



## National Cooperative Geologic Mapping Program

### FEDMAP FY 2011 Projects

#### **3D/4D Mapping of the San Andreas Fault Zone (Graymer)**

**Purpose:** To understand the evolution of the San Andreas Fault since its inception.

**Location:** California

**Website:** <http://geomaps.wr.usgs.gov/3D4Dmapping/index.htm>

**Strategic Direction:** Natural Hazards

#### **Appalachian Blue Ridge (Southworth)**

**Purpose:** To determine how geology has influenced the topography, water, soils, and plant and animal communities of the Appalachian Blue Ridge Mountains.

**Location:** North Carolina, Virginia

**Website:** <http://geology.er.usgs.gov/eespteam/smoky/>

**Strategic Direction:** Natural Hazards, Earth's Climate, Ecosystems

#### **Big Storm Footprint on California and Future Hazards (Schmidt)**

**Purpose:** To understand the footprint that big storms leave on the landscape, onshore and offshore.

**Location:** California

**Strategic Direction:** Natural Hazards, Earth's Climate

#### **Framework Geology of Mid-Continent Carbonate Aquifers (Blome)**

**Purpose:** To understand geologic controls on ground-water availability in south-central United States.

**Location:** Oklahoma, Texas

**Website:** <http://esp.cr.usgs.gov/info/platte/index.html>

**Strategic Direction:** Water Issues, Natural Hazards

#### **Geohydrology of Coast Ranges Basins (Langenheim)**

**Purpose:** To understand how geology influences ground-water availability, movement, and contamination in the western United States.

**Location:** California

**Website:** <http://geomaps.wr.usgs.gov/ug/index.html>

**Strategic Direction:** Water Issues

#### **Geology of Atlantic Watersheds (Schultz)**

**Purpose:** To understand the broader context of surface and groundwater sustainability, land-use planning, ecosystem health, climate change, and sea level fluctuation.

**Location:** Maryland

**Strategic Direction:** Water Issues, Earth's Climate

### **Geologic Framework of the Northern Basin and Range (Colgan)**

**Purpose:** To understand the geology and tectonic history of the northern Basin and Range Province.

**Location:** Nevada

**Strategic Direction:** Energy and Minerals, Natural Hazards

### **Geologic Framework of Rio Grande Basins (Hudson)**

**Purpose:** To understand how geology influences the availability of ground-water and natural resources, and tectonic hazards in Rio Grande basins.

**Location:** Colorado, New Mexico

**Website:** <http://crustal.cr.usgs.gov/projects/rgb>

**Strategic Direction:** Water Issues, Natural Hazards

### **Geology of Parks and Federal Lands of the Southwest (Billingsley)**

**Purpose:** To support the National Park Service in its resource management and preservation of cultural, biologic, hydrologic, and geologic features.

**Location:** Arizona, California, Colorado, Nevada, Western United States

**Website:** [http://geomaps.wr.usgs.gov/fed\\_lands/index.htm](http://geomaps.wr.usgs.gov/fed_lands/index.htm)

**Strategic Direction:** Water Issues, Natural Hazards, Ecosystems

### **Greater Platte River Basin and Northern Plains Geologic Framework Studies (Berry)**

**Purpose:** To define the geologic framework of ecosystems in the Greater Platte River Basin Area and part of the northern Plains, including the headwaters of the Missouri River.

**Location:** Colorado, Kansas, Nebraska, South Dakota, Wyoming

**Website:** <http://esp.cr.usgs.gov/info/platte/index.html>

**Strategic Direction:** Ecosystems, Water Issues, Earth's Climate

### **Karst Applied Research Studies through Geologic Mapping (Weary)**

**Purpose:** To understand how karst can influence ground-water availability and urbanization.

**Location:** Arkansas, Missouri, Virginia, West Virginia, Northern Mariana Islands

**Website:** <http://geology.er.usgs.gov/eespteam/Karst/index.html>

**Strategic Direction:** Water Issues, Natural Hazards

### **National Geologic Map Database (Soller)**

**Purpose:** To make geologic maps and related databases of North America more accessible to the public.

**Website:** <http://ngmdb.usgs.gov/Info/home.html>

### **Navajo Land-Use Planning Project (Hiza)**

**Purpose:** To provide a geologic framework to the Navajo Nation for land-use planning and natural resource management.

**Location:** Arizona

**Website:** <http://geomaps.wr.usgs.gov/navajo/index.htm>

**Strategic Direction:** Water Issues, Natural Hazards, Earth's Climate, Ecosystems, Human Health

### **Neotectonics of the Northern Mojave Desert (Miller)**

**Purpose:** To understand Cenozoic faulting, volcanism, and depositional histories of the region as a predictor of future geologic events.

**Location:** California

**Website:** <http://geomaps.wr.usgs.gov/neotectonics/index.htm>

**Strategic Direction:** Natural Hazards, Earth's Climate

### **North Park / Medicine Bow Mountains Study (Cole)**

**Purpose:** To improve knowledge of the timing, geometry, and controls of uplift and sedimentation and drainage in the North Park-Medicine Bow Mountains area and to produce geologic maps and three-dimensional models of the basin.

**Location:** Colorado, Wyoming

**Website:** <http://esp.cr.usgs.gov/info/northpark/index.html>

**Strategic Direction:** Ecosystems, Earth's Climate, Energy and Minerals, Water Census

### **Northern Appalachian Bedrock Mapping (Walsh)**

**Purpose:** To improve understanding of crystalline bedrock in the Northern Appalachians.

**Location:** New Hampshire, Vermont

**Strategic Direction:** Water Issues

### **Pacific Northwest Urban Corridor Geologic Mapping (Wells)**

**Purpose:** To provide geologic mapping, geophysical surveys, and research needed for earthquake hazard mitigation and ground-water resource assessments in the Seattle-Portland urban corridor.

**Location:** California, Oregon, Washington

**Website:** <http://geomaps.wr.usgs.gov/pacnw/index.html>

**Strategic Direction:** Natural Hazards, Water Issues

### **Quaternary Stratigraphic Framework of Massachusetts and Parts of Southern Michigan (Stone)**

**Purpose:** To understand how glacial deposits influence ground-water and aggregate-resource availability.

**Location:** Massachusetts, Michigan

**Strategic Direction:** Water Issues, Mineral Resources, Earth's Climate

### **San Andreas Fault System in Southern California (Powell)**

**Purpose:** To understand fault interactions in the greater San Andreas system and of the overall evolution of the fault system.

**Location:** California

**Website:** <http://geomaps.wr.usgs.gov/safsoc/index.htm>

**Strategic Direction:** Natural Hazards

### **Seismic Hazards in the Sacramento Delta (Graymer)**

**Purpose:** To increase understanding of the seismic sources that could affect the Delta.

**Location:** California

**Strategic Direction:** Natural Hazards

### **U.S. – Mexico Border Geologic Framework (Page)**

**Purpose:** To understand the geology along the U.S.-Mexico border in support of land-use management.

**Location:** Arizona, California, New Mexico, Texas

**Website:** <http://esp.cr.usgs.gov/info/borderstudies/index.html>

**Strategic Direction:** Mineral Resources, Water Issues, Earth's Climate, Ecosystems,  
Natural Hazards