

# No damage reported from minor earthquake Saturday; temblor among strongest on record in Lincoln area

**Roger Dey**  
*BVD Editor*

A cluster of four small earthquakes hit the Lincoln area Saturday, Jan. 30, centered in an area of the Helena National Forest 13 miles east of Lincoln.

The first quake, which registered as a 2.8, hit the area at 5:52 a.m. The second and largest quake, a magnitude 4.3, struck at 12:31 p.m. 3.2 miles southwest of Flesher Pass at a depth of just five kilometers. It was followed by two smaller

temblors, a 2.2 and a 2.8, that hit at 12:42 and 1:47 pm. respectively at depths of six to seven kilometers.

According to the online USGS database, Saturday's largest quake was the first 4.0 or greater to hit the Lincoln area in at least the last 50 years and was among one of the shallowest, with a hypocenter just three and a half miles deep.

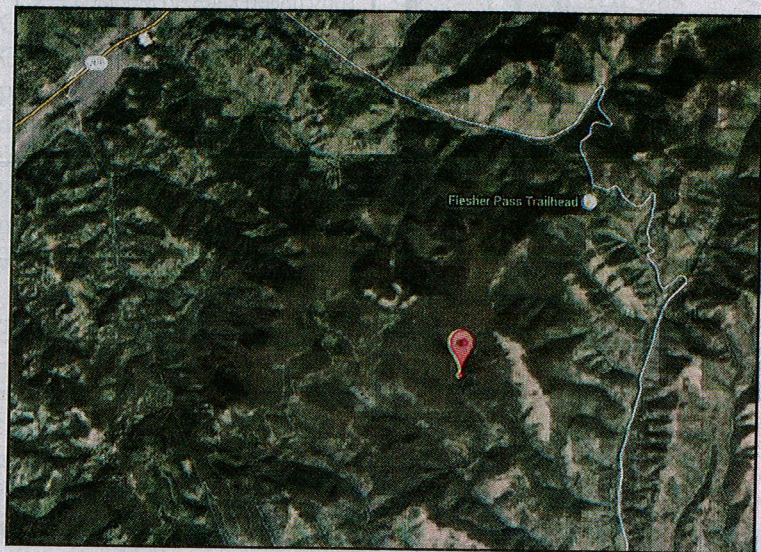
Residents living east of Lincoln both heard and felt the largest earthquake.

Peg Eschenbacher, who

lives four miles east of town, said she didn't really feel it, but heard a loud boom. Six miles further east along Highway 200 Trudy Bouma reported her husband Louie, who was working in his office at the time, felt the tremor as did their daughter Wendy who was visiting. Trudy said she didn't feel it herself, but all of them heard it.

"We all heard this sound like a big semi rumbling

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A map shows the precise location of Saturday's 4.3 magnitude earthquake

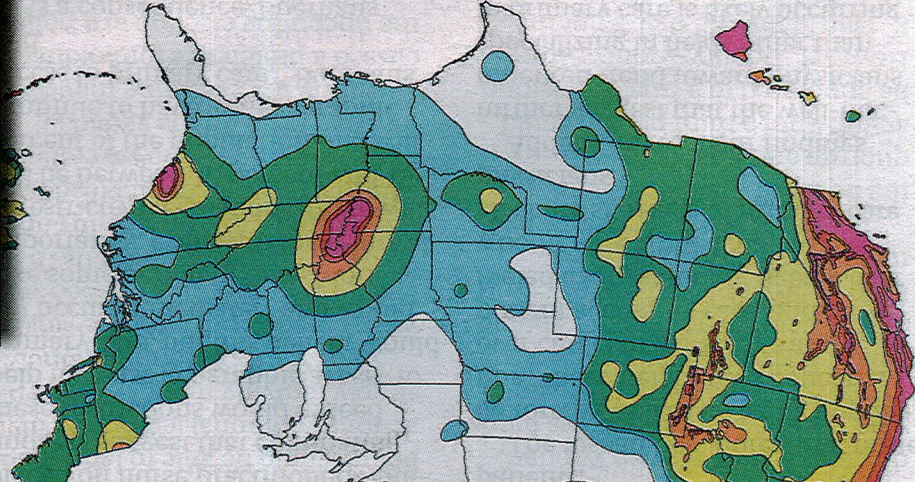


of Saturdays 4.3 earthquake and In-  
 license – which is required  
 for any hunting or fishing  
 license purchase. The price  
 of a resident conservation  
 license will remain at \$8 for  
 all ages.  
 Under the new structure,  
 most licenses that were  
 free or discounted in 2015  
 will be charged at half of  
 the standard license cost.  
 Previously, free licenses or a  
 variety of discounted prices  
 were offered to some youth,  
 seniors and disabled sports-  
 men. In 2016, only military  
 recognition and block man-  
 agement cooperators will remain  
 free. FWP is reimbursed by  
 the state general fund for  
 military recognition licenses  
 and block management co-  
 operators provide hunting  
 opportunities for all sports-  
 men.



Lowest hazard

0.4  
 4.8  
 8.0



# QUAKE

from page 1

past," she said.

Along Highway 279, residents definitely felt the

quake.

"It really shook our

house," said Mike Grimes,

who lives about five miles from the epicenter of the

quake.

Enie Fisher's home sits

just east of Grimes and she said it got a good shake.

Fisher described the tremor

as a distinct downward and then upward motion, rather

than a side-to-side shaking.

Although it put some small cracks in the corners

of her driveway and set all her pictures off kilter on

the walls, she said it didn't cause any real damage.

Fisher also described hearing a loud boom at the time,

and thought briefly that her grandson who was using the shower, had taken a fall.

Fisher said they have experienced minor shaking

in the past and said small

tremors aren't uncommon.

"It's just one of those things we shouldn't close our eyes

to, where we live," she said.

Given the quakes proximity to the Upper Blackfoot

Mining Complex waste repository, which lies across

Highway 279 from the Grimes and Fisher resi-

dences, the BVD contacted the Mike Horse impound-

ment removed before a significant earthquake hit,

the Montana Department of Environmental Quality

to ask about the facility's stability.

Haaland said in e-mail that the design engineer did a thorough job analyzing

the repository and its seismic stability. "The factors of safety achieved at this site

are well above any requirements, which means there

is little chance of failure.

The site was chosen for the repository, in part, because

of its seismic stability in a region known for earth-

quakes," she wrote. Adding that they are confident the

repository is stable and protective.

Haaland also said she's glad they were able to get

the Mike Horse impoundment removed before a

significant earthquake hit, given the unstable "jelly-

like" consistency of the material they found at the

center of the dam. "I can't tell you how much of a

quake the dam could have withstood, or if it could

have handled this event or Lincoln sits within a relatively active seismic zone

that extends in an arc from the central Utah north along the

Rocky Mountains to Canada and juts westward from the

Yellowstone area into central Idaho

Thirty-four earthquakes with a magnitude of 2.0 or

greater have been recorded within 15 miles of town

since Jan. 31, 1966. Half of those have been 3.0 or

greater.

Since Jan. 31, 1976, there have been about 40 earth-

quakes with a magnitude of 4.3 or greater in western

Montana and east central Idaho, particularly in the

areas north and west of Yellowstone National Park.

The price of all other resident tags, licenses, drawing fees and permits will remain the same as in 2015.

replaces a number of age categories.

as those between 12 and 17 years old. This language

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Starting Feb. 1, the new fee structure will standard-

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