The current drought experienced by Nebraska has presented challenges across the state. Extraordinarily dry conditions have reduced water supplies available to irrigators and helped diminish streamflows and water levels in reservoirs. As of July 17, the Department has closed over 1100 surface water permits throughout much of the state. Additional closing notices may be issued depending on flow conditions. The river basins affected include the Big Blue, Elkhorn, Hat Creek, Loup, Niobrara, North Platte, Republican, Salt Creek, and White.

During times of shortage, junior (newer priority) permits must be denied water so that senior (older priority) permits may receive the full amount of their permit. Surface water distribution in Nebraska is based on the prior appropriation doctrine, which is often characterized as "first in time, first in right."

The Department of Natural Resources is the agency authorized by Nebraska statute to regulate surface water. Under Nebraska law, the Department is to assure that all water is being used to the its most beneficial use.