

The report carried out after the flood in 1997 showed that the city of Opole was not properly prepared for the arrival of a flood of such a scale.

The following areas have been classified as being most at risk of re-flooding of the Oder (Odra) River in the city of Opole:

- Metalchem Industrial Park, Pasięka Island, Bolko Island (Aglomeracja Opolska 2015).

On the Oder River, high water levels occur in the spring-summer period (months: March, May and July) and are mainly the result of intense rainfall occurring in the upper reaches of the Oder.

The small rivers flowing through the city of Opole have higher water levels mainly in summer (in the period of June-July).

Currently, the city is most exposed to floods from small rivers and watercourses: the Szczepanowicki Channel, the Półwieś Channel, the Moderz and Olszynka watercourses, the drainage ditch running through Grotowice.

After the flood in 1997, the following works were carried out: modernization of the embankments and the completion of the Ulga Channel (Opole junction) (Aglomeracja Opolska 2015).

An important element securing the city is also the Racibórz Reservoir commissioned in 2020 - with a capacity of 185 million m³, the polder surface – 26 km², the impact of the reservoir - flood protection, will be provided within the radius of 600 km² (Januszek 2020). (view of the Racibórz Reservoir: <https://www.youtube.com/watch?v=QD28AdwDil4>)

Protection of the city of Opole in the event of a flood (the city's safety measures outside its borders are not discussed here): in the city of Opole there are numerous hydrotechnical structures protecting the city from the immediate danger of flooding: the structure closing the Młynówka inlet and the flood gate at its outlet - thanks to which the protection of the old town and buildings on the Pasięka Island is provided.

Old hydrotechnical structures have also been retained - the overflow weir on the Młynówka Canal.

Other security features include: closed openings in walls and on protective boulevards, modernized protective embankments (protection of Bolko and Pasięka Islands, western part of Opole and Zaodrże).

The flood that hit the city of Opole in 2010 showed that the solutions applied protect the city against the flood threat from the Oder River - the protection is provided for a flood wave with a height of 8 m.

It is anticipated that in the following years (several years apart) there may also be phenomena related to a large flood wave (of large length and capacity) on the Oder River, which is associated with the possibility of another flood of a scale comparable to that of 1997, the water level would then have to be higher than that of 1997 (Aglomeracja Opolska 2015).

Interview with people from the Municipal Crisis Management Center in the city of Opole on 06.08.2019:

According to the interviewees, at present the greatest danger of local floods in the city is from small watercourses, which turn into rushing rivers as a result of heavy rainfall.

At the same time, the unit of the city office estimates that the city is very well prepared for the crisis related to local floods and flooding. The anti-flood infrastructure has been significantly expanded.

After 1997, when the city struggled with the so-called "Millennium Flood" - the greatest floods occurred in 2010.

According to the interviewees, the best prepared group of people for the coming disaster related to floods is the one that survived the flood in 1997. It is an extremely organized and cooperating community. These are its representatives / neighbors who inform new residents about the dangers of living on Pasięka Island. They come and talk:

"Our new neighbor, you will be living in a place that may be flooded, in case of disturbing forecasts, be prepared to escape, buy an extra loaf of bread."

An important element of preventive measures in the city are the services of the Volunteer Fire Brigade, these units constantly monitor their area in terms of extreme phenomena.

According to the people from the city crisis management center, the most important element of an efficient rescue operation in the event of a disaster is counteracting panic amongst the public. People must be taught how to respond to such event. They must also follow any and all recommendations of the services. It is also important for the public to behave adequately to the situation:

“Often we deal with such behavior that while securing a given place by services with sandbags - in order to protect it against possible flooding - the local community does not help in these activities, but they only watch. There are also situations where local residents steal, destroy the prepared fortifications, taking out sacks and placing them in front of their own properties. ”

Schools are an important element in the plans for evacuating people from endangered areas, where a given community is located in them in times of danger.

According to the interviewees, an important element of an efficient rescue system in the event of a disaster is adequate education, which is missing. Children and youth should be educated first of all. It is necessary to support the formation of neighborhood groups that will help each other in times of danger. Often the population is also not prepared for the fact that something unexpected and dangerous may happen.

Aglomeracja Opolska, 2015, *Program poprawy funkcjonowania systemu przeciwdziałania i ograniczania skutków występowania zjawisk ekstremalnych na obszarze Aglomeracji Opolskiej na lata 2015-2020*. https://www.aglomeracja-opolska.pl/sites/default/files/page/attachments/program_poprawy_w_ao_jako_zalacznik.pdf

Januszek M., 2020, *Zbiornik Racibórz Dolny: budowa na ukończeniu*, <https://inzynieria.com/geoinzynieria/wiadomosci/57741,zbiornik-raciborz-dolny-budowa-na-ukonczeniu>