

ENGINEERING  
HANDBOOK

# chute spillways

section

14

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE





United States  
Department of  
Agriculture

Soil  
Conservation  
Service

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October 28, 1985

NATIONAL ENGINEERING HANDBOOK SECTION 14 (NEH-14)

210-VI  
AMENDMENT 1

SUBJECT: ENG - REVISIONS TO NEH-14

Purpose. To transmit revised pages for National Engineering Handbook, Section 14 - Chute Spillways (NEH-14).

Effective Date. Effective when received.

Explanation of Changes. This amendment provides corrected pages for National Engineering Handbook, Section 14, "Chute Spillways." These pages correct the equations for  $\psi$  shown on pages 2.23 and 2.24 and on the corresponding ES-drawings. These equations are:

3.7e on page 2.23 and on ES-90 pages 2.33 and 2.34,  
3.8e on page 2.23 and on ES-91 pages 2.57 and 2.58,  
3.9e on page 2.23 and on ES-92 pages 2.81 and 2.82,  
3.10e on page 2.24 and on ES-93 pages 2.97 and 2.98,

and

3.8d on page 2.23,  
3.9d on page 2.23

The correct equations were used in the preparation of the charts showing the graphical relationship of the parameters,  $B/W$ ,  $Q/W^{5/2}$ ,  $D_r/W$ , and  $H_e/W$ . Therefore, no corrections are needed in the charts.

Filing Instructions. The following pages should be removed from NEH-14, and the enclosed corresponding pages should be inserted:

Pages 2.23/2.24, 2.33/2.34, 2.57/2.58, 2.81/2.82, 2.97/2.98

Distribution. This amendment should be distributed to all SCS offices that have copies of National Engineering Handbook, Section 14 - Chute Spillways. Additional copies may be ordered from Central Supply.

PAUL M. HOWARD  
Deputy Chief  
for Technology

Enclosure

DIST: NEH-14



The Soil Conservation Service  
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United States Department of Agriculture





PREFACE

SECTION 14

CHUTE SPILLWAYS

The aim of this handbook is to present in brief and usable form information on the application of engineering principles to the problems of soil and water conservation. While this information will be sufficient for the solution of most problems, other sources of reference material should be used when applicable.

The scope of the handbook necessarily is limited to phases of engineering which pertain directly to the program of the Soil Conservation Service. Therefore, emphasis is given to problems involving the use, conservation, and disposal of water, and the design and use of structures most commonly used for water control. Typical problems in soil and water conservation are described, basic considerations are set forth, and step-by-step procedures are outlined to enable the engineer to understand a recommended solution. These solutions will help in training engineers and will promote nation-wide uniformity in procedures. Since some phases of the field of conservation engineering are relatively new, further experience may result in improved methods which will require revision of the handbook from time to time.

This section of the Engineering Handbook has been written by Paul D. Doubt, civil engineer. Richard M. Matthews and other members of the Design Section staff have helped materially with the calculations and in the preparation of charts and examples. This work was done under the general direction of M. M. Culp, Head, Design Section. A preliminary draft was submitted to field engineers and others for review. Their suggestions led to improvements in the text and are sincerely appreciated.

Many sources of information have been utilized in developing the material. Original contributions are acknowledged in the text.

PREFACE

REVISION OF OCTOBER 1977

This revision removes the references to concrete volumes which appeared in the original handbook. Concrete volumes for the elements of chute spillways may be obtained by using currently approved computer programs.



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