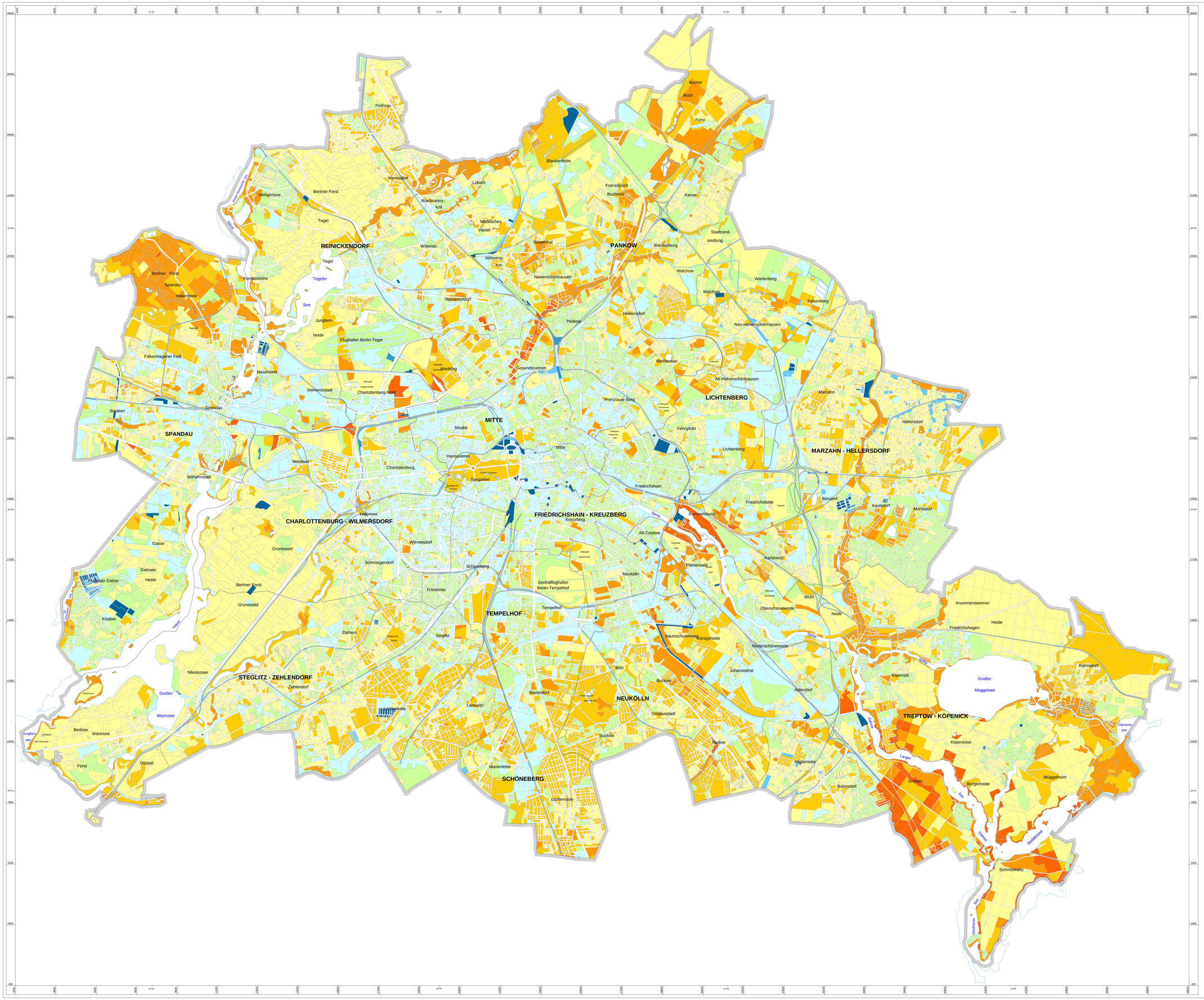

Environmental Atlas Berlin

Percolation from Precipitation

without consideration of surface sealing

Long term Mean Values
in mm /a

- < 0
- 0 - 50
- > 50 - 100
- > 100 - 150
- > 150 - 200
- > 200 - 250
- > 250 - 300
- > 300 - 350
- > 350

1. A comlex model for the calculation of surface runoff (overland flow) and percolation was developed and programmed by the Berlin Federal Institut of Hydrology. The calculation procedure uses data from the Berlin Urban and Environmental Information System. First the total runoff (precipitation minus evaporation) was determined for the approx. 25,000 individual areas and then surface runoff and percolation were determined.
2. The amount of water percolated is particularly dependent on vegetation, soil size and type of sealing, and the degree of connection of sealed surfaces to the sewer systems.
3. The glacial marl flat uplands discharge part of percolation underground into bodies of water. This is discharged as surface water. This amount does not reach into the groundwater.
4. Areas with near-surface groundwater have greater rates of evaporation because of capillary rise of groundwater into the soil zone influenced by evaporation. If real evaporation exceeds precipitation, then groundwater depletion occurs.

Scale: 1 : 50 000

0 0,5 1 1,5 2 2,5 3 3,5 4 4,5 5 km

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Special Section Communication

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Editing:	III F 1
Data:	Data from the Urban and Environmental Information System Berlin (ISU): - Land use (2001) - Precipitation (longterm mean values 1961-1990) - Vegetation structure (1999) - Utilizable capillary capacity (2001) - Depth to groundwater (edition 2002)
Data processing and map production:	III F 1, Josef Gerstenberg using the Urban and Environmental Information System (ISU) Ber and the ABIMO-model developed at the Federal Institution for Hydrography in Berlin
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Based on the maps:	Digital map 1 : 50 000 ISU-Berlin (edition 2001)

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