ВОДОКАНАЛ
САНКТ-ПЕТЕРБУРГА

SUE “VODOKANAL OF ST.PETERSBURG”

ANNUAL REPORT

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DEAR LADIES AND GENTLEMEN,

AT THE INTERNATIONAL CLEAN WATER FORUM 2012, VICE-MINISTER OF HEALTH MS. T.V. YAKOVLEVA EMPHASIZED THAT THE HUMAN HEALTH IS 80% DEPENDANT ON THE QUALITY OF WATER WE DRINK. HENCE, VODOKANAL ST. PETERSBURG BEARS A SPECIAL RESPONSIBILITY BECAUSE IT IS OUR COMPANY THAT SUPPLIES POTABLE WATER TO THE CITIZENS.

Today, the drinking water supplied to the residential buildings is fully safe and meets all regulatory requirements. Petersburg is the world's first city to treat all potable water with ultraviolet achieving a good anti-virus effect (according to the city office of Rospotrebnadzor, the hepatitis A incidence has reduced tenfold in our city over the last eight years). Moreover, Petersburg is the first big city to stop using liquid chlorine for water disinfection – we have replaced it with sodium hypochlorite. Both the production and storage of this chemical are hazard-free; it is produced of common salt at our water treatment plants.

In 2012, Vodokanal continued to improve its water treatment processes. In parallel, we focused on the renovation of our networks. The volumes of network reconstruction and valve replacement have grown. Works in this field will become one of priority tasks for Vodokanal. In addition, we are planning to modernize the city's bigger WTPs in the near future.

However, we should not forget about water quality in the Ladoga, the Neva (potable water source for Petersburg), the Gulf of Finland and the Baltic Sea. The environmental condition of water bodies strongly influences the quality of life. Therefore, effective treatment of sewage is no less important for us.

In 2012, we continued to implement the Neva Untreated Wastewater Discharge Closure Programme. The next to last stage of the Northern Tunnel Collector was completed which resulted in the closure of another five direct discharges and the treatment of as much as 97% of all wastewater.

The treatment quality meets not only Russian, but also international requirements. By now, Vodokanal has implemented the wastewater treatment processes to remove nutrients, phosphorus and nitrogen, from wastewater. As a result, Petersburg fully meets the recommendations of the Baltic Marine Environment Protection Commission (HELCOM).

However, it is not possible to achieve ideal environmental conditions in a single region. One cannot purify one's "own" section of river or sea alone. We should join our efforts, in particular, with the neighboring regions which use the same integrated water system. There are examples of such collaboration: in 2012, St. Petersburg and the Leningrad Region made the first step towards the saving of Sestroretskiy Razliv Lake. This artificial water body was constructed long ago – in XVIII century, and was a place of recreation for the citizens of Petersburg and suburban residents during many decades. However, the lake is highly polluted now. By re-routing the wastewater from the town of Sertolovo to Northern WWTP (formerly, it was discharged into the Chernaya River which runs into the Razliv Lake) we could achieve a nearly 60% reduction of pollutants inflow to Razliv. Of course, the joint efforts aimed at the saving of Razliv will continue.

Another important environmental project in 2012 was the construction and startup of snow-melting stations. It is a new area of activity for Vodokanal St. Petersburg. The permanent snow-melting stations operate as follows: wastewater heat melts the snow and then both the snowmelt and the wastewater are pumped to WWTPs where they are fully treated. So, construction of such stations in Petersburg raised the snow disposal process to a new, environment-friendly and energy-efficient level.

Ecology, however, cannot be reduced to novel technological solutions alone. It comprises changes of people's mentality, behavior and attitude to the nature in general and to water, in particular. The year 2012 marked 10 years since Vodokanal St. Petersburg established the Youth Environmental Centre. Since then, over 300,000 children have been involved in its projects, programmes and lessons. Each of them has, indeed, shared the new knowledge with his/her parents and friends. It means that, during the 10 years of work, we could impart the ideas of respectful and careful attitude to water to the majority of citizens.

The year 2013 is declared the Environment Protection Year. In this year, - by the way, it is also the 155th anniversary of Vodokanal, we will complete the construction of the Northern Tunnel Collector and, as a result, the wastewater treatment level in Petersburg will exceed 98%.

Actually, we are not going to stop at that. We are sure that, in several years, Petersburg will hit the top ten of the cities having the best water supply and sewerage systems in the world

Felix V. Karmazinov
SUE "Vodokanal of St. Petersburg"
Director General

CALENDAR OF EVENTS 2012

JANUARY

- Vodokanal started construction of the first snow-melting station at 2, Oktyabrskaya embankment.
- Vodokanal's social project, the Internet portal Da-Voda (www.da-voda.com) changed its design and launched the English version (en.da-voda.com).

FEBRUARY

- Vodokanal announced the first competition for the "company's best customer" title – The Crystal Drop. The competition results were drawn up in March.
- An open Water Lesson was given at the Youth Environmental Centre; the target audience was 6-7 year old children and primary/high school students.

MARCH

- SUE "Vodokanal of St. Petersburg" participated in XIII International Environmental Forum "The Baltic Sea Day".
- Vodokanal St. Petersburg presented its achievements at the Russian Federation's exhibition stand at the World Water Forum in Marseilles, France.
- The new chemical and bacteriological laboratory began to work at Central WWTP on Bely Island.
- Vodokanal's Youth Environmental Centre acted as a partner of the Model UN 16th Youth Conference. The conference fosters the sense of responsibility for the future of mankind in school students, helps develop their communication skills, etc.
- The new website of Burevestnik Sanatorium (run by Vodokanal) – www.vodokanal-zagorod.ru was launched.
- For the first time ever Vodokanal team was a participant of the citywide youth championship of the Club of the Funny and Inventive among the teams of St. Petersburg companies and organizations. Vodokanal team came third at the final in November.

APRIL

- The first chamber of the permanent snow-melting station at 2, Oktyabrskaya emb. was built. Vodokanal started the pre-commissioning.
- Vodokanal St. Petersburg opened the Fountain Season 2012. The Balloon Fountain in 56, Nevsky pr. and the fountain in Manezhnaya Square were activated first of all.
- The Programme of developing single fountains and fountain complexes in St. Petersburg for 2012-2015 was approved by the ordinance of the St. Petersburg Governor G.S. Poltavchenko dated 13 April 2012. The Programme envisages reconstruction of 20 fountain installations in the city.
- At III International Business Forum "Russia – Switzerland: Energy Efficiency" in Switzerland Vodokanal St. Petersburg was awarded the Quality Standard plaque of honour "for compliance with the international norms and requirements to organization of business-processes, the quality of management and end products".
- The Water Tower exhibition room at 56, Shpalernaya str. hosted the closing ceremony of the environmental awareness-raising project for senior high school students dedicated to the Baltic Sea and environment protection.
- The final of the intellectual quiz "We and the Baltic Sea" was held at the Youth Environmental Centre. Previously, tryouts were held at YEC throughout March 2012.
- I International Inter-Disciplinary Research and Practice Conference "Spiritual and Moral Dimensions of Ecology. Cooperation of Religious Communities and Secular Organizations in the Baltic Sea Region" was held on Vodokanal premises.
- The traditional initiation festival "Welcome to Vodokanal" (the fifth one) was held for the newly-employed.

MAY

- The seasonal "shift turnover" of bioindicator animals checking the quality of treated effluent took place at South-West WWTP: the slender-clawed crayfish were replaced by thermophilic Australian red-claw Cherax quadricarinatus.
- Vodokanal St. Petersburg presented the first volume of the guidebook dedicated to various wastewater treatment aspects. The publication was prepared in cooperation with the German colleagues.
- Vodokanal participated in V Neva Environmental Congress: the company hosted the round table on water management while the Youth Environmental Centre was a participant to the All-Russian Water Lesson.
- As many as 10,910 people visited the museum complex The Universe of Water during the Museums at Night 2012 event.
- The Internet portal da-voda.com launched the video-quest "Save Our Sea".

JUNE

- Vodokanal started the construction of sewage collector at Robespyera and Smolnaya embankments. With the collector in place, Vodokanal can close six direct wastewater discharges and release the Neva from 11 Mio. m3/year of untreated wastewater.
- Vodokanal St. Petersburg participated in 10th International Water Forum EQUATEC 2012.
- Vodokanal St. Petersburg became partner of the first International Youth Forum "Water and Global Heritage" hosted by the All-Russian Youth Centre "Orlyonok" (Krasnodar Region) in the framework of UNESCO World Heritage Committee's 36th session.

JULY

- Vodokanal confirmed its Good Employer title: its two branches, Water Supply and Wastewater Disposal, were awarded the Confidence in Employer Certificate.
- Three publications: Potable Water Quality Benchmarking, Systematic Sewerage Benchmarking: Comprehensive Assessment and Safety of Water Sources, and Ultraviolet Technologies in the Modern World, won the competition "100 Russia's Best Institutes of Higher Education and Research" in the nomination "Book of the Year", - among their authors were General Director of Vodokanal Felix V. Karmazinov and other company employees.
- Vodokanal St. Petersburg won the best practice competition in the creative use of social media held by the European Foundation for Quality Management (EFQM). At the competition, Vodokanal presented its experience in the promotion of water saving ideas by demonstrating its Internet portal da-voda.com.
- For the first time ever, Vodokanal organized a festival dedicated to the Love, Family and Faithfulness Day.

AUGUST

- Vodokanal in association with OAO TGK-1 presented the final phase of the programme aimed at the connection of several CHP plants to the municipal water networks.
- A regular Open Day was held at Vodokanal's Youth Environmental Centre where interactive programmes "Visiting Water Droplet" and "The Baltic Cruise" were conducted.

SEPTEMBER

- Vodokanal launched the odour removal pilot project at Severniy sludge landfill in Novoselki.
- Vodokanal's Youth Environmental Centre celebrated its 10th anniversary. More than 300,000 children have participated in the YEC classes, programmes and projects over these years.

OCTOBER

- The permanent snow-melting station in Rizhsky prospect started to collect snow.
- Vodokanal hosted the presidium meeting of the St. Petersburg Union of Industrialists and Entrepreneurs, one of the main items on its agenda was discussion of the federal law "On Water Supply and Wastewater Disposal".
- The Crown Princess of Denmark Mary visited Vodokanal's Youth Environmental Centre and the museum complex "The Universe of Water".
- The fountains operated by Vodokanal St. Petersburg went on "winter holidays".
- Six Vodokanal employees became winners and awardees of the regional professional skill competition "Stroymaster 2012".

NOVEMBER

- The joint meeting of the St. Petersburg and Leningrad Region Governments took a decision to establish the city's and regional Steering Committee in the sphere of social and economic development. The Committee would deal with provision of water supply and sewerage services to the fast-growing developments on the border between the city and Leningrad Region.
- Under the new intake construction project at Main WWTP, special structures - head walls - were submersed; through them, water from the Neva would come to the first-lift pumping station.
- The Government of the Republic of Karelia, LLC The Republic of Karelia Development Corporation and SUE "Vodokanal of St. Petersburg" entered into the agreement of cooperation in the field of water and sewerage systems in Karelia.
- Vodokanal became the general partner of the Third International Clean Water Forum attended by 1,700 delegates from 35 countries.
- On the World Toilet Day, Vodokanal made a present to the city residents and guests: they could use the company-operated public toilets free of charge.
- Vodokanal St. Petersburg was commended by the Governor of St. Petersburg for its contribution to the implementation of the Governmental Plan of personnel training for national organizations.
- Vodokanal passed a surveillance audit of its five management systems conducted by two certification companies: SAI Global Limited and Certification Association "Russian Register". The certificates of conformity issued to Vodokanal earlier were revalidated. Certification audits of Vodokanal's Energy Management System and Information Security Management System were made for the first time ever.
- The sixth initiation festival "Welcome to Vodokanal" was held for the newly-employed.

DECEMBER

- Since 6 December 2012, 97% of all wastewater has been discharged treated in St. Petersburg. On that day, five direct discharges at Pirogovskaya embankment totaling 28,000 m^3/day of wastewater were closed in the presence of the Governor.
- By re-routing wastewater streams from the town of Sertolovo to Northern WWTP we could achieve a 58.8 % reduction of untreated and poorly treated wastewater discharge into the Lake Razliv.
- Currently, Vodokanal already has six permanent snow-melting stations. The fourteenth of December 2012 was the richest in snow: then 24,706 m3 of snow were melted by the stations.
- The Director General of Vodokanal Felix V. Karmazinov celebrated his 25th year of work in the capacity of the company CEO. The President of the Russian Federation V.V. Putin and the Governor of St. Petersburg G.S. Poltavchenko congratulated Mr. Karmazinov on this occasion.

ABOUT THE COMPANY

VODOKANAL HISTORY

THE HISTORY OF THE CITY'S CENTRALIZED WATER SUPPLY GOES BACK TO 10 OCTOBER, 1858, WHEN THE CHARTER OF "ST. PETERSBURG WATER PIPELINES JOINT-STOCK COMPANY" WAS APPROVED BY THE RUSSIAN EMPEROR ALEXANDER II.

Among the founders of the Joint-Stock Company were engineers, such as A.N. Erakov, P.I. Palibin, A.A. Peretz, E.I. Okel, and prominent businessmen – I.I. Glazunov, M.I. Yakunchikov, I.N. Kushinnikov.

1858–1917

The JSC faced huge financial and technical problems at the initial stage. In early 1863, the construction of water networks was, practically, suspended. By then, the water tower in Shpalernaya str. (architects I.A. Merz and E. Shubersky) has been built and several kilometers of water distribution networks have been laid. The JSC's registered capital was spent, the shares sold badly, and even the government subsidy could not alter the situation. In March 1863, the 1 Guild merchant A.I. Kron from St. Petersburg joined the JSC, contributed the lacking sum (approximately, 900,000 Roubles) and took up completion of the long-drawn works.

Water supply to the first customers started by the end of 1863.

Some modifications were made to the initial design during the construction period. At first, it was decided to take water from a sort of a "ladle" – the artificial water body near Tavrichesky Palace connected with the Neva. However, the "ladle" proved to be unsuitable for this purpose, and the JSC had to arrange water intake from the Neva. Before mid-1870es, the water network was only used by the citizens on the left-bank side. The new joint-stock company (Partnership) was established in 1873 (to be managed by English contractors) to supply water to Peterburgskaya (Petrogradskaya) and Vyborgskaya areas. In 1890 the State Duma took a decision to buy out the assets owned by the St. Petersburg Water Pipelines Joint-Stock Company, and in 1892 – to buy out also the assets of the New Water Networks Partnership. The City Executive Commission for water supply of St. Petersburg was established to manage the water networks and was subordinated to the city administration. The manager of city water networks was appointed on a submission from the chairman of the Executive Commission.

During the first decades of the centralized water supply operation in St. Petersburg all customers received water which passed only coarse mechanical treatment. In 1889 sand filters were put into operation at the Main Waterworks (the filters had been built by the St. Petersburg Water Pipelines Joint-Stock Company as strongly demanded by the city authorities.
In 1911 the filtration station with water ozonation was built in Peterburgskaya (Petrogradskaya) area. Chlorine disinfection of drinking water was implemented at the Main Waterworks (the first chlorination experiments were made in Kronstadt in 1909). The Executive Commission for sewerage construction and water supply rehabilitation in St. Petersburg established by the City Duma had worked since 1911 and took over most of the functions in relation to water supply development.

The Soviet period

World War I and the Civil War had a negative impact on the technical condition of the city's water supply system, including its plants, equipment and networks. In 1920s-early 1930s wood pipes were sometimes used for construction of water networks due to the lack of more suitable materials. It was only by 1935 that the pre-revolution level of water supply to the city network had been reached.
However, there were also some achievements at that time. First of all, construction of the Southern Waterworks (stage I was put into operation in 1933, a part of stage II – in 1940) and modernization of the Main Waterworks treatment facilities should be mentioned. In 1923–1924 construction of sewer networks was resumed. In 1925 the city authorities approved the major sewerage plans for Leningrad (separate system with four independent sewer basins). Vasilyevsky Island was selected as experimental district for the construction of a new sewerage system. Construction of sewers in Vasilyevsky Island (total length of street networks – 153.3 km) had lasted for 10 years. Vasileostrovskaya sewage pumping station was completed by 1930. Wastewater was discharged to the Neva Bay without any treatment.

In the 1930s more and more sewers were built in other city districts. The length of sewer networks in Leningrad reached 1130 km which exceeded twice the pre-revolutionary level. In 1940 a new sewerage scheme of Leningrad was adopted. It was also based on a separate sewerage system. The scheme envisaged mechanical treatment and precipitation followed by discharge to four channels of the Neva Bay. Storm water ought to be discharged to all watercourses in the city. It was planned to use the tunneling method to build the main sewers.
A special page in Vodokanal's history is related to World War II and the blockade of Leningrad. The waterworks and facilities, clean water tanks, treatment plants, water networks and sewers were subject to intensive bombings and shelling. As many as 955 shells exploded within the area of the Southern WTP alone. The personnel of the most important facilities were put on a war footing. Destruction of networks caused the flooding of basements, streets and squares and sometimes even the whole city districts. Nevertheless, both the city water networks and the sewerage system were working without interruption except 25-26 January 1942 when the electricity supply was cut off.

Over the period between 1950 and 1970 the annual average water supply to the city has grown more than twice – from 912,800 m3 to 2,057,600 m3. The Southern WTP stage II was put into operation in 1948, Volkovskaya WTP – in 1964, and the Northern WTP stage I – in 1971. Wide-scale construction of water pumping stations was underway too. In 1952 the State Committee of the Council of Ministers of the USSR approved the project of sewerage construction in the central part of Leningrad where a combined sewerage system was proposed instead of separate sewerage. The first stage of sewerage in the city centre including the Main Pumping Station was put into operation in 1958.
In 1966 the General Scheme of Leningrad Sewerage was approved which included, among other things, three big complexes of wastewater treatment facilities. The first one – Central WWTP – was put into operation in 1978 (stage I). Before that, all city wastewater was discharged to the water bodies almost without any treatment. The Central WWTP, stage II, was put into operation in 1984, and the Northern WWTP, stage I, – in 1987. The construction of the South-West WWTP started in 1986.

Contemporary history

In the 1990s, SUE "Vodokanal of St. Petersburg" developed and implemented a novel-for-Russia concept of strategic planning of the public utilities' financial operations and business. Creation of a management system based on the corporate development planning was a crucial step to implementation of this concept in the company.

It is the implementation of the strategic planning concept that ensured sustainable development of SUE "Vodokanal of St. Petersburg". In 1992 the company was able to become self-sufficient and raise the necessary investments for reconstruction and development. In 2004, the St. Petersburg Water and Wastewater Systems Reconstruction and Development Programme for 2004-2011 was worked out. The South-West WWTP was inaugurated on 22 September 2005 in the presence of the President of the Russian Federation V.V. Putin, the President of Finland Tarja Halonen and the Swedish Prime-Minister Göran Persson.

Alongside with the construction of new facilities using the best advanced technologies, wide-scale reconstruction of the existing WWTPs was implemented. By 2006, three "hot spots" in the Baltic Sea catchment basin have been eliminated. The reconstruction of the Central WWTP in 2007 made it possible to meet, and even surpass the HELCOM standards of nutrient concentrations. By commissioning two sludge incineration plants – at the Northern WWTP and South-West WWTP – in 2007, St. Petersburg became the first megalopolis to fully solve the problem of sewage sludge utilization.

In 2008, Vodokanal St. Petersburg celebrated its 150th anniversary. One of the biggest events of the jubilee year was the commissioning of the first section of Northern Tunnel Collector extension.

The year 2009 was marked by the 20th anniversary of cooperation with the Ministry of the Environment of Finland. "The Baltic. Common Sea, Common Concern" Conference was dedicated to this date.

In June 2009, the official ceremony of the last chlorine container removal from Northern Water Treatment Plant symbolized that Vodokanal stopped using liquid chlorine for water disinfection replacing it with hazard-free sodium hypochlorite.

In December 2009, the second stage of Northern Tunnel Collector Extension was completed which enabled to reach 91% of wastewater treatment.

In June 2010, one of the biggest plants – Southern WTP started pre-commissioning of its new water treatment block designed for 350,000 m3/day of potable water production (water supply to the city from this block began in January 2011).

In 2010, Vodokanal summarized the results of the pilot project aimed to create a water supply management system and started to implement the system in the southern districts of the city.

By the end of 2010, the next stage of Northern Tunnel Collector Extension has been completed, and the official ceremony of connecting 12 more direct discharges to the Collector was held in January 2011. As a result, the wastewater treatment level in the city reached 93 %.

In 2011, Vodokanal could already treat 94% of all wastewater having re-channeled five direct discharges to Northern Tunnel Collector and closed down seven small WWTPs (the wastewater formerly collected by them was re-channeled to Northern WWTP).
The ceremony dedicated to this event was attended by the Governor of St. Petersburg G.S. Poltavchenko.

In 2011, St. Petersburg was finally crossed out from the list of Baltic Sea polluters. Since then the city has fully met the HELCOM recommendations on wastewater treatment quality: phosphorus concentrations in the total wastewater volume discharged in St. Petersburg do not exceed 0.5 mg/l. The official ceremony marking the completion of the Clean Baltic Sea Project was held at Northern WWTP in June in the presence of the President of Finland Tarja Halonen.

In 2011, Vodokanal expanded its biomonitoring system by implementing it at wastewater treatment plants: since the beginning of the year the composition of flue gases at the South-West incineration plant has been monitored by African snails, and since July the effluent quality at South-West treatment plant has been checked by Australian red-claw crayfish.

In 2011, Vodokanal St. Petersburg became one of the finalists for the prestigious award of the European Foundation for Quality Management (EFQM) - Excellence Award-2011.

Since 2011, the International Advanced Water Technologies Centre, a joint project of Vodokanal and Lahti Science and Business Park (Finland), has been working on the premises of SUE "Vodokanal of St. Petersburg".

Since 2012, Vodokanal St. Petersburg has started a new type of activity: construction and operation of snow-melting stations. Six stations were in operation in the city at the end of 2012; the heat of influent wastewater melted snow in the melting chambers.

The next-to-last stage of the Northern Tunnel Collector was completed (the wastewater streams was re-routed to the collector and then to Northern WWTP for treatment) which resulted in the closure of five direct discharges and the treatment of as much as 97% of all wastewater. The Northern Tunnel Collector Project will be completed by 10 October 2013, on 155th anniversary of Vodokanal. As a result, the wastewater treatment level will reach 98.4 %.

In autumn 2012, the cooperation between St. Petersburg and the Leningrad Region got a new impetus: the joint meeting of the city and region took a decision to establish the Steering Committee of St. Petersburg and the Leningrad Region in the sphere of social and economic development. In particular, the Committee will deal with the provision of water supply and sewerage services to the fast-growing developments at the border line between the city and the Leningrad Region.

The first result of the joint environmental actions was re-routing of wastewater in the town of Sertolovo (in the Leningrad Region) to Northern WWTP (in St. Petersburg). Due to that, the discharge of pollutants into the Lake Razliv could be reduced by 58.8 %.

In 2012, Vodokanal continued the sewage sludge treatment project for the landfill in Novoselki (the sludge had been disposed to the landfill till 2008) using the geotube technology. Moreover, an odor removal pilot project was launched.

In 2012, Vodokanal developed extensive cooperation with other regions. In particular, an agreement on cooperation in the sphere of water systems modernization in the Republic of Karelia was entered into.

September 2012 marked the 10th anniversary of Vodokanal's Youth Environmental Centre. More than 300,000 children have participated in the Centre's projects, programmes and lessons over this period.

October 2012 marked 25 years since Felix V. Karmazinov became the CEO of Vodokanal.

MISSION AND VALUES

Mission – Provision of high-quality water and sewerage services ensuring good quality of life for customers, sustainable development of the city, creation of water consumption culture and conservation of the Baltic Sea water environment.

Vision – We see Vodokanal among the world's best providers of water and sewerage services due to the quality of its services and environmental awareness.

Values:

- Responsibility before future generations – careful and efficient use of natural resources including water, energy, forests, etc.
- Responsibility before the customers – continuous studies of the customers' expectations and requirements, improvement of customer interaction procedures to raise the level of satisfaction with the water and sewerage services
- Responsibility before the staff – continuous improvement of labour safety, good salaries and wages, social security for the company staff and their families and for the retired employees.
- Innovative approach – incorporation of international best practice in the company management, the use of advanced technologies and creation of know-how in different fields of activities – that is the only way to reach success and to be a leading company.
- Openness to the public and responsibility before the society – transparency of the company activities, access to reliable information on the company work and history, close contacts with the mass media, educational institutions and public and environmental organizations – all that constitutes the basis of our information policy.

CORPORATE MANAGEMENT SYSTEM

CORPORATE MANAGEMENT SYSTEM BUILDING PHILOSOPHY

The corporate management of SUE "Vodokanal of St. Petersburg" is based on the following principles:
Accountability. The company's executive body shall be accountable to the owner (City of St. Petersburg), the state authorities and control bodies in compliance with the applicable law.
Transparency. The company shall ensure timely disclosure of reliable information on any material facts in relation to its activities, including its financial standing, social and environmental performance and operating results, as well as provide free access to such information for all stakeholders in compliance with the law of the Russian Federation.
Responsibility. The company shall acknowledge the rights of all stakeholders as provided by the applicable law and shall seek collaboration with the stakeholders to reach the company goals and to maintain financial sustainability and social stability.
Efficiency. The company will only reach its goal if each employee – from director general to ordinary officer – works efficiently.

In accordance with the Charter of the company the Director General is the sole executive body of the company. He ensures the implementation of principles of corporate governance and the future development of the corporate governance practice.

The company has its scientific technical council being an advisory body. The council scrutinizes various matters in relation to the development of water and sewerage systems in St. Petersburg, issues relevant recommendations and reviews the results of research and development. In 2011, a new branch was created in the company structure the main task of which is to work out and implement the integrated policy of water and sewerage development.

The corporate governance system relies on the principles and approaches set by the international standards: ISO 9001 Quality Management System, ISO 14001 Environmental Management System, OHSAS 18001 Occupational Health and Safety System, ISO 27001 Information Security System and ISO 50001 Energy Management System.

Vodokanal's corporate governance system is continuously developing and improving due to the strategic initiatives of the company management and its sole owner – City of St. Petersburg. Since 2009, the ideology of EFQM (European Foundation for Quality Management) Model has made a significant impact on the company management development and improvement.

OVERVIEW OF MANAGEMENT APPROACHES

The following management approaches are used by Vodokanal to improve its operations

- strategic planning;
- process-based approach to the Company Management;
- self-assessment according to the EFQM (European Foundation for Quality Management) Excellence Model;
- assessment of all stakeholders' satisfaction, including that of internal process users;
- management systems are based on the standards MC ISO 9001, 14001, 50001, 27001 and OHSAS 18001; innovative management improvement tools are implemented;
- benchmarking and comparison with the best European water companies;
- sociological studies of public awareness and expectations;
- annual public reports.

Since 2005, Vodokanal has been making a self-assessment of its activities according to the regional Business Excellence Model which is harmonized with the EFQM Excellence Model. According to the results of 2006, Vodokanal won the competition for the Russian Government's Quality Prize.

Since 2009, the company has been using the EFQM Excellence Model to assess its performance. Vodokanal has got the certificate acknowledging that its corporate management complies with the EFQM Model Recognized for Excellence level, 5 stars.

In 2010, Vodokanal won the International Quality Contest of Central and Eastern Europe.

According to the results of 2011, Vodokanal joined the ranks of finalists of the prestigious award by the European Foundation for Quality Management (EFQM) – Excellence Award 2011.

Both the self-assessment and the assessors' recommendations set out in the feedback report helped make a thorough analysis of the company management. Most of the assessors' recommendations were incorporated into the Management Improvement Programme for the coming years.

Basing on its own experience and the experience of foreign and national water companies, Vodokanal is developing the Ideal Water Company Concept. Today, it is described in the corporate Strategic Plan and covers every field of activity: customer relationship, management and development of treatment plants and infrastructure, environment and society, financial sustainability and investments, staff development and social support to the employees. The Ideal Water Company Concept is subject to revision, in form and in substance, according to the results of self-assessment for the previous year and in consideration of external factors including new laws, the outlook for city development and customer expectations.

Since 2009, Vodokanal has focused on systematic benchmarking exercise with the best European water companies and development of corporate social responsibility.

KEY PERFORMANCE MANAGEMENT PROCESSES

In parallel with the process improvements, Vodokanal is upgrading its system of indicators for strategic and day-to-day monitoring of processes. The assessment tools are: internal and external audits of management systems, self-assessment based on the EFQM Excellence Model, and corporate management rating criteria. Process performance is monitored at different management levels using strategic, tactical and day-to-day indicators.

The key performance indicators of the water supply service process are:

- compliance of potable water quality in the water distribution networks with the current regulatory values of physical and chemical parameters (expressed as percentage);
- number of breakdowns per 10 km of water networks per year;
- number of reasoned complaints about low water head;
- water losses in the distribution network;
- duration of customer disconnection from water supply.

The improvement of maintenance function alongside with reconstruction works lead to higher reliability of network operation and lower breakdown rate.

The key performance indicators of the sewerage service process are:

- compliance of wastewater treatment quality with the target regulatory values;
- number of blockages per 10 km of sewers per year.
  Process performance is monitored at different management levels using strategic, tactical and day-to-day indicators.

The process performance management process is based on Deming-Shewhart-Tailor cycle (PDCA):

1. Plan (P) – target process indicators are planned for the next year before it begins, on the basis of the strategic indicators, required resources and result analysis of the previous year. The cause-and-effect relationships between the approaches applied and the results we want to achieve are determined at this phase.
2. Do (D) – the service is provided; daily operational indicators are monitored at all process levels. At this phase, management is limited to ensuring the achievement of tactical (monthly) targets.
3. Check C – the progress in achieving performance indicators is checked using the daily and weekly data.
4. Act (A) – the progress in achieving tactical targets and the reasons for deviation from targets are analyzed, and the necessary corrective actions are worked out at weekly working meetings. Such actions help adjust the existing approaches to achieve the targets

This performance management process is carried out by process owners both at the company and branch level.

Potential areas of process management improvement are identified in the course of self-assessment based on the company management systems, internal audit results and performance evaluation reports for EMS (Environmental Management System), QMS (Quality Management System), OHSAS (Occupational Health and Safety System), EnMS (Energy Management System) and ISMS (Information Security Management System). Moreover, the analysis of process performance is on the agenda of monthly Board meetings where they discuss headway in achieving the targets.

The results of analysis are used to identify areas for improvements and work out the necessary corrective measures and actions to improve the existing approaches in order to achieve the strategic targets.

MAIN PROVISIONS ON CORPORATE CULTURE

The development of corporate culture at the company is focused on the unity of personnel in achieving the strategic targets, identification and support of social standards and values. For this purpose, regular companywide professional and cultural events are organized.

Vodokanal management realizes the priority of social responsibility to the personnel. This realization is based on the company's internal standards and supported through the implementation of different social support programmes including the improvement of remuneration mechanisms, medical care and voluntary medical insurance, subsidized catering, recreation opportunities for the employees and members of their families, organization of corporate events, and support of the company veterans and pensioners.

The company has defined and is following its policy in the field of information and knowledge. This policy is based on the principles of openness, completeness, regularity, timeliness, objectiveness, reliability, the raising of staff competence and improvement of corporate culture.

Values and ethical standards have been defined and are followed to develop the corporate culture. The leaders use their own examples to disseminate among the personnel the standards of ethical behaviour towards every stakeholder, support the learning of values during the adaptation period and promote corporate unity at different levels by initiating, and participating in, joint events.

The key approaches to development of corporate culture and the principles of corporate social responsibility are used in the day-to-day activities at all company management levels for the purpose of taking managerial decisions, organizing recreation and providing social support for Vodokanal employees.

The internal communications are effected in the company's integrated information space including, on the one hand, a set of IT resources and the corporate newspaper and, on the other hand, individual meetings between the company managers at any level with the company employees.

THE MAIN PROVISIONS OF CORPORATE CULTURE ADOPTED BY SUE "VODOKANAL OF ST. PETERSBURG" ARE SET OUT IN THE COMPANY STANDARD STO VODOKANAL SPB 1.4-2010 MANAGEMENT SYSTEM. CODE OF CORPORATE ETHICS.

The company employees adhere to the corporate values, and maintain and develop the corporate culture as required to achieve the highest level of performance.

The corporate values are obligatory for all Vodokanal staff and are proposed to all those who cooperate with Vodokanal.

The company's ethical principles are based on the corporate values, compliance with law, and respect of the rights of Vodokanal employees and partners. They govern both in-company relations and Vodokanal relationship with its partners and customers including behaviour in the situations where conflicts of interests arise.

The principles are (but not limited to):

- Focus on creation of value
  Vodokanal employees carry out their activities in line with the company strategy and strive to fulfil the most important strategic tasks. Implementing various actions, Vodokanal employees realize what value they create for customers, their company and the society in general.
- Professional skills and teamwork
  Vodokanal employees are good professionals. They build relations with their colleagues on the basis of confidence, collaboration, corporate solidarity and mutual assistance. The employees take a proactive approach in their teamwork focusing on the result of joint activities. Those who are capable of improving the company performance are offered career promotion, and, moreover, implementation of important projects is entrusted to them.
- Strategic flexibility
  Vodokanal operates in the environment where governmental regulation of tariffs and fluctuating prices for the suppliers' products are a reality and have a significant impact on the implementation of the company strategy.
- Social responsibility
  The company bears responsibility for the social well-being of its employees. The value created by Vodokanal staff is a huge contribution to the improvement of the living standards in St. Petersburg and the Baltic Sea Region.

IMPROVEMENT OF BUSINESS PROCESSES

Now, Vodokanal's corporate structure consists of: two production branches which provide water supply and sewerage services, the branches responsible for the core operation processes, and the company administration dealing with strategic planning and the monitoring of key performance indicators.

The previous management structure could not ensure proper flexibility of management or achievement of strategic targets. In 2007, for the purpose of building an effective management system, a detailed analysis of Vodokanal's business processes was made, followed by optimization of the business processes using a process-based approach to management and on the basis of the QMS (Quality Management System) principles.

As a result of re-engineering, two 1st level business processes were defined: Water Supply in St. Petersburg and Wastewater Disposal in St. Petersburg, their key management elements being: process owners, process flow, monitoring points and cost structure. The results obtained allowed to look at the company and its strengths and weaknesses from a new perspective.

In the years 2008-2010 that followed, the activities in relation to business process re-engineering were implemented in an integrated and systematic way: managers at all levels scrutinized the functions of different company units and job descriptions of employees, defined the information flows and revised the targets and key tasks.

The re-engineering of business processes was followed up by the transition from the territorial principle of water systems management to the process-based principle: water supply and sewerage services within the same area are provided by separate specialized branches.

By the end of 2010, several supporting processes had been re-engineered too. As a result, an independent Transport and Logistics Branch was segregated and an utterly new customer service function comprising the units within the company administration and the branches was established.

In 2011-2012 Vodokanal continued to build the water supply and sewerage management system in St. Petersburg. For the purpose of optimizing the key production processes, the water supply (sewerage) districts became independent structural divisions. Now, each district deals with the calculation and control of the district's water balance; and the levels of responsibility, from the company administration to the districts, are clearly defined, demonstrating that we have reached the next level of the corporate management system development.

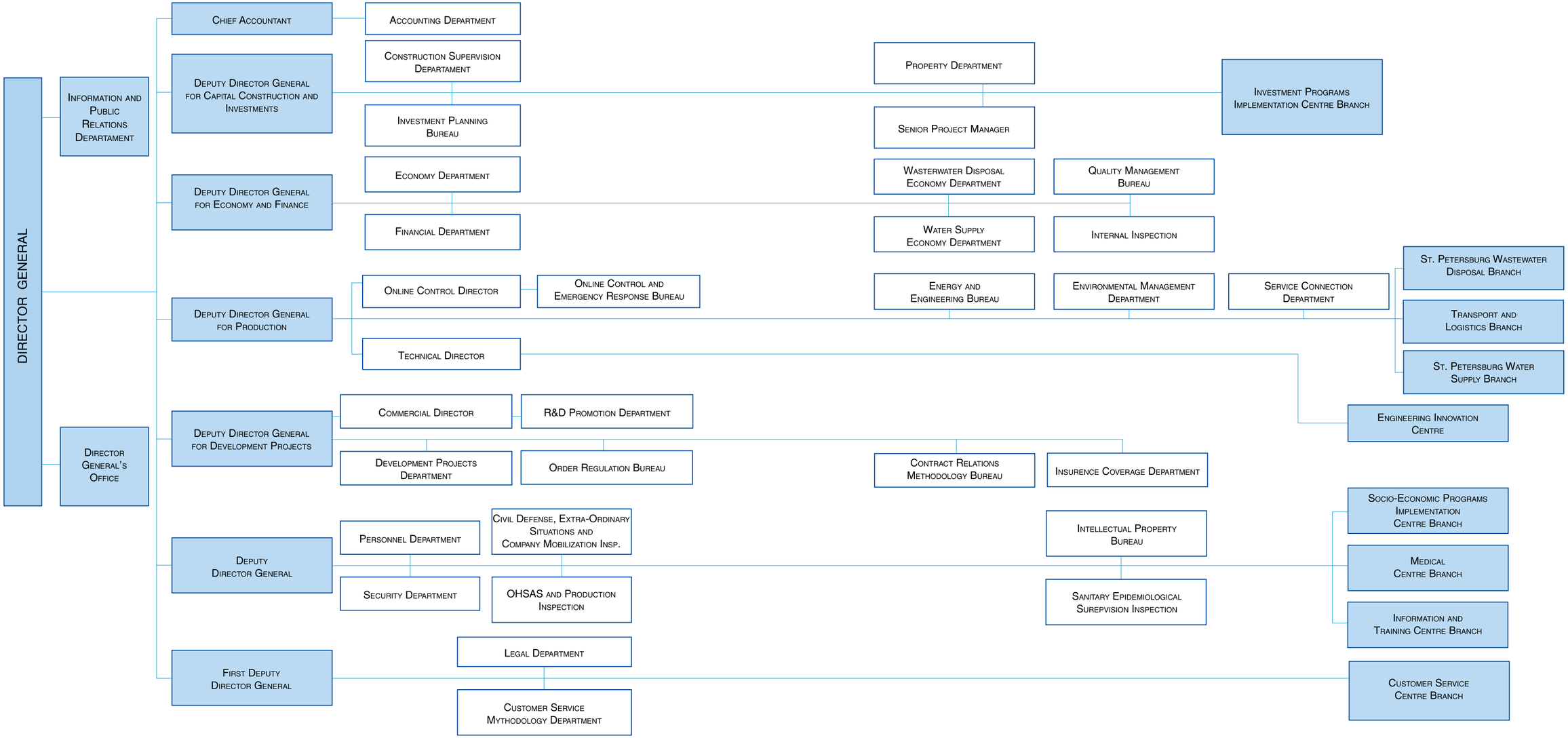
Water Supply Economy Department and Water Disposal Economy Department were established within the company administration to provide methodological assistance to water supply (sewerage) districts in preparing the district's budget and reports on their production and economic results.

Today, the corporate structure of SUE "Vodokanal of St. Petersburg" is focused on implementation of the functional-zonal principle of water systems management. Three management levels are formed in the company.

Vodokanal management system is now based on the following key principles:

- process-based approach, and
- personification of responsibilities and authority.

SUE "VODOKANAL OF ST.PETERSBURG" ORGANIZATIONAL CHART
(as of 01.01.2013)



COMPANY PROFILE

THE STATE UNITARY ENTERPRISE (SUE) "VODOKANAL OF ST. PETERSBURG" PROVIDES WATER AND SEWERAGE SERVICES TO THE CITY OF ST. PETERSBURG. IT IS THE COUNTRY'S BIGGEST PUBLIC UTILITY AND ONE OF THE KEY MUNICIPAL COMPANIES IN ST. PETERSBURG.

Since 2012, Vodokanal has taken up a new activity: construction and operation of permanent snow-melting stations.

Vodokanal's assets are owned by the City of St. Petersburg represented by relevant public authorities.

Vodokanal provides its services to the city inhabitants (5 million people) and to many thousands of companies and organizations in St. Petersburg.

As of 31.12.2012, the staff of SUE "Vodokanal of St. Petersburg" numbered 9,279 people.

The water supply system comprises:

- 6,755km of water networks;
- 200 boosting pumping stations;
- 9 water treatment plants (the biggest are Southern WTP, Northern WTP and Main WTP);
- 2 sodium hypochlorite production plants.

The sewerage system comprises:

- 88,119.3km of sewer networks;
- 241.1km of tunnel collectors;
- 138 sewage pumping stations;
- 15 wastewater treatment plants including 13 – for municipal sewage and 2 – for land runoff. The biggest are: Central WWTP, Northern WWTP and South-West WWTP;
- 3 sludge incineration plants.

Main achievements of SUE "Vodokanal of St. Petersburg" in the field of water treatment:

- all potable water supplied to the city is UV-treated to ensure epidemiologic safety;
- liquid chlorine is not used for water disinfection, it is replaced by hazard-free, non-toxic sodium hypochlorite;
- hazard-free, non-toxic ammonia sulfate is used for water ammonation instead of ammonia solutions;
- water condition in the Neva is checked by means of a biomonitoring system where crayfish act as chief "inspectors";
- PAC (powdered activated carbon) dosing is implemented to remove odors and oil;
- St. Petersburg is the first city in Russia to implement a water supply management system: a pilot project has been implemented in Uritskaya Pumping Station zone, and the system implementation is near completion in Southern water supply zone.

Main achievements of SUE "Vodokanal of St. Petersburg" in the field of wastewater treatment:

- 97.1 % of wastewater is treated in Petersburg now; this figure will grow to 98.4 % by October 2013;
- Petersburg meets the HELCOM recommendations: phosphorus concentrations in the total volume of the city wastewater discharge do not exceed 0.5 mg/l, nitrogen concentrations – 10 mg/l;
- Petersburg has solved the sludge disposal problem: three sludge incineration plants are in operation in the city;
- The geotube technology is used to recycle the sewage sludge accumulated in the landfills before the incineration plants were put into operation;
- Biomonitoring technologies are implemented to check the quality of treated effluent (by means of crayfish) and the concentrations of flue gases at the sludge incineration plant (by means of snails);
- An environment-friendly and energy-efficient snow disposal technology is implemented in Petersburg – permanent snow-melting stations utilizing wastewater heat.

SUE "VODOKANAL OF ST. PETERSBURG" HAS BUILT AN EFFECTIVE CUSTOMER FEEDBACK SYSTEM. SINCE 2004, A 24-HOUR HOT LINE HAS BEEN IN OPERATION WHERE ONE CAN GET ANY INFORMATION ABOUT VODOKANAL WORK. THE HOT LINE CAN BE CALLED BY PHONE 305 09 09.

Moreover, Vodokanal is in charge of the city fountains and public toilets.
Vodokanal pays great attention to awareness-raising activities. It has its Information and Training Centre including the museum complex The Universe of Water and the Youth Environmental Centre.

The International Advanced Water Technologies Centre established by Vodokanal in cooperation with Lahti Science and Business Park, Finland, is working on the company premises.

Another social awareness-raising project implemented by Vodokanal is the Internet portal da-voda.com which promotes the ideas of careful water use.

THE MOST IMPORTANT EVENTS IN 2012

1. THE NEXT-TO-LAST STAGE OF THE NORTHERN TUNNEL COLLECTOR PROJECT WAS COMPLETED. DUE TO THAT, AS MANY AS 97.1 % OF ALL WASTEWATER IS DISCHARGED TREATED.

On 6 December 2012, five untreated wastewater discharges on Pirogovskaya embankment (28,000 m^3/day in total) were closed down. Now this wastewater is re-routed via the collector to Northern WWTP where it passes all treatment stages (including those recommended by HELCOM).

All in all, from 2008 to 2012, Vodokanal has closed down over 60 direct wastewater discharges (approx. 250,000 m^3/day in total) due to the construction of Northern Tunnel Collector, and the Neva was relieved of 90 Mio. m^3/year of dirt.

In October 2013, seven more direct discharges (37,000 m^3/day) will be connected to Northern Tunnel Collector. As a result, the wastewater treatment level will grow to 98.4 % in Petersburg.

2. WASTEWATERS FROM THE TOWN OF SERTOLOVO (LENINGRAD REGION) HAVE BEEN CONNECTED TO NORTHERN WWTP. AS A RESULT, THE DISCHARGE OF POLLUTANTS INTO THE LAKE SESTRORETSKY RAZLIV REDUCED BY 58.8 %.

In December 2012, the official ceremony of connecting the Sertolovo wastewater was held at Northern WWTP in the presence of the Governor of St. Petersburg G.S. Poltavchenko and the Governor of Leningrad Region F.Yu. Drozdenko. By joint efforts of the city and the region the discharge of untreated and poorly treated wastewater totaling 7,700 m^3/day into the river Chernaya (it falls into the Lake Razliv) was stopped.

That was achieved due to the construction of sewage collector “Pesochniy-Novoselki-Northern WWTP” in Petersburg, the main pumping station in Sertolovo and two pressure lines to the inlet chamber of the collector “Pesochniy-Novoselki-Northern WWTP” (Leningrad Region).

3. SIX PERMANENT SNOW-MELTING STATIONS HAVE BEEN BUILT AND PUT INTO OPERATION.

Construction and operation of snow-melting stations is a new area of activity for Vodokanal St. Petersburg. The stations use the heat of wastewater pumped into the snow-melting chamber. The resulting mix of snowmelt and wastewater is sent to WWTPs where it is fully treated.

Therefore, by disposing snow to permanent stations we can achieve a significant reduction of negative impact on the environment.

4. A PILOT ODOUR REMOVAL PROJECT IS LAUNCHED AT THE SEWAGE SLUDGE LANDFILL SEVERNIY IN NOVOSELKI.

The 83ha sewage sludge landfill Severniy was put into operation in 1986, concurrently with the startup of Northern WWTP. The sludge produced in the wastewater treatment process at Northern WWTP had been disposed to that landfill till 2008 (in autumn 2007, the sludge incineration plant at Northern WWTP was put into operation, and sludge was no longer disposed to the landfill). To prevent any negative impact of the landfill on the environment Vodokanal is implementing a project to recycle the accumulated sludge using the geotube technology. In parallel, the automatic deodorant spraying system was put into operation as a pilot project for Severniy Landfill in September 2012.

The system consists of a pumping station with a control unit and a 300m long pipeline located on the posts, 6 meters above the land surface, along the landfill perimeter. The deodorant solution is atomized through the nozzles installed on the pipeline at a 6m interval.

5. THE MAIN PHASE OF THE PROGRAMME ENVISAGING CONNECTION OF SEVERAL CHP PLANTS (VYBORGSKAYA CHP AND CENTRAL CHP’S POWER PLANT NO.2) TO THE MUNICIPAL WATER NETWORKS HAS BEEN COMPLETED IN COOPERATION WITH OAO TGK-1.

Due to that, the hot water quality could be improved since the CHPs now use potable cold water from Main WTP for the preparation of hot water (formerly, the power plants used raw water from the Neva).

Vyborgskaya CHP receives up to 33,000 m^3 of cold water, and Central CHP’s power plant no.2 – approx. 44,000 m^3.

6. VODOKANAL’S YOUTH ENVIRONMENTAL CENTRE HAS CELEBRATED ITS 10TH ANNIVERSARY.

The Youth Environmental Centre (YEC) was opened in September 2002. Since then, over three hundred thousand children have participated in its interactive programmes, projects and classes and subsequently, acted as teachers for their parents and friends. Today, Vodokanal has an integrated environmental awareness-raising system comprising, in addition to YEC, the museum complex “The Universe of Water” and the International Advanced Water Technologies Centre. Since 2010, the Internet portal da-voda.com focused on active Internet audience has been in operation with the support of Vodokanal.

7. DECEMBER 2012 MARKED 25 YEARS SINCE FELIX V. KARMAZINOV BECAME THE CEO OF VODOKANAL.

Over this period, Vodokanal has implemented a number of large-scale projects which enabled St. Petersburg to reach a new level in the field of potable water supply and wastewater treatment.

INVESTMENTS IN 2012

VODOKANAL'S INVESTMENT ACTIVITIES ARE CARRIED OUT IN ACCORDANCE WITH THE INVESTMENT PROGRAMME DEVELOPED AND ADOPTED FOR A THREE-YEAR PERIOD IN COMPLIANCE WITH THE APPLICABLE LAW.

Investment programme objectives are grouped in line with the core production activities of Vodokanal.

The water supply objectives are:

- supply of safe potable water to the customers;
- provision of reliable water services;
- improvement of energy efficiency and energy saving at water supply facilities;
- access to the centralized water supply services

The wastewater objectives are:

- mitigation of wastewater system's negative impact on the environment;
- provision of reliable wastewater disposal services;
- improvement of energy efficiency and energy saving at wastewater collection and treatment facilities;
- access to the centralized wastewater disposal services

IN 2012, 16,477.5 MIO. ROUBLES WERE INVESTED IN THE DEVELOPMENT AND RECONSTRUCTION OF WATER AND WASTEWATER SYSTEMS IN ST. PETERSBURG.

This amount is the sum of Vodokanal's investment programme and the budget investments in the projects ordered by the Employer's Office for Construction and Capital Repairs of Engineering and Energy Complex (hereinafter – "the Employer's Office").

In 2012, Vodokanal's investment programme amounted to 11 100.3 Mio. Rbls.

It was funded from different sources, such as:

- St. Petersburg budget – 616.5 Mio. Rbls.
- Vodokanal's own funds – 3,904.0 Mio. Rbls.
- own funds (budget investments in the authorized capital – 1,779.7 Mio. Rbls.
- borrowed funds – 3 297.4 Mio. Rbls.
- connection fee – 1 502.7 Mio. Rbls.

Vodokanal invested 4,260.2 Mio. Rbls in the water supply system under the investment programme, including:

- development of bigger water treatment plants – 43.5 Mio. Rbls.;
- reconstruction and development of water networks – 1 986.2 Mio. Rbls.;
- improvement of energy efficiency at water facilities – 817.2 Mio. Rbls.;
- other items (production bases, procurement of equipment, security systems, development of fountain complexes) – 1 413.3 Mio. Rbls.

The amount of 6,840.1 Mio. Rbls. was invested in the wastewater system, including:

- closure of untreated wastewater discharges – 2 055.4 Mio. Rbls.
- modernization and construction of treatment plants – 580.7 Mio. Rbls.
- construction of permanent snow-melting stations – 1 612.6 Mio. Rbls.
- reconstruction and development of sewer networks – 1 869.9 Mio. Rbls.
- improvement of energy efficiency at wastewater facilities – 104.3 Mio. Rbls.
- other items (production bases, procurement of equipment, security systems, development of public toilets) – 617.2 Mio. Rbls.

IN 2012, THE TOTAL COST OF WORKS ORDERED BY THE EMPLOYER'S OFFICE TO DEVELOP WATER AND WASTEWATER SYSTEMS IN ST. PETERSBURG WAS 5,377.2 MIO. RBLS.

THE WORKS WERE FINANCED FROM THE BUDGET OF ST. PETERSBURG. VODOKANAL PERSONNEL INSPECTED THE QUALITY OF CONSTRUCTION AND INSTALLATION WORKS THROUGHOUT THE YEAR.

AWARDS IN 2012

IN 2012, VODOKANAL WON SEVERAL NATIONAL AND INTERNATIONAL AWARDS:

- Winner's diploma of the EFQM (European Foundation for Quality Management) Good Practice competition in creative use of social media
- "Confidence in Employer" Certificate (bestowed on the Branches "St. Petersburg Water Supply" and "St. Petersburg Wastewater Disposal")
- Laureate diploma of the All-Russian Award "Financial and Economic Olympus 2012"
- Laureate diploma of the "Company of the Year 2012" Award
- Badge "Quality Standard" – for compliance with the international regulations and requirements to the organization of business processes, quality of management and end products (in the framework of III International Business Forum "Russia-Switzerland: Energy Efficiency" – April)
- Honorary Certificate for active participation in the St. Petersburg International Youth Programmes Organization under the Association of International Cooperation, Association for Relations with Great Britain and Unions of English-Speakers.

In 2012, Director General of SUE "Vodokanal of St. Petersburg" Felix V. Karmazinov was awarded a medal and the laureate diploma of the competition "100 Best Higher Education and Research Institutes of Russia" in the nomination "Scientist of the Year"; the medal of the International Eurostandard Association "For Works Beneficial to Society"; the Top 100 Rating laureate diploma in the nomination "Energy and Infrastructure"; and the Medal of L.G. Melnikov "For Personal Contribution to Elimination of Hazardous Industrial Plants and the Use of Safe Advanced Technologies for Construction of Underground Tunnel Collectors". Moreover, Mr. Felix V. Karmazinov was commended by the Governor of St. Petersburg for his contribution to the implementation of the Governmental Personnel Training Plan for Russian organizations.

RISK MANAGEMENT

FINANCIAL RISK MANAGEMENT

VODOKANAL FOLLOWS A BALANCED FINANCIAL POLICY BASED ON THE STRATEGIC PLAN AND LONG-TERM PERSPECTIVE.

The basis of the forecast is unconditional compliance with the key financial ratios, calculated according to both Russian and International Financial Reporting Standards, maintaining the values as recommended by the International Financial Institutes.

To make a long-term forecast, the company uses its financial model calculated for the period up to 2030.
It helps to evaluate Vodokanal's financial capabilities taking into account the big investment projects implemented through the company's own or borrowed funds. The model enables consideration of macroeconomic factors and company development factors to identify potential sources of investments and to project development options under different scenarios.

The model provides instruments for comparative analysis and monitoring of Vodokanal's dynamically changing results. Using the results of the monitoring and analysis made by means of the financial model, Vodokanal's management promptly make necessary amendments to the company's production and investment programs.
Risk management is integrated into the management system via strategic management and budgeting processes. Internal control procedures are implemented by the company in order to decrease all risks. The company internal audit is performed by a separate department within the Vodokanal's administration. Scenario approach, industry analysis and SWOT analysis are used by Vodokanal St. Petersburg as the risk identification and assessment methods.
Property insurance and social responsibility insurance of Vodokanal as the owner of large production sites are used as the most important risk decreasing tools.

FINANCIAL RISK MANAGEMENT IN 2012

IN 2012, VODOKANAL CONTINUED USING LONG-TERM FORECASTING AND FINANCIAL MODELING TO MINIMIZE FINANCIAL RISKS.

Continuous monitoring of the financial situation and assessing potential impacts of the current financial situation on the key financial indicators provided prompt update of financial policy and maintenance of the key financial ratios that describe the company's financial stability and solvency at the proper level.

In 2012, Vodokanal continued improving its financial model. The output of the model's latest version is a package of financial statements prepared in compliance with the International Financial Reporting Standards (IFRS). The improved model corresponds to the European level and allows to predict and analyze Vodokanal's key financial indicators in accordance with IFRS.

In addition, the model enables forecasting the impact of large investment projects implementation scenarios on basic indicators of the company's financial and economic activity in the long-term perspective. As the result, the company can choose the most effective implementation scenario taking into account minimization of financial risks.

To optimize the use of loan funds provided to the company, as well as to decrease potential financial risks, Vodokanal as agreed by international financial organizations – the company's lenders – made the drawdown of the remaining loan proceeds under the Neva Untreated Wastewater Discharge Closure Program in the amount of MEURO 43.6. These loan proceeds were converted into roubles and partly used to pay for the works performed. The rest part in the amount of RUB 1.4 billion – after the deposit auction at St. Petersburg Stock Exchange among the first-class credit institutions – was deposited with a bank for 1.5 years at an annual percentage rate of 10.13% with the right to quarterly withdraw funds in pre-defined limits. The funds to be quarterly withdrawn will be used to pay for works and services performed. Thus, in addition to the profit derived from difference between loan and deposit rates, the company excluded the risk of lower euro-to-rouble rate and, consequently, the lack of funds to finance rouble contracts.

Vodokanal policy in the field of financial management and minimization of potential risks was appraised by the leading international rating agencies Standard&Poor's and Moody's, which gave Vodokanal the following investment-grade credit ratings in 2012:

- S&P - BB+ . Stable outlook
- Moody's – Baa2. Stable outlook.

NON-FINANCIAL RISK MANAGEMENT

WITHIN THE VODOKANAL'S INTERNAL CONTROL SYSTEM THERE IS A SPECIAL UNIT THAT DEALS WITH PREVENTIVE IDENTIFICATION OF THE COMPANY RISKS AND IMPLEMENTATION OF RISK MINIMIZATION ACTIVITIES.

The internal control department provides the management of Vodokanal with the information obtained:

- during inspections of the company structural departments,
- upon the analysis of range and price of goods and services procured by the company during its operation,
- during the examination of company basic and supporting processes.

General procedure for control of the structural departments and internal auditing was formed and regulated. Rules for composition, description and execution of the audit report were defined. Methods for different types of inspections and examinations are under development.

SEGMENTATION OF NON-FINANCIAL RISKS WAS MADE BY VODOKANAL WITHIN THE FRAMEWORK OF THE COMPANY SELF-ASSESSMENT IN ACCORDANCE WITH THE EFQM EXCELLENCE MODEL. THE KEY ASPECTS OF THE COMPANY ACTIVITIES, WHICH MAY LEAD TO RISKS, WERE IDENTIFIED.

They include:

1. Risks associated with the customer dissatisfaction with water and wastewater service quality.
2. Risks associated with negative impacts on the environment.
3. Risks associated with changes in legislation.
4. Risks associated with the general decline in the culture of water use.
5. Risks associated with the potable water source contamination.
6. Risks of industrial accidents.
7. Risks associated with potential diseases in hazardous working conditions.
8. Information security risks related to the company's information assets and personnel.

1. The above risks are systematically managed by the company using a process-based approach.

To minimize the risks associated with the customer dissatisfaction with water and wastewater services, the quality management system based on the International Standard ISO – 9001 is continuously improved. Regular interaction with customers through the Hot Line Service in combination with the company's transparency policy (including active communication with mass media) as well as questionnaires and customer satisfaction surveys help to mitigate this risk, too. Internal and external audits as a part of the Quality Management System (EMS) enable quick identification of the management areas, which need to be improved and help improve the processes at all stages of the service life cycle. This improves the quality of company operations and increases the customer satisfaction level.

2. Management of risks associated with negative impacts on the environment is performed on the basis of environmental management system ISO 14001, which is used by the company. Vodokanal enhances the reliability of water supply and sewerage systems, improves wastewater treatment and sludge utilization technologies, stops discharges of flush water from water treatment plants by treating it and using it as process water, and focuses on the environmental friendliness of the used motor transport.

3. Energy management system on the basis of ISO 50001 was implemented and certified within the company in 2012 in order to create a system-wide approach to increase energy efficiency of the plants.

4. Improvement of the occupational health and safety management system on the basis of OHSAS-18001 leads to mitigation of the risks associated with emergency situations and consequently, to the improvement of service quality and mitigation of the environment pollution risks. Currently, the professional risks assessment is not only an important part of occupational health and safety management but also a part of the company general management. Implementation of this activity is performed on the basis of OHSAS-18001 international standard and range of national regulations.

5. To alleviate the risks associated with undesirable changes in legislation, Vodokanal actively participates in the development of regulations, makes suggestions and argues its position.

6. To prevent the risks associated with a decline in the culture of water use, Vodokanal actively implements environmental awareness-building educational programs.

7. The management of the risks associated with potable water source contamination is based on early prevention of such contaminations. In particular, Vodokanal has implemented the river water biomonitoring by crayfish at all its water intakes. And oil spills in the river are detected by the monitoring system installed on one of the bridges across the Neva River, upstream of the first city water intake.

8. To minimize the risks associated with accidents and hazardous working conditions Vodokanal continuously performs its activities to improve working conditions, reduce accident frequency rate and control accident risk at hazardous production sites.

9. To mitigate the risks associated with information security, the company implements measures to identify risks, determine risk factors and risk probability, carries out analyses and assessment of risks that may affect the company's information security. The company's informational security management system in accordance with ISO 27001 was established and certified in 2012 to ensure a system-wide approach to the information security.

Efficient use of natural resources, system approach to the company management, active participation in the development of regulations, environmental awareness-rising activities, technological innovations, and internal and external benchmarking – all that became a part of the corporate management culture and helps alleviate risks.

NON-FINANCIAL RISK MANAGEMENT IN 2012

IN 2012, THE NON-FINANCIAL RISK MANAGEMENT PROCESS WAS UNDER CONSTANT CONTROL BASED ON ISO EUROPEAN STANDARDS AND EFQM EXCELLENCE MODEL

IN 2012, VODOKANAL INTRODUCED AND CERTIFIED TWO MORE MANAGEMENT SYSTEMS: ENERGY MANAGEMENT SYSTEM (ISO 50001) AND INFORMATION SECURITY MANAGEMENT SYSTEM (ISO 27001).

Control of the risk level is performed through monitoring of implementation of risk mitigating measures and progress analysis performed by the company's top management.

Annual self-assessment of the company operation in accordance with the EFQM Excellence Model enabled successful introduction of the applied approaches for non-financial risk management into the integrated system.

At present, Vodokanal continues improving its non-financial risk management. Particular attention is paid to the following areas:

- creation of more accurate risk-management system;
- support of energy management system according to the ISO 50001 ideology;
- support of information security management system according to the ISO 27001 ideology;
- extension of both internal and external benchmarking;
- more extensive use of such tools as 20 Keys, Six sigma, Lean production, etc.

PARTICIPATION IN EXTERNAL INITIATIVES

COMPLIANCE WITH HELCOM REQUIREMENTS

IN ORDER TO FULFIL RECOMMENDATIONS OF THE HELSINKI CONVENTION ON THE BALTIC MARINE ENVIRONMENT PROTECTION (HELCOM), IN 2012 VODOKANAL ST. PETERSBURG STRIVED TO REDUCE UNTREATED WASTEWATER DISCHARGES AND REMOVE NUTRIENTS (NITROGEN AND PHOSPHORUS) FROM WASTEWATER.

The Convention on the Protection of the Marine Environment of the Baltic Sea (Helsinki Convention) was signed by all Baltic Sea countries in 1974. The Convention for the first time dealt with all polluters located in the catchment area of the Baltic Sea. After collapse of the USSR, establishment of new independent states, unification of Germany and development of the international environmental law, the new Helsinki Convention was signed in 1992 by the states located along the coast of the Baltic Sea and the European Community. It was put into effect upon the ratification on January 17, 2000. The Russian Federation approved the 1992 Helsinki Convention in October 1998.

The main purpose of the Convention is to protect the marine environment of the Baltic Sea, restore and preserve the environmental balance in the region and ensure sustainable use of its resources.

Member-countries committed to take all necessary legislative, administrative and other measures to prevent the Baltic Sea pollution and eliminate the existing pollution sources for the purpose of the Baltic Sea ecosystem rehabilitation.

The governing body of the Convention is the Helsinki Commission, the Baltic Marine Environment Protection Commission (HELCOM), which in particular issues recommendations (regulations) for municipal wastewater treatment.

The main goals of Vodokanal in terms of the Baltic Sea protection are:

- closing untreated wastewater discharges;
- reducing nutrient load on the Baltic Sea basin.

Before 1978, wastewater in Leningrad was not treated at all. At that time about 3,500,000 m3 of untreated wastewater was daily discharged directly into the Neva River and other city water bodies.
At present, St. Petersburg has 13 wastewater treatment plants, which receive combined and municipal wastewater, and 2 storm water treatment plants. The main wastewater treatment plants are the Central Wastewater Treatment Plant (Central WWTP), Northern Wastewater Treatment Plant (Northern WWTP) and South-West Wastewater Treatment Plant (SWTP).

At the end of 2012, St. Petersburg treated 97.1 percent of wastewater. Up-to-date technologies are implemented at the city wastewater treatment plants that allow to remove effectively phosphorus and nitrogen from wastewater.
Since June 2011, Petersburg has been meeting in full the Helsinki Commission recommendations regarding phosphorus content in the city effluent discharges (not more than 0.5 mg/l). The nitrogen content in the effluent in Petersburg does not exceed 10 mg/l.

Vodokanal continues to improve wastewater treatment technologies. Since 2011, the 1st line of modernization to intensify the biological treatment processes according to JHB (Johannesburg) technology has been carried out at CWWTP. The 3d and 4th aeration tank sections were commissioned in 2012 following the completion of upgrading works in 2011.

At the same time NWWTP reconstruction work began. 5 aeration tank sections, 5 primary clarifiers, 6 secondary clarifiers will be reconstructed under the project.

Besides, in 2012 design work began to modernize wastewater treatment plants in the catchment area of south-western suburbs of St. Petersburg, including Kolpino WWTP, Kronstadt WWTP, Pushkin WWTP and Pontonny WWTP.

Major efforts were done in 2012 to reduce the untreated wastewater discharge into water bodies.
After construction of Pesochny-Novoselki-Northern WWTP collector, the company stopped to discharge untreated and insufficiently treated wastewater from the town of Sertolovo (Leningrad region) into the Razliv Lake and then into the Gulf of Finland. Since the end of 2012, wastewater from the town of Sertolovo is channeled for treatment to the Northern WWTP. That enabled to reduce by 58.8% the amount of pollutants discharged to the Sestroretsky Razliv Lake.

An important project targeted to the fulfillment of HELCOM recommendations and closure of the untreated wastewater discharges is the completion of the Northern Tunnel Collector.
The Northern Tunnel Collector is a complicated engineering structure. There are two main tunnels, each of them being 12.2 km long and 4 m wide, laid underground at the depth of 40-90 meters; it consists of dozens of inlet and distribution chambers, many kilometers of connecting micro-tunnels, a unique facility – URS – the pumping station designed to adjust the velocity of wastewater and prevent tunnel silting.
Due to the stage-by-stage commissioning of the collector, Vodokanal has annually been closing tens of thousands m^3/day of direct wastewater discharges since 2008.

In 2012, Vodokanal closed five direct discharges (28,000 m^3/day) near the Pirogovskaya Embankment. Thus, the Bolshaya Nevka River was released from about 10,000,000 m3 of untreated wastewater per year. That allowed to increase the amount of treated wastewater up to 97.1 %.

Besides, in 2012 Vodokanal began to construct a collector near the Robespierre and Smolny Embankments, which is a part of the Northern Tunnel Collector. The scope of work includes installation of a 2.2 km micro-tunnel with the inner diameter of 1.5 m (it will be laid at the depth of about 20 m) and construction of six shafts (8.5 m and 6 m in diameter) and seven solid chambers. Besides, sewerage networks with the diameter of 0.6-1.2 m and the total length of about 200 m will be re-laid.

To stop untreated wastewater discharges into the Okhta River, the Okhta tunnel design works continued in 2012. In 2013, design documents will undergo expertise and then construction of the collector will begin.

In 2013, which is declared in Russia the Year of Environmental Protection, Vodokanal continues work to stop untreated wastewater discharges into water bodies. In September 2013, the construction of the Northern Tunnel Collector will be fully completed. That will ensure treatment of 98.4 % of wastewater in St. Petersburg.

PARTICIPATION IN THE UN GLOBAL COMPACT

SUE "VODOKANAL OF ST. PETERSBURG" SUPPORTS TEN PRINCIPLES OF THE UN GLOBAL COMPACT CONFIRMING ITS INTENTIONS TO PROMOTE MORE STABLE AND OPEN GLOBAL ECONOMY AND SUSTAINABLE DEVELOPMENT IN THE FIELD OF HUMAN RIGHT PROTECTION, RESPONSIBLE APPROACH TO LABOUR RELATIONS, ENVIRONMENT PROTECTION AND ANTI-CORRUPTION.

Principles of the UN GC are based on the UN Universal Declaration of Human Rights, the International Labour Organization Declaration, the Rio Declaration on Environment and Development, the UN Convention against Corruption.

Vodokanal considers the participation in the Global Compact as a unique strategic opportunity to promote the principle of corporate social responsibility in its operations. That allows improving the company sustainable development practice.

A corporate framework of social responsibility has been established in Vodokanal. Its elements are the social support of personnel's potential and motivation, health and safety system, care for veterans, development of physical culture and sports, youth policy, interaction with trade-unions, continues system of staff training and development. Vodokanal's participation in the UN Global Compact is the basis for planning and implementation of social responsibility in the company.

Vodokanal actively participates in the UN Global Compact Network activities in the Russian Federation. In 2012, the Deputy Director General Mr. Anatoly K. Kinebas was elected to the UN GC Network Steering Committee in the Russian Federation. It was decided that Vodokanal would coordinate the environmental activities within the UN GC ten principles implementation.

In 2012, Vodokanal participated in the traditional Russian Business Week organized under the aegis of the Russian Union of Industrialists and Entrepreneurs in cooperation with the UN GC Network in the Russian Federation. The company representatives took part in conferences, round tables, working groups and advisory panels, which were organized as a part of the UN GC Network activities in the RF and devoted to the most pressing issues for business community.

Vodokanal presented for the second time its sustainable development report at the annual exhibition of non-financial reports of the companies – participants of the UN Global Compact in the Russian Federation.

In 2012, Vodokanal also participated in the development of The Best Practice Manual – "Sustainable development: role of Russian business". The manual presents ways of the UN GC principles implementation by the Russian business community as well as its activity to promote general objectives of the UN in sustainable development.

Vodokanal regularly submits the results of its activities to stakeholders and general public. This information is published in a consolidated form in corporate reports on sustainable development that are drawn up annually in accordance with international social reporting standards. Activities related to the company's corporate responsibility are also covered in corporate media – on the web-site and in the corporate newspaper.

Participation in the Global Compact allows the company to be well informed about the best international practice in terms of implementation of ten principles of UN GC and facilitates the development of the best practices in sustainable development in Russia.

INVOLVEMENT IN THE DEVELOPMENT OF LEGISLATIVE ACTS

THE MOST IMPORTANT AREA OF REGULATORY AND ANALYTICAL ACTIVITIES OF VODOKANAL IN 2012 WAS ITS INVOLVEMENT IN DEVELOPING DRAFTS OF SUBORDINATE LEGISLATION AIMED AT IMPLEMENTING THE FEDERAL LAW NO.416-FZ DATED DECEMBER 7, 2011 "ON WATER SUPPLY AND WASTEWATER DISPOSAL".

Many such subordinate acts were under the development, and the most important among them are:

- Rules of cold water supply and wastewater disposal;
- Standard form contracts for cold water supply, wastewater disposal, transportation of cold water and wastewater;
- Basic principles of pricing in water supply and wastewater disposal sector;
- Water and wastewater tariffs regulation rules;
- Rules of commercial water and wastewater metering;
- Procedure for setting permissible discharge values and discharge limit values for those organizations that discharge wastewater via the centralized sewage system to the city water bodies;
- Procedure to control composition and properties of wastewater;
- Procedure for development and approval of water supply and wastewater disposal plans, content requirements;
- Rules for the development and calculation of the target performance indicators for companies-providers of hot water, cold water and (or) wastewater services;
- Requirements for technical inspection of centralized systems of hot/cold water supply and wastewater disposal;
- and other acts.

Vodokanal's participation in the development of subordinate legislation drafts allowed to include a lot of proposals and wordings aimed at protecting rights and legitimate interests of water companies as well as efficient operation of the water sector.

In 2012, employees of Vodokanal also developed amendments to the Federal Law "On Water Supply and Wastewater Disposal". Despite the fact that this law was adopted recently (at the end of 2011), it is necessary to amend the law to protect the rights and legitimate interests of water companies and to ensure efficient operation of the water sector.

During 2012, the company worked on other drafts both of normative acts both at the federal and St. Petersburg level.

At the federal level the work was carried out, in particular, on the following regulations: the Federal Law "On protection of Lake Ladoga", the Federal Law "On amending separate legislative acts of the Russian Federation to improve on tariffs regulation for electric power, heat, gas, cold water supply and wastewater disposal", the Federal Law "On amending the Federal Law "On Competition"" and

some other legislative acts of the Russian Federation, the Federal Law "On amending the Federal Law "On Privatization of State and Municipal Property" and the Article 9 of the Federal Law "On Water Supply and Wastewater Disposal", the Federal Law "On Public and Private Partnership", the Federal Law "On Public Control in the Russian Federation", the Federal Law "On amending the Federal Law "On Concession Agreements" and separate legislative acts of the Russian Federation", the Resolution of the Russian Government "On amending several regulations of the Russian Federation Government on housing and public Utilities", as well as a number of other legislative acts.

At the level of St. Petersburg the work was performed, in particular, on the following regulations: the Law of St. Petersburg "On delineation of powers between the Legislative Assembly of St. Petersburg and the Government of St. Petersburg in water and wastewater sector" (to implement the Federal Law "On Water Supply and Wastewater Disposal"), Regulation of the St. Petersburg Government "On measures to implement the Law of St. Petersburg "On delineation of powers between the public authorities of St. Petersburg in the field of using municipal water and sewerage systems in St. Petersburg", the Regulation of St. Petersburg "On the procedure of imposing fees for the discharge of wastewater and contaminants into the municipal sewerage system of St. Petersburg", the Order of the Committee for Energy and Engineering Support "On approval of wastewater disposal norms or permissible discharges into the municipal sewerage system of St. Petersburg", as well as a number of other regulations.

During the work on the above regulation drafts, Vodokanal's employees developed texts of the drafts, prepared and consolidated comments and proposals on various versions of regulation drafts, issued objections to comments of public authorities regarding the regulation drafts, developed analytical and other documents and materials on regulation drafts (conclusions, certificates, comments, special opinions, schemes, tables, etc).

This work was conducted as part of interaction with the State Duma, the Ministry of Regional Development of the Russian Federation, the Ministry of Natural Resources and Environment of the Russian Federation, the Legislative Assembly of St. Petersburg, the Committee for Energy and Engineering Support, Not-for-profit partnership "GKH Razvitie", Not-for-profit partnership "National Union of Vodokanals", the Russian Association of Water Supply and Wastewater Disposal, as well as other public authorities and organizations.

INVOLVEMENT INTO THE REACH EUROPEAN REGULATION

REACH (REGISTRATION, EVALUATION, AUTHORIZATION AND RESTRICTION OF CHEMICALS) IS THE EUROPEAN UNION REGULATION THAT GOVERNS PRODUCTION AND TURNOVER OF ALL CHEMICALS, INCLUDING THEIR COMPULSORY REGISTRATION.

In 2010, within the framework of the Baltic Sea Action Summit in compliance with the status of a downstream user Vodokanal St. Petersburg undertook the Commitment in respect of the Baltic Sea: "Introduction of improved measures to provide environment-friendly selection and use of chemicals in Vodokanal St. Petersburg in accordance with the REACH standards".
The Commitment was undertaken to protect the Baltic Sea from the impact of hazardous substances by way of selecting environment-friendly chemicals to be applied in production processes and laboratories of Vodokanal St. Petersburg and ensure safe chemical handling. This commitment includes the following items:

- informing potential suppliers (importers) about Vodokanal's methods of using chemicals;
- collection and review of existing safety data sheets;
- informing suppliers about the requirement to submit safety data sheets in accordance with the REACH standards.

In 2012, Vodokanal proceeded with its work under the Commitment with regard to the Baltic Sea in compliance with the REACH standards.
A mandatory and integral part of Vodokanal's cooperation with external suppliers is the submittal of existing safety data sheets for chemicals and substances by suppliers.
In future, Vodokanal plans to develop its further cooperation with the Baltic Sea Action Group (BSAG) within the framework of the undertaken Commitment to improve the condition of water resources in the Baltic Sea.

PARTICIPATION IN UNIDO PROGRAMMES

IN 2012, VODOKANAL ST. PETERSBURG CONTINUED ITS COOPERATION WITH UNIDO - THE UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION. IT MOBILIZES KNOWLEDGE, EXPERIENCE, INFORMATION AND TECHNOLOGIES, THEREBY CONTRIBUTING TO THE PRODUCTIVE EMPLOYMENT, DEVELOPMENT OF A COMPETITIVE ECONOMY AND PROVIDING ENVIRONMENTAL SUSTAINABILITY.

In 2012, cooperation between Vodokanal St. Petersburg and UNIDO was built in the following main areas:

- Preparation and participation in the 5th Neva International Environmental Congress (17-18 May 2012, the Tavrichesky Palace), where UNIDO acted as an official partner of the Congress.
- Further participation of Vodokanal in the UNIDO Global Chemical Leasing Programme and similarly-named Global Award-2012 (June 2012, Frankfurt). The competition commission highly appreciated Vodokanal's contribution to the protection of international water of the Gulf of Finland and the Baltic Sea from nutrients and especially noted the company's achievements with a relevant certificate at the official ceremony, which was held on 18 June 2012 in Frankfurt.
- Development of partnership relations between UNIDO and Vodokanal St. Petersburg in the area of capacity building and choosing the UNIDO optimal international project in order to apply the experience accumulated by Vodokanal as well as to train company's specialists in specific tasks of technical assistance.
- Support and participation of Vodokanal St. Petersburg in the new Green Industry Platform presented by UNIDO at Rio+20, the United Nations Conference on Sustainable Development (21-23 June 2012, Rio de Janeiro).
- Joint participation in preparing and conducting theme-based conferences, round tables, discussions on environmentally sustainable development, promoting the UNIDO Green Industry Platform and the joint UNIDO-UNEP Global Program on Resource Efficient and Cleaner Production (RECP).

The coordinator of this cooperation, as in previous years, was the Non-Commercial North-Western International Centre of Clean Production established in St. Petersburg in 2000 with the support and active participation of UNIDO. At present, the Centre is the UNIDO's coordinator in the North-West of Russia of all UNIDO's international programs and projects, related to environmentally sustainable development, as well it is a part of the UNIDO international network of national clean production centers operating in 53 countries.

ACTIVITIES OF THE INTERNATIONAL ADVANCED WATER TECHNOLOGIES CENTRE

IN 2012, IMPLEMENTATION OF THE INTERNATIONAL ADVANCED WATER TECHNOLOGIES CENTRE CONTINUED. IT STARTED ONE YEAR BEFORE AND IS A JOINT PROJECT OF VODOKANAL ST. PETERSBURG AND LAHTI SCIENCE AND BUSINESS PARK (FINLAND).

Activities of the International Advanced Water Technologies Centre – both in Russia and abroad – were held in a form of conferences, workshops, laboratory activities, lectures, interactive sessions, training abroad.

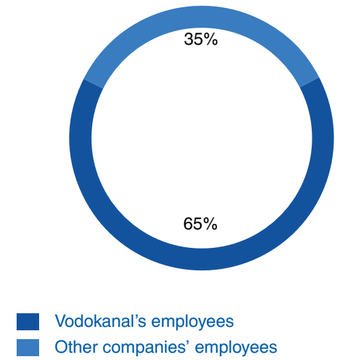
To provide its training activities the Centre invited as speakers Vodokanal's experts, leading experts of well-established European institutions and companies.

In 2012, over 20 events were held according to the program. Over 2,000 people took part in them, including over 400 experts in water and wastewater.

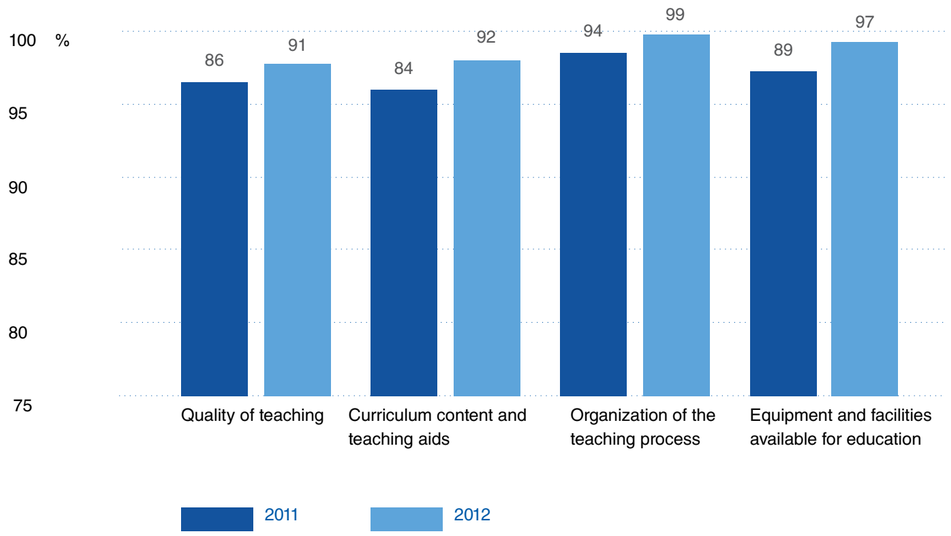
Both Vodokanal's employees and representatives of other companies participated in the Centre's training seminars.
Participants of the activities had an opportunity not only to listen to lectures, but visit Vodokanal's production facilities and The Universe of Water Complex.

In order to improve the Centre operation, continuous feedback with trainees has been established by means of their questioning. Questioning was conducted in four basic areas: satisfaction with the quality of teaching, curriculum content, and organization and material support of the teaching process. In the course of questioning proposals of the participants regarding the most important and urgent themes, in which the seminars' participants would be interested in the future, were taken into consideration. The most useful and interesting opinions of participants were used to prepare the activity program for 2013.

Participants of seminars by categories in 2012



Satisfaction of participants with the Centre training activities



The Centre is improving continuously and one of the bright examples of this improvement is introduction of new forms of activities. In 2012, one of the new activities was training of company's employee abroad. In particular, in 2012 as part of the Centre operation, three abroad trainings for the company's employees were organized for the first time at top water companies in Sweden, Norway, Denmark, Finland and Germany. In total, about 50 people were trained. The objective of these trainings was to learn about best practices and innovative technologies of drinking water and wastewater treatment and their further application in Vodokanal.

The Centre pays particular attention to the work with the younger generation. In total, in 2012, over 1,800 Russian and foreign schoolchildren took part in the programs of the Centre.

The main tasks to be solved in the course of implementation of the activities for children:

- improving the culture of water use;
- fostering the responsible attitude to natural resources;
- developing the socially active position of young people;
- promoting the ideas of effective environmental education and education for sustainable development.

To make the teaching process more effective, up-to-date technologies are actively applied during training courses, for example, 3D installation with stereo holographic effects, specially equipped laboratories and multimedia facilities.

An interesting and promising direction of work with children is organizing abroad training tours. In 2012, schoolchildren from St. Petersburg visited Finland, and Finnish students – St. Petersburg. The Centre presents a unique concept, and there are no analogues of that concept in other countries around the world. It deals with both best practices of water treatment and issues related to the value of water resources, importance of solicitous attitude to water. The difference of the Centre from other similar Russian and foreign centers is that it focuses on education in water sector and that both Russian and foreign teachers conduct training.

MEMBERSHIP IN THE EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT

SINCE 1 DECEMBER 2011, VODOKANAL ST. PETERSBURG HAS BEEN A FULL MEMBER OF THE EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT (EFQM).

The European Foundation for Quality Management (EFQM) is a not-for-profit membership organization. It was established in 1987 by 14 leading European companies with the support of the European Commission to increase the competitiveness of the European economy by promoting new management approaches, stimulating the learning of management basics and creating opportunities for recognition of success in this field.

EFQM members number over 800 European organizations totaling several millions of employees.

EFQM was established to assist organizations in achieving sustainable success by giving them relevant recommendations.

There is a set of key principles upon which the EFQM's fundamental concept of Excellence is based:

- Adding value for customers;
- Sustainable achievement of the distinguished results;
- Leading with vision, inspiration and honesty;
- Developing organization capacities;
- Succeeding through people;
- Using creativity and innovation;
- Managing with flexibility;
- Creating a sustainable future.

One of the top-priority tasks of Vodokanal St. Petersburg is the improvement of the company management system aimed to raise responsibility for sustainable future of the region, including:

- the increase of the reliability and efficiency of water supply and wastewater disposal systems through the introduction of up-to-date management and metering systems, improvement of water and wastewater treatment processes;
- sustainable use of water resources in the course of treating and distributing drinking water to consumers;
- protection of the environment at water intakes, during transportation, treatment, handling and incineration of wastewater sludge;
- guaranteeing to consumers the quality of water supply and wastewater disposal services that meet and exceed the requirements of Russian and European standards;
- keeping the investment attractiveness to implement reconstruction and building programs;
- effective resource management to optimize costs.

All of the above will guarantee the quality of services, customer confidence in the safety of drinking water and customers' right to the healthy environment not only today but in the following years.
The Foundation organized the EFQM Excellence Model Competition to motivate organizations, which introduce self-assessment according to EFQM Excellence Model, share experience and assess the company management by experts from companies that are the most successful in management improvement, namely, by EFQM acting assessors.

The organization, which shows a maximum compliance with the Excellence Model, becomes the Winner of the prestigious EFQM Excellence Award (there are also nominations "Prize Winner" and "Finalist"). However, before the contenders begin to compete for the Award, they usually must pass several levels: "Committed to Excellence" and "Recognized for Excellence" (on a regional scale) and receive corresponding EFQM Certificates, and also win the Tournament of Central and Eastern Europe. This multilevel scheme supports step-by-step implementation of the Excellence Model.
Since 2005, Vodokanal has started self-assessment of its activities on the basis of the Excellence Model to improve its management framework. At first the company used the Russian Federation Government Regional Quality Model that harmonized with the EFQM Model. Since 2009, Vodokanal has conducted the self-assessment on the basis of the EFQM Model and participated in the EFQM competition.

Stages of participation in the EFQM Model competition:

- in 2009, Vodokanal received the certificate confirming compliance of the company management with the "Recognized for Excellence" 5 stars level of the EFQM Model;
- in 2010, Vodokanal won the International Quality Tournament of Central and Eastern Europe;
- in 2011, Vodokanal became a finalist of the EFQM Excellence Award. The company was the first to achieve such a result among European water companies;
- in 2012, Vodokanal St. Petersburg won the best practice competition in creative use of social media organized by the European Foundation for Quality Management (EFQM). Vodokanal presented at the competition its video-film "The Neva Crayfish and His Friends" telling about the da-voda website (www.da-voda.com) – the project aimed to disseminate the ideas of careful attitude to natural resources.

MEMBERSHIP IN ASSOCIATIONS, UNIONS AND OTHER ORGANIZATIONS

VODOKANAL ST. PETERSBURG GIVES MUCH ATTENTION TO PARTICIPATION IN PROFESSIONAL ASSOCIATIONS AND UNIONS.

In 2012, Vodokanal continued to work within the framework of the non-commercial partnership National Union of Vodokanals (NUV) uniting companies of different ownership which account for almost two-thirds of the total water supply in Russia. The main activity of NUV is the improvement of interaction between water companies and governmental authorities for the purpose of introducing new operational standards and technical regulations and improving investment prospects of the sector. The NUV was established in 2009 and Felix V. Karmazinov, Director General of Vodokanal St. Petersburg, was elected its President.

Vodokanal St. Petersburg maintains partner relations with Russian water companies in the framework of other professional associations. The company is a member of the Russian Association of Water Supply and Wastewater Disposal (RAWWD); Felix V. Karmazinov, Director General of Vodokanal, is a member of the RSWWD Board.

Baltvod Association of North-Western Water Companies initiated by Vodokanal (more than twenty years ago) actively participates in promotion of the advanced water and wastewater technologies in water sector of the North-West Federal District. President of the Association is also Felix V. Karmazinov, Director General of the company.

Furthermore, Vodokanal St. Petersburg participates in the activities of the Non-Commercial Partnership “The Russian Water Society”. In particular, in November 2012, Vodokanal actively participated in the third Clean Water International Forum in Moscow (organizer is The Russian Water Society).

Vodokanal St. Petersburg is a member of the Non-Commercial Partnership “Association of Builders of St. Petersburg”, which got the status of a self-regulatory organization in 2009. In the same year, this partnership issued to Vodokanal permits for the works influencing the safety of the permanent facilities.

During 2010, Vodokanal changed twice its permit for the performance of works influencing the safety of the permanent facilities in order to bring the list of works in compliance with the amendments to the current legislation.

In December 2011, Vodokanal joined the Not-For-Profit Partnership “Interregional Union of Design Engineers” (NP MRSP) and obtained the competency certificate for the planning works which might affect the safety of permanent facilities.

In December 2012, Vodokanal in cooperation with Lahti Science and Business Part (Finland) officially established the not-for-profit partnership “International Advanced Water Technologies Centre” to provide training in the advanced water and wastewater technologies for Vodokanal staff, employees of other Russian and foreign water companies.

Vodokanal St. Petersburg is a member of two self-regulatory organizations: the Non-Commercial Partnership “Association of Builders of St. Petersburg” (the competency certificate for a particular type of works influencing the safety of permanent facilities no. 0064.02-2009-7830000426-C-003 dated 2 April 2012) and the Not-For-Profit Partnership “Interregional Union of Design Engineers” (the competency certificate for a particular type of works influencing the safety of permanent facilities no.0176-2011-7830000426-P-30 dated 28 December 2011).

The fact is that from 1 January 2009 the licensing of particular types of works was abolished in the Russian Federation (including the licensing of construction works), and self-regulatory organizations were authorized to issue permits for particular type of works to building companies. And now organizations may carry out design and construction works (as well as perform construction supervision/ functions of the project manager/developer) only on the basis of a competency certificate issued by a self-regulatory organization. To obtain such a certificate, a company is required to become a member of the relevant self-regulatory organization.

INTERACTION WITH STAKEHOLDERS

PARTNERSHIP CONCEPT

Vodokanal St. Petersburg maintains lasting relations with its partners on the basis of mutual trust, respect and openness in line with the EFQM Model concepts, knowing that in the dynamic environment of the modern world the company success and satisfaction of all stakeholders strongly depend on the development of effective partnership.

Vodokanal St. Petersburg divides its partners into segments – by types of activities or services and by significance and importance of the partnership in terms of creating value for the stakeholders. Vodokanal adheres to the multilateral partnership concept including the interaction with its partners and suppliers on technical, process-related, financial, organizational and tutorial aspects of activities. International cooperation gives Vodokanal an opportunity to study and implement best foreign practices in its own activities.

As for its international partners, in 2012 Vodokanal continued to cooperate successfully with such organizations as:

- the Ministry of the Environment of Finland;
- the John Nurminen Foundation;
- Nordic Environment Finance Corporation (NEFCO);
- Swedish International Development Cooperation Agency (Sida);
- Northern Dimension Environmental Partnership (NDEP);
- foreign partners-suppliers of equipment and technologies.

Vodokanal St. Petersburg maintains active partner relationships with water companies of Helsinki, Stockholm, Tallinn, Hamburg and Berlin.

To share experience, Vodokanal St. Petersburg has built good partnership relations with water companies in Russia and the Baltic Sea Region. The company is involved in development of industry standards and other regulations and transfers its experience to other Russian water utilities.

The partnership with the Russian and European banking community, as well as with different investors is successfully implemented in Vodokanal. Investments through the public-private partnership scheme are an example of sound and coherent concept of company partnership. This scheme was used for the construction of the South-West Wastewater Treatment Plant some years ago.

The basic principle of the partnership concept embraced by Vodokanal: each partner fulfils its obligations in due time and at a good quality level understanding that partnership implies joint work aimed at long-term, sustainable creation of value for both parties.

Over decades of cooperation with foreign and domestic partners, Vodokanal has never failed to fulfil its obligations, and this fact is highly appreciated by its partners.

Well-defined partnership concept and mutually beneficial cooperation with the partners help us implement innovative technologies, modernize plants, improve the company management and, eventually, raise the stakeholders' satisfaction with our services.

INTERACTION WITH CUSTOMERS

ONE OF THE MOST IMPORTANT ASPECTS OF VODOKANAL ACTIVITIES IS MAINTAINING EVERYDAY CONTACTS WITH CUSTOMERS.

The company communicates with customers in several ways: in the course of services provision, in the course of interaction initiated by Vodokanal (interviews, focus groups), by discussing various problems in the mass media and by organizing different meetings with citizens.

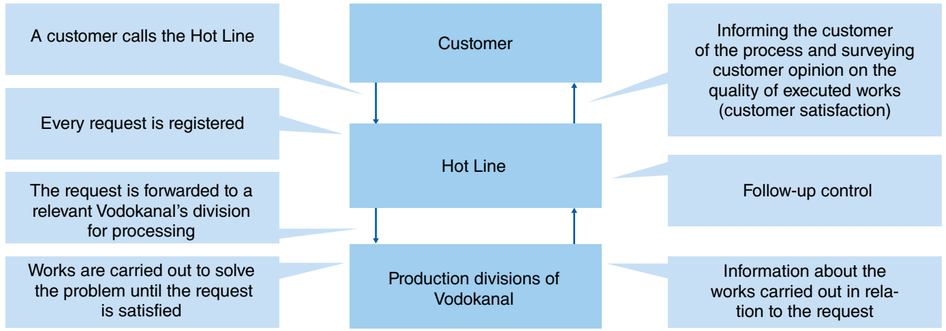
Customers come to SUE "Vodokanal of St. Petersburg" with different questions about the issuance of authorizations for connection to water and sewerage networks, conclusion of contracts, payments under contracts. Since water is a product and sewage collection – a service, Vodokanal is implementing a new contract policy to formalize contractual relations with its customers. For this purpose, special customer service units are set up at Vodokanal's production branches to communicate with customers within their respective service areas in each administrative district of the city. The reception rooms provide the necessary information and document forms; a box to collect customers' wishes and complaints is always there.

Quick response to the customers' complaints of deficiencies in water and sewage networks operation is an important aspect.

SINCE 2003, SUE "VODOKANAL OF ST. PETERSBURG" HAS BEEN OPERATING THE HOT LINE WHICH RECEIVES CUSTOMER CALLS ROUND THE CLOCK (TEL.: +7 (812) 305-09-09).

Besides, SUE "Vodokanal of St. Petersburg" receives requests via the Internet (there is a separate section "Feedback" on the corporate website www.vodokanal.spb.ru).

Vodokanal-Customers interaction through calls



All incoming requests are recorded in the information system and forwarded to the production division responsible for remediation of relevant section of network and informing the customers of the works performed. All the call processing stages - from the call to remediation – are under the control of a body independent from the production division which performs works. The monitoring of the request processing may only be stopped after the customer confirms that the works are completed. Thus, it is a customer that evaluates the final results of works in relation to every call.

Moreover, the above system enabled citizens, customers and clients to receive information and consulting services from the Hot Line operators.

To develop the call reception system, the time distribution of calls during 24 hours was analysed. The results of the analyses ensured efficient arrangement of work process with a sufficient number of skilled operators available at any time of day or night.

The customer call management includes computer registration of all incoming calls. Codification of calls supports efficient evaluation of service quality and helps determine the areas for improvement in order to eliminate the causes of complains preventively.

Processing of customer calls is based on the information obtained by means of up-to-date technologies, in particular, the Call-Centre - automated call recording and distribution system. The information obtained through this system enables us to ensure reception of all incoming calls and to optimize both the call processing time and the waiting time required for the caller to get the operator's answer.
All these factors contribute to the improvement of the customer service quality.

INTERACTION WITH SUPPLIERS PROCUREMENT

VODOKANAL ST. PETERSBURG IS STRIVING TO BUILD LONG-TERM, MUTUALLY BENEFICIAL RELATIONS WITH SUPPLIERS.

On 1 January 2012, the Federal Law "On procurement of goods, works, services by certain types of legal entities" no.223-FZ dated 18 July 2011 went into effect.

When procuring goods, works and services, legal entities specified in item 2, Article 1 of the Law no.223-FZ shall comply with the principle of transparency (item 1, part 1, Article 3 of the Law no.223-FZ). According to this principle, since 1 October 2012, the clients have been obliged to post the information about on pursued procurements on the official web-site.

Since 1 October 2012, Vodokanal has been posting the information about any of its procurement in the amount of over RUB 500,000 on the national procurement web-site www.zakupki.gov.ru.

In compliance with the Law no.223-FZ, the following information is to be posted on the official web-site:

1. Procurement plan
2. Procurement regulation
3. Procurement information
4. Amendments made to a contract during its conclusion and performance
5. Data on the number and total value of contracts concluded.

In July 2012, the Regulation of the Government of the Russian Federation no.616 dated 21 June 2012 "On approval of the list of goods, works and services, the procurement of which is made in electronic form" came into force.

To procure goods (works, services) in electronic form, as well as to automate the process of organizing and making procurements at its own expenses, Vodokanal chose B2B-Center system as the company operator of electronic tendering.

To use the company's own funds in an effective way, Vodokanal makes procurements using regulated procedures, including:

- tender – a bid process where the purchaser can evaluate the bids not only by the price but also by other criteria (warranty period, quality, duration of works, qualification level, etc.);
- auction (open or closed) – a bid process where the winner is a person bidding the lowest price or, if the contract price is reduced to zero in the course of the auction and the auction participants compete for the right to make the contract, – a person bidding the highest price for the contract;
- request for quotation (open procedure only) –a method of order placement where the information about the purchase of goods, works or services is made available to unlimited range of persons by posting the call for quotations on the company website; the participant which offers the lowest contract price becomes the winner.

The maximum contract price in this procedure is 1,000,000 Roubles, and the procedure may only be launched by the company (including its branches) once in three months for the same product.

- single source (supplier, contractor) procurement – a procedure other than tender where the purchaser sends an offer of contract to one supplier (contractor) only.

  The use of this procedure is limited to strictly defined cases where other procurement procedures are not feasible or reasonable.

Prequalification – means selection of contenders for participation in the procurement procedure in compliance with the requirements and criteria set by the procurement initiator.

The following selection criteria are used for prequalification:

- bidder's experience in the area relevant to the subject of the tender,
- availability of production facilities,
- qualifications of managers and specialists,
- company ratings,
- availability of certificates, diplomas, self-regulating organization documents,
- other criteria.

With such approach, goods and services can be procured on optimal terms and conditions.

The most preferred procurement method is bidding (tender, auction).

The published information on bidding and requests for quotations includes customer's contact persons for inquiries regarding the tendering / technical issues. Those who wish to submit their tenders (requests for quotations) can receive clarifications on various issues in the course of preparing their tender proposals either orally, by addressing the contact person specified in the documentation or in a written form by sending an inquiry. The Order Regulations Bureau is responsible for clarification of issues concerning preparation of bids while the initiator department is responsible for clarification of issues related to the Terms of Reference and draft contract provisions. With such approach, goods and services can be procured on optimal terms and conditions.

INTERACTION WITH FINANCIAL INSTITUTIONS

IN 2012, IMPLEMENTATION OF THE NEVA UNTREATED WASTEWATER DISCHARGE CLOSURE PROGRAM WAS GOING ON.

The Program is co-financed with the loans provided by the European Bank for Reconstruction and Development (EBRD), Nordic Investment Bank and European Investment Bank, and the non-refundable assistance of the Northern Dimension Environmental Partnership (NDEP), Swedish International Development Agency (SIDA), the Ministry of the Environment of Finland (FMoE), EBRD Shareholder Special Fund and the John Nurminen Foundation.

In addition to the provision of funds, Vodokanal's lenders and donors monitor the performance of financial obligations by Vodokanal, compliance with environmental requirements, conformity of tender procedures for procurement of goods, works and services with the international standards.

In 2012, Vodokanal began activities under the Small Wastewater Treatment Plants Reconstruction Project.

The Loan Agreement with Nordic Environment Finance Corporation (NEFCO) and associated agreements with each of NEFCO and FMoE on providing non-refundable assistance for this Project were signed in 2010. ZAO "Vodokanal Stroy" – the contractor – selected in an international tender, began works at Pushkin, Kolpino, Kronstadt, Pontonny WWTPs. Besides, supply of the required equipment began.

In 2012, Vodokanal continued to perform its obligations of debt repayment and servicing under the loan agreements.

LLC Vodokanal-Finance (subsidiary of Vodokanal St. Petersburg) was paying, in a timely manner and in full, the accumulated coupon yield to the holders of Series 01 non-convertible interest-bearing documentary bearer bonds of LLC Vodokanal-Finance, with obligatory centralized care (state registration number 4-01-36398-R dated 16 November 2010). In 2012, the amount of the paid coupon yield was RUB 175,520,000.00.

The series 01 bond's coupons rate was set at 8.8% per annum.

INTERACTION WITH OTHER REGIONS IN THE FIELD OF WATER AND WASTEWATER SYSTEM DEVELOPMENT

IN 2012, VODOKANAL ST. PETERSBURG PROVIDED CONSULTING AND INFORMATION SERVICES TO WATER COMPANIES IN THE REGIONS OF THE RUSSIAN FEDERATION AND THE CIS COUNTRIES.

Cooperation was performed under the signed agreements and contracts for rendering services with the assistance and support of municipal administrations, as well as in compliance with received written requests for consulting services to develop water supply and wastewater disposal systems.

In September 2012, the R&D Promotion Department was created in Vodokanal. The main objective of this unit is to provide promotion of innovative solutions and best practices of Vodokanal St. Petersburg, as well as interaction with companies that render water and wastewater services, search for potential clients to provide consultancy and information in order to optimize the clients' operating costs and the quality of services.

Promotion is aimed at the introduction of an effective tool for water company modernization in Russia, based on the investment (project) approach, i.e. on attracting private investments in the water sector with transparent state regulation that provides the balance of interests of water and wastewater system customers and owners and guaranteeing organizations.

The R&D Promotion Department on behalf of Vodokanal interacts with municipal administrations and guaranteeing organizations in the regions of the Russian Federation. The area of priority is water user companies located in the catchment area of the Neva River, the main water source in St. Petersburg, whose economic operations are directly related to the impact on the environment situation in the region.

Technical inspections of facilities, development of recommendations to modernize water supply and sewerage systems, as well as calculation of the estimated value and creation of the financial model helps regional and municipal managers develop short-term, mid-term and long-term programs and mechanisms for their financing.

19 November 2012, the agreement on cooperation with regard to water supply and sewerage systems modernization in the Republic of Karelia was signed between the Government of the Republic of Karelia, OAO "Corporation of Development of the Republic of Karelia" and SUE "Vodokanal St. Petersburg".

In 2012, inspections of the water supply and sewerage systems condition were carried out in five municipal districts in the Republic of Karelia: Lahdenpohia, Pitkäranta, Olonetsky, Sortavalsky and Kondopozhsky. In cooperation with the R&D Promotion Department, the Engineering and Innovation Centre and the Bureau of Investment Planning the analysis of the current condition of water and sewerage facilities was performed and technical solutions and the financial model of facility modernization were developed, as well as practical options were proposed to improve the condition of water and sewerage systems and reduce the environmental load.

In response to the written request of OAO "Petrozavodskiye Municipal Systems" from September 2012, the inspection of Petrozavodsk wastewater treatment plant was conducted. In cooperation with the Engineering and Innovation Centre Branch the report on the basic conditions of WWTP reconstruction was developed and rendered.

Following up upon the cooperation, a working meeting of specialists from OAO "Petrozavodskiye Municipal Systems" and experts from Vodokanal St. Petersburg was organized to share experience concerning the technical connection to water supply and sewerage networks.

The key moment in implementation of the agreement on cooperation in regards to water supply and sewerage systems modernization in the Republic of Karelia is the decision of the parties to create a joint company – an operating entity to carry out modernization of water supply and sewerage systems in the Republic of Karelia.

In 2012, the training seminar program for heads of municipalities of the Republic of Karelia was developed, as well as the training program for heads and specialists of guaranteeing organizations in the International Advanced Water Technologies Centre, jointly established by Vodokanal St. Petersburg and Lahti Science and Business Park.

In 2012, cooperation with State Enterprise "Kalugaoblvodokanal" continued.

Consultations of specialists from SE "Kalugaoblvodokanal", building authority of the Kaluzhskaya Region and the administrative board of the city of Kaluga were held regarding creation of the base of spatial data on engineering networks at water and sewerage facilities. The commercial proposal for rendering services to identify priority measures for reconstruction and construction of the water supply network in the city of Kaluga was prepared, as well as training of the deputy heads of the subjects of the Russian Federation and heads of municipalities was also conducted in Lahti (Finland). Besides, training of a repairmen team from SE "Kalugaoblvodokanal" was organized and practical works in water supply networks were conducted.

In February 2012, a supplemental agreement to the service contract on the development of the action plan for the long-term development of water and sewerage facilities and the financial model was signed by OAO "Municipal Systems of the Gatchinsky District".

In April 2012, action plan on the long-term development of water and sewerage facilities and the financial model to be implemented by OAO "Municipal Systems of the Gatchinsky District" were submitted to the Administration of the Gatchinsky District and the Government of the Leningrad Region.

In May 2012, the partnership between Vodokanal St. Petersburg, Vodokanal Dushanbe and the World Bank began.

A working meeting between representatives of the World Bank, SUE "Dushanbe Vodokanal" and Vodokanal St. Petersburg was organized at the premises of Vodokanal.

On 10 October 2012, a videoconference between Vodokanal Dushanbe, Vodokanal St. Petersburg, representatives of the World Bank and the city hall of Dushanbe was held, on the results of which Vodokanal experts went to Dushanbe, where the Memorandum of Cooperation between SUE "Vodokanal of St. Petersburg" and SUE "Dushanbe Vodokanal" was signed, as well as the draft of the training program for specialists from Vodokanal Dushanbe at the premises of the Information and Training Center was developed.

In December 2012, the agreement between the Administration of the town of Kingisep and SUE "Vodokanal of St. Petersburg" was signed and the draft of the paid service agreement on analysis of production activities and preparing the report on technical conditions of water supply and sewerage systems of OAO "Kingisep Vodokanal" was developed with OAO "Kingisep Vodokanal".

A lot of work was done to develop legally admissible and cost-effective schemes to modernize water supply and sewerage systems in the town of Kingisep. The successfully implemented project of the Ust-Luga port resulted in the growth of population in the town by 25% that set up the problem of providing safe drinking water in the required amount.

INTERACTION WITH INDUSTRIAL ENTERPRISES

THE PURPOSE OF INTERACTION BETWEEN SUE "VODOKANAL OF ST. PETERSBURG" AND INDUSTRIAL ENTERPRISES IS TO HELP THEM MEET REGULATORY REQUIREMENTS REGARDING WASTEWATER DISCHARGE INTO THE SEWERAGE SYSTEM OF ST. PETERSBURG.

The most problematic issues for enterprises are:

- compliance with the regulatory values for pollutants concentrations in the wastewater discharged into the sewerage systems of St. Petersburg;
- collection of fees for discharge of wastewater and pollutants into the sewerage systems of St. Petersburg;
- implementation of commercial wastewater metering.

In 2012, Vodokanal specialists came into close contact with industrial enterprises (in particular, through the Union of Industrialists and Entrepreneurs and the Association of Industrial Enterprises) helping them meet the existing standards for pollutant concentrations in the effluent.

To this effect, Vodokanal specialists did the following:

- gave advice in relation to the results of wastewater quality tests;
- proposed organizational and technical measures to improve wastewater quality;
- assessed the customers' action plans intended to prevent excessive discharge of pollutants into Vodokanal's sewerage systems.

The water-saving action plans aimed to prevent unsustainable use of drinking water and to reduce wastewater/ pollutants discharge are intended to improve the city environment.

In 2011, 39 industrial enterprises started to implement water-saving actions, and in 2012 their number rose to 52.

A new type of interaction with industrial enterprises was launched in 2012: Vodokanal assists enterprises in choosing best available technologies for the construction of local wastewater treatment plants.

The striking examples of modern local wastewater treatment plants constructed in cooperation with Vodokanal specialists are the plants of Open Joint Stock Company "UNIMILK Company" and LLC "Unilever RUS".

Vodokanal specialists helped "UNIMILK Company" (Petmol Dairy Plant) to select a suitable technology and the type of local treatment plant. Finally, the technology with flotation as the main treatment stage was selected, and gave very good results in the long run. LLC "Unilever RUS" is a producer of perfumes and cosmetics, the composition of its wastewater is very complex. The innovative MBR-based aerobic biological treatment technology was the right choice for such wastewater. The local WWTP was adjusted with the participation of Vodokanal specialists. As a result, the regulatory values of pollutants concentrations in wastewater were met.

Specialized workshops for industrial enterprises are planned to be held in 2013 at the International Advanced Water Technologies Center. The topics of the workshops will be the best available technologies in wastewater treatment that can be used by dairies, bakeries, meat-processing factories, and electroplating productions; and local plants for the treatment of runoff from industrial sites.

In 2012, Vodokanal of St. Petersburg maintained close contacts with the St. Petersburg Committee for Energy and Engineering Support, St. Petersburg Union of Industrialists and Entrepreneurs, St. Petersburg Association of Industrial Enterprises, Association "Bakers of St. Petersburg", etc. to prepare agreed proposals on the fees for discharge of wastewater and pollutants into the municipal sewerage system of St. Petersburg. The minutes of the meetings and the information about the decisions taken can be found on the website of St. Petersburg Union of Industrial Enterprises.

At the meetings (with participation of the Committee for Energy and Engineering Support) held during 2012, approaches to the installation of wastewater meters on the consumer side were agreed. In November 2012, a workshop and presentation of up-to-date wastewater meters were held on the premises of the Central Wastewater Treatment Plant. Moreover, draft versions of Wastewater Metering System Installation Procedure and Wastewater Metering Implementation Criteria were presented at the workshop.

The draft versions were submitted to the St. Petersburg Committee for Energy and Engineering Support, St. Petersburg Union of Industrialists and Entrepreneurs and St. Petersburg Association of Industrial Enterprises for review. According to the proposal, the Customers shall, within 2 months after the approval of the Procedure, provide to Vodokanal their action plans of evaluating the feasibility of wastewater meters installation and wastewater metering implementation plans (if the installation is technically feasible).

Simultaneously, it was decided that OJSC "KirovTek" together with SUE "Vodokanal of St. Petersburg" should organize a pilot project where temporary wastewater metering systems would be installed and the results of the experiment would be described in the final report.

Furthermore, SUE "Vodokanal of St. Petersburg" developed the terms of reference for an all-purpose measuring instrument and submitted it to St. Petersburg Union of Industrialists and Entrepreneurs and St. Petersburg Association of Industrial Enterprises to consider the prospects for designing and manufacturing affordable wastewater metering devices in St. Petersburg.

ESTABLISHMENT AND ACTIVITIES OF REALISTIC COSTS ESTIMATION STEERING GROUP

In 2012, Vodokanal worked on the project of estimating the costs of water and wastewater systems operation and development.

The purpose of the project is to develop a formalized cost estimation method based on technical and process-related parameters of water and wastewater systems operation and taking into account the existing and future requirements to the quality and reliability of services, and to test the method using the actual data of Vodokanal.

The method has to be developed because there are no accurate mechanisms today to estimate the cost of operating water and wastewater systems (nor when it is needed for tariff calculation). As a rule, the estimation of operating and development costs and calculation of tariffs are based on statistical data for the previous periods. The existing methods cannot factor in the following:

- changes in the production facilities and processes applied by the company;
- increasing wear of fixed assets;
- adoption of more stringent requirements to the quality and reliability of services and amendments to environmental and tax legislation.

Consequently, economic justification of tariffs becomes non-transparent and subjective with the subjectivity getting stronger in every subsequent regulatory period.

In December 2011, it was decided to start implementation of this project.

The project is implemented in cooperation with the Committees of St. Petersburg Government (Tariff Committee, Committee for Energy and Engineering Support). Managers of Vodokanal and the above listed committees are members of the permanent project management body – Steering Group.

Different organizations and the public were involved in the project as independent experts:

- Foundation of “City Economics Institute”,
- Housing Construction Cooperatives, Residential Complexes and Homeowners Associations of St. Petersburg,
- St. Petersburg Union of Industrialists and Entrepreneurs,
- Municipal Boards,
- Legislative Assembly of St. Petersburg,
- St. Petersburg Budget-Funded Entity “Tariff and Expert Support Center”.

In 2012, the technical inventory, including technical examination of the assets used in production processes and systematization of the information obtained, was carried out under the project.

The Identification Reference List based on the inventory result was issued where each specific unit is linked to a certain process stage. The timing of maintenance and current repair works was organized and implemented.

The rules of maintenance and current repairs were developed. Works aimed at determination of staffing levels for engineering and technical employees as well as for administration and management personnel were arranged and started.

In 2013, the Project implementation will continue. The Project results will be as follows:

- approved cost estimation methods to estimate operating/development costs of water supply and wastewater disposal,
- water balance calculation methods,
- investment program calculation methods,
- the package of regulatory documents setting rules of maintenance and current repair of the equipment used in production processes,
- cost estimation algorithms for all main cost items (chemicals and materials, electricity, payroll, etc.),
- the integrated data base.

INTERACTION WITH PERSONNEL

PERSONNEL IS A KEY FACTOR OF THE COMPANY SUSTAINABLE DEVELOPMENT. INTERACTION WITH THE PERSONNEL AND SOCIAL RESPONSIBILITY TO THE PERSONNEL ARE INCORPORATED INTO THE COMPANY DEVELOPMENT STRATEGY AND FORMULATED IN VODOKANAL'S PERSONNEL MANAGEMENT POLICY.

The main principles of the personnel management policy are: systematic approach, adaptability and practical focus of personnel management systems; flexibility; project- and competence-based approach.

Relations with the employees, the most important asset of the company, are based on social partnership, common goals, respect of mutual interests, feasibility of the obligations taken by the parties and fulfillment of such obligations in good faith.

One of the Company priorities is implementation of social programs related to recruiting and retaining the personnel, young specialists and qualified workers, motivation of employees and improvement of their labor and rest conditions.

Work with young employees is organized, "Welcome to Vodokanal" events (for the newly-employed) are held on regular basis.

The Company is continuously improving its system of incentives and developing its recognition and awards system for the personnel at all levels.

Due to a systematic approach to the personnel training and development the employees can enhance their knowledge, are given opportunities for professional development and are motivated to self-education.

Professional skills contests and the best innovative project contests are targeted to achieve and maintain a high professional level of the personnel.

The main component of the interaction with personnel is a comprehensive personnel opinion survey.
The satisfaction surveys conducted in 2012 gave analytical information about the strengths and development areas of the personnel management process, about the personnel awareness level and involvement in different processes.

INTERACTION WITH TRADE UNIONS

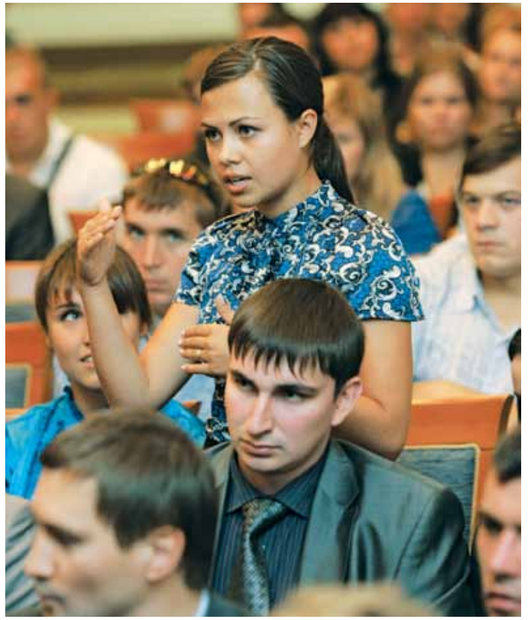
SOCIAL PARTNERSHIP WITH TRADE UNIONS IS AN IMPORTANT PART OF SUE "VODOKANAL OF ST. PETERSBURG" INTERACTION SYSTEM.

SUE "Vodokanal of St. Petersburg" recognizes the trade union as a major element of the effective system in terms of company management; occupational health and safety; raising personnel satisfaction level; organization of employees leisure and rest; health improvement etc.

The existing Collective Employment Agreement is the result of joint efforts of the employer and the trade union. The Collective Employment Agreement sets out the responsibilities of the employer and the trade union as the parties of social partnership and provides for social guarantees and benefits for the Company employees and labor veterans.

The Collective Employment Agreement for 2011 – 2013 developed with the active participation of the trade union was in effect at Vodokanal throughout 2012.

The collective employment agreement is revised and amended on regular basis in compliance with performance analysis results. All amendments to the collective employment agreement work to improve the employees' labor conditions. In 2012, twelve amendments were made aiming to improve social and labor relations at Vodokanal.



INTERACTION WITH EDUCATIONAL INSTITUTIONS

VODOKANAL PAYS SPECIAL ATTENTION TO THE TRAINING OF WORKERS AND ENGINEERS FOR THE COMPANY.

Cooperation of Vodokanal and Professional College no. 89 is a good example of successful social partnership which began six years ago.

Over all these years, advanced training facilities created together with Vodokanal have been used in the College:

- a training set to simulate emergency repairs (at water and sewer networks) and a training ground;
- training simulators for welding, sanitary, ventilation and electrical works, small-size mechanical equipment, laboratory and workbench equipment;
- all equipment for PC-89 classrooms to provide training and educational process.

The material and technical facilities are used not only for training of new comers but for advanced training and retraining of the regular employees. In 2012, 105 Vodokanal employees studied in the Professional College no. 89.

Students from PC-89 study modern production with the help of SUE "Vodokanal of St. Petersburg". For this purpose, the following annual events are organized:

- on-the-job training for water and wastewater department students at the Company's facilities;
- Joint professional contests for the following professions:

- pump operators (water supply);
- pump operators (wastewater disposal);
- emergency repair – individuals and teams (water supply);
- emergency repair – individuals and teams (wastewater disposal);
- electric welders;
- electrical repair and maintenance specialists.

In 2012, Vodokanal continued its partnership with the following specialized institutions of higher education: St. Petersburg State University of Water Communications, State University of Architecture and Civil Engineering, St. Petersburg State Transport University and others.

An important field of Vodokanal activities is close interaction with schools of St. Petersburg, Leningrad Region and other Russian cities under different programs and projects of the Youth Environmental Centre and museum complex "The Universe of Water".

INTERACTION WITH ENVIRONMENTAL ORGANIZATIONS

RESPONSIBILITY BEFORE THE SOCIETY AND FUTURE GENERATIONS IS AMONG THE BASIC VALUES OF VODOKANAL ST. PETERSBURG. IT IS RELATED BOTH TO IMPLEMENTATION OF ENVIRONMENTAL PROJECTS BY VODOKANAL AND TO INTERACTION WITH DIFFERENT ENVIRONMENTAL ORGANIZATIONS.

Vodokanal participates in the activities, organized by the Russian Department of HELCOM, the John Nurminen Foundation (Finland), the Baltic Sea Action Group (Finland), International Ecological Public Organization GREENLIGHT, etc.

The informational partnership with international environmental organizations, such as Charity: Water, Water.org, etc., began under Vodokanal's social project: the Internet portal DA-VODA (da-voda.com) aimed to disseminate the ideas of careful attitude to water. Under the aegis of the Internet portal, a number of initiatives in cleaning the territory around the lakes were implemented in 2012 with the participation of environmental volunteers, including the cleaning of territory around the Dolgoe Lake under the international project "Let's do it, World".

The dialog between Vodokanal and the St. Petersburg Branch of Greenpeace began in 2008: the Greenpeace representatives have met the company employees several times since then, and their visit to the South-West Wastewater Treatment Plant was organized in 2011.

Vodokanal involves environmental organizations in the implementation of the Youth Environmental Centre's projects and programs.

Among the partner organizations, Vodokanal cooperates with Lahti Environmental Service (Finland), Association for Co-operation with Nordic Countries (NORDEN), European Association of Underwater Images Festivals, the interregional children's club of cultural, ecological and patriotic activities "Neposeda" and others.

INTERACTION WITH FEDERAL AND REGIONAL AUTHORITIES

SUE “VODOKANAL OF ST. PETERSBURG” WORKS IN CLOSE INTERACTION WITH THE FEDERAL AND REGIONAL AUTHORITIES.

In 2012, the representatives of Vodokanal were involved in preparation of notes, comments and proposals on regulatory acts submitted for approval to federal and regional authorities including the Regional Program “Clean Water of St. Petersburg” for 2011-2025, Rules of rendering public services to citizens, the federal law “On amending the federal law “On natural monopolies” and others.

The Company specialists were involved in the activities held under the aegis of the State Duma, the Federation Council, the Ministry of Regional Development of the Russian Federation, the Ministry of Natural Resources of the Russian Federation, the Ministry of Finance of the Russian Federation, the Ministry of Economic Development of the Russian Federation as well as the St. Petersburg Government, committees of the city administration and the Legislative Assembly of St. Petersburg.

Vodokanal St. Petersburg took part in the creation of the booth for the Ministry of Natural Resources of the Russian Federation at the World Water Forum in Marseilles (France) in March 2012.

Vodokanal employees were involved in the organization and work of different conferences, meetings, panel discussions, workshops, forums and other activities held by state authorities of the Russian Federation and St. Petersburg (the State Duma, federal executive authorities, St. Petersburg environmental prosecutor’s office, committees of the St. Petersburg Government and other organizations).

Vodokanal specialists prepared letters, reports, answers to inquiries and other materials for state authorities of the Russian Federation and St. Petersburg, regarding the situation in the water sector, the need to improve the existing legislation, ways to achieve more efficient interaction between Vodokanal and its customers, and other issues in relation to the Company activities.

In October 2012, the representatives of SUE “Vodokanal of St. Petersburg” as a part of the city government delegation conducted negotiations with the administration of the Republic of Kirghiziya about modernization of water and wastewater systems in Bishkek and the training of water utilities personnel.

In December 2012, the Memorandum of Cooperation between SUE “Vodokanal of St. Petersburg” and SUE “Dushanbe Vodokanal” was signed by the order of St. Petersburg Government.

Moreover, under the program of developing multilateral relations between St. Petersburg and APAC countries, the specialists of Vodokanal St. Petersburg began drafting the Memorandum of Understanding with Metropolitan Waterworks Authority of Bangkok (Thailand) in October 2012. The memorandum was signed in February 2013.

A new phase of relationship with the neighboring regions of the North-West Federal District started due to the signing of Cooperation Agreement between the Republic of Karelia and SUE “Vodokanal of St. Petersburg” on modernization of water supply and wastewater disposal systems in the Republic of Karelia on the 19th of November, 2012.

In 2012, Vodokanal cooperated effectively with St. Petersburg Environmental and District Prosecutors’ Offices.

Vodokanal employees participated in the court proceedings involving claims by the St. Petersburg Environmental and District Prosecutors’ Offices against the company customers to require them to install local wastewater treatment plants before discharge to the municipal sewerage system (or to check the performance of the existing plants).

All court judgments on the claims brought by the St. Petersburg Environmental and District Prosecutors’ Offices against Vodokanal’s customers were made in favor of the Environmental Prosecutor’s Office, i.e. the Vodokanal’s requirement to install, by the customers, local wastewater treatment plants before discharge to the municipal sewerage system was supported, and all arguments and evidence of the Company were accepted.

In general, more than 150 claims by the St. Petersburg Environmental and District Prosecutors’ Offices were brought to the courts in 2012, and 120 of them were satisfied.

It is noteworthy that in 2011, claims were initiated by the St. Petersburg Environmental Prosecutor’s Office alone, but in 2012, claims were also initiated by St. Petersburg District Prosecutors’ Offices. In 2012, the court sessions were held in the territory of Leningrad Region, Moscow City and Moscow Region in addition to the territory of St. Petersburg.

INTERACTION WITH THE MASS MEDIA

ACCESSIBILITY OF INFORMATION IS ONE OF THE MOST IMPORTANT VODOKANAL VALUES. INTERACTION WITH THE MASS MEDIA IS A GOOD WAY TO MAKE THE INFORMATION ACCESSIBLE.

Vodokanal's information policy aims to create a positive company image, improve mutual understanding between the company, its customers and the society, and to foster the culture of water use and responsible attitude towards the environment. Relations with the mass media are based on the principles of objectivity, reliability of information and quick response.

The forms of interaction with the mass media are as follows:

- preparation and distribution of press-releases and information reports about the Company activities;
- response to the mass media's inquiries;
- interviews of Vodokanal's representatives in the mass media;
- press conferences, briefings, round tables;
- press-tours for journalists to Vodokanal's facilities;
- initiating publications in printed and electronic media, and TV/radio items;
- design and maintenance of websites describing the Company activities.

The mass media's interest in Vodokanal activities is growing every year. Almost 9,000 materials about the Company activities were publicized (in printed media, Internet, radio and TV) in 2012. In 2011, the number of such materials exceeded 8,000.

Number of mass media publications on Vodokanal activities

Year	Number
2006	2756
2007	3177
2008	3835
2009	4364
2010	6138
2011	8108
2012	8836

In 2012, the mass media showed a profound interest in Vodokanal's new activity – construction and start-up of permanent snow-melting stations.

The digests of materials on Vodokanal activities are presented to the Company management on a daily basis. It helps respond to publications promptly, provide comments and clarifications as necessary and pinpoint new themes for interaction with the mass media.

Development of the Internet sphere was in Vodokanal's special focus in 2012. The information about the Company activities was regularly posted on the Vodokanal websites (Vodokanal's official website www.vodokanal.spb.ru and the museum complex's website www.vodokanal-museum.ru).

In 2012, Vodokanal also continued to develop the awareness-raising Internet-portal about water (da-voda.com) created with the support of Vodokanal. The interviews with international and Russian celebrities appeared on the website (film directors James Cameron and Peter Greenaway, singer Regina Spektor, journalist and expert Anatoly Wasserman).

The video lessons where the Neva Crayfish (main character of this website) tells how to save water enjoyed a great popularity. Besides, the website team joined the world project "Let's Do It, World" by organizing the cleaning of the Dolgoe Lake territory in Primorsky District. This video became a nominee of the social video contest within the "Blogger against Garbage" movement.

In summer 2012, Vodokanal and the Neva Crayfish won the International Best Practice Competition in Creative Use of Social Media organized by the European Foundation for Quality Management (EFQM).

PARTICIPATION IN EXHIBITIONS AND CONFERENCES

IN 2012, SUE "VODOKANAL OF ST. PETERSBURG" TOOK AN ACTIVE PART IN DIFFERENT RUSSIAN AND INTERNATIONAL EXHIBITIONS AT ALL LEVELS IN ORDER TO OPTIMIZE INTERACTION WITH ALL STAKEHOLDERS.

On February 7, 2012, the Russian-British Conference "Strategies to improve energy efficiency of companies" was held on the premises of Vodokanal St. Petersburg where experts from Great Britain and nearly 100 delegates of various St. Petersburg companies participated. The Conference was organized by the Consulate General of Great Britain in St. Petersburg, ANO "Transboundary Cooperation Centre – St. Petersburg" (CTS-SPb) in partnership with the St. Petersburg Administration's External Relations Committee and the Committee for Energy and Engineering Support, and SUE "Vodokanal of St. Petersburg".

The aim of the Conference was to share experience in implementing energy efficiency programs in the production and service sectors and to discuss some hot issues regarding compliance with the federal energy saving laws.

One of the most noticeable and significant events for Vodokanal St. Petersburg in 2012 was its participation in the World Water Forum which took place in the first half of March in Marseille. SUE "Vodokanal of St. Petersburg" joined the exhibition stand of the Russian Federation.

On 20-23 March, Vodokanal of St. Petersburg participated in the International Environmental Forum "Ecology of Big City" held in the exhibition complex "Lenexpo" with the support of St. Petersburg Government, Leningrad Region Government, the Ministry of Natural Resources and Ecology of the Russian Federation, the Ministry for Regional Development of the Russian Federation and the Russian Chamber of Commerce and Industry. The recent achievements of the Company in the field of municipal water supply and in preventing pollution of the Neva and the Baltic Sea were presented in the exhibition booth of SUE "Vodokanal of St. Petersburg" (General Business Partner of the exhibition). The Forum events attended by Vodokanal were dedicated to environmental safety, and the quality of environment, water supply and wastewater disposal services.

Also in March 2012, SUE "Vodokanal of St. Petersburg" participated in the XIII International Environmental Forum "The Baltic Sea Day". Vodokanal St. Petersburg places high emphasis on the development of spiritual dialogue with regard to ecology, in particular, the International Inter-disciplinary Research and Practice Conference "Spiritual and Moral Dimensions of Ecology. Cooperation of Religious and Secular Organizations in the Baltic Region" was held on the premises of the Information and Training Center on April 26-27. The significance of this Conference is due to the fact that, traditionally, Vodokanal is not only concerned about the Baltic Sea environment but also strives to raise the public awareness and acknowledges the necessity of giving up an aggressive, consumer's attitude and converting to respectful perception of environment.

One of the milestone events in 2012 was the V Nevsky International Environmental Congress in Tavrichesky Palace, St. Petersburg, on 17-18 May. The main topic of the Congress was the Environmental Framework of Sustainable Development. The Congress was organized by the Inter-Parliamentary Assembly of the CIS States alongside with the Federal Council of the Federal Assembly of the Russian Federation. The United Nations Industrial Development Organization (UNIDO) was an official partner of the event. The thematic roundtables of the Congress: "Education and Science in Search for Environmental Solutions" and "Integrated Water Management: Water Use and Quality" were held on the premises of Vodokanal's Information and Training Center.

In May 2012, Vodokanal participated in the international exhibition IFAT-2012 in Munich (Germany).

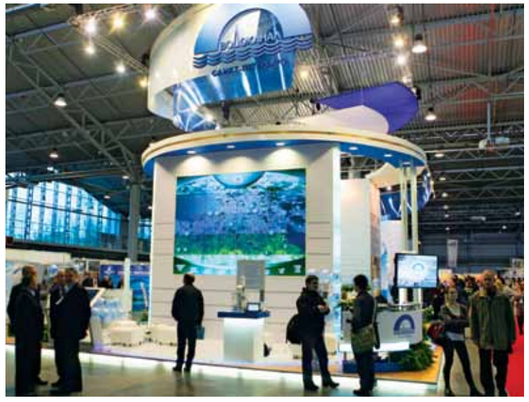
Traditionally, SUE "Vodokanal of St. Petersburg" participates in the Eastern Europe's largest international water forum - ECWATECH. On 5-8 June 2012, Vodokanal of St. Petersburg had its booth at 10th ECWATECH-2012 Forum in Moscow attended by over 800 companies from different countries. Vodokanal St. Petersburg was awarded a special memorial token for its years-long support by the Forum organizers.

In October 2012, Vodokanal specialists made a presentation at 4th IWA East European Young and Senior Water Professionals Conference (in St. Petersburg) and, in November, took part the international forums "Green Mind" and "Quality Days in Kiev-2012" in Kiev (Ukraine) under the international project "Sustainable Development: Economy – Ecology – Excellence and Quality".

Also in October, Vodokanal was among the participants of the HELCOM Agriculture and Environment Forum (AGRI/ENV) held in parallel with the joint seminar of HELCOM and the EU Strategy for the Baltic Sea Region "Eutrophication and Agriculture: State of Play" in Copenhagen (Denmark).

In November 2012, SUE "Vodokanal of St. Petersburg" became the general partner of III International Forum "Pure Water 2012". The Pure Water Forum was organized by the Non-Commercial Partnership "Russian Water Association" in collaboration with the Federation Council of the Russian Federation and the Government of the Russian Federation.

Throughout 2012, SUE "Vodokanal of St. Petersburg" participated in the international meetings dedicated to the Baltic Sea Action Plan and in different seminars on water supply and wastewater disposal development.



RESULTS OF ACTIVITIES IN 2012

WATER SUPPLY

SUE "VODOKANAL OF ST. PETERSBURG" PROVIDES POTABLE WATER TO THE INHABITANTS (5 MILLION PEOPLE) AND TO THE COMPANIES AND ORGANIZATIONS IN THE CITY (37,500 CUSTOMERS).

Vodokanal activities related to provision of water supply services include the following:

- water intake and water treatment;
- water transportation.

St. Petersburg takes water from surface and underground sources. The main water source is the Neva River; Vodokanal takes more than 98% of water from it.

The water supply system comprises:
- 9 water treatment plants
- 200 boosting pumping stations
- 6,755 km of water networks
- 2 sodium hypochlorite plants

Adjusted capacity of water treatment plants:*

Plant	Capacity
Southern WTP	900 thous. m³/day
Northern WTP	608 thous.m³/day
Main WTP	422 thous. m³/day
Volkovskaya WTP	211 thous. m³/day
Kolpino WTP	151 thous. m³/day
Zelenogorsk WTP	7 thous. m³/day
Kronstadt WTP	18 thous. m³/day

*Adjusted capacity of WTPs means capacity of WTPs calculated in consideration of raw water quality deterioration, technical condition of water facilities and more stringent requirements to potable water quality in compliance with the Resolution of the Government of St. Petersburg no. 1270 dated October 21, 2008 except for the Southern WTP which capacity is calculated considering the start-up of a new water treatment block (K-6).

Pipeline diameters of the municipal water network in St. Petersburg range from 50 mm (house connections) to 1.4 m (water pipelines).

The bigger part (62%) of networks in the St. Petersburg water supply system is made of cast iron. Recently, polyethylene pipes began to gain in popularity; they are especially widely used for major repairs and reconstruction of networks.

About 60% of water networks in St. Petersburg have been in operation for 20 - 50 years. The operating time of 22% of all networks is over 50 years, and such networks need reconstruction or replacement.

Daily average supply of potable water to the city

Year	Water supply volume
2009	2 028 290 m³
2010	1 994 690 m³
2011	1 922 900 m³
2012	1 853 300 m³

Water losses on the networks amounted to 12.7% in 2012; the breakdown rate of water networks (number of damages per 10 km) – 3.7.

St. Petersburg water supply system is based on the area zoning principle. The water supply system is divided into three units: in the southern, northern and central parts of the City.

The Southern Water Supply System comprises:

- Southern Water Treatment Plant (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping station);
- Dudergofskaya WTP (first-lift pumping station, clean water reservoirs and second-lift pumping station);
- Kolpino WTP (first-lift pumping station, clean water reservoirs and second-lift pumping station);
- Kronstadt WTP (first-lift pumping station, clean water reservoirs and second-lift pumping station);
- ground water sources in Lomonosov District, the Leningrad Region;
- named boosting pumping stations of the third and fourth lift: Moskovskaya, Frunzenskaya, Uritskaya, South-Western, Rybatskaya, Kupchinskaya, Strelninskaya, Lomonosovskaya, LGU Petrodvortsovaya Waterworks, Petrodvortsovaya Waterworks, Pulkovskaya, Orlovskaya;
- boosting pumping stations of the third and fourth lift;
- water supply and distribution networks.

Since March 2007, Petrodvortsovaya WTP has been operating as a tertiary treatment facility treating water from Southern WTP.

The system supplies water to the following administrative districts:

- 70% of Moskovsky district,
- 85% of Frunzensky district,
- 80% of Nevsky district's left-bank part and 15% of Nevsky district's right-bank part,
- 65% of Kirovsky district,
- 100% of Pushkinsky district,
- 100% of Petrodvortsovy district and the town of Kronstadt
- 100% of Kolpinsky district.

The Northern Water Supply System comprises:

- Northern WTP (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping station);
- Zelenogorsk WTP - uses water from aquifers (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping station);
- underground water sources of Kurortny district;
- named boosting pumping stations of the third and fourth lift (Murinskaya, Kushelevskaya, Primorskaya, Severo-Primorskaya, Kolomyazhskaya, Ozero Dolgoe, Martynovskaya, Parnasskaya, Osinovaya Roshcha, Gorskaya, Pesochenskaya, Novoselovskaya, Shuvalovskaya Sestroretskaya WTP);
- boosting pumping stations of the third and fourth lift;
- water supply and distribution networks.

Since November 2006, Sestroretsk WTP has been operating as a tertiary treatment plant treating water from Northern WTP.

The system supplies water to the following administrative districts:

- 100% of Kurortny district,
- 85% of Primorsky district,
- 80% of Vyborgky district,
- 90% of Kalininsky district,
- 65% of Krasnogvardeisky district,
- 85% of Nevsky district' right-bank part.

The Central Water Supply System comprises:

- Main WTP (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping station);
- Volkovskaya WTP (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping station);
- named boosting pumping stations of the third and fourth lift (Vasileostrovskaya, Gavanskaya, Petrogradskaya);
- boosting pumping stations of the third and fourth lift;
- water supply and distribution networks.

The system supplies water to the following administrative districts:

- 100% of Petrogradsky, Vasileostrovsky, Tsentralny, Admiralteisky districts,
- 20% of Vyborgsky district,
- 10% of Kalininsky district,
- 35% of Krasnogvardeisky district,
- 5% of Nevsky district's right-bank part,
- 20% of Nevsky district's left-bank part,
- 15% of Frunzensky district,
- 30% of Moskovsky district,
- 35% of Kirovsky district.
- 15% of Primorsky district

WATER TREATMENT TECHNOLOGIES

Treatment of water from surface sources.

The water treatment process at the key WTPs taking water from St. Petersburg surface sources (the Neva River and the Gulf of Finland) includes the following stages:

- a two-stage water disinfection system,
- coagulation of pollutants (aluminium sulfate is used),
- flocculation (polyacrylamide-based cationic flocculant is used),
- sand filtration in the contact clarifiers (one-stage treatment scheme),
- sedimentation and sand filtration in rapid filters (two-stage treatment scheme)
- powdered activated carbon is dosed when necessary (if the Neva water quality becomes worse, or for odour and oil removal).

THE TWO-STAGE INTEGRATED PROCESS OF POTABLE WATER DISINFECTION GUARANTEES EPIDEMIOLOGICAL SAFETY OF WATER SUPPLY IN ST. PETERSBURG AND FULL COMPLIANCE OF THE MICROBIOLOGICAL PARAMETERS WITH THE CURRENT REGULATIONS.

The process consists of chemical pretreatment with chloramines and secondary disinfection with ultraviolet. Chloramines are produced in the treated water by dosing of hazard-free chemicals, ammonium sulfate and sodium hypochlorite, and can maintain the disinfecting effect not only in the process of water treatment at WTPs, but also during water distribution via the municipal networks.

The process solutions used to design and build K-6 block, a new 350,000 m^3/day water treatment block at Southern WTP, in operation since early 2011, are as follows:

- pre-ozonation;
- clarification: coagulation, flocculation, sedimentation in lamella sedimentation tank, sludge thickening, sludge recirculation and removal;
- filtration through dual-media (sand/granular activated carbon) rapid gravity filters;
- air-and-water backwashing of filters;
- equalization, treatment and utilization of backwash water;
- sludge treatment;
- storage, preparation and dosing of chemicals;
- disinfection with chloramines.

Potable water treatment at Zelenogorsk WTP (groundwater)

Zelenogorsk WTP takes raw water from underground sources. The groundwater treatment process in Zelenogorsk aims at removing excessive concentrations of iron and manganese and consists of:

- aeration;
- removal of the sludge resulting from air oxidation of ferric hydroxide (III) by means of filtration through the gravel-sand media of the first-stage rapid filters;
- catalytic oxidation and separation of manganese as dioxide on the second-stage pressure filters.

Water is disinfected by sodium hypochlorite solution.

Oxidation of dissolved ferrous iron and blow-up of dissolved carbonic acid is performed in the aerator. To enhance the oxidation of iron and manganese compounds, sodium hypochlorite solution is injected into water. Chlorination is made after the aeration and the sodium hypochlorite dose is 4-5 mg/l of active chlorine.

The first-stage rapid filters are equipped with TRITON drainage system: hemispheric channels located on the bottom and covered by slotted elements. These elements are produced by winding stainless steel wire and welding it to a guide frame of the element.

The wire is profiled in such a way that slots widening inwards are formed between its rows. This solution ensures high reliability of the drainage structure, and the funnel-shaped slots prevent the clogging of filter elements and facilitate the backwashing process. Due to TRITON drainage system, a dual-media bed could be used for the reconstruction of open filters without increasing the bed height. The lower filter bed is made of 0.6 – 0.8mm quartz sand, the sand layer height being 800mm. The upper filter bed is made of anthracite (0.8 – 2.0 mm); the height of the layer is 400mm.

The second stage of Zelenogorsk WTP is designed for enhanced removal of iron and manganese and consists of six Culligan pressure filters, Grundfos main-line pumps, flush-water pumps for pressure filters, stilling tanks, sodium hypochlorite dosing equipment, flow meters and a chlorine analyzer.

The water treatment process control is fully automated. The plant operation data are displayed on the monitors of the plant's control room operator.

Tertiary water treatment technologies used at Petrodvorets and Sestroretsk WTP.

Electrochemical corrosion of steel pipes in the St. Petersburg water distribution system results in secondary pollution of potable water with iron.

Formerly, both Petrodvorets WTP and Sestroretsk WTP used their own surface water sources – the Nikolsky pond and the Razliv Lake. Later, because of excessive pollution of these water bodies both plants were converted to tertiary treatment facilities to treat the water supplied by the city waterworks. The tertiary treatment uses the existing water treatment units, i.e. sand filters (one-stage treatment scheme).

To prevent corrosion of steel pipes and reduce iron concentrations in the tertiary-treated water from Petrodvorets and Sestroretsk WTPs, calcium chloride and soda ash are dosed into the water as anticorrosion agents.

Both plants have the equipment as required to receive, dilute and dose 32% solutions of calcium chloride, and the systems for preparation and dosing of 10% soda ash (sodium carbonate). The dosing of calcium salts and carbonic acid into the treated water and the resulting pH increase can slow down the corrosion process, and in some cases, fully stop oxidation of iron in steel pipes due to the formation of calcium carbonate film which isolates steel from water and the dissolved oxygen contained in it.

In 2012, SUE "Vodokanal of St. Petersburg" in cooperation with the St. Petersburg State Institute of Technology (Technical University) completed the studies of steel pipe corrosion process and issued recommendations on improving anticorrosion water treatment at WTPs in St. Petersburg.

As a result of these efforts, a stepwise scheme of water treatment with calcium chloride and soda ash was implemented to enable accurate dosing control which led to reduced consumption of anticorrosion agents.

As a consequence, the iron concentrations measured at checkpoints in Petrodvorets and Sestroretsk were always low and, moreover, cost savings were achieved due to lower consumption of anticorrosion chemicals in 2012.

Tertiary water treatment technologies used at boosting pumping stations.

To improve the potable water quality at remote sections of the network, tertiary treatment systems are constructed in the boosting pumping stations. Special filter media, such as calcite, calcinated dolomite, etc. are used there to remove iron and, at the same time, to make the water less aggressive.
By using such systems we can facilitate the operation of tertiary treatment facilities since no chemicals are used.

WATER QUALITY CONTROL

WATER QUALITY CONTROL AT SUE "VODOKANAL OF ST. PETERSBURG" IS CARRIED OUT AT ALL STAGES – FROM RAW WATER INTAKE TO THE WATER METERING SYSTEM AT THE HOUSE CONNECTION.

Water quality control at SUE "Vodokanal of St. Petersburg" is implemented in accordance with the approved programs.

The Working Program for Production Control of Potable Water Quality in St. Petersburg for 2012 – 2017 has come into effect since 01.01.2012.

The Working Program was developed in accordance with SanPiN 2.1.4.1074-01 "Potable water. Hygiene requirements to potable water supplied by centralized water supply systems. Quality control. Hygiene requirements to safety of hot water supply systems"; approved by St. Petersburg Department of Rospotrebnadzor and adopted by the Chairman of the Committee for Energy and Engineering Support.

The Working Program was amended in compliance with new legal requirements to water quality control.

The program covers 174 checkpoints where 86 water quality parameters are monitored.

The following groups of indices are used in water quality control:

- composite,
- organoleptic,
- chemical (organic and non-organic),
- microbiological,
- parasitological (Lamblia cysts),
- virological (presence of hepatitis A virus antigens and rotavirus antigens),
- hydro-biological (phyto- and zooplankton),
- radiation safety.

The main water quality parameter values for 2012 are posted, in a tabular form, on the corporate website section "Water supply. Water quality" (http://www.vodokanal.spb.ru/vodosnabzhenie/kachestvo_vody/).

The Program for Production Control of Potable Water Quality covers 306 additional checkpoints allowing a more detailed assessment of the water supply system. Twelve most important parameters are short-listed for monitoring.

A systematic approach based on the principle: "WTP – water mains – city quarter network – customer" was used for selection of the checkpoints to be included into the Program for Production Control.

The monitoring results enable us to:

- trace the changes in qualitative characteristics of potable water at all stages of water production and distribution,
- identify hot spots and troubled sections of water networks,
- prioritize investments in implementation of technical solutions (selection of water treatment technologies, reconstruction of the existing facilities and capital repair of water networks, change of hydraulic regimes of water system),
- evaluate the efficiency of corrective actions.

Levels of water quality control:

- on-line process control using automatic analyzers and automated continuous monitoring systems;
- laboratory control;
- control by an independent organization – Water Research and Control Center;
- control by Rospotrebnadzor.

The automated analyzers are installed at all stages of water treatment. Signals from the instruments are sent to the control room and process engineers, thus providing for the real-time control of the process.

In 2012, 28,000 water samples were analyzed by 86 parameters. Minor deviations from regulatory requirements with regard to total iron were identified in the distribution water network.

THE MONITORING RESULTS SHOW THAT POTABLE WATER IN ST. PETERSBURG IS HARMLESS IN TERMS OF ITS CHEMICAL COMPOSITION AND SAFE IN TERMS OF EPIDEMIOLOGICAL AND RADIATION CONDITIONS.

In 2012, SUE "Vodokanal of St. Petersburg" also monitored water quality in the distribution networks of residential houses at the addresses not included into the Working Program's list of checkpoints. 22,074 samples from the distribution networks at the battery limit were analyzed. According to the water quality monitoring results, critical addresses were identified where the iron content reached the upper limit of maximum permissible concentrations. The action plan for these addresses was developed in order to improve water quality.

In addition to the instrumental metering, the biomonitoring system designed by the Russian Academy of Sciences' St. Petersburg Environmental Safety Research Center is used at all city water intakes to control water quality in the water source, the Neva River.
Prior to the treatment process, water from the Neva River is monitored by crayfish. Special sensors for on-line recording of the crayfish cardiac rhythm are attached to their carapaces. If there are toxic substances in water, the cardiac rhythm of the crayfish changes and a relevant signal is transmitted to the control room.

This biomonitoring system is improved continuously.

ACHIEVEMENTS OF 2012

In 2012, rehabilitation and construction of networks and water supply facilities was implemented in order to provide guaranteed safety of drinking water for the customers, increase reliability of services and improve energy efficiency.

1. Reconstruction of water tanks at the Southern WTP.

In 2012, reconstruction of clean water tanks no. 1, 2, 3 at Southern WTP was completed and the internal pipelines were rehabilitated. The reconstruction works at the second-lift pumping station are in progress.

2. Construction of the first-lift pumping station and water intake facilities at Main WTP.

New water intake facilities and a second-lift pumping station at Main WTP are being built under the state contract. In 2012, one water intake head was installed, the external pressure pipelines were mounted, and the concreting of the underground part of the pumping station is at the final phase. The new water intake facilities and the pumping station are expected to be completed in 2013.

3. Water supply from underground sources

3.1.Reserve water supply
The construction works for the reserve water supply at Volkovskaya WTP, Murinskaya Pumping Station, Pulkovskaya Pumping Station, in 59-b Quarter of Primorsky district (18, Turistskaya St.) are completed.
The construction and installation works at Kolpino WTP to arrange reserve water supply in Vyborgsky district (“Parkhomenko” sector) are in progress.

3.2.Centralized water supply to households
The design of WTPs in Molodezhnoye and Dyuny (“Rzhavaya kanava”) is near completion. With the WTPs in place, the local ground water sources will be used effectively to supply water to Kurortny district and new suburban developments.
Two wells were drilled to ensure reliable water supply to the villages of Krasavitsa and Reshetnikovo. The design of downhole water intakes and water networks is near completion.

4. Modernization of the Southern water supply zone of St. Petersburg, implementation of water supply control and water balance monitoring systems.

The works under the water supply control system project for the Southern water supply zone were in good progress. In 2012, the reconstruction works were completed.

The pumping equipment was replaced, energy facilities were reconstructed, automation systems were arranged, and automated instruments for water quality (turbidity, nitrogen, aluminium, iron) monitoring were installed at all numbered and named pumping stations (except for Moskovskaya Pumping Station). The pumping stations were equipped with frequency converters to control pressure. The pumps work according to the checkpoints’ pressure data (in total, 53 checkpoints are installed in the water network).

In order to manage water balance in the water supply districts of the Southern water supply zone of St. Petersburg, 18 flow meters were installed in the networks of St. Petersburg Water Supply Branch.
The works were carried out under the St. Petersburg long-term target program “On Energy Saving and Energy Performance Improvement of Water Supply Systems in the Southern Zone of St. Petersburg till 2012”

5. Modernization and reconstruction of water pipelines and networks

The following actions for reconstruction and modernization of pipelines and networks were performed to supply water to new housing developments in 2012:

- The construction of water supply pipelines system with the total length of 25 km from Kolpino WTP to Pulkovo water supply system was completed. This pipeline system will provide water to the new developments in the south-eastern part of St. Petersburg. The pipeline has been put into operation and is supplying water to the customers of Pushkinsky district. Design of the boosting pumping station “Moskovskaya Slavyanka” was completed, and the construction is planned for 2013 - 2014.

- The construction of pipeline from Main WTP to CHP-7 and Morskaya emb. of Vasilyevsky Island is in progress. The purpose is to supply water for the new hydraulic fill areas and to improve the reliability of water supply to Vasilyevsky Island. The construction of inverted siphon across the Neva River from Robespierre emb. to Petrovskaya emb. is underway.

- The construction of pipeline from the Northern WTP to Murinskaya pumping station (the total length - 12.5km) is at the final stage. This will provide uninterrupted water supply to the existing customers and to the future developments in the northern part of the city.

- In order to provide reliable water supply to the northern coastal areas of St. Petersburg, “Kamenka” and “Kolomyagi” quarters, the construction of pipeline from Udelny ave. to Severny ave. bypassing the road junction near Poklonnaya Gora is underway.

- The construction of pipeline from the cross of Savushkina str. and Primorsky ave. to Gorskoe highway via Lahta, Olgino and Konnaya Lahta is at the final stage. It will provide water supply to “Yuntolovo” residential area and the industrial zone in the north-western part of Konnaya Lahta.

- To ensure reliable water supply to the existing customers and new developments in Krasnoe Selo, water supply pipelines from Narodnogo Opolcheniya ave. to Volkhonskoye highway were laid. The construction of networks to supply water from the Neva River to the customers in Krasnoe Selo is ongoing.

The following construction, rehabilitation and modernization projects are being implemented to supply water to new industrial areas:

- Construction of water networks in Metallostroy is completed;

- Construction of water pipeline from Southern WTP to Southern CHP is at the final stage.

Water networks are being built in Olgino and Volodarskiy communities to provide centralized water supply to private houses. In 2012, 4.6km of water networks in Olgino and 16.9 km – in Volodarskiy were constructed.

In order to provide reliable, good-quality water supply services to the customers, the "disconnection" program is under implementation to separate the buildings with water supply via the internal water network laid through the basements of several houses. The pilot disconnection projects for the following sites are near completion:

- 243 sites in Kirovsky and Krasnoselsky districts in the zone of Uritskaya Pumping Station (block K-17). The works are carried out under the St. Petersburg long-term target program "On Energy Saving and Energy Performance Improvement of Water Supply Systems in the Southern Zone of St. Petersburg till 2012";
- 36 sites in Vasileostrovsky district K-1 quarter;
- Design and survey works to remove transit water pipelines out of the house basements at 55 sites in Kronstadt.

To improve hot water quality in the central part of the city by heating season 2012 – 2013, Vyborgskaya CHP-17 and Power Station-12 of the Central CHP were connected to the potable water supply system. The construction of water pipelines to ensure reliable water supply to the CHPs is ongoing.

IN 2012, SUE "VODOKANAL OF ST. PETERSBURG" COMPLETED CONSTRUCTION, RECONSTRUCTION AND CAPITAL REPAIR WORKS ON 137.1 KM OF NETWORKS IN TOTAL. SINCE THE SECOND HALF OF 2012, THE BREAKDOWN RATE OF WATER NETWORKS HAS REDUCED BY 21% COMPARED TO THE SAME PERIOD OF 2011 DUE TO THE RECONSTRUCTION WORKS.

6. Installation of individual boosting pumping stations.

In 2012, nine individual boosting pumping stations were installed in the south-western districts of the city and nine individual boosting pumping stations - in the northern districts of the city to reduce pressure in, and the load on the water networks.

7. Establishment of St. Petersburg Water Supply Management System.

The main objective of the project is to improve energy performance of the water supply system and to provide reliable water supply services.

The integrated water supply management system will reduce the operating costs by establishing controllable water supply zones, optimize water consumption patterns, reduce excessive pressure, increase reliability of operation, optimize potable water distribution and reduce energy consumption.

In 2012, process design, electrical design and automated process control system design for the South-Western and Northern pressure zones were completed. The design of Murinskaya and Primorskaya pressure zones was also completed.

8. Modernization of chemical water treatment at WTPs to reduce water corrosiveness.

In 2009-2010, the anticorrosion treatment by dosing calcium chloride and soda ash into the treated water was implemented at Petrodvorets and Sestroretsk WTPs.

In 2012, steel pipe corrosion processes were investigated, and recommendations on improvement of anticorrosion water treatment at St. Petersburg waterworks were issued. The research results and recommendations provided the basis for chemical water treatment modernization at Petrodvorets and Sestroretsk WTPs aimed at the reduction of water corrosiveness.
A stepwise water treatment with calcium chloride and soda ash was implemented at WTPs to reduce the chemical costs due to process-specific dosing of anticorrosion agents.

The following results of modernization were obtained in 2012:

- Iron concentrations in water met the regulatory requirements at all times;
- Lower consumption of chemicals due to process-specific dosing of anticorrosion agents.

9. Replacement of valves and fire hydrants.

Currently, over 20,000 fire hydrants of different types are installed in the water networks and registered in fire protection service departments. The fire hydrants are under the economic jurisdiction of SUE "Vodokanal of St. Petersburg".

Over 80,000 valves with diameters up to 1,200 mm are installed in the water network. Generally, the operating life of valves is the same as that of pipes, i.e. 40 years.

In 2012, scheduled replacement of valves and fire hydrants began. 3,533 valves including 827 fire hydrants were replaced last year.

PROSPECTS OF WATER SUPPLY DEVELOPMENT

The Federal Law of the Russian Federation "On Water Supply and Wastewater Disposal" (dated December 7, 2011 no.416-FZ) has come into force since January 1, 2013.

The main provisions of the law:

- water and wastewater facilities must not be privatized (thus, the state control in this vital sector is guaranteed),
- separate contracts shall be made for water supply and for wastewater disposal according to the model form (to avoid disputes when signing or amending contracts with customers),
- the organization in charge shall be responsible for water supply and wastewater disposal of each community (guaranteed services are provided to the customers),
- the organization in charge shall operates the networks under abeyance (guaranteed reliable services to the customers),
- agreements stipulating the conditions of regulated operations in the field of water supply and wastewater disposal (regulatory agreements) shall be made (the interests of water companies are taken into account in their relationship with the state authorities).

The new law "On Water Supply and Wastewater Disposal" enacts the "polluter pays" principle for the first time in the Russian legislation. This principle is the worldwide practice as acknowledged by the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area, HELCOM recommendations, the Water Framework Directive of the European Parliament and the EU Council and by the European Urban Waste Water Treatment Directive. The main objective of this "polluter pays" principle is to create conditions for stopping pollution of water bodies.

The law "On Water Supply and Wastewater Disposal" sets out a financial motivation mechanism for water protection: the charges for negative impact on water bodies can be set off against the cost of protective measures.

SUE "Vodokanal of St. Petersburg" has to develop and improve its water supply system in order to comply with the Federal Law of the Russian Federation "On Water Supply and Wastewater Disposal" (dated December 7, 2011 no. 416-FZ), to enhance water supply services in line with more stringent regulatory requirements and to improve operational safety of water supply facilities.

Various water supply reconstruction and development projects are designed to meet the required quality parameters and provide reliable services. The projects are implemented to raise the citizens' satisfaction with water supply services given their growing needs.

The main projects are:

1. Design and construction of St. Petersburg integrated water supply system

Construction and modernization of four main water treatment plants (Main WTP, Northern WTP, Southern WTP and Kolpinskaya WTP) and construction of new water treatment blocks. The design works are planned for 2013.

2. Development of water supply system in Kurortny district using local underground water sources.

Two new WTPs in Molodezhnoye and Dyuny ("Rzhavaya Kanava") communities, the pumping system and water distribution networks will be constructed by 2018 to supply water from local underground sources to the customers in Kurortny district.

3. Volkovskaya WTP modernization and conversion into a boosting pumping station.

Drastic modifications of the water supply system in Southern water supply zone are planned by 2016, with Volkovskaya WTP converted into a boosting pumping station to receive water from Southern and Main WTPs. Volkovskaya WTP will be converted into a boosting pumping station in the course of reconstruction and, moreover, a system of water supply from Southern and Main WTPs to Volkovskaya WTP will be constructed for this purpose, more specifically:

- a water conduit (approx. 4.5 km long) will be laid along Sinopskaya emb. from Moiseenko str. to Obvodny channel and further to Volkovskaya WTP.
- reconstruction of the existing 11 km long water pipeline along Sofiyskaya str.

4. Construction of water supply system to supply water from Southern WTP to Krasnoye Selo.

The construction of water pumping station and a pipeline to WTP at Dudergofskoye Lake is planned to support the development of Krasnoye Selo in the period till 2015. In this way, soft and hard water (the latter taken from the local underground sources) can be mixed to obtain water complying with the targeted quality parameters and, consequently, the customers would get adequate potable water.

5. Construction and reconstruction of water pipelines to Lomonosov, Petrodvortsovy district.

Due to this project, the quality of water supply in the town of Lomonosov will improve, i.e. soft or mixed water will be provided to the inhabitant; and the whole town of Kronstadt will be supplied with soft water. Moreover, the historical buildings now used for the needs of the water treatment plant will be transferred to the Lutheran Church.

6. UV system modernization at water treatment plants.

Modernization of the existing UV systems will improve the equipment performance and result in energy saving.

7. Reconstruction of water networks.

In order to reduce the breakdown rate of water networks and provide reliable water supply service to the customers, 200 km of networks should be rehabilitated, constructed or repaired annually.

8. Replacement of valves and fire hydrants.

Replacement of all valves and fire hydrants in water networks with the advanced, directly installed equipment will go on to ensure reliable operation of the networks, with the number of disconnected customers during scheduled maintenance or emergency repairs reduced from 8 to 2 average. New fire hydrants will have a better performance and higher availability for fire extinguishing. Furthermore, direct installation of valves and fire hydrants will reduce the operating and maintenance costs and ensure safety of maintenance works by line crew personnel.

9. Construction of separate house connections in the groups of buildings of different balance sheet attribution.

Construction of separate house connections equipped with metering instruments in the groups of buildings which belong to more than one owner will go on in order to improve water supply services and customer satisfaction level, and to implement water metering for each customer.

10. Development of water supply management system.

The pilot modernization project at Uritskaya pumping station completed in 2008 gave positive results: the energy consumption reduced by 42%, water losses - by 39% and the breakdown rate - by 32%.

In 2012, large-scale works to implement the Southern water supply zone management system were ongoing. With Central and Northern water supply zones modernized, the St. Petersburg water supply management system will further expand.

The main objective of the project is to create a reliable and efficient water supply system, to monitor the operation of water networks, and to achieve sustainable use of resources use and reduction of costs.

Each of the water supply zones will have its water metering system; moreover, all commercial water meters on the consumer side will be upgraded to support automatic transfer of readings. Having such system, it will be possible to receive real-time data on water consumption and the quantity of water supplied to a relevant zone. The operators will be able to monitor online any failures of measuring instruments or potential customer intervention in the meter operation, to evaluate automatically the condition of networks and changes of flow rates, and to identify leaks in the water supply networks.

The project will comprise large-scale modernization of the boosting pumping stations including the replacement of pumps, installation of frequency converters to control pressure in the network, and implementation of a pump control system to control pump operation using the pressure measurement data from the network checkpoints. To ensure reliable water supply in the event of power outage, the pumping stations will be ranked as power consumers of the special I Category Reliability Group which means that the third independent (backup) power supply unit (diesel power plant) will be installed for them.

11. Construction of water networks to connect small communities to the centralized water supply.

Construction of water networks in Volodarskiy and Olgino communities will go on to provide centralized water supply to private houses. Construction of networks in Saperny will begin. Design and construction of networks and plants in Lisiy Nos, Molodezhnoye, Lahta, Toriki, Martyshkino, Repino, Beloostrov, Dyuny, Razliv and Ust-Izhora is planned for the period till 2019. The project will be completed at all small communities by 2030.

12. City territories development provision

New developments, such as the hydraulic fill areas north of Lisiy Nos, the hydraulic fill areas in the western part of Vasilievsky Island, the Okhta banks, “Murinskiy Kvartal”, “Tsvetochny Gorod”, “Ruch’i-7”, the satellite-town “Yuzhny”, “Moskovskaya Slavyanka”, etc., are connected to the centralized water supply under Vodokanal’s investment program and the St. Petersburg targeted investment program. Moreover, new residential estates located in the Leningrad Region near St. Petersburg are being connected, one by one, to the centralized water supply network

WASTEWATER DISPOSAL

ST.PETERSBURG SYSTEM OF WASTEWATER DISPOSAL AND TREATMENT IS A COMPLEX OF INTERCONNECTED ENGINEERING FACILITIES TO PROVIDE COLLECTION OF WASTEWATER FROM CUSTOMERS, ITS TRANSPORTATION AND TREATMENT AT WASTEWATER TREATMENT PLANTS.

St.Petersburg has a combined wastewater disposal system. 70% of the territory is connected to the combined sewerage system which collects domestic and industrial wastewater as well as surface (rainfall, snow-melt) runoffs. The rest of the territory – mostly new construction areas and suburbs - is sewered according to a separate scheme where rainfall and snow-melt waters are collected separately from other wastewater and discharged currently without any treatment.

As of 1 January 2013, 97.1% of wastewater is treated in St. Petersburg, the rest of wastewater is discharged without treatment.

Untreated wastewater is discharged through direct discharge points managed by Vodokanal and industrial organizations.

As of 1 January 2013, Vodokanal has the following discharge points:

- 110 direct discharge pipes of combined and domestic wastewater,
- 1,081 rainwater discharge points and storm-water tanks,
- 13 discharge points for backwash water from Vodokanal’s waterworks.

The main cause of partial discharges of untreated wastewater into St.Petersburg water bodies is the insufficient length of intercepting pipelines and sewers.

Annually, Vodokanal reduces the amount of untreated wastewater discharges, eliminating direct discharge points and delivering wastewater to wastewater treatment plants.

Collection, transportation and treatment of wastewater generated in the city is performed by a complicated system characterized by the following criteria:

- Length of sewerage networks – 8,119.3 km, including:
  - gravity pipelines – 7,866.3 km;
  - pressure pipelines– 253 km.
- Length of tunnel collectors – 241 km;
- Number of sewerage pumping stations – 138;
- Number of wastewater treatment plants of different capacity – 15, including:
  - municipal wastewater treatment plants – 13,
  - runoff treatment plants – 2;
- Area of landfills and sludge beds - 172 ha;
- Number of sludge incineration plants - 3.

Along the sewerage (courtyard, district, street) networks domestic, industrial and surface (rainfall, snowmelt, infiltration) wastewater is channeled to the system of tunnel collectors and further to the wastewater treatment plants.

Pipeline diameters of the sewerage network range from 100mm (courtyard networks) to 1.5m. Pipelines with diameters of up to 500 mm make up 85% of the total length of all sewerage networks.

The main material of sewerage pipes is reinforced concrete (61.7 % of the whole network). Polyvinylchloride and polyethylene pipes are widely used in recent years. They are used mainly for network rehabilitation.

Tunnel sewers are the basic mains for collecting and transporting wastewater to the wastewater treatment plants. These collectors (1.5m - 4.8m diameter) were installed by a shield method at the depth of 7-90 m.

The design capacity of sewerage pumping stations at the sewerage networks ranges from 300 m^3/day to 1 Mio. m^3/day.

No	Adjusted capacity of wastewater treatment plants, m^3/day*	Adjusted capacity in rainy weather, Mio. m^3/day
1	Central Wastewater Treatment Plant	1050
2	Northern Wastewater Treatment Plant	690
3	South-West Wastewater Treatment Plant	290
4	Kolpino Wastewater Treatment Plant	69
5	Pontonny Wastewater Treatment Plant	11
6	Metallostroy Wastewater Treatment Plant	9
7	Pushkin Wastewater Treatment Plant	71
8	Sestroretsk Wastewater Treatment Plant	17
9	Zelenogorsk Wastewater Treatment Plant	10
10	Repino Wastewater Treatment Plant	10
11	Kronstadt Wastewater Treatment Plant	28
12	Molodezhnoe** Wastewater Treatment Plant	0
13	Petrodvorets Wastewater Treatment Plant	72
	TOTAL	2327

* Adjusted capacity of wastewater treatment plants is calculated for rainy weather conditions taking into account wastewater quality requirements.

** Mechanical treatment only.

The results of 2012 showed that the daily average amount of treated wastewater was 2.2 Mio. m^3/day. The percentage of disinfected effluent was 19 %.

St.Petersburg wastewater disposal system is based on the zoning principle. Three catchment areas – “North”, “Center” and “South” - are established in St. Petersburg; each including several sewerage districts.

The catchment area “North” includes the following wastewater treatment facilities: the Northern WWTP, Sestroretsk WWTP, Zelenogorsk WWTP, Repino WWTP, Molodezhnoe WWTP.

The Northern WWTP collects wastewater from the Neva right-bank territories: Nevsky (the right-bank), Krasnogvardeysky, Kalininsky, Vyborgsky, Petrogradsky, Primorsky districts and a part of Centralny district.

Sestroretsk WWTP accepts wastewater from the population and customers of Sestroretsk and neighboring towns of Gorskaya, Alexandrovskaya, Razliv, Tarkhovka, Kurort and industrial zones of Beloostrov.

Zelenogorsk WWTP accepts wastewater from the residential areas, recreation centers and organizations of the towns of Zelenogorsk and Ushkovo.

Repino WWTP accepts wastewater from the towns of Solnechnoe, Komarovo and Repino of Kurortny district of St.Petersburg.

The catchment area “Center” incudes the Central Wastewater Treatment Plant.

The Central Wastewater Treatment Plant (CWWTP) collects wastewater from the Neva left-bank territories: Nevsky (the left-bank), Vasileostrovsky, Centralny, Admiralteysky, Frunzensky, Moskovsky and a part of Kirovsky districts.

The catchment area “South” includes the South-West Wastewater Treatment Plant, Kolpino WWTP, Metallostroy WWTP, Pontonny WWTP, Petrodvorets WWTP, Kronstadt WWTP, Pushkin WWTP.

SWTP collects wastewater from a part of Kirovsky and Krasnoselsky districts, as well as from the town of Strelna.

Petrodvorets WWTP accepts wastewater from the town of Petrodvorets, partially, from the town of Lomonosov. Wastewater treatment plants of the towns of Kolpino, Metallostroy and Pontonny provide complete wastewater disposal services to Kolpinsky district.

Wastewater from Kronstadt is treated at Kronstadt WWTP. Wastewater from the towns of Pushkin and Pavlovsk and communities of Pushkinsky district is treated at Pushkin WWTP.

St.Petersburg is the first megapolis in the world to solve the problem of wastewater sludge utilization.

Before the commissioning of the sludge incineration plants, dewatered sludge was disposed in full to landfills for storage.

At the present time, three sludge incineration plants (SIP) constructed at the biggest WWTPs – Central WWTP, Northern WWTP and SWTP - are in operation in the city. They incinerate 100% of sludge produced in the course of wastewater treatment at all the WWTPs. This enabled the city to solve its primary task – to stop storing wastewater sludge and reduce the negative environmental impact.

Advantages of incineration:

- 10-times reduction of generated waste amount;
- no pathogenic microflora and unpleasant odor in ash;
- concentration of harmful compounds in treated flue gases generated in the course of sludge incineration meets the requirements of the Russian Federation and the European Union;
- use of heat for hot water supply and heating of buildings;
- energy production by means of steam utilization at SWTP and CWWTP
- possibility of ash utilization and industrial use.

The heat generated in the process of incineration is used for technical purposes, space heating and electric energy production, thus enabling SUE “Vodokanal of St.Petersburg” to achieve significant savings of energy resources.

Flue gases of all SIPs go through a three-stage purification process. Treated gases emitted into the atmosphere at all the SIPs meet the requirements of the European Committee Directive 2000/76.

Gross emission of pollutants from all the SIPs is within the limits of maximum permissible emission stated by Rosprirodnadzor.

On-line control instruments are used at all the plants to analyze the composition of emitted flue gases. Besides, the independent organization - Water Quality Control Center - performs expanded monitoring of gas composition.

Moreover, the SIP at SWTP applies a unique biomonitoring system. The indicators of flue gas quality are the giant African snails which react not only to one-time emissions, but also to minimal amounts of concentrated hazardous substances, as well as to synergistic effect of various pollutants.

WASTEWATER TREATMENT TECHNOLOGIES

TECHNOLOGIES TO ENSURE WASTEWATER TREATMENT IN COMPLIANCE WITH THE RUSSIAN NORMS AND THE REQUIREMENTS OF THE BALTIC MARINE ENVIRONMENT PROTECTION COMMISSION HAVE IMPLEMENTED AT VODOKANAL’S WASTEWATER TREATMENT PLANTS.

The main wastewater treatment stages applied by SUE “Vodokanal of St.Petersburg” are as follows:

- mechanical treatment,
- chemical and biological treatment,
- wastewater disinfection,
- sludge treatment and utilization.

The mechanical treatment is designed for wastewater clarification to ensure normal functioning of the subsequent treatment stages. This block includes screens, grit removal units, primary sedimentation tanks and scum removal units.

The biological treatment stage is the main wastewater treatment process before wastewater is discharged into the water body. It includes aeration tanks and secondary sedimentation tanks. The biological treatment process is going on thanks to activated sludge activity, in the presence of atmospheric oxygen. Activated sludge is a biocoenosis inhabited by different bacteria, protozoa and multicellular organisms which treat wastewater by oxidizing pollutants contained in it.

Previously, only mechanical and biological treatment was implemented at wastewater treatment plants, but it did not ensure the quality of treated effluent stated by HELCOM requirements for phosphorus removal. Therefore, the chemical - biological wastewater treatment process chas been implemented at Vodokanal’s wastewater treatment plants to combine enhanced nutrient removal through biological treatment and chemical phosphorus precipitation. Today, the chemical phosphorus precipitation method is introduced at all the WWTPs. The biggest WWTPs - Central WWTP, Northern WWTP and SWTP – have stationary units to dose chemicals automatically depending on phosphorus concentration in the influent. As a result, the efficient phosphorus precipitation is provided with optimal chemical costs.

Until recently, iron sulfate (Ferix) was used as a chemical. In the course of laboratory tests commenced in the end of 2011 at a number of wastewater treatment plants and successfully completed, the most efficient and cost-effective chemical – aluminum sulfate was found. Now, it is being used at all Vodokanal’s WWTPs.

In order to obtain wastewater treatment quality in compliance with HELCOM recommendations, SUE “Vodokanal of St.Petersburg” has been constantly upgrading biological treatment units implementing advanced nutrients removal technologies and enhancing wastewater treatment processes.

The advanced biological treatment technology UCT (University of Cape Town) has been implemented at SWTP, CWWTP, Sestroretsk WWTP, Petrodvorets WWTP, Repino WWTP, Pushkin WWTP, and the chemical phosphorus precipitation method is permanently applied there.

Works on the reconstruction of the aeration tanks for enhanced nutrients removal by introducing JHB technology (University of Johannesburg) including the automatic process control and chemical phosphorus precipitation are going on at the Central WWTP - the biggest WWTP of St.Petersburg. In 2012, modernization of two aeration tanks (biological treatment units) was completed.

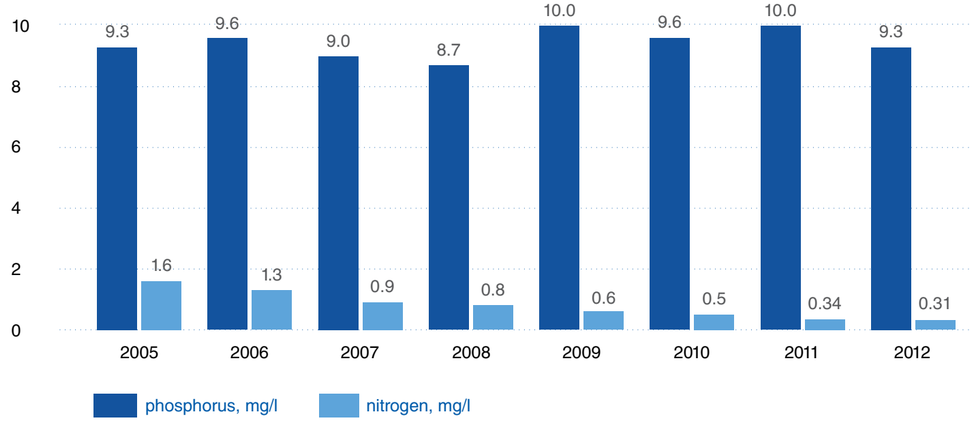
The reconstruction of the Northern WWTP is performed under the project providing for complete modernization of the mechanical and biological treatment units. In 2012, the reconstruction of the 1st line of the Northern WWTP began. The construction of the raw sludge pumping station and return sludge pumping station began.

To ensure collection, transportation and treatment of wastewater from Kolpinsly and Pushkinsky districts with regard to the future area development and solving a problem of insufficient wastewater treatment capacities, a decision to take Metallostoy WWTP out of operation and channel its wastewater to the Central WWTP, and expand the capacity of Kolpino WWTP up to 140,000 m3/day and Pontonny WWTP up to 40,000 m3/day was taken.

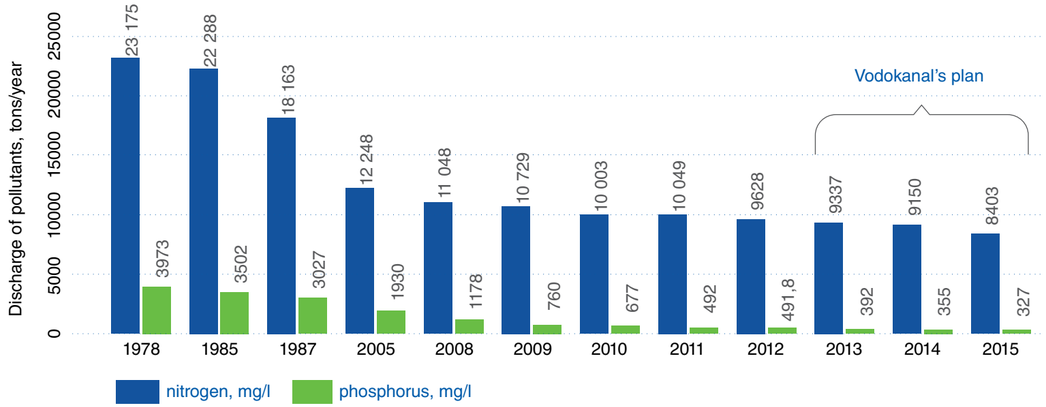
At the present time, the project of the construction of Molodezhnoe WWTP with a system of connecting pipes in the territory of the old wastewater treatment plant is under development. The project is being designed for treatment of all wastewater from the town of Molodezhnoe in compliance with HELCOM recommendations, first of all, in terms of enhanced nutrients (nitrogen and phosphorus) removal and consequently - improvement of the condition of the water area of the northern coast of the Gulf of Finland.
Efficiency of domestic wastewater treatment at Vodokanal's WWTPs in 2012 is quite high: suspended solids and BOD – over 95%; total phosphorus – 90% and total nitrogen –71%.

IN 2012, ST.PETERSBURG FULLY MET HELCOM REQUIREMENTS: PHOSPHORUS CONCENTRATION IN TOTAL EFFLUENT WAS 0.31 MG/L, NITROGEN CONCENTRATION – 9.3 MG/L.

Nitrogen and phosphorus content in effluent



Reduction of nitrogen and phosphorus load on St.Petersburg water bodies



In order to improve the sanitary and epidemiological situation of the city's water bodies and in the Gulf of Finland, a part of effluent undergoes disinfection.
To minimize the negative impact on the water bodies, the newly constructed and renovated plants of the city apply UV technologies for effluent disinfection (SWTP, Sestroretsk WWTP, Petrodvorets WWTP, Repino WWTP). At Pontonny WWTP, Metallostroy WWTP, Kolpino WWTP, Zelenogorsk WWTP, Pushkin WWTP Vodokanal uses sodium hypochlorite for effluent disinfection.

At the present time, Vodokanal has been searching for efficient and cost-effective effluent disinfection technologies to be implemented at all the wastewater treatment plants of St.Petersburg

In 2012, full-scale trials of wastewater disinfection methods were made as an alternative to UV disinfection:

- disinfection with PACS chemical at Petrodvorets WWTP;
- disinfection with Lazur-M-250 bacteriological unit combining bactericidal effects of ultraviolet and ultrasonic transducers.

In 2013, search for efficient disinfection methods will be continued.

Sludge treatment is performed at all treatment plants with mechanical dewatering method using effective polymeric flocculants. Three sludge incineration plants located at the Central WWTP, Northern WWTP and SWTP treat sludge with fluidized-bed incineration method. Incineration is performed in the fluidized-bed furnaces under the temperature of 870 ^{0}C. The ash produced in the course of incineration does not contain soluble compounds and pathogenic microorganisms.

WASTEWATER QUALITY CONTROL

WASTEWATER QUALITY CONTROL AT VODOKANAL'S FACILITIES IS CARRIED OUT IN ACCORDANCE WITH WASTEWATER QUALITY ASSESSMENT PROGRAMS APPROVED BY THE NEVA-LADOGA BASIN WATER AUTHORITY AND ROSPOTREBNADZOR AUTHORITY.

Wastewater quality control is regularly performed:

- in the inlet chamber of wastewater treatment plants (control of composition and properties of wastewater coming from the customers),
- in the collection chamber in the outlet of wastewater treatment plants.

Wastewater quality control is carried out by monitoring 21 physical and chemical parameters, 8 microbiological and parasitological parameters.
Around 16,500 components are determined annually.

Besides, wastewater composition control is regularly performed at the following processes points: the inlet chamber of WWTP, collection chamber after primary clarifiers, effluent collection chamber. These control activities ensure the operation of the facilities in compliance with the established regulations. To adjust the treatment mode the following parameters are monitored: temperature, biological oxygen demand (BOD), chemical oxygen demand (COD), phosphate group, ammonia nitrogen and nitrates group, suspended solids, alkalinity, dissolved oxygen. Around 1,150 samples are analyzed annually.

Moreover, the South-West Wastewater Treatment Plant has been constantly using the system for biomonitoring the quality of the effluent to be discharged into the Neva Bay of the Gulf of Finland. Crayfish play the role of bioindicators: it is Australian Red Claw Crayfish in warm seasons, and Native Neva crayfish in cold seasons. Replacement of crayfish depending on the season is necessary to exclude false operation of bioelectronic monitoring system. In spite of the fact that the effluent quality is monitored with special instruments by various parameters in the laboratories, it is only the organism of an animal-bioindicator that may simultaneously assess a set of all the qualitative characteristics of water where it lives.

Thanks to the bioelectronic control system based on the behavior of animals it is possible to monitor simultaneously the integrated effect of many factors on water, being the crayfish habitat. As a result of such effect, water quality may deteriorate.

Vodokanal's wastewater treatment plants are designed for treatment of household wastewater from the citizens. Removal of specific pollutants at WWTPs is performed concurrently and with different efficiency. Many substances which are not removed at the biological treatment facilities continually accumulate and may damage the plant having a disastrous influence on activated sludge.

TO CONTROL THE CUSTOMERS' COMPLIANCE WITH REGULATORY VALUES FOR THE DISCHARGE OF POLLUTANTS FROM INDUSTRIES, SUE "VODOKANAL OF ST.PETERSBURG" PERFORMS CONTINUOUS MONITORING OF QUALITY OF WASTEWATER DISCHARGED BY THE CUSTOMERS INTO ST.PETERSBURG CENTRALIZED SEWERAGE SYSTEM.

The main objective of customers' wastewater quality control is to minimize the pollution of water bodies with industrial wastewater and to evaluate the customers' compliance with wastewater quality norms.

During 2012, over 5,800 customers were controlled by Vodokanal. Wastewater samples were taken from 5,109 customers' discharge points. Total number of determinations of wastewater components in the customers' samples was 172,000. In the course of 2012, only 1% of the customers met wastewater quality requirements.
The customers shall pay an extra charge for exceeding regulatory values*. The current procedure of taking an extra charge is targeted to promote water protection activities by the customers and introduce a concession charge for those customers who implement water protection measures.

However in 2012, only 43 out of 3,800 customers (1,1 %), who exceeded regulatory values, agreed water protection plans with SUE "Vodokanal of St.Petersburg", 2 companies were granted a concession charge in due course provided that they would implement water protection measures.

In 2012, representatives of Vodokanal and its customers jointly performed 183 inspections of customers' territories to identify sources of wastewater pollution.

In 2009-2012, the quality of the municipal sewage (mixture of households sewage, industrial wastewater and runoff) was always worse compared to the quality of the households sewage (concentrations of some pollutants in municipal sewage exceeded the concentrations in the households wastewater 1.2-22 times).

*An extra charge is paid to the special account of Vodokanal. Money from this account is spent only for wastewater quality improvement and payment by Vodokanal of the fee for the negative environmental impact. The Government of St.Petersburg represented by the Committee for Energy and Engineering Support controls over the spending of funds from such an account.

PROSPECTS OF INDUSTRIAL WASTEWATER TREATMENT

IN ACCORDANCE WITH THE NEW LAW NO.416-FZ "ON WATER SUPPLY AND WASTEWATER DISPOSAL", FROM 2013, THE RELATIONSHIPS BETWEEN WATER COMPANIES AND THEIR CUSTOMERS WILL CHANGE IN TERMS OF WASTEWATER QUALITY CONTROL.

The customers (categories are determined by the Government of the Russian Federation) will be obliged to submit a declaration about wastewater composition and properties to a water company and pay for the negative impact on water bodies directly to the budget (not to Vodokanal).

At the same time, the customers will be obliged to recover Vodokanal's costs for the collection of pollutants which impair the centralized sewerage systems operation.

If water-protective measures (including construction, reconstruction and modernization of wastewater treatment plants) are taken by the customers, an extra charge for exceeding regulatory values may be reduced by the amount of actual costs incurred.

The declaration mechanism increases customers' attention to, and responsibility for, the environmental aspects of their activities (laboratory control of wastewater composition, selection of water-protective measures to minimize negative impact). At the same time, this mechanism will enable Vodokanal to reduce expenses for controlling its customers and Vodokanal will need only to check (verify) the information about wastewater quality declared by the customers.

The above regulatory norms will be implemented all over the territory of the Russian Federation after the relevant federal by-laws are adopted and become effective which is planned for 2013.

On 1st January 2014, statutory provisions amending the procedures for setting wastewater quality norms and procedures for taking an extra charge for exceeding regulatory values come into effect.
In accordance with the law, to prevent the negative impact from wastewater of industrial companies on the water bodies, regulatory permissible values for pollutants, other substances and microorganisms will be set for customers. If the customers do not comply with the established regulatory permissible values, they will be obliged to develop the action plan to reduce pollutant discharge (including construction and modernization of local WWTPs) and to agree it with the territorial federal executive authority responsible for environmental supervision. If the customers have the action plan to reduce pollutant discharge, less stringent requirements for the discharge of pollutants, other substances and microorganism may be applied to them.

Regarding the discharges by the customers of substances imposing a negative impact on the operation of the centralized sewerage systems, the requirements to collection of these substances into the centralized sewerage systems shall be incorporated into "Rules for cold water supply and wastewater disposal" which are subject to the approval of the federal executive authorities. Moreover, the requirements to those customers, who are obliged to install wastewater meters, and the procedures for wastewater metering by a calculation method shall be adopted in 2013.

Before the by-laws are adopted, the interactions between SUE "Vodokanal of St.Petersburg" and its customers will be governed by the settled practice under the applicable law. It means that Vodokanal will consult and hold seminars devoted to the possible ways of eliminating above-limit discharges into the sewerage systems, the selection of best available technologies for local wastewater treatment and the arrangements for wastewater metering.

In 2013, the customers will be assisted not only by Vodokanal's experts but also by the International Advanced Water Technologies Centre. The Centre was established in January 2011 aiming at international cooperation and exchange of experience in applicable technologies of water supply, wastewater disposal and environment protection. Experts from Vodokanal and Lahti Science and Business Park are involved in the Centre's activities. In 2013, a number of seminars for industrial companies dedicated to best available wastewater treatment technologies of dairy, bred, sausage and meat production industries, electroplating and PCB production industries, and to local treatment of run-offs from industrial sites is planned to be organized.

Vodokanal on its part intends to accumulate the Russian and international experience establishing a pool of the best available technologies for treating not only household wastewater but also wastewater from different industries.

ACHIEVEMENTS OF 2012

Reduction of untreated wastewater discharges

One of the main causes of pollution of the water bodies is discharges of untreated or insufficiently treated wastewater, since wastewater contain various pollutants having negative environmental influence, including nitrogen and phosphorus, which cause eutrophication of water bodies (water blooming).

St.Petersburg achieved considerable results in solving its task on the reduction of untreated wastewater discharges and establishment of the modern sewerage system. As of the beginning of 2013, 97.1% of wastewater were treated in the city.

1. Such a result was obtained first of all thanks to the connection of untreated wastewater discharges to the Northern Tunnel Collector. In 2011-2012, works on the construction of two shafts (dia. 9m, depth 80m) near the Grenadersky Bridge, and horizontal shafts (depth 80m) connected to two main lines of the Northern Tunnel Collector were conducted. The completion of these works resulted in the connection of the micro-tunnel laid along the Pirogovskaya Embankment to two main lines of the Northern Tunnel Collector in December 2012, and in the elimination of 28,000 m3/day untreated wastewater discharges.

2. In the frames of the Main Tunnel Collector Completion Project, works on the construction of a pumping station in the shaft no.422, the collector along the Robespierre Embankmen, and the 2nd connection of the tunnel laid in Petrogradskaya Storona to the tunnel collector were conducted during in 2012.

3. In the end of December 2012, discharges of untreated wastewater from the town of Sertolovo into the Razliv Lake were reduced by 58.8 %. Up to that time, a 7,700 m3/day wastewater from Sertolovo was channeled to the inefficient wastewater treatment plant and discharged into the Chernaya River. Today, wastewater from Sertolovo is channeled to the sewer “Pesochny – Novoselki” and delivered to the Northern WWTP for treatment.

4. Under the Neva Untreated Wastewater Discharge Closure Program, Vodokanal developed design documentation related to:

- the construction of Okhta tunnel collector. The project will be performed stage by stage. On the first stage the route of the tunnel was determined;
- closure of untreated wastewater direct discharges along the Karpovka River Embankment, Admiralteyskaya Embankment, Petrovsky Stadium.

5. Construction of the intercepting sewer along the Robespierre Embankment began

Modernization of wastewater treatment plants

At the present time, the quality of wastewater treatment at the most of wastewater treatment plants meets the HELCOM requirements. Vodokanal has accomplished the phosphorus removal task, but the nitrogen removal process is more complicated. Introduction of up-to-date biological treatment technologies presupposes comprehensive reconstruction of the facilities, including installation of new equipment and introduction of technological processes.

1. To improve treatment efficiency and stabilize the nutrient removal process at the Northern WWTP, in 2012, Vodokanal began the 1st stage of reconstruction works that will be completed in 2014. On the 1st stage Vodokanal performed reconstruction of 5 aeration tanks, 2 primary clarifiers, 4 secondary clarifies. The construction of raw sludge pumping station and return sludge pumping station was begun.

2. In 2011, the 1st stage reconstruction works began at the Central WWTP. In 2012, modernization of the aeration tanks was completed.

3. In the course of the year, the implementation of the Project for the Reconstruction and Modernization of Small Wastewater Treatment Plants was going on. In the frames of the project small WWTPs in Kolpino, Pontonny, Pushkin, Kronstadt shall meet wastewater treatment level complying with HELCOM recommendations, чтобы получилось In the frames of the project small WWTPs in Kolpino, Pontonny, Pushkin, Kronstadt shall meet wastewater treatment level complying with HELCOM recommendations.

4. A project of construction of Molodezhnoe WWTP has been developed.

1. Odor control

To alleviate the negative environmental impact and remove unpleasant odor, in 2012, works on recycling wastewater sludge stored at the Severny landfill in the town of Novoselki continued. A method of wastewater sludge dewatering in geotubes was selected for landfill reclamation. The method presupposes static dewatering – filtration of sludge liquid phase through the walls of containers made of polymer filter cloth (geo-tubes) located on specially arranged drainage area. Sludge is fed into the geo-tubes after being treated with special chemicals. The result of such treatment is the production of a harmful substrate which is odor free and may be used for manufacturing fertilizers or technogenic soil (to be used for the construction and reconstruction of motoways).

2. To prevent odor propagation, a project on the installation of the odor removal system at the Severny landfill was developed. The system is based on fine spraying of deodorant along the landfill perimeter.

Improvement of the sewerage system reliability

To prevent emergency situations and ensure reliability of the sewerage system, in 2012, the following activities were performed in the frames of the Program for improving the reliability of the tunnel sewerage system:

- construction of the 2nd line of the backup collector near the Muzhestva Square,
- reconstruction of the tunnel sewer along Rizhsky Avenue,
- reconstruction of the tunnel sewer from the shaft no.63 along.

Besides, the design documentation for the following works was under development:

- reconstruction of the main tunnel collector of the Bely Island;
- construction of the ring tunnel from the shaft 1/27 TKK to the shaft 441/2 PGKS;
- construction of the ring tunnel along Basseynaya Street;
- construction of the ring tunnels along the Fontanka River Embankment;
- construction of the ring tunnel collector along Petrogradskaya Storona on the section from the shaft 471 to the shaft 474.

Construction and reconstruction of networks

To ensure the connection of new developments in the southern part of the city to the engineering networks, including new developments of the Leningrad Region, a new development scheme of the southern part of the city was designed, the long-term territorial water balance was developed, the list of activities on construction

and reconstruction of networks to be connected to the new developments of the city and the Leningrad Region (residential development project "Tsarskoselskie Kholmy", industrial development project "Metallostroy-2", industrial development project "Shushary", the town of Yuzhny, and other projects) was prepared.

In 2012, design and survey works related to disposal of wastewater from the town of Metallostroy to the Central WWTP were going on. The design assignment for the reconstruction of Kolpino WWTP and Pontonny WWTP were developed.

Works on the construction of sewerage networks for the following residential development projects were going on:

- construction of a sewer to be connected to the housing development areas 7 and 10A Krasnoe Selo;
- construction of a sewer from the shaft no.611/2 to shaft no.611/5 along Tsentralnaya str.;
- construction of a sewer from the sewerage pumping station no.7 to Kolpino WWTP. Reconstruction of the sewerage pumping station no.7;
- construction of the combined sewerage system for "Konnaya Lakhta" facility;
- construction of local run-off treatment facilities for the residential area "Osinovaya Roshcha";
- construction of a single-line sewer from the sewerage pumping station no.6 to the sewerage pumping station "Slavyanka", the works being completed.

IN TOTAL, 114 KM OF SEWAGE NETWORK WERE CONSTRUCTED AND REHABILITATED IN 2012 (1.6 TIMES MORE THAN IN 2011).

In 2012, works on design and construction of sewerage networks to be connected to the following new projects were going on:

- residential development (including schools, kindergartens, health care facilities, board and care facilities for the veterans of the Great Patriotic War and houses for large families);
- cultural and business facilities development (shopping malls and offices);
- industrial development.

To provide centralized water supply and wastewater disposal services to the citizens of the towns of Volodarsky and Olgino, works on the installation of 25 km sewerage network and around 33 km water network were completed (as of 1 January 2013).

Stationary snow-melting stations

In order to solve the snow disposal problem, six stationary snow-melting stations were put into operation in 2012 to receive snow in the amount of 35,000 m³/day. The stations are located at the following addresses:

- 2, Oktyabrskaya Embankment;
- 77, Peterhoffskoe Highway;
- 20, Sevastianova str., Kolpino;
- 45, Rizsky Avenue;
- 83, Stachek Avenue;
- 69 Krasnoputilovskaya str..

Besides, in 2012, works on construction and installation of a stationary snow-melting station at the address: 123, Volkhonskoe Highway, were completed.

FUTURE DEVELOPMENT OF THE SEWERAGE SYSTEM

St.Petersburg sewerage system development is focused on solving the following tasks:

- elimination of untreated wastewater discharges into St.Petersburg water bodies;
- upgrading and construction of wastewater treatment plants by introducing the enhanced nutrient removal, tertiary treatment and disinfection technologies;
- construction of backup tunnel collectors and rehabilitation of the existing tunnel collectors;
- modernization of the sewerage system;
- establishment of St. Petersburg wastewater disposal management system;
- construction of networks and facilities to provide wastewater disposal for city districts.

1. To decrease the negative environmental impact and reach 100% level of wastewater treatment in St.Petersburg, the following major environmental projects are to be implemented:

In the central part of the city:

- completion of the extension of the Northern Tunnel Collector and the collector along Robespierre Embankment in 2013. 7 untreated wastewater discharges (37,500 m³/day) will be connected to the collector.
- Total amount of wastewater channeled to the Northern Tunnel Collector in 2008 - 2013 will be 284,000 m³/day. Wastewater treatment level will reach 98.4%;
- closure of untreated wastewater discharges along Admiralteyskaya Embankment, Petrogradskaya Embankment, Karpovka River Embankment, Petrovsky Stadium, etc., by 2016;
- construction of Okhta tunnel collector by 2018;
- continuation of reconstruction and modernization works at the Central WWTP and Northern WWTP.

In the southern part of the city:

- connection of wastewater from Metallostroy to the catchment area of the Central WWTP by 2016;
- comprehensive reconstruction of Kolpino WWTP extending its capacity up to 140,000 m³/day by 2017; reconstruction of Pontonny WWTP extending its capacity up to 40,000 m³/day by 2023;
- Construction of intercepting collectors and elimination of discharges in the town of Lomonosov and Kolpinsky district.

In the Kurortny district:

- by 2016, construction of Molodezhnoe WWTP with the capacity of 2,500 m³/day, reconstruction and modernization of Zelenogorsk WWTP;
- construction of sewerage networks from the town of Zelenogorsk up to the towns of Reshetnikovo and Krasavitsa

Moreover, it is planned to introduce tertiary treatment technologies and disinfection systems at all the wastewater treatment plants.
In 2013, a program of environmental restoration of St.Petersburg and Leningrad Region water bodies is planned to be prepared and implemented.

2. To increase the reliability of the tunnel sewerage system, the construction of ring tunnels and backup collectors is planned with further rehabilitation of the existing tunnel sections.

- completion of the construction of the 2nd stage of the backup collector from Vernosti str. to the Murinsky Ruchei near the Muzhestva Square, in 2014;
- completion of the reconstruction of the tunnel collector along Rizhsky Avenue and the tunnel collector along Revolyutsii Highway from the shaft no.63 to the shaft no.2 along Piskorevsky Avenue, by 2015;
- completion of the reconstruction of the main inlet collector connected to the Central WWTP and construction of the ring tunnel from the shaft no.1/27 of the tunnel collector to the shaft no.441/2 of the Northern tunnel collector, in 2016.

By 2018 we plan:

- construction of the ring tunnel collector along Petrogradskaskya Storona on the section between the shafts 471 – 474;
- Commencement of design works for the second line of the Northern Tunnel Collector.

3. To ensure the optimal hydraulic control of the sewerage network and the improvement of energy efficiency and rational use of resources, the reliable integrated wastewater management system shall be established.

For this purpose, Vodokanal needs to establish the system to measure wastewater flow and water level in sewerage collectors and wet compartments of sewerage pumping stations, as well as the automated system of remote control and the wastewater quality control system.

First of all, it is necessary to reconstruct the main pumping stations replacing old pumps.

4. The establishment of the advanced wastewater system of St. Petersburg is not possible without solving a problem of significant physical deterioration of pipelines.

The networks shall be rehabilitated. The replacement of pipelines shall account for 180-200 km per year and restoration by Vodokanal of pipeline tightness - 700 km per year. It will allow to renovate the sewerage network, ensure continuous and failure-free transportation of wastewater for treatment as well as to eliminate cesspools.

In 2013, it is panned to install and rehabilitate 147.2 km of sewerage networks.

5. In 2013, 2 snow-melting stations are planned to be constructed in St. Petersburg at the following addresses: 2, Rybinskaya str., intersection of Mebelny Driveway and Mebelnaya Street. Besides, it is planned to start the construction of stations at the addresses: 24, Obvodny Canal Embankment, 2 – 1, Bestuzhevskaya Street, with the works to be completed in 2014.

6. To ensure the availability of centralized wastewater disposal services to the citizens by 2025, Vodokanal plans to construct street networks and wastewater treatment facilities in 71 communities located in the territory of St. Petersburg (providing the private residential structures with the possibility to be connected to the system).

At the present time, the projects of construction of potable water and household wastewater networks in the towns of Olgino, Volodarsky and Saperny are under implementation. Works on designing and construction of the networks and facilities for the towns of Toriki, Lisiy Nos, Molodezhnoe, Martyshkino, Lakhta, Repino, Razliv, Ust-Izhora, Pontonny, Beloostrov and Dyuny are planned for future.

7. To eliminate the negative environmental impact of sludge landfills, the works on sludge processing by geotubing method are going on.

The planned activities are aimed at meeting the following goals:

- reduction of the negative environmental impact of the sewerage system facilities;
- continuous provision of wastewater disposal services to the customers;
- increase of the energy-efficiency of the sewerage system and introduction of the energy-efficiency policy in the wastewater disposal system;
- availability of the centralized wastewater services to the population of St. Petersburg.

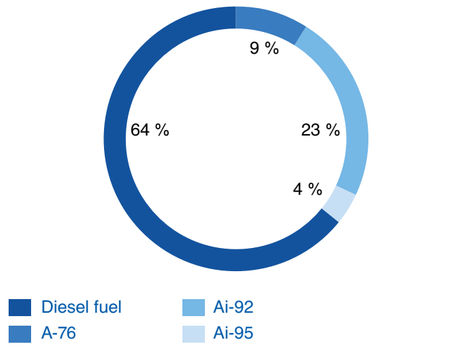
SPECIALIZED VEHICLES
AND EQUIPMENT

AS OF 1 JANUARY 2013, VODOKANAL ST. PETERSBURG HAS 1,062 TRANSPORT UNITS.

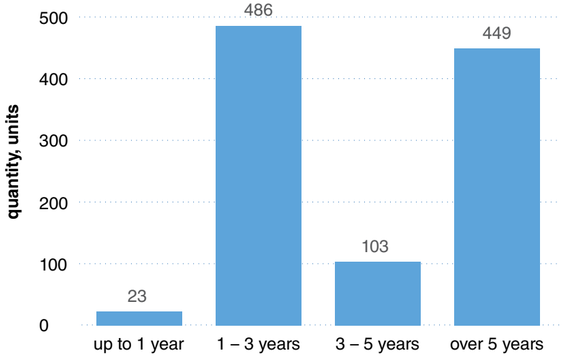
Vodokanal's vehicle park includes:

- 160 specialized van trucks,
- 138 dump trucks,
- 48 JCB loader-excavator,
- 66 Scania, Mercedes, MAN specialized combined vehicles,
- 31 steam generators (STEAMRATOR MHT700),
- 619 other transport vehicles.

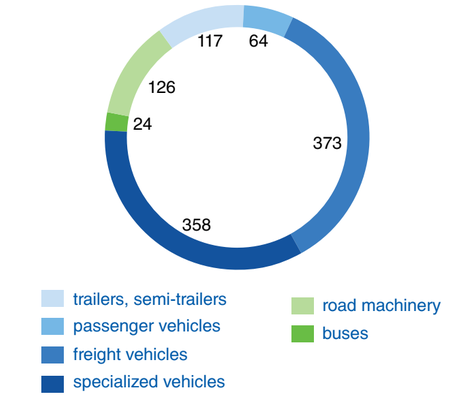
Types of fuel



Age of vehicles as of January 1, 2013



Types of vehicles



In 2012, Vodokanal purchased 29 transport vehicles including the following:

- 3 combined hydraulic jet cleaners FICO 2KDE-SCANIA P420CB8x4*4HSZ. The equipment installed on the cleaner allows to clean sewerage pipelines and at the same time to remove sludge from sewer manholes even in winter periods (down to - 25 ^{0}C).
- 11 dump-trucks KAMAZ-65115-62 to remove sewerage sludge.
- 2 buses KABZ-4235-31 for passenger transportation.
- 3 vehicles (B10M.0111-EH, AGROMASH 90TG, ATLES 946RZ) for bulldozing and ripping works.
- 10 vans GAS-2705 to provide for general production processes, transportation of personnel and small freight.

SUE "Vodokanal of St.Petersburg" plans to upgrade and develop its transport facilities, equip them with EURO-4 class motors with increased technical capability, as well as to apply multi-function transport units thus reducing the number of transport facilities:

- 22 emergency vans on the MAN chassis characterized by better chassis specifications and more comfortable transportation conditions for the teams, to replace outdated emergency vans on the ZIL chassis;
- 4 emergency vans on the Volkswagen chassis characterized by better chassis specifications and more comfortable transportation conditions for the teams, to replace outdated emergency vans on the ZIL chassis;
- 1 laboratory on the chassis Mercedes-Benz Sprinter for express-analysis of the customers' wastewater.

Timely renewal of Vodokanal's transport facilities allows to:

- increase the operational reliability of the vehicles,
- execute water supply and wastewater disposal production programs,
- establish positive conditions for implementation of infrastructure development projects and provision of engineering support of St.Petersburg.

ESTABLISHMENT OF BACKUP POWER SUPPLY SYSTEM AT VODOKANAL'S FACILITIES

Installation of backup power supply sources at socially significant and life-support facilities of St.Petersburg is envisaged by St. Petersburg Government Decree no.1454 "On the program of installation of backup power supply sources at socially significant and life-support facilities for 2012-2013" dated October 20, 2011.

As early as in 2010, Vodokanal prepared the program of the development of the backup power supply system to increase the energy safety of water/wastewater facilities. The program fully complies with the requirements of St. Petersburg Government Decree.

For the first time the company as big as Vodokanal will ensure, within the framework of the backup power supply system, that high-voltage pumps (up to 1.5 MW) are powered by reserve power supply sources (diesel-electric power units). Technical solutions used in the course of the system development are unique and unprecedented.

In 2012, 25 sites to accommodate and connect backup power supply units were established at Vodokanal's core production facilities:

- 14 sites for mobile diesel-electric power units;

- 11 sites to accommodate stationary high-voltage diesel-electric power units at the following core facilities:

- Main Water Treatment Plant;
- Volkovskaya Water Treatment Plant;
- Northern Water Treatment Plant (2 sites);
- Southern Water treatment Plant (2 sites);
- Kolpino Water Treatment Plant, 2nd elevation;
- Moskovskaya Pumping Station;
- Central Wastewater Treatment Plant;
- Northern Wastewater Treatment Plant;
- South-West Wastewater Treatment Plant.

In 2012, 2 backup power supply units were put into operation; the rest of them will be commissioned in the 2nd quarter of 2013. A decision to use variable frequency drives in combination with diesel-electric power units allowed to decrease the number of DEPUs (because of reducing the starting current) and will ensure the pumps operation with variable frequency drives in normal mode thus considerably reducing energy consumption.

The establishment of the backup power supply system at Vodokanal's facilities will result in maintaining water head in the networks of up to 10 – 15m thanks to the reserve power supply units installed at facilities supplying water from clean water tanks (potable water storage capacity – up to 12 hours), and in ensuring wastewater delivery to the wastewater treatment plants in case of external power supply interruption.

CUSTOMER SERVICE IN 2012

CUSTOMER SERVICE WAS A PRIORITY AREA FOR VODOKANAL IN 2012.

Vodokanal's territorial divisions established within the Water Supply and Wastewater Disposal Production Branches provide consultation services to customers.

Communication with customers of the service areas is a main task of water supply and wastewater disposal districts, which ensures promptness of such communication and provision of services by relevant subdivisions taking into account specific features of water and wastewater networks located in a certain area.

Functions of water supply (wastewater disposal) districts include:

- consultation on issues related to contractual arrangements of delivery of potable water and collection of wastewater;
- inspection of water supply and wastewater disposal systems at location of a customer's facility;
- preparation of draft agreements on delivery of potable water and collection of wastewater (conclusion of agreements).

IN 2012, VODOKANAL COMPLETED THE INVENTORY OF CUSTOMERS' FACILITIES.

The purpose of inventory carried out by the company was to receive reliable information about the situation at customers' facilities and to bring contractual arrangements with customers in compliance with the actual situation.

During the inventory process, Vodokanal received reliable information related to:

- an entity carrying out activities at a specific address, and its rights for water supply and wastewater disposal systems directly connected to the municipal water and sewage systems;
- number of facilities consuming potable water (disposing wastewater);
- number and characteristics of service connections, sewer outlets, availability and condition of meters;
- free access to metering units, control sewer manholes;
- area of land plots and types of pavements at the land plots.

The information received by Vodokanal in the inventory process was used for execution (re-execution) of contractual arrangements with customers, for conclusion of separate agreements on delivery of potable water and collection of wastewater and pollutants.

IN 2012, VODOKANAL CONTINUED ACTIVITIES ON INTRODUCING ADVANCED TECHNOLOGIES INTO THE WORK WITH CUSTOMERS AND:

- implemented the system of electronic notification of customers about the expiry of draft water/wastewater agreements reviewing and about the necessity to deliver a signed agreement or a protocol of disagreements;
- continued to implement the system of remote reading of measurements to ensure the possibility of on-line water consumption monitoring by a customer (including receiving prompt information on breakdowns at in-site networks) as well as the possibility to make contract payments according to the meter readings received by the company by remote transfer;
- continued to develop an electronic archive of contractual documentation aiming at prompt delivery of information about availability of a certain document in the company's archive;
- implemented, within the development of the Personal Account, on-line application and submittal of documents to execute (amend, terminate) water/wastewater agreements (the system will be commissioned on a large-scale in 2013).

IN 2012, VODOKANAL CONTINUED WORK RELATED TO CONSULTATIONS AND EXCHANGE OF OPINIONS WITH DIFFERENT CATEGORIES OF CUSTOMERS.

Within the working group with the participation of St.Petersburg authorities, Vodokanal actively cooperated with the Union of Industrialists and Entrepreneurs of St. Petersburg (with regard to wastewater disposal norms, construction of local wastewater treatment plants and installation of wastewater meters).

In 2012, substantial changes were introduced into the legislation regulating relationships between service providers and public utilities. On 14 February 2012, the Government of the Russian Federation issued the Decree no.124 approving the Mandatory Rules for the execution of agreements between service providers (a managing company or condominium or house-hold cooperative or another specialized consumer cooperative) and public utilities. The Rules for providing municipal services to owners and users of apartments in apartment buildings and residential buildings, approved adopted by the Decree of the Government of the Russian Federation no.354 dated 6 May 2011, entered into force on September 1, 2012.

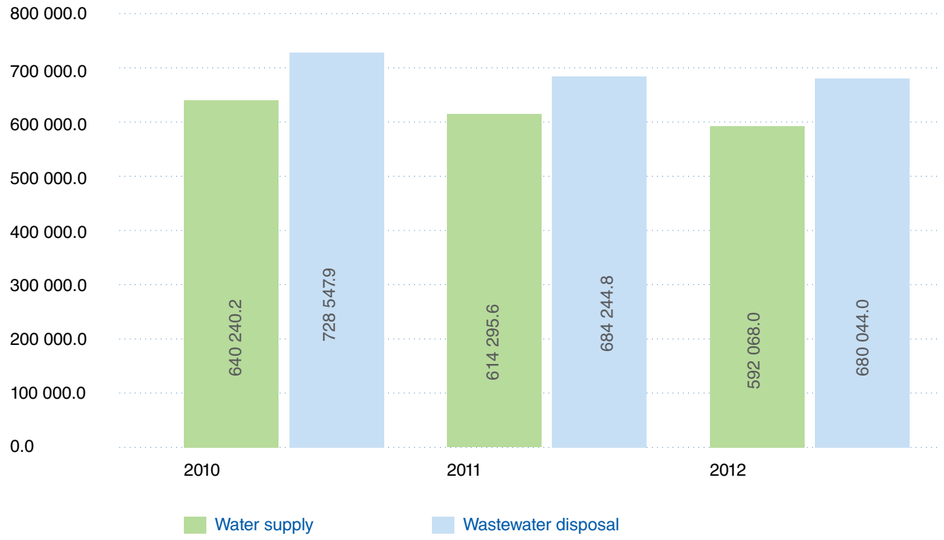
Meetings of the working group organized by the Concierge newspaper with the participation of the public services providers were held quarterly to discuss issues of water supply for apartment houses, installation of house meters and estimation of public service consumption by an apartment house if there are no metering instruments).

Vodokanal conducted consultations with the Association of Housing Construction Cooperatives, Housing Companies and Condominiums (answers to questions, meetings with company management).

VOLUMES OF SALES

THE RESULTS OF VODOKANAL ACTIVITIES IN 2010-2012 SHOW A CLEARLY STABLE REDUCTION IN WATER CONSUMPTION OF CUSTOMERS IN ST. PETERSBURG.

Volumes of water and wastewater services sales for 2010 – 2012, in physical units ('000 m³)



The diagram shows a 7.5% reduction of water volumes consumed by St. Petersburg customers in the last three years. In 2012, volumes of sales were reduced by 3.6% compared to 2011.

Water supply reduction trend may be observed for both Households and Other Consumers tariff groups.

Reduction of water consumption volumes by the Households category is a result of application by housing organizations of comprehensive measures on minimization of water losses in in-house networks to ensure rational water consumption in the housing and public utility sector.

The major factor that has impact on the reduction of energy resources consumption by customers is the obeyance of the Federal Law no.261-FZ "On energy saving and energy efficiency increase, and on amending certain legislative acts of the Russian Federation" dated 23 November 2009, and the application of the mechanism of economic incentives of rational water consumption.

Water sales reduction for Other Consumers category, started from 2009, has been caused by saving of fuel and energy resources by the companies, application of resource-saving technologies, elimination of breakdowns and leakages in in-house networks and modernization of equipment of industrial companies.

Reduction of water consumption in St. Petersburg has been caused by:

- transition from the billing according to the standard consumption rate to the billing according to actually consumed volumes following the installation of cold and hot water meters;
- energy saving measures taken by customers (emergency repairs, elimination of leakages in in-house networks, repairs of in-house pipes and etc.);
- water savings by the citizens;
- implementation of energy saving measures by housing organizations, managing companies, condominiums and housing cooperatives (improvement of metering systems and control over the consumed services).

ACCOUNTS RECEIVABLE

VODOKANAL HAS DEVELOPED A MECHANISM OF INDIVIDUAL INTERACTION WITH CUSTOMERS AIMED TO ENSURE TIMELY COLLECTION OF PAYMENTS FOR POTABLE WATER AND WASTEWATER SERVICES AND SETTLEMENT OF ANY RECEIVABLES.

From 2011, the management of SUE "Vodokanal of St. Petersburg" decided to hold regular meetings with the participation of Vodokanal Branches (Customer Service Centre, Water Supply Branch and Wastewater Disposal Branch) to strengthen control over receivables. In the second half of 2012, meetings related to customer service issues were held with representatives of the Customer Service Centre, Water Supply and Wastewater Disposal Branches every ten days. Totally, 607 such meetings were held in 2012.

To improve operations with the accounts receivable and assign experts of the Income Department of the Customer Service Centre with personal responsibility, individual payment collection plans split by customer categories ("Service providers", "Budget of St.Petersburg", "Federal Budget", "Other", "Organizations of the Leningrad Region", "Industry" and "Energy Suppliers") are approved monthly.

The algorithm of monthly reporting has been developed to analyze actual results achieved by each expert.

Monthly development and implementation of plans on identification of additional sources for settling accounts receivable was proved to be economically feasible. The plan of additional measures to generate income and reduce accounts receivable is monthly made and approved by First Deputy Director General and then is sent to the production branches.

In 2012, cooperation with the Housing Committee and the Committee for Energy and Engineering Support was organized regarding the measures aimed at collecting debt from customers attributed to the "Service Provider" category.

Numerous meetings were held at the premises of SPb GUP VZKP "Housing Services" to optimize exchange of information with due regard to the changes in legislation.

IN 2012, VODOKANAL HAD CLOSE INTERACTION WITH THE CITY AUTHORITIES RESPONSIBLE FOR THE DISTRIBUTION OF THE FUNDS FROM THE ST. PETERSBURG BUDGET, INCLUDING:

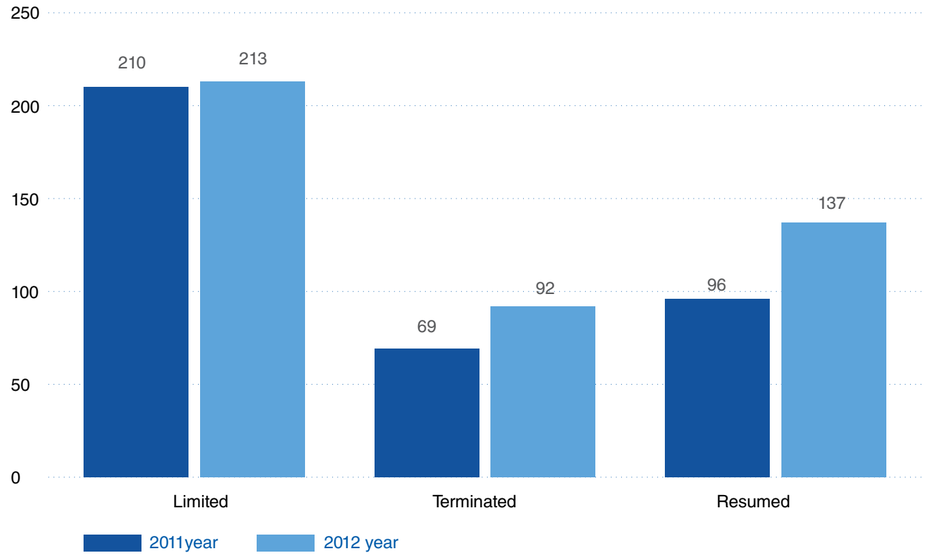
- regular meetings (at the level of district administrations of St.Petersburg, executive bodies of the St. Petersburg Government) aimed to determine reasons for the accounts receivable and debt collection dates.
- exchange of information and electronic data about the allocated funds, actual volumes of the provided services (in physical and money terms) and accounts receivable with the city authorities responsible for distribution of St. Petersburg budgetary funds.
- full-scale quarterly reconciliation of payments with customers of the relevant categories.
- timely issuance and delivery of bills to relevant customers on a monthly basis

In 2012, due to the taken measures, payments from customers under the "St. Petersburg Budget" category were collected in full.
In 2012, 128 debt restructuring agreements were concluded with the customers, who were confronted with the lack of funds required to pay for the provided services. 113 such agreements were made in 2011.

IN 2012, THE OVERDUE ACCOUNTS RECEIVABLE WERE MONITORED MORE EFFICIENTLY. THE ACTIVITIES AIMED TO LIMIT OR STOP THE PROVISION OF SERVICES TO CERTAIN CUSTOMERS WERE BETTER COORDINATED.

For example, in 2012, upon the request of the Customer Service Centre, the production branches limited water supply/wastewater services for 213 customers, terminated the provision of services to 92 customers and resumed provision of services to 137 customers.

Limitation or termination of services



Thus, in 2012, the number of customers for whom water supply / wastewater services were limited or terminated increased by 9%. It led to reduction of overdue accounts receivable with regard to the customer categories “Industries” and “Other”.

The customer category “Providers of Services to Households” has the biggest share (56.4% as of 1 January 2013) in the overall structure of accounts receivable. In 2012, this share increased by 1%.

Recovery of accounts receivable through legal proceedings is one of the instruments to liquidate the accounts receivable. In 2012, Vodokanal received 671 enforcement orders at the total amount of RUB 793,004,680 on the basis of juridical acts.

The total accounts receivable recovered under the enforcement orders amounted to RUB 543,560,060 including RUB 144,996,580 under the 2011 enforcement orders.

To increase the efficiency of payment collection and decrease the accounts receivable, Vodokanal assigned experts of Water Supply and Wastewater Disposal Branches with personal responsibility for the work with customers under the categories “Tenants” and “Private Owners”.

In 2012, Vodokanal continued to publish the information about its main debtors on its corporate website (section “Lists of Debtors”). Such information is updated on a monthly basis.
As of 1 January 2013, Vodokanal’s accounts receivable amounted to RUB 4,472,067,700.

Structure of accounts receivable in 2012, ‘000 RUB

Customer group	Accounts receivable as of 01.01.12	Accounts receivable as of 01.01.13	Difference in accounts receivable
Providers of services to households	2 211 115,0	2 521 232,6	310 117,6
GUP TEK (heat supplier)	159 093,1	168 875,6	9 782,5
TGK-1 (electricity supplier)	268 003,7	238 311,2	-29 692,5
St. Petersburg budget	37 772,2	36 655,1	-1 117,1
Federal budget	297 742,4	388 591,3	90 848,9
Organizations in Leningrad Region	309 488,9	448 061,8	138 573,0
Other	241 677,7	269 222,8	27 545,2
Industries	464 944,3	401 117,3	-63 827,1
TOTAL	3 989 837,2	4 472 067,7	482 230,5

The share of different customer categories in the structure of accounts receivable, ‘000 RUB

Customer group	As of 1.01.2012	As of 01.01.2013	Growth or reduction of share
Providers of services to households	55,4 %	56,4 %	1,0 %
GUP TEK (heat supplier)	4,0 %	3,8 %	-0,2 %
TGK-1 (electricity supplier)	6,7 %	5,3 %	-1,4 %
St. Petersburg budget	0,9 %	0,8 %	-0,1 %
Federal budget	7,5 %	8,7 %	1,2 %
Organizations in Leningrad Region	7,8 %	10,0 %	2,3 %
Other	6,1 %	6,0 %	0,0 %
Industries	11,7 %	9,0 %	-2,7 %
TOTAL	100,0 %	100,0 %	0,0 %

CONNECTION TO WATER DISTRIBUTION AND SEWERAGE NETWORKS

VODOKANAL ISSUES AUTHORIZATIONS FOR CONNECTION OF NEW (RECONSTRUCTED) FACILITIES TO MUNICIPAL DISTRIBUTION AND SEWERAGE NETWORKS.

This includes the issuance of:

- specifications,
- connection conditions,
- connection contracts,
- project validation,
- certificates of conformity of built facilities to connection conditions.

The data on the issued authorizations for 2012 are shown in the table:

Annual report on the issued authorizations for connecting facilities to municipal distribution and sewerage systems

Type of work	Number of developed documents						Increase in the number of documents in 2012 compared to 2011
Year	2007	2008	2009	2010	2011	2012	
Issuance of authorizations (including specifications, connection conditions, initial data, etc.)	6281	7250	6987	8623	11 354*	12 394**	8%
Consideration of design documents	3045	3169	2950	3456	3794	4120	8%
The number of connection agreements prepared			123	311	314	476	34%
The number of agreements concluded			24	181	260	374	30%
The number of letters confirming conformity to connection conditions				489	466	489	5%

* Including specifications — 3,261; connection conditions — 1,663;, initial data — 219
**Including specifications —2,761; connection conditions — 1,532; initial data -— 298

Customers' applications for authorizations are received by the Customer Service Centre at the address: Letter A, 21 Gakkelevskaya Street, from 9:00 till 18:00 (without lunch-break). The principle of "one window" is used.

Other visiting addresses for the customers are:

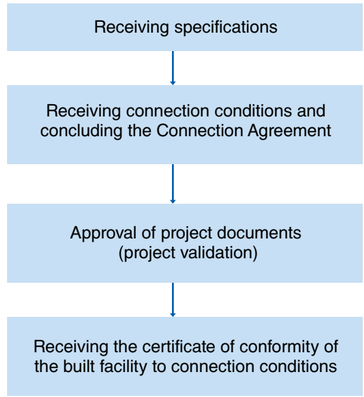
- Room 103, 7 Filtrovskoye shosse, Pushkin,
- Room 218, 15 Saperny pereulok, Kolpino,
- Room 12, 1 Pereulok Suvorovtsev, Petrodvorets

Applications for specifications can be submitted via the Internet.

Time periods for issuing authorizations by Vodokanal:

- Specifications – 2 working days (by law – 14 working days),
- Connection conditions – 5 working days (by law – 30 working days),
- Connection agreement – 5 working days (by law – 30 working days).
- Project approval – 10 working days (the term of the project review is not regulated by law),
- Certificate of conformity of built facilities to connection conditions – 5 working days (the term of issuing the certificate is not regulated by law).

The scheme of issuing authorizations for connection of facilities to municipal water and sewerage networks



CALL CENTRE

SUE “VODOKANAL OF ST. PETERSBURG” HAS ITS HOT LINE TO RECEIVE CALLS FROM THE CUSTOMERS (PHONE: +7 (812) 305-09-09, SEE ALSO “INTERACTION WITH CUSTOMERS” FOR MORE DETAILS).

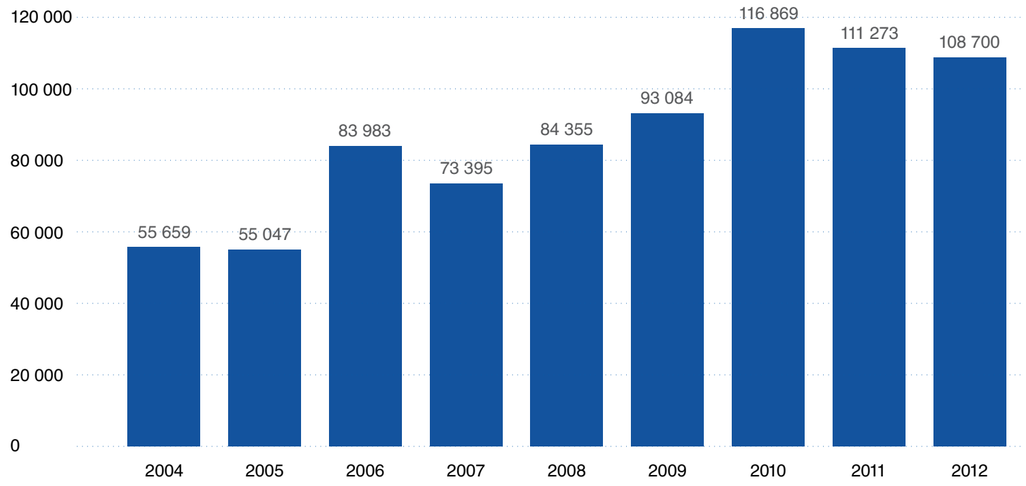
In 2004-2012, the implementation and use of the calls recording and handling system, as well as other improvements of this process, led to reduction of call duration from 12 to 2 minutes with the maximum waiting time of 2 minutes (in peak periods, when up to 200 calls per hour are received). At present, the average time of waiting for the operator’s reply is 2-20 seconds.
In 2004-2012, the number of calls (general inquiries or consultations) increased from 55,659 to 108,700.

The number of inquiries related to Vodokanal activities has increased over these years. It can be explained by the increase of new customers and the growing interest of the citizens in the company operations.

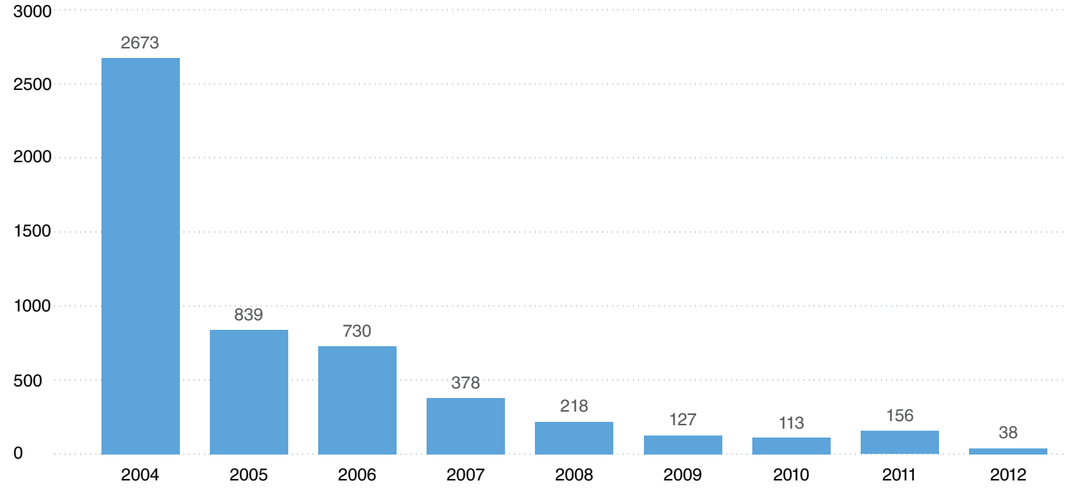
The number of complaints received by the Hot Line reduced from 30,146 to 27,826 in 2004-2012.

The most serious complaints are those related to low cold water head and blockages in the yard sewers. In 2004, 2,673 complaints about low water head were received, and in 2012 there were only 38 legitimate complaints, i.e. the number of complaints has reduced by more than 70 times over 8 years.

Information requests



Complaints about low water head



CUSTOMERS' SATISFACTION SURVEY

SUE "VODOKANAL OF ST.PETERSBURG" ANNUALLY PERFORMS OPINION SURVEYS AMONG ITS CUSTOMERS AND END-USERS (RESIDENTS OF APARTMENT BLOCKS).

In 2012, SUE "Vodokanal of St. Petersburg" held a traditional random polling of customers - representatives of budgetary organizations, providers of services to the population, tenants and industrial enterprises. The polling-2012 was organized taking into account all recommendations previously expressed by customers. In particular, the number of questions in the questionnaire was reduced.

256 respondents participated in the poll. The analysis of questionnaires revealed that 83% of customers were satisfied, in general, with the quality of the water and wastewater services (in 2011 it was 79%). But 16% of customers made critical remarks about the reliability of water supply services (and about the head loss too), 19% of respondents were dissatisfied with the time period needed to conclude contracts for potable water supply and for wastewater/pollutants collection. 28% of customers were dissatisfied with the location of customer service offices.
In 2012, Vodokanal also made an opinion survey among the citizens regarding the services provided by Vodokanal, i.e. end-user satisfaction survey. The data were collected by street interviewing of 1000 persons of all age groups and different social status, living in different city districts.

Vodokanal makes annual opinion surveys among the citizens of St. Petersburg. The objective of such surveys is to find out to what extent the end-users are satisfied with the quality of services and social projects of Vodokanal. By analyzing the results of such surveys Vodokanal can identify problems, as the citizens see them, and improve its performance in relevant areas.

The sociological survey procedure is improved every year. Before 2008, opinion polls were made by phone only. In 2009, Vodokanal used two methods: telephone polling and outdoor polling. According to the results of the surveys and on the grounds of the opinion given by marketing companies, it was decided that outdoor polling was more effective.

Since 2010, Vodokanal has conducted opinion surveys in the form of outdoor polling. Questionnaires are developed on the basis of a Likert-type scale (rating scale). Mathematical-statistical methods are used to analyze the collected data (e.g. scalogram analysis).
In 2012, the sample size was increased from 500 to 1000 persons. Respondents are grouped by age, gender, social status, district of residence, etc. to ensure representative sampling.

The survey-2012 results showed that the overwhelming majority of residents (80.5%) were satisfied with cold water quality. It corresponds to the 2011 result.

95% of residents were satisfied with the reliability of water supply (77% in 2011), and 86% - with the tap water head (81% in 2011).

The overwhelming majority (89%) of residents were satisfied with cold water odour (in 2011 - 82%). Likewise, satisfaction with tap water color and taste increased to 87% and 86%, respectively (compared to 79% and 77% in 2011).

The city residents highly appreciate the quality of Vodokanal's Hotline Service – 98% of those who have ever called the Hotline are satisfied with its performance (for reference, 93% in 2011).

More than a half of city residents (53%) are satisfied with cold water tariffs, and approximately 20% were at a loss to evaluate the tariff. However, 86% of respondents could not say what tariff they paid for cold water supply and wastewater disposal services.

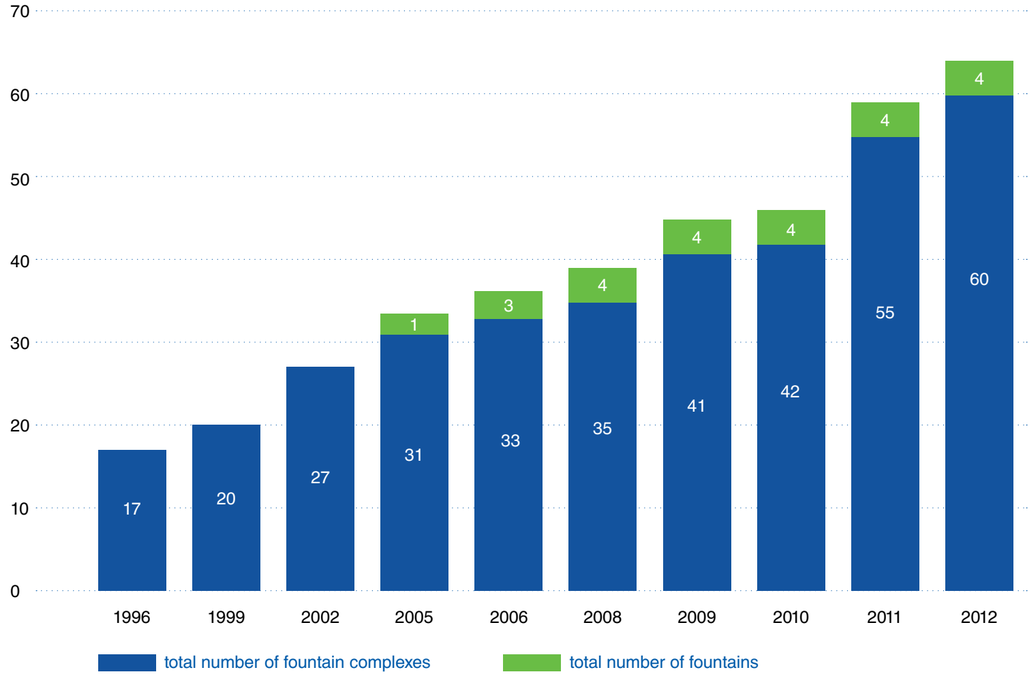
According to the survey results, 60% of households in St. Petersburg have water meters installed in their flats. The majority of those who have the meters (84%) think that they are worthwhile.

CITY FOUNTAINS

IN 2012, STATE UNITARY ENTERPRISE “VODOKANAL OF ST. PETERSBURG” OPERATED 60 FOUNTAINS AND 4 FOUNTAIN COMPLEXES.

The history of St. Petersburg fountains goes back to 1705; the fountains have lived through several periods of prosperity and decline. And by the time the decision was taken to pass the city fountains into the economic management of State Unitary Enterprise “Vodokanal of St. Petersburg”, fewer than 20 of 350 fountains were functioning in the city. Most of them were in a state of failure because no maintenance or repairs have been made from long ago.

Vodokanal St. Petersburg has been operating fountains and fountain complexes since 1996.



In 1996-2012 Vodokanal St. Petersburg renovated 31 fountains. In addition to the renovation of the existing fountains Vodokanal has also constructed new fountains in the most prominent places.

By 2008, Vodokanal had constructed 15 fountains and fountain complexes using its own and budgetary funds, including the color-music fountain complex in the square in front of Finlyandsky Railway Station (put into operation in 2005) and the fountain complex at the Moscow Square (put into operation in 2006).

All city fountains are located in the places which are the most popular among citizens and guests of the city. All fountains are unique: they differ by the year of construction, size, architecture, and are made of different materials. Fountain complexes are technology-intensive facilities that require extensive maintenance.

THE BIGGEST AND MOST ADVANCED STATIONARY FOUNTAIN COMPLEX DECORATES THE MOSCOW SQUARE. IT WAS SET INTO OPERATION IN 2006.

The total area of the fountain complex at the Moscow Square is 18,000 m^2; the total volume of bowls is 3,700 m^3. The ensemble consists of 11 bowls. The pumps of the fountain complex pump about 580,000 m^3 of water per day. The fountain bowls are installed 1-3 meters below the level of Moskovsky pr.

The fountain complex at the Lenin Square consists of 20 separate granite units with light and music. The total water volume of all bowls is over 2,000 m^3.

One of the most remarkable fountains is the fountain in the town of Lomonosov. The outer and inner sides of the large fountain bowl (its diameter is 14.2 meters) are lined up with red granite plates.

The bowl itself is made of in-situ reinforced concrete. There is a bronze monument in the center, a lion who tries to reach the sour orange tree. Initially, this tree decorated the Oranienbaum city coat of arms (the German word “Oranienbaum” means “a sour orange tree”). Today, it is used as the coat of arms of Lomonosov. The monument is 5.8 m high. In 2009, SUE “Vodokanal of St. Petersburg” developed the Rules for complex fountain maintenance, which determines maintenance methods and costs for each fountain.

Among the fountains operated by SUE “Vodokanal of St. Petersburg” are the fountain in the garden near the Kazan Cathedral, the fountain in Aleksandrovsky Garden, the fountain in Yuzhno-Primorsky Park, the fountain in the garden near Gostiny Dvor (Kronstadt) and others.

IN 2012, FIVE NEW FOUNTAINS WERE TAKEN INTO ECONOMIC MANAGEMENT BY VODOKANAL ST. PETERSBURG.

The “Bowl” fountain in Zelenogorsk, Primorskoye shosse 549, was put into operation after the capital repairs.

Moreover, in 2012 Vodokanal completed the design and began construction and installation works of the fountain in Yuzhno-Primorsky Park (27 Petergofskoye shosse, lit. K); began construction and installation works of the fountain in 3, Pisareva Street, building 1, lit. F; initiated the design of fountains in “St. Petersburg 300th Anniversary” Park (74 Primorsky pr., lit. N and M) and “Slava” fountain in Moskovsky Park Pobedy (Victory park) (188, Moskovsky pr., building 1, lit. F).

The fountains operated by Vodokanal St. Petersburg are equipped with more than 8,000 lamps, 4,700 nozzles, 880 pumps, 915 electromagnetic valves and almost 340km of cabling. During the winter period the performance of all fountain equipment is tested; the relevant parts and units are repaired or replaced.

In 2013, it is planned to complete the capital repairs of the fountain in Yuzhno-Primorsky Park and reconstruction of the fountain on Pisareva Street, bld.

Besides, the following works are planned in 2013:

- Design, construction and installation works for capital repairs of the fountain in Zelenogorsk, 559/1, Primorskoye shosse, bld. 1, lit. A;
- Design, construction and installation works for capital repairs of the fountains in the western and eastern lanes of the “St.Petersburg 300th Anniversary” Park;
- Design, construction and installation works for capital repairs of the fountain-lighthouse on 74, Primorsky pr., lit. L;
- Design, construction and installation works for reconstruction of the fountain “Slava” in Moskovsky Park Pobedy;
- Design, construction and installation works for reconstruction of the fountains in Rumyantsevsky garden;
- Design, construction and installation works for reconstruction of the “Aphrodite” fountain on 64-66, Ligovsky pr., bld. 1, lit. F;
- Reconstruction project design for the fountain in Kolpino, 34/2, Pavlovskaya Street, lit. A;
- Reconstruction project design for the fountains in 1, Komsomola Street, lit. G, bld. 1, 2;
- Reconstruction project design for four fountains in Smolny garden;
- Reconstruction project design for the fountain in 3, Admiralteysky pr., bld. 1, lit. F;
- Reconstruction project design for the fountain on 160, Fontanka emb., bld. 1, liter F.

Moreover, since 2012 Vodokanal has closely cooperated with the public institution “State Research and Design Center of St. Petersburg Master Plan” subordinate to the Committee for City Planning and Architecture, with the aim of developing the concept of “City fountains design. Light and hydrodynamic effects”.

PUBLIC TOILETS

IN 2012, SUE “VODOKANAL OF ST. PETERSBURG” OPERATED 646 PUBLIC TOILETS.

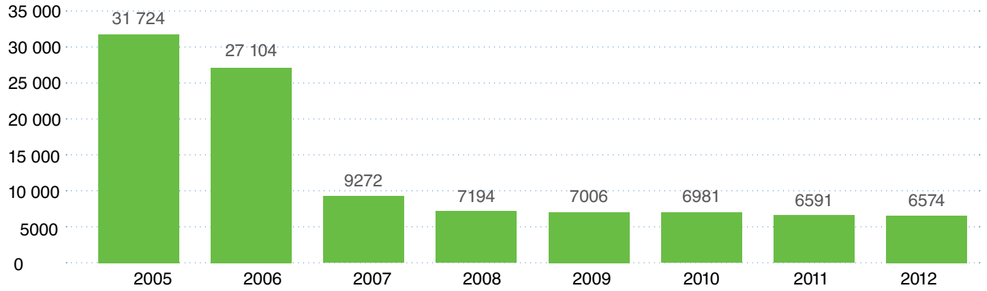
There are 794 public toilets in the economic management of Vodokanal St. Petersburg, including:

- 217 stationary toilets
- 140 networkable modular toilets
- 34 modular toilets with storage containers to be installed in the gardens and parks
- 20 mobile sanitary and hygienic complexes installed on vehicle chassis
- 348 mobile cabins
- 35 urinal-type toilets

The following were in operation:

- 143 stationary toilets
- 66 modular toilets
- 34 modular toilets with storage containers
- 348 mobile cabins
- 20 mobile sanitary and hygienic complexes (installed in buses, semitrailers and Valday vehicles)
- 35 urinal-type toilets

Number of inhabitants per one toilet (for Vodokanal-operated toilets only)



The total number of outdoor public toilets in St. Petersburg in 1950-70s reached 700. They were managed and operated by GUP "Tsentr-Servis", the municipal authority "Spetssluzhba", landscaping companies, housing offices.

In early 1990s, the number of public toilets was reducing. As a result of privatization many buildings and facilities were bought out or leased.

According to the inventory made by territorial district authorities of St. Petersburg, at that time there were about 300 toilets on the city balance sheet, a part of which had already been let out on a long-term lease, and the others were either devastated or falling into decay. Vodokanal St. Petersburg was assigned with the task to solve this problem.

Vodokanal St. Petersburg has been operating public toilets since 2001. In December 2001, the Order of the Administration of St. Petersburg no.1492-ra "On the development of St. Petersburg public toilet network" was issued. Vodokanal St. Petersburg assumed responsibility for the maintenance of public toilets owned by the city of St. Petersburg, and took the client's in relation to repairs, renovation and development of toilets.

Pursuant to the Sanitary Rules of Installation and Maintenance of Public Toilets no.983-72 dated 19.06.1972 approved by the Deputy Chief Sanitary Inspector of the USSR, when new shopping centers are built Vodokanal St. Petersburg issues technical specifications for the mandatory construction of public toilets there. Today, almost every big shopping center has free public toilets for all categories of visitors.

Since 2006, a lot of work has been done to install new-generation modular toilets next to underground stations and in the places approved by district administrations. The toilets are equipped with modern sanitary and hygienic facilities. They are more comfortable and look nicer. According to the public toilets development programme the target is to have 140 such toilets by 2015.

SUE "Vodokanal St. Petersburg" was the first to purchase mobile sanitary and hygienic toilet complexes installed on the vehicle chassis. With such toilets, visitors can get services of better quality compared to mobile toilet cabins. Currently, Vodokanal intends to purchase improved models of such toilets.

The vehicle-based complexes and modular toilets are useful in central districts where they help satisfy the demand for such services.

The subcontractor's trained personnel works in every public toilet managed by SUE "Vodokanal of St. Petersburg", and Vodokanal specialists supervise their work on a regular basis. The toilets have security systems to ensure the personnel security. Over 500 people are involved in operation and maintenance of toilets.
Toilets are open from 9:00 till 21:00. On public holidays toilets are open according to a special schedule.
Moreover, Vodokanal can extend the open hours if necessary, especially, during public events.

During the city festivals – the New Year, Christmas, Victory Day, Day of the City, and "Scarlet Sails" – Vodokanal set up mobile toilets.

In total, mobile toilets were provided for more than 730 events in 2012 on requests of different organizations.

In May 2012, the Government Decree no.502 "On targeted program for capital repairs of public toilets owned by St.Petersburg for 2013-2015" was approved. It is expected to rehabilitate 12 stationary toilets under this program.

In 2013, two toilets will be rehabilitated, construction and installation works will begin on 4 toilets and 3 new toilets will be designed under the program. In March 2013, the Government Decree no.154 "On St.Petersburg public toilets network development program" was approved. In accordance with this program 30 toilets will be reconstructed (9 of them - in 2013).

In addition, it is planned to purchase 110 mobile toilet cabins and 14 mobile sanitary and hygienic toilet complexes and to connect 20 modular toilets to utility networks in the next three years.

All in all, by 2015 Vodokanal is planning to:

- reconstruct 30 stationary public toilets;
- perform capital repairs of 12 public toilets;
- purchase 14 mobile sanitary and hygienic toilet complexes installed on vehicle chassis;
- purchase 110 mobile toilet cabins.

As a result, Vodokanal will operate 840 public toilets in 2015 including:

- 203 stationary toilets;
- 140 modular toilets without storage containers;
- 34 modular toilets with storage containers;
- 34 mobile sanitary and hygienic toilet complexes installed on vehicle chassis;
- 443 mobile toilet cabins.

As the result, the availability of Vodokanal's public toilets will reach the level of 6554 persons per one toilet.

Due to advanced construction methods and the use of new environment-resistant materials the rehabilitated toilets will be in a serviceable condition for a long time.

For the convenience of the city residents and visitors, Vodokanal closely cooperates with the Committee for Press and Mass Media Relations aiming to have the information on toilets location posted on the city's information facilities. The information will be updated annually as new toilets are put into operation.

PERMANENT SNOW-MELTING STATIONS

CONSTRUCTION AND OPERATION OF PERMANENT SNOW-MELTING STATIONS IS A NEW ACTIVITY OF SUE "VODOKANAL OF ST.PETERSBURG". IT IS PERFORMED BY THE COMPANY IN ACCORDANCE WITH THE ST. PETERSBURG GOVERNMENT DECREE NO.1334 DATED 16 OCTOBER 2007.

During the winter 2011-2012, approximately 200,000 m^3 of snow was removed from St. Petersburg roads and streets daily. The snow storage capacity of St. Petersburg was depleted and, for environmental reasons, the city had to make a transition from snow disposal to special dumps to the snow melting practice. The technology of mixing snow with warm municipal sewage is energy-efficient and environment-friendly.

The snow-melting stations work on the principle that the sewage heat (the average temperature is 16–18°C) melts the snow loaded into the melting chamber; it takes about 3 minutes to process 10 tons of snow.

The permanent snow-melting station consists of an underground snow-melting chamber with separator-crushers (snow is unloaded from the truck into the chamber and melted there), a grit removal unit (for sedimentation of suspended solids and litter), a sewage pumping station, a crusher control panel and a checkpoint.

Wastewater can be pumped into the snow-melting chamber by the existing or newly-constructed sewage pumping stations depending on the location of the station.

The permanent snow-melting stations have big advantages over the snow dumps:

- all contaminated wastewater from the snow-melting stations comes to WWTPs where it is fully treated in compliance with the HELCOM recommendations;
- they require a much smaller land area than snow dumps.

Before October 2012, St. Petersburg had only one permanent snow-melting station at 43, Rizhsky prospect. It was quite an out-dated facility by the time when it was transferred to Vodokanal for economic management.

Under the St. Petersburg Government Order no. 713 dated 12.07.2012 "On the action plan for design, implementation and modernization of permanent snow-melting stations in St. Peters-burg in 2012-2013", Vodokanal approved its program of design, implementation and modernization of permanent snow-melting stations.

In 2012, seven snow-melting stations were constructed at the fol-lowing addresses in compliance with this Order:

1. Oktyabrskyay emb., bld. 2 – 7,000 cubic meters of snow per day.
2. 77, Petergofskoye shosse – 7,000 cubic meters of snow per day.
3. 20, Sevastyanova str., Kolpino – 7,000 cubic meters of snow per day.
4. 45, Rizhsky prospect – 7,000 cubic meters of snow per day.
5. 83, Stachek pr. – 3,500 cubic meters of snow per day.
6. 69, Krasnoputilovskaya str. – 3,500 cubic meters of snow per day.
7. 123, Volkhonskoye shosse – 7,000 cubic meters of snow per day.

In July 2012, construction and installation works at 2, Rybinskaya str. began.

Vodokanal is the operator of snow-melting stations and, under the contract with the Landscaping Committee, provides snow collection and disposal services.

The above work is performed in accordance with "Provisional Rules of interaction with SUE "Vodokanal of St. Petersburg" for the purpose of snow collection and processing at Vodokanal's snow-melting stations with subsequent wastewater treatment".

The operation of snow-melting stations is divided into the following periods:

- operating period;
- interseasonal maintenance period.

During the inter-seasonal maintenance period:

- the stations are made ready for the operating period (the last 15 days of the interseasonal maintenance period);
- the stations are prepared for interseasonal maintenance (the first 15 days of the interseasonal maintenance period).

The snow-melting stations work round-the-clock throughout the operating period. Each station is served by 16 operators (4 shifts, 4 operators each) who measure and keep records of the incoming snow masses, make visual inspections of the snow composition, arrange access to separator-crushers for trucks, and control the operation of separator-crushers (collection of big-sized industrial and domestic garbage, etc.). Moreover, each snow-melting station has a front-end loader to handle the dumped snow and big-sized garbage.

From 31.10.2012 to 31.12.2012 six snow-melting stations have col-lected and processed 396,294.3 м^3 of snow, more specifically:

1. 45, Rizhsky pr. – 64,993.5 m^3;
2. 2, Oktyabrskaya emb. – 103,211.0 m^3;
3. 20, Sevastyanova str., Kolpino – 65,200.0 m^3;
4. 77, Petergofskoye shosse – 86,163.3 m^3;
5. 83, Stachek pr. – 40,136.0 m^3;
6. 69, Krasnoputilovskaya str. – 36,600.5 m^3.

The snow-melting stations proved to be serviceable, energy-efficient and environment-friendly; they can work round-the clock receiving snow from the city roads and streets during snowfalls, and from temporary snow dumps in dry weather.

IMPLEMENTATION OF NEW WATER AND WASTEWATER TECHNOLOGIES

SUE “VODOKANAL OF ST. PETERSBURG” IMPLEMENTS UP-TO-DATE TECHNOLOGIES ON A LARGE SCALE TO ENSURE PROVISION OF GOOD-QUALITY WATER AND WASTEWATER SERVICES TO ITS CUSTOMERS AND TO MINIMIZE THE ENVIRONMENTAL IMPACT.

WATER SUPPLY

1. Selection of slit-type water intake pipe heads for water treatment plants of SUE “Vodokanal of St.Petersburg”

In 2006-2007, potential implementation of slit-type water intake pipe heads was considered by scientific-technical councils (STC). This activity was recommenced in 2011.

SUE “Vodokanal of St.Petersburg” together with designers and builders performed search of possible pipe heads alternatives. Different designs were scrutinized and the slit-type water intake pipe heads were considered to be the most technically and economically feasible option. Slit-type pipe heads are widely used in the world.

Advantages of slit-type heads are the following:

- minimal hydraulic resistance,
- significant reduction of filter surface clogging (the triangular profile contacts with particles in 2 points only),
- wound-wire screen creates ideal conditions for backwashing,
- uniform distribution of the filtered medium flow in the contact area,
- no stagnation zones in the distribution units.

By using the slit-type heads it is possible to:

- avoid the clogging of slits and facilitate the regeneration process, because mechanical particles contact with the head in only two points,
- extend the equipment lifecycle,
- extend the filtration time between backwashing cycles,
- reduce the (time, liquid) costs of filter elements regeneration.

In 2011, the STC meeting recommended to implement slit-type heads at SUE “Vodokanal of St.Petersburg” water treatment plants as one of the options, and select places of installation taking into account the conditions of the navigable, slush ice carrying Neva River.

In 2012, slit-type water intake pipe heads were used for the Main WTP’s 1st lift pumping station reconstruction project. By the end of 2012 slit-type heads have been mounted in the Neva River, the water source of the city.

Slit heads’ screens that were used at the Main Water Treatment Plant are made of high-precision triangular profile and traversal supporting structures with different cross-sections, which are welded in each junction. As a result, the triangular profile forms a smooth stiff screen with strictly sized longitudinal slits with allowance up to ± 15 μm.

2. Modernization of chemical water treatment process at water treatment plants to reduce corrosive activity of water.

In 2009-2010, a corrosion-preventing water treatment process (dosing of calcium chloride and soda ash into the treated water) was implemented at Petrodvorets and Sestroretsk water treatment plants.

In 2012, corrosion of steel pipelines was investigated, and recommendations on how to improve the corrosion-preventing water treatment process at St. Petersburg waterworks were issued. The chemical water treatment process at Petrodvorets and Sestroretsk WTPs was modernized on the basis of research and recommendations aiming at water corrosive activity reduction.

By implementing stage-by-stage water treatment with calcium chloride and soda ash at the water treatment plants, reduction of chemicals consumption could be achieved due to controlled dosing of anticorrosion chemical.

The following results were obtained in the course of system modernization in 2012:

- continuous production of water of required quality, in terms of iron concentrations;
- chemicals saving due to the control of anticorrosion chemical dosing.

3. Installation of new-type fire hydrants

One of the main challenges of underground fire hydrants operation is their use in winter periods due to specific hydrological conditions in St. Petersburg. Seasonal fluctuations of groundwater level, the flooding of fire hydrant manholes in thaw periods and subsequent freezing made it difficult to ensure a 100% operational availability of fire hydrants resulting in significant operating costs.

New Russian fire hydrants are highly reliable as they have no rotating elements or threaded joints in the valves. Such design prevents groundwater infiltration into the hydrant body and eliminates the risk of freezing.

The fire hydrant design has following features:

- device for removal of residual water from the fire hydrant shaft;
- water flow can be controlled with the valve after the hydrant stand pipe is installed;
- the hydrant body is made of corrosion-resistant steel;
- direct installation;
- no risk of groundwater or surface water infiltration into the hydrant;
- no rotating parts;
- height can only be changed by adjusting the body length;
- light weight.

It is planned to replace all fire hydrants in St. Petersburg by 2018.

4. Experimental research and feasibility study of the surface water treatment technology.

In 2012, the evaluation of new surface water treatment process solutions was completed. The solutions were tested on a mobile pilot plant constructed at Southern water treatment plant.

The technology developed is a combination of new natural surface water treatment steps performed by means of new tools and new structural solutions, and using new materials.

The full-scale implementation of the plant (as a container-type package plant) will begin in 2013.

5. Full-scale tests and selection of new chemicals.

In 2012, the development of technology for anionic bio-degraded flocculants production on the basis of natural polymers to be used by Vodokanal WTPs was completed.

The results can be considered as positive. The technical and economic parameters of the new product equal those of the flocculant that is used now.

Further research in this area is planned aiming at improvement of the technical parameters, and full-scale tests will be made in different seasons.

Implementation of anionic bio-degradable flocculants will mitigate the negative impact on the environment while the flocculant efficiency will be the same and the water treatment quality will be good.

6. Follow-up of innovative ideas implementation for creating an effective water supply management system.

The main activities aimed at implementation of the integrated water supply management system in St. Petersburg are as follows:

1. Further improvement of hydraulic models for water supply zones allowing determination of optimization strategy for water network (elimination of excessive pressure, improvement of velocity, building an advanced system of hydraulic mode control).

   Mathematical (or hydraulic) models allow to make multivariate hydraulic calculations, particularly to identify the sections with minimal velocity and overloaded sections and select the best activities to eliminate these defects; to calculate various scenarios of water consumption, strategies to repair, modernize and construct water pipelines. An important point is the hierarchical approach to the network sections: the most important sections, water conduits, street distribution networks etc. are singled out.

2. Modernization of pumping stations to reduce energy consumption by 30-40 % by improving the efficiency and implementing automated pressure control using “check points” in the networks.

   As a result of the pumping equipment modernization, variable-speed drives will be used for all pumping units to enable soft starts and stops of motors reducing the load on the power grid. Operating regimes of pumps are selected automatically based on the readings of flow meters, pressure recorders in “check points” and other criteria (for example, water level in clean water reservoirs). As a result, the optimal values of water pressure and water flow are maintained at the outlets. Reduction of excessive pressure in the water pipeline reduces breakdown rates and distribution losses and increases its lifetime. Due to the soft start and stop of pumping units the network loads in transient modes decrease manifold and, hence, the breakdown rate is lower because the water hammer is prevented. Automatic self-start of pumps after power failure and automatic startup of standby pumps minimize interruptions of water supply and reduce the number of operators. Maximum-efficiency operation of pumps results in lower energy costs and extended life of pumps.

3. Installation of up-to-date valves that improve the water supply reliability, ensure failure-free operation of networks, prevent hydraulic hammers and avoid air locks.

   Advanced control valves which operate off-line according to pre-set parameters can control pressure in separate sub-zones and minimize excessive pressure, thus reducing water losses.

   Air valves help avoid air accumulation in water pipelines, thereby increasing the network reliability and performance and ensuring high accuracy of flow measurements.

4. Installation of pulse-output metering systems to calculate water balances and monitor water consumption and leaks online.

   With the automatic meter reading there is no need for inspectors’ visits, and the readings can be taken and invoices issued exactly on required dates, therefore, the collection of payments is improved and the “human factor” minimized. Automatic comparison of meter readings taken at pumping stations, on the networks and on the consumer side allows to diagnose and locate leaks, to identify unauthorized connections and faulty meters. Emergency teams get preliminary information about the locations of leaks and losses before water flows out on the surface and people start to make calls.

5. Installation of “reference points” for online water quality control in the network and on the customer side.

   Online water quality control in the network allows to adjust the water supply modes in a timely manner and guarantee compliance of water quality with regulatory requirements.

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WASTEWATER DISPOSAL

In 2012, SUE “Vodokanal of St. Petersburg” continued consistent actions aimed at implementation of new wastewater treatment technologies to reduce the negative impact on the environment, and improvement of municipal sewerage performance in St. Petersburg.

1. Wastewater treatment plants technological process improvement
The reconstruction of Central WWTP, Kolpino, Pushkin, Kronstadt and Pontonny WWTPs is ongoing. The most advanced technological solutions and equipment, such as biological enhanced nutrients removal system, online effluent quality control, tertiary treatment and disinfection system, are implemented at wastewater treatment plants.

Among these actions, the laboratory and field testing was performed and aluminum sulfate was implemented at all wastewater treatment plants for chemical precipitation of phosphorus - one of the main nutrients contributing to eutrophication of the Baltic Sea. Each wastewater treatment plant requires an individual approach to select effective doses and optimal dosing points. Performance tests and pre-commissioning works were performed at all wastewater treatment plants.

The coagulant (ferrous sulfate (III), or Ferix, was used for chemical phosphorus precipitation before mid-2012) was changed to improve wastewater treatment efficiency and reduce operating costs. The results obtained at all wastewater treatment plants showed that, compared to Ferix, a lower dose of aluminum sulfate gave a better phosphate removal efficiency, and, moreover, it has no negative impact on the activity of activated sludge and sludge dewatering ability. These efforts helped reach compliance with the HELCOM recommendations regarding lower concentrations of nutrients in the treated effluent.

Moreover, tests of ferrous sulfate (II) used for chemical phosphorus precipitation were launched in 2012. Laboratory tests were made at all wastewater treatment plants aiming at further optimization of wastewater treatment processes and reduction of operating costs. The tests will continue in 2013.

2. Testing of chemicals used for sludge treatment
Laboratory and performance tests of Superfloc flocculant were made at SWWTP and Petrodvorets WWTP.

The aim of this work is to compare Superfloc with the FLOPAM flocculant now used for sludge dewatering. Comparative tests of the flocculants were made on the basis of the existing technical capabilities and production conditions, trying to create identical experimental conditions to the maximum extent possible. Samples of raw sludge, cake and reject water were tested to assess the flocculant performance.

The test results show that Superfloc flocculants are effective and can be an alternative to FLOPAM that is used now.

3. Search for technologies and chemicals for wastewater disinfection. In 2012, full-scale tests of PACS chemical used for treated effluent disinfection were made at Petrodvorets WWTP in cooperation with PAC Solution Oy (Finland), PACS being an alternative to UV disinfection.

The purpose of the experiment was to select the chemical dose as required to meet the MAC values for coliphages, total coliforms and thermotolerant coliforms; and to find the dosing regimes that ensure allowable concentrations of residual acetic acid and hydrogen peroxide in the disinfected effluent.

That was the third phase of cooperation with PAC Solution Oy. Previously, PACS pilot tests were made at Sestroretsk and Kronstadt WWTPs.

The bactericidal plant “LAZUR-M-250” designed by ZAO “Svarog” was tested at the South-West WWTP.

The plant is designed for water disinfection with UV light and ultrasound. Its special feature is simultaneous use of powerful bactericidal UV lamps and the ultrasonic transmitters enhancing the plant performance.

Research in this area will proceed in 2013 for the purpose of selecting effective and economically feasible wastewater disinfection methods

4. Studies of chemicals for lipolysis and prevention of incrustation in sewers.
Laboratory tests of “Economic” and “GreaseTrap”, the concentrates used to remove grease in sewer networks, were made in the chemical bacteriological laboratory of the Northern WWTP in collaboration with LLC “Premium Clean”.

The purpose of the laboratory tests was to evaluate the efficiency and reaction time of the grease removing agents at different concentrations.

The comparative lipolysis tests gave satisfactory results.
The tested concentrates can be recommended for application in different companies’ internal sewer systems to remove grease from wastewater before draining to the municipal sewerage.

5. Sewage sludge incineration.
Vodokanal WWTPs produce 6,000 cubic meters of raw sludge daily. To solve the sludge problem, Vodokanal is successfully applying the incineration technology to dewatered sludge. Sludge is burnt at three sludge incineration plants (SIPs) located at three bigger WWTPs: Central, Northern and South-West WWTPs.

A biomonitoring system is largely used by Vodokanal for flue gases quality control. Biosensor information systems are implemented at the South-West Wastewater Treatment Plant to check air toxicity. Such systems use living organisms, in this case - snails, as indicators. A characteristic feature of the system is the possibility to assess the cumulative negative impact (synergetic effect) of every pollutant in the immediate environment (in the air on the border of the site’s buffer zone) on the indicator organism.

6. Recycling of landfilled sludge.
Since 2010, Vodokanal has been using the landfilled sludge recycling technology Geotube to the best advantage. Due to this technology, the recycled sludge has no negative impact on the environment and can be used for different applications.

7. Selection of advanced odour removal technologies. Unpleasant odours appear at different points of wastewater disposal system: sewer networks, sewage pumping stations, wastewater treatment plants, and sludge landfills.

Currently, sorption-plasma-catalytic air treatment systems at wastewater pumping stations and the filter cartridge in a rainwater drainage well are in operation. In 2012, the search for sludge landfill odour removing technologies continued.

In 2012, a pilot odour removal project at Severniy landfill was implemented successfully. Under the project, the water solution of Air Solution concentrate was atomized along the landfill perimeter to remove the odour. The system consists of a pumping station with a control unit and a 300 meter long pipeline with nozzles.

The programmable control unit sets operation regimes according to the indications of wind, rain and other sensors. Odour removal solutions of Air Solution are a special chemical composition - a mixture of essential oils and organic compounds extracted from plants. They eliminate rather than mask odours, and are nontoxic, bio-degradable and environment-friendly. The plan is to implement the technology along the perimeters of Severniy and Volkhonka-2 landfills.

8. Snow processing at permanent snow- melting stations.

The construction and commissioning of permanent snow-melting stations continued in 2012.

The stations use wastewater heat (the average wastewater temperature in winter is 16–18°C) to melt snow. The resulting meltwater is pumped via sewers to wastewater treatment plants for full treatment.

Snow-melting stations reduce the burden on water bodies because meltwater with pollutants and chemicals is no longer discharged untreated, less city area is required for snow dumps, and uncontrollable loading of sewer networks and collectors with melted snow is prevented.

9. Development of the Road Map to mitigate the negative impact on the Baltic Sea, Lake Ladoga and Lake Onega.

Following the initiative of SUE “Vodokanal of St. Petersburg”, the Baltic Sea Action Group (BSAG) in cooperation with SUE “Vodokanal of St. Petersburg” are developing the Road Map aimed at the reduction of negative impact on the Baltic Sea, Lake Ladoga and Lake Onega.

The action is implemented in the framework of preparations to the St. Petersburg Baltic Sea Summit 2013.

The studies of water quality in the Neva River and its tributaries (the Utka, Okkervil, Izhora, Murzinka, Lubya, and Okhta rivers) were made to identify the sources of microbiological and chemical pollution. Each river was divided, from head to mouth, into several monitoring sections. Depending on the river morphometric characteristics, a certain number of verticals and horizontals were selected in each section as sampling points.

The emphasis was upon the Neva River as the main city waterway. During the investigation, 126 samples were taken and tested in the laboratory for microbiological parameters (total coliforms, thermotolerant coliforms) and nutrient (phosphates, ammonium nitrogen) concentrations.

The results obtained proved that the Neva water quality becomes worse, in terms of microbiology, in the downstream direction due to the negative influence of settlements located along the banks of the Neva and its tributaries.

SUE “Vodokanal of St. Petersburg” and the Baltic Sea Action Group are discussing potential key areas of joint efforts aimed to reduce the negative impact on water bodies in St. Petersburg and the Leningrad Region.

DEVELOPMENT OF HYDRAULIC SIMULATION

AN INTEGRAL PART OF THE WHOLE WATER SUPPLY SYSTEM MODERNIZATION IS THE IMPROVEMENT OF WATER DISTRIBUTION SYSTEM. HYDRAULIC SIMULATION IS AN IMPORTANT PART OF THIS WORK.

Works on hydraulic simulation are carried out in order to resolve the following tasks:

1. Forecasting of changes in pressure, directions of water flow in case of the scheduled service disconnection, changes of pressure valves positions, changes of operational mode of pumping stations and etc. (performance of hydraulic calculations of water supply networks operation).

2. Evaluation of the impact produced by the connection of new city territories on hydraulic mode of the network operation, evaluation of the feasibility of changing pipe diameters in course of the network reconstruction, forecasting of changes in the water supply areas borders (performance of design hydraulic calculations of water supply network).

3. Development of the proposals on water supply pumping stations operational modes with due regard to the anticipated hydraulic conditions of the network.

4. Operational simulation of emergency situations at water supply facilities and possible case scenarios during remedial actions.

Hydraulic simulation of the water supply network is performed by specialized software SynerGEE Water.

The applied mathematical model of water supply network is a modern and efficient tool to plan and develop the water network as well as to perform strategic control over the hydraulic modes. Operational and design hydraulic calculations are performed. Calculations can be made by pressure zones, water supply districts or other territory units.

In order to improve the existing water distribution facilities, the hydraulic calculations of the existing network at peak (maximum and minimum) loads are performed by means of the mathematical model. Problems in the water supply system are identified, the search for solutions to improvement the situation and model calculations are carried according to the calculation results. Upon the completion of the scheduled works at the network experts compare the results of performed calculations with actually measured data of the network operation.

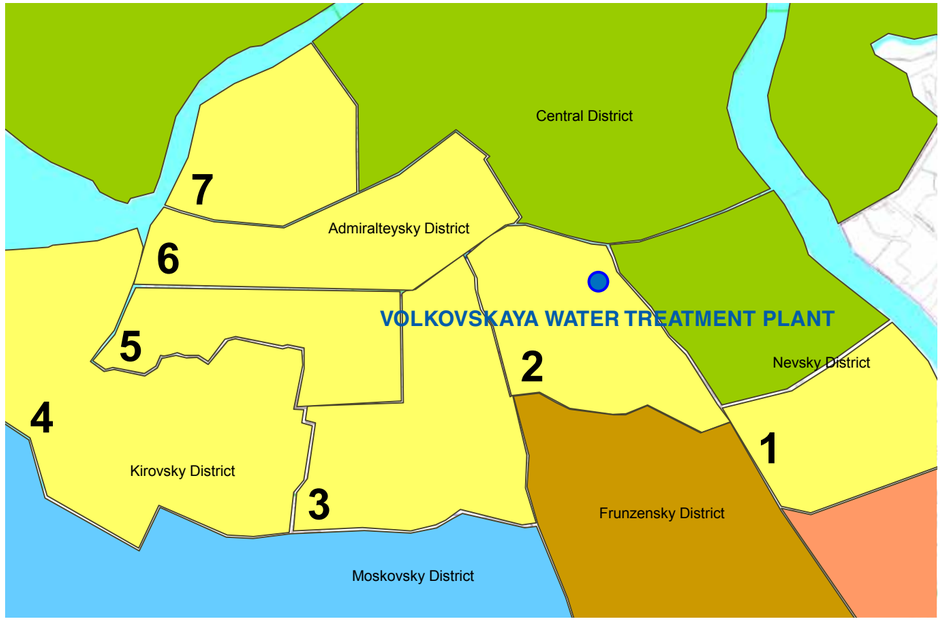
In order to achieve compliance of the hydraulic simulation with the results of field measurements, hydraulic model of the St.Petersburg water supply networks is calibrated and updated on a yearly basis. Hydraulic simulation is arranged in PDCA cycle, ensuring constant improvement of both mathematical model and methods of calculation.

In 2012, 95 operational hydraulic calculations were performed upon requests of the water supply districts.

Hydraulic calculations of the scheduled and emergency service disconnections and switching are performed for the water supply network with diameter of 500 mm or more, since such disconnections may cause substantial changes in pressure and impair water quality on the consumer’s side (due to the changes of the water flow direction).

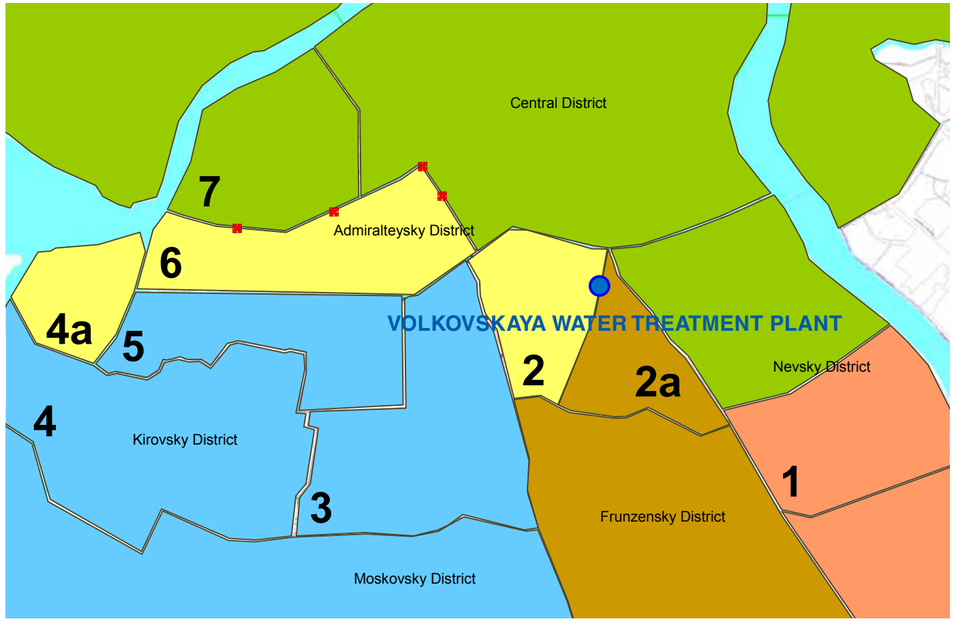
A large-scale project completed in 2012 is multiple-option calculations and feasibility study on the conversion of Volkovskaya Water Treatment Plant into the booster pumping station. New borders of pressure zones for Volkovskaya Water Treatment Plant, Southern Water Treatment Plant, Main Water Treatment Plant, Moskovskaya Pumping Station, Frunzenskaya Pumping Station, as well as new operational modes of water treatment plants and pumping stations have been determined based on the made hydraulic calculations.

EXISTING PRESSURE ZONE OF VOLKOVSKAYA WATER TREATMENT PLANT



Yellow colour – existing pressure zone of Volkovskaya Water Treatment Plant
Figures 1-7 – subzones of Volkovskaya Water Treatment Plant to determine new boundaries of pressure zone

PRESSURE ZONE OF VOLKOVSKAYA WATER TREATMENT PLANT UPON ITS CONVERSION INTO THE 3D LIFT PUMPING STATION, INCLUDING ADDITIONAL WORKS



Yellow colour - pressure zone of Volkovskaya Water Treatment Plant upon its conversion into the 3d lift pumping station
Figures 1-7 – subzones of Volkovskaya, Main and Southern WTPs and pumping stations

DEVELOPMENT OF THE GEOINFORMATION SYSTEM

ASSETS OF SUE “VODOKANAL OF ST. PETERSBURG” COMPRISE 15,000 KM WATER DISTRIBUTION SYSTEM, OVER 800 LAND PLOTS AND NEAR 1,700 BUILDINGS AND STRUCTURES LOCATED AT THE MAIN AND AUXILIARY PRODUCTION FACILITIES IN THE TERRITORY OF ST. PETERSBURG.

The use of advanced information technologies is of priority importance for the companies, which own a large number of property items.

Geoinformation system (officially – “Baltics” information system of St.Petersburg water supply and wastewater disposal) is a combination of software-technological and information-graphical means allowing reception and processing of information regarding space-distributed facilities.

Geoinformation system is designed for providing actual, reliable and comprehensive geoinformation about company facilities and city infrastructure facilities to Vodokanal subdivisions, ensuring consolidation of all types of accounting, registration of rights to property, information communication with state authorities, and solving queries of engineering and operation services of Vodokanal on information support for the production tasks resolving.

The structure of geoinformation system includes technical means, software, and cartographic database of Vodokanal and communication channels.

IS “Baltics” is a unified storage for all types of information of the cartographic database. It ensures implementation of the following tasks:

- Storage and use of information layers of the address system and the present cadastral plan of St.Petersburg.
- Input and update of information regarding Vodokanal’s property.
- Ensuring constant update of technical and spatial information about Vodokanal engineering network (including entry, storage, control and editing of information on specifications of the engineering network elements; information support of works on technical inventory of networks; accounting of scheduled and emergency operations at the engineering network.

The system is also used for including into the balance sheet the engineering networks from external organizations, the engineering networks constructed at the expense of Vodokanal, engineering networks following their capital repair as well as for the recording the engineering network following their writing-off from the balance sheet of the company.

Geoinformation system also ensures:

- development and maintaining the registers of the territorial zones (development and keeping the registers of the territorial divisions of production branches, catchment areas of booster pumping stations and sewerage pumping stations);
- keeping the registers of water wells and licenses for the right of the use of subsurface resources in relation to Vodokanal assets;
- keeping the register of the boosting and sewerage pumping stations of Vodokanal;
- development and keeping a unified database of hydrodynamic cleaning of sewerage networks;
- keeping the register of the quality control points;
- works on the integrated inspection of water supply networks;
- exchange of the information with the hydraulic calculations software to develop an up-to-date model of engineering networks with further back uploading of the calculation results to IS “Baltics”;
- determination of disconnection sections at the water supply network.

An important task of geoinformation system is an informational support of works carried out by the line and emergency crews, using mobile workstations.

This enables:

- prompt access to any permitted information in the working area;
- map positioning and display of location of the engineering networks. For that purpose the double-frequency GLONASS/GPS receivers (with the accuracy in the differential mode of not less than 2 m and in RTK-imaging mode – not less than 0.20 m) are used.

IS “Baltics” is a distribution information system established by using MapXtreme tools (MapInfoCorp.). It has an open-architecture core, which enables to develop the system and establish modules for solving monitoring, design-modeling, simulation and other tasks.

Application of the own technology for the development of the information system allowed to resolve problems of security restrictions when working with cartographic data related to the location and characteristics of engineering networks at users workstations by means of installing information security software.

Today, IS “Baltics” cartographic database contains over 140 cartographic layers, and includes the following materials:

- present cadastral plan of the St. Petersburg Committee for Land Resources and Land Management;
- data of St. Petersburg urban-planning information system from the Committee for Urban Development and Architecture;
- information on investment projects received from GU “Investment Management”;
- the digital 1:10000 map of St. Petersburg dated 2005;
- raster tablets (1:500, 1:2000);
- orthophotomaps of the territory of St. Petersburg produced based on materials of aerial survey conducted in April-May 2011 with resolution of 18 centimeters;
- digital surface map of St. Petersburg, where all types of surface (grass plot, bushes, asphalt, tile and etc.) are presented in the form of areal objects (1:2000);
- digital map of the territory of the Leningrad Region within a radius of 30 km from St. Petersburg, as well as the town of Luga,
- thematic information about engineering networks, land plots, buildings and facilities of the company.

IN 2012, IS “BALTICS” WAS DEVELOPED IN THE FOLLOWING THREE MAIN DIRECTIONS:

1. Integration of Vodokanal information systems with IS “Baltics”.
Information exchange between IS “Baltics” and IS of the Customer Service Centre allowed in 2012 to finish works on formation of a block of tasks targeted at information support of the inventory process of Vodokanal’s customers. For customer services, the interface was upgraded thus enabling to perform the dimensional analysis of territories, form different search queries in the address and customer base and generate different cartograms for informational support of company’s specialists.

2. Updating and build-up of the fundamental cartographic base.
Since it is necessity to revise on an on-going basis available cartographic materials, in 2012, the layers of a special-purpose digital plan of the territory of St.Petersburg were updated. A special-purpose digital plan is needed to calculate volumes of surface runoffs when concluding contracts with customers. The development and updating of the digital plan is an integral part of work on the determination of St.Petersburg surface runoff volumes and formation of water balance in order to identify all sources of sewage discharged into the municipal sewage system and assess sewage volumes.

In 2012, a digital topographic map of the territory of the Leningrad Region in a radius of 30 km from the city borders and of the town of Luga was added to the cartographic database in order to improve operations related to the provision of services to Vodokanal customers outside of St.Petersburg.

3. Development of a package of interrelated information-computing tasks and models to ensure operation of the engineering networks.
Communication module with hydraulic calculation software (SynerGeeWater) was designed and put into operation in 2012. This module is used to form the up-to-date engineering network model, transfer the model to the hydraulic calculation software with further back uploading of the calculation results to the “Baltics” IS.

The clogging module was designed and successfully commissioned in 2012 to ensure a prompt and visual presentation of information regarding clogging in sewerage networks and processing of statistic reports for the specified districts over a certain period.
The net of satellite navigation base stations was also upgraded in 2012 in order to increase efficiency of information support of the line and emergency crews. Equipment was replaced at ten base stations, including the installation of ZephyrGeodetic 2 and double-frequency GPS/GLONASS receivers (SBS–363).

ENERGY-SAVING AND ENERGY EFFICIENCY PROJECTS

SUE “VODOKANAL OF ST. PETERSBURG” IS ONE OF THE BIGGEST ENERGY CONSUMERS IN ST. PETERSBURG. IN 2012, ENERGY CONSUMPTION OF THE COMPANY ACCOUNTED FOR 732 MIO. KW/H.

Moreover, due to the implemented energy-saving projects Vodokanal managed to reduce its energy consumption almost by 33% over the past twenty years.
It became possible because of the reduction of drinking water volumes supplied to the city, replacement of the equipment with energy-efficient solutions, the use of alternative energy sources (heat and electric power produced by sludge incineration) as well as activities implemented to establish St. Petersburg water supply management system.

IN 2012, VODOKANAL COMPLETED COMPREHENSIVE ENERGY INSPECTIONS TO PREPARE ENERGY PASSPORT OF THE COMPANY. THE ENERGY PASSPORT WILL BE VALID FOR 5 YEARS.

IN 2012, VODOKANAL HAS IMPLEMENTED AND CERTIFIED THE ENERGY MANAGEMENT SYSTEM (ENMS) UNDER ISO 50001: 2011 “ENERGY MANAGEMENT SYSTEMS. REQUIREMENTS WITH GUIDANCE FOR USE”.

The company developed EnMS policies and procedures, including the corporate EnMS standard 8.1-2012 “Guidance to Energy Management System. General Provisions”, “Energy Assessment Procedures”, “Planning of Energy Management Activities” and “Monitoring, Measurement and Evaluation of Energy Efficiency”, improved the integrated procedures of the company in line with EnMS requirements.

The company conducted EnMS training for its personnel and internal auditors.

SUE “Vodokanal of St. Petersburg” Energy Policy has been developed by company experts and approved by the Director General. Today, it is posted on the company’s website.

The company worked out objectives and tasks in energy management as well as the programme for energy-saving and increase of energy efficiency.

Full range of EnMS internal audits was performed.

In November 2012, the energy management system of SUE “Vodokanal of St. Petersburg” was certified for conformity with ISO 50001:2011 requirements by the international certification company SAI GLOBAL and the certification association the Russian Register.

PATENTS

IN 2012, SUE “VODOKANAL OF ST. PETERSBURG” RECEIVED 22 INTELLECTUAL PROPERTY ASSETS PATENTS. BESIDES, 7 NEW APPLICATIONS FOR USEFUL MODEL PATENTS WERE SUBMITTED, PATENT STUDIES ON 21 TOPICS WERE CARRIED OUT AND 11 PATENTED TECHNICAL SOLUTIONS WERE IMPLEMENTED.

Cost benefit from the use of intellectual property in 2012 amounted to 131 mln. Rubles.

Main principles of SUE “Vodokanal of St. Petersburg” intellectual property policy are to:

- provide timely legal protection of intellectual property results in compliance with the intellectual property law (including technical solutions as inventions and useful models, architectural-design solutions as industrial models);
- prevent the violation of the company’s exclusive rights on the intellectual property;
- plan and manage design works and/or development of services.

In 2012, the company obtained, inter alia, the following patents for inventions: method of mechanical removal of sludge from radial-flow settlement tank; wastewater disposal system for megalopolis; method of construction and repair of shallow level water/sewage pipelines on the bottom of rivers and water bodies; a water disinfection device, and patents for useful models: the settlement tank for sewage treatment; the mobile laboratory and diagnostic unit; energy-saving system for operational control of energy consumption at sewage pumping stations and others.

Upon the receipt of intellectual activity results it is essential to further introduce and use the patented technical solutions.

Over 2012, 11 technical solutions were implemented, including the following inventions: method of mechanical removal of sludge from radial-flow settlement tank; integrated plant security system, and useful models: the submerged pump installer, settlement tank for sewage treatment, telephone directory of the company and etc.

Since 2010, SUE “Vodokanal of St. Petersburg” has been participating in research and development project on the establishment of standard modules and systems for treatment, disinfection and utilization of wastewater from oil-and-gas extraction platforms and terminals on the basis of modern technologies. Such research and development project has been carried out under the public contract with the Ministry for Industry and Trade of the Russian Federation. In October 2012, the third project stage was completed.

A pilot model of the treatment system for domestic wastewater from oil-and-gas extraction platforms and terminals was constructed as a result of the third stage.

The Commission of the Department for Ship-Building and Marine Technology of the Ministry for Industry and Trade of the Russian Federation approved the results of R&D project. SUE “Vodokanal of St. Petersburg” forwarded a letter to the Department for Ship-Building and Marine Technology of the Ministry for Industry and Trade of the Russian Federation on the transfer of the pilot model and the related technical documents to the research engineer for further testing and application to the benefit of water and sewage utilities.

According to the minutes of meeting of the Scientific and Technical Council dated 11 October 2012, the results of the R&D project were recommended for introduction.

The experience gained in the course of the project will allow introducing small capacity wastewater treatment plants in little-inhabited settlements, including cottage estates.

During the International Water Forum ECWATECH-2012 Vodokanal represented at its exhibition booth the following products:

- a model of the wastewater treatment plant for oil extraction platforms;
- a prototype model of the non-freezing stand pipe;
- a model of tunnel sewers diagnostic system.

DEVELOPMENT OF INFORMATION INFRASTRUCTURE

INFORMATION INFRASTRUCTURE OF SUE “VODOKANAL OF ST.PETERSBURG” IS A FOUNDATION FOR ENSURING PRODUCTION, FINANCIAL AND ECONOMIC OPERATIONS OF THE COMPANY.

Development of information infrastructure is implemented simultaneously in several directions:

- development of communication means and systems,
- development of production automation means and systems,
- development and maintenance of information systems,
- information security of the company,
- technical and process support of IT infrastructure.

Information infrastructure of Vodokanal is divided into the following levels:

- automation of company business processes, first of all financial and economic operations and supporting activities;
- automation of production tasks;
- automation of equipment control.

Main activities to improve information technologies are targeted to the automation of Vodokanal’s business processes. First of all, this is a transition to the uniform standards for software selection, throughout integration of the existing information systems and creation of an integrated system of corporate management.

This system enables to increase significantly the efficiency of information and process management, namely, to:

- provide reliable information to the staff;
- organize an integrated information space;
- ensure end-to-end data exchange between subsystems and associated information systems of the company;
- avoid duplicated entry of the required information.

At present, the following components of the integrated information system are in full operation:

- Customer Service Center. It provides for the whole range of activities with company’s customers, starting from receiving applications for connection to Vodokanal networks up to customer billing;
- Integrated Production Planning System “Water Balance”. At this moment, this is the main tool for monitoring and metering water resources from water sources to a customer. This subsystem allows for optimizing and controlling production capacities, consumption of chemicals, fuel for sludge incineration and electric power;
- Information system to present environmental information about untreated wastewater discharges of SUE “Vodokanal of St. Petersburg” and customers of the relevant catchment areas;
- Integrated system of management accounting and bookkeeping. It completely covers system of bookkeeping, personnel records and inventory accounting, transportation and logistics tasks.

In 2013, in framework of further development of Vodokanal information systems, it is planned to update the existing business processes and prepare the corrective actions plan with its subsequent implementation.

In 2012, within the existing automated billing and payment collection system, Vodokanal centralized the instrumentation data management and started to establish the general purpose interface for selecting and automatic analysis of the accuracy degree of the data from customer’s metering devices equipped with pulse output. As a result, the established interface will enhance the automation of the billing and reduce handwork.

INFORMATION SECURITY

SUE “Vodokanal of St. Petersburg” has developed, implemented, prepared for certification and certified under the International Standard ISO/IEC 27001:2005 the Information Security Management System (ISMS) of the company.

137 employees of the company (managers responsible for ISMS of the branches, managers responsible for ISMS of structural subdivisions of the company’s administration, managers responsible for ISMS of water-supply areas, sewerage areas, wastewater treatment plants and water supply plants) underwent training on ISMS fundamentals in 2012. Also, Vodokanal performed the inventory of its information assets, established the registers of company’s assets, carried out evaluation and analysis of information security risks and developed plans of information security risks handling. As a result of this work, Vodokanal developed the plan of managerial and technical measures to enhance company’s information security, which included internal audits of information security, acquisition of hardware and software for raising technical level of information security and reducing detected and evaluated risks.

AWARENESS-BUILDING

UNDERTAKING ITS MISSION, SUE “VODOKANAL OF ST. PETERSBURG” PUTS SPECIAL EMPHASIS ON DEVELOPING CAREFUL AND RESPONSIBLE ATTITUDE TOWARDS ENVIRONMENT IN GENERAL AND WATER RESOURCES IN PARTICULAR.

The recent years’ stable trend towards reduction of water consumption is, in particular, the result of Vodokanal’s awareness-building efforts.

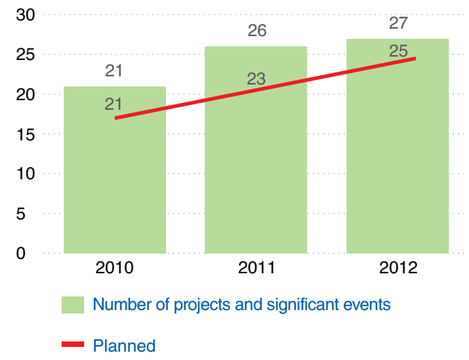
For the purpose of disseminating the culture of water use and developing environmental thinking Vodokanal widely cooperates with mass media and uses the potential of different Internet-resources. In 2010, the Internet-portal www.da-voda.com targeted for the active part of Internet community was launched with the support of Vodokanal. The principal character of the Portal – the Neva Crayfish – has its own pages in social networks.

The key instruments of the company’s awareness-building activities are the Youth Environmental Center (YEC) and “The Universe of Water” museum complex – both being part of the Information and Training Center.

YOUTH ENVIRONMENTAL CENTER

IN SEPTEMBER 2012, THE YOUTH ENVIRONMENTAL CENTER OF VODOKANAL CELEBRATED ITS 10TH ANNIVERSARY. OVER TEN YEARS MORE THAN 300,000 CHILDREN PARTICIPATED IN INTERACTIVE PROGRAMMES, PROJECTS AND LESSONS OF YEC, MORE THAN 50 LARGE PROJECTS, INCLUDING INTERNATIONAL PROJECTS, WERE IMPLEMENTED.

In 2012, 27 projects and programmes for children of all ages were implemented at the Youth Environmental Centre and 35,815 children were involved in these activities.



One of the key targets of YEC is distribution and promotion of importance of the environment and water resources protection, defining a vision about Vodokanal Petersburg activities and its impact on the city development among the younger generation, dissemination of sustainable development ideas and urgent questions of the modern world.

In 2011, the Youth Environmental Center was reconstructed. Two thematic halls were created: “Hall of the First Discoveries” for kids (from 4 to 9 years old) and “The Baltic Sea Hall” for school children and students.

The renovated YEC halls are equipped with modern instruments widely used for interactive programs and activities.
Each hall has advanced multimedia devices (touch panels, interactive boards, etc.) and laboratories. Dozens of various animation videos and video films about water properties, waterworks and wastewater treatment plants operation, the Baltic Sea and its inhabitants were prepared specially for new programs of the Youth Environmental Center. All this made the educational process more effective and fascinating.

Waterdrop, the main YEC character, meets kids in “The Hall of First Discoveries”. It helps them to find out how dew, snowflakes and rain drops are formed. Besides, there is also a ship here waiting for kids to set on an imaginary journey over the Baltic Sea.
In the children’s laboratory of the Youth Environmental Center young guests can conduct their first tests, watch Paramecium caudatum and other microorganisms via microscope.

YEC specialists have developed new environmental and educational interactive programs for the groups of different age, series of new brain educational games, particularly for computer medias; the scenarios of educational films have been written, the series of tutorial experiments have been developed, new training materials have been prepared and the rest of them have been updated.

In 2012, the interactive programs for children of four years and upwards were daily performed in the renovated halls of YEC.
YEC specialists have developed programmes for young children devoted to environmental aspects of water use, conservation of the Baltic Sea, modern water treatment technologies, resource-saving, including “Water on Earth”, “Water in everyday life”, “Mysteries of Nature”, “Big-Small Sea”, “The Sea Nearby”, “Secrets of the Baltics”, “The City by the Sea”, “LAB – laboratory for water analysis”, “Baltic Expert”, “Water – a global resource” and etc.

YEC halls are equipment with up-to-date technical devices, which make the learning process more efficient and exciting for nowadays children.

YEC experts use the following equipment:

- 3D-cinema with stereo and holographic effects
- a game table with the touch panel
- an electronic encyclopedia of the Baltic Sea inhabitants
- video quizzes with the electronic voting system
- laboratory

New proposals from YEC in 2012 were the thematic festive-educational programme “Sea adventures on the birthday” and “Programme for a school class” (a theme-based programme for the class).

ONE OF THE MOST IMPORTANT DIRECTIONS OF ACTIVITIES OF THE YOUTH ENVIRONMENTAL CENTRE IN 2012 WAS PROJECT IMPLEMENTATION.

In 2012, the Baltic Regatta Project was organized for lower grades. 1,943 children participated in the project. The project participants learnt about Vodokanal operations, mission and values of the company, how to help the Baltic Sea inhabitants and become sea defenders during project activities in the Youth Environmental Center and independent work according to methodic approaches of YEC.

The Russian-German Project for the youth of St. Petersburg and Hamburg “Next Generation!” was launch in April 2012. The Project was implemented under the partnership with the Government of Hamburg, St. Petersburg and Hamburg Filmmakers and Cine Amateurs Union. In the course of the project 25 school teams watched motion picture films, which were made by the youth from Germany and devoted to environmental conservation. During the next project stage children participated in master classes in cinematography and environmental training in the Youth Environmental Center in order to make their own short eco-videos.

In November 2012, there was the Eco-Vision Festival, where schoolchildren from St. Petersburg represented their conception of urgent environmental issues. Videos of the Eco-Vision Festival prize winners (schools no. 623, no.631, no. 391) are posted on Vodokanal’s website.

In 2012, the YEC experts rapidly developed environmental awareness programmes for the youth within the framework of the International Advanced Water Technologies Centre together with Lahti.

Main directions:

- the Baltic Sea and its specific features;
- water treatment technologies;
- ways to reduce environmental load on the Baltic Sea.

2,671 people took part in the programme, including 48 teachers from educational institutions, 50 students from St. Petersburg higher education institutions and 2,573 senior pupils.

Senior pupils, who underwent training in YEC, implemented projects related to the Baltic Sea in 36 schools of the city as well as participated in the interschool quiz “Baltic Expert”. The best project teams from school no.16 and lyceum no.126 competed with schoolchildren from Finland at the international quiz in Lahti. The programme will proceed in 2013.

In 2012, the Youth Environmental Center in partnership with the Consulate General of Great Britain in St. Petersburg and St. Petersburg Association of International Cooperation launched the Russian-British Project “Green is great: freshening up ideas for water use”.

30 schools with profound learning of the English language and English-speaking students from St. Petersburg higher education institutions underwent training at the seminars and started to develop solutions for pressing problems of sustainable water use.
The final project event was the youth festival “Freshening up ideas for water use” in March 2013, where young people presented their ideas to the experts in water resource conservation.

One more project - “Dialogues about water in school and family” – has been implemented within 2 years in partnership with schools of the Leningrad Oblast. Primary and junior schoolchildren of Vsevolozhsk District of the Leningrad Oblast participate in the project.

The project is aimed at improving the understanding by schoolchildren of environmental problems and solutions in water use and preservation of water resources as well as to develop skills of taking simple practical actions to save water at home and in school. The project objective is to develop and test a model of environmental education for a city district.

THE YOUTH ENVIRONMENTAL CENTER PARTICIPATES IN HIGH-PROFILE CITY, REGIONAL AND INTERNATIONAL PROGRAMMES AND EVENTS.

The YEC experience was demonstrated at the V International Neva Environmental Forum in May 2012. YEC experts developed and conducted a demonstration lesson on ecology for primary school in live transmission mode at the plenary session of the Forum. Pupils from the school no. 631, who participated in the demo lesson, answered well the questions from the chairperson of the Federation Council of the Russian Federation Ms. Valentina I. Matvienko.

One of the new areas of work of YEC in 2012 became the Safe Water Use Programme developed by the experts of the Youth Environmental Center. The programme was tested and implemented for 5-11 forms pupils at the city round of the All-Russian Health and Wellness Competition.

In the course of the IV International Forum “Clean Water” in November 2012 the experts of the Youth Environmental Center conducted series of interactive programmes for schoolchildren from Moscow in one of the exhibition halls of the Forum.

One of the remarkable events was the participation of YEC in the International Youth Forum “Water and World Heritage” organized within the 36th session of UNESCO World Heritage Committee in the All-Russian Children Health Center “Orlenok”. The experts of the Youth Environmental Center worked out and conducted for the forum participants the environmental programme “Water and Nature Heritage” as well as acted as experts in implementing projects of young people from 10 regions of Russia and near-abroad.

YEC took part in arrangement and conduction of the International Program of the UN Model for high school children education certified under the Hague UN Model. 132 delegates took part in the conference from 17 countries in the age of 14-18 years. Delegates made decisions on the environmental protection and challenges of the Baltic Sea.

In 2012, the Youth Environmental Center for the first time participated in the international event “Museums at Nights-2012” and offered to the visitors the educational express-quiz devoted to the secrets of the coastal city of St. Petersburg.

Work with youth core groups is an integral part of YEC activities. By getting knowledge and experience in the environmental work, young people not just participate in YEC projects and programmes, but become enthusiastic promoters of the gained knowledge, mission and values of Vodokanal among children of their age.

In 2012, the youth core group of YEC took part in the All-Russian Contest “Your Footprint on the Planet”. 46 works were represented at the contest from regions of Russia and CIS countries. The eco-video “Vuoksa – the international river” headed the list of eco-videos. YEC core group members were awarded with package tours to the All-Russian Children Health Center “Orlenok”.

YEC promotes ideas of efficient environmental education and interacts with teachers. YEC experts developed and conducted 16 theme-based programmes for efficient environmental education, which involved more than 300 teachers.

MUSEUM COMPLEX “THE UNIVERSE OF WATER”

204,500 PEOPLE VISITED THE UNIVERSE OF WATER IN 2012. TOTAL ATTENDANCE OF THE MUSEUM COMPLEX AND THE YOUTH ENVIRONMENTAL CENTER WAS 240,400 PEOPLE.

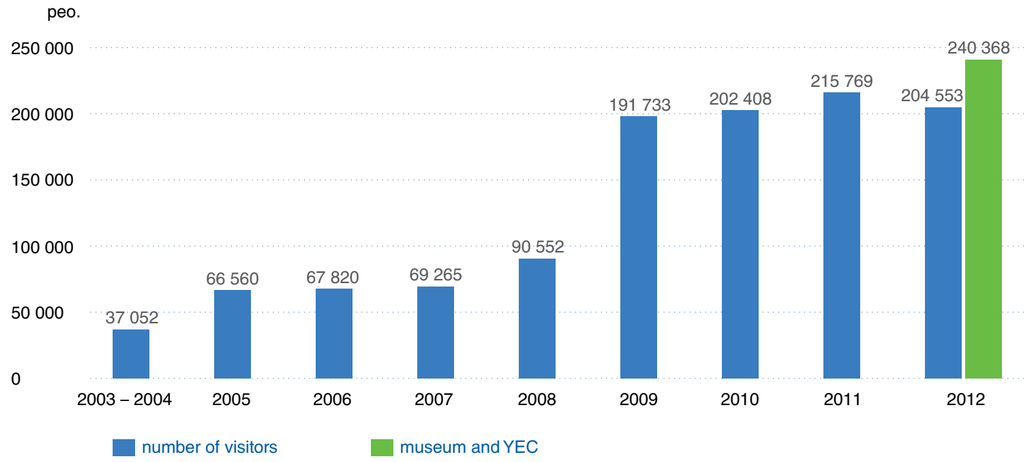
The Universe of Water museum complex in 56 Shpalernaya str. is an open social project of SUE “Vodokanal of St. Petersburg”. The museum complex not only offers the full picture of the man’s views of water and its properties, but also shows the history of St. Petersburg, the city where water is a city-forming essence and the source of scientific, engineering and cultural achievements rather than just something that is used for household or industrial needs.

The museum complex comprises three exhibitions:

- Classical museum exhibition “The Water World of St. Petersburg” (in the old Water Tower). The exhibits – documents, pictures, objects, collections of sanitary equipment and hatches – show the history of water supply and sewerage origination and development.
- Multimedia exhibition “The Underground World of St. Petersburg” (in the left annex to the Water Tower). Visitors can trace the route of water from the intake to treatment plants, then to the flats via distribution networks and back to the treatment plants. Here, they can also look at a gigantic model of the historical center of St. Petersburg. The model was produced by the Institute of Architecture to Vodokanal’s order.
- Multimedia exhibition “The Universe of Water” (in the former underground clean water reservoir). It is a unique storage of modern water knowledge. The exhibition is based on multimedia technologies, stereo effects and textual explanations. Over thirty video-films disclosing various aspects of the water element are demonstrated here.

The exhibition in the Water Tower was opened in 2003 – it was Vodokanal’s present on the occasion of the 300th anniversary of St. Petersburg. The former clean water reservoir was transformed into The Universe of Water museum in 2008 when Vodokanal St. Petersburg celebrated its 150th anniversary.

Visitors of the museum complex (number of persons)



Museum complex “The Universe of Water” offers novel interactive programs for visitors of different age groups. Interactive programs are developed for preschoolers and schoolchildren, general and various thematic excursions are offered to students and adults.

Museum complex “The Universe of Water” is a permanent participant of the international event “Museums at Nights”. Participation in this event helps to draw also attention of those people who are not regular museum visitors.

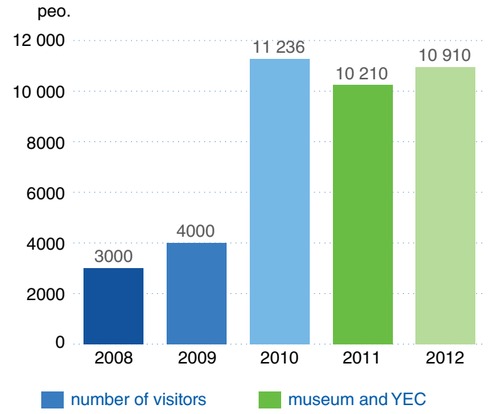
For the international event “Museums at Nights - 2012” experts of the museum complex and the Youth Environmental Center developed a special museum rout map which allows visiting all three exhibitions of the museum complex and the Youth Environmental Center.

10,910 people visited exhibitions of the museum complex and the Youth Environmental Center during the event of “Museums at Nights”.

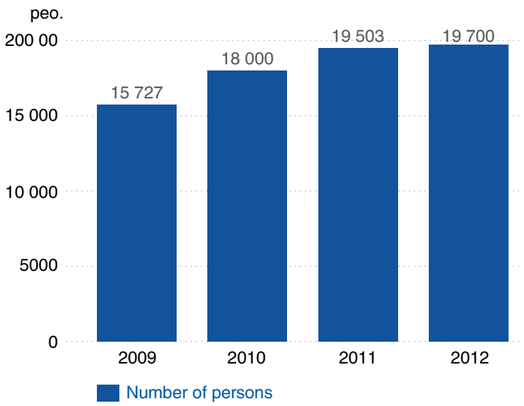
Experts of the museum complex continued to interact with the participants of the “Museums at Nights” event also upon its completion. They organized special interactive programme “Secrets of the Old Tower” and presented pleasant souvenirs to the winners of the quiz contest.

On 2-18 November 2012, during school holidays, the museum complex participated as is customary in the City Festival of Museum Programmes for Children “Children’s Museum Days in St. Petersburg”.

Visitors of the museum complex during the international event “Museums at Nights-2012” (number of persons)



Visitors of the Festival “Children’s Museum Days in St. Petersburg” (number of persons)



In the frame of this festival our experts developed and presented the Museum Programme “Where do crayfish winter?”

In the course of implementing game activities programme participants learnt about drinking water treatment processes, bio-indication methods, when crayfish, snails and gold fish help to assess air and water quality, about various types of domestic pollution and ways to reduce the load on the Neva and the Baltic Sea.

19,700 people participated in the special festival programme. It is a maximum turnout over the whole period of museum participation in the festival.

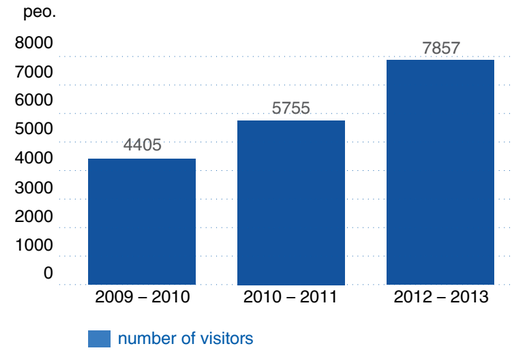
Our experts developed rout maps for the visitors of the historical exhibition “The Water World of St. Petersburg”, which helped festival participants to learn about new technologies and achievements of Vodokanal.

In 2012, the following temporary theme-based exhibitions were organized in the premises of the museum complex:

- “Looking for Mummy” Exhibition. The exhibition was organized in the frame of the “Children Wait” Project to help orphaned children to find new families. This exhibition was implemented together with the regional non-governmental organization “St. Petersburg Parents”, which supports children deprived of parental care. As a result of the exhibition some orphaned children found new families.
- “Valaam Island in Art” Exhibition. The exhibition was organized together with “Zolotoy Plyos” Gallery and the cultural-educational center “Light of Valaam”.

- X Anniversary Corporate Exhibition of creative works by Vodokanal employees “Water – a Source of Inspiration”. Various works of figurative arts were presented at the exhibition, including painting (oil and water color), photos, decorative and applied arts (wood engraving, embroidery, knitting, floristics, bead weeding, quilling, scrapbooking, decoupage, string art), as well as literally works. 60 participants took part in the exhibition and presented over 250 works.

Visitors of the New Year Programme (number of persons)



- Creative Women’s Works Exhibition. Works of Swedish women-inventors were presented together with the Consulate General of Sweden and St. Petersburg Social-Economic Institute.

In the end of 2012, 64 times the New Year environmental-educational programme was held in the museum complex for children of Vodokanal employees and schoolchildren of the city.
In the course of the programme children learnt about water treatment technologies applied by Vodokanal in an easily accessible and exciting form.

A record number of participants – 7,857 people – attended the New Year programme.

In 2012, the museum complex “The Universe of Water” hosted the following events:

- an evening with the honored artist of Russia Mr. Nikolay Pozdeev,
- an evening with the honored people’s artist of Russia Ms. Svetlana Kryuchkova,
- an evening with the Russian filmmaker, film scripter, people’s artist of RSFSR Ms. Valeriya Uskova.

For the first time in Vodokanal there was a festival for Vodokanal employees and members of theirs families devoted to the Day of Family, Love and Fidelity.

WEBSITE DA-VODA

THE INTERNET PORTAL WWW.DA-VODA.COM – A SOCIAL PROJECT OF ST. PETERSBURG VODOKANAL. IT IS A WEB-SITE ABOUT WATER AND WHY WE SHOULD HAVE THOUGHTFUL ATTITUDE TOWARDS IT. THE PROJECT THAT HAS BEEN IMPLEMENTED SINCE 2010 ENABLES TO ATTRACT THE ATTENTION OF ACTIVE INTERNET USERS.

The main character of the Portal is the Neva Crayfish.
It is a recognizable and directly linked with Vodokanal operations character. The point is that the Neva Crayfish (the Neva is a major source of water for St. Petersburg) really work at all municipal water intakes of Vodokanal. They monitor quality of water taken from the Neva. These crayfish are very popular among journalists and visitors of companies’ premises; they are a special brand of Vodokanal.

With help of the Neva Crayfish the portal Da-Voda.com tells and shows the following:

- why celebrities do not waste water carelessly;
- what technical means help to save water without any loss in quality of life;
- how to solve water-related problems within a household;
- to what thoughtless attitude towards water might lead.

The Neva Crayfish as the main character of the portal has its accounts in the social media, including Facebook, VK.com and Twitter. The Neva Crayfish communicates in social media in the Russian and English languages.

By the end of 2012, the Neva Crayfish had over 7,000 friends.
The structure of the portal Da-Voda includes several sections. One of these special sections “Gadgets” contains information about different devices that can reduce water consumption (without impairing your comfort) and evaluates their pros and cons. The Portal visitors will learn how much water can be saved by using infrared sensor mixing faucets; why spray nozzles should be used; what shower meters are, etc.

In 2012, we posted in the section “Thirst for networking” interviews with pop-stars and well-known people such as film makers Peter Greenaway and James Cameron, American singer Regina Spektor, a person of keen intellect Anatoly Wasserman. Russian Ded Moroz (the Father Frost) and his Finnish colleague Joulupukki told about solicitous attitude to water.

One of the most popular sections of the portal is Video-lesson, where the Neva Crayfish acts as a teacher. The aggregated number of viewing figures of the short animated cartoons about careful attitude to water was about four thousand. Visitors of the website and the Crayfish social media accounts were mainly interested in two global questions: how to check water quality and why we need to save water.

In the section “Da-Voda TV” a short-video “Monster of the Dolgoe Lake” was increasing in demand. It was viewed over 37,000 times. This short thriller is devoted to the main problem of city water bodies - neglectful attitude of the citizens.

Film shooting inspired the team of Da-Voda.com to organize solid waste collection in the frame of the international project “Let’s Do It, World”, which took place in September 2012. Editorial staff of the website and volunteers, who followed the project news in the media, collected more than fifty garbage bags in the public garden in front of the Dolgoe Lake. One part of the garbage was subject to recycling, the rest was disposed to the landfill. The administration of the Primorsky District of St. Petersburg supported the event and provided all participants with tools, garbage bags and gloves.

In 2012, Vodokanal St. Petersburg has won the best practice competition in creative use of social media organized by the European Foundation for Quality Management (EFQM). The competition is a part of the EFQM quality management programme comprising recognition of the leading organizations and the sharing of best practices.

When announcing Vodokanal’s victory, the jury of the Good Practice Competition mentioned that ‘they were impressed by the excellent example of using social media by a company for which on-line communications are not a must”. According to the jury, “Vodokanal responds to the needs of society and has achieved good results’. The results of competition were evaluated taking into account both the professional jury’s opinion and the number of votes given to the video during the Internet voting.

It is not one and only award of the Da-Voda Internet-portal. In 2010, the Da-Voda Internet-portal won the Runet award in the nomination “Health and Recreation”. Moreover, in December 2011, the website became the winner of the international competition in the field of public relations PROBA-IPRA Golden World Awards -2011 in “The Best Social PR-project” nomination.

LABOR SAFETY AND ENVIRONMENT PROTECTION

ENVIRONMENT PROTECTION

PROTECTION OF THE ENVIRONMENT AND THE BALTIC SEA, RATIONAL USE OF NATURAL RESOURCES AND RESPONSIBILITY FOR THE RESULTS OF THE COMPANY'S ACTIVITIES BEFORE FUTURE GENERATIONS HAVE BEEN STATED AMONG THE KEY PRIORITIES OF SUE "VODOKANAL OF ST. PETERSBURG" AND COMPRISE ONE OF THE STRATEGIC TARGETS OF THE COMPANY.

Vodokanal's environmental concept is based on understanding of its role to ensure a positive environmental situation in the whole Baltic Sea Region. A key international line of leader's activity provides for participation in public and intergovernmental structures of the countries of the Baltic Region, particularly, in terms of the International Convention of the Helsinki Commission – Baltic Marine Environment Protection Commission (HELCOM).

Taking into account the company's responsibility for the sustainable development of the city and the Baltic Sea Region and considering the approaches applied in the environmental management and the experience of similar European companies, the company implemented and certified the environmental management system in accordance with ISO14001.

During 2012, Vodokanal continued a successive implementation of the environmental management system as an essential part of the company management by way of studying current and future needs of all stakeholders, developing water consumption culture and contributing to preservation of the Baltic Sea basin.

In 2012, the following strategic targets in terms of the environment protection were updated:

- Improvement of the ecological state of water bodies and the environment (decrease of the environmental load on the water bodies of St. Petersburg, the Gulf of Finland and the Baltic Sea; reduction of landfill areas used for wastewater sludge storage, closure of untreated wastewater and flush water discharges).
- Increase of energy efficiency of water supply and wastewater disposal facilities, implementation of resources and energy saving policy (plants renovation, implementation of the energy consumption regimes management, implementation and certification of the power management system in compliance with ISO 50001).
- Development of the water consumption culture and environmental consciousness.

Our target in terms of the environment protection is to apply the best practices and technologies, create conditions for sustainable development not only of our city but the whole Baltic Sea Region.

In 2012, Vodokanal carried out the following activities in these directions:

1. The next stage of a large-scale program of untreated wastewater discharges closure was completed. As a result 97% of wastewater will be treated in St. Petersburg.
2. HELCOM requirements to phosphorus content in the discharged effluent were fulfilled. Phosphorus content in St. Petersburg treated effluent is under 0.5 mg/l, even with regard to the wastewater discharged directly into water bodies. Such a figure could be achieved by reaching a level of 0.3-0.4 mg/l phosphorus in effluent at the main wastewater treatment plants.
3. Along with implementation of the enhanced phosphorus removal from wastewater, Vodokanal dealt with the problem of eliminating from wastewater another nutrient - nitrogen.
4. Another achievement was the implementation of wastewater sludge utilization technology. St. Petersburg became the first megalopolis in the world to solve the problem of wastewater sludge utilization. Now, three sludge incineration plants are in operation in the city. One of them, located at the South-West Wastewater Treatment Plant, is equipped with the flue gas biomonitoring system, which uses snails.
5. To alleviate the negative environmental impact of sludge landfills, since 2010, we have been implementing the first phase of sludge landfills reclamation at Severny Landfill near the village of Novoselki. The methods of chemical treatment and stationary dewatering of wastewater sludge in geo-tubes has been used for decreasing the hazard class and sludge volume, and removal of odor. Reduction of pollutants emission is achieved by decreasing the area of sludge landfills.
6. The company launched the programme for construction of stationary snow-melting stations in St. Petersburg.
7. The energy management system is based on a package of activities aimed at automation of energy metering, identification and elimination of irrational use of energy, improvement of energy efficiency of the company. Key energy-saving projects implemented by Vodokanal include the recovery of energy produced in the course of wastewater sludge incineration and establishment of the water supply management system.
8. A great success was achieved in lessening water consumption through educational and awareness-building activities undertaken by Vodokanal. The company has the Universe of Water Museum and the Youth Environmental Center (more detailed information see in "Awareness Building" Section of this report).

"Vodokanal of St. Petersburg has done a lot to improve its image. The history of the city's success proves that political will and motivation are very important when environmental law requirements are not enough, and more strict measures should be taken. In terms of harmful discharge reduction, St. Petersburg reached higher results than stipulated by the Russian and EC norms", - states Anne Christine Brusendorff, the HELCOM Executive Secretary.

The company successfully underwent the scheduled inspection by Rospotrebnadzor in October 2012.

Parameters of pollutant discharges (from wastewater treatment plants and untreated wastewater outlets) to St. Petersburg water bodies, emissions and waste production

Parameter	Mea. unit	2006	2007	2008	2009	2010	2011	2012
Wastewater flow discharged through public sewerage systems into water bodies	Mio. m^3/year	1026,1	1023,6	1034,6	970,4	952,1	931,6	931,6
Mass of suspended solids discharged into water bodies	t/year	20 535,0	19 418	21 845,4	15 826,9	14 120,8	13 706,9	12 382,2
Mass of BOD_{total} discharged into water bodies	t/year	26 860,2	26 074,3	28 627,3	18 718,2	17 677,9	15 635,6	13 311,7
Mass of total nitrogen discharged into water bodies	t/year	11 282,1	11 037,3	11 048,2	10 729,6	10 003	10 048,6	9627,7
Mass of total phosphorus discharged into water bodies	t/year	1576,7	1269,7	1177,8	759,9	677,7	492,4	491,8
Total pollutants emission into the atmosphere	t/year	4468,0	4555,7	4538,2	4653,9	4790,0	3952,0	2745,8

LABOUR SAFETY

VODOKANAL'S OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM DEVELOPED IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL STANDARD OHSAS 18001-2007 AND APPLICABLE RUSSIAN LAW GUARANTEES THAT IDENTIFIED RISKS ARE UNDER THE CONTROL OF THE COMPANY.

The main purpose of the company's updated occupational health and safety policy is no occupational accidents and the creation of necessary conditions at workplaces to achieve high performance results, the complexity of production, the diversity of applied technologies and equipment being taken into account.

Employees of SUE "Vodokanal of St. Petersburg" and all stakeholders (contractors, visitors) are informed about the company's occupational health and safety policy.

The effective operation of OHSAS at SUE "Vodokanal of St. Petersburg" provides also for the employee's health safety management. Programs for disease prevention and health improvement of employees, monitoring of working conditions and health of employees, as well as monitoring of efficiency of the taken measures have become an important element of OHSAS.

The monitoring system includes:

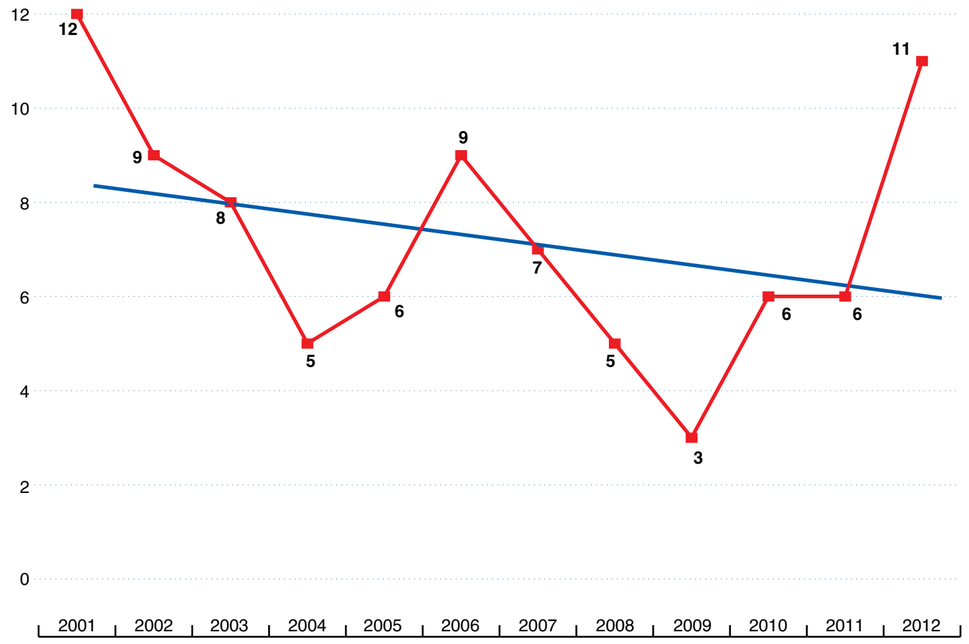
- monitoring of working environment (assessment of sanitary and hygienic working conditions, organization of labour and maintaining favourable social-psychological environment at work);
- monitoring of health status of employees (health survey for the detection of early symptoms of diseases, biological monitoring, polling of employees).

THE INTERNATIONAL AUDIT CARRIED OUT IN OCTOBER-NOVEMBER 2012 CONFIRMED THAT OHSAS AT SUE "VODOKANAL OF ST. PETERSBURG" OPERATED IN COMPLIANCE WITH THE REQUIREMENTS OF OHSAS 18001-2007.

During 2012, SUE "Vodokanal of St. Petersburg" carried out as a part of the Occupational Health & Safety Management System the following activities:

- working conditions at six company production facilities were improved due to the introduction of new, safe practices and advanced technologies that ensure reliable and failure-free operation as well as reduce the rate of injuries and professional diseases;
- monitoring and assessment of safe working conditions at 1,086 workplaces was organized and carried out based on instrumental measurements of hazardous and harmful production factors;
- it was ensured that 100% of employees had means of individual protection;
- training and knowledge assessment of 6,108 company employees in occupational health and safety was carried out.

Accident rate in different years



Accident prevention enabled to ensure the following core indicators in the company:

- the number of insurance events per 1,000 employees (Vodokanal's average is 1.23; industry average is 1.54);
- the number of days of temporary disability per one insurance event (Vodokanal's average is 50.6; industry average is 59.92).

Industrial safety compliance inspection is organized and implemented in the company in accordance with the Article 11 of the Federal Law no.116-FZ dated 1997 "On industrial safety at production facilities' and Rules "On organization and implementation of control over industrial safety at the hazardous production facility" approved by the Resolution of the RF Government no.263 as of March 10, 1999. On the grounds of the Rules the company developed the Regulation "On the control over industrial safety in the course of operation of the hazardous production facilities of SUE "Vodokanal of St. Petersburg" approved by the Director General in December 2012 and agreed upon with the North-Western Department of Rospotrebnadzor.

The company management issued orders to organize control over industrial safety at the hazardous production facilities of the company. Action plans to ensure compliance with industrial safety requirements in the course of operation of the hazardous production facilities are developed annually. Information about the organization of control over industrial safety is provided to the local compliance authorities of the Federal Mining and Industrial Safety Inspectorate of Russia.

As of December 2012, 55 hazardous production facilities were registered and operated by the company. Vodokanal performs operation of chemically hazardous facilities, explosive and fire hazardous plants according to the relevant licenses issued by the North-Western Department of Rospotrebnadzor.

PERSONNEL POLICY

THE BASIS OF ALL ACHIEVEMENTS OF VODOKANAL IS PERSONNEL COMPETENCE THAT IS WHY THE COMPANY PAYS SPECIAL ATTENTION TO PERSONNEL DEVELOPMENT ISSUES, ECONOMIC INCENTIVES AND SOCIAL PROTECTION OF EMPLOYEES. ALL OF THESE CONTRIBUTE TO HARMONIC CONJUNCTION OF INTERESTS OF BOTH THE COMPANY AND ITS EMPLOYEES.

As of 1 January 2013, the staff of Vodokanal numbered 9,279 persons.
The average age of the employees was 43.13 years.
37.8% of the company's employees have a higher and incomplete higher education.
In 2012, employee turnover was 10.49%.

Work with the personnel in Vodokanal is performed in accordance with the personnel management strategy and policy.

The strategic goals of the company in personnel management are:

- increasing of the personnel deployment efficiency,
- improvement of the personnel development system,
- preservation and development of the human resources,
- increasing of the personnel satisfaction.

Vodokanal's personnel management policy is aimed to implement these goals.
Personnel management work is based on the process approach.

PERSONNEL RECRUITMENT, MOTIVATION AND APPRAISAL

The current employment system applied in Vodokanal allows to recruit the most competent specialists from the external market.

Personnel recruitment is performed in compliance with the Company standards "Labor Market Research" and "Recruitment and Employment Procedures" both in the internal and external labor markets.

Modern HR-technologies are used to search for, and select, candidates through Internet resources, specialized publications, interviewing, case studies and comprehensive candidate appraisal.
There is a procedure of adaptation and tutorship used for new staff.
Knowledge transfer is provided through constant personnel training.
In order to increase professional level and development of management competences, there is a Program of Education and Training for middle managers developed and implemented. For the same purpose professional workmanship contests, the best innovative design contests are held, participation in conferences, exhibitions and other activities is organized annually that contribute to personnel improvement.

To appraise the efficiency of used personnel management methods, analysis of personnel satisfaction is carried out regularly.

Motivation system for company's personnel is targeted at high-efficient work of personnel, constant development, increase in personnel engagement, as well as its satisfaction, loyalty and commitment.

The motivation system includes both incentive means (bonuses, allowances, lump-sum remunerations, additional paid leaves, material aid and targeted social assistance) and measures of moral encouragement (recognition of services of employees, stimulation of professional growth, medical support for personnel, recreation organization, carrying out mass cultural events, insurance of employees and members of their families). Personnel motivation system is described in the Collective Agreement of SUE "Vodokanal St. Petersburg".

Vodokanal is a socially liable employer, maintaining social programs for its employees. This work is carried out through the Centre for Implementation of Social and Economic Programs and the Medical Centre. Vodokanal has two health and recreation resorts, where health-improving rest and treatment are available for company's employees.

Personnel evaluation is carried out according to the standard of Vodokanal "Personnel Appraisal System" and aimed at personnel development.

In 2012, one of the tasks of personnel appraisal was to increase the number of employees being appraised. As a result, 544 employees of Vodokanal took part in this procedure, including 84 people as part of work with high potential staff.

All employees who are candidates of personnel reserve pass appraisal by competences. Out of number of employees included in the high potential staff the Talent Group is formed, who are workers with the highest development potential.

Based on appraisal results, Plans of Individual Development of Employees included in the Company personnel reserve are created, career planning is built.

ANALYSIS OF PERSONNEL SATISFACTION

In 2012, the second stage of the analysis of satisfaction, loyalty and commitment of the Vodokanal's personnel was conducted. The analysis was carried out by the international research company EPSI. The basis of this analysis is a regression model of Vodokanal personnel satisfaction.

Within the framework of analysis two models have been considered - for managers and specialists, and for workers. The analysis involved over 25 % of Vodokanal workers: in total 2,649 questionnaires were processes (1,205 of them were filled by workers and 1,444 - by managers and specialists).

The questionnaire filled by employees in 2012 was expanded and supplemented with new questions related to aspects of social policy of Vodokanal and awareness of employees.

As compared to the data on satisfaction, loyalty and commitment, as well as satisfaction factors, according to the analysis results for 2010 no substantial changes of indices have been observed, but a positive trend in general dynamics was noticed.

Among the most important for personnel, the following factors can be noted:

- Satisfaction at work and motivation
- Image of the employer
- Professional and personal growth in the company.

At the same time, the analysis showed that the company should work actively on improvements directed at increase of personnel satisfaction. Satisfaction growth will have positive effect on both loyalty and commitment of employees. Upon the analysis results, action plans to increase satisfaction have been developed.

PERSONNEL TRAINING AND DEVELOPMENT

VODOKANAL OF ST.PETERSBURG PAYS GREAT ATTENTION TO PERSONNEL TRAINING AND DEVELOPMENT.

One of the conditions for efficient work of Vodokanal is systematic, targeted and high-quality training of its personnel.

Development of the personnel training system is aimed at the improvement of key processes of Vodokanal and ensuring the personnel is ready to conduct current and strategic tasks.

Training process in Vodokanal is implemented according to the company standard “Personnel Management in SUE “Vodokanal of St. Petersburg”. The System of Planning, Organization and Control of Personnel Training”.

An important factor of successful training is accurate identification of training needs subject to short- and long-term targets of the company, as well as evaluation of training efficiency.

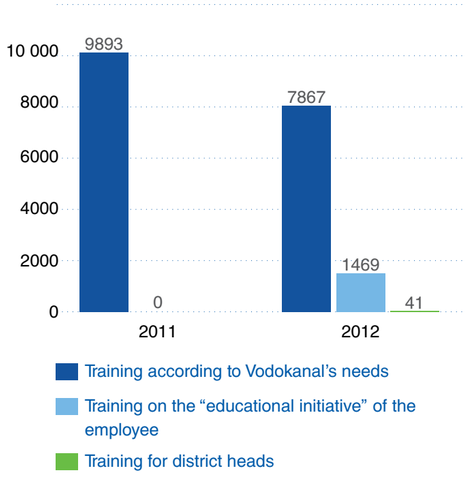
The targets of training and professional development of personnel are:

- acquiring of knowledge and skills by Vodokanal employees required for successful work performance;
- increasing the performance of company’s employees;
- making employees ready to accept and implement changes carried out in Vodokanal;
- encouraging to constant professional growth and self-training.

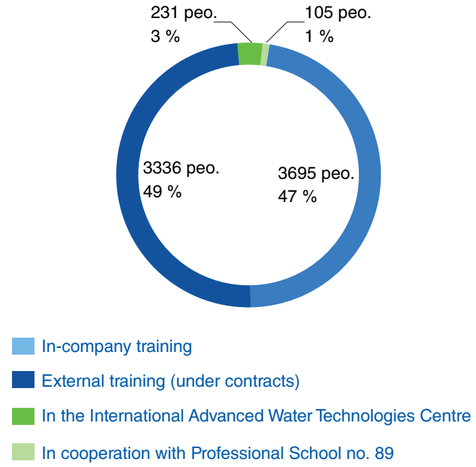
In 2012, 445 company’s employees took training, refresher courses and advanced training, and 105 of them were trained in Vocational School No. 89. 6,205 employees passed training in labour, industrial, road-traffic safety and sanitary and hygienic welfare of the population according to the legislation requirements. 759 trainees took part in computer and communication competence educational programs. 458 people attended workshops and courses of professional development for managers and specialists, and 231 of them took training in “Modern Technologies of Water Supply and Disposal” course as part of workshops of the International Advanced Water Technologies Centre.

In total, 7867 employees of Vodokanal took part in trainings in 2012.

Number of trainees by types of training



Number of trainees by internal and external programmes in 2012:



In 2012, new training areas were introduced:

- commercial computer courses (14 programs)
- self-training programs for Vodokanal employees (3 programs)
- workmanship contests in “Master Class” format (1 contest)

In 2012, training for heads of water supply and wastewater disposal districts and their deputies by the program “Fundamentals of Management and Economics for District Managers” was organized. According to the training results, 74 people passed test successfully, and the average test score was 4.26.

In June, as part of this program, practical training for district heads in top water companies of Sweden, Norway and Denmark was conducted. In autumn, the second practical training was carried out, in course of which the participants got acquainted with operation of water and wastewater plants in Turku, Helsinki and Lappeenranta. In December, the third practical training took place.

These practical trainings helped the participants to consolidate existing knowledge and learn best practices, process schemes and methods of work with customers.

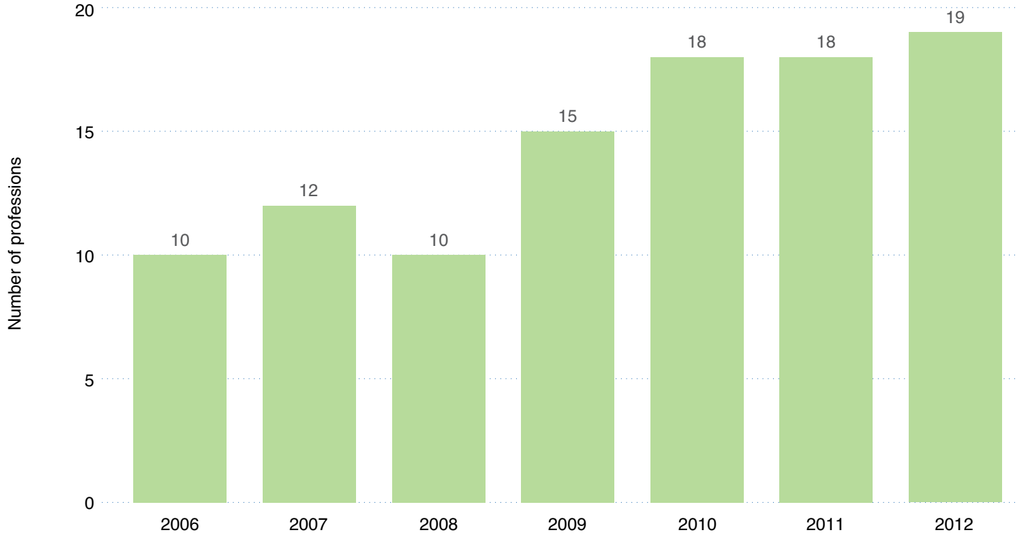
In 2012, 77 Vodokanal employees were studying at 6 higher education institutions in St. Petersburg to get their first or second higher education.

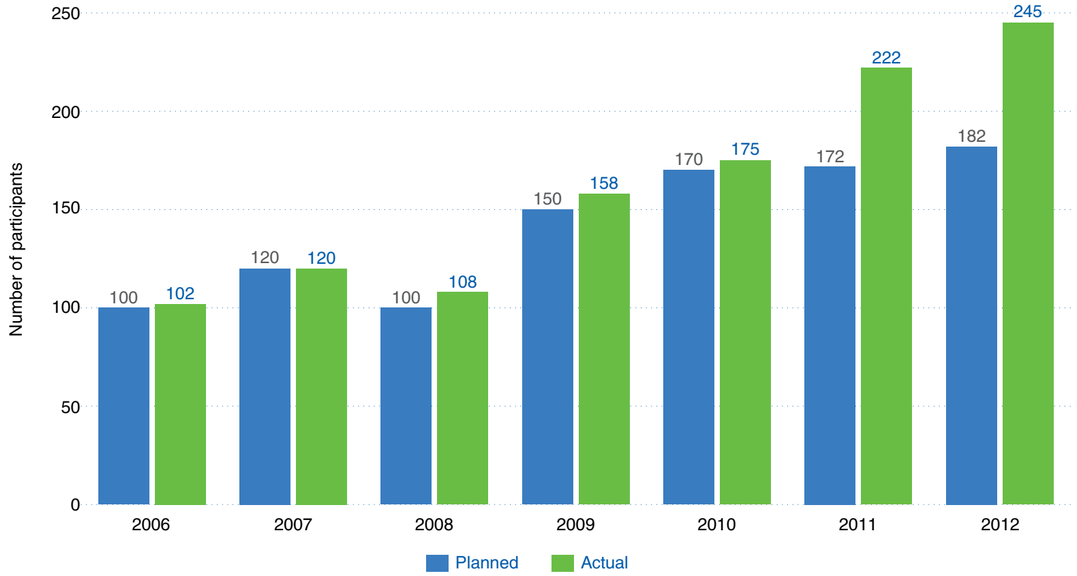
PROFESSIONAL SKILL CONTESTS

A special form of training activities is professional skills contests that make it possible to maintain a high professional personnel level, ensure dissemination of advanced and innovative techniques and methods of work, as well as provide employees with access to knowledge and experience gained in Vodokanal.

In 2012, Vodokanal held 19 final professional skills contests “Best Professional”, where 245 persons participated. That figure has been a record-breaking indicator since 2006.

Participation in professional skills contests “Best Professional” in 2012





High professional level of the company’s workers is evidenced by Vodokanal workers success in interdisciplinary professional skill contests.

Thus, in the contest Best Professional among workers of housing and public utilities of St. Petersburg and the Leningrad Region, a representative of Vodokanal St. Petersburg took the first place among electric welders. In a contest within the Russian Industrialist exhibition, the company’s employees took the first and the third places in the Maintenance Electrician category.

Vodokanal St. Petersburg was awarded a big collection of prizes in the Stroymaster 2012 contest:

- in The Best Team nomination:
  - 1st place – team of emergency repair men (water supply),
  - 2nd place - team of emergency repair men (wastewater disposal);
- in The Gifted Hands Master nomination:
  - 3rd place - autocrane mechanist,
  - 3rd place - excavator operator,
  - 3rd place - car driver,
  - 3rd place –maintenance electrician.


ВОЛТОКАНАЛ
САНКТ-ПЕТЕРБУРГА
ФИЛИАЛ "ВОДОТВЕДЕНИЕ"

SUE "VODOKANAL ST. PETERSBURG" IMPLEMENTS SOCIAL POLICY IN COMPLIANCE WITH THE CURRENT LEGISLATION AND AS PART OF SOCIAL COMMITMENTS SPECIFIED IN THE COLLECTIVE AGREEMENT FOR 2011- 2013.

The key principle of corporate social policy is the principle of social responsibility.

According to it, Vodokanal:

- builds its strategy taking into account the interests of society in general;
- observes the laws;
- observes commonly accepted moral and ethical norms;
- respects human rights;
- tends to ensure in its activity the balance of interests of stakeholders - personnel, consumers, other social groups that are one way or another related to Vodokanal activities;
- considers interests of future generations and tends to maximize sustainable use of natural resources and improve living conditions of the population;
- works consistently to provide health and occupational safety of its personnel.

The basis for implementation of corporate social policy is social programs that have the highest value for employees and aimed at involvement and retention of high-qualified personnel in the company.

First of all, it refers to such social programs as healthcare (including voluntary medical insurance of employees and their children), organization of recreation and rehabilitation of employees and their families, social support of current and former employees of the company.

Top priorities of the corporate social policy of Vodokanal are:

- high management competences and qualification of the personnel;
- efficient use of labour resources;
- improvement of salary and bonus systems, motivation of employees;
- compliance with global standards in occupational health and safety;
- growth of pesonnel's living standards, creation of favourable conditions for work and rest, social support of retired employees;
- creation of conditions to implement constructive initiatives of young employees; creation of conditions for professional growth and self-realization of the youth;
- creation of the end-to-end training system, promotion, development and evaluation of personnel;
- development of the dynamic corporate culture that helps employees to interact efficiently and accelerates integration of new assets and employees;
- provision of optimal age and personnel composition;
- development of relationships of social partnership, mutual responsibility and trust;
- personnel loyalty, stable and positive social environment.

SOCIAL PROTECTION PROGRAM AND TARGETED MATERIAL ASSISTANCE

SOCIAL PAYMENTS AND BENEFITS TO COMPANY EMPLOYEES AND VETERAN OF LABOR ARE SPECIFIED IN THE COLLECTIVE AGREEMENT OF SUE "VODOKANAL OF ST. PETERSBURG".

In 2012, the following payments were made:

- lump-sum payment to retiring employees; to employees who reached jubilee age; as well as for an uninterrupted service in the company;
- monthly targeted material assistance to veterans of the Great Patriotic War (former company employees), payments to the war veterans on the occasion of the Full Lifting of Leningrad Siege and the Victory Day, payments to the citizens of besieged Leningrad, to Nazi camp prisoners (former company employees);
- quarterly targeted material assistance to retired employees (former company employees);
- financial assistance for medical treatment, in case of damage caused by fire, natural disaster, theft etc.;
- payments for childbirth;
- payments after death of a relative;
- payments to employees, who worked for the company prior to a recruitment into the Armed Forces of the Russian Federation and were newly employed.

In 2012, the material assistance was provided to 871 people: 824 employees, 47 former employees and their relatives.

RECOGNITION OF EMPLOYEES' ACHIEVEMENTS AND CORPORATE AWARD

SUE "VODOKANAL OF ST. PETERSBURG" VALUES ITS EMPLOYEES AND RECOGNIZES THEIR CONTRIBUTION TO OBJECTIVE FULFILLMENT AND COMPANY DEVELOPMENT.

Awarding the title "Labour Veteran of Vodokanal St. Petersburg"

The title "Veteran of Work of SUE "Vodokanal of St. Petersburg" is awarded to employees, who have the unbroken record of service of 20 years in the company and have achieved high labour indices. At the same time the winner is awarded a lapel badge and certificate, as well as a cash bonus.

In 2012, the title "Labour Veteran of Vodokanal St. Petersburg" was awarded to 164 Vodokanal employees.

Awarding the title "Honorary Employee of Vodokanal St. Petersburg".

The title "Honorary Employee of Vodokanal St. Petersburg" is awarded to company employees for great services and contribution to development of water supply and wastewater disposal systems of St. Petersburg, adoption and implementation of new technologies, application of advanced methods of labour organization, strengthening of corporate culture and high professionalism. At the same time the winner is awarded with a lapel badge and certificate, as well as a bonus.

In 2012, the title "Honorary Employee of Vodokanal St. Petersburg" was awarded to 13 Vodokanal employees.

Awarding company employees certificates of honour and gratitudes of Vodokanal, prizes from executive and legislative bodies of St. Petersburg and Russia

In 2012, 177 employees were awarded the Vodokanal certificate of honour, 431 people were got the gratitude of Vodokanal.

44 employees were awarded departmental and national prizes:

- 6 people got certificates of honour and gratitudes of the Ministry of Regional Development of the Russian Federation,
- 38 people got awards of executive and legislative bodies of St. Petersburg.

CATERING AND TRANSPORTATION

Ultimate nutrition with partial payment of its value is provided to Vodokanal workers at the premises of the company. For that purpose, in 2012 Vodokanal organized operation of 18 fitted foodservice outlets at its premises, where over 4.5 thousand people a day could be served.

In the night time, emergency teams working 24-hour shifts are provided with free hot meals, which are delivered to their work places in specially equipped vehicles.

For over 10 years the employees have been provided with special transport to deliver them to their work places in the morning and to the nearest underground station at the end of the working day.

RECREATION ORGANIZATION FOR EMPLOYEES AND THEIR FAMILIES

TOP PRIORITY OF SOCIAL POLICY OF SUE "VODOKANAL OF ST. PETERSBURG" IS ORGANIZATION OF A PROPER REST FOR EMPLOYEES AND THEIR FAMILIES IN BUREVESTNIK SANATORIUM.

The Burevestnik sanatorium is one of the most comfortable and advanced recreation and rehabilitation facilities in the Leningrad Region. It is located in the vicinity of the town of Luga and surrounded by century-old pines forest lakes.
The sanatorium has three sites (Burevestnik, Omchino and Zvezdny) and provides a wide range of services: swimming pools, fitness facilities, a gym, and tennis courts, outdoor playgrounds for badminton, volleyball, basketball and Finnish sauna. There is a library, a caf and a cinema and concert hall. For those who prefer equestrian sport there is a riding hall.

The sanatorium's modern medical centre with a diagnostic and treatment department can do all types of necessary analyses and procedures.
The sanatorium can accommodate over 600 holiday-makers at the same time.

The main objective of Burevestnik sanatorium is support and promotion of health of al Vodokanall employees and their families, as well as the company personnel rehabilitation. The Company gives an opportunity for the employees and their families to buy vouchers for health care and recreation in a sanatorium "Burevestnik" at a reduced price.

Vodokanal employees working in harmful and (or) hazardous labor conditions are provided extra leaves (over-leaves under the legislation of the Russian Federation) up to 10 days long. Within such a leave employees can undergo rehabilitation and health improvement in the Burevestnik sanatorium.

185 employees spent their rehabilitation holidays in the sanatorium in 2012.

In total, Vodokanal employees bought 7,250 vouchers to the Burevestnik sanatorium in 2012.

During summer vacations the company employees can send their children at age 6 to 15 to Zvyozdny children's health camp.

Educational and health improvement programs for children are developed based on the entire Zvezdny infrastructure and include:

- sports and health improvement,
- art and aesthetics,
- mass-culture sector,
- historic and patriotic sector,
- Environmental sector,
- social and adaptive sector.

The tasks and objectives of the programs meet the new educational standard “School-2020”.

Special attention in these programs is paid to children’s health. The programs are also aimed at gaining knowledge in various areas, developing communicative skills and explaining environmental values to children.

2500 children aged 6 to 15 took holidays in Zvezdny recreation camp for children in 2012.

HEALTHCARE

Vodokanal of St. Petersburg implements a range of measures aimed at health care and disease prevention, and rendering timely and high-quality medical care.

Vodokanal has the Medical Centre branch, which provides multi-level system of medical care for company’s employees.

The Medical Centre branch includes:

- two sites of the Diagnostic and Treatment Centre with departments of preventive medical examination and professional suitability examination, radiodiagnosis, clinical laboratory, a department of rehabilitation treatment;
- a dental clinic;
- a medical division of Burevestnik sanatorium;
- a medical division of production branches
- Orlovsky sanatorium.

All of this allowed creating a uniform system of medical care, including occupational medicine, up-to-date outpatient care, high-tech diagnostic techniques, health-improving recreation and rehabilitation.

Medical services are rendered to Vodokanal employees by a program of mandatory medical insurance, and by programs of voluntary medical insurance (outpatient and dental care, house call, emergency medical service).

There are 8 Doctors and 14 Candidates of Medical Science, 47 physicians and 69 nurses of higher category working in the Medical Centre branch; 49% of workers have higher professional education.

A new system of medical service quality assurance is available in the Medical Centre, which is based on PDCA method (Plan-Do-Check-Act).

Also, the system of customer information on medical services is arranged in the branch, which includes:

- meeting of the director and officials of the branch with personnel of branches, active trade unionists, and representatives of labour safety subdivisions on improvement of quality of medical services for Vodokanal employees;
- telephone hotline of the service of operating management, organization and accounting of medical and preventive care (telephone 326-52-78);
- a web-site of the Medical Centre branch: http://www.med-vdk.ru, where all information about doctors and service prices is available, a Contact section is created for making online an appointment with the doctor (a patient leaves in a special form his/her data, a contact number, describes a problem to be solved; the data goes to a monitoring service and analyzed; the patient receives a call from an operator proposing to arrange an appointment with the doctor at a convenient time);
- information on “Vodokanal-Info” internal portal of the company, where the section “Social Package” includes information about the procedure of making an appointment with the doctor in the Diagnostic and Treatment Centre, with telephone numbers of receptions and monitoring services, a scheme and telephones for employees to contact aid posts of a medical division of production branches, with contact information of medical workers of the aid posts;
- announcements and advertisements in mass-media;
- advertising booklets.

In order to increase economic efficiency and decrease costs for maintenance, operation and repair of medical equipment, for realization of a lean production project, there is a general system of preventive maintenance called Total Productive Maintenance (TPM) implemented.

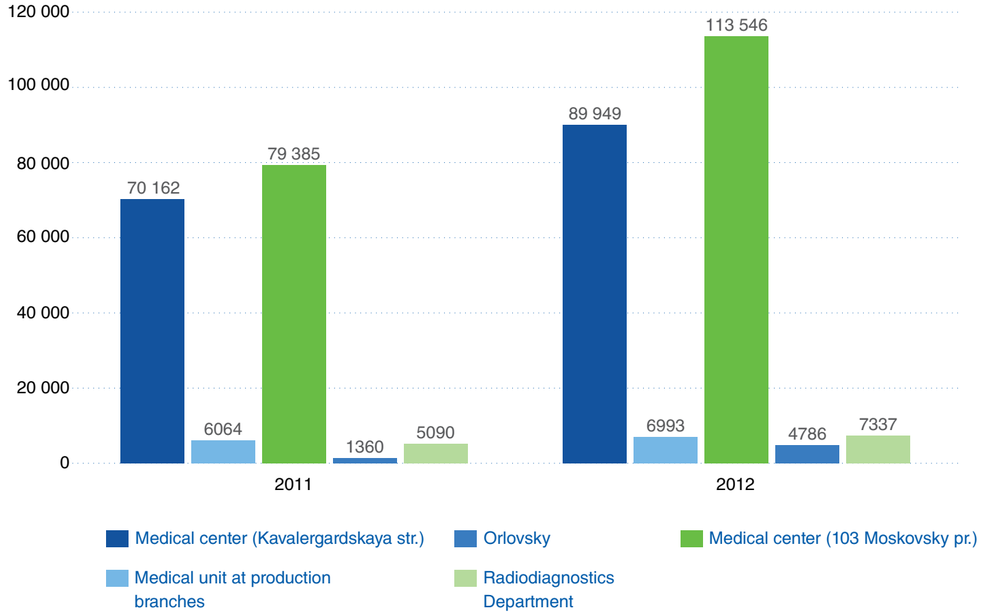
In general, in 2012 on two sites of the Diagnostic and Treatment Centre (with a department of rehabilitation treatment based on the sanatorium “Orlovsky”), over 200 thousand medical services have been rendered to Vodokanal employees, which is 28% higher than the indices of 2011.

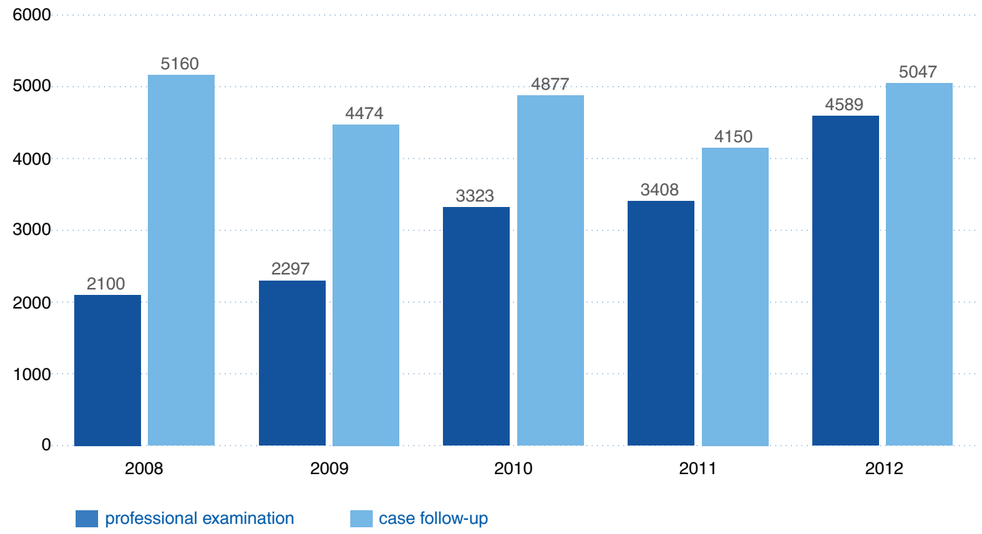
Due to conducted work, indices of number of days of labour loss and cases of disability in Vodokanal for the recent years are at a stable low level.

The results of Vodokanal efforts regarding health care of employees can be evaluated by such an important index as the healthy and apparently healthy persons index (health groups I - II): in Vodokanal of St. Petersburg is around 40%.

A range of actions aimed at health care of company’s employees, besides treatment measures, also includes:

- case follow-up;
- professional examination of workers..





The total number of Vodokanal employees who passed regular medical examinations in 2012 was 4,589 people; 5,047 people underwent case follow-up.

The new requirements for conduction of preliminary (when hiring) and regular medical examinations, due to entry into force on January 1, 2012 of the Decree of the Ministry of Health and Social Development of the Russian Federation as of 12 April 2011 no. 302 “On approval of a list of harmful and/or hazardous production factors and works, at which mandatory preliminary and regular medical examinations (check-ups) are to be conducted, and the Procedure of conduction of mandatory preliminary and regular medical examinations (check-ups) for employees engaged in heavy works and in works with harmful and hazardous labour conditions”, were implemented in a standard of SUE Vodokanal SPB 24.2-2012 The Procedure of preliminary and regular medical examinations of SUE Vodokanal personnel, engaged in heavy works and in works with harmful and/or hazardous labour conditions.

In 2012, in framework of the national project titled “Health” additional clinical examination of 820 employees was conducted in Vodokanal. The program is aimed at early detection and effective treatment of diseases that are major causes of death and disability among working-age population of Russia, including diabetes, tuberculosis, cancer and cardiovascular diseases, diseases of the musculoskeletal system. The employees who have passed additional clinical examination received health certificates, and record cards of additional clinical examination were forwarded to district polyclinics at place of residence of employees.

An important direction of health care work is conduction of mandatory vaccination of employees of decreed groups, and vaccination in order to prevent seasonal infection (flu). In 2012, the number of vaccinations against enteric fever as compared to 2011 increased by 74%, which is related to seasonal revaccination of employees once in 3 years. Also, number of flu vaccinated employees increased by 38%.

To prevent tuberculosis and early detect of respiratory diseases, all Vodokanal employees passed photofluorographic examination. Medical information system “Avicenna” has been further improved. In 2012, specialists of the Medical Centre branch and representatives of ZAO “Kosta” implemented the developed in 2011 Electronic Medical Record on External Electronic Media (EMR), where sections for storage of the results of laboratory examinations and medical (X-ray, CT, MRT) images have been added. For that purpose, a module for communication with Siemens Medical Image Server was designed, and Laboratory Information System using bar-coding elements was created.

In the collective agreement, valid in SUE “Vodokanal of St. Petersburg”, the following opportunities of obtaining a medical care are settled:

- obtaining medical care by the policies of obligatory medical insurance and VHI based on the Medical Centre branches (a Diagnostic and Treatment Centre and a dental clinic are standard for Vodokanal employees);
- obtaining individual medical and cosmetological services beyond the OMI and VHI programs;
- medical care of the former Vodokanal employees - participants in the Great Patriotic War, who have the certificate “The Participant of the Great Patriotic War”, and also enterprise personnel and former personnel, who worked during the Siege of Leningrad at company’s facilities by the program of obligatory medical insurance in the diagnostic and treatment center.

SPORTS SUPPORT

Implementation of the comprehensive enterprise rehabilitation program and arrangement of sports events contribute to development and support of healthy life, team building, strengthening interpersonal relationship and friendly ties.

In the territory of “Burevestnik” sanatorium spartakiada games for water services units, festivals and traditional winter and summer sports tourist meetings are held annually for the Vodokanal employees.

In 2012, the following events took place on the territory of the sanatorium:

- a winter sports Vodokanal meeting with the participation of over 500 employees,
- two sports contests of Russia’s vodokanals “Fellowship” participated by teams from Nizhny Novgorod, Cherepovets, Vologda, Veliky Novgorod, Vladimir (over 350 people in total).
- the Youth Games Festival allowed more than 300 young employees to express their sports achievements.
- a summer sports Vodokanal meeting, participated by over 600 employees.

Sports activity is one of the most important lines of Vodokanal corporate life. Sports grounds and swimming pools are rented for sporting activities and exercises. The trade committee leased more than 10 pools in different districts of the city, where over 700 employees from our company go in. Vodokanal volleyball, football, table tennis, swimming, ski race teams are gathered on a regular basis and a veterans’ football team.

Vodokanal teams took part in sport contests arranged by Physical Training and Sports Society FSO Russia (1st place winner), Interregional Trade Union Committee (1st place), Central St. Petersburg District (2nd place).

A sport contest of SUE “Vodokanal of St. Petersburg” was arranged among the branch teams that included 13 kinds of sports.

In 2012, Vodokanal employees also participated in the following sports activities:

- FSO “Russia” Ping-Pong Club Championship
- Central District Head Mini Football Cup
- Central District Mini Football Friendship Cup
- “Veterans” Mini Football Championship
- Football tournament between teams of Vodokanal St. Petersburg and Hamburg Wasser
- City Football Championship
- Volleyball Championship (amateur league)
- Russia Kayak and Canoe Paddling Championship among veterans.

At present, SUE “Vodokanal of St. Petersburg” is one of the leading teams in development of physical training and sport in St. Petersburg.

TARIFF POLICY

LEGAL FRAMEWORK OF TARIFF REGULATION

SUE “VODOKANAL OF ST. PETERSBURG” IS CARRYING OUT REGULATED ACTIVITIES IN ST. PETERSBURG AND THE SUBURBS.

The legal framework and general principles of pricing and tariff regulation for public utilities are established by the Federal Law no. 210-FZ dated 30 December 2004 “On Principles of Public Utility Tariffs Regulation” and the Decree of the RF Government no. 520 dated 14 July 2008 “On Pricing Principles and Regulation of Tariffs, Surcharges and Limiting Indices to Be Used by Public Utilities”.

Under the current law, the tariffs for municipal water companies are regulated at the federal level by the Federal Tariff Authority. This federal executive body is authorized to exercise legal control over the national regulation of prices (tariffs) for services and to monitor the use thereof; it sets the average price change limits for the subjects of the Russian Federation.

At the level of the subject of the Russian Federation, supervision and control of tariff activity of SUE “Vodokanal of St. Petersburg” is exercised by the St. Petersburg Tariff Committee.

The Tariff Committee issues a special instruction establishing tariffs for Vodokanal water services for each customer group and each subsequent fiscal year.

In addition, the Tariff Committee sets payment for connection to cold water and sewerage networks of newly constructed (reconstructed) real estate units (buildings, structures, facilities and other units).

Meeting the information disclosure standards approved by the Government of the Russian Federation Decree no. 1140 dated 30 December 2009, the approved tariffs are published in the magazine “Newsletter of St. Petersburg Tariff Committee” dated 8 December 2011, published at the official website of the Tariff Committee of St. Petersburg and at the website of SUE “Vodokanal of St. Petersburg”.

PRINCIPLES OF TARIFF POLICY

The Federal Law no. 210-FZ dated 30 December 2004 establishes the following general principles of tariff regulation:

- the balance of interests between the public utility and its customers should be reached to ensure affordability of goods and services provided by the public utility and, at the same time, efficient work of the public utility;
- the tariffs and surcharges should cover financial needs of the public utility as required for the implementation of its production and investment programs;
- motivate reduction of production costs, improve economic efficiency of operations and the use of energy saving technologies by the public utilities;
- create conditions as required for the raising of investments in order to develop and upgrade the infrastructure of public utilities;
- full repayment of the costs incurred by a public utility in the process of implementing its production and investment program;
- accessibility of information on the structure of tariffs and surcharges.

TARIFFS FOR SERVICES OF SUE “VODOKANAL OF ST. PETERSBURG”

Tariffs for 2012 are established by the instruction of the Tariff Committee no. 374-r dated 29 November 2011 “On establishment of tariffs for cold water and wastewater disposal by the State Unitary Enterprise “Vodokanal of St. Petersburg” in 2012”.

Cold water tariffs of SUE “Vodokanal of St. Petersburg” in 2012

Period	Customer groups	Cold water tariffs, RUB/m³		Tariffs for wastewater services, RUB/m³
		Potable water	Utility water	
from 01.01.2012 to 30.06.2012	Municipal service providers	13,37		13,37
from 01.07.2012 to 31.08.2012		14,17		14,17
from 01.09.2012 to 31.12.2012		15,02		15,02
from 01.01.2012 to 30.06.2012	Population (including VAT)	15,78		15,78
from 01.07.2012 to 31.08.2012		16,72		16,72
from 01.09.2012 to 31.12.2012		17,72		17,72
from 01.01.2012 to 30.06.2012	Other customers	18,70	3,38	21,74
from 01.07.2012 to 31.08.2012		18,70	3,38	21,74
from 01.09.2012 to 31.12.2012		18,70	3,38	21,74

Note: the tariffs are shown without the value-added tax except for the “Population” group tariffs

In 2012, the tariffs were set with the calendar breakdown:

- From January 1, 2012, the tariffs were kept at the level of 2011;
- From 01.07.2012 to 01.09.2012 the tariffs were increased for municipal service providers (population) by 6%.

Moreover, in the framework of implementation of the Federal Law no. 185-FZ of July 21, 2007 “On the Fund of Assistance of Reformation of the Housing and Communal Sector” under the agreed schedules, the Tariff Committee of St. Petersburg envisaged a step-by-step elimination of cross-subsidization between the groups of “Municipal service providers” (Population) and industrial customers – “Other customers” group. The annual average tariff rate for cold water and wastewater disposal for “Municipal service providers” and the population was increased by 5%. At the same time, in 2012, the tariffs for cold water, wastewater disposal and wastewater treatment for “Other customers” group were kept at the level of 2011.

Following the results of 2012, average weighted tariff growth rate was 2.9% in comparison with the average weighted tariff of 2011; this value is lower than the inflation rate.

CONNECTION TARIFFS

Tariffs for connection of newly constructed (reconstructed) real estate units (buildings, structures, facilities and other units) to cold water supply and sewerage systems of SUE “Vodokanal of St. Petersburg” in 2012-2014 are established by the Instruction of the Tariff Committee no. 381-r dated 29 November 2011

Tariffs for connection of newly constructed (reconstructed) real estate units (buildings, structures, facilities and other units) to Vodokanal’s cold water supply and sewerage systems in 2012-2014, RUB/m³/hour

Description	Connected capacity under 4.17 m³/hour	Connected capacity 4.17-41.67 m³/hour (inclusively)	Connected capacity over41.67 m³/hour
Cold water supply	714000,00	711600,00	709200,00
Wastewater disposal	738000,00	735600,00	733200,00

Note: the tariffs are shown without the VAT.

The charge for connection to Vodokanal networks is calculated, in compliance with the Decree of the Russian Government, Articles 14.1 and 14.2, no. 360 dated 9 June 2007 “On Approving the Rules of Public Contracts Execution and Performance”, as the product of declared demand (in m3/hour) and connection tariff.
In 2012, connection tariffs were not raised and were at the level of 2009 – 2011.

REASONS FOR TARIFF INCREASE

When planning financial activity of Vodokanal, the total expenditures include material costs. The latter are estimated on the basis of:

- For purchase of materials, works and services:
  - state-regulated tariffs (prices) or their projected values officially communicated by a relevant tariff (price) regulating authority;
  - forecasted price change indices by sectors of industry;
  - forecasted consumer price indices officially published by the Russian Ministry of Economic Development;
  - macroeconomic indicators of forecasted socio-economic development approved by the Government of the Russian Federation’s subject in consideration of specific features of regional development;
  - actual price trend (the soundness of such calculation should be confirmed by a relevant regulatory body).
- For provision of services by the Company departments:
  - planned depreciation of the existing and newly commissioned fixed assets;
  - payroll costs based on the planned number of employees.

The main reasons for tariff increase are as follows:

- Sufficient growth of expenditures for energy, fuel, gas and heat energy due to the tariff increase for above listed resources.
- Inflation causes rise in the costs for materials and services needed to implement the company production activity.
- Increase of amortization expenses due to introduction of fixed assets under the production and investment programs

FINANCIAL STATEMENTS

MAIN FINANCIAL INDICATORS OF SUE “VODOKANAL OF ST. PETERSBURG”

Indicators, Mio. RUB	2008 year	2009 year	2010 year	2011 year	2012 year
Turnover	16720	18413	20060	22797	23649
Operating costs	14123	15484	17694	19853	19546
Operating profit	2597	2929	2366	2944	4103
Net profit	24	72	379	404	1074
Profitability of core operations, %	18,4	18,9	13,4	14,8	21,0

Due to the growth of its main financial indicators over the recent years Vodokanal can finance different actions aimed to achieve the service quality targets in line with the long-term company development strategy. The indicator “profitability of core operations” is high compared with that of other municipal utilities. The company profit was used for connection to water supply and sewerage networks implemented under the investment program.

Indicators	2008 year	2009 year	2010 year	2011 year	2012 year
Current ratio (standard: 1 to 2)	2,0	1,6	1,1	1,3	1,4
Cash ratio (0.2 or higher)	0,2	0,2	0,2	0,3	0,6

Vodokanal St. Petersburg maintains a rather high level of solvency which is evidenced by the fact that its profitability ratios are within the standard range meaning that the Company has sufficient funds for current payments.

Indicators	2008 year	2009 year	2010 year	2011 year	2012 year
Equity to Total Assets	0,84	0,87	0,88	0,90	0,88
Financial Leverage	0,16	0,13	0,14	0,11	0,14

Vodokanal is a company with a high capital coefficient. The share of fixed assets in the balance sheet structure is over 90%. The Equity to Total Assets Ratio is high which means that the Company capital structure is stable.

BALANCE SHEET

		CODES		
	OKUD	0710001		
as of 31 December 2012	Date (day, month, year)	31	12	2012
Organization SUE “Vodokanal of St. Petersburg”	OKPO	03323809		
Taxpayer’s Identification Number	INN	7830000426		
		90.00.1, 41.00.1, 41.00.2, 85.11, 85.12, 85.13, 85.14		
Type of business	OKVED			
Form of incorporation / Type of ownership				
State Unitary Enterprise / RF subject owned	OKOPF/OKES	42	13	
Unit of measurement: ’000 RUB	OKEI	384		

Location (adress) 42, Kavalergardskaya str., St. Petersburg, 191015

Classifi-cations	Item	Code	As of 31 December 2012	As of 31 December 2011	As of 31 December 2010
1	2	3	4	5	6
	ASSETS				
	I.NON-CURRENT ASSETS				
1, 2.2	Intangible assets	1110	215 013	207 592	156 093
2, 2.2	R&D results	1120	3 167	2 279	4 232
	Intangible development assets	1130	-	-	-
	Fixed development assets	1140	-	-	-
3-6, 10. 2.3	Fixed assets	1150	159 442 471	143 992 939	127 347 670
	from Line 1150:				
	buildings	1151	19 139 393	16 679 513	13 067 473
	structures, transfer devices	1152	114 857 627	105 019 925	91 879 569
	machinery and equipment, vehicles	1153	7 148 391	6 607 662	5 815 150
6,10	Construction in progress	1154	18 059 305	15 428 773	16 344 349
	Income-bearing investments in inventories	1160	-	-	-
7, 2.4	Financial investments	1170	395 879	118 110	63 870
2.16	Deferred tax assets	1180	396 148	381 877	361 766
8	other non-current assets	1190	125 897	105 350	93 943
	Section I, TOTAL	1100	160 578 575	144 808 147	128 027 574

BALANCE SHEET

Classifi-cations	Item	Code	As of 31 December 2012	As of 31 December 2011	As of 31 December 2010
1	2	3	4	5	6
	II.CURRENT ASSETS				
9, 2.5	Inventories	1210	1 767 648	1 718 962	1 292 440
	from Line 1210				
	Raw materials, materials, etc.	1211	784 320	769 228	618 691
	Deferred expenses	1212	983 328	949 734	673 749
	Value-added tax on purchased valuables	1220	121 641	110 348	231 234
10, 2.6	Accounts receivable	1230	6 652 670	5 688 978	4 491 515
	from Line 1230				
	Accounts receivable due beyond 12 months after the reporting date	1231	1 232 155	707 059	418 315
	from Line 1231 Buyers and Clients	12311	29 884	76 436	95 954
	Accounts receivable where payments are expected within 12 months after the reporting date	1232	5 420 515	4 981 919	4 073 200
	from Line1232 Buyers and Clients	12321	4 684 707	3 990 130	3 158 544
7, 2.4	Financial investments (other than cash equivalents)	1240	922 000	-	-
2.7	Monetary resources and cash equivalents	1250	5 837 699	2 583 926	1 476 646
	Other current assets	1260	-	-	-
	Section II, TOTAL	1200	15 301 658	10 102 214	7 491 865

Classifi-cations	Item	Code	As of 31 December 2012	As of 31 December 2011	As of 31 December 2010
1	2	3	4	5	6
	BALANCE	1600	175 880 233	154 910 361	135 519 409
	LIABILITIES				
2.8	III. CAPITAL AND RESERVES				
	Registered capital	1310	3 475 580	1 467 627	1 167 627
	Own shares bought out from shareholders	1320	-	-	-
	Revaluation of non-current assets	1340	88 630 171	88 719 533	85 679 921
	Additional capital (not revaluated)	1350	58 259 598	46 160 777	30 047 255
	from Line 1350				
	Special-purpose receipts	1351	7 072 029	6 500 138	4 493 212
	Reserve fund	1360	86 339	80 356	60 167
	Undistributed profit (uncovered loss)	1370	2 352 430	1 249 067	883 143
	Section III, TOTAL	1300	152 804 118	137 677 360	117 838 113

BALANCE SHEET

Classifi-cations	Item	Code	As of 31 December 2012	As of 31 December 2011	As of 31 December 2010
1	2	3	4	5	6
	IV. LONG-TERM LIABILITIES				
2.10	Borrowings	1410	9 860 025	7 440 358	7 814 639
	from Line 1410				
	Loans repayable beyond 12 months after the reporting date	1411	7 866 025	5 446 358	5 813 223
	Credits repayable beyond 12 months after the reporting date	1412	1 994 000	1 994 000	2 001 416
2.16	Deferred tax liabilities	1420	180 359	98 560	84 647
	Estimated liabilities	1430	-	-	-
	Other liabilities	1450	-	-	761 737
	Section IV, TOTAL	1400	10 040 384	7 538 918	8 661 023
	V. SHORT-TERM LIABILITIES				
2.10	Borrowings	1510	2 860 483	832 633	1 710 427
	from Line 1510				
	Loans repayable within less than 12 months after the reporting date	1511	2 850 129	823 239	1 296 729
	Credits repayable within less than 12 months after the reporting date	1512	10 354	9 394	413 698
11, 2.9	Accounts payable	1520	7 566 899	6 594 049	5 015 986
	from Line 1520				
	suppliers and contractors	1521	2 317 578	3 153 426	3 732 727
	payroll debt	1522	156 934	149 841	133 102
	debt to state extra-budgetary funds	1523	71 188	64 334	41 313
	tax arrears	1524	1 144 173	1 050 881	198 546
	other creditors	1525	3 877 026	2 175 567	910 298
	Deferred income	1530	2 061 092	1 774 136	1 864 252
12, 2.11	Estimated liabilities	1540	547 257	493 265	429 608
	Other liabilities	1550	-	-	-
	Section V, TOTAL	1500	13 035 731	9 694 083	9 020 273
	BALANCE	1700	175 880 233	154 910 361	135 519 409

Director General _____ (signature) F.V. Karmazinov (name)

Chief Accountant _____ (signature) G.A. Khachaturova (name)

29 March 2013

INCOME STATEMENT

		CODES		
	OKUD	0710002		
as of 2012	Date (day, month, year)	31	12	2012
Organization SUE “Vodokanal of St. Petersburg”	OKPO	03323809		
Taxpayer’s Identification Number	INN	7830000426		
Type of business	OKVED	90.00.1, 41.00.1, 41.00.2, 85.11, 85.12, 85.13, 85.14		
Form of incorporation/ Type of ownership State Unitary Enterprise/RF subject owned	OKOPF/OKFS	42	13	
Unit of measurement: ’000 RUB	OKEI	384		

Classifications	Item	Code	2012	2011
2.14	Turnover	2110	23649007	22797415
13, 2.15	Cost of sales	2120	(19546351)	(19853247)
	Gross profit (loss)	2100	4102656	2944168
	Commercial expenses	2210	-	-
	Administrative expenses	2220	-	-
	Sales profit (loss)	2200	4102656	2944168
	Income from participation in other organizations	2310	2211	580
	Interest receivable	2320	3935	2923
	Interest payable	2330	(363806)	(494824)
2.14	Other income	2340	786925	667373
2.15	Other expenses	2350	(2424672)	(1938985)

Classifications	Item	Code	2012	2011
	Before-tax profit (loss)	2300	2107249	1181235
2.16	Current profit tax	2410	(966106)	(783238)
2.16	incl. constant tax liabilities (assets)	2421	(612003)	(539570)
2.16	Change of deferred tax liabilities	2430	(81907)	(13766)
2.16	Change of deferred tax assets	2450	14560	21187
2.16	Other	2460	(192)	(1634)
	Net profit (loss)	2400	1073604	403784
	FOR REFERENCE			
	Result of non-current assets revaluation not included into the net profit (loss) of the period	2510	-	3111904
	Result of other transactions not included into the net profit (loss) of the period	2520	-	-
	Cumulative financial result of the period	2500	1073604	3515688
	Base profit (loss) per share	2900	-	-
	Diluted earnings (loss) per share	2910	-	-

Director General _____ (signature) F.V. Karmazinov (name)

Chief Accountant _____ (signature) G.A. Khachaturova (name)

29 March 2013

CONTACT INFORMATION

STATE UNITARY ENTERPRISE “VODOKANAL OF ST. PETERSBURG”:

42, Kavalergardskaya str., St. Petersburg 191015, Russia
Tel.: +7 (812) 274-16-79, Fax +7 (812) 274-13-61 (Documents Division)
e-mail: office@vodokanal.spb.ru
e-mail: personal@vodokanal.spb.ru – Personnel Department (for CVs)
Website: www.vodokanal.spb.ru

HOT LINE – +7 (812) 305-09-09

CUSTOMER SERVICE CENTER BRANCH

Lit.A, 21, Gakkelevskaya str., St. Petersburg
Open hours: 9.00 a.m. – 6.00 p.m.
+7 (812) 702-12-98 – Reception room,
+7 (812) 329-34-51 (-52, -59, -68, -74, Fax – 329-34-62) consultancy on calculations,
+7 (812) 438-44-17 - consultancy on prolongation and amendment of the agreements on potable water supply, wastewater and pollutants receive (“unified” agreements),
+7 (812) 438-44-11; +7 (812) 326-52-32 - consultancy on connection to the networks.
The detailed contact information can be found at the official website of the company: http://www.vodokanal.spb.ru in “For customers” page.

MUSEUM COMPLEX “THE UNIVERSE OF WATER”:

56, Shpalernaya str. (underground station “Chernyshevskaya”)
Tel.: +7 (812) 438-43-75, 275-43-25, 438-43-01
Open hours: Wednesday-Sunday (Monday and Tuesday– closed).
The museum is open 10.00 a.m. -7.00 p.m. Tickets can be bought till 6.30 p.m.
Website: www.vodokanal-museum.ru

YOUTH ENVIRONMENTAL CENTER OF SUE “VODOKANAL OF ST. PETERSBURG”:

56, Shpalernaya str., (underground station “Chernyshevskaya”)
Tel. +7 (812) 438-43-96
E-mail: dec@vodokanal.spb.ru
Website: www.vodokanal-ecocenter.ru

BUREVESTNIK SANATORIUM:

Office in St. Petersburg:
Lit. A, 7, Zelenkov per
Tel./Fax: +7 (812) 438-44-85

Office in Luga:
16, Zapadnaya Street
Tel. +7 (813-72) 4-33-03, 2-36-60

“MEDICAL CENTER” BRANCH
TREATMENT & DIAGNOSTIC CENTER

Lit. Я, 42, Kavalergardskaya str.
Tel. +7 (812) 438-44-20, 326 52 78
Open hours: Monday-Friday, 8.00 a.m. - 8.00 p.m.,
Saturday and Sunday – closed.

Treatment & Diagnostic Center (including X-Ray Diagnostics Department):
Block 2, 103, Moskovsky Prospect, St. Petersburg.
el. +7 (812) 438-47-77, 326-52-78
Open hours: seven days a week, 8.00 a.m. -10.00 p.m.

Dental Clinic:
Lit. AK, 56, Shpalernaya str.
Tel. +7 (812) 326-53-19
Open hours: Monday-Friday, 9.00 a.m. - 9.00 p.m.,
Saturday: 9.00 a.m. - 3.00 p.m.,
Sunday – closed.
E-mail: medcenter@vodokanal.spb.ru
Website : www.med-vdk.ru

Orlovski Sanatorium
3a, Novo-Narvskoe shosse, Strelna
Tel. +7 (812) 421-40-71
Website: orlovskiy.med-vdk.ru
Tel.: 8 (812) 421-40-71
Website: www.orlovskiy.spb.ru