Joseph C. Henggeler is the recipient of the 2019 Award for the Advancement of Surface Irrigation for his extension work and his significant contributions using practical approaches to achieve adoption by surface irrigators.

Henggeler is a retired extension engineer in the department of bioengineering at the University of Missouri. A keen observer of on-farm irrigation practices, Henggeler combines creativity with irrigation engineering knowledge. Throughout his career, Henggeler’s pragmatic approach has improved efficiency and has effectively communicated these improvements to stakeholders. In one such project, through data analysis, Henggeler showed that electric utility load management programs, under Missouri conditions, were more beneficial to furrow irrigators than they were to pressurized pivot users. In another case, he demonstrated the use of a push rod to conduct furrow distribution uniformity tests and taught furrow irrigators to use yield maps and Google Earth views to evaluate their systems.

While Henggeler was a graduate student at Utah State University, surge flow technology was first developed and he incorporated these technologies into his work. He co-authored one of the earliest papers on surge and basin irrigation and participated in the landmark Flowell surge flow irrigation study. He was the first to report early Utah irrigation pioneers had traditionally employed surge flow irrigation.

When he moved to Texas in 1982, there were no commercial surge flow valves. He spoke on the concept at an irrigation conference he organized, which led a local farmer-entrepreneur to develop the first commercial surge valve. He worked with eight different surge flow valve manufacturers and held a state Surge Flow Irrigation Conference in Midland, Texas in 1984 and he sponsored the “Surge Flow Shootout”, where companies came and set up their valves based on earlier provided soil information.

Later in his career, Henggeler realized that energy efficiency was the biggest obstacle for surface irrigators. Pumps were being used to irrigate out of the alluvial aquifer in the Delta for over 100 years and he wrote about how to improve irrigation pumping plant efficiency for surface irrigators. Henggeler is author or coauthor of more than 150 peer-reviewed articles, book chapters, conference proceeding papers, and other publications. In 2016, Henggeler was named the Conservation Systems Irrigation Researcher of the Year.