A new report says western Nebraska irrigation wells are drying up the North Platte River and Lake McConaughy far more than originally believed.

The annual impact of farmers pumping underground water to irrigate cropland in the Panhandle's North Platte valley robs Lake McConaughy of the equivalent of 5 feet of water depth each year.

That's the conclusion of an analysis unveiled Friday in Holdrege, Neb., by a Denver water consulting firm on behalf of the Central Nebraska Public Power and Irrigation District.

Central owns and operates Lake McConaughy, the state's largest reservoir. Central relies on the North Platte River to fill McConaughy.

"We realize that they (upstream irrigators) are not responsible for all the lost inflow into McConaughy. Drought is part of it, too, but it doesn't mean that it can be ignored and that we accept additional harm," said Mike Drain, Central's natural resources manager.

Kay Grote, a spokeswoman for the North Platte Natural Resources District in Scottsbluff, said district officials hadn't seen the analysis.

The NRD is responsible for managing underground water in the area. Grote said the district is working with the Nebraska Department of Natural Resources to roll back irrigation pumping to bring supply and demand into balance.

"We're doing everything required of us right now," Grote said. "That process is ongoing and will be completed."

Central has unsuccessfully encouraged the NRD to impose strict limits on the amount of water irrigators may pump from the ground in an attempt to boost river flows into
The NRD will limit irrigators near the river — where state water authorities say demand exceeds supply — to 18 inches of water per acre for the first time this year. The tributary Pumpkin Creek watershed has a limit of 12 inches per acre.

Groundwater irrigation by farmers with wells in the river valley upstream from McConaughy takes at least 120,000 acre feet of water out of the river that would have flowed into the reservoir annually — and it's growing, the analysis says.

"Even if they don't drill another well, as long as existing wells continue to pump they'll add to the total," Drain said.

The analysis estimates that McConaughy will lose 141,000 acre feet of water annually by 2054 if nothing changes. An acre foot is the amount of water that covers an acre of land 1 foot deep.

The analysis by Lytle Water Solutions of Highlands Ranch, Colo., says the NRD's pumping limits would provide very little stream flow recovery, but greater reductions would result in quick and substantial recovery of North Platte flows.

"There can be significant recovery to the river through regulations, but not through regulations now being considered," Drain said.

Central has held a state-granted right to water in the North Platte River since Kingsley Dam was built during the 1930s, creating Lake McConaughy.

There were no groundwater wells upstream from the dam in 1934. There were fewer than 700 as recently as 1970. Today, there are 2,684 wells up the North Platte and its tributaries from McConaughy. Nearly 700 were added since 1997.

"We're not asking them to stop pumping," Drain said. "We're looking for a meaningful reduction of their impact on the river."

The analysis was presented at a meeting of south-central Nebraska farmers who use water from McConaughy to irrigate cropland.