

Industrial Wastewater Treatment in Warsaw

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KICK OFF in HELSINKI
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***Project BEST – Better Efficiency for Industrial Sewage Treatment
#R054 BEST***

Presentation's Content

- The Wastewater treatment plants in Warsaw and their operator
- The domestic/industrial wastewater delivery agreement
- Monitoring procedures
- Types of industrial wastewater
- Methods of pretreatment
- The challenging substances
- Do industrial wastewater affect WWTPs in Warsaw?
- Enlarging of the combine system capacity as an important factor of the process
- Changes of Water Law in Poland

Wastewater treatment plants in Warsaw



Wastewater management in Warsaw



MPWiK S.A.

**Municipal Water and Sewerage Enterprise is
a joint stock company
(100% property of Warsaw)**

**Operating since
1886**

**Employees
2159 people**

**Wastewater treated
capacity per year
180 mln m³**

**Sewage pipes length
4081 km**

The rules of the treatment of industrial wastewater



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The owner of industrial wastewater sends application to the Waterworks

The agreement is prepared with annex containing limits of harmful substances and procedures of monitoring

If the owner declares substances from black list (e.g. heavy metals) special water law permit is needed

An agreement is signed

Water law permit is given by environmental authorities

An agreement is signed

The rules of the treatment of industrial wastewater / monitoring



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Monitoring places:

- The place of industry
- The sewage pipe at the point of connection

Monitoring timetable in agreement

WWTP

**Monitoring is done by
Waterworks experts**

The types of industrial wastewater in Warsaw



- Approximately 300 producers of industrial wastewater

- Food industry
- (milk, meat, fruits and vegetables)

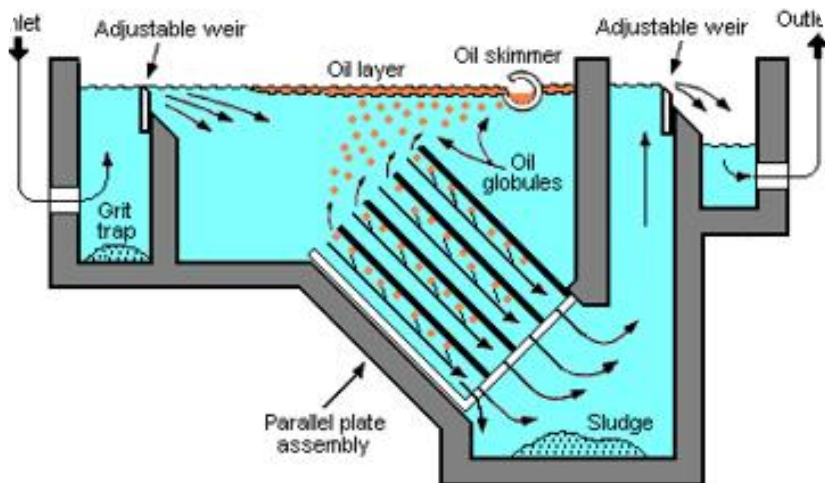
- Transport companies
(oils, detergents)

- Others with specific substances (heavy metals)

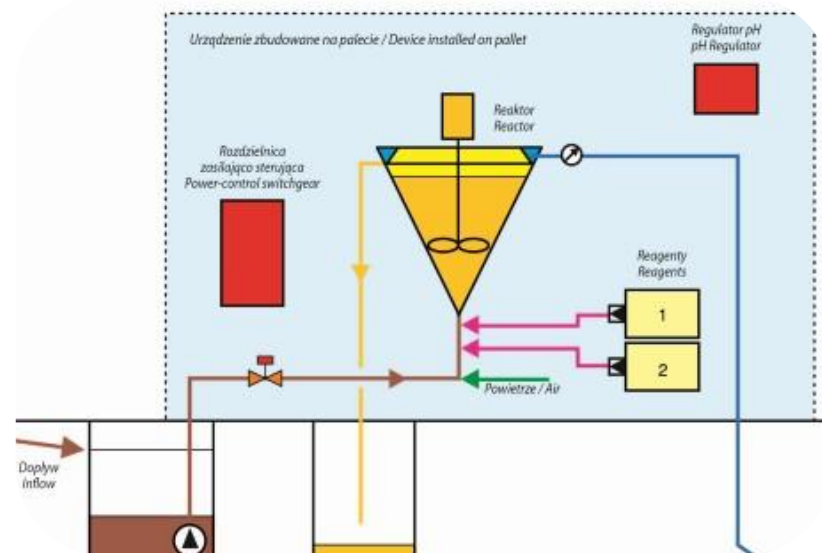
The methods of pretreatment

The producer of industrial wastewater is responsible for pretreatment, it's method and maintaining. And it must be done before entering sewage system!!!

- Simply separators (oil and similar)



- Advanced pretreatment plant (Danone Company as example)



The challenges

- Antibiotics, other medicines – we have more and more of them, and we do not control them!



- Transporting wastewater from long distance places to WWTP – is it under control of standard procedure?!

About 70 producers deliver their industrial sewage by tanks to WWTPs. Mainly because they are out of the range of the sewage system.



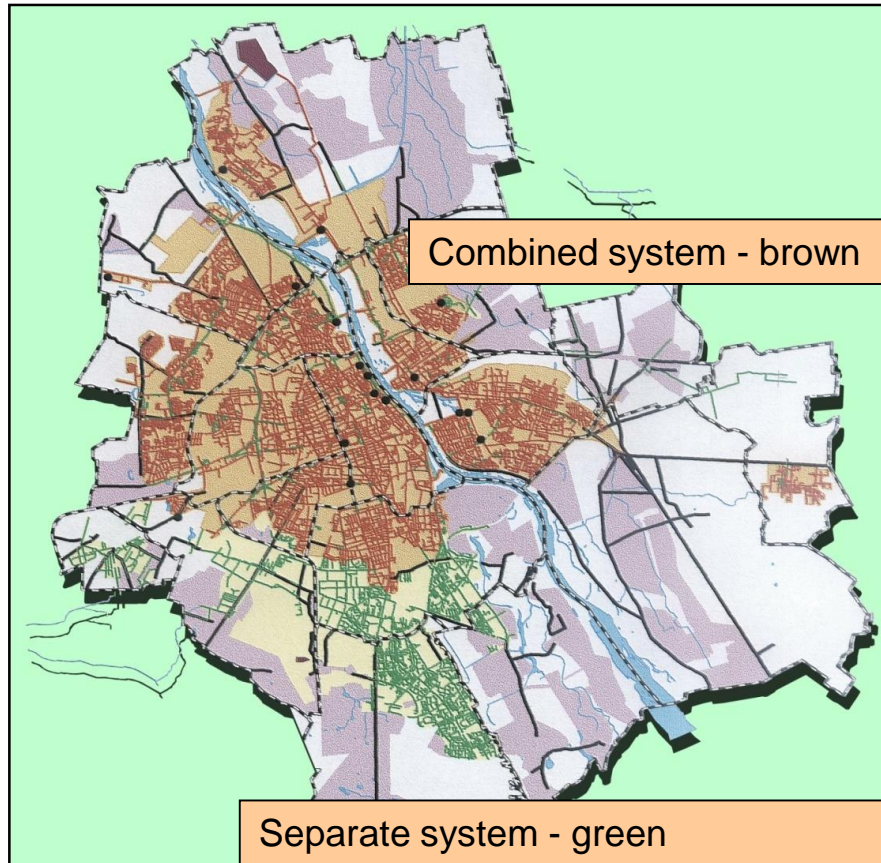
What we are proud of...

- ✓ Our Czajka WWTP with its very good parameters of effluence and especially sludge to energy plant producing energy with perfect utilization of the sludge and it's harmful content. The sludge from other WWTPs is also utilized here.
- ✓ Other WWTPs of Warsaw are also modernized and still under improvement.



What we have just started...

The retention of combined sewage system will be improved



Warsaw Waterworks is going to build 3 line containers:

1. Wiślany 9,5 km length , 3,2 m diameter
2. Linde Bis 4,7 km length, 1,8 m diameter
3. Mokotowski Bis 4,0 km length 2,8 m diameter

Open pool container close to Czajka WWTP is almost ready with its capacity 78 000 m³.

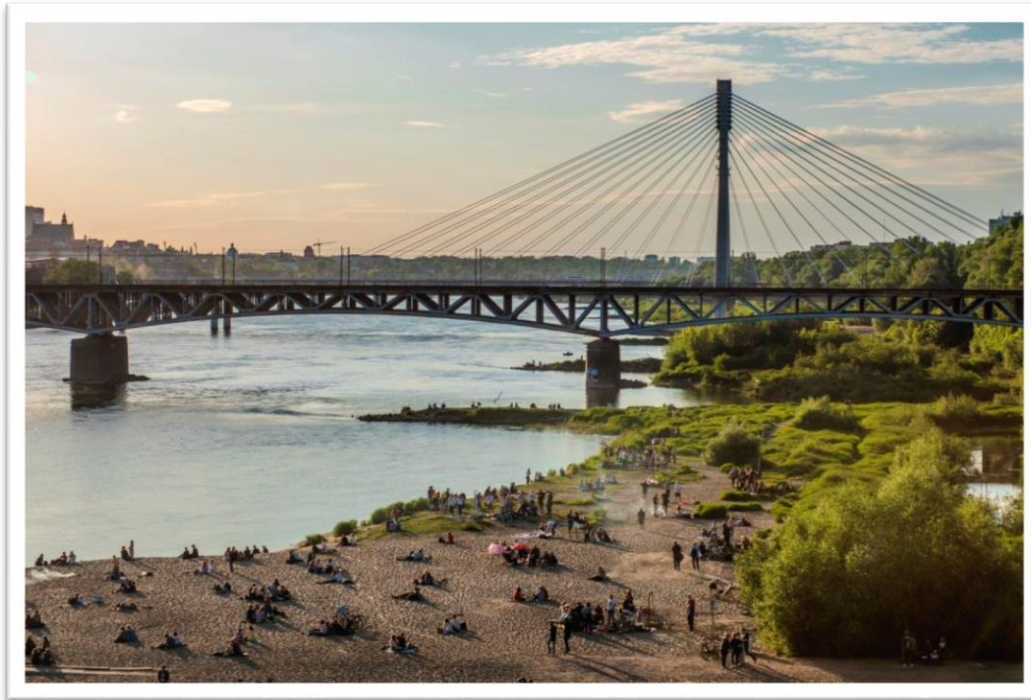
This action will reduce to minimum the number of overflows from combined system to the Vistula River when heavy rain occurs.

New legal rules

New „Water Law” since January 2018

- The procedure of water law permit has changed.
- The rainwater from streets is not a sewage any more.
- The procedure of monitoring and penalty is probably going to be changed.
- We will have to estimate the influence of new law onto the industrial wastewater management.
- At the moment we have a stage when new legal structures are into final stage of construction.





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