



# Weldon Spring Site

## *Boy Scout Programs*

### **Environmental Science:**

Howell Prairie at the Weldon Spring Site is an ideal location for field study in environmental science. Working with an Environmental Scientist, scouts can perform species surveys of small plots of land, comparing the biodiversity found in each plot. Scouts are also encouraged to visit the Site on a regular basis to make observations about the living and non-living parts of the prairie ecosystem.

### **Land Pollution-**

Preventing soil erosion at the Weldon Spring Site is an essential part of everyday maintenance activities. Scouts will first perform an indoor lab experiment illustrating how water creates erosion of soil. Then scouts will have the unique opportunity to tour the Site with an Environmental Scientist to learn about and see several different methods that are being actively used to repair and prevent soil erosion that was caused by rainwater. This is an indoor and outdoor activity lasting approximately 45-50 minutes.

### **Nature:**

The newly revitalized land at the Weldon Spring Site supports a surprising diversity of plant and animal species. With the assistance of our Site Biologist, Scouts will have the opportunity to perform an outdoor field study within our 150-acre Howell Prairie and will identify the birds, animals, insects, reptiles, amphibians, and plants that live there. Participants will also learn about food chains that exist in a prairie ecosystem. Scouts can also collect seeds and/or leaves of prairie plants to assist in their identification. Soil types present at the Site will also be discussed. We will provide all field study equipment necessary including log sheets, identification guides, binoculars, collection bags, and soil sampling equipment. This is an outdoor activity lasting approximately 50 minutes - 1 hour.

### **Chemistry:**

Protecting workers from exposure to chemical contaminants was an extremely important issue during the environmental clean-up at the Weldon Spring Site. In this activity, Scouts will actually try on several different types of chemical resistant safety clothing and learn how it protects workers. Scouts will also learn what a Material Safety Data Sheet (MSDS) is and will compare MSDSs from different types of chemicals. Scouts will also have the unique opportunity to tour our Site Environmental Laboratory to see other types of laboratory safety equipment and to observe how chemicals are stored. This is an indoor activity lasting approximately 45 minutes.

### **Soil and Water Conservation:**

This activity will cover many of the same concepts as the Land Pollution activity above, but will focus on what exactly soil is, how soils differ from one another, and nutrients that are found in soil. Scouts will also learn about different types of soil erosion and how soil erosion is monitored at the Weldon Spring Site. Scouts will also perform a lab activity to create their own watershed and will use it to learn how our water supply can become polluted. Scouts will also have the opportunity to tour the wastewater treatment plant at the Site to learn all about primary and secondary wastewater treatment processes and biochemical oxygen demand. This is an indoor and outdoor activity lasting approximately 1 hour.

### **Nuclear Energy:**

Scouts will first learn basic information about radioactive atoms and properties of radioactive materials including alpha, beta, and gamma radiation. Terms used in the nuclear science field such as half-life, isotope, curie, rem, ALARA, and others will be discussed. Participants will also learn about natural and man-made sources of radiation that exist in our environment and what hazards they may present to people and wildlife. Scouts will then use Geiger-Mueller counters to scan household objects for the presence of radioactivity and conduct experiments to demonstrate how radioactivity changes with time, distance, and shielding. This is an indoor activity lasting approximately 30-45 minutes.

The Weldon Spring Site offers free programs to many different scouts and scouting events in the area.

For more information about the programs on this page or our outreach programs, please contact Brendan McGhee, Marketing & Communications Assistant at (636)-329-1438 or at [brendan.mcghee@gjo.doe.gov](mailto:brendan.mcghee@gjo.doe.gov).