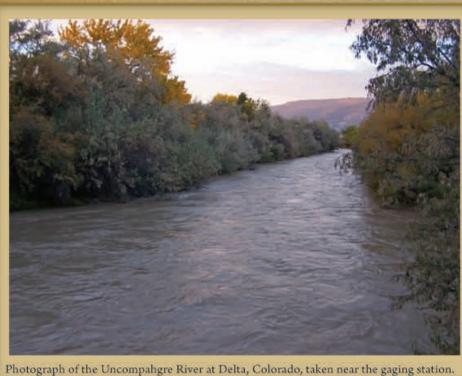


2010 Hydrology Highlights

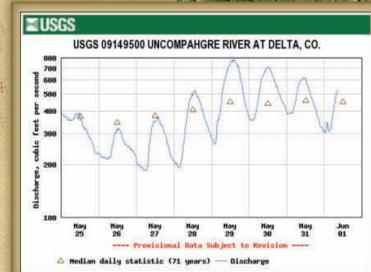


Photograph of the Uncompahgre River at Delta, Colorado, taken near the gaging station.

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Real-Time Streamflow of Region



The water flow of a stream or river is measured as discharge. Discharge is the rate of water volume flowing past a reference point per unit time, usually measured in cubic feet per second. The rise and fall in discharge for the Uncompahgre River at Delta, Colo., is indicative of the effect of day and nighttime temperatures on melting of the snowpack. The daily median discharge (triangle) based on 71 years of data is also shown on the graph.

The "Real-time streamflow" map for Colorado tracks short-term changes in flow (over several hours) for rivers and streams. Although the general appearance of the map changes very little from one hour to the next, individual sites may change rapidly in response to major rain events or to reservoir releases. The USGS provides online real-time streamflow maps for every State at <http://waterwatch.usgs.gov>.

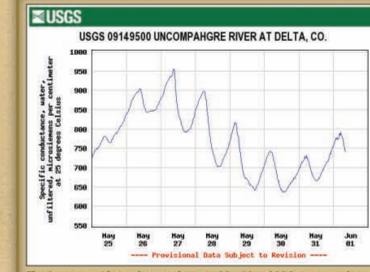
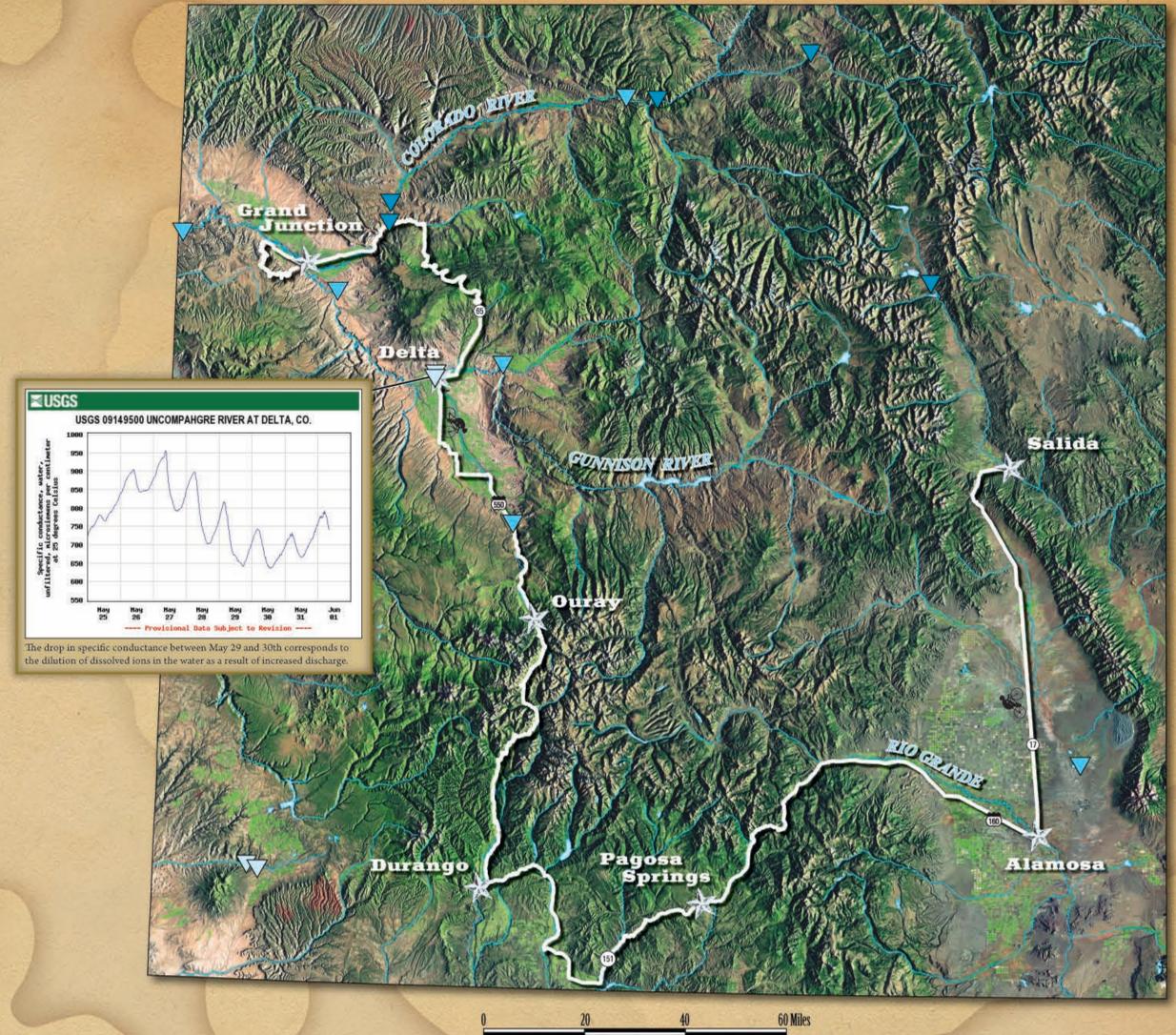
The map depicts streamflow conditions as computed at USGS streamgages. The colors represent real-time streamflow compared to historical daily streamflow for the day of the year. Only streamgages having at least 30 years of record are used.

Explanation - Percentile classes

- Low
- < 10
- 10 - 24
- 25 - 75
- 76 - 90
- > 90
- High

A percentile is a value on a scale of one hundred that indicates the percent of a distribution that is equal to or below it. For example, on the map of daily streamflow conditions, a river discharge at the 90th percentile is equal to or greater than 90 percent of the discharge values recorded on this day of the year during all years that measurements have been made. The flow category "Low" indicates that the estimated streamflow is the lowest value ever measured for the day of the year. Similarly, the flow category "High" indicates that the estimated streamflow is the highest value ever measured for the day of the year.

Real-Time Water Quality of Region



The drop in specific conductance between May 29 and 30th corresponds to the dilution of dissolved ions in the water as a result of increased discharge.

Water quality encompasses the biological, chemical, and physical characteristics of water as well as its general composition. Such attributes affect water's ability to sustain life and its suitability for human consumption and agriculture. In-stream measurements of specific conductance are a proxy for water quality; higher values indicate a higher dissolved solid content and thus poor water quality. Water-quality measurements recorded in time intervals as small as 5 minutes to hourly are often referred to as continuous. These time-dense (continuous) stream data are made available on the Web in near-real time (updated in 4-hour intervals or less) at <http://waterdata.usgs.gov/nwis>. Providing these real-time data informs the user of stream conditions for various uses and public safety.

Explanation - Specific conductance

- ▼ < 250
- ▼ 250 - 749
- ▼ 750 - 2,249
- ▼ 2,250 - 4,999
- ▼ 5,000 - 9,999
- ▼ 10,000 - 35,000
- ▼ > 35,000

Specific conductance can be used to estimate water quality. Specific conductance is the ability of water to conduct electric current. Ions dissolved in water, for example, sodium, provide the conduit to conduct current. When a relation between the conductance and the concentration of a particular ion can be developed from historical measurements, the concentration of that ion on a certain day can be estimated by measuring only the specific conductance.