When it comes to collecting remotely acquired data, the U.S. Geological Survey (USGS) has the process wired. USGS has been providing near-real-time streamflow data on the Web since 1994, and more recently the agency has added data on stream stage, depth to groundwater, water quality parameters such as temperature and specific conductance, elevation of reservoirs and lakes, and precipitation. Additional water quality parameters such as turbidity and concentrations of nitrogen, chlorophyll, chloride, and sodium; and meteorological parameters such as wind speed and direction, solar radiation, and snow water content are available for some locations. All data collected throughout the United States are available from a single Web site, waterdata.usgs.gov/nwis/rt.

According to the USGS (2002), data are collected from more than 8,800 real-time sites nationwide. The agency defines “real” time as “automatically collected, transmitted, and made available to the public at least once each day” (USGS, 2001); however, the data are typically transmitted every four hours. The number of monitoring stations and the parameters monitored at any given station vary considerably from state to state, as shown in the table above.

The real-time data are transmitted primarily by Geostationary Operational Environmental Satellite (GOES) telemetry, although land-line or cellular telephone modems and radio-frequency technology are used in some locations.

### References
