



**Department of Public Works  
Water Division  
8/16/2018**

**From:** Stacie Alter, Water Compliance Officer  
**To:** Dawn Ashbacher, Interim Director of Public Works  
**Subject:** **Summary of Aberdeen Wells Evaluation**

**Background**

Water Staff conducted an evaluation of wells on the Aberdeen Property, in response to discussions at the June 26, 2018 Town Council Meeting. The objective of the well evaluation was to: 1) assess the general condition of the wells, and 2) collect water quality samples from representative wells to assess the potential impact of agricultural activities on the aquifer.

**Well Inspections**

On June 28, 2018 through July 5, 2018, Water Staff performed a preliminary field inspection of four wells: PWB-2A, PWB-3A, PWB-4B, and PWB-6F to assess site and well access, available power supply, and whether pumps were installed in the wells. Results of the field inspection indicated the following:

- Wells PWB-2A and PWB-4B were not equipped with pumps or power.
- Well PWB-3A was equipped with a pump and an electrical panel, but there was no power supply to the electrical panel.
- Well PWB-6F was equipped with a pump and an operable electrical panel. The pump was operable, but the pumping rate from the well could only be controlled by adjusting the valve (i.e., no variable frequency drive).

Based on the results of the field inspection and review of the engineering designs/reports for the Consolidated Well Treatment Facility (also referred to as the Jeffries Groundwater Treatment Plant), Water Staff recommended collecting groundwater samples from wells PWB-3A, PWB-4B, and PWB-6F.

**Groundwater Sampling**

Water Staff collected groundwater samples at wells PWB-3A, PWB-4B and PWB-6F on July 12, 2018 and July 16, 2018. Broy & Son Pump Services was contracted to provide a generator to power the pumps at wells PWB-3A and PWB-4B. Broy & Son also provided a submersible pump for sampling activities at Well PWB-4B.

Groundwater samples were submitted to National Testing Laboratories for analysis of: 1) Loudoun County WaterCheck with pesticide option, and 2) glyphosate (primary ingredient in Roundup).

Results of the groundwater sampling activities indicated the following:

- Glyphosate was not detected above the laboratory detection limit of 0.1 mg/L at wells PWB-3A, PWB-4B and PWB-6F.
- Nitrate was not detected above the laboratory detection limit of 0.5 mg/L at wells PWB-3A, PWB-4B, and PWB-6F.
- None of the pesticides or herbicides included in the analyses were detected above their respective laboratory detection limits at wells PWB-3A, PWB-4B and PWB-6F.

The glyphosate, nitrate, and pesticides/herbicides results are summarized on Table 1. The Loudoun County WaterCheck also included analyses of inorganic analytes, volatile organic compounds and physical factors. The complete laboratory reports are attached to this memorandum.