

Waste water treatment conformity to standard requirements on sewer treatment facilities of housing and communal services of the Arkhangelsk region

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According to data of Water Resources Federal Agency in superficial water objects of the Arkhangelsk region it is annually dumped about 620 million m³ of waste water, including 15.0 million m³ of storm waters. About 63 % - 387 million m³ – passes through treatment facilities, the others are dumped without clearing.

From total amount of the dumped sewage, the polluted drains comprise 69 % (427 million m³), including polluted without clearing – 8,2 % (51 million m³).

In the rivers of the Northern Dvina basin it is annually dumped about 491 million m³ of sewage, including 7 million m³ of storm waters, out of which polluted without clearing comprise 4,2 % (20,5 million m³), including storm waters – 2 million m³.

70.5 % (346 million m³) of sewage passes through treatment facilities, including 5 million m³ of storm waters. Out of them only 3 % are dumped treated to standard quality by biological, mechanical and physical-chemical clearing facilities.

The Northern Dvina river basin pollution is influenced by 3 pulp-and-paper industrial complexes of the Arkhangelsk region and housing and communal services enterprises, as well as the polluted storm sewage water disposal system.

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In Russia «Rules of water utilities and drain systems and constructions technical operation» function, according to which water-sewage organizations are obliged to provide reliable and effective work of all water drain system elements, such as sewer networks, treatment facilities, pump stations; to carry out industrial laboratory control over work of all elements.

The basic infringements of the water security legislation regarding sewer treatment facilities operation are the following:

- using water objects without authorization documents,
- non-observance of process regulations and treatment facilities operation modes,
- non-observance of authorization documents conditions regarding excess of the established specifications of polluting substances admissible dumps in water objects,
- due to an emergency condition of sewer treatment facilities or sewer networks, sewage release directly on the ground areas (land relief), which is infringement of the operating ground legislation,
- absence of attendants, no industrial laboratory control over sewage release after sewer treatment facilities.

Main reasons for non-observance of authorization documents conditions (decisions on water objects use) - excess of the established specifications of polluting substances admissible dumps in water objects - are the deterioration and a preemergency condition of sewer and treatment facilities maintained by housing and communal service enterprises. Many facilities were constructed in 60-70s of the last century, have become morally and physically outdated, their major repairs are not made due to lack of financing.

Furthermore, the treatment facilities which are municipalities' property and being in an emergency condition, under lease contracts are transferred for service to newly formed housing and communal service enterprises or individual businessmen who have no means for their restoration, competent and effective operation. There may happen situations when district municipalities transfer to service only sewer networks, leaving thus treatment facilities abandoned.

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For example, “Kosogorskoye” Municipality of Primorskiy District has concluded the contract of communal service property lease with «Production and commerce company PAV» LLC for rendering services in water supply of the population and water removal on Bobrovo settlement territory. Property (the sewer pump station and sewer networks) was transferred without treatment facilities. Thus, treatment facilities work without attendants and are actually taken out of service.

Municipal unitary enterprise "Vodokanal" of municipality "Arkhangelsk City" serves 10 sewer treatment facilities located on peripheral sites and islands of the city.

As a result of extreme deterioration of peripheral sites' treatment facilities equipment in Zaton and Turdeevo sewage is dumped without clearing in the water object, on other sites sewage does not pass clearing of the necessary level and is dumped in water objects polluted - with excess of the established standards.

On water-resources sites – the island of Khabarka, Maymaksanskiy timber port (the island of Brevennik), Turdeevo settlement – infringement of sewer treatment facilities service regulations happens.

Emergencies on the sewer collectors served by Municipal Unitary Enterprise "Vodokanal" are of special concern. The failure which has occurred with the collector submitting drains from Maymaksanskiy district in October, 2008 around Velmozhnogo St., 25, is still not eliminated. Untreated sewage spreads on the surrounding territory and flows down in Solombalka creek, the untreated drain monthly volume comprises about 10-12 thousand m³. MUE "Vodokanal", operating organization, and “NovodvinskSulphEko” LLC, the collector proprietor, do not take measures to repair the network emergency site.

Rosprirodnadzor Administration carries out state control across the Arkhangelsk region which results in claims to compensate the harm caused to water objects; in 2010 nine housing and communal service enterprises were submitted demands to compensate caused harm.

22.11.2010

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