

**GEOLOGIC MAPPING SUBCOMMITTEE
of the
STATE MAPPING ADVISORY COMMITTEE**

Meeting Notes

**1:30 to 3:30 p.m., Monday, August 4, 2003
Nevada Bureau of Mines and Geology (NBMG) Conference Room
Scrugham Engineering Mines Building, Room 401
University of Nevada, Reno Campus**

1:30 p.m. Welcome and Introductions by Jon Price, Director/State Geologist, Nevada Bureau of Mines and Geology.

The purpose of this meeting is to discuss NBMG's geologic mapping priorities, particularly those that will be presented for funding assistance through the Statemap portion of the U.S. Geologic Survey's National Cooperative Geologic Mapping Program.

Review of ongoing mapping projects. Jon Price handed out a page-size map of Nevada showing approximately 19% of Nevada covered with adequate or better quality 1:24,000 scale geologic mapping, a summary sheet showing previous and current Statemap projects, and the current NBMG cartographic department schedule of geologic mapping projects. Chris Henry handed out a list of joint NBMG-GSN assisted geologic mapping projects. Up to \$2,500 is paid to the author of each geologic map upon delivery of final product to NBMG. Then NBMG covers the expense of field review and map publication.

Discussion by Chris Henry and Jim Faulds about Geologic mapping in northern Walker Lane area. They presented maps of their current work and explained the need for more detailed geologic mapping to better understand the fault dynamics and earthquake potential within the Walker Lane. The National Science Foundation (NSF) as well as Statemap has funded part of this project. Several quads have been mapped in this area in recent years.

Steve Castor spoke about his ongoing work on the Fraser Flat/Moses Rock Quadrangles and on the Virginia City Quadrangle. To better understand the structural and stratigraphic associations on the east half of the Virginia City Quadrangle, he is proposing to map the west half of the adjoining quad, Flowery Peak.

John Bell is currently working on the Wadsworth, Pah Rah Mountains, and Nixon Quadrangles located on the lower Truckee River and Pyramid Lake delta. These maps adjoin the work that Henry, Castor, and Faulds mentioned above. This mapping is also leading to a better understanding of the history and water level fluctuations associated

with Lake Lahontan over the last 100,000 years.

Review of previously established priorities for new geologic quadrangle maps in Nevada. Geologic mapping priorities were developed several years ago using a points-based, multi-layered GIS approach. The individual priority layers were passed around and explained. The final priority map, presented on the wall of the conference room, was discussed. It shows areas of existing mapping, and areas requiring mapping either as high, higher, or highest priority.

Discussion of priorities and adjustments as needed. It appeared that the current priority map was still an accurate representation of where new geologic mapping projects should be focused. In general the highest priority areas are the Las Vegas urban growth area, the Reno-Carson City urban corridor including surrounding growth areas, and the Humboldt Basin for mineral, energy, water, and environmental resources.

Presentations on new maps to be proposed by NBMG for Statemap grants in federal fiscal year 2004.

NBMG plans to propose the following geologic mapping and digital conversion projects to the 2004 Statemap program:

Reno area new geologic mapping:

- Fernley East Quadrangle
- Seven Lakes Mountain Quadrangle, south half
- Flowery Peak Quadrangle, west half

Reno area GIS digital conversion of existing geologic maps:

- Frazier Flat and west half of Moses Rock Quadrangles

Las Vegas area new geologic mapping:

- Ivanpah Valley, 2.5 quads, 3rd year of geologic mapping program
- Spirit Mountain Quadrangle

Las Vegas area GIS digital conversion of existing geologic maps:

- Nelson SW Quadrangle
- Fire Mountain Quadrangle
- Callville Bay Quadrangle
- Government Wash Quadrangle
- Hiller Mountains Quadrangle

Humboldt Basin area GIS digital conversion of existing geologic maps:

- Mule Canyon Quadrangle
- Beaver Dam Quadrangle
- Willow Creek Reservoir Quadrangle
- Willow Creek Reservoir SE Quadrangle

Scanning and georeferencing of the full-color NBMG 1:250,000-scale county geologic map series for all Nevada counties.

These proposed project areas were approved by committee members.

Further discussion of priorities for geologic mapping to be taken into account in the proposal process for 2005.

Gass Peak SW Quadrangle in Clark County was discussed as an area of rapid development but not yet mapped at 1:24,000 scale. It has some geologic faults that may be key to understanding regional faulting in the area. Several members of the committee indicated that it should become a geologic mapping project in the near future. A master's student at UNLV did not complete work on this quadrangle, which will probably need to be remapped.

Lew Gustafson identified some critical areas for NSF's EarthScope initiative that should be prioritized for 1:24,000-scale geologic mapping. These include areas in northeastern Nevada, areas around the Humboldt Range area, and the Desert Peak area.

Bob Levich suggested that the proposed rail access routes to Yucca Mountain should be prioritized for large-scale geologic mapping. The proposed rail routes were also identified as an important issue during the 2002 subcommittee meeting.

3:30 p.m. Meeting Adjourned

Meeting Attendees

Jon Price	Nevada Bureau of Mines and Geology
Ron Hess	Nevada Bureau of Mines and Geology
Robert A. Levich	U.S. Department of Energy/Yucca Mountain Project
John H. Peck	Consultant
Jeffrey Schmitz	Nevada Department of Transportation
Michael Wallen	Southern Nevada Water Authority
Jim Faulds	Nevada Bureau of Mines and Geology
Ron Lynn	Clark County Building Department
Lew Gustafson	Consultant
Chris Henry	Nevada Bureau of Mines and Geology
Ronald Parratt	Nevada Division of Minerals
Steve Castor	Nevada Bureau of Mines and Geology
John Bell	Nevada Bureau of Mines and Geology
Neville Rhoden	Retired Geologist

For more information contact Jon Price or Chris Henry at the Nevada Bureau of Mines and Geology, (775) 784-6691.