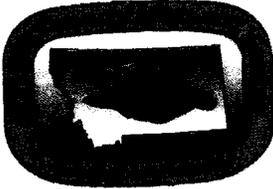


Sand and Gravel Program



John Metesh
Montana Bureau of Mines and Geology
Presented to:

**Education and Local
Government Interim Committee**

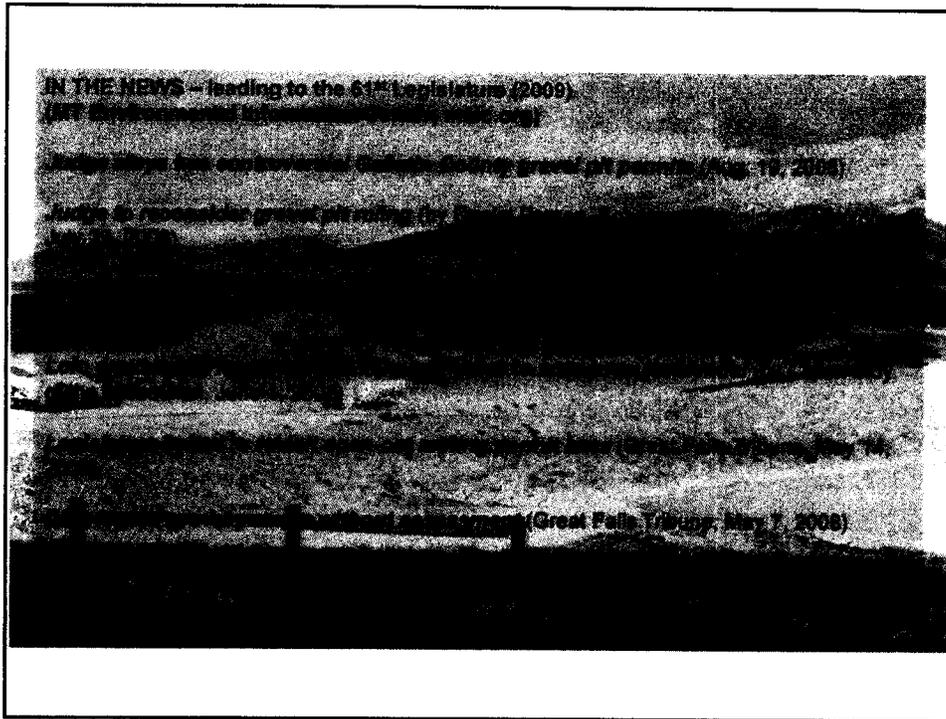
February 4, 2014

**Montana Bureau of Mines and Geology
"the Bureau"**

| | |
|--|--|
| <p><u>Geology</u> Coop Mapping Program Mining and Minerals Earthquake Studies Office Coal availability / CBM Data Preservation Geothermal Sand and Gravel</p> | <p><u>Environmental Studies</u> Superfund Natural Resource Damage Program USFS/BLM Abandoned-inactive Mines</p> |
| <p><u>Ground Water Studies</u> Ground Water Assessment Prg Ground Water Investigation Prg DNRC/DEQ grant programs National Park Service others</p> | <p><u>Ground Water Monitoring</u> Statewide Monitoring Superfund Yellowstone Compact Coal lands / CBM</p> |
| <p><u>Research Analytical Labs</u> inorganic & organic isotopes</p> | <p><u>Publications / GIS</u> traditional / historic online / digital maps and reports</p> |

A non-regulatory research department within the Montana University System
and the state geological survey

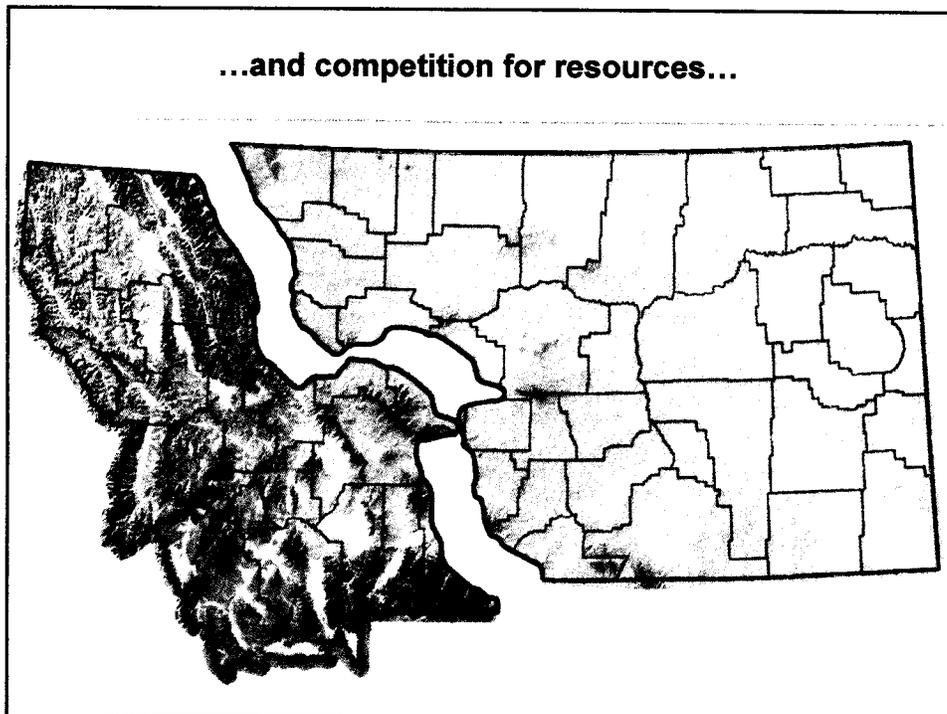
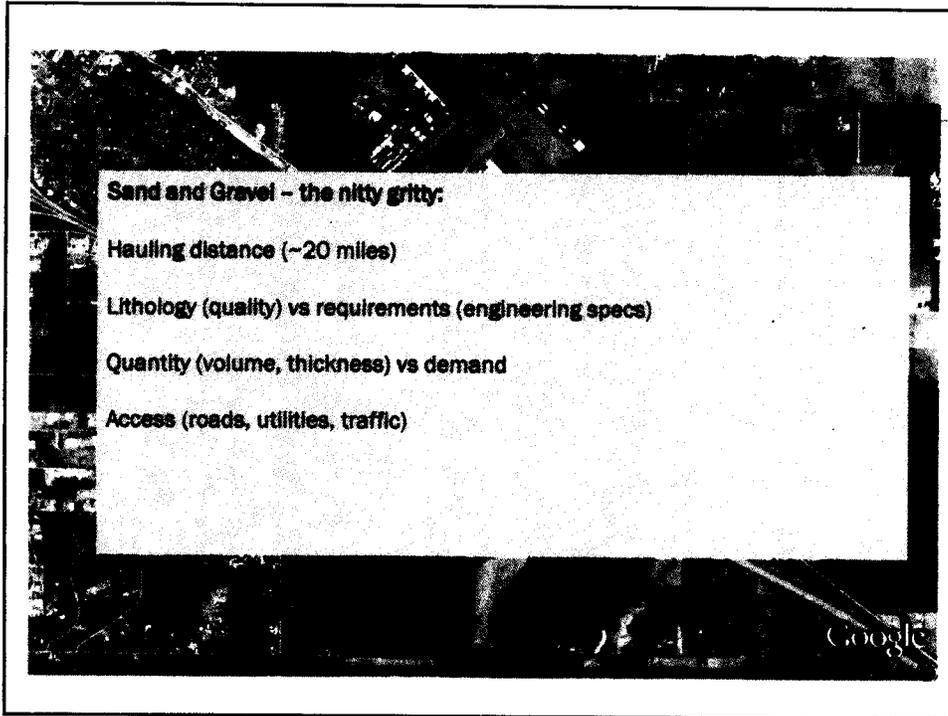
Education and Local Government Meeting
February 4, 2014

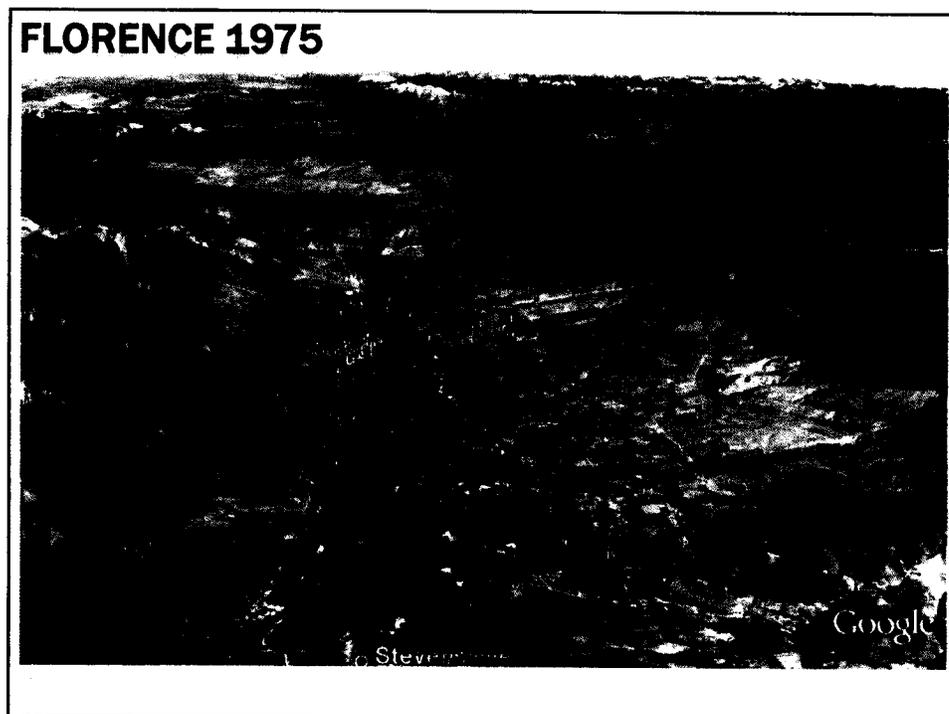


Sand and Gravel deposits in Montana

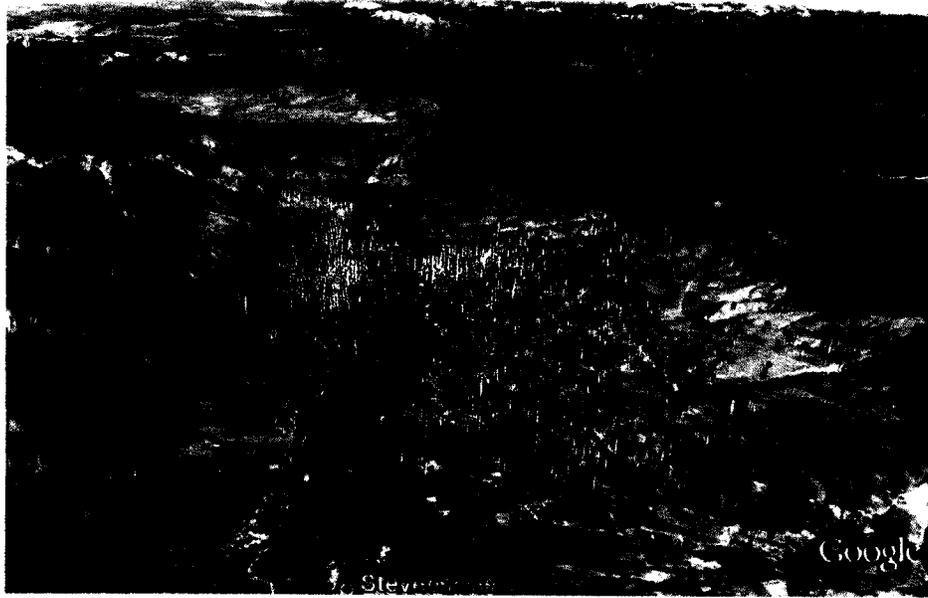
- Sand and gravel along major streams and basin-fill deposits in intermontane basins.
- Thickness: 30 to >800 feet
- Sand and gravel along major valleys - high level benches.
- Thickness: 50 to ~150 feet

...but is that enough information?





FLORENCE TODAY



~220,000 wells



MBMG sand & gravel program

Legislation History (61st Legislature)

Senate Bill 297 [Sen. Cliff Larsen, D-Missoula]:

Establishes a sand and gravel mapping program and enables the Montana Bureau of Mines and Geology to evaluate and report on sand and gravel resources in Montana. 82-2-701, MCA

House Bill 486 [Rep. Gary MacLaren, R-Victor]:

amends MCA 76-1-601 to include "sand & gravel resources" in growth policies that will be written and established by individual counties in Montana.

MBMG sand & gravel program

82-2-701. Sand and gravel deposit program – investigation – purpose – prioritization.

(1) The Montana bureau of mines and geology shall establish a sand and gravel deposit program for the purpose of investigating sand and gravel deposits in areas of the state where conflicts between development and sand and gravel operations are high.

(2) In prioritizing areas for investigation, the bureau of mines and geology shall consider the largest counties, according to the most recent census data, and counties with the most opencut mining permits and subdivision applications, according to the department of environmental quality.

MBMG sand & gravel program

The **goal** of the program is to produce a 1:100,000-scale State-wide digital map of sand and gravel deposits. Gravel-pit locations will be included as a separate layer where relevant data are currently available.

The **objective** of the program is to provide **digital** sand and gravel maps that are **practical** for land-use planning at state and county levels and useful to private industry and developers.

Counties will be able to use the geologic base in conjunction with other "GIS coverages" to derive sand & gravel resource planning maps

MBMG sand & gravel program

82-2-701. Sand and gravel deposit program – investigation – purpose – prioritization.

- (3) The bureau of mines and geology may start an investigation when it has sufficient funds to conduct an investigation.

- (4) Within 1 year of starting an investigation, the bureau of mines and geology shall present the results of the investigation in the form of maps and text to:
 - (a) the counties included in the investigation;
 - (b) the education and local government interim committee; and
 - (c) the environmental quality council.

MBMG sand & gravel program

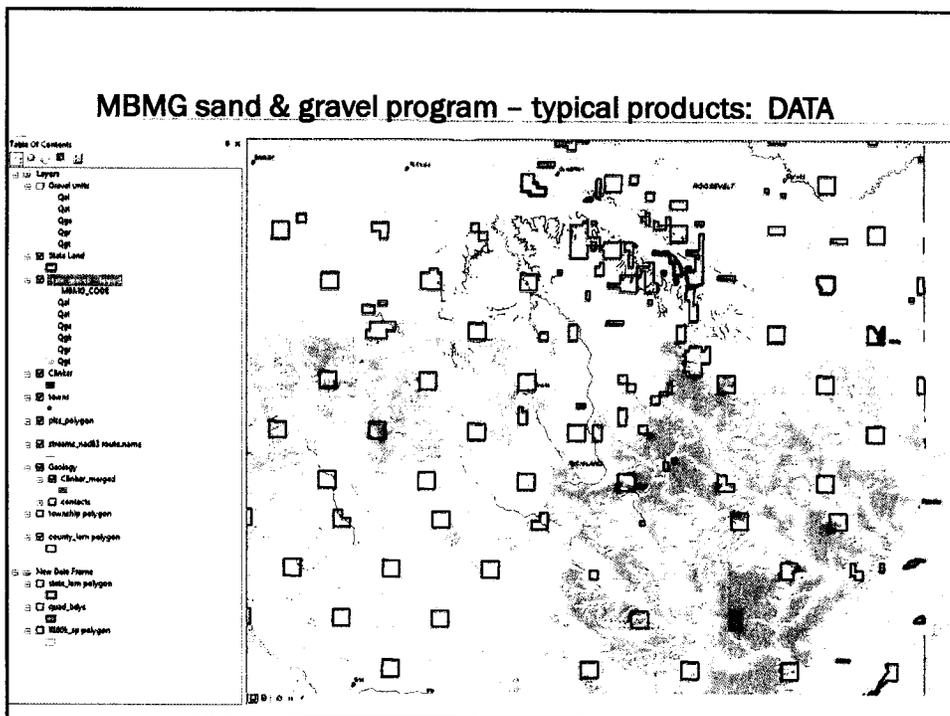
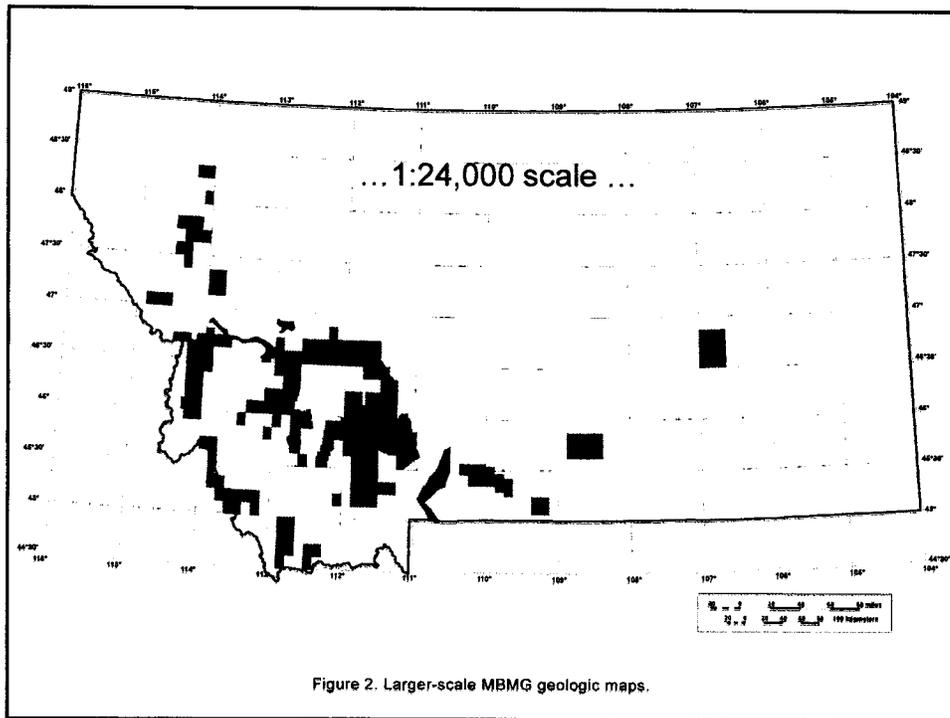
Legislation History (61st Legislature)

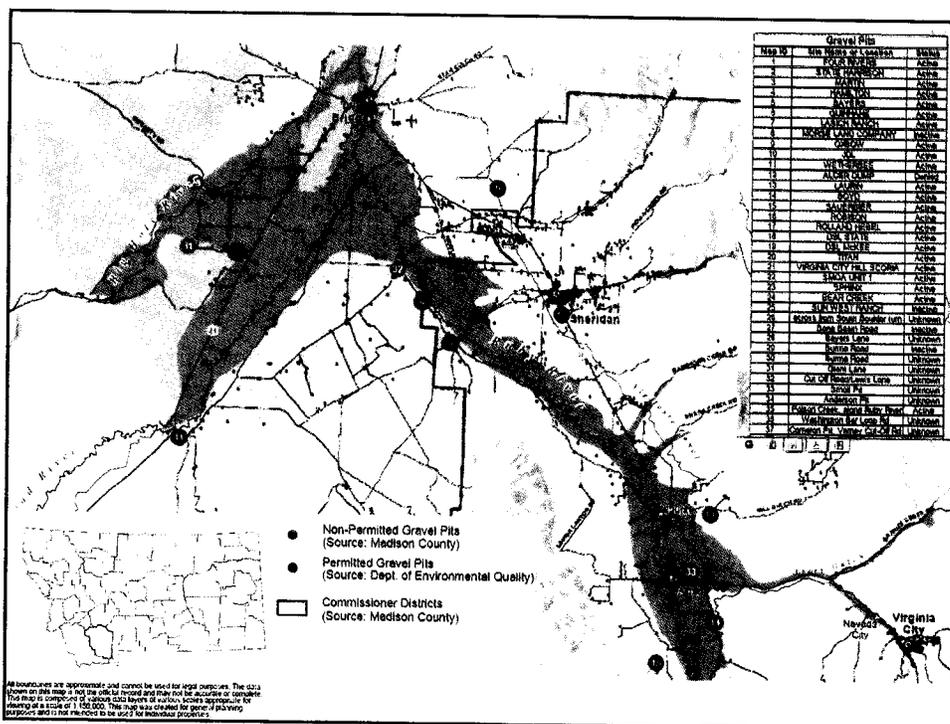
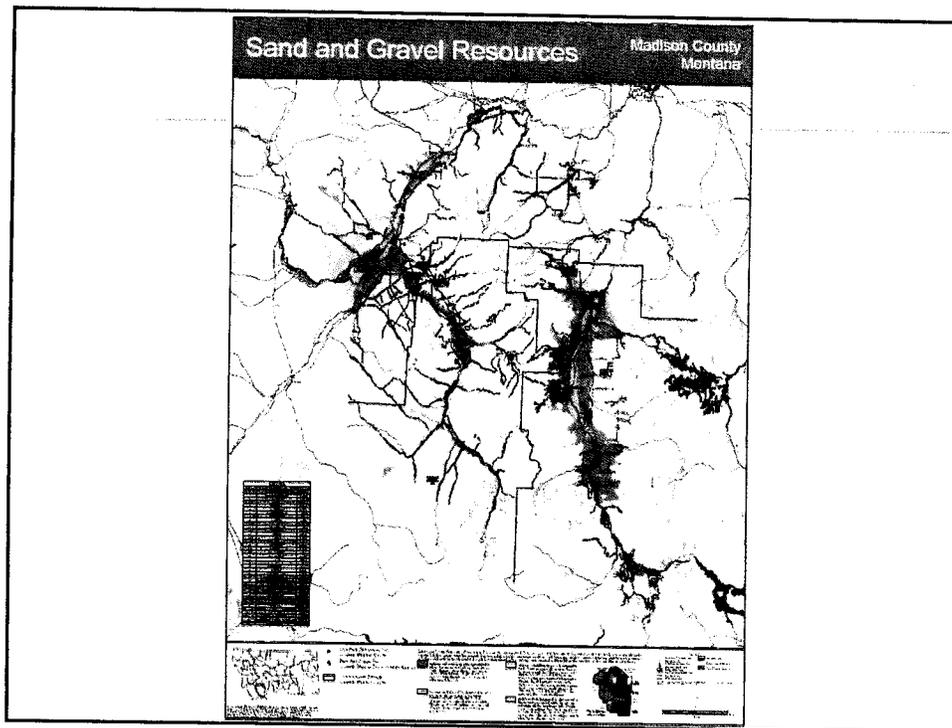
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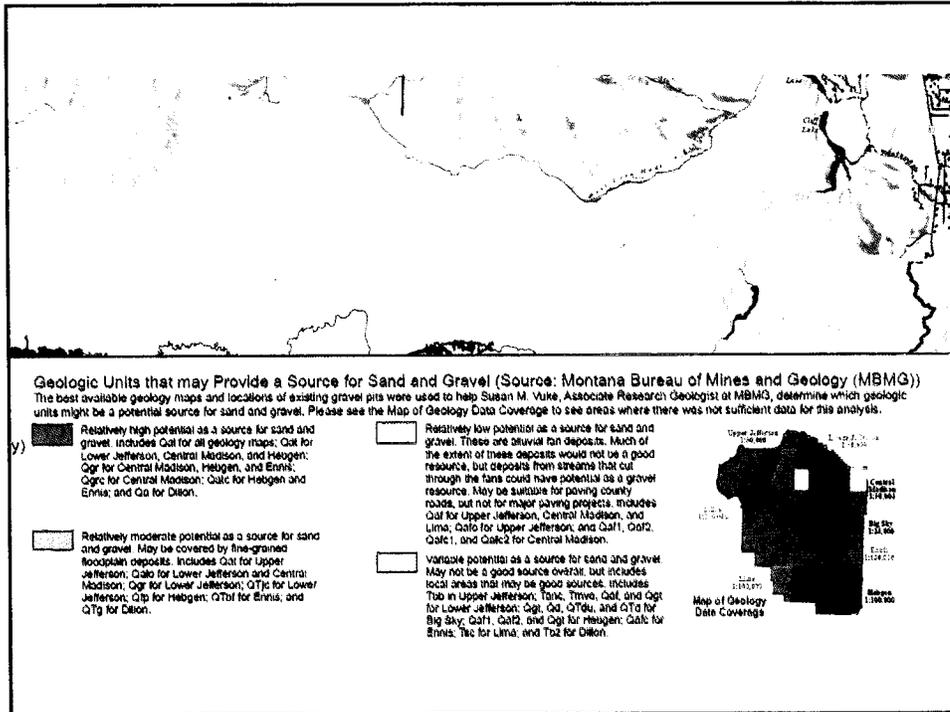
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MBMG sand & gravel program

Counties Served Directly

Missoula,
 Madison,
 McCone,
 Dawson,
 Ravalli, and
 Rosebud

Counties served with focus on state lands

Sheridan,
 Roosevelt,
 Richland, and
 Wibaux

The gravel pit database: 2941 data points derived from those indicated on topo maps, published geologic maps, and local information.

The MBMG Abandoned Inactive Mines database: 960 data points (includes quarries).