

MINERAL RESOURCES PROGRAM PROJECT AREAS FY 2004

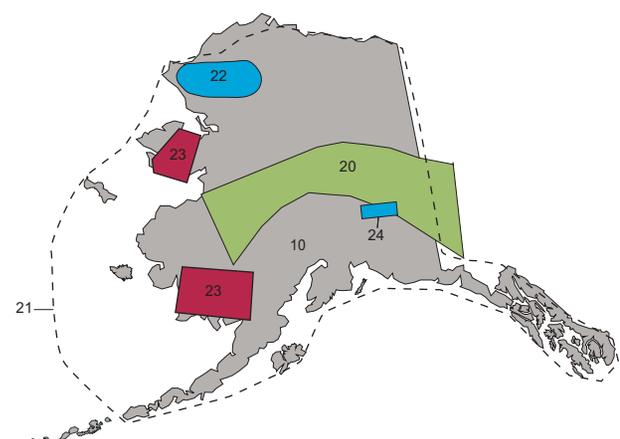
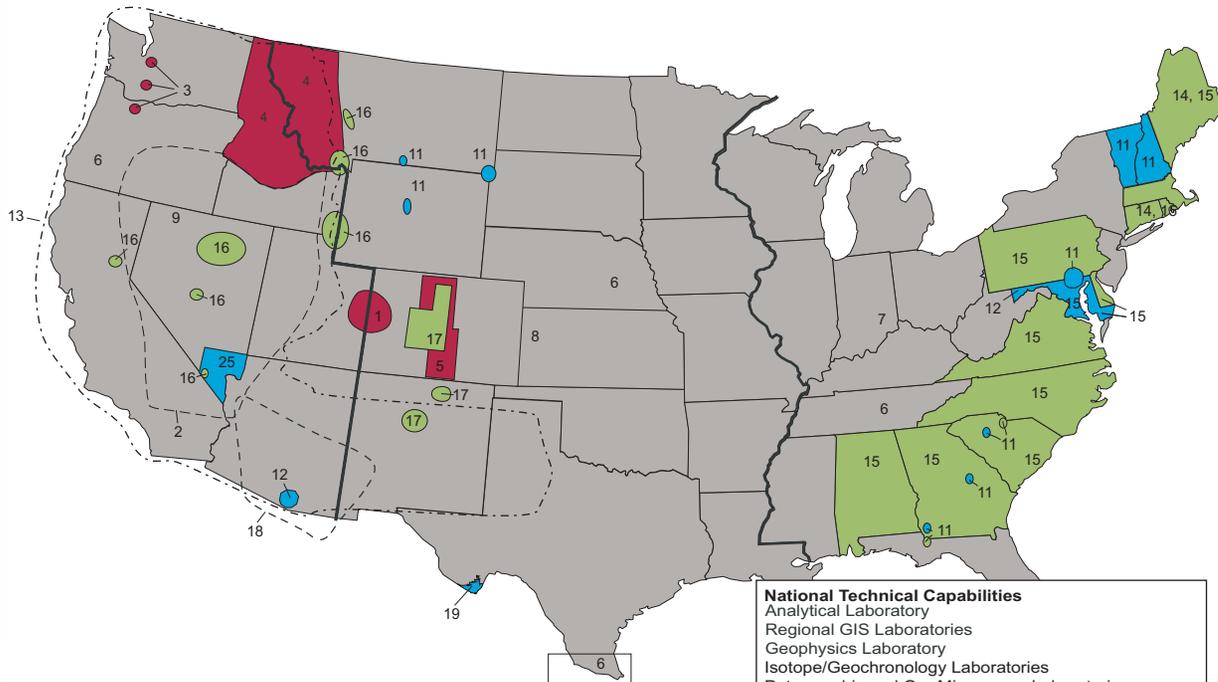


Mineral abundance in rocks, soils, and water defines our geochemical landscape and directly interacts with all biota influencing nutrient availability, toxic element concentration, vegetation distribution, and the general health of ecosystems. Modern civilization is also based on a host of mineral materials: the steel in cars, the concrete and drywall in buildings, the aggregate in roadbeds, and the mineral fertilizers which sustain modern farming. The USGS Mineral Resources Program (MRP) brings a national perspective to the mineral issues facing the country. These issues can be grouped into three categories as shown in the triangle above. The Environment and Public Health category covers environmental impacts of mineral occurrence, and the mining, smelting, using, and eventually disposing of mineral products. The Sustainability and Societal Need category is focused on the Nation's mineral supply and meeting resource needs while sustaining environmental integrity. The Economy and Public Policy category addresses the science needed for government policies related to the economy and land stewardship.

Map Legend

Color-coded to major program themes

- Environment and Public Health
- Sustainability and Societal Need
- Economy and Public Policy
- All Program Themes

Project Areas

1. Mancos Shale Landscapes: A Regional Partnership Project
2. Metallogeny of the Great Basin: Crustal Evolution, Fluid Flow, and Ore Deposits
3. Hydrothermal Systems, Cascades Volcanoes
4. Headwaters Province, Idaho and Montana: Earth Science Studies in Support of Public Policy Development and Land Stewardship
5. Central Colorado Mineral Resource Assessment Project
6. Geochemical Landscapes - Soil Geochemistry (National in scope)
- Surveys & Analysis of Mineral Resource Data:
 7. Eastern Region
 8. Central Region
 9. Western Region
 10. Alaska

Industrial Minerals:

11. Industrial Minerals and Surficial Development
12. Sustainable Development of Industrial Minerals
13. Sources of Industrial Minerals in Western States
14. Processes Affecting Mineral Deposits in Humid Environments
15. Scoping of Tracers of Surficial Processes Affecting Mineral Deposits in Humid Environments

National Technical Capabilities

- Analytical Laboratory
- Regional GIS Laboratories
- Geophysics Laboratory
- Isotope/Geochronology Laboratories
- Petrographic and Ore Microscopy Laboratories
- Radiogenic and Stable Isotope Methods

National and International Minerals Information

- Commodity Information/Metals/Industrial/International
- Metal Industry Indicators
- Materials Flow Studies

National Projects Supporting All Issues

- Spatial Data Delivery
- National Databases: MRDS, ARDF, Geophysical, Geochemical, AMIS, Lithological, DMA/DMEA/OME
- Assessment Methods
- Outreach & Technology Exchange
- Geologic Map Data Model
- Research Chemistry
- Geophysics for Assessments
- Geophysical Research & Development

Topical or International Studies (not shown on map)

- Global Mineral Resource Assessment
- Pathways of Metal Transfer
- Process Studies of Contaminants
- Predictive Experimental Studies of Sulfide Oxidation
- Aqueous Geochemistry Research & Development
- Health Effects of Asbestiform Minerals
- Geochemical and Isotopic Studies
- Complex Systems Modeling
- Secular Variation
- Coupled Thermal, Mechanical, Chemical, & Hydraulic Phenomena in Ore Formation
- Modeling Near-Surface Processes in Mineral Systems
- Metallogenesis of Proterozoic Basins & Stratified Rocks
- Alaska Data-at-Risk



Visit the Mineral Resources Program website at: <http://minerals.usgs.gov/>