

Activity solutions

1. What impact did the creation of the SCS have on hydrology and hydraulics?

For the first time, serious impact was made to stop or reduce soil erosion. Personnel were hired to design structures, plan improvements, and recommend vegetative practices. Runoff data, structure design, channel, and waterway improvement designs all needed engineers to gather and use. Universities hired more engineers for research to assist in the effort. For the first time, engineers were made available in all phases of agriculturally related work to help control soil and water erosion.

2. What did the Flood Control Act of 1944 do?

The Flood Control Act of 1944 authorized the installation of the works of improvement contained in 11 of the survey reports completed by the Secretary of Agriculture under the authority of the Flood Control Act of 1936. These projects consisted mainly of accelerated land treatment measures and practices. They contained no structural measures. Structural measures were not included until after 1948.

3. What were the provisional changes to Public Law 566, August 6, 1956?

- 1. Required the Federal government to pay 100 percent of the construction costs allocated to flood prevention.*
- 2. Added agriculture water management (irrigation and drainage) as eligible purposes.*
- 3. Increased the maximum size of dams and reservoirs for up-stream protection from 5,000 to 25,000 acre feet, provided that not more than 5,000 acre-feet were devoted to flood protection.*
- 4. Authorized the Secretary to make loans up to \$5 million to local organizations to finance their share of the costs.*
- 5. Extended the program to include Hawaii, Alaska, Puerto Rico and the Virgin Islands.*

4. How does the Resource Conservation and Development Program (RC&D) work?

Resource conservation and development (RC&D) projects help people take better care of their natural resources and improve their community's economy. These projects are locally initiated, sponsored, and directed. They provide a base for people to come together to plan and carry out actions that will make their project area a better place in which to live, work, and play.

USDA provides technical and financial assistance to the sponsoring local groups. it also

helps them seek funds and services from other federal, state and local sources. USDA assistance is provided under the following authorities: the Soil Conservation Act of 1935 (PL 74-46), the Food and Agriculture Act of 1962 (PL 87-703, 76 Stat. 607), and further amended by Public Law 89-76, 80 Stat. 1478. SCS has leadership for USDA in the RC&D Program.

5. What is the purpose of a snow survey?

It provides specific information that can be used to predict expected water supplies during the ensuing growing season. This is of major concern to western states that depend on snow melt for irrigation, municipal, and industrial use.

6. What are the hydrologic/hydraulic responsibilities of an engineer when working with local, county, and state agencies?

The engineer must assure that alternative selection is kept within the realm of reason. The engineer must be familiar with the various public agencies involved in water development. The engineer must work closely with other disciplines and specialists in the planning, design and construction of various resource developments, and understand the types of hydraulic data needed.

7. List the reasons why hydrology and hydraulics are important to the SCS engineer.

Hydrologic and hydraulic data are essential for water resource planning and design of water related structures and projects. Hydrologic and hydraulic criteria established in standards and directives are required to be used for designing conservation practices.