



2009 CSREES National Water Conference; St. Louis, MO

Sustainable Development and the Land

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Abstract:

Assisting counties and communities with sustainable development is an important research and outreach goal for the University. This poster will summarize some of the efforts made in the Soil Science Department over the past 25 years to achieve this goal. Research related to siting, design, installation, O&M and operation of decentralized wastewater treatment systems and decentralized water supplies will be summarized relative to how it has changed current regulations and the 'state-of-practice' in these fields. This poster display includes advanced wastewater treatment technologies resulting from NCSU research in collaboration with local and global partners. The poster also addresses the linkages and educational techniques we have used to accomplish improvements in people being able to use their land in a sustainable way while also protecting environmental quality and public health at the same time. In addition to field-based applied research as a foundation, these methods also include providing (1) technical assistance, (2) professional training via hands-on training centers, (3) student education and (4) community education applied at specific pressure points to address both technical and regulatory barriers. One part of the poster illustrates packed bed media filters with the range of accepted media used illustrated.

Impact Statement:

A very specific and direct local example of the long-term economic impacts of this research and extension program is shown to demonstrate the effects of this program approach. That is a 404 acre land tract that could never be developed without the advanced technologies resulting from our research, technical assistance and training. In just this one development the land value increases over 25 years from approximately \$200,000 to over \$160 million dollars as a direct result of this program. The display also describes research and study and needs for extending this program including for establishment of an international decentralized water reuse think tank.

Category: Other Water Resource Topics
Type of Presentation: Poster Presentation