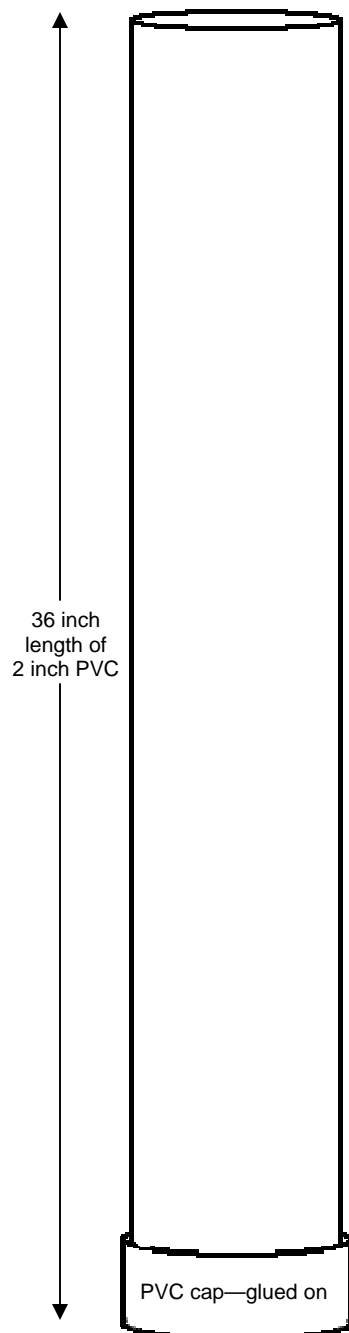


Simple Design for a Remote Rain Gauge

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Precipitation data is often useful in making land management decisions. However, sites of interest are often in remote areas that are visited infrequently. Below are instructions for building an inexpensive precipitation gauge and how to take seasonal measurements on remote sites. The precipitation gauge is made from a 36-inch length of 2 inch PVC pipe that has a PVC cap glued onto one end. The pipe is then hose clamped open-end-up to a fence post or T-post.

Make sure to locate the gauge away from trees, buildings, power lines, and other features that may reduce the accuracy of data collected. After securing the gauge to the post, place a small volume (2 to 3 inches) of a 50:50 mix of antifreeze and automatic transmission fluid. The ATF keeps the captured water from evaporating and the red color of the ATF makes it easy to read on a tape measure. The antifreeze keeps the water from freezing.

Measurements should be recorded following winter (usually collected in June) and summer precipitation (usually collected in early October). More frequent readings (i.e monthly or quarterly) may be collected when justified. At each site, depth readings are taken, giving the amount of precipitation since the last reading. The gauge should be cleaned and replenished at least once per year. It is also a good idea to put a piece of hardware cloth inside the opening to prevent birds, rodents, and other small animals from entering the pipe.

On grazing allotments managed by state or federal agencies, it is a good idea to locate several precipitation gauges distributed across the management unit. Many ranchers that have permanent monitoring sites place these gauges at each site. Some users of these gauges have camouflaged them to decrease the likelihood of vandalism.