

Practical experience and methodology in flood protection in the City of Dortmund



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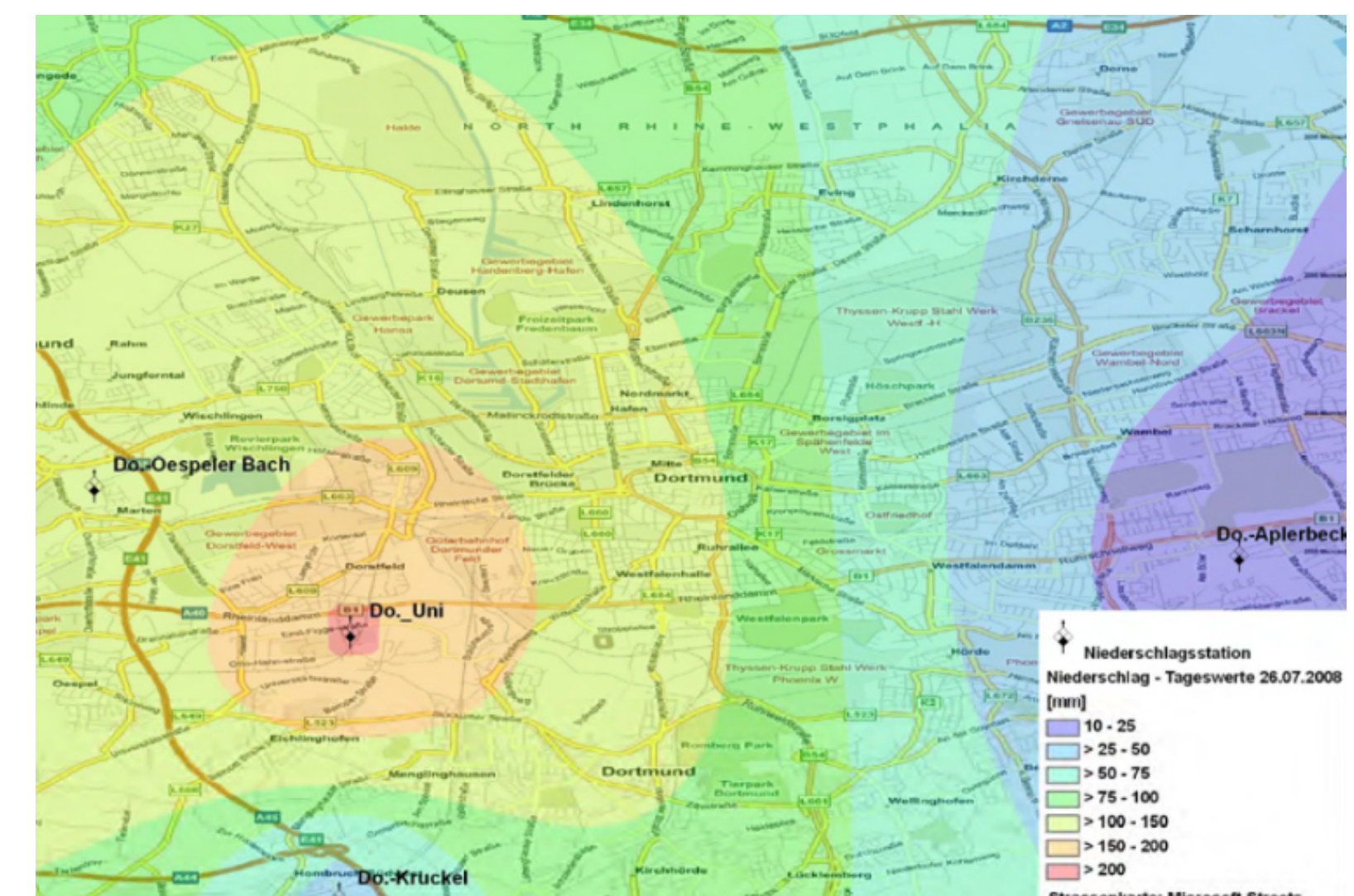
Stadt Dortmund
Feuerwehr





Floods in Dortmund?

- Dortmund is located in the catchment area of three river-systems
 - Ruhr
 - Emscher
 - Lippe/ Seseke
- No (relevant) problems concerning floods resulting out of this rivers
- During 3h the amount of precipitation reached the level of 200 mm
 - ➔ More than double the average precipitation of July 2008
 - ➔ Reason: a “stationary” thunder cell, which led among others to hail and squalls

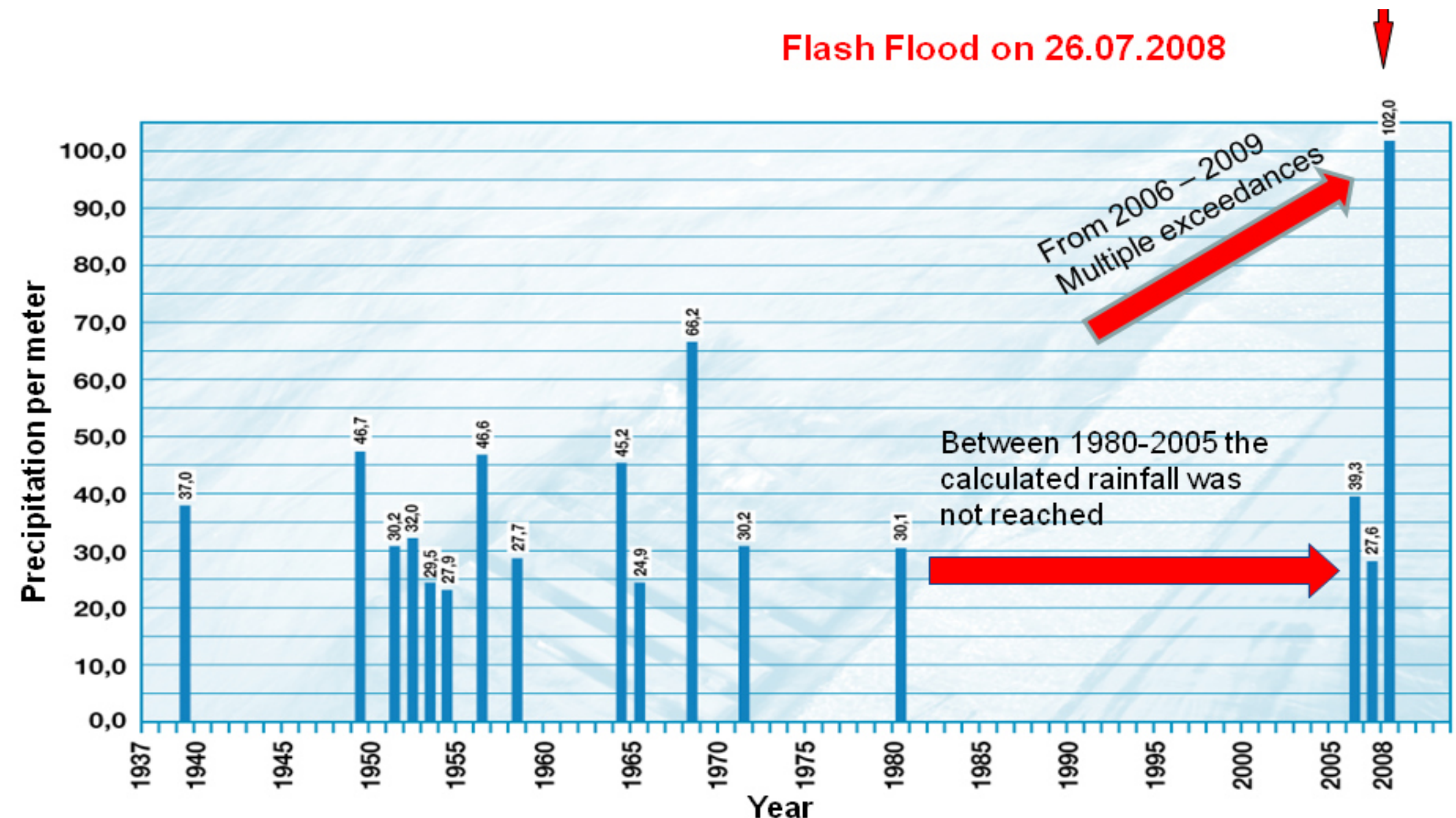




Intense rain records since 1937 (Gauge Dortmund Marten)

Statements of an expertise

- 100-year event
- Urban drainage system was completely functional but not designed for such an event
- Need for taking into account the EU Flood Risk Management Plans
- Establishment of a municipal flood control officer





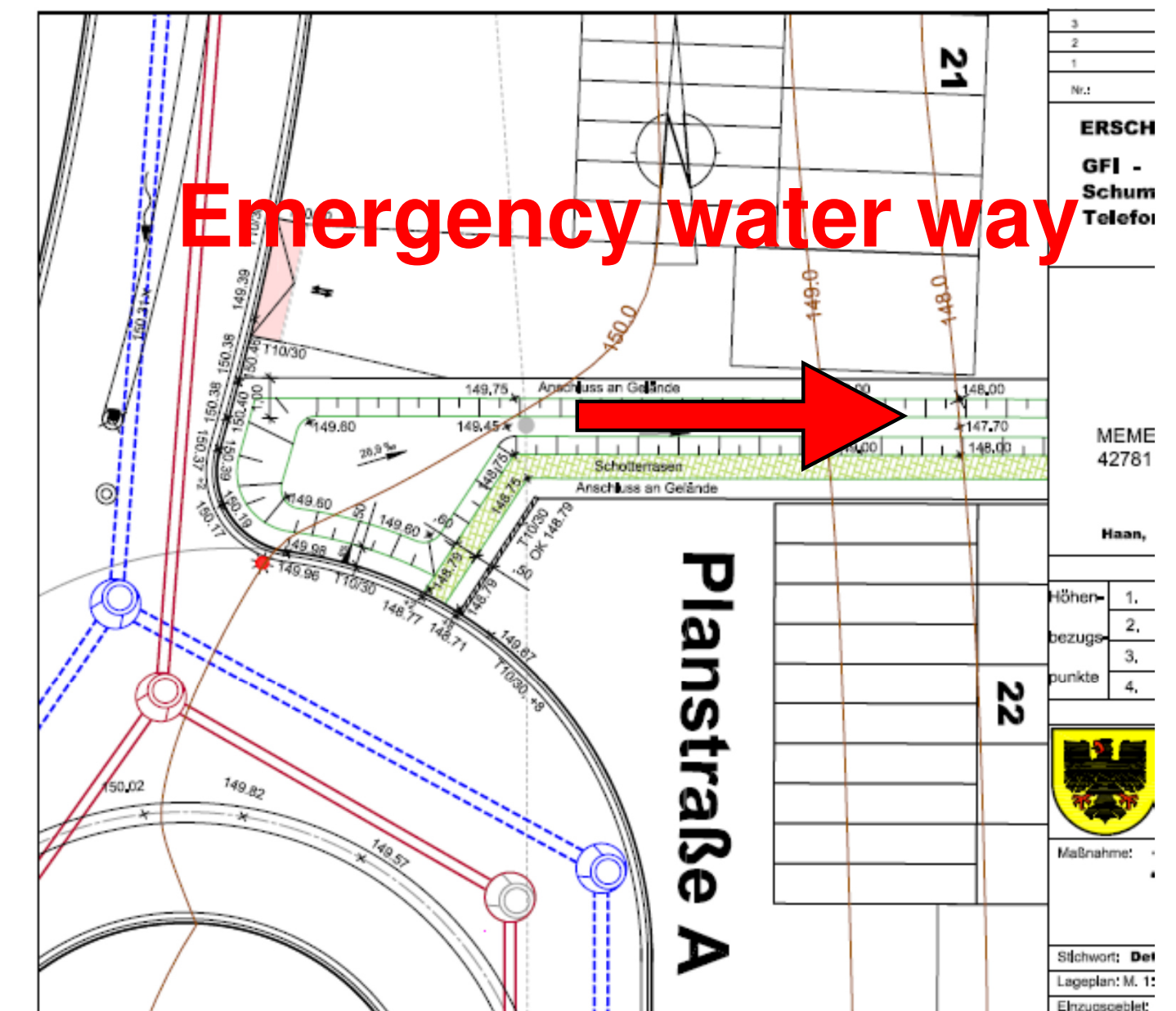
Administrative requirements

- Flood protection working group was launched
- Emergency plan „Civil Protection“ was elaborated (in cooperation with Fire Department and the Federal Agency for Technical Relief)
- Elaboration of an information flyer concerning flood prevention measures
- A hydrodynamic sewer network calculation to assess the flood risk of the urban sewer system has been carried out
- A municipal flood prevention officer has been appointed
- A general flood prevention plan (concerning water and sewage system) for Dortmund has been established
- The technical facilities have been improved, mobile high capacity flood pumps have been purchased

- Water bodies

- Is it ensured that the existing retention area remains?
- Is it ensured that there is no storage of substances hazardous to waters in the land-use plan?
- Is it ensured that no oil-heating will be realized?
- Is the area of the land-use plan located within an flood prone area (e.g. areas behind levees)? If so, was an appropriate risk assessment / analysis conducted?

- How is the drain of the run-off rain water managed (see § 51a of the state water law, decentralized infiltration, centralized infiltration, local disposal into a water body, combined sewer system etc.)



Implementation of the administrative requirements – Improvement of response capacity



Floods: Fire brigade upgraded with off-road vehicles and pumps

The fire brigade is ready for the next flood. Two new high capacity flood pumps and six off-road vehicles are in use for future natural disasters. Additionally, the Fire Department developed a program to strengthen and improve the response capacity (among others response time, extend of operations) during flood events.

