

Presentation:

**THE FORMATION OF SURFACE WATER BODIES STATE  
MONITORING SYSTEM  
IN THE RUSSIAN FEDERATION**

The quality of water has always been a special focus for state authorities, NGOs, mass media and public. As they say, water is essential to life.

It was in the time of Peter the Great that the first Russian rivers protection acts were issued. The regulatory framework developed in the 18<sup>th</sup> century were in the early 19<sup>th</sup> unified into the national legislation. The 1845 Penalty Regulation provided for a special section “On violating the rules of water and air purity protection”.

It wasn't before mid-30s of the 20<sup>th</sup> century that the development of state water bodies monitoring system was started in the Russian Federation. The development was headed but Russia's Federal Service for Hydrometeorology and Environmental Monitoring (RosHydromet), formerly known as USSR Glavhydrometservice, whose first monitoring object was chemical composition of natural waters. Among the gross amount of observations the main ones were selected to form the basis for the monitoring observations network. Since observations were based on hydrological network, the majority of hydrochemical observation points coincided with hydrological stations.

In the 1970s, by joining Roshydromet's and other ministerial departments' observation stations, they established the all-Russian service for environmental monitoring and pollution level control; developed organizational and methodological guidelines for its functioning; and qualitatively rearranged the observation points networks to facilitate complex observations for hydrochemical, hydrobiological and hydrological parameters. Inline with that, Water Management Ministry (Minvodkhoz) and Environmental Protection Ministry (Minprirody) were developing their own systems ensuring surface water bodies monitoring. It was the first attempt to join the efforts of various ministries and departments in the field of water monitoring and delimitate the scopes of activity for various services. To assess the efficiency of their treatment facilities, water users are now starting to control the quality of surface waters and the water within half a kilometer zone up- and downstream waste waters discharge points. Water Management Ministry is in charge of surveiling water users' operations, keeping waste waters cadastre and, if necessary, monitoring certain areas of water bodies. Hydrometservice is responsible for monitoring the surface water bodies pollution level, while the State Committee for Sanitary and Epidemiological Surveillance monitors the quality of water in the sources of centralized drinking water supply and recreational zones.

In the new Russia, one of the first acts adopted was Environmental Protection Act, also the first one oriented towards the market principles of human habitat protection. In 1994 the Russian President signed a decree “On RF Strategy for Environmental Protection and Sustainable Development”, which provides for each citizen’s right to favourable environment.

The most important instrument of water legislation today is the Water Code (Federal Law 74-Φ3 of 03 June 2006). It specifies the main provisions, legal acts governing the use and ownership of water bodies, state monitoring procedure, water register keeping and liability for water legislation violation. The main document to regulate the procedure of water bodies state monitoring is the Regulation on the State Monitoring of Water Bodies (SMWB), enacted by RF Government Resolution 219 of 10.04.2007 (amended by RF Government Resolution 830 of 17 October 2009).

The RF Water Code provides for the following types of water bodies monitoring:

- monitoring of surface water bodies with the use of data obtained in the course of hydrometeorological and associated monitoring;
- monitoring of the state of bottoms and shores, as well as of water protection zones;
- monitoring of the underground waters with the use of data obtained from subsurface resources monitoring;
- monitoring of the state of water management systems, including hydraulic structures, and supplied/discharged volumes.

As provided by the above SMWB Regulation, the monitoring will be implemented by Federal Agency for Water Resources, Federal Service for Hydrometeorology and Environmental Monitoring and Federal Agency for Subsurface Resources Management, with participation of executive bodies in RF constituent entities and other state authorities and sub-departmental organizations. Water users also participate in water bodies monitoring. They keep record of water intake, waste water discharge, water quality and regularly monitor the water bodies and their water protection zones.

Being the territorial office of Federal Agency for Water Resources, Dvina-Pechora Basin Water Directorate is in charge of the implementing the following SMWB components:

- monitoring of the state of bottoms, shores, and use of water protection zones; morphometry of water bodies fully situated in the constituent entities of the RF and falling within the Directorate’s area of operations, whose waters are used for water supply in two or more constituent entities of the RF. These include Iovsky and Knyazhegubsky water storage reservoirs (in Murmansk Region) and

those within the transboundary Patso-Yoki River (Borisoglebsky, Kaitakoski, Rayakoski, Yaniskoski storages), as well as the Onega Lake;

- monitoring of the water management systems, including the federally-owned hydraulic structures used by subordinated organizations;

- monitoring of the water intake and discharge in all the water bodies within Directorate's area of operations;

- collection, processing, storing and analysis of data obtained in the course of water bodies monitoring performed by subordinated authorities, territorial offices of Federal Service for Hydrometeorology and Environmental Monitoring and Federal Agency for Subsurface Resources Management, as well as data provided by the territorial offices of Federal Service for Supervision of Natural Resources Usage, Federal Service of Environmental, Technical and Nuclear Supervision, Federal Service for Health and Consumer Rights, Russian Federal Fisheries Agency, Federal Agency for Transport Supervision, as well as by water users;

- general assessment and forecasting of changes in the state of water bodies, their bottoms, shores, morphometry, water-protection zones water resources and water management systems, including hydraulic structures.

Based on the information obtained in the course of SMWB, the Directorate develops the data bank for basin district, river basins, water management districts, RF constituent entities. It ensures integration of the data in the state water register and submitting thereof to federal executive authorities, government bodies in RF constituent entities, local self-government bodies, legal entities and individuals, as provided by water legislation and Federal Law "On Information, Information Technologies and Information Protection".

The responsibility of providing Dvina-Pechora Basin Water Directorate with the information on the state and use of water bodies, as well as of monitoring data analysis, lies with FSE "DvinaRegionVodkhoz" and FSE "VologdaVodResources". Apart from water bodies covered by the state monitoring system, the FSE-used surface waters observation network includes the points located in the areas of high anthropogenic load, where RosHydromet performs no observations. The FSE's network also includes local observation area and background surveying points.

Based on the results of water bodies observation, Dvina-Pechora Basin Water Directorate, compiles the following analytical documents:

- "Information Bulletin on the state of surface water bodies, water management systems and facilities within the operations area of Dvina-Pechora Basin Water Directorate";

- “Overview of Water Bodies Status and Efficiency of Water-Protective Measures Within the Operations Area of Dvina-Pechora Basin Water Directorate”;
- “State Report on Status and Use of Water Resources”.

The monitoring results are mainly used

- in developing the norms of acceptable impact (NAI) and Schemes of Multipurpose Water Use and Protection;
- in arranging and implementation of measures aimed at preserving the natural state of water bodies;
- for the purpose of water management regulation;
- when granting water bodies for use;
- in setting the norms of waste water discharge;
- in emergency clean-up activities;

The monitoring results are used by

- territorial offices of water management services; central board of Dvina-Pechora Basin Water Directorate;
- territorial bodies of the Russian EMERCOM (data on emergencies needed to decide on clean-up operations);
- territorial offices of federal executive bodies with duties to maintain control and surveillance over the water bodies use and protection;
- executive authorities in constituent entities of the RF;
- local self-government bodies;
- legal entities and individuals.

The priority goals for SMWB participants to achieve include

- improvement of the current legal framework and methodology;
- expanding of the observations network in the part of sea water monitoring;
- improved cooperation of SMWB participants;
- putting into effect of the Unified Automated Monitoring Information System.

To coordinate the activities of all SMWB participants, it would be expedient to set up a methodical center at the Federal Agency of Water Resources.

The development of SMWB system will further follow the line set in the Water Strategy of the Russian Federation to 2020, enacted by RF Government Resolution 1235-p of 27 August 2009.