A geologic map shows the distribution, relationship, and composition of earth materials including rocks and surficial deposits—such as sediments and landslides—on the earth’s surface. Each color on the map represents a different type or age of rock. Thick black lines represent the locations of faults.

Geologic maps help us understand the geologic history of an area, and to plan for the future. Geologists use the maps to interpret what resources might lie below the surface, such as oil and natural gas, groundwater, and mineral deposits. Geologic maps are also used to identify potential hazards such as landslides, volcanoes, earthquake faults, liquefaction zones, and tsunami hazard zones. Geologic maps are used in environmental and engineering studies to identify areas suitable for agriculture, urban development, and construction. They provide important information needed to build a safer and more sustainable world.