

Precipitation

This web page shows the digital precipitation estimates used in National Weather Service river forecast models.

Allows download of digital data in shapefile or netCDF format.

Description of precipitation display and its features.

Provides list of links to other precipitation – related web pages.

Selectable timeframe: current, archived monthly, or archived daily data.

User can select year and month or year, month, and day depending on archive timeframe chosen.

Third row shows options available under "Precipitation" category.

Feedback from users is highly valued.

Precipitation depth in selected units.

User selectable overlays.

Select units for display.

Area covered: state, major hydrologic region, or weather forecast office area (defaults to CONUS + Puerto Rico).

Interactive Snow Information

This web page (www.nohrsc.nws.gov/interactive/) provides an interface to remotely sensed snow information.

Control map by zooming in or out.

When box is red, clicking and dragging while holding down mouse button and then releasing zooms in on created rectangle area.

Select type of data to display – e.g., snow water equivalent, snow depth, or snow water equivalent change.

Select date and time to display.

Select geographic features to display.

Select display units (U.S., metric).

Miscellaneous display control features.

Latitude and longitude of cursor location. User can enter coordinates to re-center map.

Map shows portion of U.S. currently being displayed.

Key to information being displayed.

Elevation key for base map.

Directions for use of interactive features.



NOAA/PA 200850

NOAA's National Weather Service

Guide to Hydrologic Information on the Web



Colorado River at Lees Ferry Photo: courtesy Tim Helble

The Advanced Hydrologic Prediction Service, or AHPS, is a program in NOAA's National Weather Service designed to provide improved river and flood forecasting and water information. AHPS provides a suite of graphical and numeric products over the Internet to assist community leaders and emergency managers in making better life- and cost-saving decisions about evacuations and movement of property before flooding occurs.

To access the water information in this brochure, see: water.weather.gov

Feedback on these web pages is welcome at: weather.gov/contact

Your gateway to web resources provided through NOAA's Advanced Hydrologic Prediction Service begins here: water.weather.gov

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National Map

This web page shows the flood status at all National Weather Service (NWS) river forecast locations.

Clicking on this tab shows locations where observations are available, color coded according to their current flood status.

Clicking on this tab shows locations where forecasts are available, color coded according to highest forecast for the entire period.

Allows user to display all locations, hydrograph/probability forecast locations, and inundation map locations.

Click here to only display locations currently in flood.

First row shows options available on the NWS home page.

Second row shows options available under the "Water" category.

Clicking on any location brings up a regional map showing a NWS Weather Forecast Office (WFO) Hydrologic Service Area (HSA) containing that location.

Use dropdown menus to show locations across different regions, including states, NWS WFO HSAs, NWS River Forecast Center Areas of Responsibility, and USGS Water Resource Regions.

NWS river forecasts and flood products are critically dependent on the USGS stream gaging network.

Color coding scheme used on map locations to indicate flood status. Click on colored box and only points in that category are displayed.

Regional Map

This web page shows the flood status of river forecast locations in the selected region. Selecting a specific river/stream location provides access to localized information.

Clicking on this tab shows locations where observations are available, color coded according to their current flood status.

Clicking on this tab shows locations where forecasts are available, color coded according to highest forecast for the entire period. Users can adjust the forecast timeframe using the forecast slider bar.

Navigation arrows allow users to move to neighboring NWS WFO HSAs.

Squares indicate locations with observed hydrograph plots, some which include near-term forecasts. Circles are used for locations that also have forecast uncertainty information out to several months.

Extensive inundation of structures and roads. Significant evacuations of people and property.

Some inundation of structures and roads near stream – some evacuations of people and property.

Minimal or no property damage, but possibly some public threat.

River or stream level approaching flood stage.

River or stream level below flood stage.

No data received from this site in at least 24 hrs.

River or stream gauge is not operating.

Color of icon indicates category of flooding.

Hydrograph

The hydrograph is the first graphic displayed after clicking on a specific river/stream location on a regional map. It provides recent observations and for many points a forecast for the next few days. Tabs at the top of the hydrograph allow a user to display other graphical information for the river/stream location.

Latest observed stage with time and date. Flood stage is included if available.

Peak observed and forecast stages during time period covered by graph.

Scale for indicating water level in terms of stage in feet (ft).

Observed trace – indicates water level trends over the past several days.

Vertical line marks the current viewing time.

Coordinated Universal Time (UTC) scale.

Color-coded flood categories for location being viewed, with stage where each category starts. Flood severity color scheme is consistent throughout these web pages.

Scale for indicating water level in terms of flow in thousands of cubic feet per second (kcs) or cubic feet per second (cfs).

Forecast trace – shows expected water level trend over the next few days.

Local time scale.

Weekly Chance of Exceeding Levels

This graphic provides the probability of exceeding various river/stream levels during the next three months given the weather patterns in past years and the best available long-term forecasts.

Lines for flood category levels use the same color scheme shown on the flood hydrograph and other web pages.

Each colored section of vertical bar represents a range of probabilities (e.g., 5% to 25% for the green bars). Range of stages corresponding to those probabilities can be found on the left scale of the graph (see Example).

Bars are shown in weekly increments.

Provides explanation of the graph.

On the web, click on "About this graph" for description of this plot

Example: For week of 5/5 to 5/12, the bottom of the green bar shows there is a 25% chance the stage will exceed about 9.1 feet and the top shows there is a 5% chance the stage will exceed about 21 feet.

Allows user to display probabilities in terms of stage, discharge, or weekly flow volume

Flood Inundation Map

This interactive web page shows the spatial extent of possible or expected flooding in a given area. It can be used to show if roadways and structures will be impacted by floodwaters. At the limited number of forecast locations where inundation maps are currently available, this web page is accessed by clicking on the inundation mapping tab on the hydrograph web page. In collaboration with partners, this product will be expanded to new locations.

Set display: inundation levels, flood categories, or current forecast.

Flood category display

Current forecast display

Menu for inundation levels shown on map: stage = 28.1 feet is highlighted in yellow.

Slider for adjusting transparency of overlay.

Mouse cursor location information, including water depth when the feature is activated.

Latest stage observation.

Stage at inundation level currently shown on map.

Download data and links to supporting documents.

Describes stage where each flood category begins.

List of historical flood crests.

Select background: Google high-resolution aerial or satellite images.

Color scale for depth of inundation.

Flood inundation at stage = 28.1 ft is shown on map.

Link to user guide video on YouTube.

Clicking anywhere on the map displays marker info, including depth, latitude, longitude, and nearest geolocated address.

Provides overlays for FEMA floodway and 0.2% and 1% annual exceedance flood probability maps.

1% Annual Exceedance Flood Probability 0.2% Annual Exceedance Flood Probability