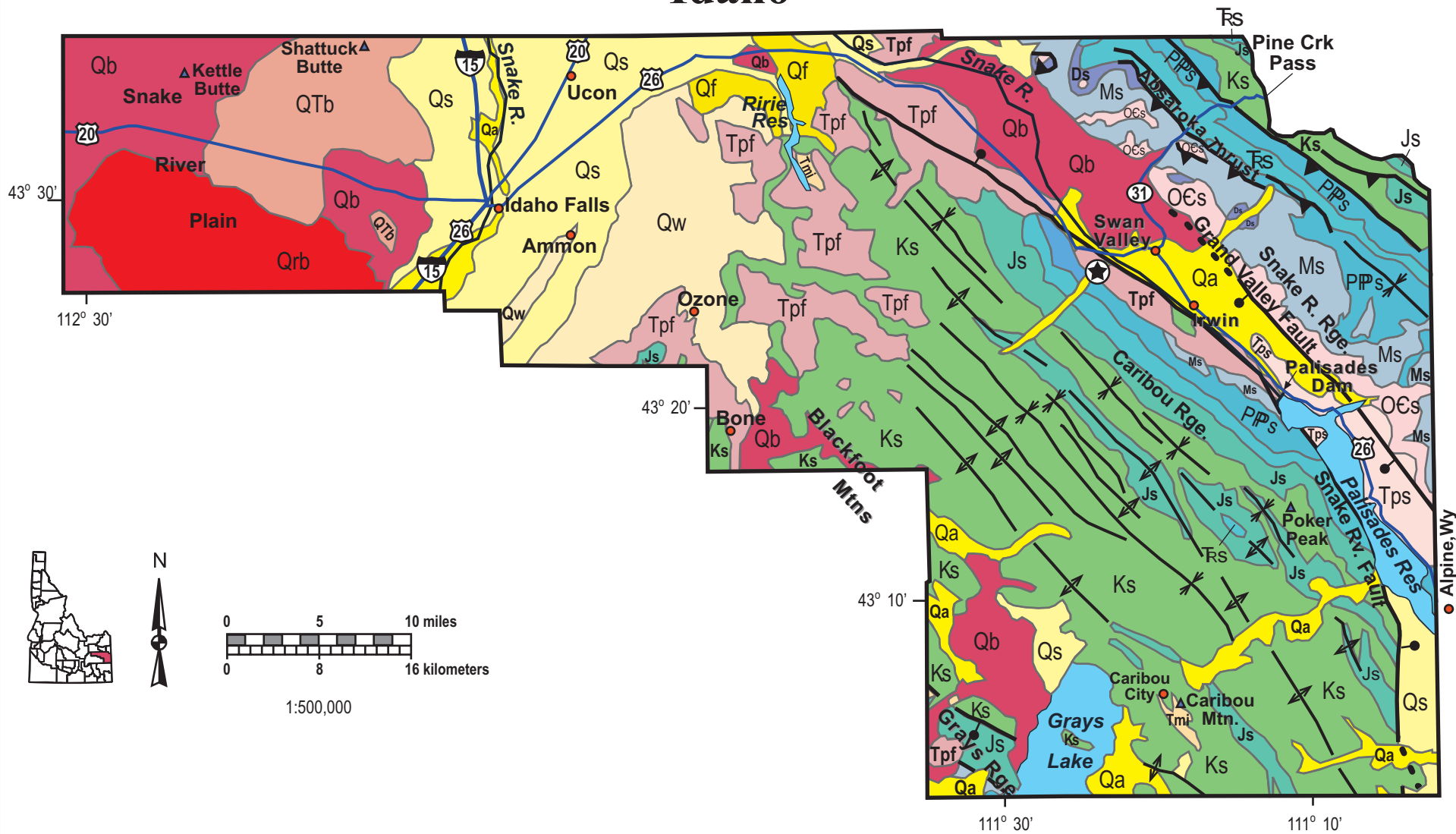


# Bonneville County, Idaho



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<http://www.isu.edu/departments/geology/>

## Bonneville County

Bonneville County covers a huge area in eastern Idaho, spanning from the Snake River Plain on the west to the Wyoming border on the east. The horseshoe path of the Snake River is mainly within the county as the river exits the Grand Canyon of the Snake at Alpine Wyoming, and flows north through Palisades Dam and Swan Valley, all within the Miocene to Recent Grand Valley graben.

The populated irrigated areas along the Snake River near Idaho Falls hold almost all of Bonneville County's residents, but the nearly empty back county contains beautiful forested mountains on the east and wide open sagebrush desert on the west.

The eastern part of the county, including the Caribou and Snake River ranges, is in the Idaho-Wyoming thrust belt, with the Absaroka thrust cropping out about half way up highway 31 toward Pine Creek Pass. This regional structure puts Paleozoic on Mesozoic rocks. Numerous folds are found in Mesozoic rocks in the Caribou Range, in the hanging-wall of the Absaroka thrust fault, and on the west side of the Grand Valley graben.

Grand Valley is a Miocene to Recent feature. The main, Grand Valley fault is on the east side. A subsidiary fault, the Snake River fault, is on the west side, west of Swan Valley.

In the southwest of the county is the Grays Lake lava field, filled with Pleistocene basalts of the Willow Creek volcanic field, and now covered with the shallow waters of Grays Lake, a national wildlife refuge.

For more information see the Idaho-Wyoming thrust fault text from Rocks, Rails and Trails.

P.K. Link, 10/02







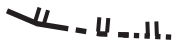





### Descripton of Units for Bonneville County, Idaho

- Qa Quaternary alluvial deposits
- Qs Quaternary surficial cover, including colluvium, fluvial, alluvial fan, lake, and windblown deposits. Included fluveolian cover on Snake River Plain, (Snake River Group).
- Qw Quaternary windblown deposits; sand dunes and loess.
- Qf Pleistocene silicic volcanic rocks; rhyolite lava and ash-flow tuff (includes Yellowstone Group).
- Qrb Recent basalt lava, less than 12,000 years old, lava flows are fresh, poorly vegetated, and show original flow geometry.
- Qb Pleistocene basalt lava, 2 million to 12,000 years old, flows have some vegetation and surface weathering.
- Tps Pliocene and Upper Miocene stream and lake deposits (Salt Lake Formation, Starlight Formation, Idaho Group).
- Tpf Pliocene and Upper Miocene felsic volcanic rocks, rhyolite flows, tuffs, ignimbrites. (in Owyhee County and Mt. Bennett Hills, this should be Tmf).
- QTb Pleistocene and Pliocene basalt lava and associated basaltic tuff (deposited close to basaltic vent).
- Ks Cretaceous sedimentary rocks.
- Js Jurassic sedimentary rocks.
- Ts Triassic sedimentary rocks.
- PPs Permian and Pennsylvanian sedimentary rocks.

## Description of Units for Bonneville County, Idaho cont.

- Ds Devonian sedimentary rocks.
- OEs Ordovician and Cambrian sedimentary rocks.

### Symbols

 <p>Geologic unit contacts with unit designation.</p>	 <p>Overturned anticline: trace of axial plane.</p>
 <p>Normal fault: certain; dashed where approximately located; dotted where concealed.</p>	 <p>Overturned syncline: trace of axial plane.</p>
 <p>Thrust fault: certain; dashed where approximately located; dotted where concealed.</p>	 <p>Location of ISU Rockwalk rock from each county.</p>
 <p>Detachment fault: certain; dashed where approximately located; dotted where concealed.</p>	 <p>Cities</p>
 <p>Anticline: trace of axial plane: large arrow indicates direction of plunge.</p>	 <p>Feature location</p>
 <p>Syncline: trace of axial plane: large arrow indicates direction of plunge.</p>	<p>Roads</p>  <p>15 Interstate Route 95 U.S. Route 1 State route</p>