



Maps and Posters in the 2013 CNRA Map Gallery and Their Authors

Robyn Starr, GISP DWR, CNRA Map Gallery Coordinator and assisted by Steven Springhorn, Geologist, DWR (11/19/13)

Chris Higgins, Senior Geologist, California Geological Survey, chiggins@conservation.ca.gov (916) 322-9997

Development of mineral-hazards maps for Caltrans districts and highway corridors. Describes the purpose of the maps and how they were developed. Shows examples of map products that are given to Caltrans for their internal use, which ranges from road maintenance and planning of new projects to emergency situations. 42" x 90"

Marcia Denise Scavone-Tansey, Ph.D. is an Environmental Scientist with a Masters and PhD, and has a GIS degree from ARC. She is currently, a water quality investigator for DWR. Scavone-Tansey, Marcia@water.ca.gov (916) 376-9810
Using National Hydrography Dataset (NHD) to Estimate Missing Water Quality Data

For this poster, several of the NHD analysis tools were demonstrated in the reach of the Yuba River below Englebright Reservoir. Using Utility Network and Statistics tools, the flow directions and the distances between the stations were used to perform the analyses and decide the best water quality measurement available. Watershed delineation was performed using the ArcHydro tool to determine which stations drain to the target station. 48"X36"

Three employees of the California Energy Commission have coauthored and present three team effort maps.

Jacque Gilbreath, Research Program Specialist I (GIS), Gilbreath, Jacque@energy.ca.gov

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California Energy Commission's three maps in the Map Gallery are:

1. 3-Part Transmission Line with Substation shown by kV and ownership with an Enlargement Area Map. 4'X6'
2. Statewide Operational Power Plant shown by fuel type, .1MW and above, with Energy Resource Areas 3'X4'
3. Statewide Hydroelectric Generation Facilities ranked by On-line Megawatts. 3'X4'

Crystal Krause, Spatial Ecologist, Krause, Crystal@wildlife.ca.gov (916)324-3742

The Sierra Nevada foothills wildlife connectivity modeling project focuses on the northern Sierra Nevada foothills (NSNF) ecoregion. We modeled fine-scale connectivity within the NSNF and between the NSNF and adjacent. We identified 30 focal species and used species-specific data to model connections between protected lands. The models identified important habitat areas for the focal species as well as least-cost-path connections between protected lands. Each linkage represents a move through habitat for the focal species, live in habitat for corridor dwellers and allows species to shift and/or change geographic range to find suitable habitats with climate change. 44"X34"

Steve Goldman, Research Manager II (GIS), Goldman, Steve@wildlife.ca.gov (916)445-9939

The poster was designed and created by Steve Goldman and consultant Sophie King. It describes the purpose and uses of the Biogeographical Information and Observation System and the process of data acquisition from the beginning collaboration with contributors to the final posting of the data to the map viewer. 48"X36"

(over)

Melanie Gogol-Prokurat, Spatial Ecologist, Gogol-Prokurat, Melanie@wildlife.ca.gov (916)324-9265

Species distribution is influenced by climate, topography, vegetation and water resources, but detailed distribution models showing habitat suitability across the landscape are not available for most species in California. Recent advances in species distribution modeling using GIS data have allowed for statistical analysis of multiple environmental variables to predict habitat suitability across the landscape. We developed habitat suitability models for 9 focal species (black bear, bobcat, black-tailed jackrabbit, dusky-footed woodrat, gray fox, mountain lion, mule deer, western gray squirrel, and western pond turtle) in the northern Sierra Nevada foothills ecoregion using Maxent with the objective of using the habitat analysis for wildlife corridor modeling. 44"X34"

Kristi Cripe Fien, Research Program Specialist I (GIS), Fien, Kristi@dfg.ca.gov (916)445-2620

This poster summarizes the overall methodology and illustrates the mapping efforts associated with the updated volume of the California Amphibian and Reptile Species of Special Concern (ARSSC). A collaborative effort by California Department of Fish and Wildlife, herpetologists at the University of California, Davis, and other interested parties. Range and distribution maps were updated for 41 ARSSC species based on various Department and author-provided data sources. 34"X44"

William Patterson, Research Program Specialist II (GIS), Patterson, William@Wildlife.ca.gov (916)323-1484

GIS in the Wilderness - Rare Trout Restoration. The Paiute cutthroat trout is one of the rarest forms of trout with a native range of a single stream, Silver King Creek in the Carson-Iceberg Wilderness. The California Department of Fish and Wildlife (CDFW) is partnering with several agencies to restore the fish to historic distributions. The first phase of the project was implemented in August 2013 using chemical treatments to remove non-native fish from selected habitat. Additional treatments will occur in 2014 and possibly also 2015. This poster shows approaches used by CDFW GIS staff to help implement the project, including challenges of using geospatial technologies in the wilderness. 32" x 42"

Steven Springhorn, Engineering Geologist, DWR Springhorn, Steven@water.ca.gov (916)376-9620

A base of fresh groundwater (BFW) contour map was created to identify the approximate lower limit and the thickness of the fresh groundwater aquifer system in the Sacramento Valley. The BFW map is useful for groundwater resource and storage analyses, groundwater modeling, and delineating structural geologic features in the Sacramento Valley. 3'X4'

Robyn Starr, GISP DWR, Starr, Robyn@water.ca.gov (916)595-3751, Map Gallery Coordinator for GIS Day 11/19/13

Map of Robyn's Central Valley Parcel Base, zoomed into Sacramento, Yolo and Sutter Counties. Includes multiple imagery layers used to digitize 7,000 hand sketched parcels. Photos depict waterways, flood events and crops. 32"X42"

Siran Eryasian, Research Analyst (GIS) DWR, Eryasian, Siran@water.ca.gov (559)230-3312

Map 1. Planning Areas, Detailed Analysis Units and Groundwater Basin Boundaries – San Joaquin River, Central Coast and Tulare Lake Hydrologic Regions. DWR subdivides California into study areas for planning purposes. The subject map was divided into 2 separate maps: one with the Planning Areas and Detailed Analysis Units and the other with Planning Areas and Groundwater Basins. Map size: 36"X48"

Map 2. Agricultural and Environmental Water Users in the San Joaquin Valley – Surface Water as Primary Supply

This map shows the public water agencies, wildlife areas and refuges that receive surface water as their primary water supply. This map includes agencies within the South Central Region only. 36"X36"

Map 3. State and Federal Agricultural Water Contractors, South Central Region

This map shows agencies that receive Central Valley Project or State Water Project water for agricultural use via the main canal/conveyance responsible for delivering that water. 36"X36"

Map 4. Agricultural Water Supply Districts – Agencies Receiving Local Surface Water, South Central Region

This map represents water agencies whose primary agricultural water supply is from a local source. In a typical water year, these agencies rely on local rivers as their primary surface supply for irrigation. 36"X36"

Map 5. Present and Potential Drainage Problem Areas – Depth to Water

The Agricultural Drainage Program collects data annually on the depth of water in the San Joaquin Valley. The resulting data was plotted according to the average depth to water from over 1,200 wells within the study area. 36"X36"

Map 6. San Joaquin Valley Drainage Monitoring Program - Describes the Drainage Program with text notes, photos and maps. Web site also included for more information. 36"X42"