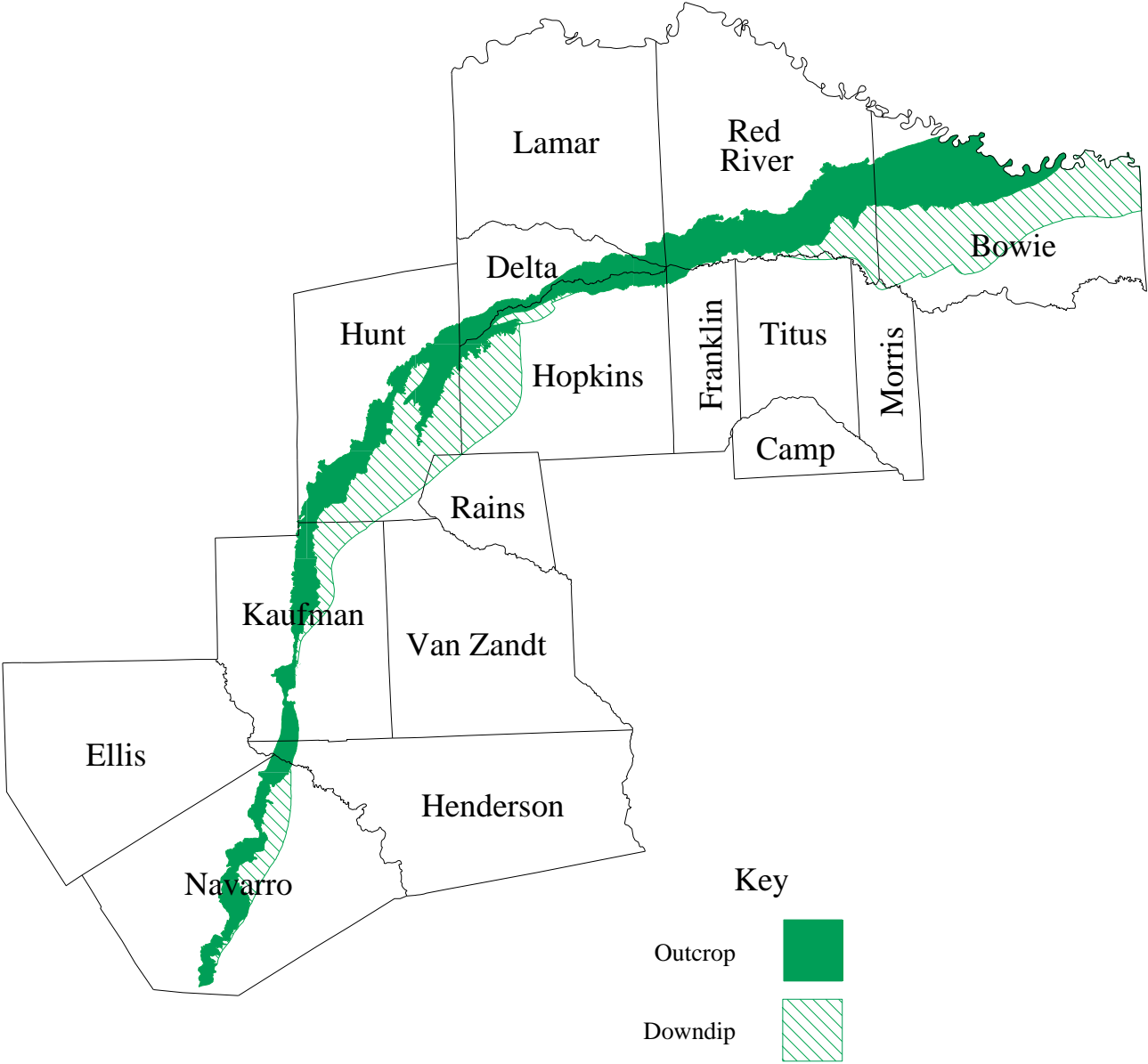


# Nacatoch



## Nacatoch Aquifer

The Nacatoch aquifer occurs in a narrow band in Northeast Texas and extends eastward into Arkansas and Louisiana. The Nacatoch Formation, composed of one to three sequences of sand beds separated by impermeable layers of mudstone or clay, was deposited in the East Texas Basin during the Cretaceous Period. A hydrologically connected mantle of alluvium up to 80 feet thick covers the Nacatoch along major drainageways. The south and east basinward dip of the formation is interrupted by the Mexia-Talco fault zone, which alters the normal flow direction and adversely affects the chemical quality of the ground water.

The quality of ground water in the aquifer is generally alkaline, high in sodium bicarbonate, soft, and increases in dissolved-solids concentrations in the downdip portion of the aquifer. The downdip limit of usable water (less than 3,000 mg/l), especially in the northern region, is controlled by the Mexia-Talco fault system. In areas where the Nacatoch occurs as multiple sand layers, the upper layer contains the best-quality water.

Water from the aquifer is extensively used for rural domestic and livestock purposes; however, the town of Commerce has historically pumped the greatest amount from the aquifer. Declining water levels that had developed around Commerce in Delta and Hunt counties have begun to stabilize as a result of conversion to surface water.

### References

- Ashworth, J.B., 1988, Ground-water resources of the Nacatoch aquifer: TWDB Rept. 305, 50 p.  
McGowen M.K., and Lopez, C.M., 1983, Depositional systems in the Nacatoch Formation (upper Cretaceous), Northeast Texas and Southwest Arkansas: Univ. of Texas, Bureau of Economic Geology Rept. of Inv. No. 137, 59 p.