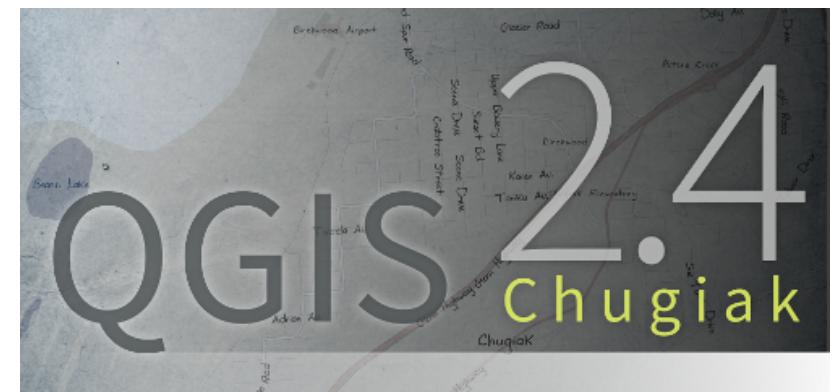
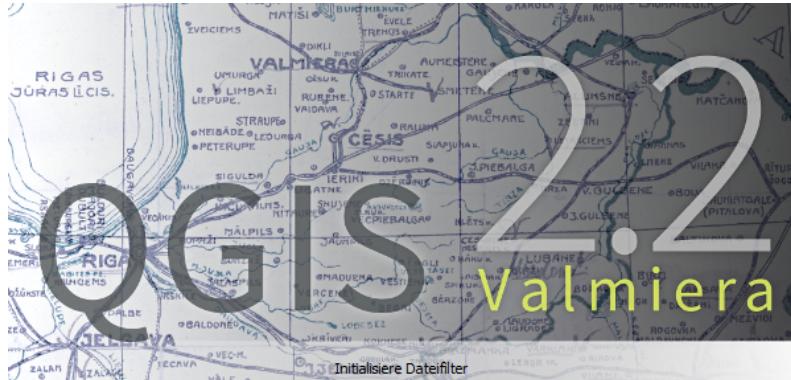


New Functions in QGIS



Versions 2.2 and 2.4

Marco Hugentobler (Sourcepole) and Andreas Neumann (Stadt Uster)

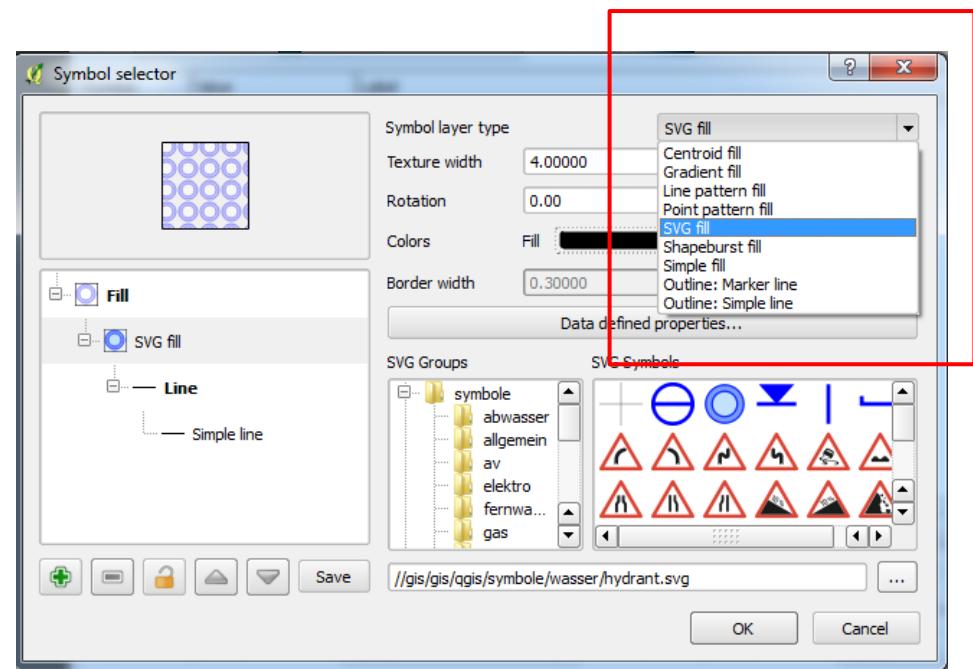


Agenda

- Symbology and Labeling
- Print Composer
- Atlas-Serial Printing
- Forms and Relations
- Datum transformations
- Data format support
- Under-the-hood improvements

Symbology - Current Fill Types

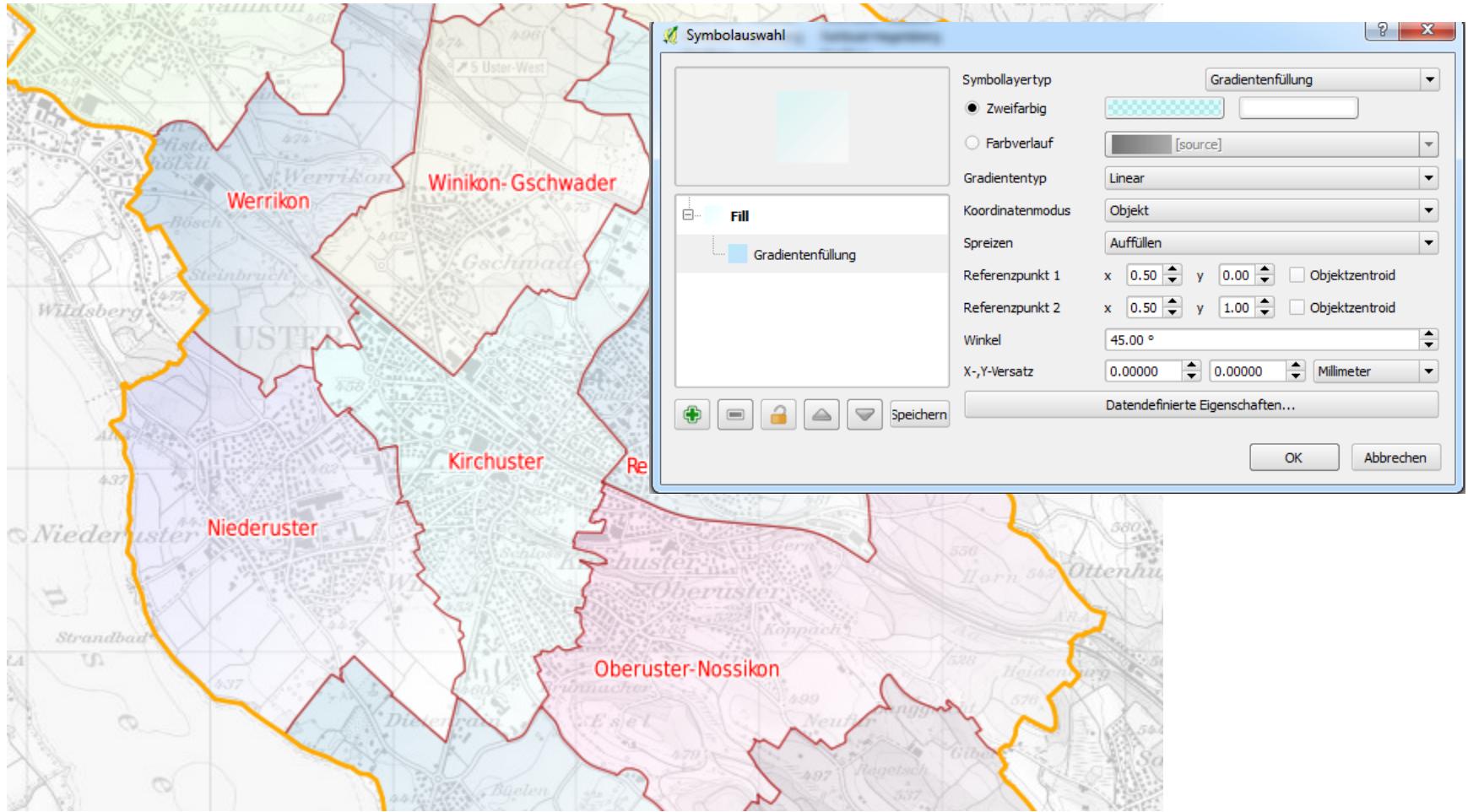
- Simple fill
- Line pattern fill (Schraffur)
- Point pattern fill (Punktraster)
- SVG fill (vector fill)
- Centroid fill
- Gradient fill
- Shapeburst fill



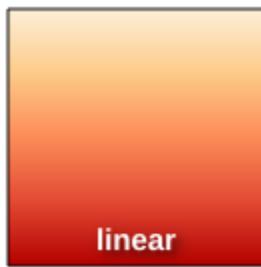
Symbology - Gradient Support (2.2)

- Two color or ramp based
- Linear, radial or conical
- Viewport or object based gradient bounding box
- Supports data-defined properties with expressions

Symbology - Gradient Support (2.2)



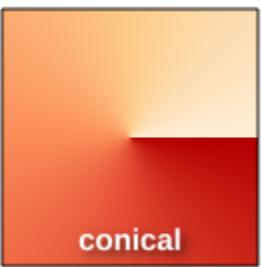
Symbology - Gradient Support (2.2)



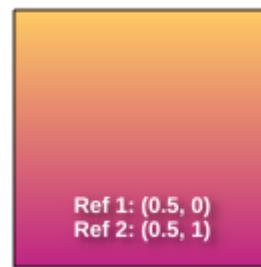
linear



radial



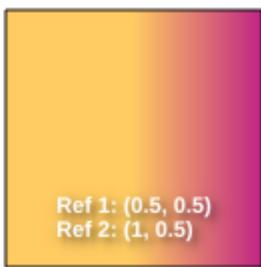
conical



Ref 1: (0.5, 0)
Ref 2: (0.5, 1)



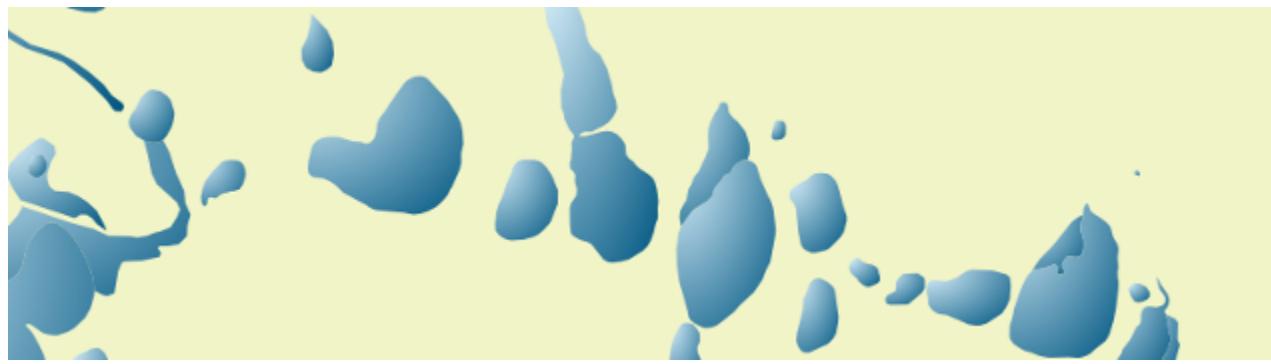
Ref 1: (0, 0)
Ref 2: (1, 1)



Ref 1: (0.5, 0.5)
Ref 2: (1, 0.5)

Color Gradient Type

Influence of Reference Points



Object bounding box
mode

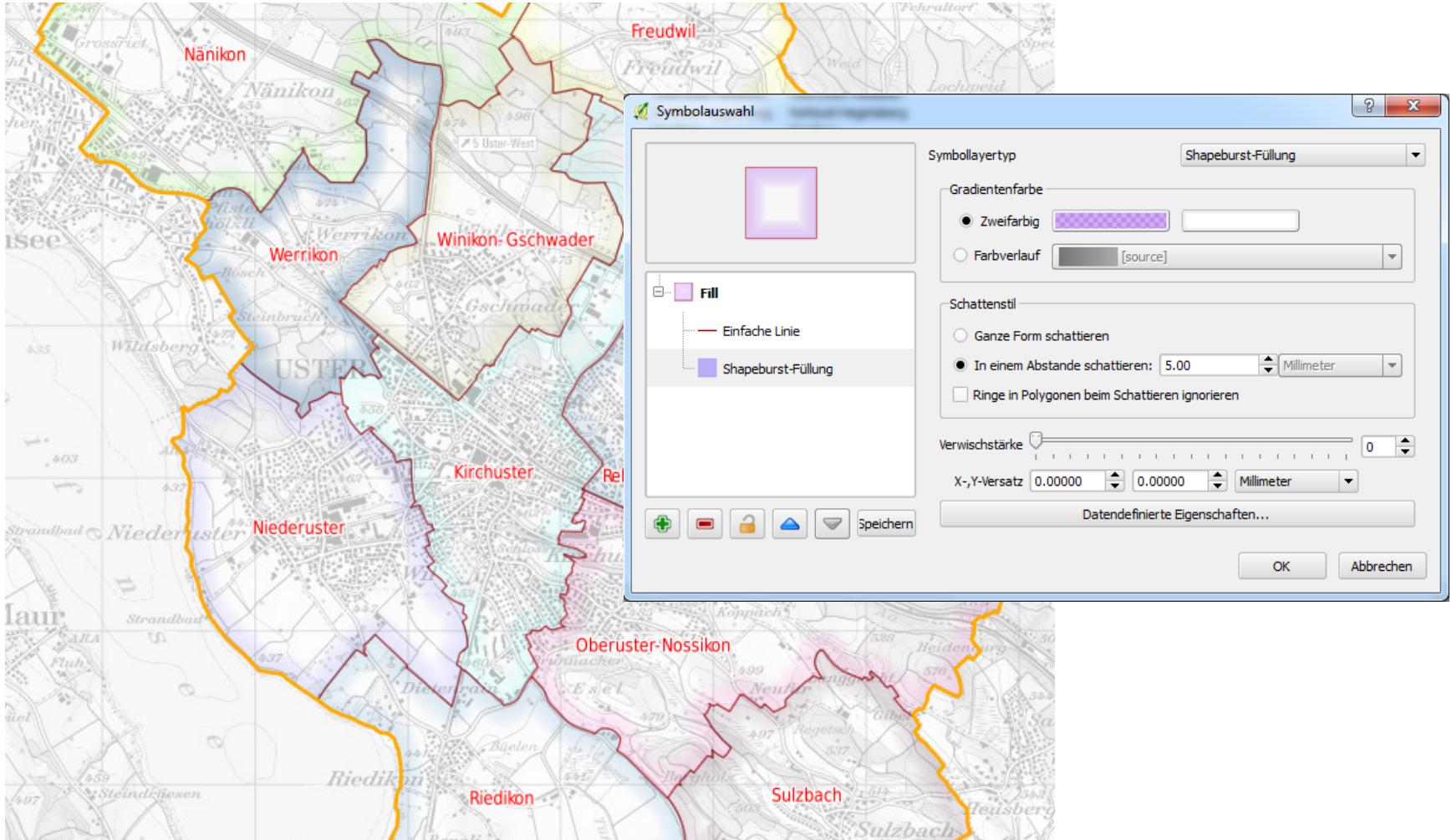


Viewport bounding
box mode

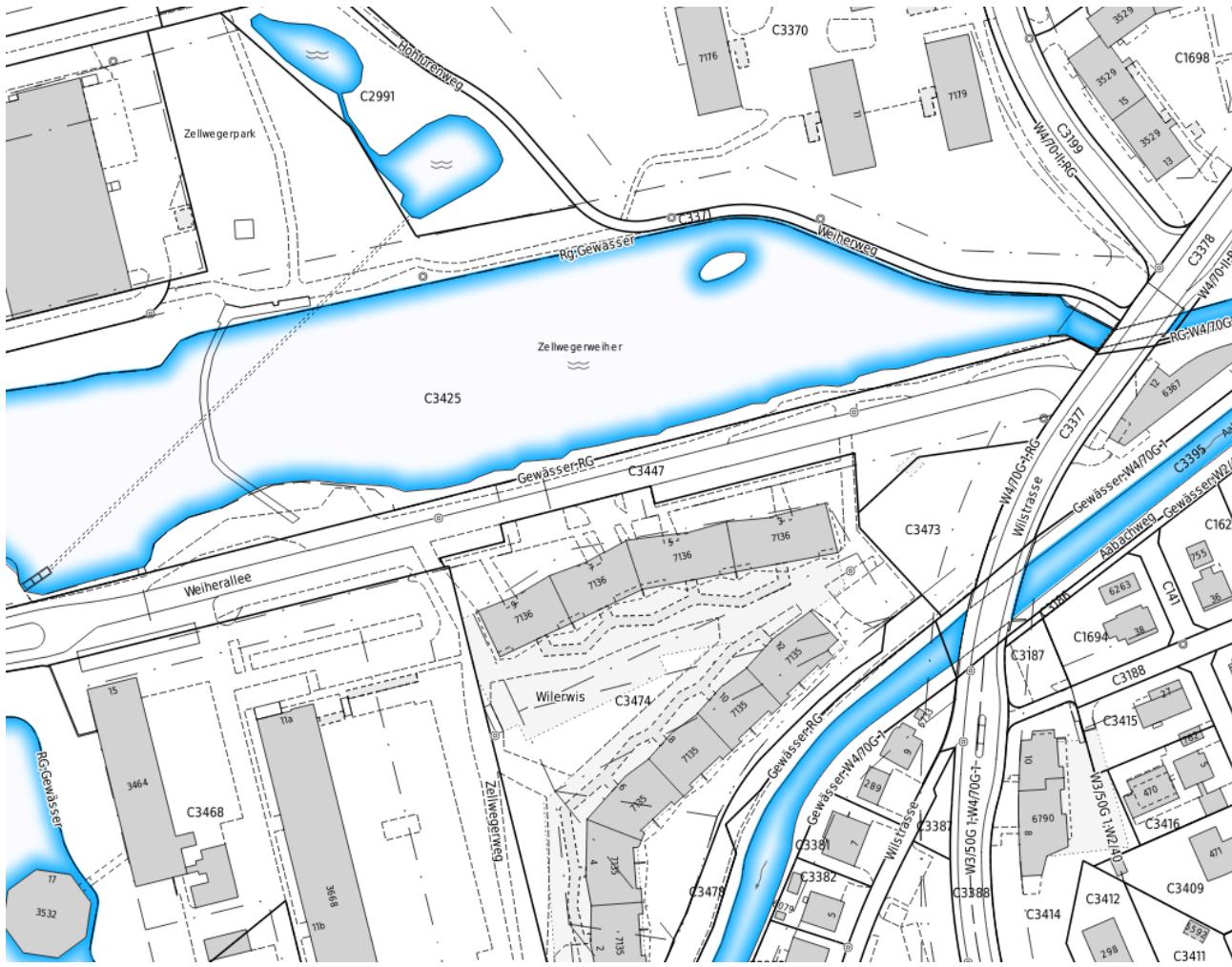
Symbology - Shapeburst Support (2.4)

- Shapeburst: Gradient that follows shape
- Two-color or ramp
- Supports alpha channel
- Linear, radial or conical
- Shade from border to center point or shade only in buffer along borders
- Opt additional blur effect to reduce spines
- Optionally ignore holes
- Supports data-defined properties with expressions

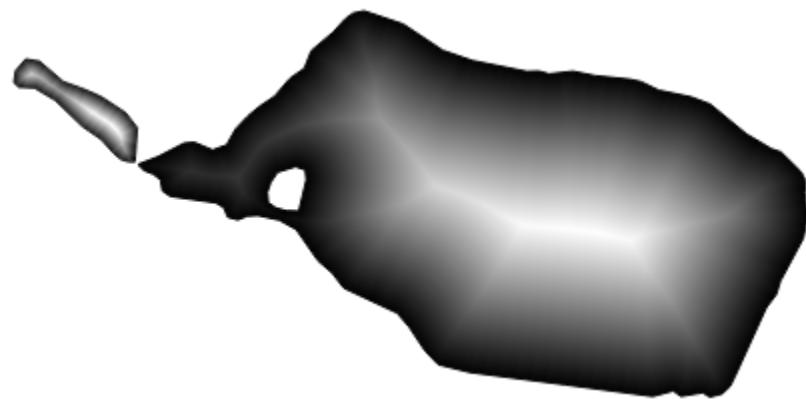
Symbology - Shapeburst Support (2.4)



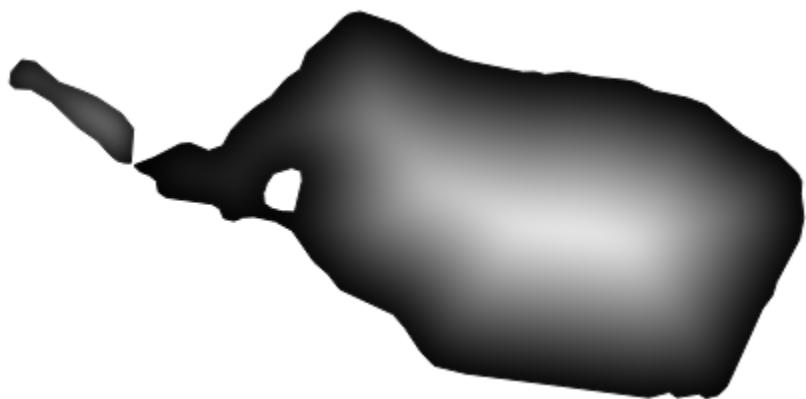
Symbology - Shapeburst Support (2.4)



Symbology - Shapeburst Support (2.4)

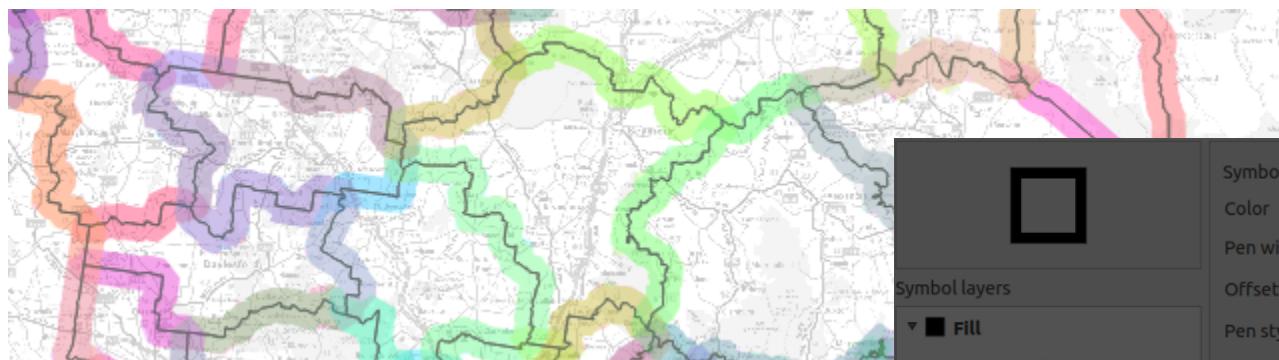


without blur

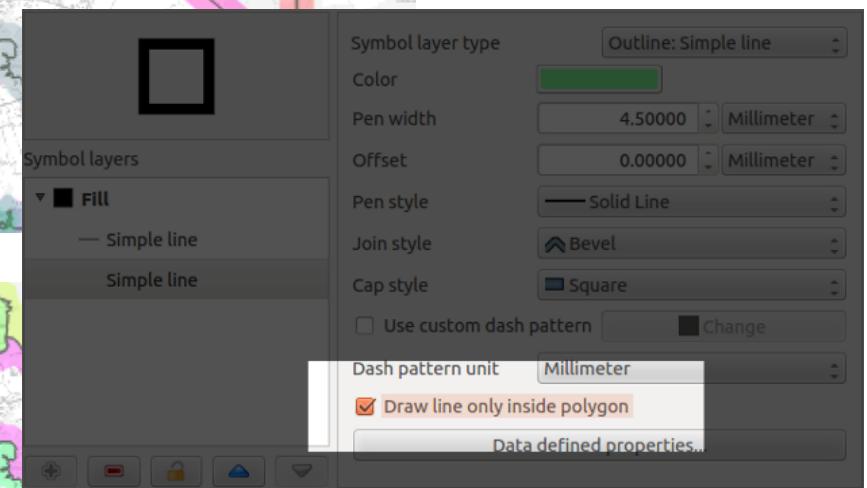
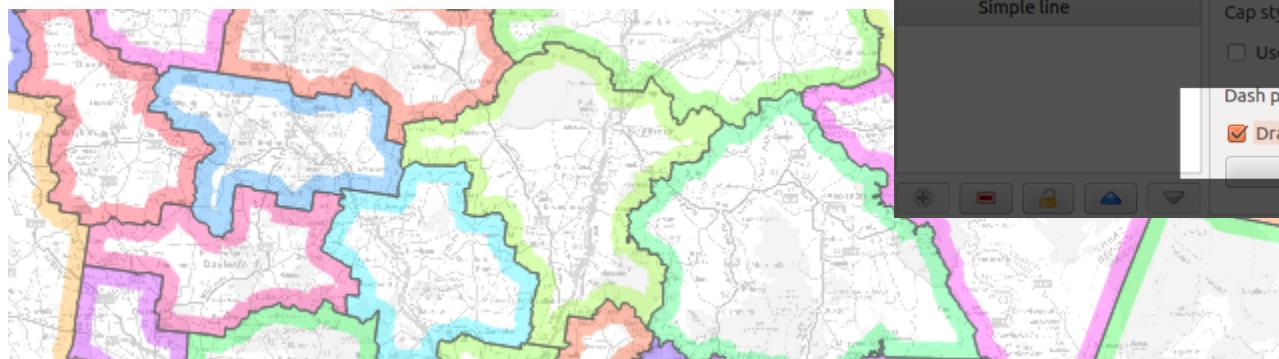


with blur to remove spines

Symbology - Draw line only inside polygon (2.2)



Default Centerline

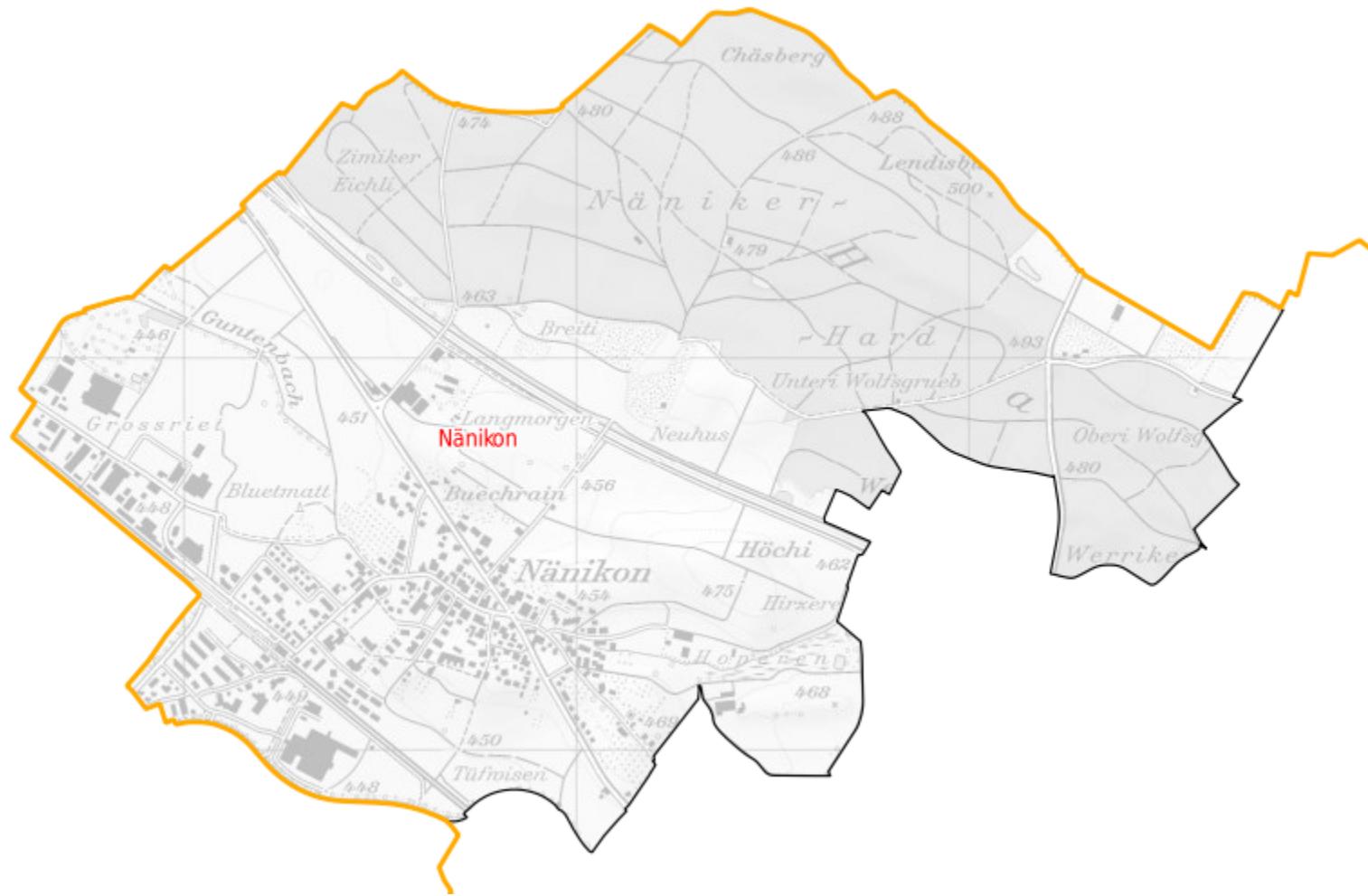


Draw line only inside polygon

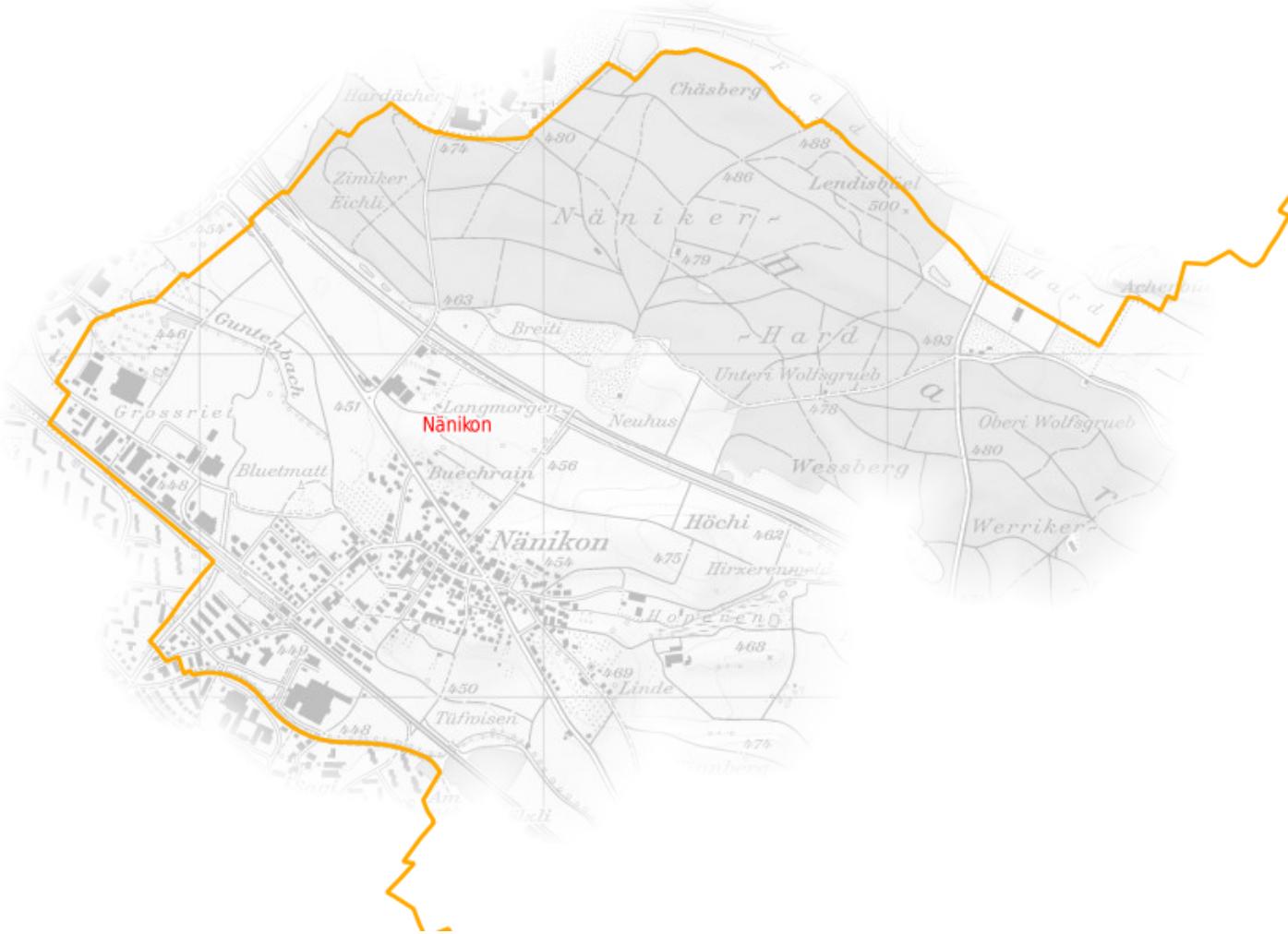
Symbology - Inverted Polygon Renderer (2.4)

- Used to show only certain features and cover others (like cookie cutter)
- You style everything that is outside of current feature
- Useful for showing only selected features in layers below
- Very useful for Serial Printing

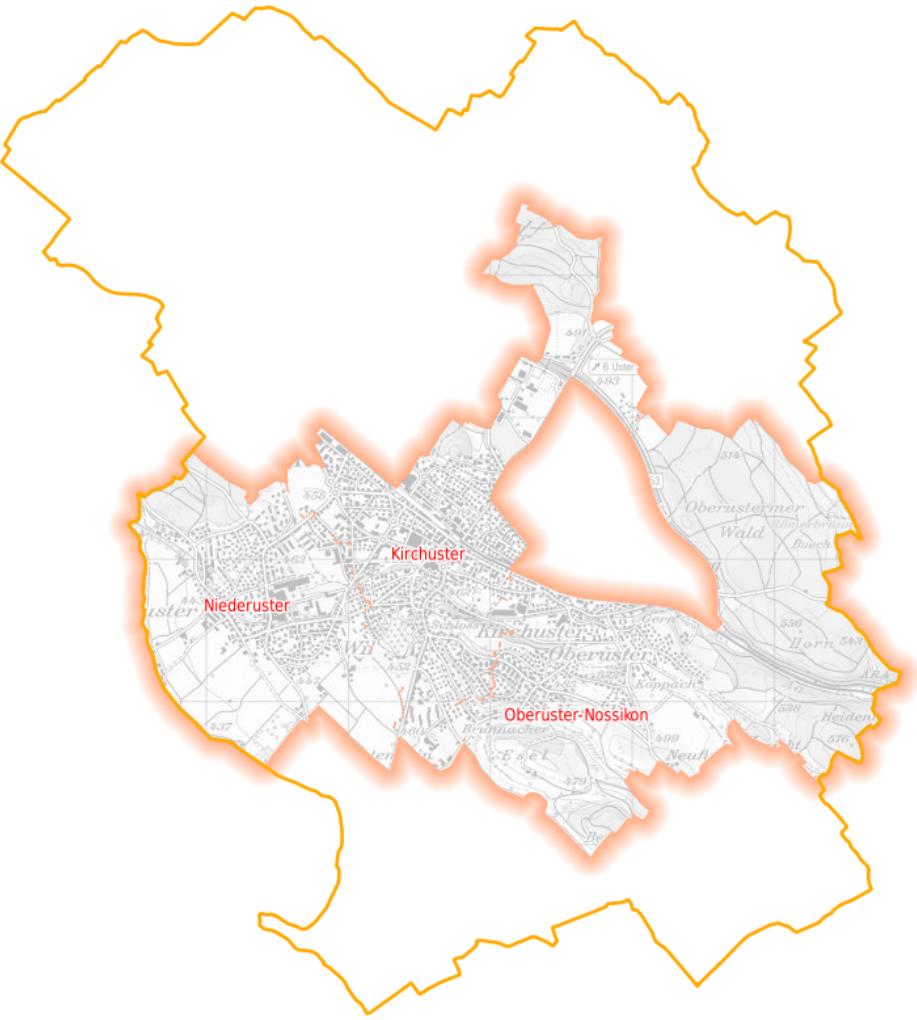
Symbology - Inverted Renderer (2.4)



Symbology - Combination Inverted Renderer and Shapeburst Support (2.4)



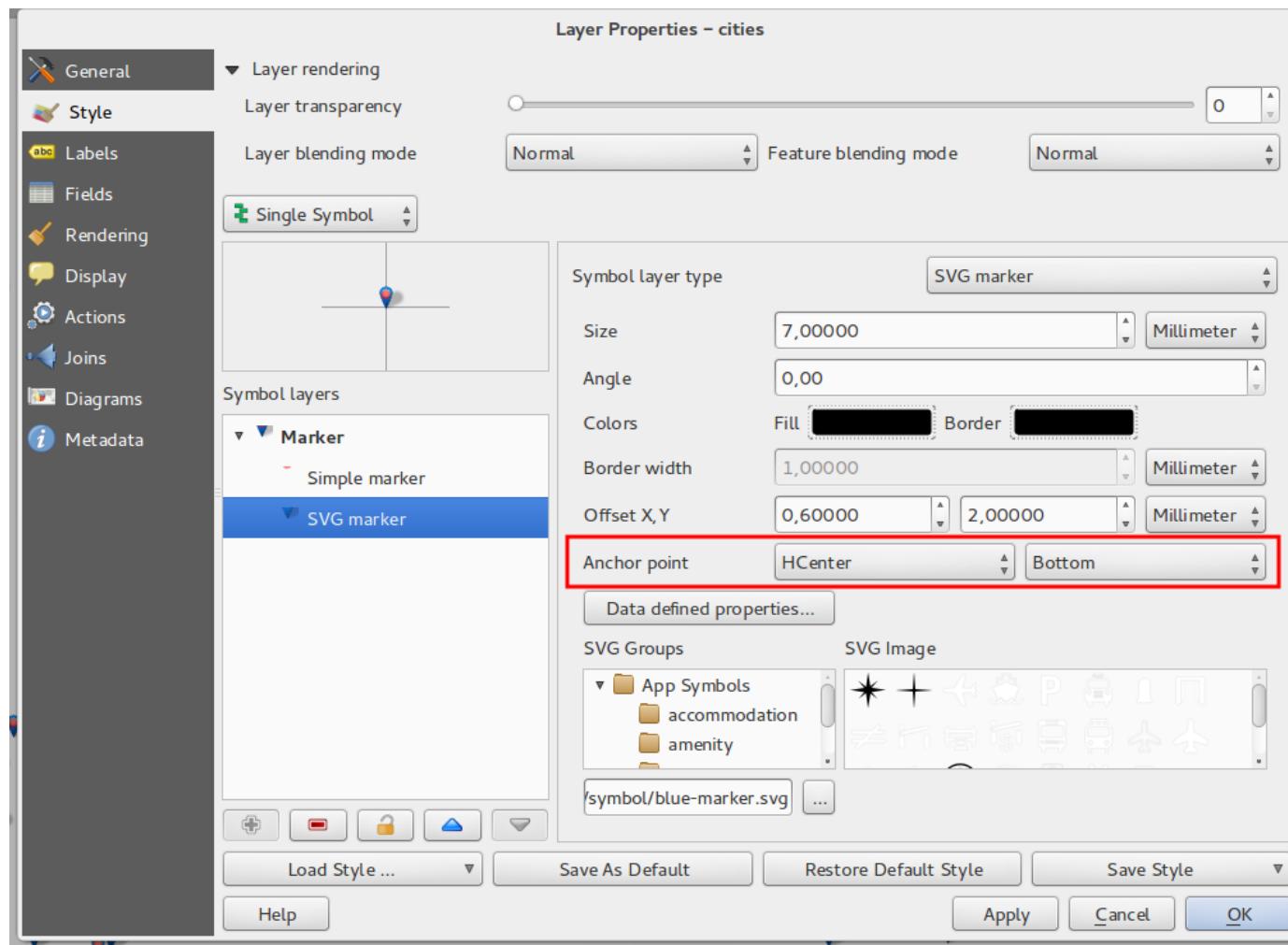
Symbology - Combination Inverted Renderer and Shapeburst Support (2.4)



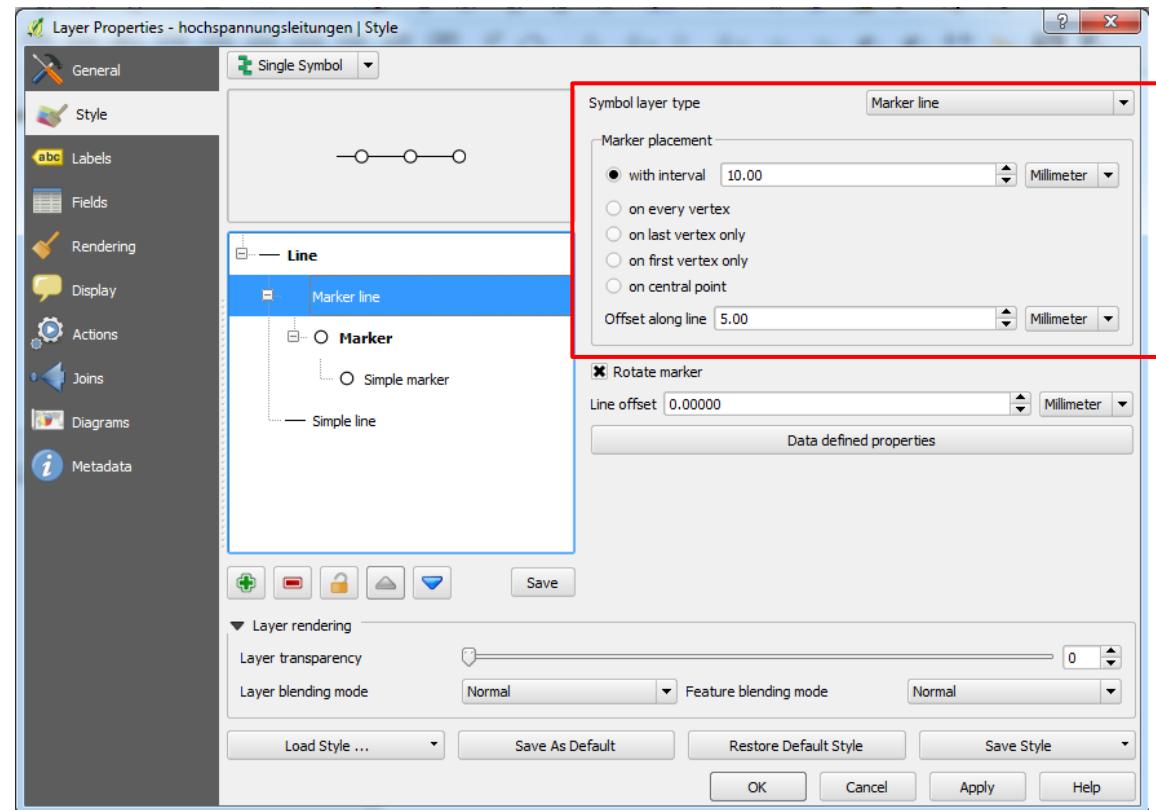
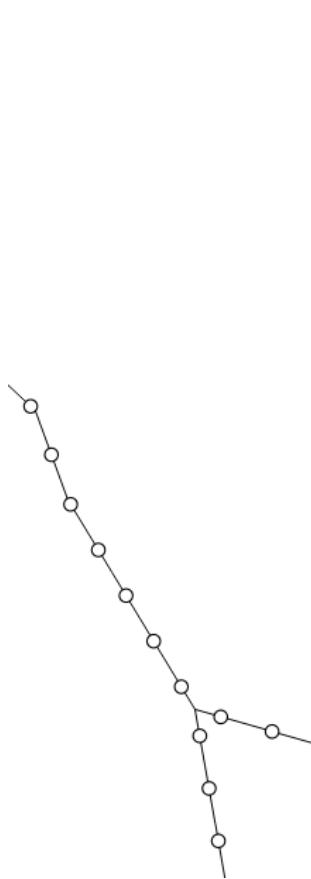
Symbology - Anchors for Point Symbols (2.2)

- Previously, symbols were always centered
- You could use offsets against center point
- Now you can horizontally and vertically align point symbols
- Very useful for scalable symbols that should only grow to the top/bottom or left/right

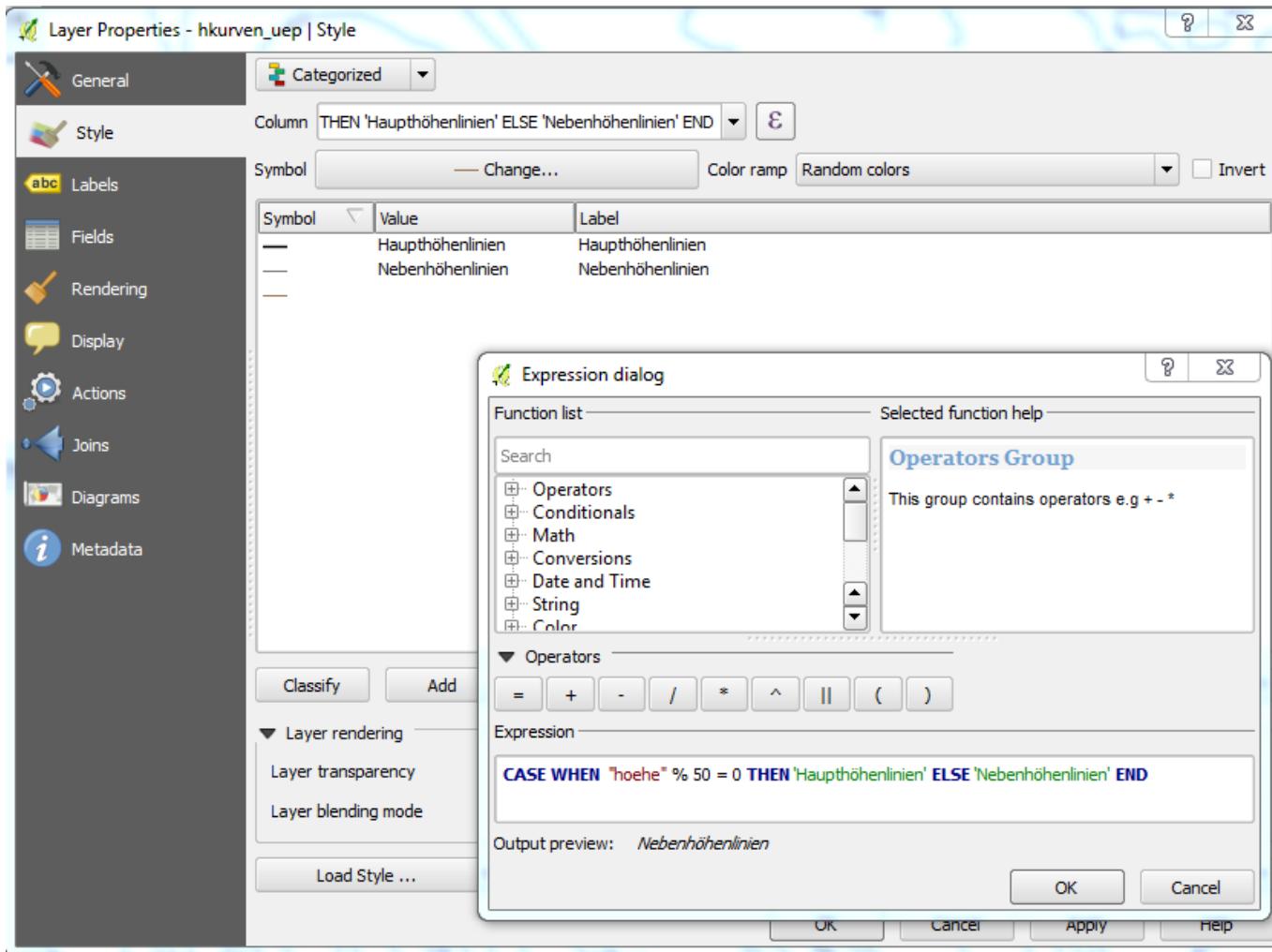
Symbology - Anchors for Point Symbols (2.2)



Symbology - Marker Line Offsets (2.4)

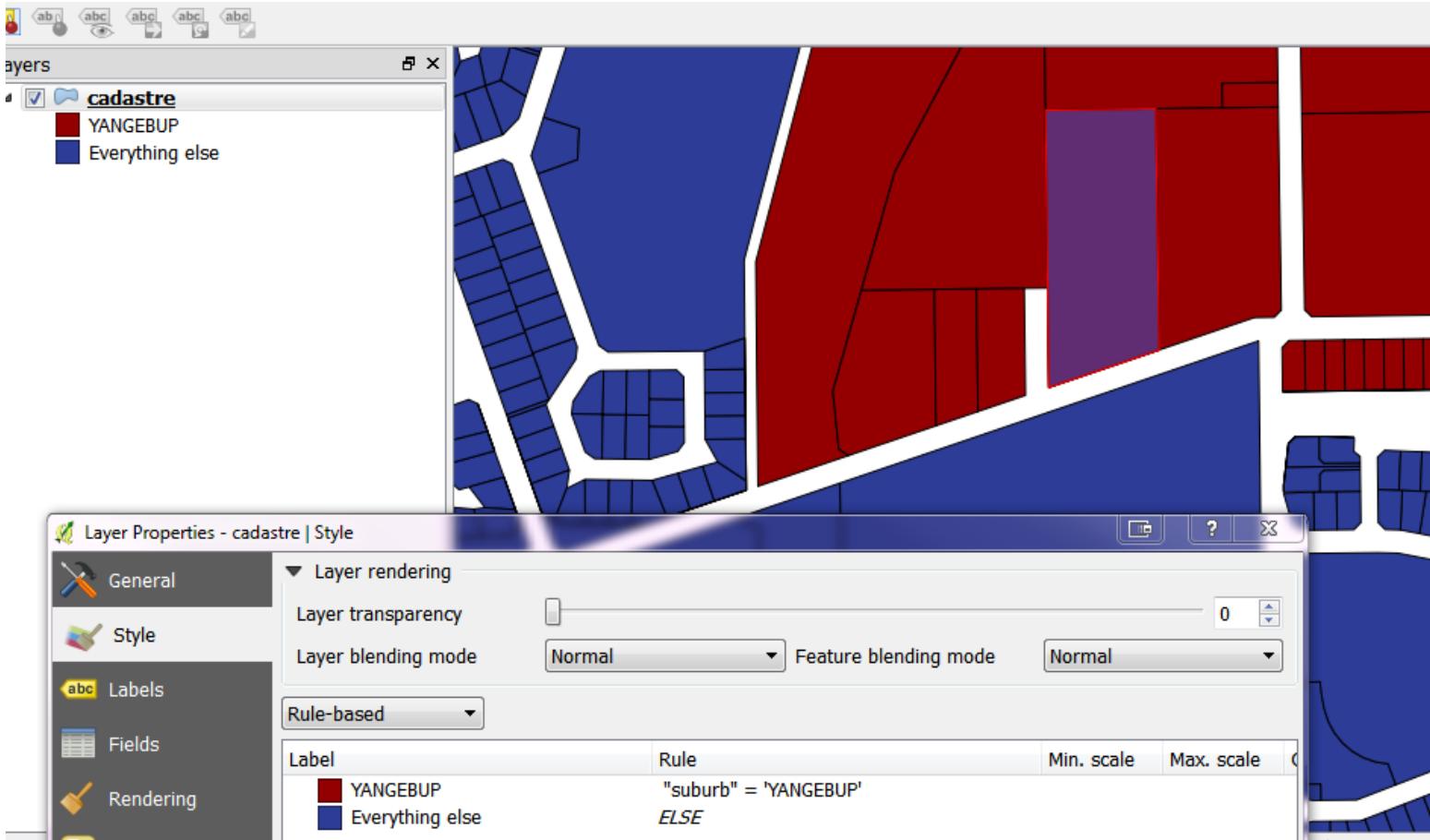


Symbology - Categorizations based on expressions (2.2)



Use categorized and graduated renderer with expressions

Symbology - Else Rule for Rule based Renderer (2.2)



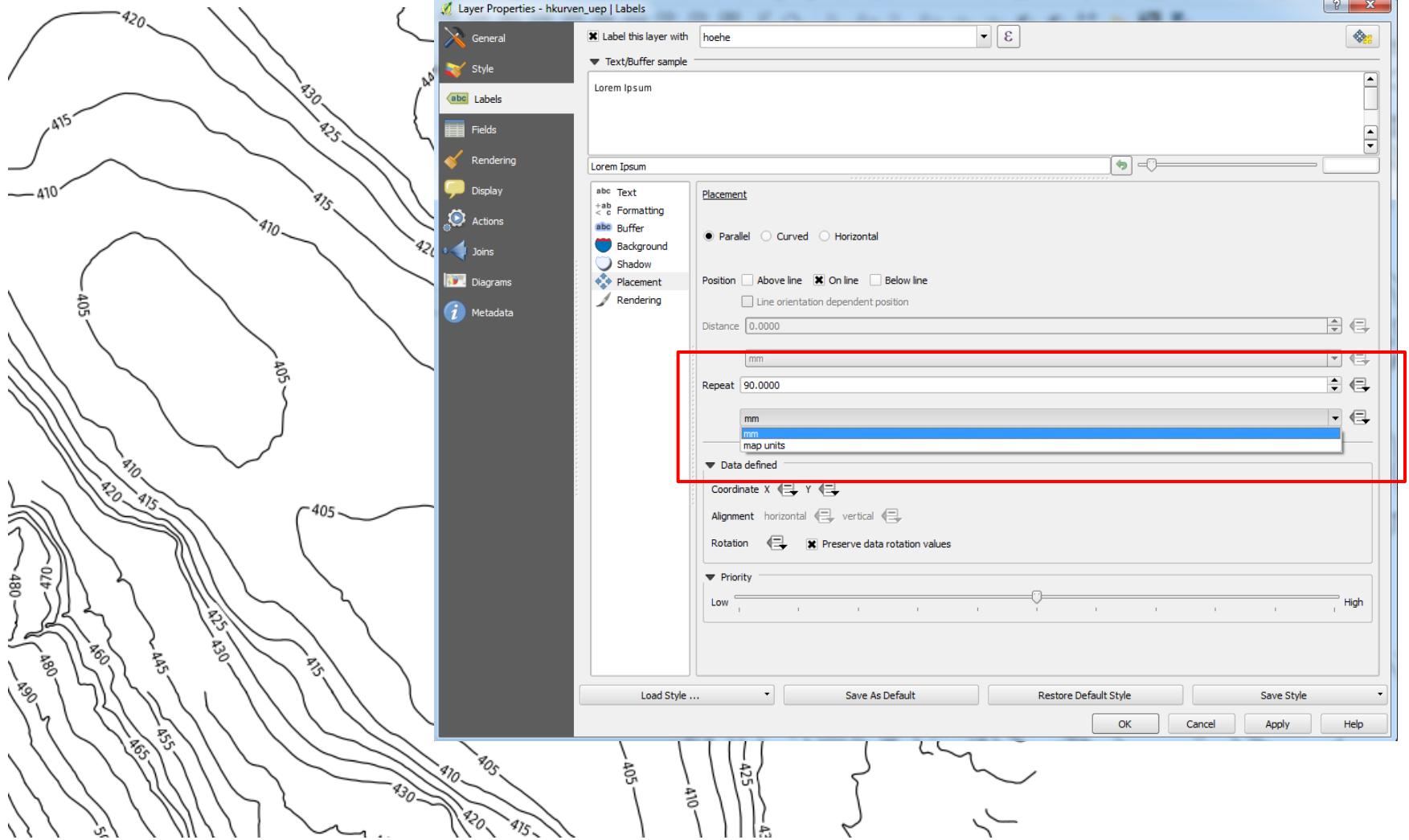
Applied when all other rules do not apply

Labeling Improvements (2.2 + 2.4)

- Horizontal and Free Labeling for polygons now render faster
- Lines can be repeatedly labeled



Labeling Improvements (2.2 + 2.4)



Print composer (2.2 + 2.4)

- Various improvements to usability
 - Select elements by mouse drag
 - Rectangle zoom, mouse wheel zoom
 - Zoom to actual size
- Rotation for all map elements
- Shape styling / canvas styling
- Grayscale / colour blindness preview
- Pictures
 - data source with expressions
 - horizontal/vertical alignments
 - sizing modes
- Better page breaks in HTML frames

Atlas serial printing (2.2 + 2.4)

- Atlas preview in composer
- Support multiple map styles with \$map variable
- Several atlas controlled maps
- Pick closest round map scale from provided list of scales
- More details in the afternoon workshop

Tables - Quick Calcbar (2.4)

Attribute table - hkurven_uep :: Features total: 834, filtered: 834, selected: 0

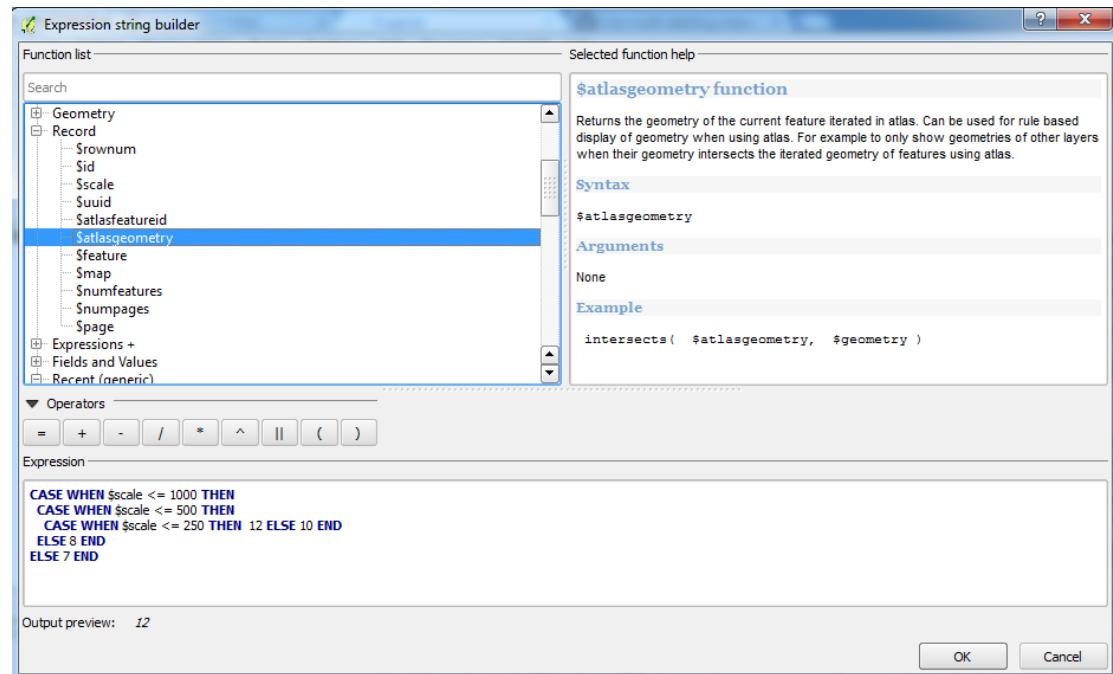
length = round(\$length,2) Update All

	gid	length	hkurven_id	hoehe
0	1	1829.83	4459	555
1	2	55.05	4481	570
2	3	761.12	4491	475
3	4	141.75	4497	570
4	5	334.11	4501	485
5	6	1095.71	4506	535
6	7	464.25	4509	485
7	8	73.57	4510	485
8	9	165.96	4513	560
9	801	4266.58	30787	500
10	802	6021.2	30788	500
11	14	412.22	4541	535
12	803	4802.31	30831	510

Show All Features

Expressions Improvements (2.2 + 2.4)

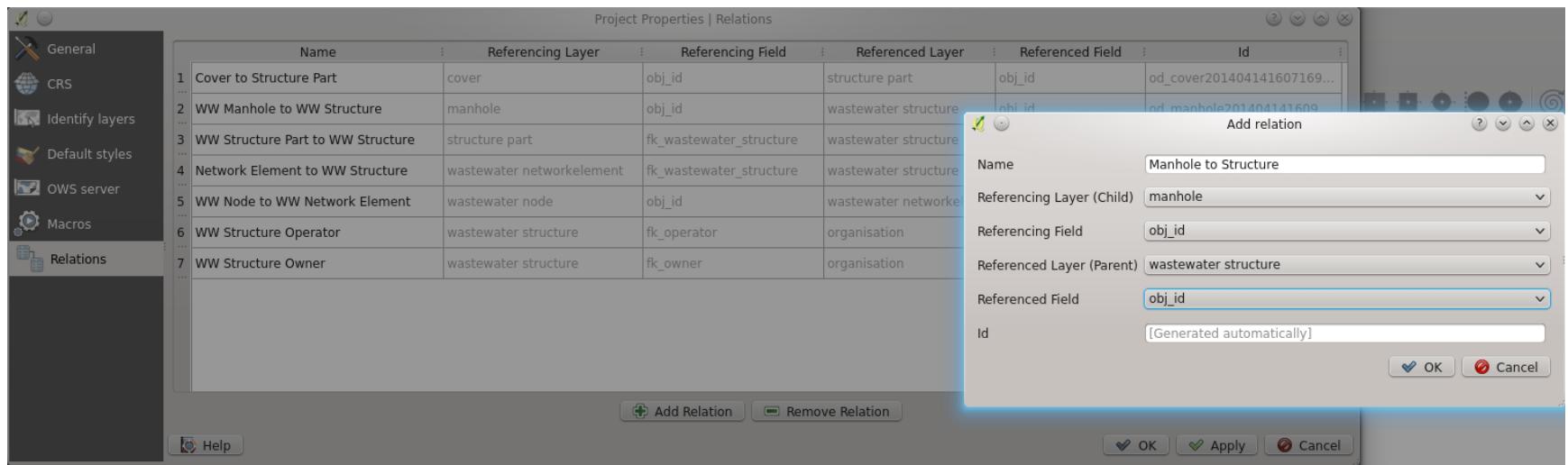
- List of recent expressions
- New expressions for print composer and atlas serial printing - More to come in version 2.6



Forms and relations (2.2 + 2.4)

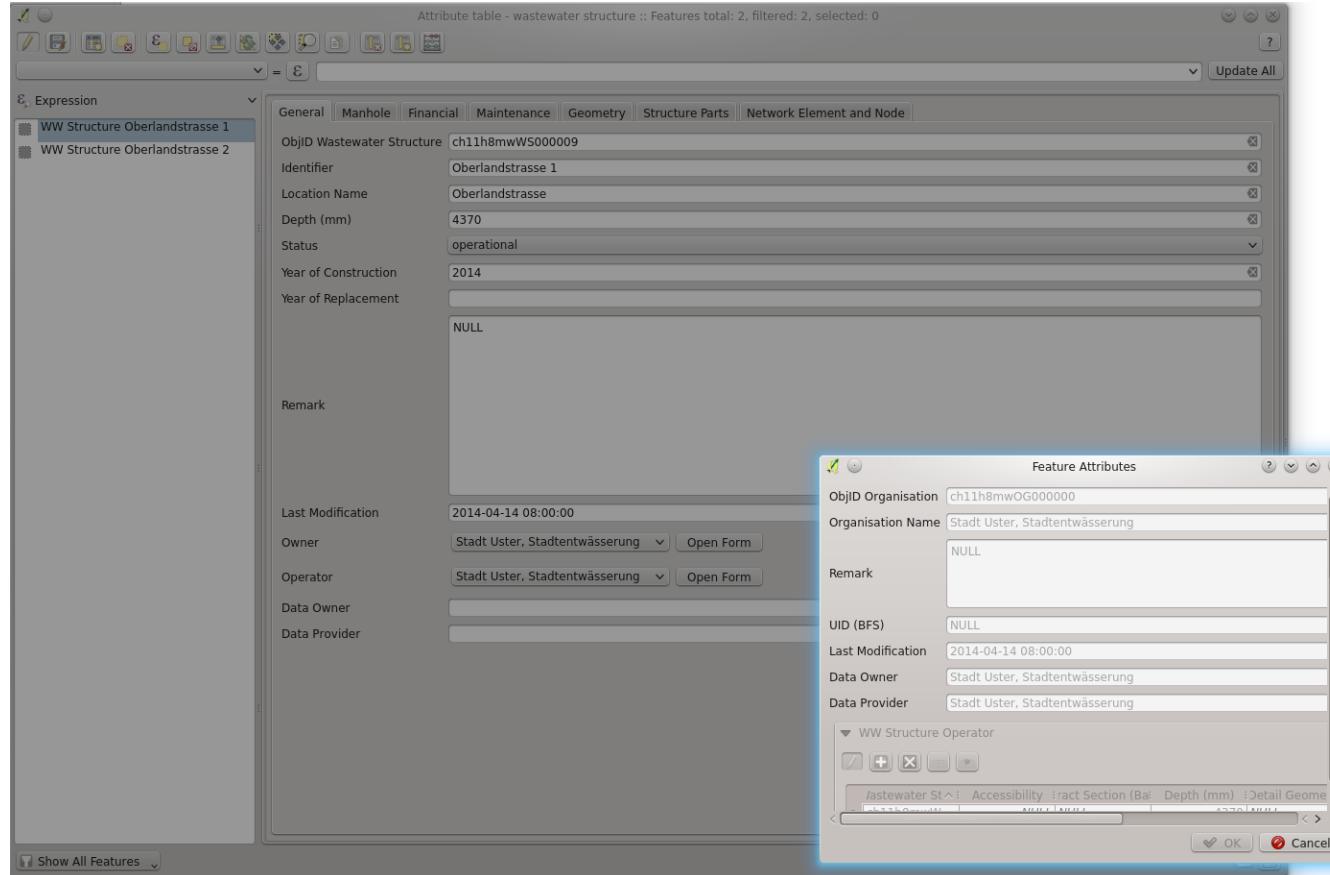
- Relations manager (cross-datasource relations)
- 1:n relations
- Relation reference widget
 - open in separate dialogue
 - as embedded form

Forms and relations (2.2 + 2.4)



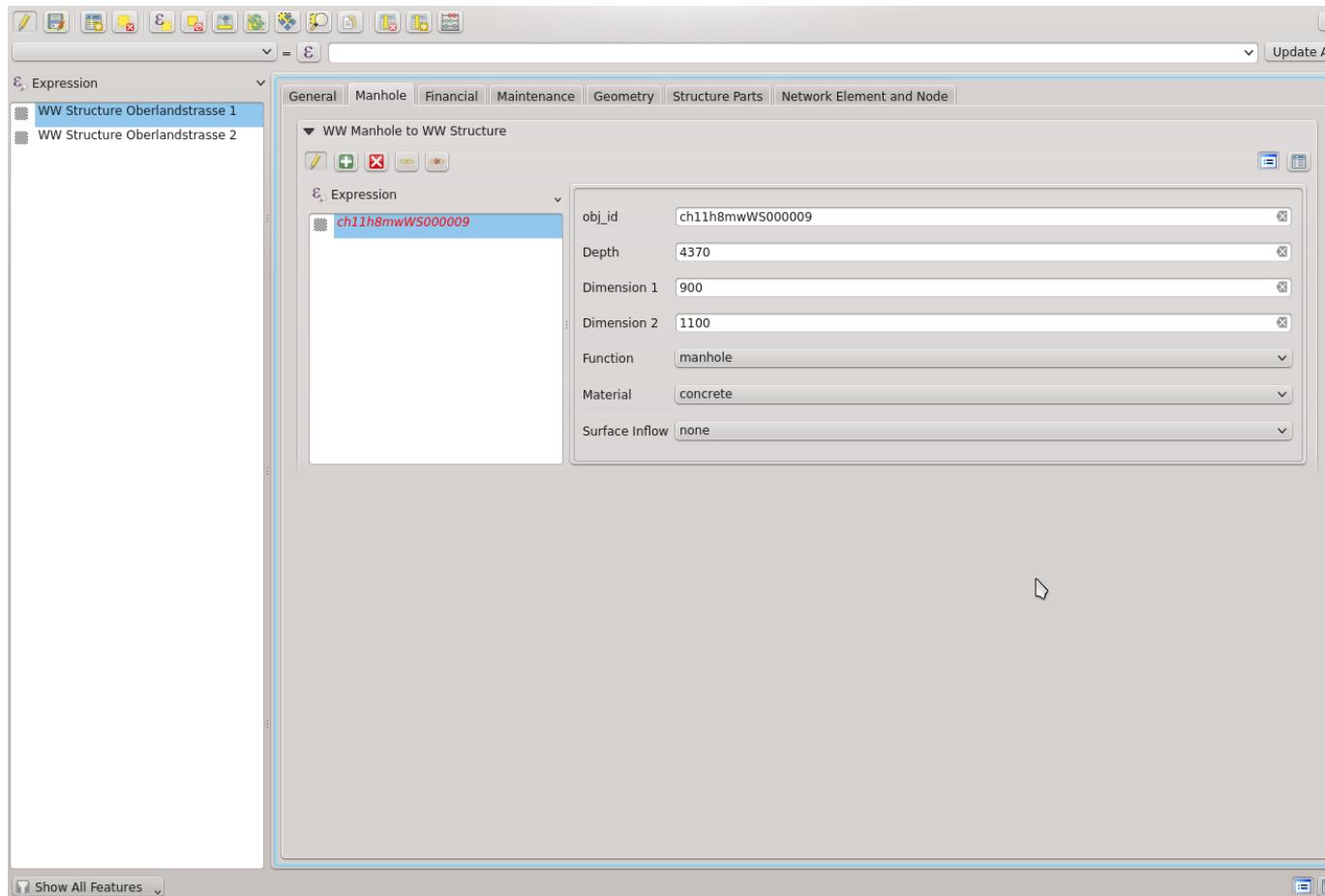
Relations Manager - allows cross-data source references

Forms and relations (2.2 + 2.4)



Sample with separate form to open (relation reference widget)

Forms and relations (2.2 + 2.4)



Sample with embedded form (relation reference widget)

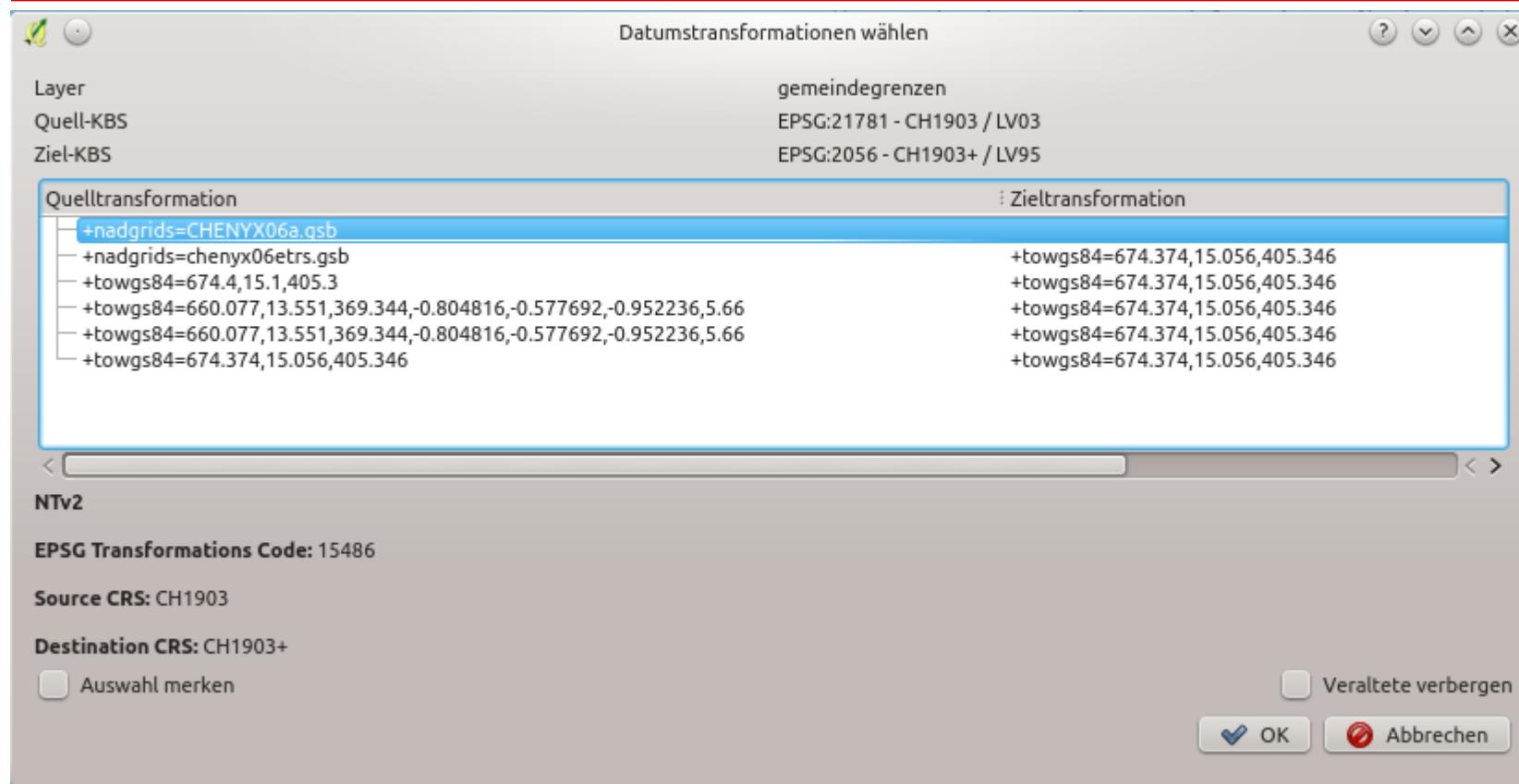
Forms and relations Todo (2.6)

- more testing
- integrate joins and relations
- QGIS Expression to SQL expression translator
- special mode for 1:1 relations (hide left column since there is only one match)
- better handling of multi-table edits
- joins and relations should be better usable in symbology and labeling
- aggregate expressions

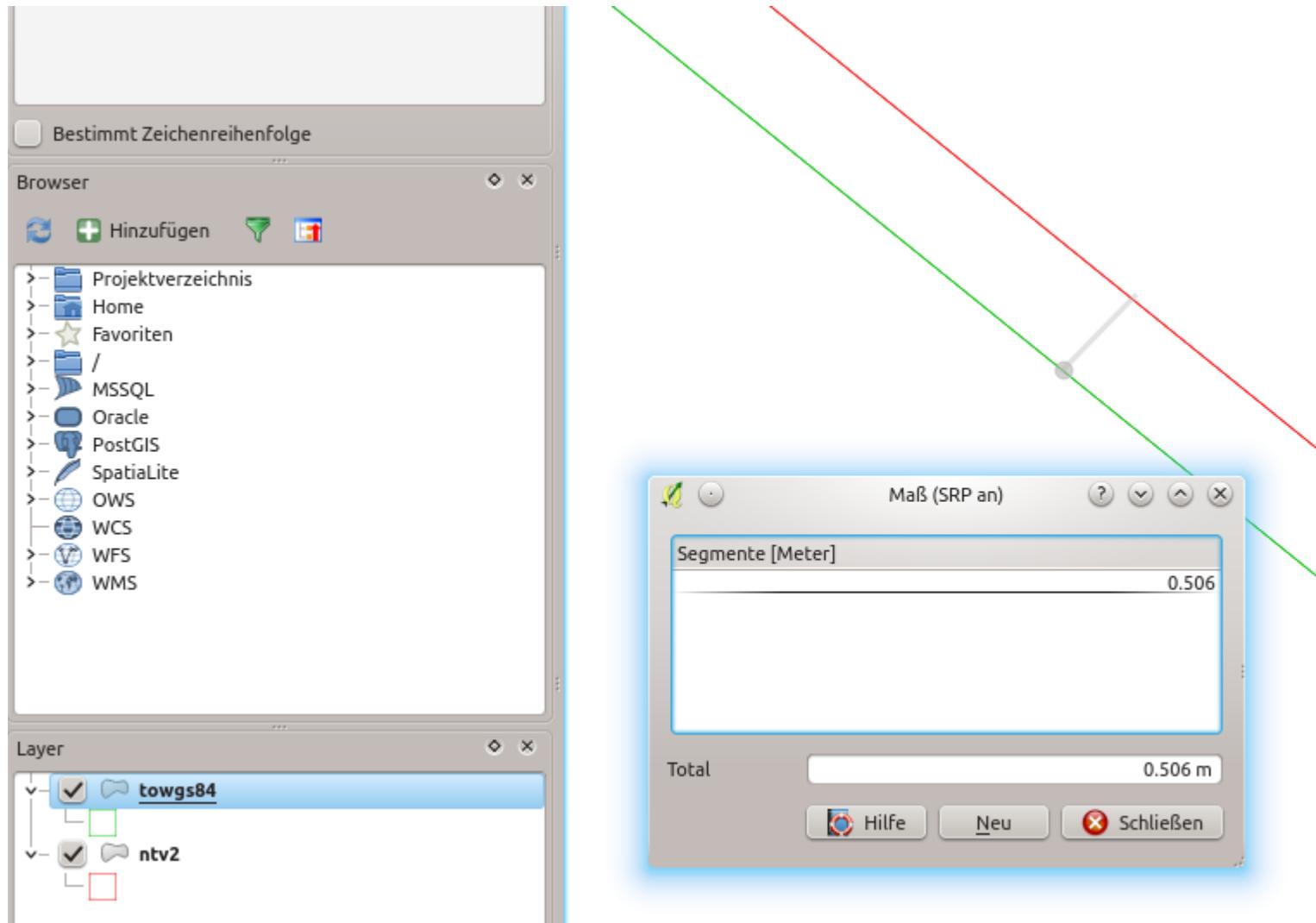
Datum transformations (2.2)

- QGIS 2.2: datum transformation configurable
- NTv2 grid shift transformations can be used
- Transformation LV03 -> LV95 with CHENYX06a.gsb
- Configuration options about when user should be asked for datum transformation

Datum transformations (2.2)



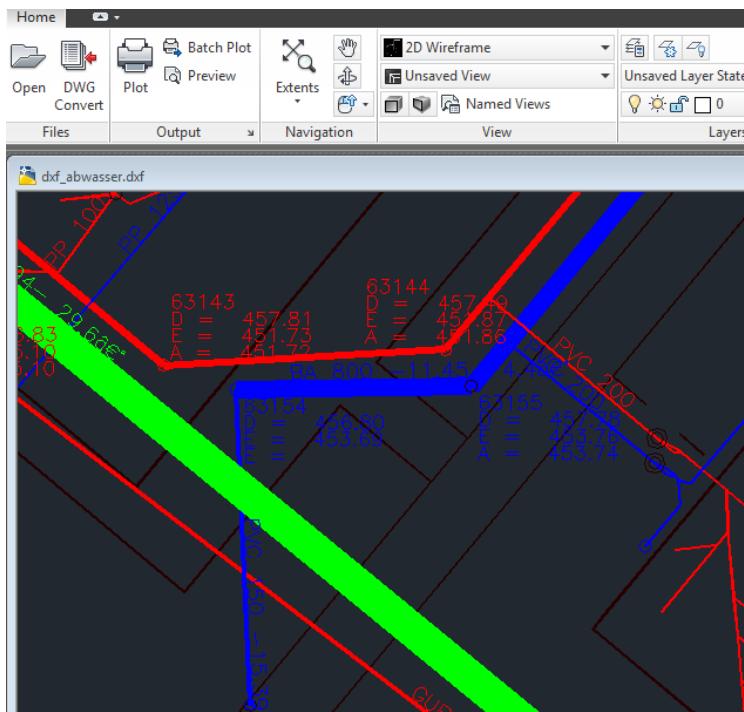
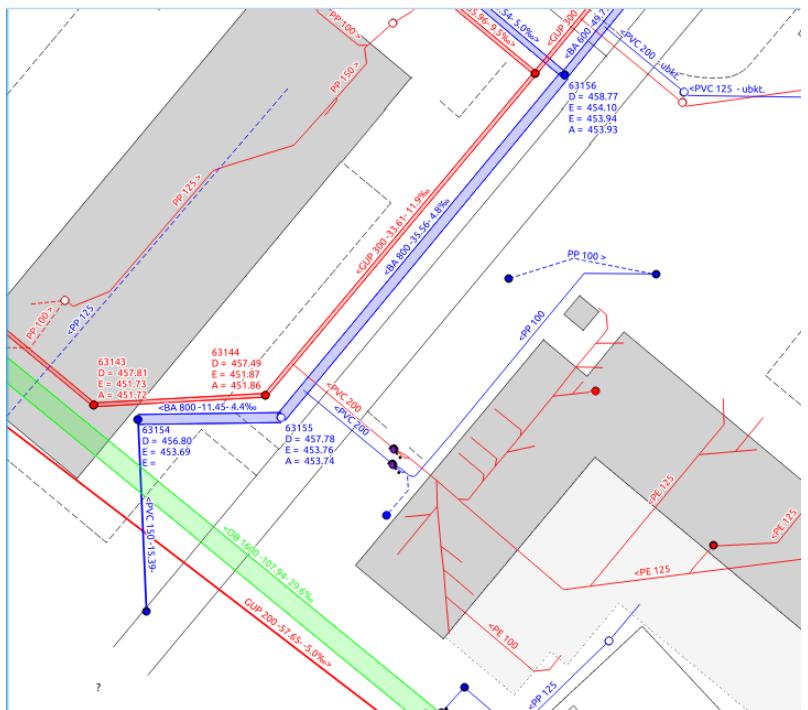
Datum transformations (2.2)



DXF export (2.2 + 2.4)

- Native export
- Considers symbology as much as possible
- Label export
- Version: AC1009
- Pending: polygon fills, probably with solid pattern

DXF export (2.2 + 2.4)



Under the hood improvements (2.4)

- Multithreaded rendering
 - < 2.4: Rendering in GUI-thread, application is blocked
 - 2.4: Each layer renders image in own thread, images are combined
 - Rendering can be canceled before the whole map has rendered
- Legend redesign -> access to legend for plugins

Credits

- To all who paid for new features / bug fixing
 - QGIS-CH
 - SIGE
 - Uster, Morges, Vevey
 - Solothurn, Glarus, Basel Land
 - Agence de l'eau Adour Garonne
 - World Bank / Inasafe
- To all who developed the new functionality
 - Nyall Dawson
 - Martin Dobias
 - Jürgen Fischer
 - Marco Hugentobler
 - Matthias Kuhn
 - Sandro Mani
 - Hugo Mercier
 - Denis Rouzaud
 - Nathan Woodrow

list is not complete ...