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**WYOMING STATE GEOLOGICAL SURVEY  
Gary B. Glass, State Geologist**

**STRATEGIC  
FIVE-YEAR PLAN (FY1996-FY2000)  
for the  
WYOMING STATE GEOLOGICAL SURVEY**

**PREPARED FOR THE GOVERNOR OF WYOMING AND THE  
WYOMING STATE LEGISLATURE  
BY THE  
WYOMING STATE GEOLOGICAL SURVEY  
PURSUANT TO WYOMING STATUTES 28-1-115 AND 28-1-116**

**1995**

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## **AGENCY VISION**

**For a Wyoming where the citizenry is safer through a heightened awareness of geologic hazards and where an improved quality of life is sustained by a diverse economy that includes a thriving mineral and energy industry.**

## **AGENCY MISSION STATEMENT**

**The Wyoming State Geological Survey is a service-oriented agency that promotes the beneficial and environmentally sound use of Wyoming's vast geologic, mineral, and energy resources while helping protect the public from geologic hazards. By providing accurate information and expanding knowledge through the application of geologic principles, the Geological Survey contributes to economic growth and improvement in the quality of life for Wyoming's citizens.**

## **AGENCY PHILOSOPHY STATEMENT**

**The Wyoming State Geological Survey is a professional organization that provides responsive, accountable, and dedicated service to the public, to other government entities, and to its own employees. We take pride in providing information that is timely, objective, accurate, and complete. With limited resources, our innovation, creativity, and efficiency continue to be keys to our ongoing success.**

## **SITUATION ANALYSIS**

**The Wyoming State Geological Survey operates in an environment of changing needs and expectations. The public and the business sectors expect less involvement of the State in regulating their affairs. Government is increasingly being expected to reduce costs, taxes, and any unnecessary regulation and bureaucratic functions. Public servants are being asked to improve their productivity, their efficiency, and to focus on meeting essential societal needs. However, while demanding less government, the public and their representatives are increasingly conscious of the need to make sound use of natural resources, to protect the environment and provide public safety, and to promote economic development. The public is also increasingly quality conscious in its expectations from government. Government agencies are being challenged to operate more like a business with valued customers who deserve quality service at reasonable costs.**

**The needs for geologists and geologic information are also dynamic and changing. Nationally, there is not only a reduction of geologists within the energy and mineral sectors, but also a shift in the types of services that geologists provide, from more traditional roles in exploration and development to new roles in environmental protection and remediation.**



Wyoming is the leading coal-producing state in the nation. While amendments to the Clean Air Act are stimulating more demand for Wyoming coal from the Powder River Basin, markets for higher rank, but more expensive coals in southern Wyoming, are diminishing. Decreasing production of oil, already hastened by low prices, may also be affected by new competition from Canadian oil. Canadian gas also poses a potential threat to the State's natural gas industry, which is growing. Although Wyoming leads the nation in trona and bentonite production, producers of these resources have realized much of their recent growth by developing new uses and/or new products. Tariffs continue to plague the export markets for soda ash, which is the primary product from trona. Wyoming is also a significant uranium producer as well as a producer of many other industrial minerals and construction materials, which are always in some demand. Interest in precious and base metals and diamonds continues although there is not yet any commercial production of these commodities.

Difficulties in siting and permitting new mines, quarries, and wells have complicated the continued operation and development of existing industries as well as the start-up of industries wishing to develop yet undeveloped or underdeveloped mineral and energy resources in Wyoming. Similarly, because two or more mineral or energy resources may overlies one another, there is a need to identify technologies or strategies that might permit the safe and efficient concurrent development of both resources. It is also recognized that value-added or alternative uses for mineral and energy resources can help sustain or enhance the State's economy, which is heavily dependent on the energy and mineral industries.

Due in part to recent events, there is a growing realization that geologic hazards such as earthquakes and landslides do threaten lives and property. Consequently, there is a need to increase the awareness of potential geologic hazards, whether natural or manmade, and incorporate a consideration of them in land management, land-use planning, the siting and design of facilities, as well as emergency preparedness.

Changes in Federal policy are anticipated. The movement to reduce the Federal deficit is expected to include reduction of Federal funding in some areas, which may reduce the availability of grant monies that currently fund some of the geological investigations by the Geological Survey. Reductions at the Federal level may also present opportunities for the Geological Survey. For example, some national data bases that include data on Wyoming might be made available to the Geological Survey if it would agree to maintain the data bases. The Geological Survey has no intention of assuming responsibility for any data base or Federal program that is not a priority to Wyoming, nor any activities where adequate funding is not included. Yet, it will look for opportunities that enhance the accomplishment of its goals and objectives for Wyoming.

The changing conditions mentioned above present more opportunities than threats to the Wyoming State Geological Survey. They also present challenges to the Geological Survey in meeting the needs and expectations of its customers.

Customers of the Wyoming State Geological Survey are many and diverse. In addition to serving the general public, the Geological Survey serves industry, consultants, and the geology profession as a whole. It also serves customers in educational institutions and university departments, Wyoming and local government entities, and the Federal government. Its customers are within and outside the State and the nation.



Among the other Wyoming State agencies with whom it frequently works are the Oil and Gas Conservation Commission, Department of Environmental Quality, State Engineer, Department of Transportation, University of Wyoming, State Land and Farm Loan Office, Department of Commerce, Board of Registration for Professional Geologists, Public Service Commission, Emergency Management Agency, State Planning Coordinator, Game & Fish, Department of Administration & Information, State Crime Lab, and the Secretary of State.

The Wyoming State Geological Survey has historically prepared and provided geologic information, data bases, maps, and reports as well as technical assistance to its customers. Industry customers have characteristically accessed the information and data bases, used the reports, been guided by the maps, and tapped the expertise of the Geological Survey's professional staff to improve their exploration and development plans. Similarly, consultants, engineering firms, and government entities have used the Geological Survey's information and expertise to help satisfy their planning, siting, and designing needs. The general public has enjoyed the Geological Survey's products and assistance for educational and recreational purposes. Customers have been willing to pay for many of the Geological Survey's products, thus allowing it to generate more than \$80,000 a year for deposit into the General Fund. The Geological Survey has also been a key player in making revenue projections for use by the Governor, the Legislature, and others.

The Wyoming State Geological Survey, like other organizations, has strengths and weaknesses that affect its ability to achieve its goals. This plan is designed to help it capitalize on its strengths and overcome its weaknesses. While continuing to provide geologic information of general interest to its customers, the Geological Survey will, during the life of this plan and beyond, actively seek direction from industry, trade groups, government agencies, and other external and internal customers. By asking them and exploring needs and potential opportunities with them, it will identify the information, data bases, and services its customers most want and need; then it will respond to those priority needs. The Geological Survey will remain alert to opportunities not previously recognized as potential value-added or alternative uses for Wyoming's rich mineral, energy, and other geologic resources. It will expand its contributions to economic growth in Wyoming through increasing support to the mineral and energy industries. While focusing on its support of current Wyoming operators, it will also seek to attract new firms and development of heretofore undeveloped mineral and energy resources.

The Wyoming State Geological Survey has been constrained by past staff reductions. Yet, the Geological Survey has probably been just as constrained by the limits it placed upon itself. These self-imposed constraints will now become opportunities as the Geological Survey takes a new look at itself and redefines or "reinvents" itself through this strategic planning process. By being more customer focused, proactive in creating its opportunities, and becoming team players on (interdisciplinary, intra-, and inter-agency) projects, it will increase its beneficial contributions to Wyoming's economic vitality and quality of life.

The Geological Survey's enabling statutes are W.S. 9-2-801 through 9-2-810. Additional responsibilities of the State Geologist or the Geological Survey are found in W.S. 30-5-102 and 30-5-104, in W.S. 33-41-106 and 33-41-107, and in W.S. 36-6-102 and 36-6-105 .

## AGENCY GOALS

### **GOAL 1: DIVERSIFY AND STRENGTHEN THE STATE'S ECONOMY BY SUPPORTING THE RESPONSIBLE AND INNOVATIVE EXPLORATION AND USE OF WYOMING'S GEOLOGIC, MINERAL, AND ENERGY RESOURCES.<sup>1</sup>**

**OBJECTIVE A:** Help the coal, oil and gas, industrial minerals, uranium, and other existing mineral and energy industries in Wyoming to continue their production, exploration, and further development within the State.

- Strategy 1. Assist companies and other entities both in the recognition and understanding of geologic, chemical, physical, and other variations in oil and gas and mineral deposits, and in the identification of value-added or alternative uses for extracted mineral and energy resources and products derived from them.
- Strategy 2. Maintain or improve the accuracy of forecasting future trends, prices, and production in the mineral and energy industries of Wyoming.
- Strategy 3. Enhance and(or) increase the transfer of geologic information or technologies important to existing mineral and energy industries.

**OBJECTIVE B:** Contribute substantially to attracting new geologic-, mineral-, and energy-related industries.

- Strategy 1. Focus on promoting exploration, development, and value-added uses of the State's undeveloped and under-developed energy, metallic and nonmetallic, and precious stone resources that offer the greatest potential for development, but not to the exclusion of higher risk ventures where the potential payoff is substantial.
- Strategy 2. Enhance and(or) increase the transfer of geologic information or technologies important to attracting the development of undeveloped or under-developed geologic, mineral, and energy resources.
- Strategy 3. Develop acceptable ways to increase the direct or indirect economic benefits derived from the State's paleontological resources.



**OBJECTIVE C:** Contribute to the identification and prevention of decisions or other actions that would be contrary to the beneficial and wise use of the State's geologic, mineral, and energy resources.

- Strategy 1. Help develop methodologies and(or) policies that will assure the safe, concurrent development of trona and natural gas in southwestern Wyoming.
- Strategy 2. Alert the State to decisions or other actions that could adversely affect its mineral interests or its revenues from geologic, mineral, and energy resources.
- Strategy 3. Assist in preventing the waste of oil and natural gas through the State Geologist's participation on the Oil and Gas Conservation Commission.
- Strategy 4. Help protect the public from mineral- and energy-related scams.
- Strategy 5. Improve protection of the State's paleontologic resources.

**OBJECTIVE D:** Contribute to increasing the economic benefits to Wyoming derived from tourism and recreation.

- Strategy 1. Enhance tourists' visits and hopefully lengthen their stay in Wyoming by raising awareness of the State's nationally-known as well as less well-known unique and scenic geologic features; its rich paleontologic resources; its collectible rocks and minerals; its mining and mining history; as well as the diversity of its mineral wealth.
- Strategy 2. Support recreational activities, especially hunting, fishing, hiking, and rockhounding, by providing needed topographic maps and(or) geologic information and materials that will increase a person's enjoyment or success at these activities.

**GOAL 2: BETTER PROTECT WYOMING'S CITIZENRY, PROPERTY, AND NATURAL RESOURCES FROM HARM OR DAMAGE ASSOCIATED WITH GEOLOGIC PROCESSES OR GEOLOGIC HAZARDS.<sup>2</sup>**

**OBJECTIVE A:** Raise constituents' awareness, knowledge, and understanding of potentially harmful or damaging geologic processes and geologic hazards in Wyoming as well as the ways to mitigate or avoid their adverse effects.

- Strategy 1. Issue warnings when the potential for a geologic hazard increases or becomes imminent.
- Strategy 2. Define geologic hazards and explain the geological processes that can have a deleterious effect on the State's citizenry, property, and natural resources.
- Strategy 3. Respond in a timely and effective manner to events caused by geologic hazards.
- Strategy 4. Alert the State and others to development activities where there are geologic or topographic aspects that may adversely affect people, property, and natural resources.
- Strategy 5. Bring about needed improvements in seismic monitoring and building codes.
- Strategy 6. Enhance and(or) increase the transfer of geologic information or technologies related to geologic hazards or protection of the environment.

**OBJECTIVE B:** Raise awareness of the need to consider geology, geohydrology, economic geology, and geologic hazards in land management, land-use planning, and the siting and design of facilities such as buildings, power plants, gas-processing plants, pipelines, roads, dams, well sites, and mines within Wyoming.

- Strategy 1. Work to incorporate a consideration of geology, geohydrology, economic geology, and geologic hazards in land management, land-use plans, and the siting and design of facilities.
- Strategy 2. Enhance and(or) increase the transfer of geologic information and technologies important to land management, land-use planning, and the siting and design of facilities.



OBJECTIVE C: Raise public and government confidence in the accuracy of geologic reports and the reliability of geological services provided to them.

Strategy 1. Encourage geologists to become licensed, encourage government entities to require licensed geologists, and support legislation that would require the licensing of all geologists practicing before the public.

**GOAL 3: PLAY AN INTEGRAL ROLE IN SATISFYING CONSTITUENTS' GENERAL OR SCIENTIFIC INTEREST OR UNDERSTANDING OF WYOMING'S GEOLOGY, MINERAL AND ENERGY RESOURCES, AND LANDFORMS.<sup>3</sup>**

OBJECTIVE A: Contribute to meeting the needs of general interest, educational, as well as scientific audiences interested in Wyoming's geology, mineral and energy resources, and landforms.

Strategy 1. Gear some activities, information, and other materials specifically to general interest, educational, scientific, or a suitable combination of these audiences.

Strategy 2. Enhance constituents' awareness of and accessibility to general interest, educational, and scientific information and materials.

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<sup>1</sup> W.S. 9-2-803(c) and (d); 9-2-805, 9-2-808, 30-5-102, 30-5-103(a) and (d), and 30-5-104.

<sup>2</sup> W.S. 9-2-803(c) and (d), 9-2-805, 9-2-808, 33-41-106, and 33-41-107.

<sup>3</sup> W.S. 9-2-803(c) and (d), 9-2-805, and 9-2-808.