USDA’s Conservation Reserve Program (CRP) is the nation’s flagship private-land conservation program. In the Chesapeake Bay Watershed, CRP’s Conservation Reserve Enhancement Program (CREP) has played a critical role in state and federal efforts to improve the health of the Bay, having enrolled over 20,000 contracts across six U.S. states. Using state-of-the-art maps and watershed modeling techniques, this project evaluates the many services provided by CREP riparian buffers in the Chesapeake Bay watershed. Key findings thus far include:

- CREP riparian forested buffers reduce nitrogen pollution from contributing areas by 25-47%, and phosphorus by 37-49%. Grass buffers reduce nitrogen by 20-33% (phosphorus by 37-49%). In fact, CREP buffers frequently filter more than just agricultural runoff, treating runoff from suburban developments and highways among other sources.
- Runoff filtration by riparian buffers is often undermined by gullies and ditches that route runoff water around the buffer. On average, these features reduce buffer runoff filtration from adjacent lands by 37%, reducing nutrient mitigation potential by 50-100%. Targeting concentrated flow features is key to improving the performance of CREP buffers.
- Opportunities exist to enhance the performance of riparian buffers, either by redesigning buffers or promoting synergistic combinations of conservation practices. Comprehensive conservation planning allows for flexibility in approach (avoiding one-size-fits all).