

**National Mapping Program
Technical Instructions**

Standards for Digital Elevation Models

**U. S. Department of the Interior
U.S. Geological Survey
National Mapping Division**

CONTENTS

| | <u>Date</u> |
|------------------------------|-------------|
| 1. General | 8/97 |
| 2. Specifications | 1/98 |
| 3. Quality Control | 8/97 |
| | |
| Change Notice | 1/98 |
| Change Notice | 8/97 |
| Change Notice | 11/95 |
| Change Notice | 4/94 |
| Change Notice | 8/93 |

SUMMARY OF CHANGES

Change Notice 1/98

Clarification for the collection of digital cell name abbreviations and specifically to no longer collect abbreviations for Canada and Mexico, caused a change to Part 2, Appendix 2-A.

Change Notice 8/97

Approval of variable horizontal grid resolutions from 1-meter to 30-meters and variable vertical elevation resolutions from decimal to whole units of meters or feet for 7.5-minute DEM data required changes to several sections and appendices. It is now required that shoreline elevations be set at least one vertical resolution unit higher than adjacent level water bodies. A new Level-4 classification for electronic source imaging systems was added to Table 1-2. The need for four character year values required a change to Appendix 2-A data elements 20 and 21. All references to the "Defense Mapping Agency" (DMA) were changed to the "National Imagery Mapping Agency" (NIMA).

Change Notice 11/95

A requirement for edge matching was instituted to support the use of DEM's as a source for digital orthophoto quadrangles. Record Type A; element 1, Process code; element 2, Origin code; element 3, DEM level code; element 4, Code defining elevation pattern; element 24, Data validation flag; and element 25, Suspect and void area flag were updated to reflect system terminology for describing current DEM production and validation processes. New fields were added for data element 1, SE geographic corner; element 30, edge match flags; and element 31, vertical datum shift value. Part 2 is the only part affected.

SUMMARY OF CHANGES Continued

Change Notice 4/94

This change notice was to clarify the conventions for the population of character versus numeric data into the DEM data records and applies specifically to the treatment of fields requiring blanks or zeros. No other special characters (back space, null, line feed, hard return, etc.) can be used for the purpose of representing blanks or zeros. Part 2 is the only affected section.

Change Notice 8/93

The branch of Product Distribution Policy and the Office of Information Services defined a policy that all digital elevation models in the NDCDB be archived and distributed on standard ANSI-labeled 9-track magnetic tape. Parts 1 and 2 are the affected parts.

LIST OF PAGES

A complete and current copy of the preliminary pages for the Standards for Digital Elevation Models consists of the pages (and most recent creation or revision dates) listed below.

| <u>Page</u> | <u>Date</u> |
|-------------|-------------|
| ii | 1/98 |
| iii | 1/98 |
| iv | 1/98 |
| v | 1/98 |