



VillageWaters Project meeting

**Formal situation of wastewater treatment in
separate stations in Poland**

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Mandatory law in force concerning domestic sewage treatment plants in Poland

- Warsaw, December 16, 2014
- ORDINANCE MINISTRY OF THE ENVIRONMENT from 18 November 2014 in Official Journal - 15 - Pos. 1800 from December 16, 2014
- Based on Article. 45 sec. 1 point 1, 3 and 4 of the Act of July 18, 2001 - Water Law (Journal of Laws of 2012, item 145, as amended with later changes 3)) the following is ordered:

§ 1. The regulation defines:

4) maximum permissible pollutant values for sewage from domestic and municipal sewage treatment plants and for wastewater from sewage treatment plants in the agglomeration.

The great part of **agglomerations** in Poland were created from a few or several smaller municipalities for obtaining money from E.U. guided by the National Program for Municipal Waste Water Treatment for building water supply and sanitation systems. It means, that all domestic waste water treatment plants located in agglomerations must fulfill the same pollution limits and other requirements as central waste water treatment station in this agglomeration.

Areas outside the agglomerations

In these areas obligatory are requirements typical for domestic waste water treatment stations possible for fulfilling. In Poland 23 376 000 people live in agglomerations (cities up to 50 000 habitants). The part of smaller municipalities are also merging into greater agglomerations.

As the result of such policy we have two kinds of requirements and conflict between habitants needs and requirements.



Two kinds of requirements

- For plants in agglomerations:
 - Treated waste water quality as for the main plant,
 - Number of quality control as for the main plant,
 - As the result – building and exploitation cost is too high for households
- For plants outside of agglomerations:
 - Treated waste water quality as for the plant up to 5 cu.m./day,
 - Quality control once a year,
 - Building and exploitation cost is low

Problem with the standards versus plant type

- **PN - EN 12566-3** - Small wastewater treatment systems for up to 50 PT – Part 3: Packaged and/or site assembled domestic wastewater treatment plants dated August 2016,
- **PN -EN 12566-4** - Small wastewater treatment systems for up to 50 PT – Part 4: Septic tanks assembled in situ from prefabricated kits dated August 2016,
- **PN-EN 12566-6** - Small wastewater treatment systems for up to 50 PT – Part 6: Prefabricated treatment units for septic tank effluent dated August 2016
- **PN-EN 12566-7** - Small wastewater treatment systems for up to 50 PT – Part 7: Prefabricated tertiary treatment units dated August 2016

Problem with the standards versus plant type

- According to the CEN/TC – 165 these standards and PN-EN 12566-1 will be modified in 2017 - 2018

Problem with the standards versus plant type

- Why this plant with soil biofilter is not so popular in Poland as other constructions and not only in Poland?
- The first three standards are obligatory for producers of waste water treatment plants and as the result, they can be placed in the tender conditions of the municipalities,
- Construction and technology of these plants are based on concret or plastic tanks and other elements (aerators) produced in factory and installed in residents – these constructions is easy to install,
- According to the fourth standard the basic part of plant is based on typical system of low oxygenated bed and soil – vegetable bed is treated as third part of plant, not as the most important part.

Problem with the older plant construction and technology

- The total number of exploited plants in Poland is about 200 000. As the result of policy of municipalities and producers we have in Poland almost 60% of plants built 8 or more years ago working without any proper maintenance and exploitation and control parameters of treated wastewater.
- We obtained results of measurement treated wastewater from several municipalities in rural areas and these results vary between, according to requirements, non acceptable and, with municipality service - acceptable.

Problem with the plant construction, technology and maintenance

- Great part of older plants has been built as sedimentation tank and drainage system with gravel. In this system we can't measure pollution level of treated wastewater,
- The other type of plants were constructed as sedimentation tank and low loaded aeration bed with maintenance by households.

Problem with the plant construction, technology and maintenance

- Habitants very frequently switched off aerators because of saving electric energy,
- They also did not remove sludge from sedimentation tank what caused damaging pump supplying waste water to the aeration bed.
- Maintenance and exploitation should be realized by specialized municipality service, but sometimes it is problem for small municipalites.

What is better in dispersed areas ?

- Building central waste water treatment stations with transportation systems?
- Building for all habitants domestic plants with accordance to obligatory standards PN – EN ?
- Building for all habitants domestic plants with soil bed and stabilization pond ?
- Building for part of more compact rural development central systems and for dispersed houses domestic plants ?
- What is better for protection Baltic watershed ?
- These questions create not only economic but also social, technological and environmental problems and we will answer for them in our project.



THANK YOU