

**Title:**

Professional Development for Extension Professionals and Educators on Land use and Management Practice to Enhance Water Quality.

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## **Abstract**

E. coli has been identified as the leading cause of impairment to surface water throughout the plains states. The leading source of this impairment has been identified as non-point source pollution from livestock grazing and livestock feeding and handling operations. Other common sources impairment that have been linked to livestock production include fecal coliform, excess nutrients and eutrophication. Best management practices have been identified for 1) nutrient and manure management and 2) land use practices within watersheds that enhance water quality.

The proposed extension program will provide technical in-service training and program curriculum on 1) land use of riparian ecosystems and 2) manure and nutrient management for Extension Specialists, Extension Agents and Educators at Regional Universities, Community Colleges and 1994 Institutions within the Great Plains Region. The program would be comprised of an in-service training held within three different states. The in-service would be two days with a day allocated to each of the topic areas. Each day would be formatted to include a classroom component, a hands on technical component, and wrap-up discussion. The technical training portion of the in-services will help demonstrate assessment methods, sampling techniques and exhibit management practices. This hands on training will engage participants and project partners resulting in co-learning and co-discovery of new knowledge. Program participants will develop technical skills and knowledge that will enhance their ability to develop innovative solutions for the management of livestock and the enhancement of water quality. Upon completion of the in-service participants would be supplied with curriculum on the topics covered to utilize in extension programs and courses.

The in-service and curriculum will empower Extension Professionals and Educators to conduct programs and course work on nutrient and manure management and land use within riparian ecosystems, increasing the awareness of producers and students on the topic in the short term and resulting in changes in land management and water quality in the long term.