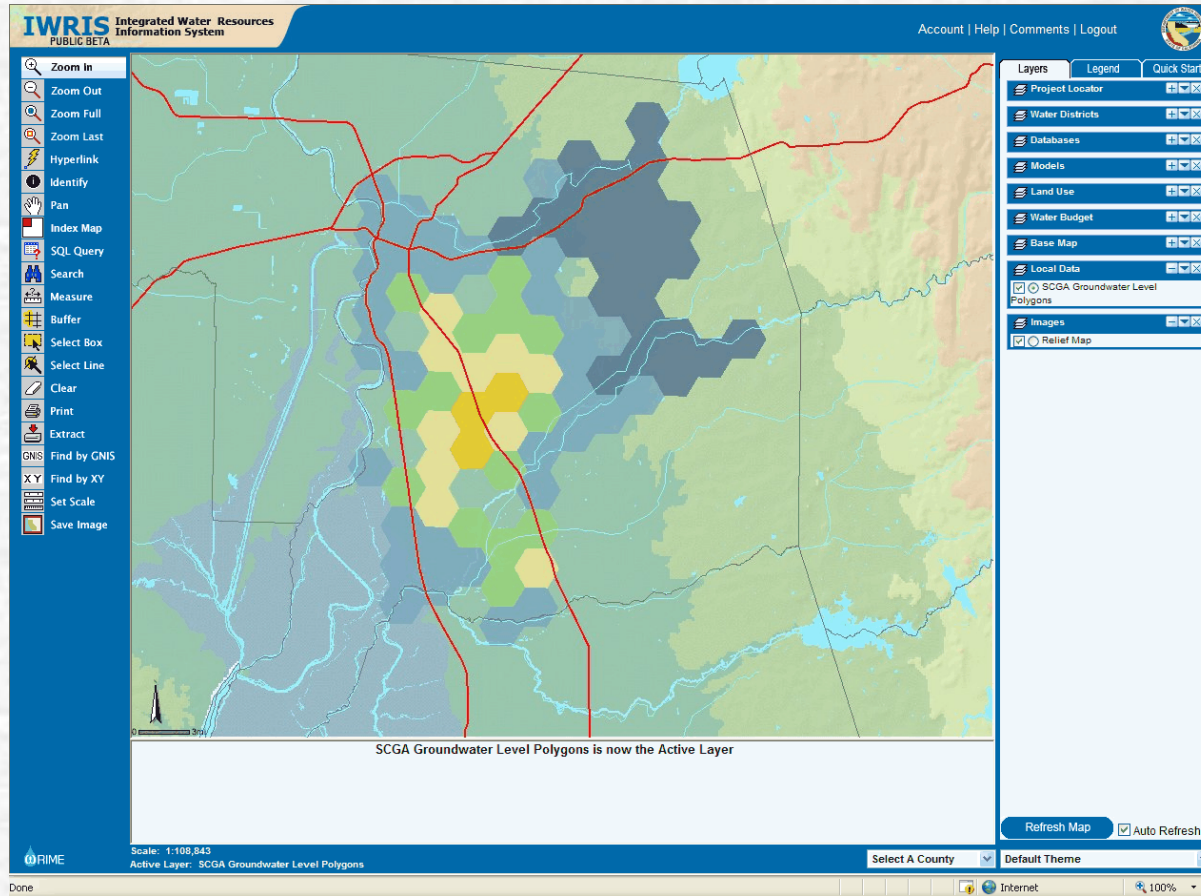
Select A County: SCGA Local Database

Refresh Map Auto Refresh

Internet 100%



Statewide IWRIS



Project Status

Task	Status	Remaining Work
Lithology	60% Complete	Visualization Tools.
GW Quality	40% Complete	Resolve DPH issues. QA/QC.
GW Pumping	Nearly Complete	Additional purveyor data. QA/QC.
GW Levels	Nearly Complete	Final QA/QC.
DMS Data Update	Nearly Complete	Upload of final data.
Tools	Nearly Complete	IWRIS/DWR interaction.
Outreach	5% Complete	Board presentation. Demos.
Reporting	10% Complete	Reports and User Manual.
PM	75% Complete	Ongoing.

Project Status

- ☛ Schedule: Extension filed for the end of 2010
- ☛ Budget
 - \$160,000 spent to-date
 - \$90,000 remaining

Questions?

