

## **Workforce Development JET Recommendations September 2020**

The Workforce Development working group investigated opportunities in the Fairfax County geographic area around renewable energy, energy conservation, green building, resource and wildlife management, stormwater management, wastewater management, sustainable landscaping and more. Discussions across FCPS led the group to focus communications within the Career and Technical Education department with some discussions with Get2Green staff and Design and Construction. The FCPS Energy Manager, John Lord, was instrumental in providing contacts in the solar industry.

In reaching out to Fairfax County for possible collaborations, discussions with the Fairfax County Park Authority and the Department of Public Works and Environmental Services resulted in several immediate ways to collaborate and many ideas for longer term joint work.

Four goals are proposed below with summaries of the discussions to date. There are components of each goal that can be initiated immediately and some that will be easier to implement and work toward once COVID-19 is behind us and students are again meeting in-person in our school buildings.

Background information and notes related to these goals can be found in [this google folder](#).

### **Goal One**

**Equip FCPS guidance counselors and career center staff with a standardized tool kit for talking with students about the range of green careers and the background necessary to enter those careers. Ensure the presence of green career professionals in career days and student interview days.**

### **Tasks:**

- Coordinate with Fairfax County staff and community members to prepare initial tools for school staff.
- Determine collaboration/incorporation with the Naviance System.

- Determine which staff will be the main POC for the updates to the tool kit and distribution to guidance staff.

### Summary Notes:

There are a number of resources available to FCPS juniors and seniors through the guidance departments of the high schools that can help them with career planning. Naviance is a tool used to help students gauge careers that may be suitable for them to pursue. Google sites are used to house specific career information. The best way to house green career information needs to be determined.

The National Wildlife Federation has a Green Career Center and holds periodic symposiums on developments in green careers. The Center manager, David Corsar, attended a Jet meeting to update us on his work. His center has a green career toolkit with helpful information that can be found here: <http://www.nwfecoleaders.org/career-services-toolkit>

The Virginia Department of Labor and Industry has an Apprenticeship list <https://www.doli.virginia.gov/apprenticeship/sponsor-list/>. Many of the industry specialists we talked with expressed the importance of basic certifications when hiring technicians or engineers--electrician apprenticeships, OSHA 10 certifications we specifically mentioned. Here is a full [catalog](#) of the courses that are available in FCPS ACE Apprenticeship program

In discussions with both the Fairfax County Park Authority (FCPA) and the Department of Public Works and Environmental Services (DPWES), both offices have staff that are very interested in participating in career days, informational interviews, etc. They are now connected with FCPS Career and Technical Education (CTE) staff to create some videos on careers for student viewing and will be on the list to participate in the FCPS spring Apprenticeship and Career Fair. Additional avenues for advertising county jobs for high school students and recent graduates will be discussed.

### Goal Two

**Work with local solar installers to discuss the possibility of them hiring high school graduates, Fairfax county job program grads, etc. Determine what training is needed for job entry and how jobs can be advertised to the potential employees.**

### Task:

- Develop contacts at local solar providers that may have internships and jobs available.
- Determine the possibility of student learning and observation as solar panels are being installed at schools and county buildings. (time lapse cameras, etc.)
- Given the wealth of data available on solar panel efficiency and output on a national scale, create interdisciplinary lessons (or utilize existing lessons such as NEED-National Energy Education Development <https://www.need.org>) for teachers and students to use in classes or as eco action teams.
- Investigate potential collaborations/internships with FCPS and County energy management and energy efficiency personnel.

### Summary Notes:

Our team spoke to Standard Solar and Sun Tribe Solar, two of the solar installation companies that are working on county and FCPS solar installations. Both are willing to work with staff to coordinate learning experiences for students.

The most widely recognized certification body in the solar PV industry is the National American Board of Certified Energy Practitioners (NABCEP). They have a NABCEP Associate Credential program. <https://www.nabcep.org/certifications/associate-program/> Fairfax County Public Schools could develop a program and become a registered provider of the NABCEP Associate Credential course, similar to those listed here: <https://coursecatalog.nabcep.org/exam-courses>

This would enable students to leave with basic knowledge of solar PV applications, economics, design, installation, and operations & maintenance. NABCEP also has analogous programs for small scale solar heating and small scale wind power.

The solar companies collect lots of data around asset management data, DC current and AC current info, power factors and radiant data, temperature, and performance ratios. This data is collected for their customers around the country and they may be willing to share any or all of that data to be used for student learning.

To help us also meet Goal 4, the solar companies can provide as-built drawings of the systems and time lapse videos of the system construction. These can be used as display materials in the buildings to describe building sustainable features.

Internships/Apprenticeships in electrical careers and certifications such as OSHA 10 will help prepare students for work as solar technicians.

### **Goal Three**

**Develop a comprehensive plan to offer one or more green career/economy-related programs for high school students to encourage participation in this emerging job market. Opportunities could include specialized training, job shadowing, internships, and real-world workforce experience in fields such as electric vehicle maintenance, solar panel installation, LEED Green Associate Certification, sustainable landscaping, and more. This could be done as a module to an existing course, an afterschool program, curriculum substituted as appropriate in an existing course or program, a new course, etc.**

### **Tasks:**

- Expand existing collaborations between FCPS and the county to increase the number and the type of intern possibilities for students.
- Coordinate with the FCPS Trades for Tomorrow program to determine the potential to increase student interns in the trades. (electrical, energy efficiency)
- Look into certification programs that can be accomplished within courses already offered or during after-school programs.

### **Summary Notes:**

In discussions with the Department of Public Works, they have started to develop a high school recruitment program with several high schools. The divisions recruit for positions that require completion of 10<sup>th</sup> grade or high school diploma/GED and minimal or no work experience. Additionally, the divisions frequently struggle to fill these types of positions and job advertisements yield small applicant pools. At a minimum, better communication between the schools and the county is warranted. County staff expressed difficulty in setting up a sustainable program. At this point, they are reliant on one off relationships with teachers or guidance staff at a particular school. Participating divisions could include: Wastewater Collection Division, Wastewater Treatment Division, Maintenance and Stormwater Management Division, Solid Waste Operations Division.

The Department of Vehicle Services (DVS) has an apprenticeship program for FCPS students enrolled in automotive tech II and III. DVS has hired five FCPS students since the program began in Fall 2017. The program was identified as a best practice in a trades magazine. The article is available here:

<https://www.bestsupplychainpractices.com/2018/05/fairfax-county-department-of-vehicle-services/>.

Fairfax County Park Authority identified a number of areas for potential internships such as the invasive management program and the natural resource branch ecologists. In addition, other learning opportunities include participation in the Master Naturalist Program and working as an assistant in the education division or the Meaningful Watershed Educational Experience program.

### **Sample Certification List:**

- OSHA 10
- HAZWOPER--40 hour certif course for chemical sampling training, MSDS (Material Safety Data Sheets)  
([https://www.osha.com/courses/hazwoper.html?gclid=EAlaIQobChMI1fD7sv-E6wIV7vzjBx2wqAw3EAAYASAAEqKrnPD\\_BwE](https://www.osha.com/courses/hazwoper.html?gclid=EAlaIQobChMI1fD7sv-E6wIV7vzjBx2wqAw3EAAYASAAEqKrnPD_BwE))
- National Green Infrastructure Certification Program <https://ngicp.org/>
- Chesapeake Bay Landscaping Professional <https://cblpro.org>
- LEED Green Associate <https://www.usgbc.org/credentials/leed-green-associate>
- National American Board of Certified Energy Practitioners (NABCEP)  
<https://www.nabcep.org/certifications/associate-program/>

### **Goal Four**

**Develop a plan to utilize our buildings as learning tools as we install solar panels and begin to utilize Net Zero building practices and continue our use of sustainable building and architecture. Ensure building occupants have the opportunities to learn about all of the building's sustainable features through educational tools such as signage, dashboards, and interactive models.**

#### **Task:**

- Utilize the next new school as a laboratory to explore these practices as the building is designed, built and utilized.

- Determine the possibility of working with neighboring middle and high school students as this school is being built so the secondary students can learn about sustainability.
- Utilize Cooper Middle School renovation as a pilot as the renovation is started and completed.
- Establish partnerships with companies doing the construction to enable student learning.
- Utilize the buildings as learning tools for professional development of construction and facilities staff.
- CHPS verify upcoming new construction projects in FCPS.
- In county construction, put up learning centers in the buildings to ensure visitors and occupants are aware of the sustainability features employed.

Summary Notes:

There are a number of articles such as this one that talk about school districts engaging in this learning process. [This article](#) highlights Virginia districts.

FCPS uses the Collaborative for High Performance (CHPS) criteria for ensuring that the district meets minimum standards for sustainability in its construction. Engaging K-12 students and FCPS and county employees throughout this full process including doing a third party verification of meeting sustainability requirements will enable both FCPS and the county to use a learning tool that is already there but underutilized. The county uses LEED certification for its buildings so a similar process can be engaged there.

**Workforce Committee Contacts**

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