



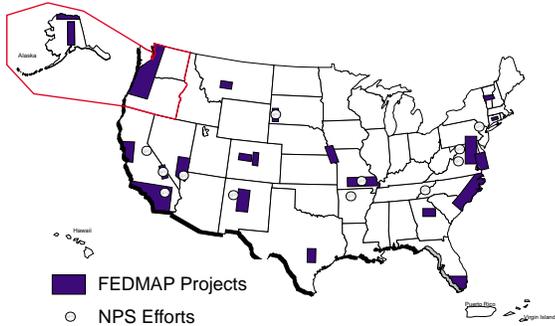
Association of American
State Geologists

in cooperation with

United States
Geological Survey

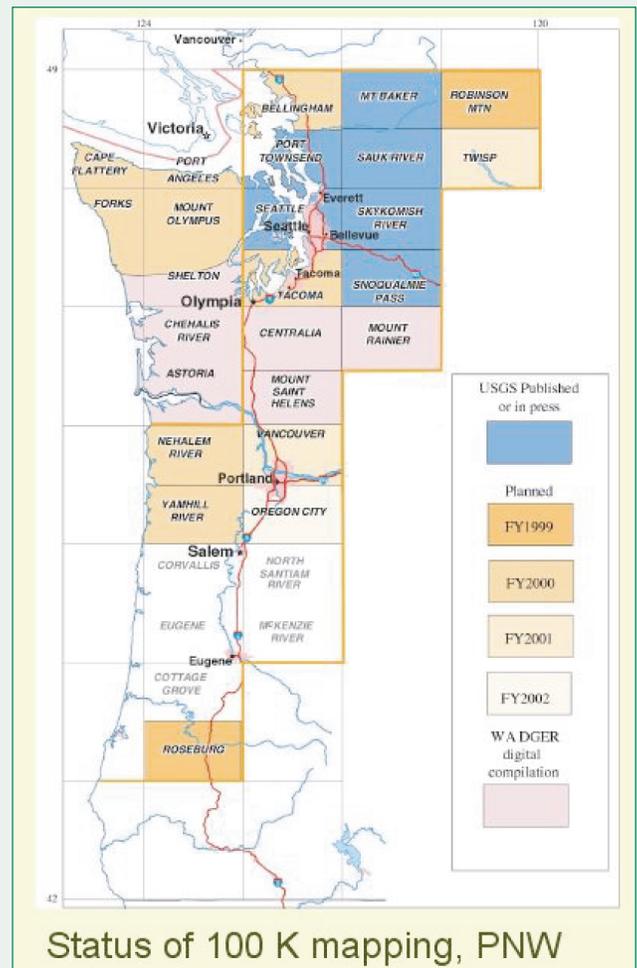


National Cooperative Geologic Mapping Program



Pacific Northwest

The **Pacific Northwest Urban Corridor Geologic Mapping Project** conducts detailed geologic mapping and high-resolution geophysical surveys of the Puget Sound Lowlands, including newly recognized active faults, which pose earthquake hazards to the rapidly urbanizing Seattle–Portland corridor. The geologic mapping, which is a cooperative effort between the USGS, the University of Washington, and the City of Seattle, provides hazard and resource information for growing urban areas around Seattle and other lowland Washington cities prone to seismic shaking, ground failure, and damage from earthquakes. Field investigations guided by airborne laser terrain mapping have revealed that previously unknown active surface ruptures have occurred along a strand of the Seattle fault. The new geologic field mapping shows great promise for accurately mapping active fault structures, landslides, surficial deposits, and water-courses throughout the Puget Lowland. As part of the Seattle Urban Seismic Mapping Project, geologic mapping will be incorporated into hazard maps and landslide susceptibility maps for the city of Seattle. These maps have a direct impact on building codes, seismic-retrofit decisions, and planning. Additionally, geologic three-dimensional basin models provide important constraints on ground-water flow and surface-water–ground-water interactions.



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Geologic Mapping in Support of Land and Resource Issues in Alaska is a cooperative effort conducted with the Alaska Division of Geological and Geophysical Surveys to undertake reconnaissance geologic mapping and data compilation as an initial step in assessing geologic-mapping needs for a proposed transportation corridor in Alaska. The projected societal impact of increasing oil prices has galvanized interest in developing gas reserves under Alaska's North Slope and adjacent Yukon Territory. Critical to development of these vast gas resources is identification and geologic characterization of a transportation corridor for the proposed gas pipeline. As was the case with the Trans-Alaska Oil Pipeline, evaluation of potential corridor routes requires detailed geologic information, including information on natural hazards and engineering issues along the route. Canadian regional governments have completed geologic surveys of potential corridors crossing the Yukon. Responsible planning and evaluation of proposed gas pipeline routes through Alaska is an issue with national energy distribution and international trade implications.

In the past 200 years, more than 50 volcanoes in the United States have erupted, many repeatedly, causing significant hazardous impacts and societal and economic disruption. The NCGMP is conducting geologic mapping studies for the **Volcanic Geology, Petrology, and Processes Project** of the USGS Volcano Hazards Program to determine the likelihood of renewed activity at potentially destructive volcanoes in the Western US, assess the probably hazard to people and property, and communicate hazard-related information to civil authorities, the news media, and affected communities.

The **Digital Geologic Maps of Northern Alaska** is a cooperative pilot project between the USGS and the Alaska Division of Geological and Geophysical Surveys aimed at providing geologic map coverage along the entire width of northern Alaska. The map products will cover key areas where both oil and mineral exploration development efforts are focused including large parts of the National Petroleum Reserves and the Lead-Zinc-Silver belt. The maps will provide Federal, State, Native, and private sector organizations with digital geologic maps in an area of highly visible resource-management issues as well as providing a digital base for ongoing and future earth-science research thrusts in northern Alaska.