

Watershed Conservation Management Planning Using AGNPS

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Abstract: A watershed scale assessment of the effect of conservation practices on the environment is critical when recommending best management practices to agricultural producers. The environmental benefits of these practices have not been widely quantified at the watershed scale, which would require extensive monitoring studies. Pollutant loading allocations established without comprehensive studies will likely require treatment of lands that will contribute little to load reductions and insufficient treatment of higher contributing lands. The Agricultural Nonpoint Source model (AGNPS) was developed to perform these necessary evaluations to assist in watershed conservation management planning typically performed by the USDA–Natural Resources Conservation Service. AGNPS is a suite of computer models developed to assist the user with quantifying the impacts of agricultural nonpoint source pollution on water quality and the environment. Enhancements to AGNPS have been and will continue to be developed for use with the USDA CEAP project, which includes: (1) enhanced ephemeral gully components; (2) enhanced snowfall, snowmelt, and soil temperature capabilities; (3) improved animal and feedlot waste disposal processes; (4) improved GIS user interface; and (5) model database management.