

PRODUCT DESCRIPTION

Topographic web map Download, raster

DOCUMENT VERSION: 1.6

Figure 1. Section from Topographic web map Download, raster.



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I General description

Topographic web map Download, raster shows information from Lantmäteriet's basic data storage with a harmonised cartography between scales.

The product has the same contents and appearance as Topographic web map View service, cache and is suitable for use when you need a zoomable map is needed but do not have the ability to be connected to Lantmäteriet's viewing services.

The product is provided in two variants, one where the information is presented prominently and colour-coded, and one where the information is presented in a toned-down grey scale. The map information is presented in fixed scale levels.

I.1 Contents

Topographic web map View service contains a selection of topographic information from several of Lantmäteriet's products. For a detailed description of the content of each product, please refer to the product descriptions on [Lantmäteriet's website](#).

- Address points from the Real Property Register
- Topography 10 Download, vector
- Topography 50 Download, vector
- Topography 100 Download, vector
- Topography 250 Download, vector
- Topography 1M Download, vector
- GSD Map of Sweden 1:5 million
- Adjusted VectorMap, level 0 (a public global geographic database)

Partly the content varies depending on what scale it is displayed in. Currently the different map products are created in separate production lines. Since data is retrieved from different map products inconsistencies will occur, e.g., that a municipality boundary shifting in the map image between different scales. For presentation of content in different scale levels see chapter 1.5 and a separate document with the symbol legend.

I.1.1 TOPOGRAPHIC WEB MAP DOWNLOAD, RASTER

The layer contains topographic map information such as administrative division, buildings, facilities, regulations, roads, railways, mountain information, electricity transmission lines, land areas, water areas, water courses, contour lines, terrain shading, place names, informative text, and address numbers. The information is coloured to make it clearly visible.

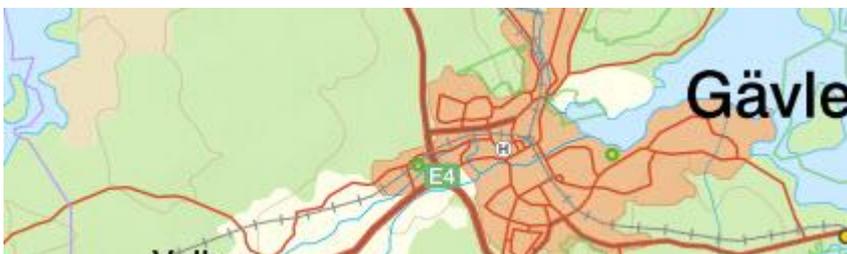
Figure 2 Example image in scale 1:3 780 (SWEREF 99 TM).



Figure 3. Example image in scale 1:30 236 (SWEREF 99 TM).



Figure 4 Example image in scale 1:241 890 (SWEREF 99 TM).



I.1.2 TOPOGRAPHIC WEB MAP DOWNLOAD, RASTER TONED-DOWN

The layer presents the topographic map information in a toned-down grey scale and is suitable to use as a background to other information that needs to stand out clearly.

Figure 5. Example image in scale 1:3 780 (SWEREF 99 TM).



Figure 6. Example image in scale 1:30 236 (SWEREF 99 TM).

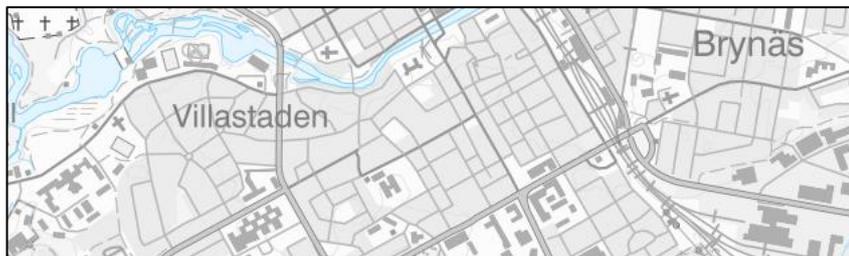


Figure 7 Example image in scale 1:241 890 (SWEREF 99 TM).



1.2 Geographic coverage

Topographic web map View service, cache includes the entire Sweden. In the smallest scales, information for Northern Europe is included.

1.3 Geographic selection

The product can be ordered for the entire Sweden or with optional coverage using a bounding box (coordinates for the lower left and upper right corners of the area).

1.4 Coordinate system

Plane:

- SWEREF 99 TM (EPSG 3006)
- WGS84 Web Mercator (EPSG 3857)

Height:

- RH 2000

Each layer is available in two coordinate systems. SWEREF 99 TM is developed for Sweden and is correct in terms of length and scale. Web Mercator is a standardized projection for world maps which enables to combine the map with other data from e.g., Google, Bing or OpenStreetMap.

Web Mercator should only be used for visualizations, not for analysis, as the projection is neither correct in terms of angle nor length. The projection errors are larger in the north than the south of Sweden.

1.5 Miscellaneous

When ordering, the highest desired resolution of the map should be selected. The delivery will then include image files with the selected resolution and all image files with lower resolutions. To receive the complete content, the maximum resolution should be selected, in SWEREF 99 TM at 0,5 m/pixel and in Web Mercator at 1,2 m/pixel.

The table below describes the main principle for which scale ranges the various products are used in, in SWEREF 99 TM.

Table 1. Scale range for plotting for each product.

From scale	To scale	Product, with possible selection.
1:1 890	1:1 890	Address points from <i>Fastighetsregistret</i>
1:1 890	1:7 559	Topography 10 Download, vector
1:1 890	1:30 236	Topography 50 Download, vector
1:1 890	1:120 945	Topography 100 Download, vector
1:60 472	1:241 890	Topography 250 Download, vector
1:60 472	1:∞	Topography 1M Download, vector
1:483 780	1:7 774 472	Text from the GSD-Sweden map 1:5 million
1:2 902 667	1:∞	Adjusted VectorMap

To obtain a sharp image, the map's fixed scale levels should be followed. Zooming to a scale between the fixed levels may result in a pixelated image, and symbols and text may not be displayed at their optimal size.

The table below describes the fixed scale levels in the service and how the different products is displayed at each level, in SWEREF 99 TM.

Table 2. Scale levels, resolution, products, and selection in SWEREF 99 TM.

Level	Scale	Resolution in the image represents metres on the ground	Product	Selection of contents
13	1:1 890	0,5	Topography 10 Download, vector	All information apart from contours
			Topography 50 Download, vector	Contours
12	1:3 780	1	Topography 10 Download, vector	All information apart from contours
			Topography 50 Download, vector	Contours
11	1:7 559	2	Topography 10 Download, vector	All information apart from contours
			Topography 50 Download, vector	Contours
10	1:15 118	4	Topography 50 Download, vector	All information
9	1:30 236	8	Topography 50 Download, vector	All information
8	1:60 472	16	Topography 100 Download, vector	All information except for contours
			Topography 250 Download, vector	Contours
			-	Terrain shading
7	1:120 945	32	Topography 250 Download, vector	All information, except for mountain information.

Level	Scale	Resolution in the image represents metres on the ground	Product	Selection of contents
			Topography 100 Download, vector	Mountain information
			Topography 1M Down- load, vector	Some place names.
			-	Terrain shading
6	1:241 890	64	Topography 250 Download, vector	Regulations, facilities lines, runways
			Topography 1M Down- load, vector	All other information
5	1:483 780	128	Topography 1M Down- load, vector	All information
			GSD Map of Sweden 5m	Text
4	1:967 559	256	Topography 1M Down- load, vector	All information
			GSD Map of Sweden 5m	Text
3	1:1 935 118	512	Topography 1M Down- load, vector	All information
			GSD Map of Sweden 5m	Text
2	1:3 870 236	1024	Topography 1M Down- load, vector	All information
			GSD Map of Sweden 5m	Text
			Adjusted VectorMap	Information outside Sweden's borders

Level	Scale	Resolution in the image represents metres on the ground	Product	Selection of contents
1	1:7 774 472	2048	Topography 1M Download, vector	All information
			GSD Map of Sweden 5m	Text
			Adjusted VectorMap	Information outside Sweden's borders
0	1:15 480 945	4096	Topography 1M Download, vector	All information
			Adjusted VectorMap	Information outside Sweden's borders

The above presentation is a rough classification and there are details that do not follow the classification completely.

The table below describes the fixed zoom levels in the service, Web Mercator. The values are approximate and calculated assuming a resolution of 96 dpi in the service. The projection is not correct in terms of length and scale and the projection error increases towards north.

Table 3. Scale levels and resolution in Web Mercator.

Level	Scale	Rough resolution in meter/pixel
12	1:4 497	1,2
11	1:9 033	2,4
10	1:18 066	4,8
9	1:36 118	9,6
8	1:72 235	19,1
7	1:144 471	38,2
6	1:288 941	76,4
5	1:577 883	152,9

4	1:1 155 765	305,8
3	1:2 311 531	611,5
2	1:4 623 062	1223,0
1	1:9 246 123	2446,0
0	1:18 492 247	4892,0

2 Quality description

Data capture, maintenance and data quality for the information displayed in the service vary depending on what product it comes from, i.e., the scale in which is displayed in (refer to tables in section 3.1). For a more complete description of quality refer to the products and product information on [Lantmäteriet's web site](#).

- [Topography 10 Download, vector](#)
- [Topography 50 Download, vector](#)
- [Topography 100 Download, vector](#)
- [Topography 250 Download, vector](#)
- [Topography 1M Download, vector](#)
- [GSD Map of Sweden 1:5 million](#)

2.1 Purpose and use

Topographic web map, raster is suitable to use when you need a zoomable map but do not have the possibility to be connected to Lantmäteriet's viewing services.

2.2 Maintenance

2.2.1 MAINTENANCE AND UPDATE FREQUENCY

The information in the map is updated at different intervals depending on type of information and scale level. A simplified description of the timeliness is that:

- The information in scale areas up to 1:20 000 is updated daily.
- The information in scale areas up to 1:20 000 is updated monthly.

3 Contents on delivery

3.1 Catalogue structure on delivery

A delivery consists of one GeoPackage file per bounding box, named after the coordinate in the lower left corner. The ordered files are in a top directory named **topografisk_webbkarta**.

The maximum number of extents (GeoPackage files) per order is 2000.

3.2 Delivery format

Topographic web map Download, raster is delivered in GeoPackage with the raster format PNG. The user's system must support both GeoPackage and the raster file format.

Topographic web map Download, raster can be delivered in SWEREF 99 TM and Web Mercator projections.

Upon delivery, the ordered area is matched against pre-defined tiles in the cached map information. Therefore, the delivery will likely contain data from a slightly larger area than the ordered one.

When ordering, the highest desired map resolution is specified. The delivery will then contain image files with the selected resolution and all image files with lower resolutions. The lower the resolution an image file has, the larger the area it will cover. The image with the lowest resolution covers a significantly larger area than the one with the highest resolution. The effect of this is that when zooming in on the map, data will be missing at the edges of the image, and it will appear as white areas in the map.

For a delivery of the entire Sweden in SWEREF 99 TM the file size is approximately 100 GB and in Web Mercator approximately 80 GB.

3.2.1 GEOPACKAGE

A GeoPackage is an SQLite database file with the file extension `.gpkg`. The file contains several tables, both used-defined and metadata tables. GeoPackage is an open format standardized by OGC, and more information can be found on the [GeoPackage website](#).

4 List of changes

The table indicates in which version of the product description the change was made. The date indicates from which day the change is valid from.

Figure 8. Table of changes for the document.

Version	Date	Change since previous version
1.6	2023-04-04	Chapter 2.1.1 Maintenance frequency updated.

Version	Date	Change since previous version
1.5	2023-02-01	<p>Reference to the road Map and Mountain Map changed to the new product Topography 100 Download, vector.</p> <p>Reference to the Overview Map changed to the new product Topography 250 Download, vector.</p> <p>Reference to the Sweden Map 1:1 million changed to the new product Topography Download, vector.</p> <p>Table 1 Scale range for plotting for each product is updated.</p> <p>Table 2 Scale range for plotting for each product and selection is updated.</p> <p>Figures 1,4 and 7 are updated.</p> <p>Chapter 2.1.1 Maintenance frequency updated.</p>
1.4	2022-09-01	<p>References to the Terrain Map changed to the new product Topography 50 Download, vector.</p> <p>Table 2 Scale area for drawing for each product and selection is updated.</p> <p>Figures 3 and 6 are updated.</p> <p>Chapter 2.1.1 Maintenance frequency updated.</p>
1.3	2021-10-01	<p>New product name – Topographic web map Download, Raster.</p> <p>References to the Real Property Map changed to the new product Topography 10 Download, vector.</p> <p>Example images updated due to changes in style.</p>
1.2	2019-04-02	Links updated.
1.1	2019-03-27	<p>The Artic circle has been added.</p> <p>Limestone bog, peatery and shallow soil on flat limestone have been removed.</p> <p>Adjustment of content in the scale levels for Web Mercator has been done.</p> <p>Clarification of the text in chapters 1:5 and 3:2.</p>
1.0	2018-10-23	Established version.

