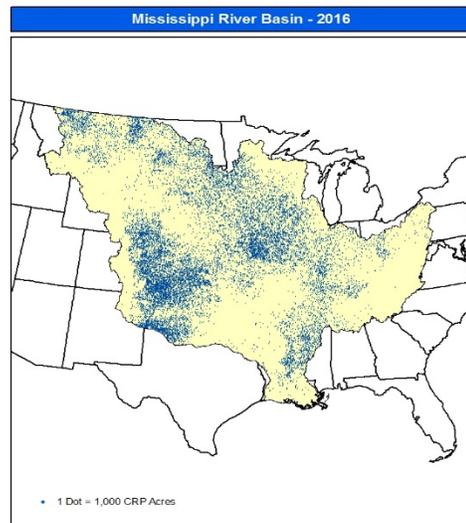


# Environmental Benefits of the Conservation Reserve Program

## 2016 Mississippi River Basin



		<u>Fiscal Year</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
<b>Land Enrolled *</b>	million acres		19.4	19.4	17.6	17.0	16.3	16.3
<b>In Wetland</b>	million acres		1.4	1.5	1.4	1.3	1.4	1.5
<b>Buffers</b>	million acres		1.3	1.3	1.3	1.3	1.2	1.2
<b><u>Reductions (not leaving field or intercepted by buffers)**</u></b>								
<b>Sediment</b>	million tons		165	163	158	158	150	148
<b>Nitrogen</b>	million lbs		446	439	423	423	401	396
<b>Phosphorus</b>	million lbs		91	90	86	86	81	80
<b><u>Greenhouse Gas Reduction ( CO2 equivalent/year)**</u></b>								
<b>CO2 Sequestered</b>	Mil. metric tons		28	27	25	24	24	24
<b>Reduced Fuel and Fertilizer Use</b>	Mil. metric tons		5	4	4	4	4	4
<b>Total</b>	Mil. metric tons		33	31	29	28	28	28

\*Cumulative acres. . \*\* Annual estimate, see Estimation Methodology.

- CRP reduces the nitrogen and phosphorus leaving a field in runoff and percolate. Nitrogen and phosphorus leaving CRP fields are 95 and 86 percent less, respectively, compared to land that is cropped.
- Grass filter strips and riparian buffers intercept sediment, nitrogen, phosphorus, and other contaminants, before they enter waterways. Because buffers both reduce contaminants on the land they occupy and intercept contaminants from other lands they have disproportionate water quality benefits.
- Using models developed by the Food and Agricultural Policy Research Institute (FAPRI), CRP reduced nutrient losses in 2016, by an estimated 396 million pounds of nitrogen and 80 million pounds of phosphorus, compared to land that is cropped. Sediment losses were reduced by an estimated 148 million tons.
- Wetlands restored and constructed by CRP improve water quality by converting nitrate-nitrogen into benign atmospheric nitrogen through denitrification. Nitrate is a form of nitrogen that is biologically available to algae. Excess nitrate contributes to the formation of hypoxic zones in the

Gulf of Mexico. Iowa's 117 CREP constructed wetland projects are designed to intercept and treat water from underground agricultural drainage systems. In 2016, these projects removed 1.3 million pounds nitrate from agricultural drainage water.

- Mississippi State University researchers found that quail populations were positively related to CRP upland buffer enrollment. Overall breeding season bobwhite densities were 70-75% greater on CRP buffers than control fields.
- The U.S. Fish and Wildlife Service (USFWS) estimated that CRP contributes to a net increase in ducks each year. Between 1992 and 2012 CRP resulted in over 37 million additional ducks from the North Dakota, South Dakota, and northeastern Montana portion of the Prairie Pothole region. Because CRP enrollment in the Prairie Pothole region has decreased, annual waterfowl numbers attributable to CRP have also decreased. However, with CRP enrollment of 4.5 million acres in the Prairie Pothole region, including 1.4 million acres of wetlands, CRP continues to strongly benefit duck populations.
- Researchers from the USFWS, U.S. Geological Survey, and the University of Montana have demonstrated that, since its inception, CRP has had a large impact on grassland bird populations in the Northern Plains, including two birds designated as species of continental importance by Partners in Flight. Further, CRP has repeatedly been identified as important to grassland birds by the North American Bird Conservation Initiative. The 2013 *State of the Birds* report states: "CRP is restoring grassland habitat for breeding birds. Henslow's Sparrow populations, which declined more than 95% between the mid-1960s and 1990s, rebounded in some areas through CRP. In Illinois, the regional Henslow's Sparrow ... spring bird counts ... are now about 25 times greater than ... prior to CRP."
- In prime ringed-neck-pheasant habitat, a 4 percent increase in CRP herbaceous vegetation was associated with a 22 percent increase in pheasant count.
- CRP's SAFE program identifies priority habitat to be conserved for wildlife species that are threatened or endangered, have suffered significant population declines, or are important environmentally, economically, or socially. SAFE areas have created habitat for Northern Bobwhite in Missouri; and American Woodcock, Henslow's Sparrow, Sedge Wren, and Grasshopper Sparrow in Indiana
- Upstream CRP lands reduce downstream flood damage. Peak flows are reduced by slowing, storing, and infiltrating storm water runoff. For example, U.S. Army Corps of Engineers found that urban areas realized significant monetary flood damage reduction benefits due to existing CRP land in the Indian Creek basin of Iowa.
- In 2016, CRP resulted in the equivalent of a 28 million metric ton net reduction in atmospheric CO<sub>2</sub> within the Mississippi River Basin from sequestration, reduced fuel use, and nitrous oxide emissions avoided from not applying fertilizer. Carbon sequestration helps offset the release of greenhouse gases (GHG) from other sources into the atmosphere. CRP sequesters more carbon, on private lands than any other federally administered program.