



Instructions: Print: Table 1, Table 2 & Figure 7, then complete the activities below:

1. Using the map, which county and which geologic province have had the most earthquakes? the fewest?

2. Excluding areas outside the state, where do most felt earthquakes ($M > 4$) occur in Idaho?

3. Considering only earthquakes with magnitudes greater than 4.5, where do these occur relative to Holocene fault activity?

4. Three of the eight largest earthquakes occurred in the same locations so only five distinct symbols may be apparent for these in the map. Four of the largest earthquakes occurred in central Idaho; where did the largest of these occur?

5. Create a graph of earthquake frequency from data on felt earthquakes collected over the past 110 years: Table 1 lists Idaho earthquakes with surface wave magnitudes greater than 5 that have occurred between 1884 and 1994; in Table 2, enter the number of earthquakes having magnitudes greater than or equal to each value listed; plot these values against magnitude in a graph like that shown in Figure 7. As an example, the first and last two values have already been entered in Table 2 and plotted in Figure 7.

6. Answer these questions based on your graph:
 - i) How many earthquakes with magnitude 5 or greater occurred between 1884 and 1994?

 - ii) The recurrence interval is the number of years in a period of time divided by the number of earthquakes of a certain magnitude or greater. Divide 110 years by the number of earthquakes having a magnitude greater than 5. What is the recurrence interval of Magnitude 5 earthquakes in Idaho?

 - iii) Repeat steps i) and ii) to find the recurrence interval for earthquakes of Magnitude 6 or greater.

 - iv) Repeat steps i) and ii) to find the recurrence interval for earthquakes of Magnitude 7 or greater.