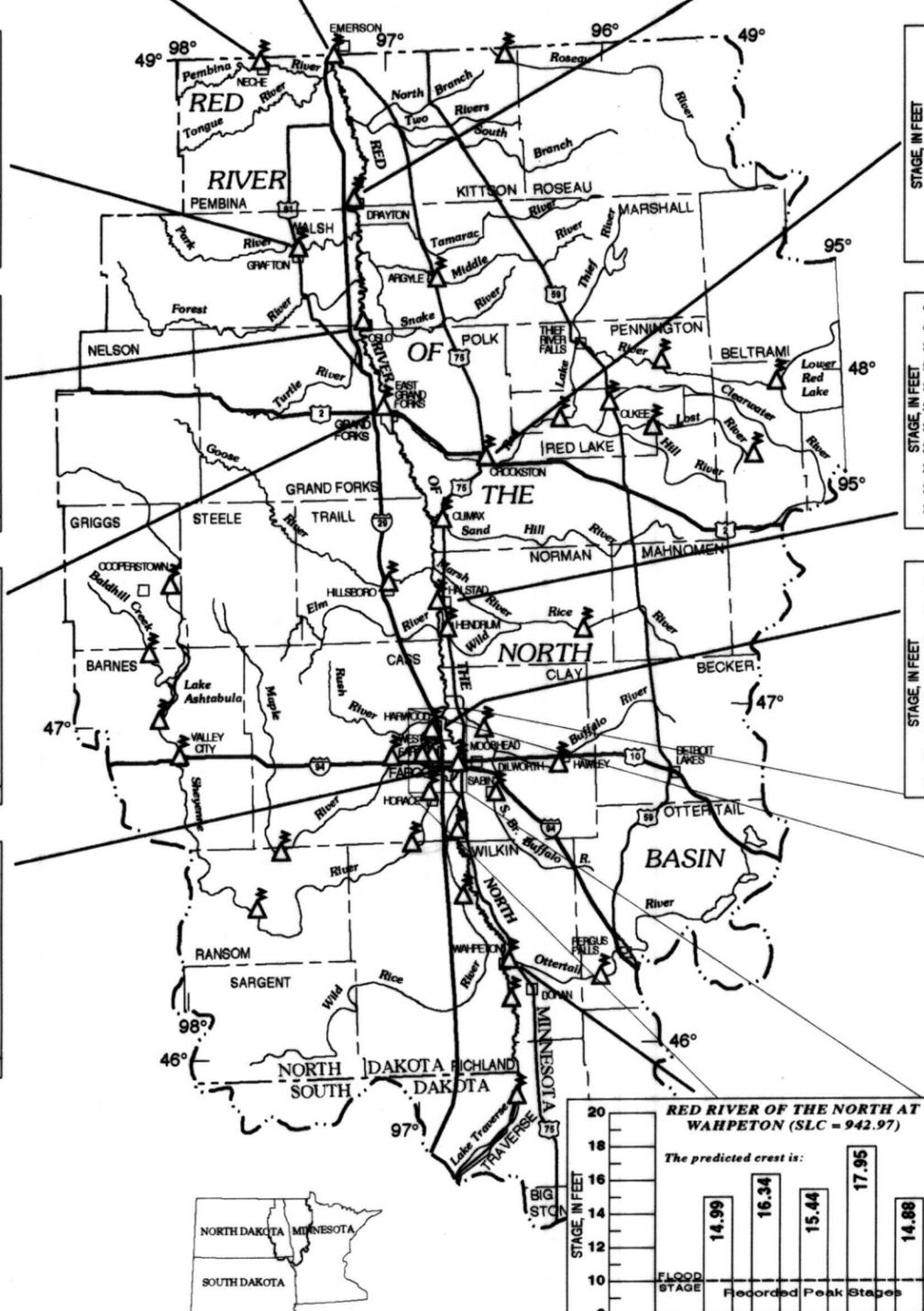
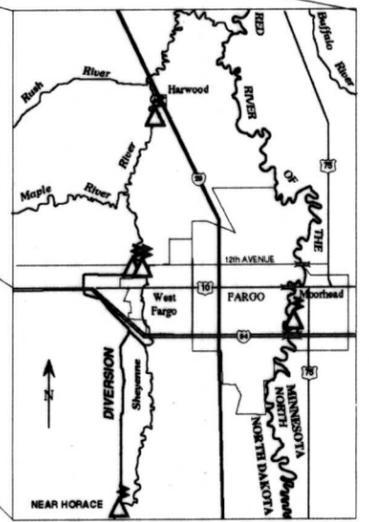
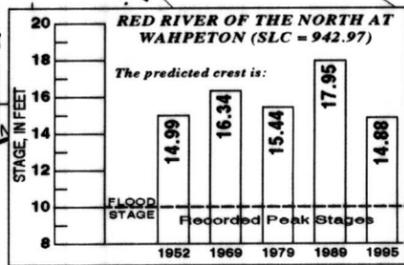
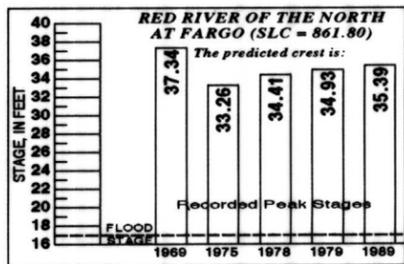
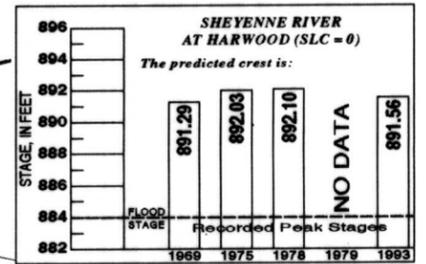
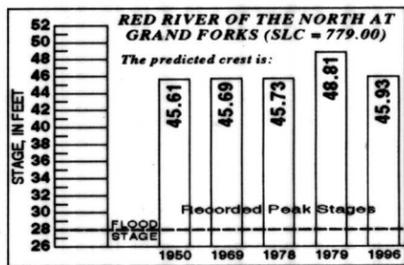
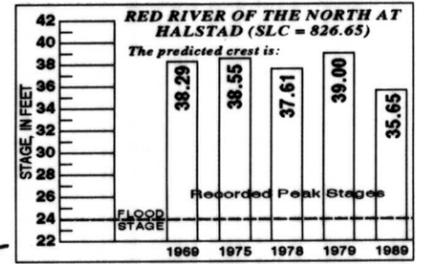
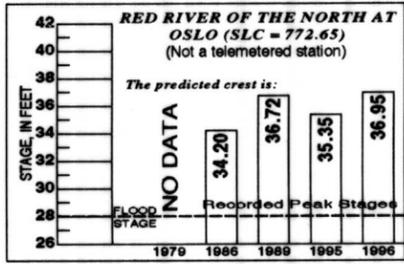
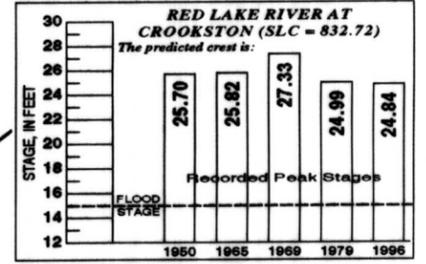
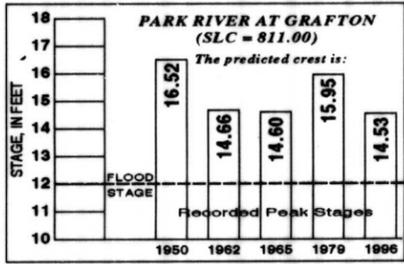
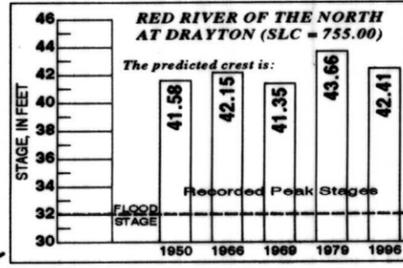
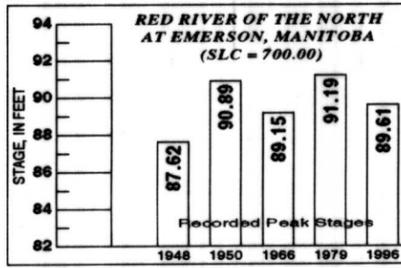
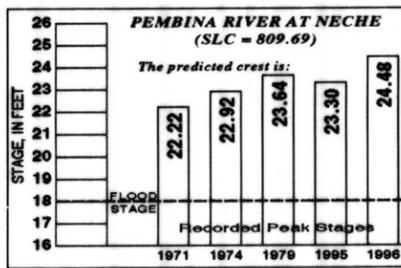


1997 FLOOD TRACKING CHART FOR THE RED RIVER OF THE NORTH BASIN

For real-time data, access the U.S. Geological Survey "Home Page" at <http://srv1dndbmk.cr.usgs.gov/public/>
 For other flood-related information, access the North Dakota State Water Commission "Home Page" at <http://water.swc.state.nd.us>
 For flood-related information concerning U.S. Army Corps of Engineers reservoirs within the Red River of the North Basin, access the U.S. Army Corps of Engineers "Water Control Home Page" at <http://www.ncs-wc.usace.army.mil>



Estimated Elevation of Foundation

Key Gaging Station

TO CONVERT STAGE TO SEA LEVEL

EXAMPLE: Red River of the North at Grand Forks
 If stage = 48.81 feet and sea level conversion (SLC) factor = 799.00 feet, elevation above sea level = 48.81 feet + 799.00 feet = 847.81 feet

The "1997 Flood Tracking Chart for the Red River of the North Basin" can be used by local citizens and emergency response personnel to record the latest river stage and predicted flood-crest information. By comparing the current stage (water-surface elevation above some datum) and predicted flood crest to the recorded peak stages of previous floods, emergency response personnel and residents can make informed decisions concerning the threat to life and property. The flood tracking chart shows a map of the basin, the location of major real-time streamflow-gaging stations in the basin, and the historical recorded peak stages at selected stations. Each graph represents a station and has a scale on which to record the most recently reported river stage from the U.S. Geological Survey (USGS). The predicted flood-crest information from the National Weather Service (NWS) also can be recorded on each graph.

During a flood, the USGS provides current river-stage information to the public through news releases and, more directly, through the USGS "Home Page" on the Internet. The North Dakota District of the USGS displays available real-time river-stage data on the World Wide Web at the following address: <http://srv1dndbmk.cr.usgs.gov/public/>

The NWS has direct access to all information collected by the USGS for use in their forecasting models and routinely broadcasts the forecast information to the news media and on shortwave radio. The radio frequencies are 162.400 MHz (megahertz) in Petersburg, N. Dak., and Detroit Lakes, Minn.; 162.425 MHz in Webster, N. Dak., and Bemidji, Minn.; 162.450 MHz in Roosevelt, Minn.; 162.475 MHz in Grand Forks and Amenia, N. Dak.; and 162.550 MHz in Thief River Falls, Minn.

To use the flood tracking chart for a particular property, determine the approximate elevation of the threatened property and record the elevation in the box at the lower left corner of the map along with the elevation of the "key gaging station." The "key gaging station" is the station that is closest to the threatened property. For example, most people in Grand Forks, N. Dak., probably will use the Red River of the North at Grand Forks station as their "key gaging station." Using the news media, Internet, or shortwave radio, routinely find out the latest river-stage information. Record the information for each station, especially the "key gaging station," and convert the stage to sea level (see the example in the lower left corner of the map). The sea level conversion (SLC) factor, if available for the station, is shown on the

corresponding graph for that station and can be added to the current river stage and also to the historical recorded peak stages to relate the information to sea level elevations. Compare the information to the elevation of the property to immediately know if the property has an impending threat of flooding. One must be cautioned by the fact that the surface of flowing water is not flat but has a slope. Therefore, the water-surface elevation near a threatened property might not be the same as the river stages at the gaging stations. For those stations where an SLC factor is not available, past historical peak gage heights can be compared to the latest river-stage information and used as a guide to determine the threat of flooding.

The network of river-gaging stations in the Red River of the North Basin is operated by the USGS in cooperation with the U.S. Army Corps of Engineers, the North Dakota State Water Commission, the Minnesota Department of Natural Resources, the Southeast Cass Water Resources District, the Cass County Joint Water Resource District, the Red River Joint Water Resource Board, and the Red River Watershed Management Board. For more information about USGS programs in North Dakota, contact the District Chief, U.S. Geological Survey, North Dakota District, at (701) 250-4601.

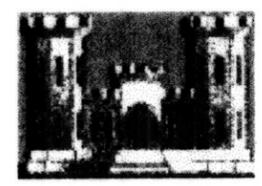


Prepared by Gregg J. Wiche, Cathy R. Martin, Laverne L. Albright, and Geraldine B. Wald of the U.S. Geological Survey in cooperation with the U.S. Army Corps of Engineers, the National Weather Service, the North Dakota State Water Commission, and the Southeast Cass Water Resources District

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U.S. GEOLOGICAL SURVEY



U.S. ARMY CORPS OF ENGINEERS