



THE OFFICE OF INFORMATION MANAGEMENT & ANALYSIS

BROWN BAG SEMINAR

Data Resources for GIS Analysis at the Water Boards

Speaker: Jeff Kapellas, GIS Specialist

Division of Information Technology, GIS Unit

State Water Resources Control Board

Please Note:

- All participants are muted upon log in
- For questions, all participants will be un-muted after the presentation is completed. Or, send via chat box.
- A recording of the presentation will be posted on

http://www.waterboards.ca.gov/water_issues/programs/sw_amp/brownbag_seminars.shtml

For inquiry: dawit.tadesse@waterboards.ca.gov &

Candice.Heinz@Waterboards.ca.gov

GIS Data and Resources at the Water Boards

Jeff Kapellas

GIS/Graphics/Web Unit

Division of Information Technology

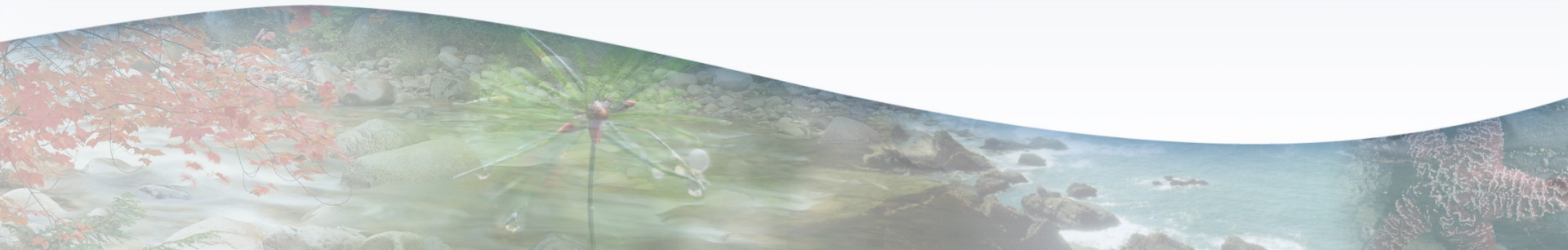
State Water Resources Control Board



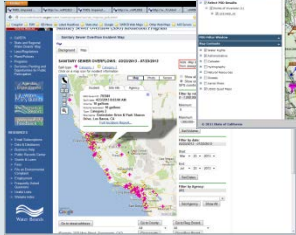
Water Boards GIS Unit

GIS@waterboards.ca.gov

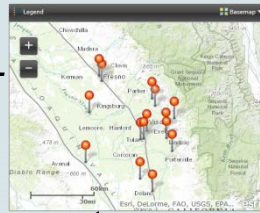
Steve Barnett (supervisor)	Steve.Barnett@waterboards.ca.gov	916-341-5231
Stephanie Bucknam	Stephanie.Bucknam@waterboards.ca.gov	916-558-1708
Jennie Catalano	Jennie.Catalano@waterboards.ca.gov	916-319-8464
Jeff Kapellas	Jeff.Kapellas@waterboards.ca.gov	916-324-9685
Mark Solem	Mark.Solem@waterboards.ca.gov	916-445-2118



Map applications



AGOL



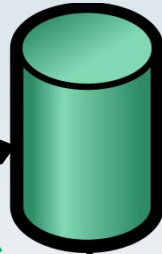
Map services



External map data services



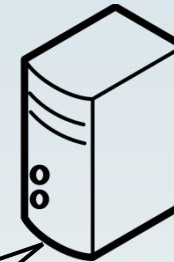
Data library
• ArcSDE
• Oracle



ArcGIS Servers

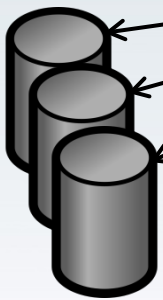


License server

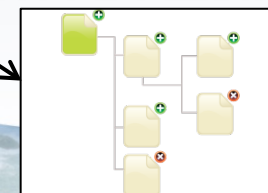
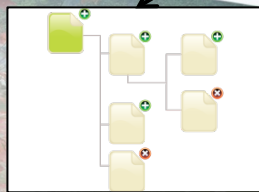


- 20 ArcGIS Advanced
- 50 ArcGIS Basic
- 12 Spatial
- 4 Geostat.
- 4 3D
- 1 Network

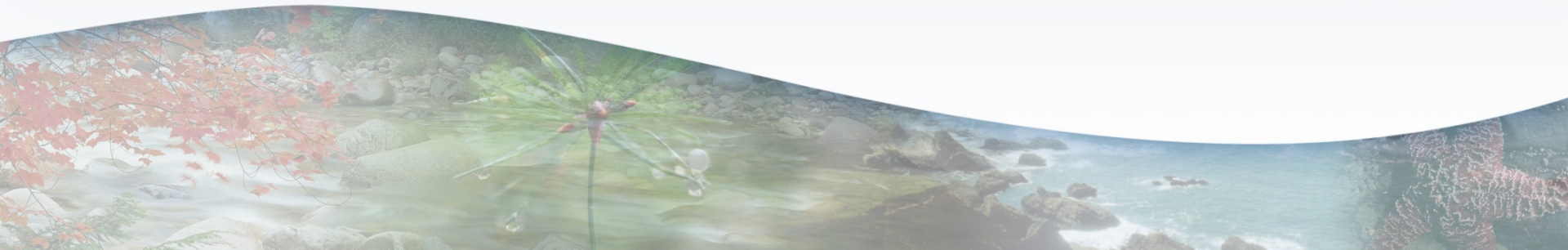
Enterprise databases



More than 500 desktop GIS users statewide

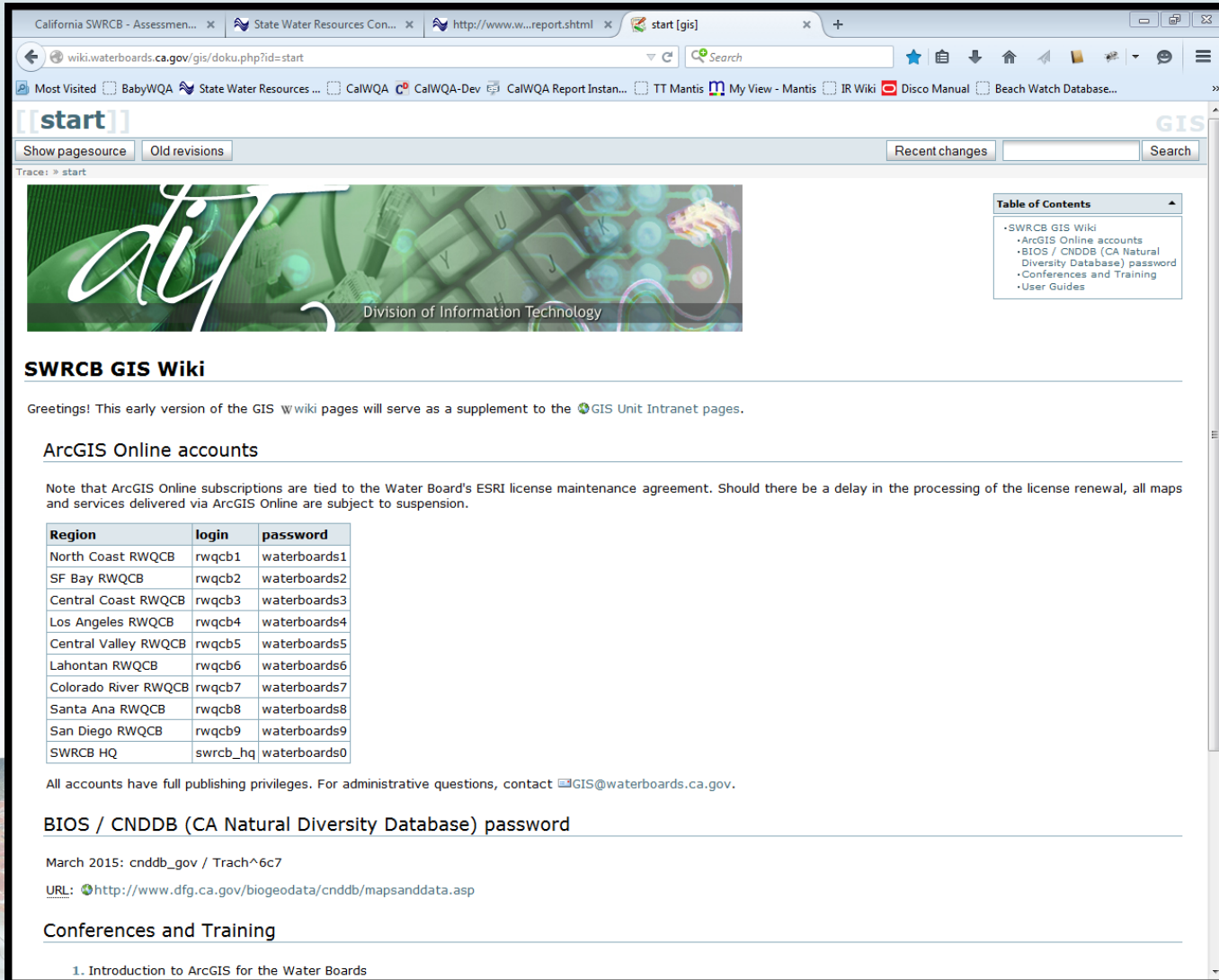


New(-ish) GIS Data Resources



GIS Wiki

<http://wiki.waterboards.ca.gov/gis/doku.php>



California SWRCB - Assessmen... x State Water Resources Con... x http://www.w...report.shtml x start [gis] x +


wiki.waterboards.ca.gov/gis/doku.php?id=start

Most Visited BabyWQA State Water Resources ... CalWQA CalWQA-Dev CalWQA Report Instan... TT Mantis My View - Mantis IR Wiki Disco Manual Beach Watch Database...

start

Show pagesource Old revisions Recent changes Search

Traces: start



Division of Information Technology

SWRCB GIS Wiki

Greetings! This early version of the GIS Wiki pages will serve as a supplement to the GIS Unit Intranet pages.

ArcGIS Online accounts

Note that ArcGIS Online subscriptions are tied to the Water Board's ESRI license maintenance agreement. Should there be a delay in the processing of the license renewal, all maps and services delivered via ArcGIS Online are subject to suspension.

Region	login	password
North Coast RWQCB	rwqcb1	waterboards1
SF Bay RWQCB	rwqcb2	waterboards2
Central Coast RWQCB	rwqcb3	waterboards3
Los Angeles RWQCB	rwqcb4	waterboards4
Central Valley RWQCB	rwqcb5	waterboards5
Lahontan RWQCB	rwqcb6	waterboards6
Colorado River RWQCB	rwqcb7	waterboards7
Santa Ana RWQCB	rwqcb8	waterboards8
San Diego RWQCB	rwqcb9	waterboards9
SWRCB HQ	swrcb_hq	waterboards0

All accounts have full publishing privileges. For administrative questions, contact GIS@waterboards.ca.gov.

BIOS / CNDDDB (CA Natural Diversity Database) password

March 2015: `cnddb_gov / Trach^6c7`

URL: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>

Conferences and Training

1. Introduction to ArcGIS for the Water Boards

eWRIMS GIS

<http://waterrightsmaps.waterboards.ca.gov/ewrims/gisapp.aspx>

The screenshot displays the eWRIMS GIS web application interface. At the top, the logo "eWRIMS GIS" is visible on the left, and "Sign out" with a user icon is on the right. Below the logo is a navigation menu with "File", "Home", "Map", and "Tools".

The main interface is divided into several sections:

- Draw:** Includes tools for Point, Edit Drawing, Clear, and Export Drawings.
- Find Data:** Includes tools for Point, Water Right, and Stream Trace.
- Coordinates:** Includes tools for Plot Coordinates and Zoom To Location.
- Edit:** Includes the Edit POD tool.

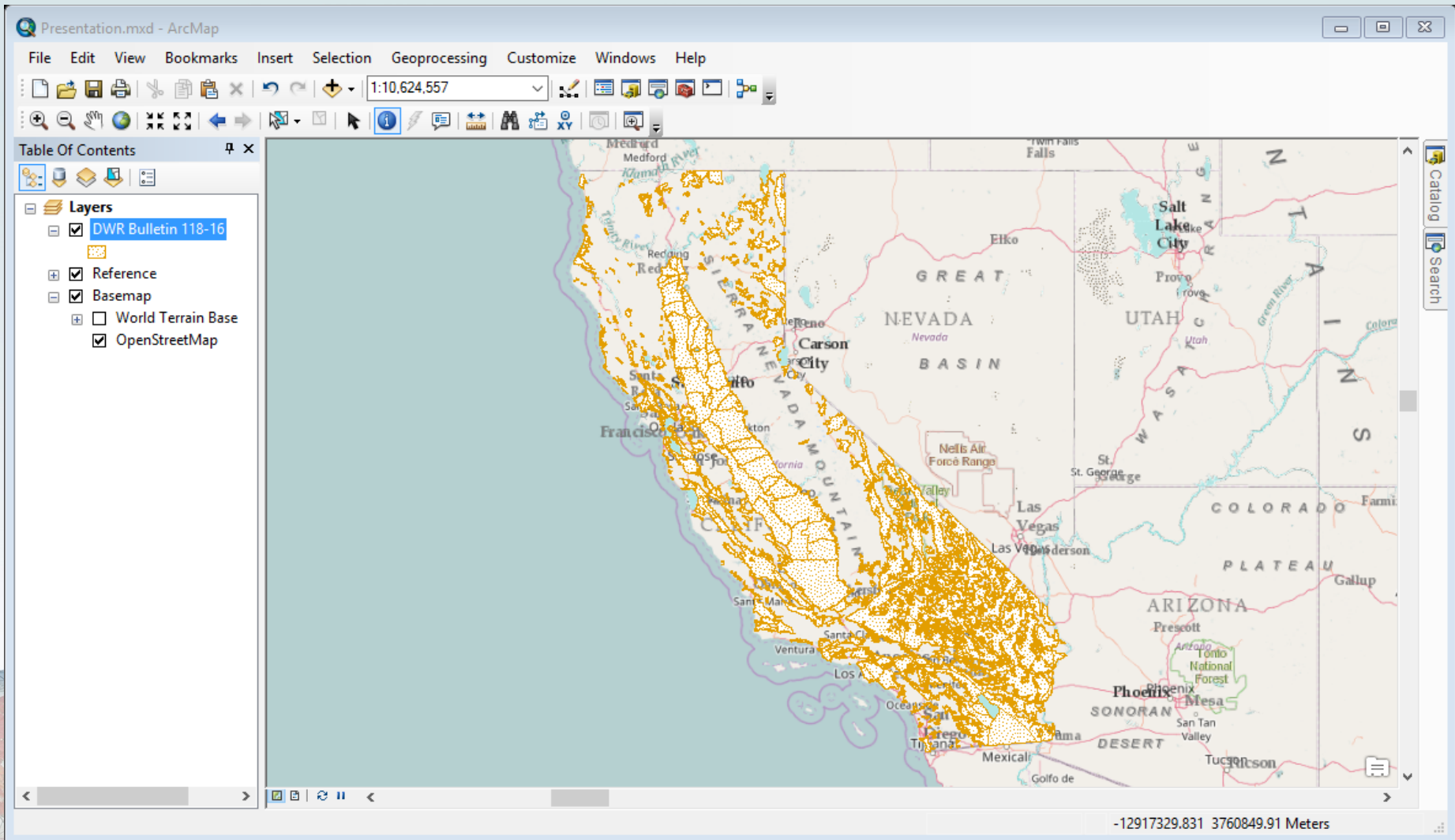
The central map area shows a street map of Sacramento, CA, with various water rights and stream traces overlaid. A search bar at the top of the map contains the text "I want to...". The map is labeled with "SACRAMENTO WEST", "Central Valley", and "SACRAMENTO EAST". A scale bar at the bottom indicates 0, 0.5, and 1 mile. The bottom right corner of the map area contains the text "US Geological Survey | California Water Resources Control B...".

On the left side, there is a sidebar with the following content:

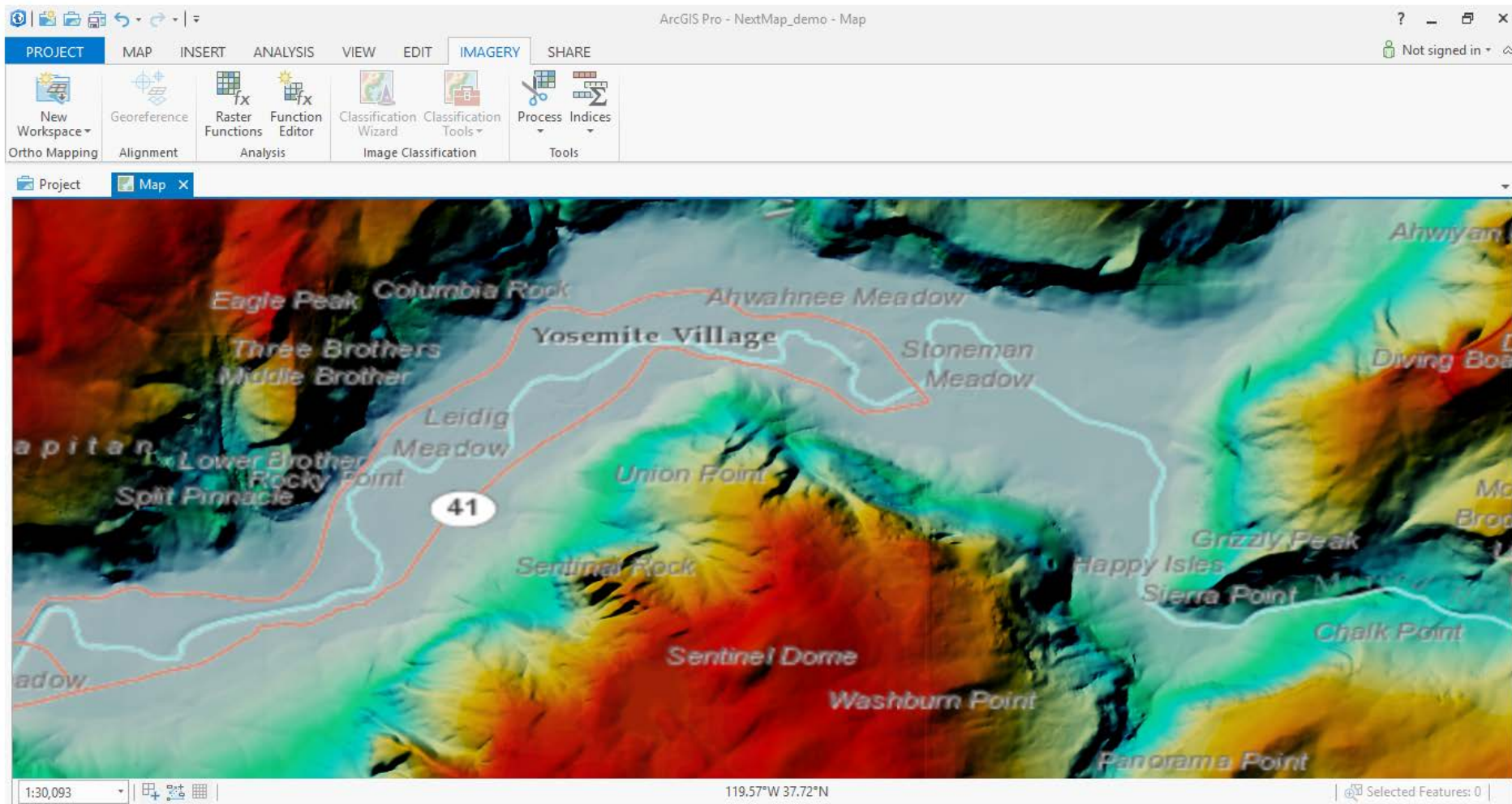
- Home**
- eWRIMS GIS System**
- Welcome to California Water Resources Control Board GIS System. This application allows you to explore the area, search for water rights and create your own maps.
- Get started now:
- Find water rights**
Search for water rights in different ways.
- Edit PODs**
Edit the location and attributes of PODs.
- Stream trace**
Find PODs using a stream trace.
- Home
- Layers

New Ground Water Basin Dataset

DWR Bulletin 118-16

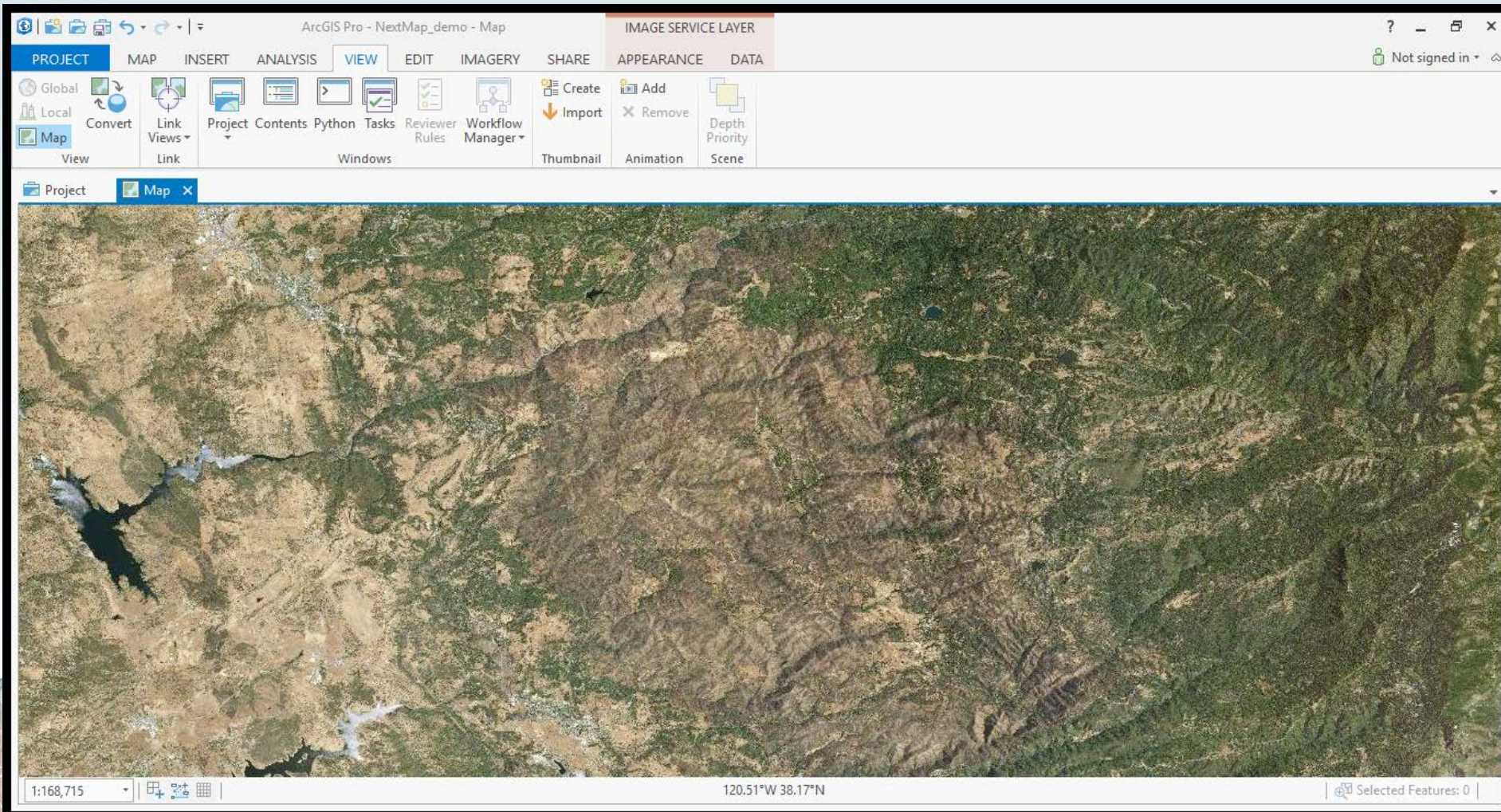


5-meter Elevation Data WBGIS.Elevation_5m (water49)



NAIP 2016 Imagery

https://map.dfg.ca.gov/arcgis/rest/services/Base_Remote_Sensing/



CNDDDB / BIOS

http://wiki.waterboards.ca.gov/gis/doku.php#bios_cnddb_ca_natural_diversity_database_password

BIOS: <https://www.wildlife.ca.gov/Data/BIOS>

The screenshot shows the ArcMap interface with the following components:

- Table Of Contents:** Lists layers including CNDDDB, CNDDDB_Points, CNDDDB_Areas, DWR Bulletin 118-16, Reference, Basemap, World Terrain Base, and OpenStreetMap.
- Map:** Displays a map of California with red circles and blue squares representing data points.
- Identify Window:** Shows the following list of species:
 - sharp-shinned hawk
 - bank swallow
 - Methuselah's beard lichen
 - Oregon goldthread
 - marbled murrelet
 - running-pine
 - running-pine
 - marbled murrelet
 - running-pine
 - Methuselah's beard lichen
 - southern torrent salamander
 - maple-leaved checkerbloom
 - running-pine
 - northern red-legged frog
 - Pacific tailed frog
- Location:** -13,797,571.291 4,950,709.020 Meters
- Field Value Table:**

Field	Value
OBJECTID	30490
ELMCODE	ABNKC12020
OCCNUMBER	16
MAPNDX	70059
EONDX	70915
PARTS	1
ELMTYPE	2
- Status Bar:** Identified 171 features

Parcel Data / LandVision

Find a location

Layers List Draw Quick Measure Export Image Print Map View Bookmarks Advanced Help

Location Information

Results at this Location | 2

3082 ASHLEY RIVER RD

APN: 3580000013

All results are shown

3082 ASHLEY RIVER RD

Insurance Hazards

	View All Hazards	Hide All Hazards
ALL	View All Hazards	Hide All Hazards
BROWNFIELDZONES	View Hazard	
AREAFALTZONES	View Hazard	
EARTHQUAKEFAULTS	View Hazard	
EARTHQUAKEMMISHAKE	View Hazard	
INDUCEDEARTHQUAKEZONES	View Hazard	
DFIRM	Hide Hazard	
FLSINKHOLERISK	View Hazard	
HAIL	View Hazard	
HURRICANE	Hide Hazard	
LIGHTNING	View Hazard	

© 2017 HERE Earthstar Geographics SIO

CGS Information Warehouse

<http://maps.conservation.ca.gov/cgs/informationwarehouse/>

The screenshot shows the CGS Information Warehouse website interface. At the top, there is a navigation bar with the following items: Home, Earthquakes, Geologic Hazards, Mineral Resources, Education, Library, Publications, and Maps. Below this is a secondary navigation bar with: Regulatory Maps, Landslides (selected), Mineral Lands Classification, Tsunami, Borehole Database, and Help. The main content area is titled "CGS Information Warehouse: Landslides" and features a map of California. The map displays various geographical features, including major cities (Sacramento, San Francisco, San Jose, Modesto, Stockton, etc.), national forests (Mendocino, Tahoe, Stanislaus, etc.), and parks (Yosemite). A grid of yellow squares is overlaid on the map, indicating areas of landslide hazard. The map includes a search bar labeled "Esri World Geocoder", a scale bar for 60 miles, and coordinates (38.412 -123.281 Degrees). The bottom right corner of the map area contains the text "POWERED BY esri" and "Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS".

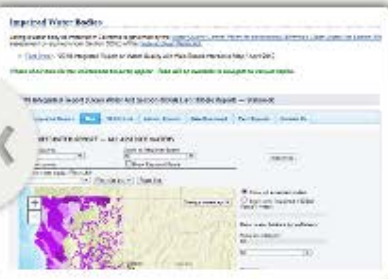
GIS Portal

(under development)

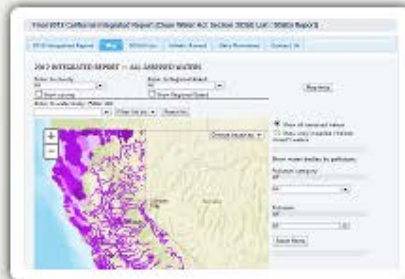


California
Water
Resources
Control Board

Maps



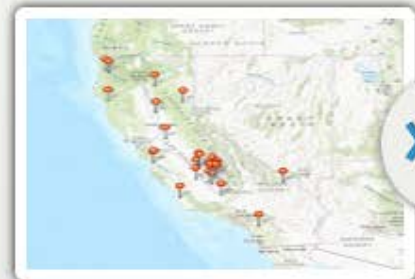
2010 Integrated Report



2012 Integrated Report



California Areas of Special
Biological Significance



California Drinking Water
Drought Funding Projects

Maps & Apps

CA.GOV CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

[Home](#) [About Us](#) [Public Notices](#) [Board Info](#) [Board Decisions](#) [Water Issues](#) [Publications/Forms](#) [Press Room](#)

Welcome to the State Water Resources Control Board |

Office of Governor
Edmund G. Brown Jr.
[Visit his Website](#)

Board Chair
Felicia Marcus
[Visit the Water Board Members Page](#)

California Water Boards
Protecting California's Water

- Cal/EPA
- State and Regional Water Boards' Map
- Board Priorities
- Laws/Regulations
- Plans/Policies
- Programs
- Decisions Pending and Opportunities for Public Participation

CONNECT WITH US

Agendas
English/Español

My Water Quality

Performance Report

RESOURCES

- Email Subscriptions
- Data & Databases
- Business Help
- Public Records Center
- Grants & Loans
- Fees
- Customer Service Survey
- File an Environmental Complaint
- Employment

- Agriculture
- Bay-Delta / Delta Watermaster
- Clean Beaches & Ocean Standards
- Drinking Water
- Drought Year Info
- Enforcement
- Financial Assistance
- Groundwater
- Operator Certification
- Permit / Licensing
- Petitions
- Septic Systems (OWTS)

ANNOUNCEMENTS

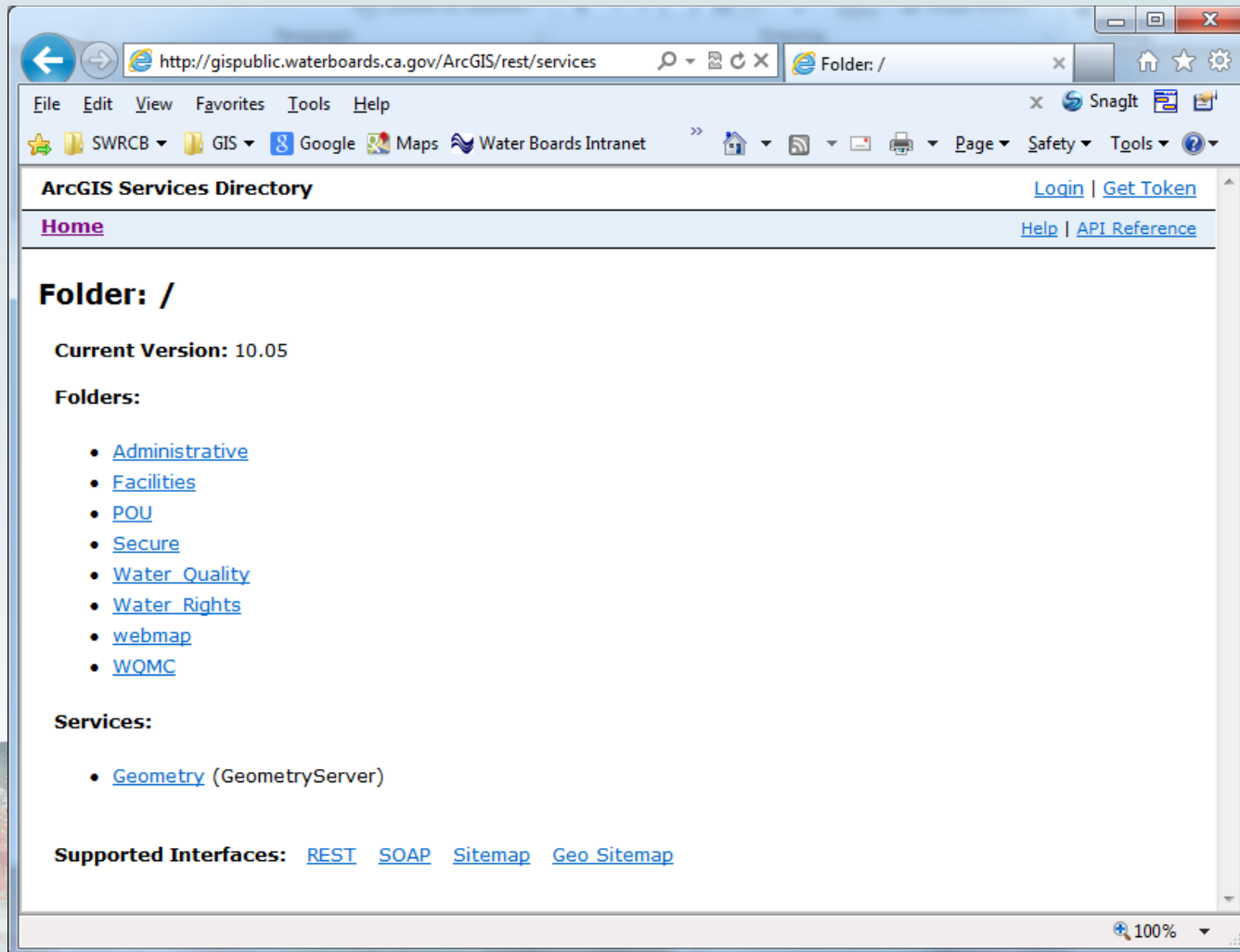
- [State Water Board Streamlines Process to Apply for Drinking Water Funds \(2/6/15\)](#)
- [State Water Board Orders More Information from Diverters Claiming Senior Delta Wa](#)
- [State Water Board Issues Order in Response to State and Federal Water Project Peti](#)
- [December Water Conservation, Per Capita Use Info \(2/3/15\)](#)
- [Emergency Water Conservation Regulations Portal \(2/1/15\)](#)
- [Water Quality Fees Stakeholder Meeting on Friday, February 13, 2015 \(2/3/15\)](#)
- [More Announcements ...](#)

IMPORTANT INFORMATION... **SHOW CAROUSEL**

- Regional Water Quality Control Boards' MAPS & WEBSITES
- Water Boards' Data Maps**
- DROUGHT INFORMATION
- Save Our WATER
- Ahorre Nuestra AGUA
- Once-Through Cooling Power Plants
- CEDEN California Environmental Data Exchange Network
- Water Quality Assessment Integrated Report
- My Water Quality
- Water Boards' Performance Report
- Creek Watch
- FAACT
- Near a Nitrate

Public GIS service portal

<http://gispublic.waterboards.ca.gov/ArcGIS/rest/services>



The screenshot shows a web browser window displaying the ArcGIS Services Directory. The address bar shows the URL <http://gispublic.waterboards.ca.gov/ArcGIS/rest/services>. The page title is "ArcGIS Services Directory". The navigation menu includes "Home", "Login", "Get Token", "Help", and "API Reference". The main content area displays the following information:

Folder: /

Current Version: 10.05

Folders:

- [Administrative](#)
- [Facilities](#)
- [POU](#)
- [Secure](#)
- [Water Quality](#)
- [Water Rights](#)
- [webmap](#)
- [WQMC](#)

Services:

- [Geometry](#) (GeometryServer)

Supported Interfaces: [REST](#) [SOAP](#) [Sitemap](#) [Geo Sitemap](#)

ArcGIS Online

waterboards.maps.arcgis.com

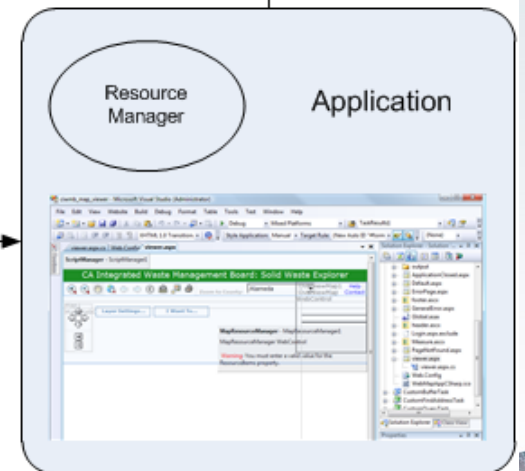
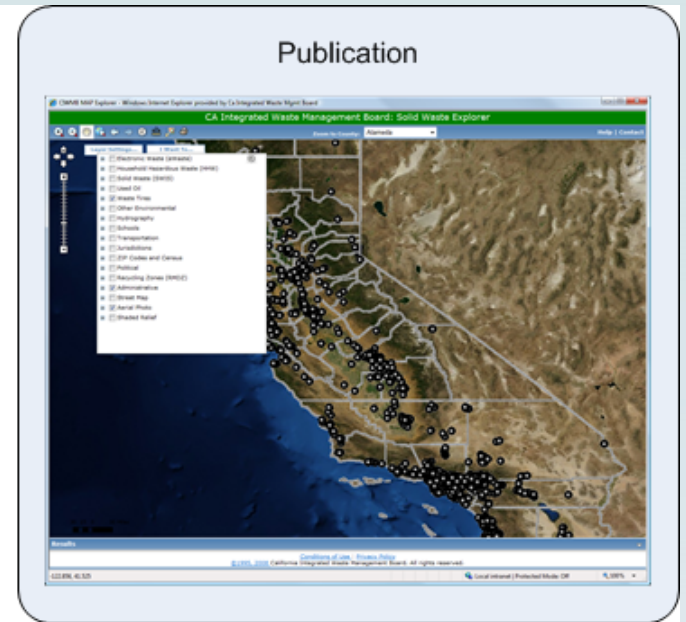
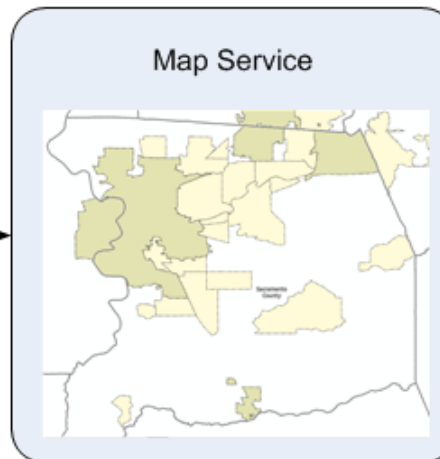
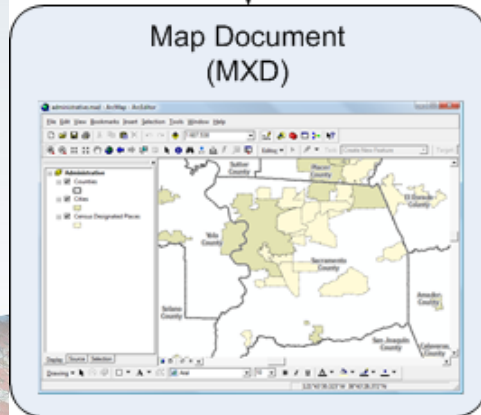
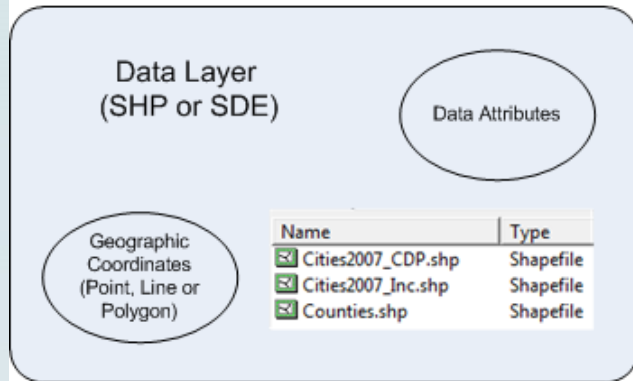
The screenshot displays the ArcGIS Online web interface for the 'R3 GeoWQA features' map. The browser address bar shows the URL: `waterboards.maps.arcgis.com/home/webmap/viewer.html?webmap=61a1221221d042bfa3be138baccb69d`. The interface includes a top navigation bar with 'HOME', 'NEW MAP', and 'CREATE PRESENTATION' options. Below this is a toolbar with icons for 'Details', 'Add', 'Edit', 'Basemap', 'Save', 'Share', 'Print', 'Directions', 'Measure', and 'Bookmarks'. A search bar is located on the right side of the toolbar.

On the left side, there is a 'Contents' panel with a list of layers and their visibility status:

- Change Requests
- DRAFT R3 Lines
- DRAFT R3 Polygons
- GeoWBS R3 Lines
- GeoWBS R3 polys
- nhd - Flowline
- nhd - Waterbody
- nhd - Area
- National Geographic

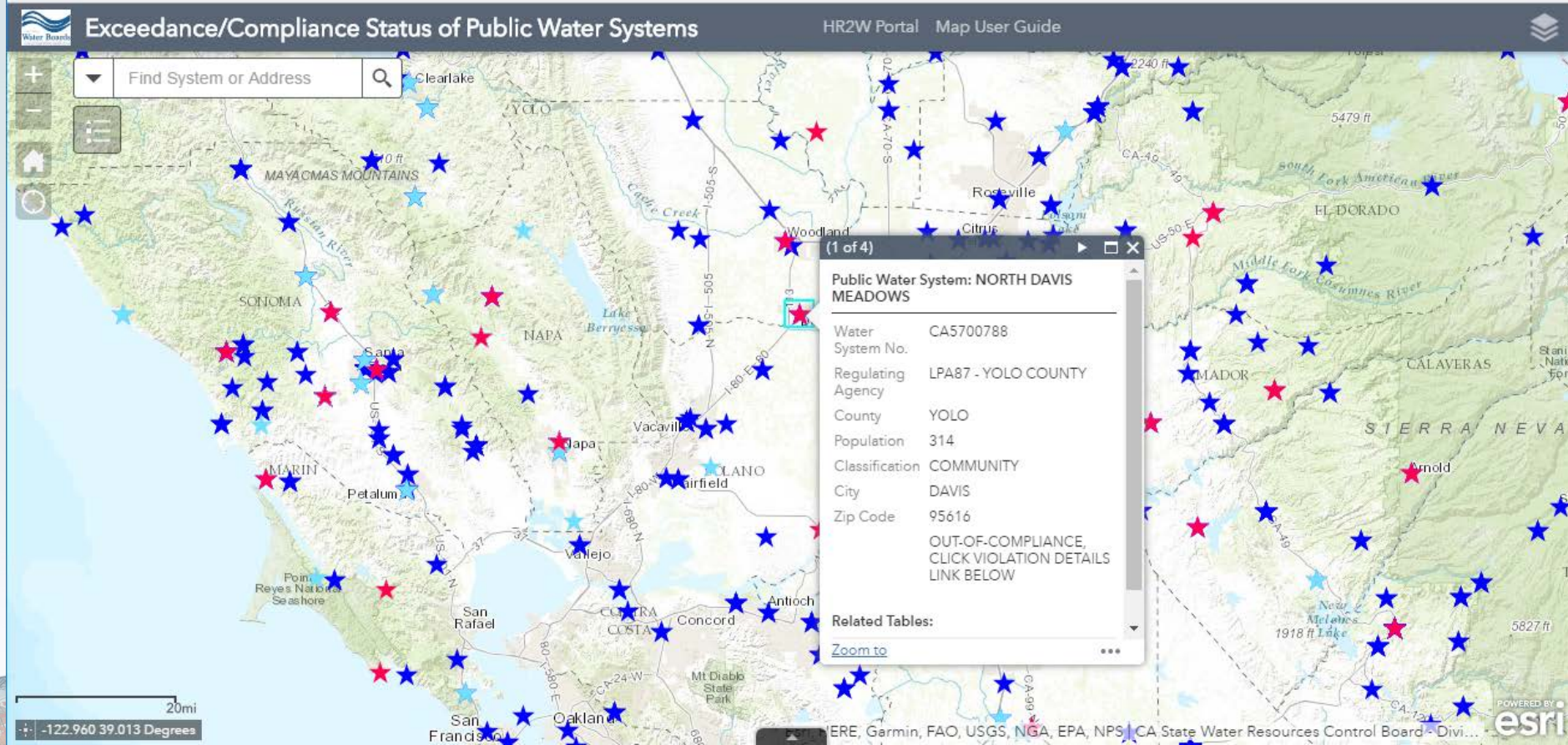
The main map area shows a topographic view of California, with various waterboards boundaries overlaid in red and purple. Major cities and regions are labeled, including San Mateo, Fremont, San Jose, Merced, Los Banos, Santa, Soledad, Fresno, Visalia, Lemoore, Avenal, Delano, Bakersfield, Santa Maria, Lompoc, Santa Barbara, Thousand Oaks, Simi Valley, and Los Angeles. The map also shows geographical features like the San Joaquin Valley, Sierra Nevada, and various seamounts (e.g., Neer Seamount, Guide Seamount, Davidson Seamount, Rodriguez Seamount). A scale bar at the bottom left indicates 0, 15, and 30 miles. The Esri logo is visible in the bottom right corner of the map area.

Construction of ArcGIS Online Project



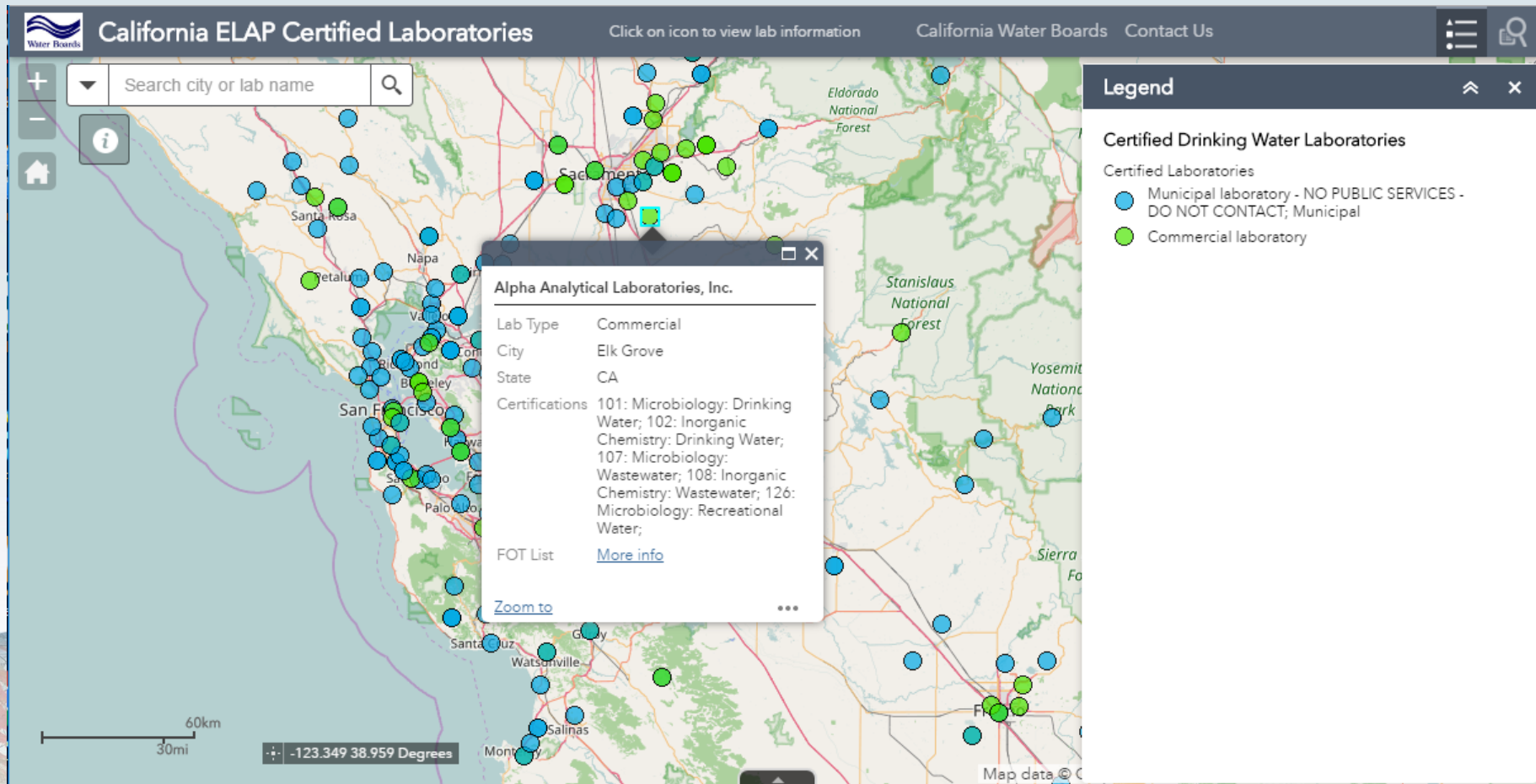
Drinking Water Standards Compliance

http://www.waterboards.ca.gov/water_issues/programs/hr2w/index.shtml



Lab Accreditation

http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml



GAMA Groundwater Reports

http://www.waterboards.ca.gov/water_issues/programs/gama/publications.shtml

The screenshot displays the GAMA web application interface. On the left, a 'Layer List' panel shows various operational layers, including 'GAMA Deep Aquifer Study Units of the Priority Basin Project (2004 - 2012)' which is checked. The main map area shows a map of California with various colored regions representing study units. A pop-up window titled '(1 of 2)' provides details for the 'Western San Joaquin Valley Deep Aquifer Study Unit'. The pop-up includes the following information:

- Study Unit: Western San Joaquin Valley
- Area (Km): 5,611.63
- Area (Miles): 2,142.67
- Data Report Link: [More info](#)
- Assessment Report Link: [More info](#)
- Fact Sheet Link: [More info](#)
- Study Unit Info: The Western San Joaquin Valley Study Unit was sampled between 3/1/2010 and 7/8/2010; 58 wells were sampled. The study unit is within Stanislaus, Merced, Madera, Fresno and Kings

At the bottom of the interface, there is a scale bar (0 to 100 miles), a toolbar with navigation icons, and a coordinate display showing -132.318 41.957 Degrees.

GIS Training

The image shows a screenshot of a web browser displaying the Esri Training website. The browser's address bar shows the URL <https://www.esri.com/training/>. The page features the Esri logo on the left and a navigation menu with links for Industries, Products, Support & Services, About, and Community. A search bar is located on the right side of the navigation area. The main content area is dominated by a large banner with a background of topographic maps in blue and green. Overlaid on this banner is a white box containing the word "Training" in a large, blue font, followed by the tagline "Your location for lifelong learning" in a smaller, black font. At the bottom of the page, there is a dark blue navigation bar with links for Main, Catalog, My Learning, Certification, and Help.

Esri Training | Your Location

Secure | <https://www.esri.com/training/>

Apps eWRIMS DFW NAIP BIOS GIS Wiki CGS Information War ESRI Training

esri

Industries Products Support & Services About Community

Jeff

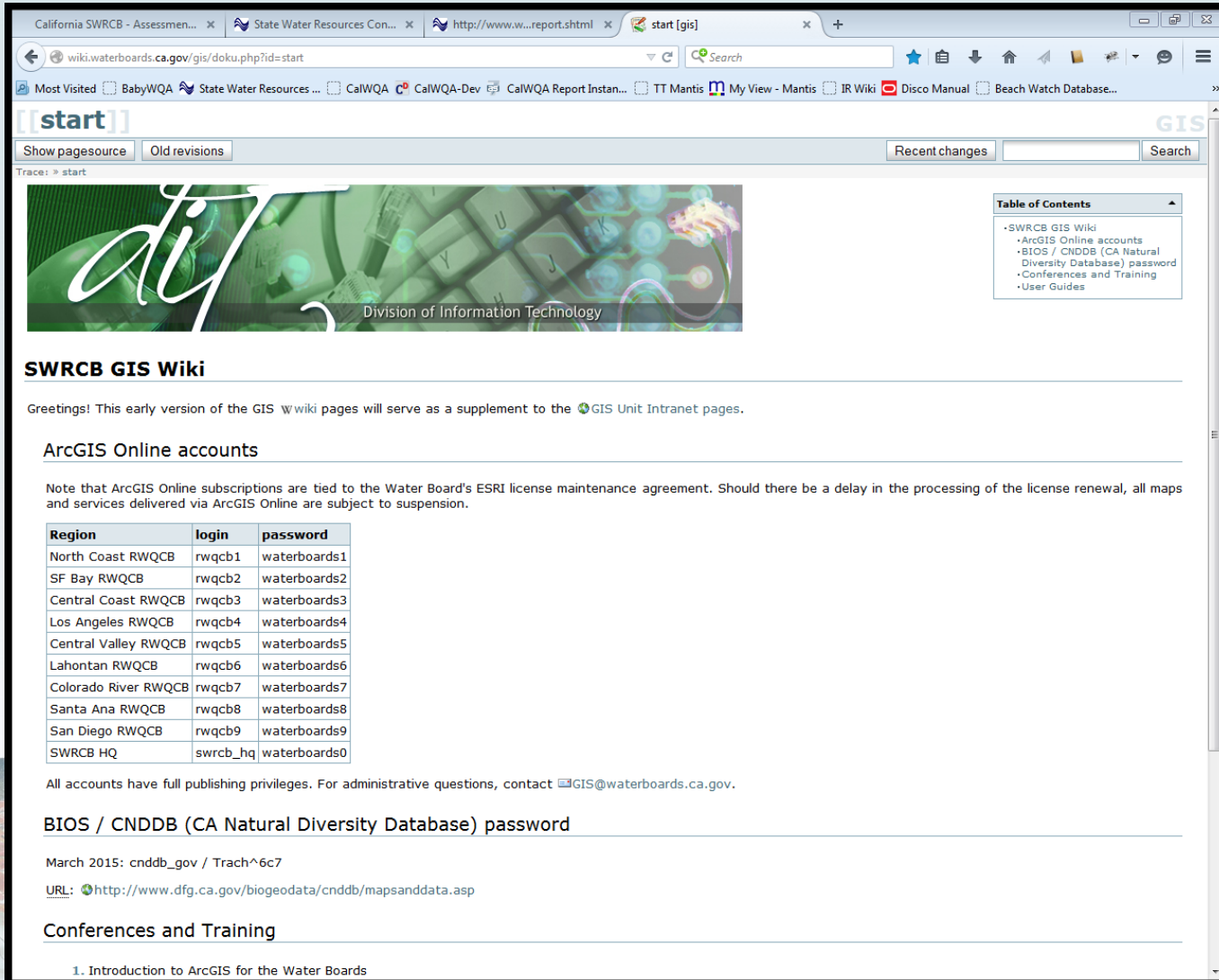
Training

Your location for **lifelong** learning

Main Catalog My Learning Certification Help

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<http://wiki.waterboards.ca.gov/gis/doku.php>



California SWRCB - Assessmen... x State Water Resources Con... x http://www.w...report.shtml x start [gis] x +


wiki.waterboards.ca.gov/gis/doku.php?id=start

Most Visited BabyWQA State Water Resources ... CalWQA CalWQA-Dev CalWQA Report Instan... TT Mantis My View - Mantis IR Wiki Disco Manual Beach Watch Database...

start

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March 2015: `cnddb_gov / Trach^6c7`

URL: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>

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