

**DEPARTMENT OF BUILDING AND DEVELOPMENT**

**COUNTY OF LOUDOUN**

**MEMORANDUM**

DATE: December 18, 2009

TO: Sophia Fisher, Department of Planning

FROM: William Marsh, Environmental Review Team Leader

CC: Theresa Stein, Building and Development  
Pat Giglio, Department of Planning

**SUBJECT: SPEX-2009-0032, SPMI-2009-0010, CMPT-2009-0011, Arcola Substation**

The Environmental Review Team (ERT) reviewed the subject application on December 14, 2009, with a December 15 site visit. Our comments are as follows:

1. The special exception plan depicts a possible underground stormwater management area located downhill of the proposed substation pad. Staff does not believe that an underground is needed, because there is enough space on site for a pond or other stormwater feature. Staff recommends that a facility be designed with a high nutrient removal capability, including but not limited to an extended enhanced detention pond, retention (wet) pond, or an array of bioretention basins (with underdrains if needed.) Runoff leaving this site will enter Bull Run, which drains to the Occoquan Reservoir, a drinking water source. Zoning Ordinance Section 6-1310(H) includes the application's impacts on water quality as an issue for consideration with a special exception.
2. Chapter 5 of the Facilities Standards Manual (FSM) regulates stormwater management for "hotspot" uses, where certain activities could generate runoff of hydrocarbons, trace metals, or toxicants. Staff inquires into the presence of liquids with hydrocarbons or other potentially toxic materials that are used on site, including but not limited to mineral oil. Depending on materials being stored, staff may require verification of secondary containment where these products are stored or handled, consistent with FSM Section 5.320.E.4.b.
3. Northern Virginia Electric Cooperative has received grant money from the Federal stimulus to install "smart grid" capacity into the distribution network. Smart grid technology is incorporated to improve demand response and stabilize spikes in power demand and supply, among other goals. These priorities help achieve the "timely delivery of these services to businesses and households as development occurs," described as a County goal on page 2-23 of the Revised General Plan. Accordingly, staff encourages the applicant to incorporate smart

grid technology with this application, and to educate current and future county customers about the efficiency gains available through this design.

Please contact me if you need additional information or have questions.