



## Groundwater Study Frequently Asked Questions (FAQs)

### **Q.8 The private well drillers' "static water level" data has been questioned as often inaccurate. Does this undermine the findings and conclusions of the Groundwater Assessment Study?**

**A.** No, LCPCC's Groundwater Assessment Study report remains valid.

"Static Water Level" refers to the amount of water normally in a well when not in use, and best determined long after the well is drilled and after several hours after pumping.

The authors of the LCPCC Study recognize that private drillers' individual "static water level" filings are often unreliable and lack the scientific rigor used in hydrostudies for new developments. However, the report's findings don't rely on the accuracy of any individual driller's filing with the County. Rather, they are based on the trends over time from more than 10,000 such submissions and there is no reason to expect a bias that systematically under-estimated water level declines in the past and overestimated them in recent years. Moreover, the Groundwater Assessment Study does not rely solely on private drillers' "static water level" reports. The analysis also includes detailed "scientific" water level monitoring from over 1,500 "hydrostudy wells" in county records.

The Study's conclusions are also supported by a wide range of additional evidence, including:

- Wells drilled specifically for monitoring purposes have also reported appreciable declines.
- A professional hydrostudy conducted by a County contractor confirmed that during testing, public wells drilled for the town of Lovettsville had a negative impact on nearby private wells.
- Recently, a monitoring well in nearby Fauquier County reported a rapid 25-foot decline in the local water table as a result of pumping for irrigation.
- Groundwater recharge relates directly to stream baseflow. Daily stream flow monitoring shows a 5-10% decline in groundwater recharge in recent decades, with recent data showing months with zero recharge.
- Initial air-lift yields have declined slightly over time. Air-lift well yield is an approximate measure of a well's ability to produce water, by injecting compressed air into the well.

Significant droughts have occurred with increasing frequency in western Loudoun, and the area is currently experiencing severe drought conditions.