

# ISO Geodetic Registry

|                           |   |  |
|---------------------------|---|--|
| <i>Item class</i>         | VerticalCRS   |  |
| <i>Name</i>               | <b>NMVD03 - NOHt</b>                                    |  |
| <i>Item status</i>        | VALID   |  |
| <i>Identifier</i>         | 391   |  |
| <i>Alias</i>              | Northern Marianas Vertical Datum of 2003                |  |
| <i>Information source</i> | <i>Title</i>  | Development of Comprehensive Geodetic Vertical Datums for the United States Pacific Territories of American Samoa, Guam, and the Northern Marianas |
|                           | <i>Author</i>   | E. Carlson, D. Doyle, D. Smith   |
|                           | <i>Publisher</i>  | American Congress on Surveying and Mapping   |
|                           | <i>Publication date</i>                                 | 2009-01-01   |
|                           | <i>Edition date</i>                                     | 2009-01-01   |
|                           | <i>Series/Journal name</i>                              | Surveying and Land Information Systems   |
|                           | <i>Issue identification</i>                             | Volume 69, No. 1   |
|                           | <i>Page</i>   | 5-17   |
|                           | <i>Other citation details</i>                           | ASVD02, GUV04, NMVD03  |
| <i>Data source</i>        | ISO Geodetic Registry                                   |  |
| <i>Scope</i>              | Spatial referencing                                     |  |
| <i>Datum</i>              | Northern Marianas Vertical Datum of 2003                |  |
| <i>Coordinate System</i>  | Vertical CS. Axis: height (H). Orientation: up. UoM: m. |  |

## Extent

|                                |   |       |
|--------------------------------|---|-------|
| <i>Description</i>             | <b>Northern Mariana Islands - onshore - Saipan, Tinian, and Rota.</b> |       |
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i>   | 143.0 |
|                                | <i>North-bound latitude</i>   | 18.0  |
|                                | <i>East-bound longitude</i>   | 146.0 |
|                                | <i>South-bound latitude</i>   | 14.0  |

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|                           |  |  |
|---------------------------|--|--|
| <i>Item class</i>         | VerticalDatum  |  |
| <i>Name</i>               | <b>Northern Marianas Vertical Datum of 2003</b>  |  |
| <i>Item status</i>        | VALID  |  |
| <i>Identifier</i>         | 191  |  |
| <i>Alias</i>              | NMVD03   |  |
| <i>Information source</i> | <i>Title</i>   | Development of Comprehensive Geodetic Vertical Datums for the United States Pacific Territories of American Samoa, Guam, and the Northern Marianas                       |
|                           | <i>Author</i>  | E. Carlson, D. Doyle, D. Smith   |
|                           | <i>Publisher</i>   | American Congress on Surveying and Mapping   |
|                           | <i>Publication date</i>  | 2009-01-01   |
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|                           | <i>Series/Journal name</i>   | Surveying and Land Information Systems   |
|                           | <i>Issue identification</i>  | Volume 69, No. 1   |
|                           | <i>Page</i>  | 5-17   |
|                           | <i>Other citation details</i>  | ASVD02, GUV04, NMVD03  |
|                           | <i>Title</i>   | Affirmation of Vertical Datum for Surveying and Mapping Activities for the Islands of Rota, Saipan and Tinian of the Commonwealth of the Northern Mariana Islands (CNMI) |
| <i>Information source</i> | <i>Author</i>  | US Government  |
|                           | <i>Publisher</i>   | Office of Federal Register, NARA   |
|                           | <i>Publication date</i>  | 2009-01-22   |
|                           | <i>Edition date</i>  | 2009-01-22   |
|                           | <i>Series/Journal name</i>   | Federal Register Notice  |
|                           | <i>Issue identification</i>  | Volume 74, No. 13, Document: E9-1180, Citation: 74 FR 3990   |
| <i>Information source</i> | <i>Page</i>  | 3990-3991  |
|                           | <i>Other citation details</i>  | Mandates use of NMVD03   |
|                           | <i>Title</i>   |  |
| <i>Data source</i>        | ISO Geodetic Registry  |  |
| <i>Remarks</i>            | Normal orthometric heights.  |  |
| <i>Anchor definition</i>  | <p>Northern Marianas Vertical Datum of 2003 (NMVD03) consists of a set of three independent leveling networks on the islands of Rota, Saipan and Tinian (in the Commonwealth of the Northern Mariana Islands). Each of these leveling networks is affixed to a single origin point on their respective islands referenced to the Saipan tide station. Island of Rota: Tide Station Rota East Harbor, Rota (PID: DG4014, VM: None, Bench Mark: Tidal 3, 1.482 m above LMSL). Island of Saipan: Tide Station 1633227, Tanapag Harbor, Saipan (PID: DG3988, VM: 16316, Bench Mark: 163 3227 TIDAL UH-2C, 1.657 m above LMSL). Island of Tinian: Tide Station Tinian Harbor, Tinian (PID: AA4407, VM: None, Bench Mark: Tidal 1, 2.361 m above LMSL). NMVD03 was affirmed as the official vertical datum in the National Spatial Reference System for the islands of Rota, Saipan and Tinian in the Commonwealth of the Northern Mariana Islands (CNMI) by Federal Register Notice (2009), replacing all previous height systems for this region. The official defining document for that datum was published in 2009.</p> |  |
| <i>Release date</i>       | 2009   |  |
| <i>Scope</i>              | Spatial referencing  |  |

## Extent

|                    |   |
|--------------------|---|
| <i>Description</i> | <b>Northern Mariana Islands - onshore - Saipan, Tinian, and Rota.</b> |
|--------------------|---|

|                                |                             |       |
|--------------------------------|-----------------------------|-------|
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i> | 143.0 |
|                                | <i>North-bound latitude</i> | 18.0  |
|                                | <i>East-bound longitude</i> | 146.0 |
|                                | <i>South-bound latitude</i> | 14.0  |

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|                           |  |   |
|---------------------------|--|---|
| <i>Item class</i>         | VerticalCS   |   |
| <i>Name</i>               | <b>Vertical CS. Axis: height (H). Orientation: up. UoM: m.</b> |   |
| <i>Item status</i>        | VALID  |   |
| <i>Identifier</i>         | 42   |   |
| <i>Information source</i> | <i>Title</i>   | ISO 19111 Geographical information - Spatial referencing by coordinates |
|                           | <i>Author</i>  | International Organization for Standardization (ISO)                    |
|                           | <i>Publisher</i>   | International Organization for Standardization (ISO)                    |
|                           | <i>Publication date</i>  | 2007-07-01  |
|                           | <i>Edition</i>   | Second Edition  |
|                           | <i>Series/Journal name</i>                                     | International Standard  |
|                           | <i>Issue identification</i>                                    | ISO 19111:2007  |
|                           |  |   |
| <i>Data source</i>        | ISO Geodetic Registry  |   |
| <i>Remarks</i>            | Used in vertical coordinate reference systems.                 |   |

## Axes

|                           |  |   |
|---------------------------|--|---|
| <i>Item class</i>         | CoordinateSystemAxis                     |   |
| <i>Name</i>               | <b>Gravity-related height</b>            |   |
| <i>Item status</i>        | VALID                                    |   |
| <i>Identifier</i>         | 35                                       |   |
| <i>Information source</i> | <i>Title</i>                             | ISO 19111 Geographical information - Spatial referencing by coordinates |
|                           | <i>Author</i>                            | International Organization for Standardization (ISO)                    |
|                           | <i>Publisher</i>                         | International Organization for Standardization (ISO)                    |
|                           | <i>Publication date</i>                  | 2007-07-01  |
|                           | <i>Edition</i>                           | Second Edition  |
|                           | <i>Series/Journal name</i>               | International Standard  |
|                           | <i>Issue identification</i>              | ISO 19111:2007  |
|                           |  |   |
| <i>Data source</i>        | ISO Geodetic Registry                    |   |
| <i>Remarks</i>            | Used in a 1D vertical coordinate system. |   |
| <i>Abbreviation</i>       | H  |   |
| <i>Direction</i>          | up                                       |   |
| <i>Unit</i>               | metre                                    |   |