AGNPS

Model Uses AGNPS is a set of programs and models that allows for the prediction of non-point source pollution loading within agricultural watersheds and can be used to assist in the creation of Best Management Practices and other planning-related decisions.

Major Categories Water Quality

Subject Knowledge Level
Intermediate

Minor Categories Non-Point Source

Technical Difficulty Level
Intermediate

Model Type Physical Model

Geographic in Nature?
No

Abstract
Agricultural Non-Point Source Pollution Model (AGNPS) is a joint USDA-Agricultural Research Service and Natural Resources Conservation Service system of computer models developed to predict non-point source pollutant loadings within agricultural watersheds. It contains a continuous simulation, surface runoff model designed to assist with determining Best Management Practices, the setting of Total Maximum Daily Loads, and for risk and cost/benefit analyses.

Future Developments
The development of Winter-time routines.

Increased functionality of the output post-processor program.

Model Limitations
Not suitable for Winter-time applications or assessments.

Model Features

- Input generation and editing of associated and required databases
- AnnAGNPS Model ('Annualized' pollutant model for agricultural watersheds)
- Output re-formatting and analysis functions
- Integration of CCHE1D Routines for stream network analyses
- CONCEPTS stream corridor model
- SNTEMP instream temperature model
- Several related salmonid models (SIDO, Fry Emergence, Salmonid Total Life Stage, Salmonid Economics)

Required Data Types
The input data set for the AnnAGNPS Pollutant Loading Model consists of many sections of data, which can be generated by the user in a number of ways. The AGNPS Input Data Preparation Model was developed to help the user create a new, or modify an existing, AnnAGNPS data set. It is recommended that the user download, print, and read the AnnAGNPS Input Specifications in order to become familiar with the input data requirements to the pollutant loading model.

Look at http://www.sedlab.olemiss.edu/agnps.html for more information.

Model Outputs
AnnAGNPS produces two output files, one for source accounting and one for event output. The user selects where in the watershed output is desired and the type of output desired. These files were not designed to be viewed and interpreted on a screen. A program was written to read these two files and based on the objectives of the user, selects data to place in another file in a table format at an 80-column page width. Event output can be summarized by individual event, monthly, or yearly totals for each type of output (water, sediment particle class and source, sediment particle class, sediment source, nitrogen, phosphorus, organic carbon,

and pesticides). Source accounting output can be summarized by total at each selected location and/or ratio of value at a location compared with the watershed outlet. The program operates interactively. Upon initial start-up of the program, the user may select event or source accounting output to be summarized. From that point, selections of output information can be selected at the user prompts. Comments on the output processor are encouraged. Further development of the program is planned. Get output applications from http://www.sedlab.olemiss.edu/agnps.html.

Source
USDA Agricultural Resources Agency and Natural Resources Conservation Service (NRCS)

Source (URL)
http://www.sedlab.olemiss.edu/agnps.html

Hardware Requirements
386 or later processor
At least 32mb RAM

Supported Platforms

DOS	☒	**UNIX**	☐
Windows	☒	**Macintosh**	☐

Software Requirements
No additional software is required.

Cost, Licensing and Availability
Model is offered free of charge from USDA / NRCS through the link provided above.