

Colvin Run Mill

ENGINEERING THEN & NOW



Do you want to know how things work? Have you ever wondered how engineers use their knowledge and creativity to solve problems? Want to try a little problem-solving yourself? Join us at Colvin Run Mill for Engineering Then & Now. Come see the 200-year-old mill in operation and explore the work of historic and modern engineers. You can try hands-on activities, talk with engineers from a variety of fields and use sample tools as you learn how today's engineers are building on the work of engineers of the past to solve problems in the present and future.

Colvin Run Mill is an early Industrial Revolution site, and an example of one person using his mechanical knowledge and ingenuity to solve a problem. The mill at Colvin Run uses the "Oliver Evans system." In 1872, Evans was unhappy with the inefficient and unsanitary conditions of many gristmills (mills used to grind grain). After much planning and consideration, he redesigned the machinery of milling and, in 1875, he worked with his brothers to build a prototype of his new mill in Delaware. Evans combined old technologies—buckets elevators and Archimedean screws—with his invention, the hopper boy, to design an innovative system that was powered by the mill's waterwheel. Using the waterwheel and gravity, a mill using Evans' system could be run with half the manpower needed for an unimproved mill. Like many new technologies, Evans' system was soon adopted by other millers—including the one built at Colvin Run. In 1790, the US Patent Office awarded Oliver Evans a patent for his milling technologies. It was one of the first patents the new country issued.

Inventor Oliver Evans wasn't alone in early America. The 18th and 19th centuries were busy times for engineering. Using growing knowledge of science and mathematics, engineers made improvements in transportation, communication, and construction. Roads, canals, ships, and railroads were built. There were new ways to light buildings and even cities. With telegraphs and telephones, people could communicate across miles. New materials, better tools, and improved surveying changed the buildings where people lived and worked.

Today we also live in a great time for engineering. Engineers research problems or ideas, build on existing technology, design and conduct experiments, and develop innovations. They have successes and sometimes make mistakes. All this engineering leads to new technologies and new ways to use existing technologies.



Want to see it in action? Come to Colvin Run Mill on Saturday, May 20, from 12-3 p.m. Meet "Oliver Evans" and his assistant as they explain how the mill works. See the mill with its machinery and 20-foot waterwheel in operation. Talk to historical engineers and examine 19th century tools and innovations. Watch a film by NASA to understand the links between early technology and the space program. Meet with engineers working today to solve problems and develop new inventions. Use your critical thinking skills and hands to solve problems and challenges. Maybe someday, they'll be talking about your amazing engineering discovery.

For more information and to register, turn to page 127.