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Adoption-Outreach of Agricultural Water Conservation Strategies in a Sub-Humid Urban Area

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Abstract Text:

The City of Sioux Falls, SD is a rapidly growing moderate sized city (~130,000) in a transition climate zone between the moist Midwest and more arid Plains. Average precipitation in the area is about 24" year. The increasing population and additional summer water demand has created a strain on the city's ability to supply water and impacted their total water supply. Particularly heavy use of the water supply comes from lawn watering during the summer, when daily water use nearly doubles. This water use is a limitation to growth of the city and has become a focus of governmental and public discussion during recent summer dry periods. The Agricultural and Biosystems Engineering department at South Dakota State University has been funded by the USDA-NRI to work with the city to assess and help recommend lawn watering amounts while helping individuals maintain lawn quality around the city. Initial work in preparation for the first watering season has centered on finding volunteers for lawn assessments and precipitation monitoring. One of two new weather stations has also been installed. A new web page is being developed for water resources in the city. Protocols for lawn assessments are also being developed. During the lawn assessments, the irrigation system for each cooperator will be evaluated using existing protocols developed by the Irrigation Association. For this poster, we will review projected outcomes of the project and milestones reached thus far. We will also review city water use based on climatic relationships of accumulated rainfall and daily temperature during peak usage times.

Impact Statement:

This project is in preliminary stages. Proposed outcomes are to reduce overall lawn watering and water use in the City of Sioux Falls. We also hope to help the city delay water systems improvements, saving them additional dollars.