

WinDAM: Practical applications of NRCS's other dam modeling software

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The USDA-NRCS has constructed over 12,000 dams across the United States to provide flood protection. Most of these dams were built from the 1950's to the 1970's and now NRCS and local sponsors are focused on maintaining and rehabilitating these aging dams. Although the SITES computer program is still used today, the NRCS has recognized the constraints of its SITES software. USDA-NRCS released WinDAM, which incorporates tools to better analyze existing dams.

In contrast with SITES and its predecessors, which were developed for designing new dams, WinDAM focuses more specifically on the assessment of existing dams. WinDAM has several features to help engineers both assess current dam conditions and evaluate alternative design configurations to address deficiencies including:

- Overtopping and embankment breach analysis
- Embankment armoring
- Monte-Carlo analysis of spillway integrity parameters
- Multiple Auxiliary Spillways

This presentation will review NRCS's suite of modeling software, identify key differences between SITES and WinDAM C, and provide an overview of useful tools for developing rehabilitation designs for dams.