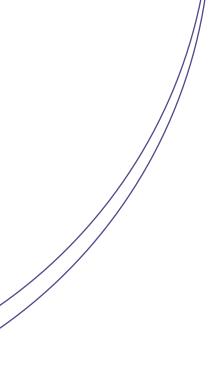


DIRECTOR GENERAL'S ADDRESS	4
CALENDAR OF EVENTS	6
ABOUT THE COMPANY	10
Vodokanal history	12
Mission and values	16 18
Corporate management system Vodokanal today	28
Risk management	40
Participation in external initiatives	48
Interaction with stakeholders	64
RESULTS OF ACTIVITIES IN 2013	92
Adoption of St. Petersburg Water and Wastewater Master Plan	94
Water supply	96
Wastewater disposal	110
Specialized vehicles and equipment	124
Customer service	130 142
City fountains Public toilets	142
Permanent snow-melting stations	150
INNOVATIONS	154
Development of hydraulic simulation	156
Implementation of new water and wastewater technologies	162
Development of the geoinformation system	164
Energy-saving and energy efficiency projects	168
Patents	170
Development of information infrastructure	172
SOCIAL RESPONSIBILITY	174
Awareness-building	176
Environment protection	190
Labour safety Personnel policy	196 200
Social policy	200
TARIFF POLICY	218
	•
FINANCIAL STATEMENTS Main financial indicators	226 228
Balance sheet and income statement	228 230
Income statement	230
	•
CONTACT INFORMATION	238





Dear All,

THE PAST YEAR 2013 WAS A SPECIAL YEAR FOR VODOKANAL ST. PETERSBURG. IT WAS THE 155TH ANNIVERSARY OF OUR COMPANY AND, MOREOVER, IT WAS ANNOUNCED THE ENVIRONMENTAL PROTECTION YEAR.

It will not be an exaggeration to say that the main event in 2013 was the completion of the Northern Tunnel Collector. This notable historical event marked the birthday of Vodokanal, 10 October 2013. We have travelled a long way and, honestly, it was sometimes hard to believe that we would be able to succeed. Thousands of people – designers, builders, equipment suppliers, etc. – were involved in this major environmental project. We could implement it thanks to extensive support from the Government of the Russian Federation and St. Petersburg administration. The project was co-financed by international financial organizations.

Of course, all citizens of St. Petersburg can be rightfully called co-investors of this project: payments for water services collected from households and companies were the main source of Vodokanal investment in the Northern Tunnel Collector construction.

As a result, the Neva and the Gulf of Finland are relieved from discharge of 334,000 m³/day of wastewater, i.e. about 122 million cubic meters of dirt per year. As much as 98.4% of wastewater has been discharged treated in Petersburg since 10 October 2013. It is of great importance that the treatment process performance meets the recommendations of the Baltic Marine Environment Protection Commission (HELCOM). Petersburg fully complies with the HELCOM recommendations regarding concentrations of phosphorus and nitrogen in the treated effluent, and the results of space survey show that today the Gulf of Finland is actually clear of blue-green algae.

98.4% IS A GOOD RESULT. HOWEVER, WE ARE NOT GOING TO STOP AT THAT.

Vodokanal continues to close the remaining direct discharges. There are not many of them left, and in most cases, the volumes of untreated wastewater discharged into water bodies are very small, but nevertheless our goal is to fully stop the discharge of untreated wastewater in Petersburg.

The permanent snow-melting stations built and operated by Vodokanal also contribute to the clean condition of the city's water reservoirs. Indeed, it is a very environment-friendly and energy-efficient method of snow disposal. In 2013, the total number of stations increased to ten: by the end of the year, three new permanent snow-melting stations, including one in the northern part of Petersburg, have been put into operation.

We are doing our best to mitigate the burden on the water environment of the Neva, Gulf of Finland and Baltic Sea.

Actually, there is no separate Neva and separate Baltic Sea. We should focus on the integrated water system of the north-west region which comprises Lake Onega, Lake Ilmen and Lake Ladoga including their water basins. In April 2013, the Baltic Sea Summit in St. Petersburg announced the St. Petersburg initiative which envisages active participation of Petersburg and Vodokanal in the preservation of water system in the North-West Region.

Under this initiative, Vodokanal undertakes to investigate the areas where the sources of negative impact on water bodies are located, and to draw up recommendations on selection of effective solutions for the improvement of environmental situation.

This work has already begun. Since 2012, an agreement between the Republic of Karelia and Vodokanal regarding cooperation in the sphere of water systems modernization in Karelia has come into effect. We also collaborate with Leningrad Oblast and other regions.

This work is of paramount importance for us, firstly, because Lake Ladoga is the only potable water source for Petersburg. Moreover, the condition of Lake Ladoga and the Neva has a direct impact on the water treatment process in Petersburg.

In 2013, Vodokanal kept improving its drinking water production technologies to ensure reliable and safe cold water

supply to the citizens. At the same time, we gave special attention to reconstruction of networks: priority measures to improve drinking water quality were taken in the houses where near-limit concentrations of iron had been recorded.

Our plan is to accelerate the process of network renovation and, in parallel, to start modernization of the city's bigger water treatment plants.

All such activities are listed in the St. Petersburg Water and Wastewater Master Plan for the period up to 2025 with the outlook to 2030, adopted by the city government in 2013.

The actions envisaged in the Master Plan aim to improve the quality of life and environmental situation. In parallel to the solving of technical and process-related tasks Vodokanal proceeds with its environmental awareness-raising projects.

In 2013, the Universe of Water museum was modernized, and the work of the Youth Environmental Centre was in full swing. Moreover, Vodokanal began a new activity in 2013: rehabilitation of marine mammals' pups in cooperation with the Not-For-Profit Partnership "Marine Mammal Rehabilitation Centre of Leningrad Region". A pinnipedian rehabilitation station was opened at Repino treatment plant; its patients were three Ladoga ringed seal pups and two little Baltic grey seals. They recovered, improved in strength and were released to their natural habitat.

In 2014 as announced The Gulf of Finland Year by the decision of Russia, Finland and Estonia, the Rehabilitation Station activities, as well as Vodokanal's other environmental awareness-raising projects, will be further developed.

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

CALENDAR OF EVENTS 2013

January'13

SUE "Vodokanal of St. Petersburg" launched its updated website. The website design has changed, it became more dynamic and state-of-the-art. More capabilities of posting information on the site are provided with the fundamental navigation approaches preserved. The updated resource now has new online services for Vodokanal's customers.
Vodokanal is given the certificate of membership in the All-Russian Quality Organization's Hall of Fame. The virtual Hall of Fame is created on the website www.cepvok.ru as part of the portal of the All-Russian Quality Organization (www.mirq.ru). The site offers information on methods and approaches to the improvement of Vodokanal activities and describes the phases of the company's management system improvement.

February'13

• February 2, 2013 marked 35th anniversary of inauguration of Central Wastewater Treatment Plant, Stage I, the first and biggest WWTP in St. Petersburg, one of the Europe's biggest WWTPs and the biggest one in the Baltic Sea Region. In 1978, with Central WWTP in place, 27% of wastewater in the former Leningrad was sent

to treatment. Before that, municipal sewage was discharged, practically, untreated. • The Governor G.S. Poltavchenko signed the city administration's ordinance on approving the Programme of Public Toilets Development in St. Petersburg for 2013–2015. The Programme sets out the extension of the public toilet network owned by the City of St. Petersburg and operated by Vodokanal on the basis of the right of economic management.

• On 25 February, Vodokanal's Youth Environmental Centre launched the Water Olympiad, a new environmental awareness-raising project dedicated to the Environmental Protection Year. In 2013, nearly 1,500 children and teenagers (pre-schoolers and 1–7-year school students) from St. Petersburg and the Leningrad Region participated in the project.

March'13

• The Internet portal "Da-Voda" (www.da-voda.com) created and supported by Vodokanal St. Petersburg got a special section devoted to the Environmental Protection Year and to preparations for the Gulf of Finland Year 2014.

• Vodokanal's specialists participated in 14th International Environmental Forum "The Baltic Sea Day" in Petersburg, on 20–22 March. The Forum agenda featured burning environmental topics of paramount interest for the Baltic countries.

• Vodokanal hosted the first meeting of the Public Council responsible for organizing the Gulf of Finland Year events. The meeting was attended by the Governor of St. Petersburg G.S. Poltavchenko and the Governor of Leningrad Region A.Yu. Drozdenko.

• A temporary pinnipedian rehabilitation station has been set up at Vodokanal's treatment plant in Repino. Vodokanal began to rescue rare animals of the Baltic Sea Region, ringed seals and grey seals, in association with the Not-For-Profit Partnership "Marine Mammal Rehabilitation Centre of Leningrad Region" with the support of 2PR communication agency.

April'13

• The Youth Environmental Centre launched the Russian-German ECOvision project. Under the project, young people from St. Petersburg and Hamburg discussed challenging environmental issues and produced videos to be presented at the ECOvision festival in November.

• Vodokanal Director General Felix V. Karmazinov was among the participants of the Baltic Sea Forum. The Forum was held in the framework of the Environmental Protection Year in Russia and in the context of Russian presidency in the Council of Baltic Sea States (CBSS) in 2013.

• Vodokanal summarized the results of the second Crystal Drop Competition for "the company's best customer" title.

• Vodokanal opened the fountain season 2013. For the fourth consecutive year, the fountain "Globe" in 56, Nevsky, and the fountain in Manezhnaya Square (in Novo-Manezhny Garden) were the first to start working.

• The permanent snow-melting stations were closed for "summer vacation".

May'13

The Festival of Videos concluded the environmental project "Raising the awareness of young people through the International Advanced Water Technologies Centre".
Vodokanal's Water Museum in 56, Shpalernaya str. celebrated its 10th anniversary. The festive programme dedicated to this date was held in the framework of The Museums at Night event, overnight into 19 May. At that time, nearly 8,000 people visited the museum.
Vodokanal St. Petersburg made a valuable contribution to the work of the Neva International Environmental Congress held in Tavrichesky Palace in St. Petersburg. The EcoCinema was open in Tavrichesky Garden during the Congress. On the Children Day, the kids from Vodokanal's Youth Environmental Centre played an active role.
The first release into the wild took place at the pinnipedian rehabilitation station. A Ladoga ringed seal pup was released into Lake Ladoga near the Valaam Archipelago.

June'13

• Vodokanal St. Petersburg was awarded the Certificate "For notable achievements in the field of implementation and maintenance of an outstanding management system" at the IQNet international forum held in St. Petersburg in early June.

• On 13 June, Vodokanal opened the historical drinking fountain in Sennaya Square. For this purpose, Vodokanal connected the fountain to the municipal water supply network, installed new pumps and renovated the hydro-insulation of the fountain bowl.

July'13	• The last "leaving event" took place at the pinnipedian rehabilitation centre. All in all, five pups were rehabilitated in Repino: three Ladoga ringed seals and two Baltic grey seals.
August'13	 The fountain in Yuzhno-Primorsky Park came into operation after general overhaul. The fountain is one of the biggest in Petersburg: its bowl is 100 m long and 20m wide. The water pattern of the fountain is formed by 225 jets, 8–16 m high. Another historical fountain opened by Vodokanal after reconstruction is that in the garden near the palace of grand prince Alexey Alexandrovich (in Pisareva str.)
September'13	 SUE "Vodokanal of St. Petersburg" and the Danish company Vand Center Syd signed the Memorandum of Intent in the presence of the Danish Minister of Environment Ida Auken. Vodokanal approved a new version of its Environmental Policy with the extended list of the company's environment protection commitments. Vodokanal's branch "Information and Training Centre" celebrated its 10th anniversary.
October'13	 On 10 October 2013, Vodokanal St. Petersburg celebrated its 155th anniversary. This day was marked by the completion of a large-scale environmental project: construction of Northern Tunnel Collector in Petersburg. Since then, as much as 98.4% of wastewater has been treated in Petersburg. Vodokanal finished flush water diversion at Main Water Treatment Plant. As a result, 50,000 m³/day of flush water could be diverted to Northern Tunnel Collector. The multimedia exhibition The Universe of Water, one of the three permanent exhibitions of the museum complex in 56, Shpalernaya str., opened after reconstruction. The season of fountains was closed. Vodokanal's Medical Centre celebrated its 10th anniversary.
November'13	 The Governor of St. Petersburg G.S. Poltavchenko started up a new snow-melting station in 2, Rybinskaya str. The station can melt 5,000 m³/day of snow. Vodokanal was visited by Artemiy Lebedev's ethnographic expedition: on 5 November, the distinguished bloggers visited Southern WTP, South-West WWTP, the NTC Pumping Station, the Youth Environmental Centre and the Universe of Water museum. Vodokanal's team of the Club of the Cheerful and Sharp-Witted won the Weekend League championship 2013 among the teams from St. Petersburg companies and organizations. On the World Toilet Day, 19 November, Vodokanal made a present to the citizens and guests of Petersburg. On that day, the toilets operated by Vodokanal could be used free of charge.

December'13

• The Government of St. Petersburg approved the Water and Wastewater Master Plan for St. Petersburg until 2025 with the outlook to 2030. The Master Plan was developed under the federal law dated 07.12.2011 no.416-FZ "On Water Supply and Wastewater Disposal" in consideration of the requirements to such master plans as approved by the RF Government Decree dated 05.09.2013 no.782 "On Water and Wastewater Master Plans".

• Potential creation of a water cluster in the city was discussed at the meeting of the St. Petersburg Government's Environmental Council. Proposals on creating a territorial innovative cluster of water supply and wastewater disposal were presented by the Director General of SUE "Vodokanal of St. Petersburg" Felix V. Karmazinov.

• Scientists from the Atmospheric Air Protection Research Institute examined the performance of the automatic deodorant sprinkling system constructed at Severniy Landfill and confirmed that the technology was effective.

• Vodokanal St. Petersburg hosted the second meeting of the Gulf of Finland Year 2014 Public Council. The participants discussed proposals on the Gulf of Finland Year events to be organized in St. Petersburg and Leningrad Region and summarized the results of the Environmental Protection Year.

• The official ceremony of signing Vodokanal's Collective Agreement for 2014–2016 was held. The Collective Agreement ensures social security of the company staff and sets out incentives and social guarantees for both the existing staff and ex-employees.

• Vodokanal held its seventh regular festival "Welcome to Vodokanal!" The newly employed were greeted at the Information and Training Centre.

• Vodokanal's Medical Centre received its 100,000th visitor.

• Vodokanal won the 10th V.I. Vernadskiy National Environmental Award. Vodokanal's Northern Tunnel Collector Completion Project was a winner in the nomination "Global Ecology".

• The jury of PROBA-IPRA GWA International Award determined the winner in the nomination "The Best Social PR Project": it was the joint project of Vodokanal and 2PR Agency "Help the pinnipeds". Another Vodokanal's project, "Vodokanal in the Environmental Protection Year", was short-listed in the nomination "Best Corporate PR Campaign" and awarded a diploma.



ABOUT THE COMPANY

זיבות-זו

CALEN

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-1870s, the water network was only used by the citizens on the leftbank 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 1,130 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,

tion and operation of snow-melting stations. In 2012, the next-to-last stage of the Northern Tunnel Collector was completed (the wastewater streams was diverted 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.

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 would deals 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 diversion 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%.

and since July the effluent quality at South-West treatment plant has been checked by Australian red-claw crayfish. In 2011, Vodokanal St. Petersburg 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 at the premises of SUE "Vodokanal of St. Petersburg".

became

one of the

finalists for the

Since 2012, Vodokanal St. Petersburg has started a new type of activity: construc-

IN 2013, VODOKANAL CELEBRATED ITS 155TH ANNIVERSARY. BESIDES, THIS YEAR WAS ANNOUNCED THE ENVIRONMENTAL PROTECTION YEAR IN RUSSIA. THE MAIN EVENT OF THE YEAR TOOK PLACE ON VODOKANAL'S BIRTHDAY, 10 OCTOBER 2013: THE LARGE-SCALE ENVIRONMENTAL PROJECT, CONSTRUCTION OF NORTHERN TUNNEL COLLECTOR, WAS COMPLETED IN PETERSBURG. TEN UNTREATED WASTEWATER DISCHARGES WERE CLOSED. SINCE THEN, 98.4% OF WASTEWATER HAS BEEN TREATED.

IN 2013, VODOKANAL PUT THREE MORE SNOW-MELTING STATIONS IN OPERATION. THE TOTAL NUMBER OF SUCH STATIONS INCREASED TO TEN. SNOW IS MELTED BY THE HEAT OF WASTEWATER FED INTO THE MELTING CHAMBERS.

IN 2013, VODOKANAL LAUNCHED A NEW SOCIAL PROJECT: IN COOPERATION WITH THE NOT-FOR-PROFIT PARTNERSHIP "MARINE MAMMAL REHABILITATION CENTRE OF LENINGRAD REGION" AND 2PR PUBLIC RELATIONS AGENCY, IT WAS SAVING RARE ANIMALS OF THE BALTIC SEA REGION, RINGED SEALS AND GREY SEALS.



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 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.

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. In 2011, the ideology of EFQM (European Foundation for Quality Management) Model made a significant impact on the company management development and improvement.

In 2010, SUE "Vodokanal of St. Petersburg"

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.

In 2012, Vodokanal made a transition from six management levels (company administration – branch – production office – district – section – team) to three levels (company administration – branch – district) having extended the districts' scope of functions.

In 2013, the following production departments were included in the corporate structure: area water supply management offices and area wastewater disposal systems, each of them serving several city districts.

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.

At present, the corporate management system is built on the process-based approach aimed to implement a functional-zonal management principle for water supply and wastewater disposal.

Continuous improvement of the management system is based on benchmarking studies of the best European companies. Vodokanal's strategic goals are defined for 5 basic aspects of its activities, including the following goals:

1) customer satisfaction;

2) water supply and wastewater disposal processes;

3) healthy environment and satisfaction of society;

4) personnel and corporate development,

5) financial and investment support of activities.

The goals are inter-related and arranged in a strategic goal map; performance indicators for continuous monitoring of progress and target values for each of the 5 aspects are specified. The company's strategic planning horizons are harmonized with perspective plans of city development (medium-term perspective – till 2015, and long-term perspective – till 2025, for most of the indicators).

The performance of processes is monitored on different management levels (district, branch or company) using the approved (strategic, tactical and operational) performance indicators. Vodokanal has implemented several information systems enabling daily monitoring of operational indicators.

Systematic satisfaction surveys of all stakeholders including the assessment of satisfaction among the main customer categories, satisfaction and awareness of the public, and staff satisfaction (including assessments of commitment and loyalty), are an integral part of continuous improvement. Together, the studies give an unbiased assessment of the company performance regarding the key stakeholders.

OVERVIEW OF MANAGEMENT APPROACHES, IMPLEMENTATION OF NEW MANAGEMENT SYSTEMS

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;

• satisfaction surveys of all stakeholders including the internal process consumers;

• 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 peers;
- · sociological studies of public awareness and expectations;

• annual public reports.

Since 2006, Vodokanal has self-assessed its activities according to the Excellence Model and participated in regional and European competitions. Regular self-assessment and participation in competitions means, above all, that a great number of employees are involved in a continuous improvement process and in the search for new ways of development and performance improvement. More and more employees get inspired with the Excellence ideas and study relevant materials. Primarily, the results of that are obvious in everyday work: management methods and organization of activities are improving, performance indicators become better, etc.

At the present phase of improvement, our task is to reach the management level that would support high productivity and meet the expectations of all stakeholders.

We promote wider application of mechanisms, such as lean production, "55", "20 keys", etc. in perspective plans of the company improvement.

In future, Vodokanal intends to develop its strengths, come closer to the model of ideal

organization and participate in international quality-related events. We see Vodokanal ranging with the world's best companies.

Using its own experience and the experience of its foreign and domestic peers, Vodokanal is developing the "Ideal Water Company" concept. It is now formulated in the company's Strategic Plan and addresses all spheres of activity: interaction with customers, development and management of water services and infrastructure, environment and society, financial sustainability and investments, staff development and social support.

The Ideal Water Company Concept is revised in form and substance against the results of self-assessment for the previous year and in consideration of external factors, such as new regulatory acts, the outlook for city development and customer expectations.

By applying the management approaches, we can:

ensure continuous improvement of service quality and customer satisfaction;
meet the challenges and solve the problems faced by Vodokanal;
augment the company's contribution in the sustainable future.

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. Targets for the next three years and the form "Quality Targets for the Current Year Split by Months" have been developed to support regular monitoring of Vodokanal's progress to the (water supply and wastewater disposal) quality goals. Process performance is monitored at different management levels using relevant indicators.

THE KEY PERFORMANCE INDICA-TORS OF THE WATER SUPPLY SER-VICE PROCESS ARE:

• compliance of potable water quality at the plant outlet or in the distribution networks with the applicable regulatory values of physical and chemical parameters (expressed as a percentage);

• number of cases where the microbiological limit values were exceeded at the plant outlet or in the distribution networks;

• number of recorded reasoned complaints about low water head;

• number of breakdowns on water distribution networks per 10km of pipelines per year;

• water losses in the distribution network.

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

THE KEY PERFORMANCE INDICA-TORS OF THE SEWERAGE SERVICE PROCESS ARE:

• percentage of wastewater treated by wastewater treatment plants;

• number of blockages per 10 km of sewers per year;

• admissible concentration of total nitrogen in the treated effluent;

· admissible concentration of total phospho-

rus in the treated effluent; • percentage of dewatered sludge to be incinerated.

THE PROCESS PERFORMANCE MANAGEMENT IS BASED ON DEMING-SHEWHART-TAILOR CYCLE (PDCA):

1. Plan (P) – key process performance targets 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 and monitored at all process levels (management processes, life cycle processes and supporting processes); daily operational indicators are checked. At this phase, management is limited to ensuring the achievement of tactical (monthly) targets.

 Check (C) – the progress in achieving the key performance indicators is checked using the daily and weekly data.
 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 working montings. Such actions

at weekly working meetings. Such actions help adjust the existing approaches to achieve the targets. Potential areas of process management improvement are identified in the course of self-assessment based on the company management systems internal

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 the 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 (see the section "Mission and Values" above), 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 the relations between Vodokanal and 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, the Baltic Sea Region and society in general.

RE-ENGINEERING OF BUSINESS PROCESSES IN 2013 AND THE RESULTS ACHIEVED

Vodokanal corporate structure as of 31 December 2013 consists of eight territorial directorates for water supply and five territorial complexes for wastewater disposal 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.

In 2007, for the purpose of building an effective management system, a detailed analysis of SUE "Vodokanal of St. Petersburg" 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.

In 2013, the production branches' functions were actually transferred to the territorial directorates for water supply and territorial complexes for wastewater disposal, each of them serving several districts of St. Petersburg. Moreover, the Emergency Response Department was created within the corporate structure, which combines the functions of the integrated operational dispatching service and the "Hot-line". These organizational changes have much reduced the time of responding to the citizens' complaints and improved the efficiency of emergency procedures.

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; • personification of responsibilities and

• personification of responsibilities and authority.

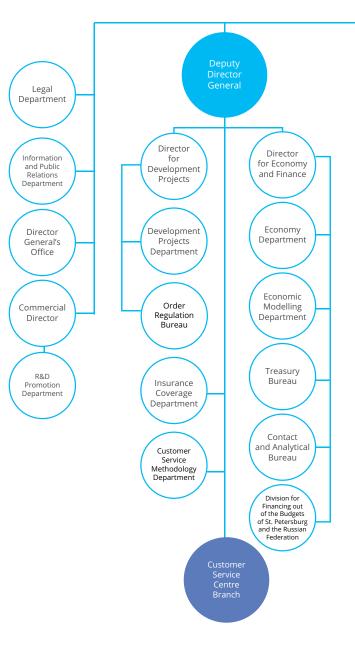
DISCLOSURE OF INFORMATION ABOUT VODOKANAL OPERATIONS IN THE FIELD OF WATER SUPPLY AND WASTEWATER DISPOSAL

Until 30 January 2013, SUE "Vodokanal of St. Petersburg", as a public utility, had disclosed information on its regulated activities in the manner prescribed by the "Standards for Disclosure by Public Utilities", approved by the Decree no.1140 of the Government of the Russian Federation dated 30 December 2009. The forms and frequency of disclosure were approved by the Order no.26-r of the St. Petersburg Tariff Committee dated 22 March 2010.

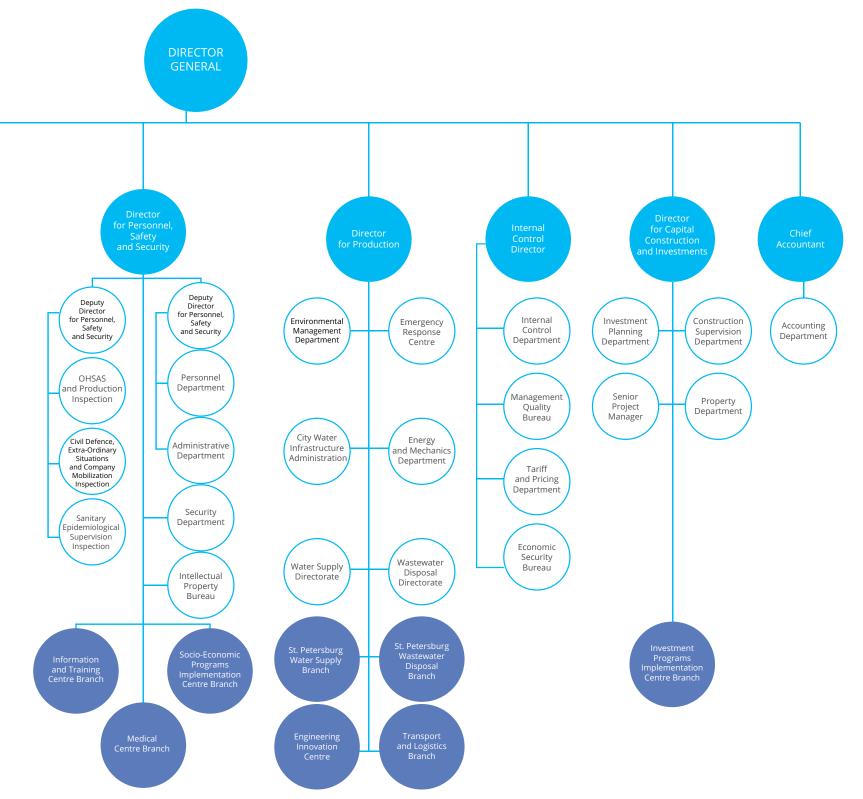
Due to changes in the Federal Law no.416-FZ "On Water Supply and Wastewater Disposal" dated 7 December 2011, since January 30, 2013, any disclosure shall be performed in the manner prescribed by the "Disclosure Standards for the Water Sector", approved by the Decree no.6 of the Government of the Russian Federation dated 17 January 2013. The forms and frequency were approved by the Order no.129 of the Federal Tariff Authority dated 15 May 2013.

In addition, pursuant to Article 4, part 1, clause 5 of the Federal Law no.190-FZ "On Heat Supply" dated 27 February 2010, since 15 July 2013, any disclosure of information in the field of heat supply shall be performed in accordance with the "Standards of Disclosure by Heat Supply Organizations, Heat Networks Organizations and Regulatory Authorities", approved by the Decree no.570 of the Government of the Russian Federation dated 5 July 2013. The forms and frequency of disclosure were approved by the Order no.282-r of the St. Petersburg Tariff Committee dated 9 October 2013.

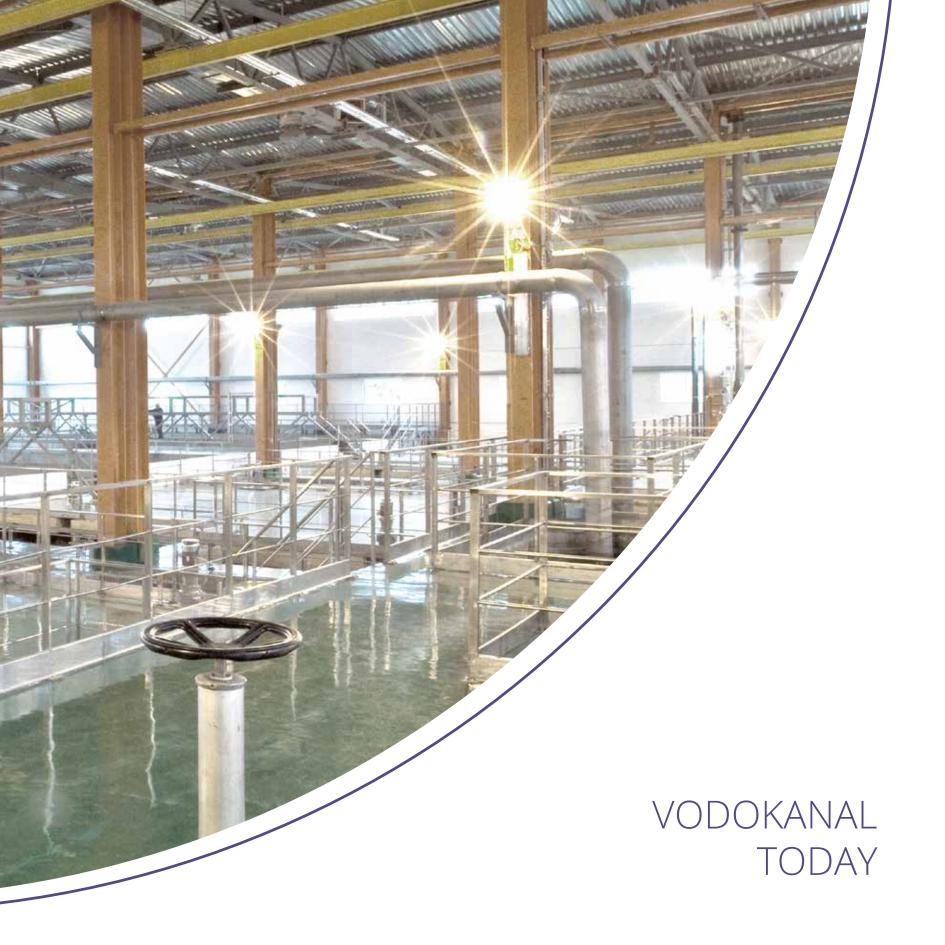
Annually, the St. Petersburg Tariff Committee approves a reporting procedure for the organizations subject to governmental tariff regulation in St. Petersburg, in addition to the reports submitted under the above disclosure standards.



VODOKANAL STRUCTURE (AS OF 1 JANUARY 2014)







COMPANY PROFILE

THE STATE UNITARY ENTERPRISE (SUE) "VODOKANAL OF ST. PETERSBURG" **PROVIDES WATER SUPPLY 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**

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 December 2013, the staff of SUE "Vodokanal of St. Petersburg" numbered 8,792 people.

The water supply system comprises:

- 6,865.7km of water supply networks;
- 198 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:

• 8,240.6km of sewer networks;

+1855550r

- 241.1km of tunnel collectors;
- 141 sewage pumping stations;
- 15 wastewater treatment plants including 13 – for municipal sewage and 2 – for 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 Russia's first city 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:

98.4% of wastewater is treated in Petersburg now. This achievement is due to the completion of the Northern Tunnel Collector Project in St. Petersburg (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 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 providing any information about Vodokanal work. The Hot Line phone number is +7 812 305 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 Universe of Water museum complex 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 webportal "Da-Voda" (www.da-voda.com) which promotes the ideas of careful water use.

THE MOST IMPORTANT EVENTS IN 2013

The large-scale environmental project, construction of the Northern Tunnel Collector in St. Petersburg, was completed on October 10, 2013. Since that day, 98.4% of wastewater has been treated in St. Petersburg. It is noteworthy that this event took place in the Environment Year and on Vodokanal's

in the Environment Year and on Vodokanal's 155th anniversary.

The Collector completion ceremony took place at the new Flow Regulating Facility.

Governor of St. Petersburg Georgy Poltavchenko, Chairman of the Russian Federation Council Valentina Matviyenko, and Deputy Minister of Environment of Finland Hannele Pokka made speeches at the ceremony.

The Collector Project completion was marked by several events that took place on October 10th:

• commissioning of the second line

of the main tunnel,

• commissioning of the unique Flow Regulating Facility (a powerful pumping station required to ensure fault-free operation of the Collector).

Moreover, ten remaining untreated wastewater discharges (one on Vyborgskaya Embankment, six discharges along Robespierre Embankment and three discharges of backwash water from Main WTP) totaling 87,000 m³/day of wastewater were closed on that day. Previously, this wastewater was discharged directly into the Neva, and now it is diverted via the Collector to the Northern Wastewater Treatment Plant for a full treatment cycle. AS A RESULT, 98.4% OF

WASTEWATER HAS BEEN TREATED IN ST. PETERSBURG SINCE OCTOBER 10, 2013. 2 The St. Petersburg Water and Wastewater Master Plan up to 2025 with an outlook for 2030 was adopted by the St. Petersburg Government in December.

The Master Plan was developed under the Federal Law no.416-FZ dated 07.12.2011 "On Water Supply and Wastewater Disposal" in compliance with the requirements to the contents of such master plans as approved by the Decree of the Russian Federation Government no.782 dated 5.09.2013 "On Water and Wastewater Master Plans".

The objective of the Master Plan is to implement the national water and wastewater policy aimed to maintain the public health and to improve the quality of life. UNDER THE FEDERAL LAW, THE WATER AND WASTEWATER MASTER PLAN SHALL BE THE BASIS FOR DEVELOPMENT AND APPROVAL OF ANY INVESTMENT PROGRAMMES PROPOSED BY REGULATED ENTITIES IN ST. PETERSBURG.

Vodokanal participated in the rescuing of rare animals in the Baltic Sea Region, ringed seals and grey seals.

3

Vodokanal together with the experts of the not-for-profit partnership "Marine Mammal Rehabilitation Centre of the Leningrad Region" and the Public Relations Agency "2PR" participated in the rescuing of endangered Baltic seals under the "Help the Pinnipeds" project. A temporary facility for rehabilitation of pinnipeds was set up at the premises of Vodokanal's wastewater treatment plant in Repino.

The project was launched in March, and already in May the first rehabilitated pinnipeds were released to their natural habitat. A Ladoga ringed seal pup was released into Lake Ladoga near the Valaam Archipelago. Other wards of Vodokanal's rehabilitation center, namely, two grey seals and two Ladoga ringed seals, were released into the wild in June and July.

In total, five pups have been rehabilitated in the center.

In December, the Vodokanal's "Help

the Pinnipeds" project became the winner of the international competition in the field of public relations PROBA-IPRA Golden World Awards 2013 in "the Best Social PR-project" nomination. Another Vodokanal project, "Vodokanal in the Environment Year", was short-listed for GWA in the nomination "Best Corporate PR-Campaign" and given a diploma.



4 Three new permanent snow-melting stations have been built and put into operation.

The permanent snow-melting stations (PSMS) melt snow in the chambers using the heat of wastewater. The resulting mix of meltwater and wastewater is pumped via collectors to WWTPs where it is fully treated. Therefore, snow processing at PSMSs helps mitigate the negative impact on the environment significantly. In the end of 2013, Vodokanal commissioned the PSMSs in Rybinskaya Street (5,000 cubic meters of snow per day), in Mebelnaya Street (7,000 cubic meters of snow per day), and in Kushelevskaya Road (5,000 cubic meters of snow per day). IN TOTAL, 10 PERMANENT SNOW-MELTING STATIONS WITH THE TOTAL CAPACITY OF 59,000 CUBIC METERS PER DAY WERE OPERATED IN ST. PETERSBURG BY THE END OF 2013.

Odour removal project at Severny Landfill proved to be effective.

5

The automatic deodorant spraying system for odour removal was put into operation as a pilot project for Severny Landfill in 2012. The project was continued through 2013: the automatic deodorant spraying system encompassed the major part of the Landfill along the perimeter. SCIENTISTS FROM THE ATMOSPHERIC AIR PROTECTION RESEARCH INSTITUTE EXAMINED THE AUTOMATIC DEODORANT SPRAYING SYSTEM PERFORMANCE AT THE SEVERNY LANDFILL AND CONFIRMED THAT THE TECHNOLOGY WAS EFFECTIVE. 6

The Water Museum at 56 Shpalernaya Street celebrated its 10th anniversary.

The festive programme devoted to this date was implemented during the "Museums at Night" event overnight into 19 May. This time The Universe of Water museum complex was visited by approximately 8,000 people.

The museum in the former water tower was opened by Vodokanal on May 19, 2003 to mark the 300th anniversary of St. Petersburg.

The historical exhibition The Water World of St. Petersburg and the multimedia exhibition The Underground World of St. Petersburg have been open in the water tower since 2003. ONE MORE EXHIBITION, "THE UNIVERSE OF WATER", WAS OPENED IN THE FORMER CLEAN WATER RESERVOIR IN 56 SHPALERNAYA STREET BY THE 150TH ANNIVERSARY OF VODOKANAL IN 2008. IN 2013, BY THE 155TH ANNIVERSARY OF VODOKANAL, IT WAS RENOVATED. Vodokanal launched three fountains. The historical drinking fountain in the Sennaya Square was put into operation by Vodokanal in the early summer of 2013. Soon after the capital repairs, the fountain in Yuzhno-Primorsky Park, one of the largest parks in St. Petersburg, began its operation.

Also, in summer 2013, one of the city's historical fountains in the garden around the palace of Grand Duke Alexei Alexandrovich (in Pisareva str.) was started after refurbishment.

INVESTMENTS IN 2013



VODOKANAL'S INVESTMENT ACTIVITIES ARE CARRIED OUT IN ACCORDANCE WITH THE INVESTMENT PROGRAMME DEVELOPED AND ADOPTED FOR 2012–2014

The 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 measures at water supply facilities;

• access to the centralized water supply services.

The wastewater disposal 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 measures at wastewater collection and treatment facilities;

access to the centralized sewerage.

IN 2013, 21,761.6 MIO. RUB WERE INVESTED IN THE DEVELOPMENT AND RECONSTRUCTION OF WATER AND WASTEWATER SYSTEMS IN ST. PETERSBURG.

This amount is the sum of SUE "Vodokanal of St. Petersburg" 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 2013, SUE "Vodokanal of St. Petersburg" investment programme amounted to 13,500.8 Mio. RUB.

It was funded from different sources, such as:

- Federal budget 992.3 Mio. RUB;
- St. Petersburg budget 1,173.0 Mio. RUB;
- Vodokanal's own funds 3,877.2 Mio. RUB;
- own funds (budget investments in the
- authorized capital) 1,164.4 Mio. RUB;

• borrowed funds - 3,063.6 Mio. RUB;

• connection fee – 3,230.3 Mio. RUB.

Vodokanal invested 4,662.4 Mio. RUB in the water supply system under the investment programme, including:

• supply of safe potable water to the customers – 31.6 Mio. RUB;

- provision of reliable water services -
- 1,706.9 Mio. RUB;

• improvement of energy efficiency and energy saving measures at water supply facilities – 233.2 Mio. RUB;

• access to water supply services – 2,069.4 Mio. RUB;

• other items (production bases, procurement of equipment, security systems, development of fountain complexes) – 621.3 Mio. RUB.

The amount of 8,838.4 Mio. RUB was invested in the wastewater system, including:

• mitigation of wastewater system's negative impact on the environment – 6.301.1 Mio. RUB:

• provision of reliable wastewater services – 532.3 Mio. RUB;

 improvement of energy efficiency and energy saving measures at wastewater collection and treatment facilities – 99.3 Mio. RUB;

access to the sewerage – 1,468.1 Mio. RUB;
 other items (production bases, procurement of equipment, security systems, development of public toilets) – 437.6 Mio. RUB.



IN 2013, THE TOTAL COST OF WORKS ORDERED BY THE EMPLOYER'S OFFICE TO DEVELOP WATER SUPPLY AND SANITATION SYSTEMS IN ST. PETERSBURG WAS 8,260.8 MIO. RUB THE WORKS WERE FINANCED FROM THE BUDGET OF ST. PETERSBURG.

In 2013, significant events took place that will impact all future investment activities of Vodokanal.

Thus, Vodokanal started practical

implementation of its investment activities under the Federal Law no.416–FZ "On Water Supply and Wastewater Disposal" approved in 2011.

The Water and Wastewater Master Plan of St. Petersburg till 2025 was developed and approved by the City Government with participation of Vodokanal specialists. The Scheme is the basis for the company new investment period for years 2015-2020 with possible extension to 2025.

The company drew up the draft terms of reference for investment programme

development on the basis if the approved Master Plan. The investment requirement for the period till 2020 under the Master Plan is 171 billion Roubles.

The new investment programme will improve the company services and make them more reliable. Vodokanal will be able to perform a comprehensive modernization of water and wastewater treatment plants, significantly increase the scope of networks rehabilitation. The programme results will contribute to the improvement of the quality of life in the city and ameliorate the environmental situation.



AWARDS IN 2013

IN 2013, VODOKANAL WON SEVERAL NATIONAL AND INTERNATIONAL AWARDS:

Vodokanal won 10th V.I. Vernadsky National Environmental Award in the nomination "Global Ecology" (to mark the Northern Tunnel Collector Completion Project).

Vodokanal also became laureate of the international award "For compliance with international standards and requirements imposed on business processes, management quality, and final product".

Vodokanal was awarded a diploma for implementation of XXI century high-tech innovative solutions in the water supply and sanitation filed.

AMONG OTHER VODOKANAL AWARDS ARE:

• certificate and medal "Leader of Russia 2013";

• certificate "Recognition of Special Achievements in Implementation and Maintenance of an Outstanding Management System";

• honorary diploma of the Union of Construction Associations and Organizations;

• diploma for years-long active involvement in the development of methodological support for works and services of the utilities sector and the development of standards for the maintenance and repair of water supply and sanitation equipment and facilities;

• honorary diploma of the Federal Environmental, Industrial and Nuclear Supervision Service of Russia;

• diploma for outstanding achievements in business development and significant contribution to the strengthening of economy of St. Petersburg and Leningrad Region in connection with 155th anniversary of Vodokanal;

• winner diploma of the international award PROBA-IPRA GWA 2013 in "The Best Social PR-project" nomination ("Help the Pinnipeds" project) and diploma of finalist in "Best Corporate PR-Campaign" nomination for the "Vodokanal in the Environment Year" project.

IN 2013, DIRECTOR GENERAL OF SUE "VODOKANAL OF ST. PETERSBURG" FELIX V. KARMAZINOV WAS AWARDED AN HONORARY DIPLOMA AND LAPEL PIN OF THE STATE DUMA OF THE FEDERAL ASSEMBLY OF THE RUSSIAN FEDERATION FOR SIGNIFICANT CONTRIBUTION TO THE DEVELOPMENT OF LEGISLATION AND PARLIAMENTARY SYSTEM, SECURING OF CITIZENS' RIGHTS AND FREEDOMS, STRENGTHENING OF DEMOCRACY AND CONSTITUTIONAL ORDER, FOR SOCIAL AND POLITICAL ACTIVITY IN THE RUSSIAN FEDERATION.



At the international conference "Vodokanal: Innovative Path of Development" dedicated to the company's 155th anniversary and the completion of the major environmental project of 2013, namely, the Northern Tunnel Collector Project in St. Petersburg, Felix Karmazinov was awarded the lapel pin "V.I. Vernadsky Order" (established by the V.I. Vernadsky non-governmental environmental foundation). This pin is awarded to outstanding scientists, statesmen and public persons for special merits and scientific achievements in the field of ecology, sustainable use of natural resources and environmental protection.

Within the framework of the international conference "Vodokanal: Innovative Path of Development", the Mayor of Turku Aleksi Randell awarded the Director General of Vodokanal with a commemorative medal "In Honour of 60th Anniversary of Twin-City Relationship between St. Petersburg and Turku". AMONG THE RECOGNITIONS BESTOWED ON FELIX KARMAZI-NOV IN 2013 IS THE HONORABLE DIPLOMA OF THE FEDERATION COUNCIL FOR HIS VIGOROUS ENVIRONMENTAL ACTIVITY, PAR-TICIPATION IN ENVIRONMENTAL FORUMS AND THE CLEAN WATER PROJECT, AND GENERATION OF NEW IDEAS.







FINANCIAL RISK MANAGEMENT

SUE "VODOKANAL OF ST. PETERSBURG" FOLLOWS A BALANCED FINANCIAL POLICY BASED ON THE STRATEGIC PLAN AND LONG-TERM PERSPECTIVE

The forecasting principle is unconditional compliance with the key financial ratios calculated according to both Russian and International Financial Reporting Standards and maintained as recommended by the International Financial Institutions.

To make a long-term forecast, the company

uses its financial model calculated for the period up to 2035.

The model evaluates Vodokanal's financial capabilities taking into account the big investment projects implemented with the company's own or borrowed funds. It takes account 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 dynamic analysis and monitoring of Vodokanal's results. The monitoring and analysis results provided by the financial model are promptly used by Vodokanal management to make the 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 to mitigate all risk types. Internal audits are made by a separate department within the Vodokanal administration. Scenario-based approach, industry analysis and SWOT analysis are used by Vodokanal as risk identification and assessment methods.

Furthermore, property insurance and third-party insurance of Vodokanal as the owner of hazardous production facilities are used as a risk reduction tool.

FINANCIAL RISK MANAGEMENT IN 2013

IN 2013, VODOKANAL CARRIED ON LONG-TERM FORECASTING AND FINANCIAL MODELING TO MINIMIZE FINANCIAL RISKS

Continuous monitoring of financial situation and assessing its potential impacts on the key financial indicators enabled prompt updating of financial policy and helped maintain the key financial ratios defining the company's financial standing and solvency at the proper level.

In 2013, Vodokanal continued improving its financial model. The improved model corresponds to the European level and allows to predict and analyze Vodokanal's key financial indicators in accordance with IFRS.

Moreover, the model allows to forecast the impact of big investment projects implementation scenarios on the key indicators of the company's financial and economic activity in the long-term perspective. As a result, the company can choose the most effective implementation scenario minimizing any financial risks.

In 2013, in view of unstable rouble-

to-euro exchange rate (Vodokanal's debt service obligations to international financial institutions totaling MEUR 125 as of the end of 2013) it was decided to hedge the company's interest rate and exchange risks. Prequalification for a master agreement on forward transactions in financial markets was conducted. According to the qualification results the master agreement was signed with Goldman Sachs Bank. The plan is to complete the hedging of the company's interest rate and exchange risks in 2014, thus enabling fixation of loans repayment and debt servicing amounts irrespective of any currency fluctuations.

Moreover, for the purpose of increasing the company's current assets, in 2013 a 1,667 Mio. RUB loan was taken in Sberbank with the repayment deadline December 31, 2014. The interest rate was determined on the basis of an open auction held on 04.07.2013 in the electronic trading system of the closed joint-stock company "St. Petersburg Stock Exchange" among the first-class credit institutions and amounted to 7.99% per annum, which is below the Bank of Russia refinancing rate.

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 investmentgrade credit ratings in 2013:

S&P – BB+. POSITIVE OUTLOOK MOODY'S – BAA2. STABLE OUTLOOK.

However, given the company's sound policy of financial risk management, the rating outlook of SUE "Vodokanal of St. Petersburg" was changed from "stable" to "positive" by the rating agency Standard & Poor's in November 2013.

NON-FINANCIAL RISK MANAGEMENT

VODOKANAL'S INTERNAL CONTROL FUNCTION HAS A SPECIAL DEPARTMENT THAT DEALS WITH PREVENTIVE IDENTIFICATION OF THE COMPANY RISKS AND IMPLEMENTATION OF RISK MINIMIZATION ACTIVITIES

The internal control department works to achieve the following objectives: • ensuring the reliability of financial and managerial information;

• protection of the company assets and supporting the effective use of the company resources;

• assistance in optimization of the company organizational structure;

• compliance with the applicable laws of the Russian Federation and St. Petersburg and the company internal regulations;

• implementation of financial and economic activity plans.

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

during inspections of the company departments;

• by analyzing the range and prices of goods and services procured by the company in the course of operations;

• during the examination of company basic and supporting processes.

General procedures for internal control of departments and internal auditing are formulated and approved. Inspection reporting rules and requirements to the form and contents of reports are issued. Development of inspection and audit methods for different types of corporate activities is ongoing. SEGMENTATION OF NON-FINANCIAL RISKS WAS MADE BY VODOKANAL AS A PART OF SELF-ASSESSMENT IN ACCORDANCE WITH THE EFQM EXCELLENCE MODEL. THE KEY ASPECTS OF THE COMPANY ACTIVITIES WHICH MAY LEAD TO RISKS WERE IDENTIFIED. The non-financial risks are systematically managed by the company using a process-

managed by the company using a process based approach in order to restrain possible losses of SUE "Vodokanal of St. Petersburg".

To minimize the risks associated with the customer dissatisfaction with 1 water and wastewater services, the guality 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 the mass media), as well as questionnaires and customer satisfaction surveys, help mitigate this risk, too. Internal and external audits under the Quality Management System (EMS) promptly identify the management areas to be improved and help improve the processes at all stages of the service life cycle. In this way, the company performance can be enhanced and customer satisfaction raised.

SUSTAINABLE USE OF NATURAL RESOURCES, SYSTEM APPROACH TO THE CORPORATE MANAGEMENT, STRONG CONTRIBUTION TO THE DEVELOPMENT OF REGULATORY ACTS, ENVIRONMENTAL AWARENESS-RAISING, INNOVATIVE TECHNOLOGIES, AND INTERNAL AND EXTERNAL BENCHMARKING – ALL THAT IS INTEGRATED INTO THE CORPORATE MANAGEMENT CULTURE AND LEADS TO MINIMIZATION OF RISKS

2 The risks associated with negative impacts on the environment are managed on the basis of the environmental management system ISO 14001 used by the company.

Vodokanal enhances the reliability of water supply and sewerage, improves wastewater treatment and sludge management technologies, stops the discharge of backwash water from water treatment plants using it for process needs after a proper treatment, and addresses the environmental impacts of its vehicles.

The ISO 50001 energy management system was implemented and certified in 2012 to raise energy efficiency at the plants in a systematic way. Improved occupational health and safety management on the basis of OHSAS 18001 mitigates the risks associated with emergency situations and consequently, leads

3

4

to the improvement of service quality and mitigation of the environment pollution risks. Currently, professional risks assessment is not only an important part of occupational health and safety management but also a part of the corporate management. This activity is implemented on the basis of OHSAS 18001 international standard and national regulatory acts.

To alleviate the risks associated with undesirable changes

5 in legislation, Vodokanal makes a strong contribution to the development of regulations, makes suggestions and argues its position.
6 To prevent the risks associated with low culture of water use, Vodokanal widely implements environmental awareness-building programmes.

7 The risks associated with pollution of potable water source (the Neva) are mitigated by early detection of pollution events. In particular,

Vodokanal has implemented the river water biomonitoring by crayfish at all its water intakes. Oil spills in the river are detected by the monitoring system installed on one of the bridges across the Neva, upstream of the first city water intake.

8 To minimize the risks associated with accidents and hazardous working conditions Vodokanal is doing its best to improve working conditions, to reduce accident frequency rates and to

prevent emergency situations 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; makes analyses and assessments of the 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 systematic approach to the information security.

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

development of risk management;
maintenance and development of energy management system according to the ISO 50001 ideology;

maintenance and development 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.

NON-FINANCIAL RISK MANAGEMENT IN 2013

IN 2013, THE NON-FINANCIAL RISK MANAGEMENT PROCESS WAS UNDER CONSTANT CONTROL BASED ON ISO EUROPEAN STANDARDS AND EFQM EXCELLENCE MODEL, THUS ENSURING AN EFFICIENT COMBINATION OF MEASURES TO ALLEVIATE THE RISKS TAKEN BY THE COMPANY AND MEASURES TO MINIMIZE, AVOID OR REDISTRIBUTE THE UNACCEPTABLY HIGH RISKS

The risk management process is designed to reduce the probability of unfavorable outcome and to limit potential losses of SUE "Vodokanal of St. Petersburg" when any risk event occurs.

Non-financial risk control comprises:

• identification of all significant non-financial risks (risk map);

• monitoring of the progress of designed actions for mitigation of all significant risks;

- immediate response to identified risks or to the situations where the identified risks are near threshold levels;
- effectiveness analysis of risk management actions by the top management.

GENERAL NON-FINANCIAL RISK MAP OF SUE "VODOKANAL OF ST. PETERSBURG"

Risk	Risk factors	Degree of impact	Risk management measures
	POLITICAL AND RE	GULATORY RISKS	
Risk of economically unjustified restrictions in the state regulation of tariffs for water supply and wastewater disposal	State authorities decide to freeze or limit the growth of tariffs	High	Close interaction with the regulating authority (St. Petersburg Tariff Committee)
	OPERATION	IAL RISKS	
Production-related and technical risks (risks of breakdowns or incidents)	Losses due to irrecoverable damage of production facilities	High	Company investment programme implementation; Control over the scope and time schedule of repairs
	Losses due to higher cost of providing water and wastewater services compared to planned operation of equipment	High	
Shutdown of process equipment as a result of any terrorist act or natural disaster in the region	Terrorist or naturally-occurring threats	Above average	Implementation of antiterrorist measures in compliance with the law of the Russian Federation; Protection against potential consequences of accidents, catastrophes and natural disasters; Insurance of property and personnel
Customers dissatisfaction with the quality of water and wastewater services	Lower quality of the services provided	Above average	Management system improvement on the basis of ISO 9001 and EFQM Excellence Model
Corruption risks (potential conflicts of interest)	Losses due to economically unjustified terms of transactions with counterparts and payments for nonexistent works	Above average	Enhancement of internal control to prevent conflicts of interest; Compliance with anti-corruption policy and the corporate ethics code
Risks of accidents at production sites	Negative impact on the life and health of the company personnel resulting from their operational activity	Average	Compliance with the Russian laws pertinent to occupational health and safety; improvement of the management system on the basis of OHSAS 18001
Risks of non-performance of obligations by contractors	Nonfulfillment of contractual obligations regarding the time schedule and quality of performed works, supply of equipment and components	Below average	More detailed preliminary analysis of counterparty risks and control over performance of obligations by counterparties
	STRATEG	IC RISK	
Strategic risk	Incorrect long-term planning of the company development	Above average	Regular updating of the strategic development plan
	environmei	NTAL RISKS	1
Water quality deterioration and pollution of the Neva	Negative impact of ship traffic and agriculture on the Neva water	High	Maintenance and improvement of the Neva water monitoring system, incl. biomonitoring
Risk of negative impact on environment	Negative impact on environment resulting from the company activity	Above average	Management system improvement on the basis of ISO 14001 and ISO 50001

Annual self-assessment of the company activities in accordance with the EFQM Excellence Model enabled successful integration of the approaches applied for non-financial risk management into a holistic system.





PARTICIPATION IN THE ENVIRONMENT YEAR

"THE PLAN OF MAIN EVENTS IN THE ENVIRONMENT YEAR 2013 TO BE IMPLEMENTED BY VODOKANAL" WAS DEVELOPED BY VODOKANAL IN ACCORDANCE WITH THE ORDER OF THE PRESIDENT OF THE RUSSIAN FEDERATION NO.1157 DATED 10 AUGUST 2012 "ON HOLDING THE ENVIRONMENT YEAR IN THE RUSSIAN FEDERATION"

The Plan sets out measures aimed at ensuring the environmental safety and improvement of social standards of living for the population of St. Petersburg, and environmental awareness-raising activities.

The biggest environmental project, completion of the Northern Tunnel Collector, was the major event in the Environment Year in St. Petersburg. With the Northern Tunnel Collector in place, the discharge of 122 Mio. m³/year of untreated wastewater could be stopped, and wastewater treatment level in the city reached 98.4%. Furthermore, direct discharge of backwash water from Main WTP could be stopped too. Now all wastewater is diverted to the Northern WWTP via the Northern Tunnel Collector.

Construction of permanent snow-melting stations (PSMS) to reduce the burden on the Gulf of Finland continued. In 2013, three new snow-melting stations with the total capacity of 17,000 m³/day were put into operation.

In 2013, sources of pollution of Lake Ladoga and the Neva were identified with the aim to eliminate them in future.

A "road map" for reduction of negative impacts on water environment of the Baltic Sea, Lake Ladoga and Lake Onega was developed in the framework of preparations to the Baltic Sea Action Summit held in St. Petersburg in April 2013. Main fields of joint activities aimed at the reduction of negative impact on the environment were identified.

In 2013, for the purpose of building the culture of water use and careful attitude to the environment, Vodokanal organized various environmental awareness-raising events, e.g. the project "Water Olympiad", conferences "Water – the Source of Life on Earth", the Russian-British project "Green is great: freshening up ideas for water use", panel discussion "Environmental Education and Public Awareness-Raising" (the latter was held at the XIII International Environmental Forum "The Baltic Sea Day"), etc.

Establishment of a pinnipedian rehabilitation center in Repino was a follow-up of Vodokanal activities in the field of the Baltic Sea protection.

COMPLIANCE WITH HELCOM RECOMMENDATIONS

BEING THE LARGEST CITY IN THE BALTIC SEA REGION, ST. PETERSBURG BEARS A SPECIAL RESPONSIBILITY FOR THE CONDITION OF THE SEA

The Convention on the Protection of the Marine Environment of the Baltic Sea (Helsinki Convention) was signed by all Baltic countries in 1974. For the first time ever, the Convention addressed all polluters located in the catchment area of the Baltic Sea.

After the collapse of the USSR and other geopolitical changes in 1990s, the new Helsinki Convention was signed in 1992 by the states located along the coast of the Baltic Sea and the European Community, and came into effect after ratification on January 17, 2000. The Russian Federation approved the 1992 Helsinki Convention in October 1998.

In 1992, the Comprehensive Programme of environmental protection measures in the Baltic Sea Region adopted as a part of Helsinki Convention listed the biggest pollution sources of the region and named them "hot spots". Initially, the Programme specified 132 "hot spots" located in all countries of the Baltic Sea Region. Out of the 18 "hot spots" located in Russia, 6 were in St. Petersburg including 4 "hot spots" with 19 "hot subspots" being the responsibility of SUE "Vodokanal of St. Petersburg". The main tasks of Vodokanal with regard to the commitments taken by the Russian Federation under the Helsinki Convention are as follows:

• closure of untreated wastewater discharges;

• reduction of nutrient load on the Baltic Sea basin.

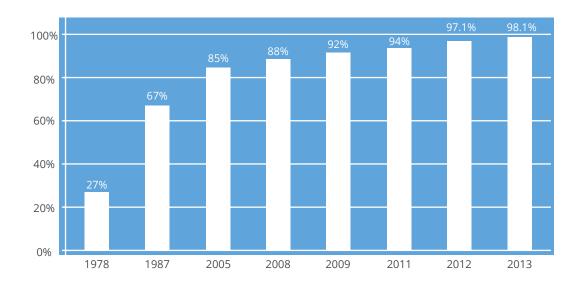
Since then, Vodokanal has made a huge work to phase out untreated wastewater discharge into the water bodies and to implement and modernize wastewater treatment technologies. As a result, the major part of Vodokanal's "hot spots" was eliminated.

In the beginning of 2014, only 3 hot sub-spots (construction of the Northern Tunnel Collector, wastewater treatment plants in Kolpino and Metallostroy) remained. Actually, the Northern Tunnel Collector sub-spot was eliminated in October 2013 upon the project completion. Construction of the Northern Tunnel Collector is one of the key projects under the Neva Untreated Wastewater Discharge Closure Programme implemented by Vodokanal. The NTC collects wastewater from the area of 330 square kilometers with a population of 2 million (Krasnogvardeysky, Kalininsky, Vyborgsky, Petrogradsky, and Primorsky districts, right-bank part of Nevsky district and part of Tsentralny district) and transports it to the Northern Wastewater Treatment Plant for treatment. The sub-spot "Construction of the Northern Tunnel Collector" will be officially closed at the forthcoming meeting of HELCOM LAND in May 2014.

The closure of hot sub-spots "Kolpino WWTP" and "Metallostroy WWTP" is planned for 2018. By that time, reconstruction of Kolpino WWTP will be completed and the plant capacity increased to 140,000 m³/day, while Metallostroy WWTP will be closed with the wastewater diverted to the Central Wastewater Treatment Plant).

Overall, 199 discharges of untreated municipal sewage, industrial wastewater and storm runoff, 475,000 m³/day in total, were diverted to the municipal sewerage system under the Neva Untreated Wastewater Discharge Closure Programme in 2003–2013.





PERCENTAGE OF WASTEWATER TREATMENT

In parallel, Vodokanal is improving its wastewater treatment processes in compliance with the HELCOM recommendations.

In the 1990s, HELCOM adopted unified limit values for concentrations of nutrients, nitrogen and phosphorus, for all Baltic countries. These requirements are getting more stringent.

With the adoption of new recommendation for municipal wastewater treatment on November 15, 2007, the requirements to wastewater treatment quality became more stringent. Concentrations of total nitrogen and total phosphorus in the treated effluent discharged into water bodies shall not exceed 10 mg/l and 0.5 mg/l, respectively.

Since 2005, enhanced biological treatment and chemical phosphorus precipitation methods have been used at St. Petersburg wastewater treatment plants to meet new requirements and achieve stable nutrients removal performance. Since 2008, with the chemical phosphorus precipitation process implemented at all municipal WWTPs, the total phosphorus removal efficiency has grown to 89-90%, and phosphorus discharge into the Gulf of Finland decreased 3.7 times.

The following projects are being implemented to improve nutrients removal from wastewater:

 – RECONSTRUCTION OF NORTHERN WWTP including implementation of UCT process by SWECO (Sweden) for enhanced removal of nutrients;

- SMALL WASTEWATER TREATMENT PLANTS RECONSTRUCTION PROGRAMME (in Pushkin, Kolpino, Kronstadt and Pontonny).

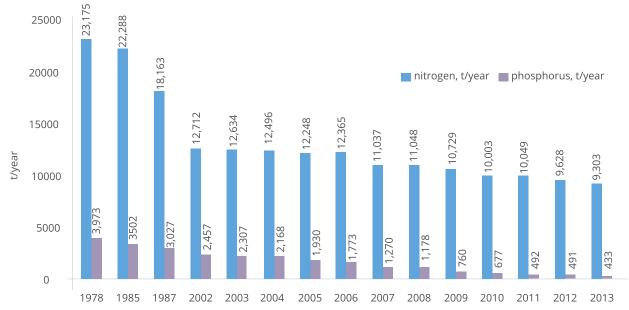
The following works are performed under the Small WWTPs project: – KRONSTADT WWTP – reconstruction of

aeration tank for implementation of UCT process, rehabilitation of primary / secondary clarifiers and the grit channel; – KOLPINO WWTP – rehabilitation of grit channels, two primary clarifiers, two secondary clarifiers and installation of raw sludge pumps;

 PONTONNY WWTP – installation of rotating bar screens, rehabilitation of secondary clarifier no.3, repairs of two grit channels including replacement of jet pumps, repair of sludge thickener;

– PUSHKIN WWTP – rehabilitation of mechanical screens, installation of raw sludge pumps, four new air blowers, and a new drum screen for raw sludge.

Currently, St. Petersburg fully complies with the HELCOM recommendation on "Municipal Wastewater Treatment" regarding the discharge of nutrients, adopted for cities with a population of over 200,000. By the end of 2013, concentrations of total nitrogen and total phosphorus in the effluent were 9.8 mg/l and 0.35 mg/l, respectively. Now, the volume of nitrogen and phosphorus discharged into the water bodies of St. Petersburg continues to decrease.



DISCHARGE OF POLLUTANTS

Since the recovery of the Baltic Sea water environment is only possible through joint efforts in the field of innovation and awareness-raising, the Memorandum of Understanding was signed between HELCOM and SUE "Vodokanal of St. Petersburg" on April 19, 2013, regarding cooperation under the project "Implementation of the HELCOM Baltic Sea Action Plan (BASE Project)". The subject of the Memorandum is the support to joint activities for the Baltic Sea recovery. The Memorandum provides for information exchange and pooling of resources with the aim to implement model wastewater treatment technologies in the Leningrad Region settlements pursuant to the HELCOM recommendations.

Moreover, a pilot project was launched under the Memorandum of Understanding

between HELCOM and SUE "Vodokanal of St. Petersburg" to identify the sources and types of pharmaceuticals discharged from St. Petersburg into the Baltic Sea (with the involvement of scientists from the Russian Academy of Sciences Environmental Safety Research Centre). The focus of the study was diclofenac and ethinylestradiol, as their negative impact on the hemathermal species in the Baltic Sea had been reported. In 2013, methods of diclofenac and ethinylestradiol detection in water were developed, and the first set of samples taken from raw sewage and treated effluent was tested.

At the same time, preparations began for implementation of another pilot project, detection of micro-plastics in wastewater.

On October 3, 2013, the Ministers of

Environment and high-level officials from nine Baltic countries and the European Union adopted the HELCOM Copenhagen Declaration. In the Declaration all parties agreed that the "regional actions plan on marine litter shall enable ... development and testing of technology for removal of micro-plastics and nanoparticles in municipal wastewater treatment plants by 2020 and inter alia work with industry to ban the use of micro-plastics and on the assessment of the use of nanoparticles within the production process (e.g. in cosmetics)". Therefore, it is important to get reliable information on microplastics concentrations in wastewater. A programme is developed to assess concentrations of micro-plastics in influent wastewater and treated effluent (currently, it is in the pre-implementation phase).

ESTABLISHMENT OF PUBLIC COUNCIL FOR THE GULF OF FINLAND YEAR

PREPARATIONS FOR THE GULF OF FINLAND YEAR TO BE CONDUCTED IN 2014 IN THREE COUNTRIES, RUSSIA, FINLAND AND ESTONIA, STARTED IN 2013. THE GULF OF FINLAND YEAR PUBLIC COUNCIL WAS ESTABLISHED IN ST. PETERSBURG. THE FIRST MEETING OF THE COUNCIL WAS HOSTED BY VODOKANAL ON 22 MARCH, THE BALTIC SEA DAY

The governments of the three countries agreed to co-organize the Gulf of Finland Year in 2012. The main objective of the initiative is to improve environmental conditions in the Baltic Sea Region. During the Year, pollution level of the Baltic Sea coast will be studied, and recommendations on the sea water protection will be issued. The impact of ship traffic on the marine environment and preservation of biodiversity and fish resources will be a special focus area.

The trilateral cooperation between Russia, Estonia and Finland aimed at the protection of marine environment in the Gulf of Finland began in 1992. However, the first "Gulf of Finland Year" was actually organized as early as in 1960s; for the second time such year was implemented in 1996 – in all three countries at the ministerial level. The initiative to organize one more Gulf of Finland Year was proposed by both the officials and the scientific community. The Russian President Vladimir Putin, the Finnish President Sauli Niinistö, and the Estonian President Toomas Hendrik Ilves became patrons of the Gulf of Finland Year.

National public councils have been established to prepare the Year agenda. In our region, such council is headed by the Governors of St. Petersburg and Leningrad Region: Georgy Poltavchenko and Alexander Drozdenko.

The members of the Public Council are: Art Director of Mariyinskiy Theatre V.A. Gergiyev, Director of the State Russian Museum V.A. Gusev, Director of the State Hermitage Museum M.B. Piotrovskiy, Chairman of the Union of Journalists of St. Petersburg and Leningrad Region L.D. Fomicheva, Director General of SUE "Vodokanal of St. Petersburg" F.V. Karmazinov, and representatives of industrial companies, public organizations, executive and legislative authorities, etc. (18 members in total).

There were two meetings of the Public Council in 2013 (they were hosted by Vodokanal). The Council members believe that the Gulf of Finland Year should be a big event not only for professional environmentalists and the scientific community. It is a good opportunity to draw the public attention to different issues in relation to careful and respectful attitude to water in general and the Baltic Sea in particular.

Vodokanal Director for Personnel and Security A.K. Kinebas is appointed executive secretary of the Public Council "Gulf of Finland Year 2014".

PARTICIPATION IN THE UN GLOBAL COMPACT

The UN Global Compact (UN GC) is the world's largest voluntary initiative bringing together companies and organizations that share ten principals for business in the area of human rights, labour, the environment and anti-corruption.

SUE "Vodokanal of St. Petersburg" joined UN GC in April 2007 and became one of the first Russian companies that signed the relevant agreement. Vodokanal's support of UN GC initiative demonstrates the Company's eagerness to comply with international standards in all operation areas and confirms the Company's intention to develop rapidly social projects.

On 17 December 2008, the UN Global Compact Network in Russia was launched at the general meeting of UN GC members, which took place in the RF.

Anatoly K. Kineba

The Steering Committee is the executive body of the UN GC Network in Russia. It is comprised of ten members elected for one year. There are permanent members of the Steering Committee: one representative from the Russian Union of Industrialist and Entrepreneurs, one representative from the UN and one representative from the government authorities. Five representatives from the member-companies of the UN Global Compact Network in Russia and one representative from non-commercial organizations of the Russian Network are elected by the general assembly.

For two years Director for Personnel, Safety and Security Mr. Anatoly K. Kinebas was elected to the Steering Committee of the UN GC Network in the RF. In 2012 and 2013, Vodokanal coordinated the environmental activities within the implementation of the UN GC ten principles. In 2014, it was decided that Vodokanal would continue to coordinate works in this field.

To ensure successful introduction of the UN GC principles Vodokanal participates in working meetings, relevant conferences and workshops organized by the UN GC Network in Russia. During such events the stakeholders exchange experience and demonstrate best available practices. In April 2013, Vodokanal took part in a traditional festive event of socially responsible companies – the Patron of Arts Day. This event was organized by the UN GC Network in Russia on 13 April 2013 in the Hermitage Theater of St. Petersburg.

In September 2013, St. Petersburg Vodokanal participated in the UN Global Compact Leaders' Summit (on the delegation of the UN GC Network in Russia). The Summit took place on 19–20 September 2013 in New York under the chairmanship of the UN Secretary-General Ban Gi Moon.

The Leaders' Summit is a central international platform of the UN Global Compact enabling the participants to present to the world community their achievements in sustainable development, establish new business contacts and discuss issues related to the promotion of the UN GC ten principles.

The Leaders' Summit confirmed the principles of corporate social responsibility and that the principles of sustainable development had been increasingly in demand with the lapse of time. This fact is equally related to the state-owned companies and to the private sector.

During the Leaders' Summit the representatives of Vodokanal participated in the briefing – "Russian Hour. Investments of the Russian Business into Sustainable Development". At the briefing St. Petersburg Vodokanal reported about its achievements in the environment protection, including the completion of the Northern Tunnel Collector Project and various environmental and awareness-raising programmes.

The discussion panel (organized during the Leaders' Summit) – Rational Use of Water Recourses and Development Tasks after 2015 – acknowledged that rational water use issues remained urgent at the present day.

Three new platforms for sustainable development – business for the world, sustainable agriculture and education – were launched at the Leaders' Summit. Summit participants turned their attention to the fact that investments in education met public needs. For Vodokanal it confirmed the importance of educational initiatives oriented to schoolchildren and students. On 20–22 December 2013, Vodokanal participated in the H2O Film Festival. This is not by accident that water became the topic of the festival, since the year 2013 was announced by the UN General Assembly the Year of International Water Cooperation.

In 2013, Vodokanal was involved in the development of the Best Practices Guide "Sustainable Development: the Role of the Russian Business". The Environmental Section of the Best Practices Guide contains the article devoted to fostering careful attitude to water.

BY JOINING THE UN GC VODOKANAL SHARES THE VIEW THAT BUSINESS OPERATIONS BASED ON TEN FUNDAMENTAL PRINCIPLES FACILITATE BETTER SUSTAINABILITY, FAIRNESS AND VISIBILITY OF GLOBAL MARKET, ENCOURAGE THE DEVELOPMENT OF RESPONSIBLE CIVIL SOCIETY AND STABLE FRAMEWORK FOR NATIONAL AND GLOBAL ECONOMY. ATTENTION TO PERSONNEL NEEDS, RESPONSIBILITY TOWARDS POPULATION, COMPLIANCE WITH CUSTOMERS' REQUIREMENTS URGE OUR COMPANY TO PAY CLOSER ATTENTION TO THE ENVIRONMENT PROTECTION AND INDUSTRIAL SAFETY.

ABOUT THE COMPANY

INVOLVEMENT IN THE DEVELOPMENT OF SUBORDINATE ACTS TO THE LAW "ON WATER SUPPLY AND WASTEWATER DISPOSAL" AND OTHER REGULATIONS

IN 2013, VODOKANAL'S EXPERTS PARTICIPATED IN THE DEVELOPMENT OF THE MOST IMPORTANT SUBORDINATE ACTS PROVIDED IN THE FEDERAL LAW "ON WATER SUPPLY AND WASTEWATER DISPOSAL" NO.416-FZ DATED 7 DECEMBER 2011 AS WELL AS OTHER REGULATIONS BEING OF DIRECT RELEVANCE TO WATER AND WASTEWATER SERVICES

Such documents include, but not limited to:

• Cold water supply and wastewater disposal rules (approved by the decree of the Russian Federation Government no.644 dated 29 July 2013);

• Standard contract forms for cold water supply and wastewater disposal (approved by the decree of the Russian Federation Government no.645 dated 29 July 2013);

• Basic pricing principles in water supply and wastewater disposal, Rules for the regulation of water and wastewater tariffs, Rules for the determination of investment capital in water and wastewater sector, Rules for investment capital records, Rules for the calculation of the investment capital rate of return (approved by the decree of the Russian Federation Government no.406 dated 13 May 2013 "On state regulation of tariffs for water and wastewater services");

• Rules for commercial metering of water and wastewater (approved by the decree of the Russian Federation Government no.776 dated 4 September 2013);

• Rules for the development and approval of water and wastewater master plans; master plan requirements (approved by the decree of the Russian Federation Government no.782 dated 5 September 2013);

• Wastewater composition and properties control regulations (approved by the decree of the Russian Federation Government no.525 dated 21 June 2013);

• Customer categories subject to special discharge limits of pollutants, other substances and microorganisms (approved by the decree of the Russian Federation Government no.230 dated 18 March 2013);

Rules for decreasing the negative environmental impact fee for companies and their customers, which implement nature protection measures (approved by the decree of the Russian Federation Government no.347 dated 17 April 2013);
Rules for the determination of discharge limits of pollutants, other substances and microorganisms for customers, which discharge wastewater into water bodies via the centralized wastewater system (approved by the decree of the Russian Federation Government no.393 dated 17 April 2013);

• Regulation on decreasing the discharges of pollutants, other substances and microorganisms into surface and underground waters as well as catchment basins (approved by the decree of the Russian Federation Government no.317 dated 10 April 2013). Vodokanal's experts also drafted the below-listed regulations and facilitated their approval, as a prerequisite for the implementation of the Federal Law "On Water Supply and Wastewater Disposal" no.416-FZ dated 7 December 2011 in the territory of St. Petersburg. Such regulations include:

St. Petersburg Law no.113–23 dated
13 March 2013 "On delineation of powers among St. Petersburg public authorities in water and wastewater sector";
Resolution of St. Petersburg Government no.940 dated 29 November 2013 "On measures to implement St. Petersburg Law "On delineation of powers among St. Petersburg public authorities in water and wastewater sector";

• Resolution of St. Petersburg Government no.989 dated 11 December 2013 "On the approval of St. Petersburg water and wastewater master plan up to 2025 with an outlook to 2030".

Vodokanal's experts were involved in an intensive work at different meetings with executive bodies of the Russian Federation and professional community to develop and adopt regulations on the provision of public services as well as other waterrelated spheres.

Moreover in 2013, experts of the Company made valuable contribution to the development of changes to the Federal Law "On Water Supply and Wastewater Disposal" no.416-FZ dated 7 December 2011 targeted to the improvement of the incorporated legal mechanics. The draft of such changes was submitted to the State Duma of the Russian Federation and brought for the approval of the authorized governmental bodies.

ACTIVITIES OF THE INTERNATIONAL ADVANCED WATER TECHNOLOGIES CENTRE

IN 2013, ACTIVITIES OF THE INTERNATIONAL ADVANCED WATER TECHNOLOGIES CENTRE, CO-FOUNDED BY ST. PETERSBURG VODOKANAL AND LAHTI REGION DEVELOPMENT LADEC LTD. (FINLAND), CONTINUED

More than twenty years ago, the partnership between St. Petersburg Vodokanal and Finland started with training activities. In the course of time, such approach proved to be absolutely right. Although Vodokanal's specialists now train their colleagues from other Russian regions, they continue to learn, because the company development is not possible without continuous improvement of the staff proficiency level. For this very purpose and under the aegis of the working group for environment and nature conservation of the Northern Dimension Business Council, the non-commercial partnership – International Advanced Water Technologies Centre – was established.

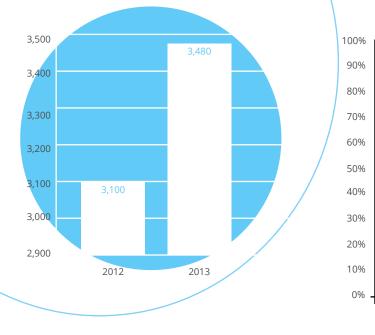
In 2013, the Centre was registered as a non-commercial partnership.

In 2013, over 30 training activities were held for managers and experts in water sector as well as for students and schoolchildren.

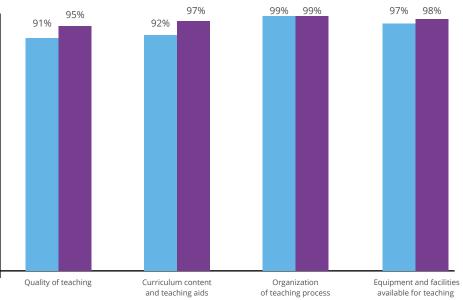
Totally, about 3,500 Russian and foreign water experts took part in the training activities of the Centre in 2013, including over 500 water and wastewater experts.

The geographic boarders of cooperation were significantly extended, since participants from new regions were involved in the Centre activities. Over 30 water companies from Russia and CIS, tens of Russian and foreign water sector-related organizations participated in the activities in 2013.

PARTICIPANTS OF THE CENTRE ACTIVITIES IN 2012 AND 2013



SATISFACTION LEVEL - 2013 VS. 2012



The Centre arranges the following types of events: workshops, laboratory lessons, lectures, interactive lessons, on-the-job training in Russia and abroad. Lectures and lessons were conducted by Vodokanal experts and leading specialists from European institutions and companies. The target-groups of the Centre are managers and personnel of water companies, experts of research institutions, water quality control and research laboratories.

The Centre also dealt with students from water or other higher education institutions as well as 8–11 grade schoolchildren.

In 2013, one of the promising directions of activities became the organization of workshops for foreign students. For example, on 15 May 2013, the Centre organized at the Central Wastewater Treatment Plant the seminar for PhD students from Finnish universities.

In 2013, the Centre for the first time started to organize on-the-job training for experts from external companies.

On 18–22 November 2013, the Centre together with the Irkutsk State Technical University organized on-the-job training for water experts from the towns of Eastern Siberia within the framework of the Presidential Programme for upgrading the skills of engineers for 2012–2014.

Of vital importance for the development of the Centre is its participation in international water events. On 20–21 March 2013, the Centre presented its activities in the exhibition booth of Ladec in the course of ChemBio 2013 in Helsinki.

To ensure continuous improvements the Centre pays special attention to the opinion of the people who participate in various activities. The feedback from the trainees is based on the questionnaires.

The questionnaires cover three main items: satisfaction with the organization of the event, proposals to improve organization of the training process and topics the participants would like to include into future training programmes. The most advantageous and interesting opinions are

2012 2013

used to update programmes.

The Centre puts special emphasis on work with the younger generation. First of all, this is environmental education.

For this purpose an extensive experience and premises of the Youth Environmental Centre of SUE "Vodokanal of St. Petersburg" are used.

Schoolchildren participate in interactive lessons learning how to reduce the load on the environment of the region in general and, of course, on the Baltic Sea.

In the end of 2012, the Centre received the award as the best international initiative from the Finnish Science Park Association (TEKEL).

The Centre continuously improves its operation not only in terms of quantity but also in quality. It develops new directions and forms of activities, extends the geographical boarders of cooperation.

The Centre creates a unique platform for upgrading professional skills of Vodokanal employees and other experts from water companies in Russian and abroad.

MEMBERSHIP IN THE EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT

SINCE 1 DECEMBER 2011, ST. PETERSBURG VODOKANAL 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. More than 30,000 companies all over the world use principles and instruments developed by EFQM. 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 St. Petersburg Vodokanal 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, distributing and provision of 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;

ABOUT THE COMPANY



 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 selfassessment 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. Since 2005, Vodokanal has started selfassessment 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 selfassessment on the basis of the EFQM Model.

Main stages of interaction with EFQM: • 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 EFOM Excellence Award. The company was the first to achieve such a result among European water companies; • in 2012, St. Petersburg Vodokanal won the best practice competition in creative use of social media organized by the European Foundation for Quality Management (EFOM), 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: • in 2013, Vodokanal's experts acting as EFQM assessors were engaged in examining Russian companies for nomination to "Committed to Excellence" and "Recognized for Excellence" Levels.

MEMBERSHIP IN ASSOCIATIONS, UNIONS AND OTHER ORGANIZATIONS

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

In 2013, 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 twothirds 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 as well as 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 (RAVV); Felix V. Karmazinov, Director General of Vodokanal, is a member of the RAVV 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.

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).

Membership of Vodokanal in the listed organizations was approved by the City

Property Committee pursuant to the Federal Law no.161-FZ dated 14 November 20002 "On state and municipal enterprises".

The fact that Vodokanal has relevant competency certificates enables the Company to perform its daily operation on a full scale and in line with applicable law of the Russian Federation.

It should be reminded that due to the adoption of the Federal Law no.148-FZ dated 22 July 2008 "On introducing amendments to the Town-Planning Code and certain legislative acts of the Russian Federation", 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 (which activities are regulated by the Federal Law no.315-FZ dated 1 December 2007 "On self-regulatory organizations") were authorized to issue permits for particular type of works to building companies.

At present 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.

SUPPORT OF REGIONAL INITIATIVES



St. Petersburg Vodokanal is engaged in various regional initiatives, including environmental awareness.

In 2013, experts of the Universe of Water Museum Complex and the Youth Environmental Centre participated in regional events devoted to the Environmental Protection Year and targeted to environmental awareness among children, the youth, population and city guests.

These events included:

•organization of the city contest "Fundamentals of Safe Water Use" in the framework of the All-Russian School Olympiad in Life Safety, the city round;

• organization of the Interactive Programme "Water, Environment and Myself" for participants of the festival "Europe Days" in St. Petersburg;

presentation of Vodokanal's aware-

ness-building activities and implementation of interactive programme in ECOcinema in the framework of VI Neva Environmental Congress;

•co-organizing of VI All-Russian Scientific Environmental Conference "Water – Source of Life on Earth";

•preparation and implementation of the programme for International Event "Museums at Night";

• co-organizing of children programme at the International Environmental Film Festival "Green Vision";

• participation in the environmental festival and research-to-practice conference "Krasnoselskaya Rainbow";

participation in city festival EcoOkhta;
participation in Museum Programme Festival "Children Days in St. Petersburg".

In 2013, Vodokanal provided its assis-

tance to the organizers of different city events to ensure comfortable environment for participants of such events.

Vodokanal has at its disposal various types of mobile toilets used for public events. Subject to the venue of the public event, number of participants and guests as well as time of year Vodokanal is able to provide both mobile toilet cabins and toilet units on vehicle chassis.

All in all, in 2013 Vodokanal provided mobile toilets for 800 public events, including the New Year, Christmas, Victory Day, Day of the City, Scarlet Sails School-Leaving Festival, Breach of the Siege Day, Children's Day and etc. In addition, in 2013 two religious processions were organized in St. Petersburg for the first time, and Vodokanal provided mobile toilets for the comfort of city inhabitants.



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.

As for its international partners, in 2013 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.

The international cooperation enables Vodokanal to study and implement into its own operations experience of the best foreign companies. One of the most long term partners of the Company is the Ministry of the Environment of Finland which participated in over 50 innovative projects of Vodokanal. Among long standing business partners of Vodokanal there are over 20 Finnish companies and organizations. Vodokanal maintains close partnership with water companies of the Baltic Region cooperating with regard to HELCOM Convention and Clean Baltic Sea Project. The Company has partner relationships with water companies of Helsinki, Stockholm, Tallinn, Hamburg and Berlin. International cooperation assists the Company to solve issues related to efficient benchmarking, investments, environmental protection, technical upgrade and environmental awareness-building.

Since 2009, Vodokanal has been the member of the National Union of Vodokanals and interacted with water companies and governmental authorities for the purpose of introducing new operational standards and technical regulations as well as increasing investment opportunities of the sector. The Company is engaged in reviewing and developing new drafts of water legislation for public utilities, conducts consultations with legislative and executive bodies, exchanges experience with leading housing and public utilities as well as water unions. At present Vodokanal is involved in promoting innovative approaches in housing and public utilities of the Russian Federation and CIS. Vodokanal production branches conducts working meeting with experts

from housing and public utilities of the Russian Federation and CIS and arranges visits to Vodokanal reference plants, where such innovative projects and the best practices have been implemented.

Among Russian partners in the field of innovative technologies there are such companies as Kreal, Arsenal and AViV. Together with these companies Vodokanal obtained 10 protection documents for new technologies.

The partnership with the Russian and European banking community, as well as with different investors is successfully implemented in Vodokanal.

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

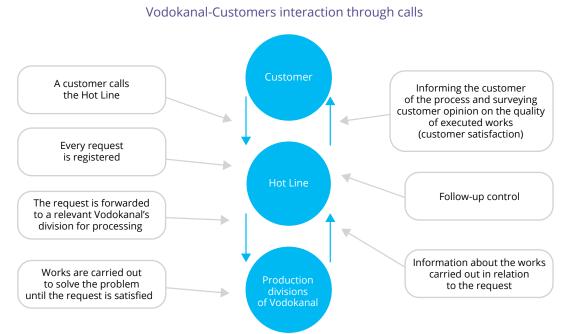
ONE OF THE MOST IMPORTANT ASPECTS OF VODOKANAL ACTIVITIES IS MAINTAINING EVERYDAY CONTACTS WITH CUSTOMERS

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.

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

Since 2003, Vodokanal of St. Petersburg has been operating the Hot Line which receives customer calls round the clock (tel.: +7 (812) 305-09-09).

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



All incoming requests are recorded in the information system of the Hot Line and forwarded to the relevant production division responsible for examination of the network, 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.

IN 2013, 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). On a regular basis Vodokanal conducted working meetings with St. Petersburg International Business Association (SPIBA) with regard to wastewater disposal norms, wastewater treatment quality, standard form contracts for water and wastewater services and installation of local wastewater treatment plants.

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, including drinking water quality, installation of house meters, estimation of public service consumption by an apartment house if there are no metering instruments and interaction with owners (right holders) of non-residential premises of apartment houses.

Vodokanal conducted consultations with the Association of Housing Construction Cooperatives, Housing Companies and Condominiums, discussed issues related to installation of house meters, estimation of wastewater service consumption by an apartment house if there are no limits for wastewater services consumed for the apartment house management needs and boundaries of operating responsibilities of the public service providers toward wastewater network within apartment houses. In 2013, for the second time St. Petersburg Vodokanal organized the Annual Contest for the best customer title – "Cristal Drop".

Major criteria of the contest are timely payment by the customer of water and wastewater services, implementation of nature conservation and water protection measures for the fulfilment of qualitative and quantitative parameters of wastewater discharge limits. One of the key tasks of "Cristal Drop" Contest is to build up close interaction between customers and Vodokanal as well as to enhance further fruitful cooperation.

On 19 April 2013, winners of "Cristal Drop" Contest were announced in the following nominations:

 the title "The best customer among heat supply companies" was awarded to OAO "TGK-1";

• the title "The best customer among organizations which are financed through St. Petersburg budget and not served by the Centralized Accounts Department of the administrative districts of St. Petersburg" was awarded to the Orphanage no.1 (for children with disabilities) of Kirovsky District; • the title "The best customer among organizations which are financed through St. Petersburg budget and served by the Centralized Accounts Department of the administrative districts of St. Petersburg" was awarded to the state funded educational institution "St. Petersburg City Palace of Youth Creativity";

• the title "The best customer among organizations financed through the federal budget" was awarded to St. Petersburg State University;

• the title "The best customer among industrial companies" was awarded to OAO "Zavod Navigator" (water and wastewater consumption up to 10,000 m³/day), OAO "Karl Liebknecht Mechanical Plant of Leningrad" (water and wastewater consumption 10,000–30,000 m³/day), FGUP "Goznak" (water and wastewater consumption over 30,000 m³/day);

• the title "The best customer among housing companies" was awarded to the housing agency no.2 of Kalininsky District and to the housing cooperative Filippov's House;

• the title "The best customer among owners (right holders) of non-residential premises located in apartment houses" was awarded to OOO "Chayka".

INTERACTION WITH SUPPLIERS, PROCUREMENT

Vodokanal St. Petersburg is striving to build long-term, mutually beneficial relations with suppliers.

Pursuant to the Federal Law "On procurement of goods, works, services by certain types of legal entities" no.223-FZ dated 18 July 2011, when procuring goods, works and services St. Petersburg Vodokanal shall comply with the principle of transparency. According to this principle the contracting authority is obliged to post the information about pursued procurements on the official 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.

To use the company's own funds in an effective way, Vodokanal carries out procurements applying regulated procedures, including:

tender – a bid process where the winner is a person bidding the best contract terms evaluated in line with tender criteria, evaluation procedure and bids comparison;
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 – 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;

• competitive dialogue – a method of order placement where the Order Placement Commission conducts negotiations with the participants of competitive dialogue and upon the completion of such negotiations the Commission makes its final proposal. Prior to the competitive dialogue the Order Placement Commission, on the grounds of evaluation criteria and procedure set forth in the Competitive Dialogue Documents, selects the participant of the competitive dialogue offering the best contract terms.

Prior to the above-mentioned procedures the prequalification may take place in case of procurement of goods, works and services for production needs and if untimely and poor quality of goods, works and services may impair customers.

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

The following selection criteria are commonly used for prequalification:

- bidder's experience in the area relevant to the subject of the tender;
- plants and equipment;
- qualifications of managers and specialists;
 company ratings;
- certificates, diplomas, self-regulating organization documents;

• other criteria enabling to assess the bidder.

With such approach, goods and services can be procured on optimal terms and conditions. The published information on bidding and requests for quotations includes contracting authority's contact persons for inquiries regarding the tendering / technical issues. Those who

wish to submit their bids (requests for quotations) can receive clarifications on various issues in the course of preparing their tender proposals either by addressing the contact person specified in the documentation over the phone 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.

In 2013, within the framework of the Provision "On the procurement of goods, works and services through Vodokanal own funds" the Company conducted about 2,000 procurement procedures and concluded over 1,800 contracts.

Pursuant to 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", to procure goods (works, services) in electronic form, as well as to computerize the process of procurements made at the Company's own funds, Vodokanal entered into the contract with the company operator of electronic tendering platform B2B (www.b2b-vodokanalspb.ru).

In 2013, Vodokanal tested almost all procedures to be organized in electronic form and integrated the operation of the electronic tendering platform with the official procurement website (www.zakupki.gov.ru) and the Company's website (www.vodokanal.spb.ru). E-procurement reduces labour costs of the bidders and the contracting authority, facilitates the development of competitive environment, speeds up and simplifies procurement process.

One of the key factors applied by Vodokanal to the selection of suppliers (contractors) is the quality of the supplied goods (performed works) and qualifications of the supplier (contractor). The Company organized the contests for the title "The best supplier of the year for the needs of Vodokanal". In June 2013, winners of the contest were announced.

The contest for the title "The best supplier of the year for the needs of Vodokanal" was held for the second time. 16 companies submitted their applications for the contest in 2013. The main criteria of the contest included fulfilment of the contract terms and conditions, prompt attention of the supplier's experts to Vodokanal's requests, compliance of the supplier's operations with the quality management system, safety management system, hygiene and living conditions, availability of individual protective devices and etc.

INTERACTION WITH FINANCIAL INSTITUTIONS

FINANCING OF ONE OF THE MOST IMPORTANT PROJECTS OF VODOKANAL – THE NEVA UNTREATED WASTEWATER DISCHARGE CLOSURE PROGRAM – WAS ORGANIZED PARTIALLY THROUGH INTERNATIONAL FINANCIAL INSTITUTIONS

The Program is co-financed with the loans provided by the European Bank for Reconstruction and Development (EBRD), Nordic Investment Bank (NIB) and European Investment Bank (EIB), as well as the non-refundable assistance of the Northern Dimension Environmental Partnership (NDEP), Swedish International Development and Cooperation Agency (SIDA), the Ministry of the Environment of Finland (FMoE), EBRD Special Support 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 2013, within the Neva Untreated Wastewater Discharge Closure Program

Vodokanal conducted competitive biddings and concluded two last contracts for the supply of equipment for reconstruction of the Northern Wastewater Treatment Plant (Northern WWTP):

the supply contract with Purac AB in the amount of SEK 37,092,675 (to be financed through non-refundable assistance provided by Swedish International Development and Cooperation Agency);
the supply contract with Malmberg Water AB in the amount of EUR 9,021,558 (to be financed through non-refundable assistance provided by Northern Dimension Environmental Partnership).

In 2013, Vodokanal fully completed the Northern Tunnel Collector Extension Project. The remaining project funds will be used in 2014 for the reconstruction of the Northern WWTP. In 2013, Vodokanal continued the Project for Upgrading Small Wastewater Treatment Plants in St. Petersburg. This project has been financed, inter alia, through NEFCO loan in the amount of EUR 5 mio.

In 2013, Vodokanal went on performing 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 nonconvertible 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 RUR 175,520,000.00. The series 01 bond's coupons rate remained at 8.8% per annum.

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

ONE OF THE MAJOR PRINCIPLES OF VODOKANAL OPERATION IS ENVIRONMENTAL RESPONSIBILITY FOR CLEAN WATER BASIN OF THE NORTHWESTERN FEDERAL DISTRICT "ONEGA LAKE, ILMEN LAKE – LADOGA LAKE – RIVER NEVA – GULF OF FINLAND – BALTIC SEA"

In 2013, Vodokanal continued its works targeted to the reduction of adverse environmental impact on water bodies located in the North-West Region.

Increased pollution load on water bodies worsens the quality of raw water in the Neva River, which is the major water source for St. Petersburg.

IN NOVEMBER 2012, THE STEER-ING COMMITTEE FOR SOCIAL AND ECONOMIC DEVELOPMENT OF ST. PETERSBURG AND THE LENIN-GRAD REGION WAS ESTABLISHED.

At the meetings of the Steering Committee the authorities of two neighboring subjects coordinate their work with regard to the development of transport and engineering infrastructure, fuel and energy complex, housing and public utilities, social safety for the population, labour migration and other issues.

On 7 December 2012, the Steering Committee gave the task to St. Petersburg Vodokanal to conduct the survey of water and wastewater facilities, which are located in the Leningrad Region and discharge wastewater into the Neva – Ladoga catchment area.

In cooperation with the Committee

for Housing, Utilities and Transport of the Leningrad Region and administrations of municipal districts, the Company primarily conducted technical survey of water and wastewater facilities and water bodies which produce a direct impact on the Neva River and the Gulf of Finland.

The results of the conducted technical survey and the action plan for upgrading water and wastewater system were presented to the Governor of the Leningrad Region in October 2013.

IN 2013, VODOKANAL CONTIN-UED ITS COOPERATION WITH THE GOVERNMENT OF THE REPUBLIC OF KARELIA AND OAO "CORPORA-TION FOR THE DEVELOPMENT OF THE REPUBLIC OF KARELIA" IN THE FIELD OF WATER SUPPLY AND SEW-ERAGE SYSTEMS MODERNIZATION IN THE REPUBLIC OF KARELIA.

In June 2013, Vodokanal completed the survey of water and wastewater facilities located in the Republic of Karelia. The survey was carried out in 128 population centers of 17 municipal districts in cooperation with administrations of municipal districts and local public utilities. In addition, the Company conducted survey at non-municipal wastewater treatment plants of single-industry towns (Kondopoga, Segezha and Pitkäranta).

On the grounds of the survey Vodokanal developed the list of recommendations to be elaborated further in the course of joint projects on construction, reconstruction and operation of the integrated water and wastewater system in municipal districts of the Republic of Karelia. Such projects shall accord with interests of the Republic of Karelia and reduce adverse impact on the Neva – Ladoga catchment area.

IN 2013, VODOKANAL ALSO WAS INVOLVED IN DESIGNING WASTE-WATER TREATMENT PLANT ON THE ISLE OF VALAAM.

Existing Valaam wastewater treatment plant does not comply with wastewater treatment requirements related to the removal of nitrogen, phosphorus and BOD. There is a need to increase the capacity of wastewater treatment plant and to replace the technological process with more efficient and reliable one.

In 2013, design works for Valaam wastewater treatment plant were completed and the construction started.

Water supply and sewerage systems on the Isle of Valaam were transfer for operation to St. Petersburg Vodokanal.

INTERACTION WITH PERSONNEL

INTERACTION WITH THE EMPLOYEES, THE MOST IMPORTANT ASSET OF THE COMPANY, IS 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

Welfare of the company is impossible without welfare of its employees. Therefore, Vodokanal goes on with implementation of social programs related to staff retention, recruiting of younger specialists and qualified workers, raising the motivation of employees and improvement of their labor and rest conditions.

A systematic approach to training of employees, upgrading the personnel skills, motivation of employees to self-education and maintaining operational excellence are the most significant components of the interaction with personnel.

In 2013, the top-priority for the Company was interaction with younger experts.

ST. PETERSBURG VODOKANAL CONSISTENTLY IMPLEMENTS PROJECTS TARGETED TO THE ESTABLISHMENT OF THE YOUNGER EXPERTS' POOL, RECRUITMENT OF TALENTED YOUTH, CREATION OF CONDITIONS FOR THE YOUTH

PROFESSIONAL GROWTH AND INVOLVEMENT IN THE COMPANY'S OPERATIONS.

In 2013, the following projects were implemented:

 Vodokanal organized III Youth Games Festival which purpose was to build up corporate unity among younger employees, establish conditions for creative initiatives and development of professional capacities of the youth;
 in connection with the Youth Day Vodokanal organized the training course



"Principles of Efficient Business Communication". Younger employees of Vodokanal, members of the Group of Talents and Youth Council of the trade union organization participated in that training course;

• Vodokanal launched the award (lapel pin) "Best younger employee of the Company". This award is given to Vodokanal employees up to the age of 35, who have been working in the Company for 5 consecutive years, for their personal contribution to management and operation; introduction of up-to-date water and wastewater technologies; operational excellence that facilitates the development of the Company, as well as for close involvement into the Company's social activities;

• Vodokanal organized Welcome to Vodokanal Event for newly-employed experts. The purpose of this event is to tell about the Company, its operations, introduce the Company's management and traditions.

On the night of 21 and 22 June 2013, younger employees of the Company participated in the city bike ride along the Road of Life dedicated to the Day of Remembrance and Greif. Bike riders visited four monuments of the Road of Life belonging to the Greenbelt of Victory and met with war veterans.

Vodokanal's team got the first place in St. Petersburg Wits & Humour Competition organized by the Regional Non-Governmental Organization for Support and Development of Youth Activities "Students Club of St. Petersburg" with the assistance of St. Petersburg Committee for Youth Policy and Interaction with NGOs, and won the championship of "Weekend League".

INTERACTION WITH INDUSTRIAL ENTERPRISES

FINDING A SOLUTION TO THE PROBLEM OF INDUSTRIAL WASTEWATER TREATMENT IS OF GREAT IMPORTANCE FOR THE IMPROVEMENT OF THE GULF OF FINLAND AND THE BALTIC SEA WATER ENVIRONMENT, SO VODOKANAL PAID SPECIAL ATTENTION TO ITS INTERACTION WITH INDUSTRIAL ENTERPRISES IN 2013

In compliance with the current legislation, centralized household sewerage systems are designed to treat sewage from inhabitants and surface runoff from residential areas (in case of combined sewerage systems). Therefore, Vodokanal's large-scale projects for construction of new wastewater treatment plants or reconstruction of the existing ones are aimed at proper treatment of municipal sewage from inhabitants and surface runoff. Specific industrial pollutions cannot be completely removed at WWTPs.

Thus, collection of industrial wastewater is regulated by limit values for wastewater composition and properties to prevent any negative impact on both water bodies and centralized sewerage systems. New standards of emerging industrial legislation on water supply and wastewater disposal prescribe implementation of water protection measures by industrial customers including construction and modernization of local wastewater treatment plants.

Vodokanal interacts with industrial enterprises in the following main areas:

 providing assistance for enterprises to meet regulatory values for pollutants concentrations in wastewater discharged into the centralized sewerage systems of St. Petersburg;

• interaction with industrial enterprises and associations of industrial enterprises (Association of Industrial Enterprises in St. Petersburg, the Union of Industrialists and Entrepreneurs of St. Petersburg, St. Petersburg Bakers Association and other associations) to address the issues related to the adoption of the Federal Law "On Water Supply and Wastewater Disposal" and relevant bylaws.

Enterprises get advice on:

assessment of wastewater test results;
implementation of organizational and technical measures to improve wastewater quality;

 assessment of the customers' action plans intended to prevent excessive discharge of pollutants into sewerage systems.

Depending on the company's profile and the condition of onsite sewerage network, water protection plans may include both short-term measures that do not require any capital investments (wastewater composition tests in check points, ensuring normal operation of onsite sewerage, video diagnostics of networks to determine the scope of repairs needed, etc.), and capitalintensive technical measures (construction of local wastewater treatment plants, transition from outdated production processes to water-saving and environment-friendly technologies, implementation of water recycling, etc.). In 2013, 218 Vodokanal's customers had local wastewater treatment plants, 59 customers planned to construct (modernize) local wastewater treatment plants by 2014–2017 (in compliance with the submitted water protection action plans).

In 2013, 34 enterprises planned the construction of local wastewater treatment plants with different capacity, of which: • 28 enterprises fully completed their works;

6 enterprises performed 50%–90%
 of construction works.

Among the enterprises that have implemented (or are implementing) complex up-to-date schemes of industrial wastewater treatment there are LLC "Unilever Rus"; St. Petersburg Dairy "Piskarevsky"; Unimilk Company. It resulted in removal of specific pollutants from industrial wastewater, reduction of negative impact on the environment and sewage systems of St. Petersburg.

In 2013, Vodokanal continued its work (that started in 2012) to help industrial enterprises choose the best available technologies to construct local wastewater treatment plants (LWWTPs). In 2013, 8 different enterprises addressed Vodokanal for advice on LWWTP construction or other water protection measures including ZAO "ATEK", LLC "Sampsonievsky Business Centre", LLC "GM Auto", ZAO "Petersburg Products International ZAO", OAO Laminated Plastics Plant, ZAO "Malthouse Soufflet Saint Petersburg", OAO "Zvezda", LLC "Kesko Real Estate". Besides, taking into consideration the positive results of joint work on sharing experience in water supply and wastewater disposal at the International Advanced Technologies Center, in 2014 special workshops will be organized for industrial enterprises on the topics:

• Russian and European legislation governing the issues of reception and treatment of industrial wastewater in the centralized sewage systems;

experience of applying the best available technologies to treat wastewater from food, chemical industries, metalwork;
standard schemes of the runoff treatment, experience of applying sorbent agents and cartridge filters to treat runoffs in the EU countries.

Vodokanal of St. Petersburg maintains close contacts with St. Petersburg Committee for Energy and Engineering Support, St. Petersburg Union of Industrialists and Entrepreneurs, St. Petersburg Association of Industrial Enterprises, St. Petersburg Bakers Association, etc. on issues related to new provisions of the entered into force Federal Law "On Water Supply and Wastewater Disposal" as well as relevant bylaws.

In 2013, 9 meetings/seminars and round tables (not including working meetings) were held with representatives of St. Petersburg Union of Industrialists and Entrepreneurs, St. Petersburg Association of Industrial Enterprises (including the St. Petersburg Committee for Energy and Engineering Support) on issues related to compliance with legal requirements of the law "On Water Supply and Wastewater Disposal", "Rules of Cold Water Supply and Wastewater Disposal" and other rules adopted pursuant to the Federal Law.

Vodokanal's specialists provided clarification with regard to of the Federal Law "On Water Supply and Wastewater Disposal" in the Chamber of Commerce of St. Petersburg, at workshops organized by the Department of Natural Resources Management, Ecological Safety and Environment Protection of St. Petersburg, in American Chamber of Commerce in St. Petersburg, at meetings with the Association of Industrial Enterprises and St. Petersburg Union of Industrialists and Entrepreneurs.

The working group, which task was to address issues related to enforcement of the Federal Law "On Water Supply and Wastewater Disposal", was established in order to develop a common position on the proposed amendments to new regulations. Bother representatives of Vodokanal and industrial enterprises became members of the working group. The working group will continue its work in 2014.

In 2013, Vodokanal hold regular meetings with St. Petersburg International Business Association and discussed relevant issues related to water supply and wastewater disposal.

ESTABLISHMENT OF THE TERRITORIAL INNOVATIVE WATER AND WASTEWATER CLUSTER

In 2013, Vodokanal was involved in activities organized by the Government of St. Petersburg to create the so-called territorial innovative water and wastewater cluster (hereinafter referred to as "the cluster") in St. Petersburg as an integrated center for water sector development.

THE GOAL OF THE CLUSTER IS TO ENSURE:

stable and safe functioning of water and wastewater systems and provide affordable water and wastewater services to customers in compliance with target values oriented to the improvement of life quality;
development of innovative methods and materials for provision of water and wastewater services; sustainable development of St. Petersburg and subjects of the Russian Federation;
reduction of the human impact on the Baltic Sea water basin.

THE CLUSTER WILL ADDRESS THE FOLLOWING CHALLENGES:

• reduction of dependence on foreign manufacturers;

- creation of the research segment;
- creation of comprehensive production and service infrastructure;
- development and implementation of efficient investment policy;
- search for, and implementation of, innovations;
- training of qualified personnel;

provision of affordable water and wastewater services of high quality;
development of legislative initiatives related to the environment protection of the Baltic Sea.

Finally, the integrated, researchandtechnology, innovative and production infrastructure will be created aimed to increase the level of social and economic development of the region as well as to enhance the environmental condition of the Baltic Sea.

In 2013, under the leadership of a Vice-Governor of St. Petersburg a working group was established to address issues related to the creation and operation of the territorial water innovation cluster in St. Petersburg, the cluster concept was prepared, meetings with potential participants were held and a number of other relevant measures were taken.

The initiative to create the cluster was supported by the authorized government authorities. The issue was also considered at the meeting of the Environmental Council under the Governor of St. Petersburg, where its participants approved the proposal to create the cluster.

CREATION AND IMPLEMENTATION OF THE CLUSTER WILL ALLOW TO:

- attract private investments for project;
- improve environmental situation in the region;
- shorten timeframes of investment projects, reduce the final cost of projects due to creation of common use centers and a technological park;

• disseminate project implementation methods and project results in other

regions of the Russian Federation;

- rotate high qualified staff, organize staff training, retraining and recruiting;
- increase tax revenues into the city budget;
- create more than 1 thousand new working positions that will also lead to the increase of social deductions to the state social funds;
- provide affordable water and wastewater services of high quality.



WORK ON THE PROJECT "ESTIMATION OF COSTS OF OPERATION AND DEVELOPMENT OF WATER AND WASTEWATER SYSTEMS IN ST. PETERSBURG"

IN 2013, THE WORK ON THE PROJECT "ESTIMATION OF COSTS OF OPERATION AND DEVELOPMENT OF WATER AND WASTEWATER SYSTEMS IN ST. PETERSBURG" WAS COMPLETED

This project was implemented under the leadership of the working group that included managers of Vodokanal and heads of the St. Petersburg government committees (the Tariff Committee, the Committee for Energy and Engineering Support). Representatives of the legislative authority, independent experts and representatives of the public (including representatives from the Union of Consumers, the Union of Industrialists and Entrepreneurs, the Association of Housing Cooperatives and Homeowners, etc.).

When developing approaches to the estimation of costs of operation and development of water and wastewater systems, the working group took into account not only internal but also external factors that significantly influence the financial status and performance of the enterprise.

In the course of the project

implementation, approaches and principles of cost calculations based on technical and technological parameters of the centralized water and wastewater system operation as well as on the current and future requirements to the quality and reliability of the provided services were developed.

Within the frame of the project: • inventory of Vodokanal's production

assets was carried out; • regulation and reference data on

consumption of resources were developed and standardized;calculation of costs of all service elements wad made.

An important step was the development of the hierarchical structure of water and wastewater facilities: from large facilities, such as a water treatment plant to the smallest ones – pumps, electric motors, valves, etc. Application of this approach for the inventory of production assets allowed to get detailed view on the composition and condition of assets, although it was resource consuming. Up to one thousand employees participated in the inventory of production assets in different periods, and over 1.5 million items were recorded. Experts made random inventory of different facilities of Vodokanal and site surveys in order to match the collected information about the facilities with the data from the Company's information system.

In 2013, maintenance rules developed by Vodokanal were standardized, completeness and correctness being checked. Vodokanal's maintenance rules were prepared based on the current industry regulations, own operation experience, requirements of equipment manufactures and contain standard resource consumption values for the maintenance and repair of all types of water and wastewater assets. To check the completeness and correctness of activates specified in the maintenance rules, time actually spent for the implementation of such activities was measured during the performance of works at water and wastewater facilities. In total, the rules included



INTERACTION WITH TRADE UNIONS

VODOKANAL 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, AND OTHER ACTIVITIES

over 3,000 types of work with different groups of equipment. The Not-For-Profit Partnership "Tsentr Expert ZKH" (partnership of service providers, consultants and auditors working in the field of housing utilities) adopted these rules and put them into effect as a maintenance and repair standard (STO MTS ZKH 009-2013 standard).

In 2013, the classifier of Company's costs was also developed on the basis of the Water and Wastewater Pricing Principles as well as principles that are currently being used in tariff regulation of the sector.

Moreover, cost estimates were made to determine operation and development costs of the centralized water and wastewater systems.

Under the project a number of internal regulations (methods) were tested including calculation of company demand for energy, chemicals, technical and administrative staff. The main document defining the relationships between the employer and the trade union as the parties of social partnership is the Collective Employment Agreement – a legal act that regulates social and labour relations between employers and employees based on the congruence of interests of the parties in compliance with the laws of the Russian Federation.

In 2013, the previous Collective Employment Agreement was completed. After the trade union had initiated collective negotiations, a commission consisting of representatives of the employer and the trade union on a parity basis was established in Vodokanal to develop a new collective agreement.

As a result of the commission's work the new Collective Employment Agreement was developed and signed; it was entered into force on 1 January 2014 and will be valid for the next three years.

The Collective Employment Agreement for 2014–2016 provides a well-developed corporate social responsibility base that comprises social support of the personnel's potential and motivation, healthcare and labor occupational safety systems, care for veterans, sports development, youth policies, interaction with trade unions, regular staff training.

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.

Performance of the Agreement, where relations between the personnel and the company are specified, is annually verified by representatives of the parties. After considering the results of such verification a certificate is issued and made available to all employees. The Collective Employment Agreement is revised and amended on regular basis in compliance with performance analysis results. All amendments to the Collective Employment Agreement are aimed at optimizing social and labor relations between employees and the employer.

INTERACTION WITH EDUCATIONAL INSTITUTIONS

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

Cooperation of Vodokanal and the Water College (former Professional School no.89) is a good example of successful social partnership.

Advanced training facilities have been created in the College together with Vodokanal, among them:

• 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 the College classrooms to provide training and educational process.

The material and technical facilities are used not only for training of newcomers but for advanced training and retraining of regular employees.

College students study up-to-date production processes with the help of Vodokanal. For this purpose, annual on-the-job training for water and wastewater department students at the Company's facilities is organized. College representatives also participate in professional contests organized by Vodokanal.

In 2013, Vodokanal continued its partnership with the following specialized institutions of higher education: St. Petersburg Technological Institute, 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 (YEC) and The Universe of Water Museum Complex.

Relevant environmental information,

various forms of work, active training methods applied in YEC allowed to attract over 650 educational institutions to the implementation of YEC projects and programmes.

YEC partners are kindergartens, schools, colleges, vocational schools, higher education institutions in St. Petersburg and the Leningrad Region.

Interaction with educational institutions is built on the basis of social partnership and in compliance with the main objectives of YEC:

- fostering the culture of water use in the city;
- fostering the responsible attitude of citizens to natural resources;
- development of social activity of the youth;

• promotion of ideas of efficient environmental education as well as

education for sustainable development. Besides, a lot of work with teachers

is done on the premises of YEC including seminars, methodological support and dissemination of teaching aids.

INTERACTION WITH ENVIRONMENTAL AND OTHER NON-GOVERNMENTAL ORGANIZATIONS

RESPONSIBILITY TO THE SOCIETY AND FUTURE GENERATIONS IS AMONG THE BASIC VALUES OF VODOKANAL ST. PETERSBURG. VODOKANAL ACTIVELY INTERACTS WITH DIFFERENT ENVIRONMENTAL ORGANIZATIONS IN THE COURSE OF ITS PRODUCTION OPERATIONS AND ENVIRONMENTAL AWARENESS-RAISING

In particular, a representative of Vodokanal is a member of the Environmental Council for Environmental Protection under the Government of St. Petersburg (it is a permanent collegial advisory and consultative body). At the meeting on 6 December 2013, Director General of SUE "Vodokanal of St. Petersburg" F.V. Karmazinov submitted proposals for the creation of the territorial innovative water and wastewater cluster. The Chairperson of the Environmental Council Boris S. Krylov, the Co-chair Valery N. Matveyev (the Chairperson of the Committee of Natural Resources, Environment Protection and Environmental Safety) as well as the members of the Environmental Council supported the idea of the water cluster.

In 2013, the cooperation of Vodokanal with specialists of the not-for-profit partnership Marine Mammal Rehabilitation Centre of the Leningrad Region began. The main goal of the Marine Mammal Rehabilitation Centre is providing help to seal pups. The Director of the Center, veterinarian Vyacheslav Alekseyev and zoologist Elena Andrievskaya are the qualified experts that have gained a wide experience in successful rehabilitation of marine mammals. In addition to the rehabilitation work they monitor populations of the Ladoga ringed seal, the Baltic ringed seal and the grey seal in St. Petersburg and the Leningrad Region.

With the assistance of the Public Relations Agency "2PR", the temporary Pinnipedian Rehabilitation Station at Vodokanal's treatment plant in Repino was opened. Vodokanal

provided premises and necessary equipment so that the experts could nurse animals got into trouble. From March to July they provided help to two Baltic ringed seals and three Ladoga ringed seals. After finishing the treatment and rehabilitation three "leaving events" took place. The Rehabilitation Project for Pinnipeds was widely covered by mass media. It was decided to be continued in 2014.

In 2013, the social project of Vodokanal – the Da-Voda internet portal – cooperated with the city non-governmental initiative "No.More.Waste" as well as the all-Russian non-governmental organization "Waste Separation".

In 2013, the web-site acted as an information partner of the international environmental project "Let's Do It, World!" Video "Let's Do It! Sestroretsky Razliv" was filmed.

Vodokanal participates in the activities organized by HELCOM representative office in Russia, the John Nurminen Foundation (Finland), International Ecological Public Organization GREENLIGHT, etc. In particular, on 20 March 2013, the panel discussion "Environmental Education and Public Awareness Raising" was held as part of the XIV International Environmental Forum "The Baltic Sea Day" in Vodokanal. This forum is some kind of informal annual report on activities of environmental organizations in the Baltic Sea region to the peoples that live there.

In 2013, joint efforts of Vodokanal and the Baltic Sea Action Plan Foundation (BSAG) continued. They were dedicated to the development of so-called road map aimed at reducing the adverse impact on the integrated water system "Lake Ladoga – Lake Onega –Neva River –Gulf of Finland". This topic is very important today because 2014 is The Year of the Gulf of Finland.

In 2013, Vodokanal continued cooperation with St. Petersburg department of the Interregional Non-Governmental Environmental Organization "Green Cross".

Vodokanal involves environmental organizations in the implementation of the Youth Environmental Centre's projects and programs. Among the partner organizations, Vodokanal cooperates with "Finland-Russia" society, Association of International Cooperation, children's interregional social movement "Neposedy Club", not-for-profit organization "Friends of the Baltic", non-governmental organization "No More Waste", Union of Amateur Filmmakers, film studio "Giraffe", etc.

INTERACTION WITH FEDERAL AND REGIONAL AUTHORITIES

VODOKANAL WORKS IN CLOSE INTERACTION WITH THE FEDERAL AND REGIONAL AUTHORITIES

Vodokanal St. Petersburg was directly involved in the development of the St. Petersburg Water and Wastewater Master Plan for the period up to 2025 with the outlook to 2030 that was approved by the Government of St. Petersburg in 2013.

Vodokanal continued fruitful cooperation with the Government of St. Petersburg, the City Administration Committee, the Legislative Assembly, the Authorized Representative Office of the President of the Russian Federation in the North-West Federal District, heads of the subjects of Federation. Vodokanal strengthened its links at the regional level; in particular, a delegation of the administrative office from the Novgorod Region headed by the Governor Sergey G. Mitin visited Vodokanal in May 2013.

On 7 April 2013, the Minister of Natural Resources and the Environment of the Russian Federation Sergey E. Donskoy visited Vodokanal St. Petersburg. According to Sergey E. Donskoy, the experience gained, and the approaches developed, by Vodokanal to address issues related both to wastewater treatment and environmental awareness-raising can be used in other cities of Russia.

During 2013, Vodokanal St. Petersburg closely interacted with the Government of the City and the Leningrad Region to prepare "The Gulf of Finland Year 2014" Project, the co-chairpersons of which are the Governor of St. Petersburg G.S. Poltavchenko and the Governor of the Leningrad Region A.Y. Drozdenko. In this respect several meetings were held in Vodokanal.

Vodokanal employees were involved in the organization 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 and other organizations).

In particular, Vodokanal was involved in the All-Russia meeting "Effective management of the Housing and Utility Sector for the purpose of creating favorable living conditions for citizens" (22–24 April 2013, Saratov), which was held with support of the Ministry of the Regional Development of the Russian Federation, the State Corporation "The Fund for the Promotion of the Housing and Utility Sector Reform", as well as other similar events.

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 the Company and its customers and other issues in relation to Vodokanal activities. In October 2013, with the active participation of Vodokanal employees the address of the Governor of St. Petersburg to the Chairman of the Government of the Russian Federation on the need of amending federal regulations with regard to the control of wastewater quality was prepared.

During 2013, Vodokanal employees

participated in the court proceedings involving claims by St. Petersburg Environmental Prosecutor's Office and district prosecutors' offices against the Company's customers to oblige them to install local wastewater treatment plants before discharge to the municipal sewerage system (or to check the performance of the existing plants). Successful disposal of these legal proceedings improved the quality of wastewater treatment by customers, helped to prevent damage to the central sewerage system, as well as reduce the negative impact on water bodies. In total, Vodokanal employees were involved in the investigation of 160 similar proceedings in 2013.

INTERACTION WITH 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 pressreleases 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;

work with mass media as part of the

information support of projects. The mass media's interest in Vodokanal activities is growing every year. Over 9,000 materials about the Company activities were publicized (in printed media, Internet, radio and TV) in 2013. In 2012, the number of such materials exceeded 8,000.

NUMBER OF MASS MEDIA PUBLICATIONS ABOUT VODOKANAL ACTIVITIES

Year	Number
2006	2,756
2007	3,177
2008	3,835
2009	4,364
2010	6,138
2011	8,108
2012	8,836
2013	9,254

On 10 October 2013, the official ceremony of the Northern Tunnel Collector Completion was held. From that date St. Petersburg treated 98.4% of wastewater. That happened on Vodokanal's birthday, in the Year of Environment Protection. About 40 Russian and foreign mass media covered the ceremony. After 10 October 2013, a number of live TV and radio programs with the participation of Vodokanal managers were organized, which were dedicated to the completion of the Northern Tunnel Collector and future plans of Vodokanal related to the improvement of the Baltic Sea (how Vodokanal will close the rest 1.6% of wastewater still discharged untreated). The ethnographic expedition headed by the famous designer and blogger Artemy Lebedev visited one of the NTC's facilities -URS-422 Pumping Station, as well as South-West Wastewater Treatment Plant and the Southern Water Treatment Plant.

Information about the upcoming completion of the Collector, URS-422 Pumping Station and importance of this project not only for St. Petersburg but also for all the Baltic Sea countries, was distributed in media throughout the year. In general, there are about 200 publications on this topic.

In 2013, the Pinnipeds Rehabilitation Station and the release of treated animals into the wild attracted a great interest of the mass media. 6 press tours were organized to the Pinnipeds Rehabilitation Station and the places of animals' release that resulted in more than 200 publications and reportages. The project was widely covered by the media, including such TV channels as The First, The Fifth, NTV, RTR, STO TV, Saint-Petersburg, Mir, OTV, DTV, TK of the Federation Council. Numerous journalists' individual inquiries were separately processed.

Traditionally, opening and closing ceremonies of fountains, fountain working hours on the Day of Navy, the Day of Air Landing Troops and operation of snowmelting facilities are topics of interest among journalists. In total, mass media released over 600 publications about the fountains, approximately 200 publications about the snow-melting facilities. Journalists were also interested in Vodokanal's activities related to the elimination of odor at the Severny wastewater landfill. Over 100 publications were issued on that topic.

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 2013. The information about the Company activities was regularly posted on Vodokanal websites (Vodokanal's official website www.vodokanal.spb.ru, and the Museum Complex's website www.vodokanal-museum.ru, Burevestnik Sanatorium's website www.vodokanalzagorod.ru). In 2013, the Company also continued to develop the awareness-raising Internet-portal about water "Da-Voda" (www. da-voda.com) made with the support of Vodokanal. A special column was created here to cover the events occurred in the Environment Protection Year.

In 2013, over 300 news and 112 press-releases were posted on Vodokanal's official web-site. The Information and Public Relations Department of Vodokanal answered on average 30-35 media inquiries per month (requests for comments, interviews, shooting films).

THE JURY OF THE INTERNATIONAL AWARD PROBA-IPRA GWA 2013 PRONOUNCED VODOKANAL'S PROJECT "HELPING THE PINNIPEDS" THE WINNER IN THE NOMINATION "BEST SOCIAL PR-PROJECT". ANOTHER VODOKANAL'S PROJECT- "VODOKANAL IN THE ENVIRONMENT PROTECTION YEAR" – WAS SHORT-LISTED IN THE NOMINATION "BEST COMPANY IN CORPORATE PR" AND AWARDED A DIPLOMA.

COOPERATION WITH SOCIAL MEDIA

TO COMMUNICATE WITH THE INTERNET AUDIENCE, THE MOST PART OF IT BEING THE YOUTH, VODOKANAL HAS CHOSEN AS ITS REPRESENTATIVE – THE CHA-RACTER OF THE DA-VODA.COM PORTAL – THE NEVA CRAYFISH. THIS CHARACTER IS DIRECTLY ASSOCIATED WITH VODOKANAL'S ACTIVITY

On the Da-Voda.com portal The Neva Crayfish gives video lessons, saves the Gulf of Finland from dirt in the game "The Neva Grayfish against Waste" and has its own accounts in the social networks (VKontakte, Facebook, Twitter). It communicates with its friends, answers their questions, takes initiatives, tells interesting facts about water and animals; shares information on devices that help save water in everyday life, organizes environmental actions. In 2013, a lot of information about the work of the Pinnipeds Rehabilitation Centre and its fosterlings was published on The Neva Crayfish web-page.

In total, the Neva Crayfish has over 11 thousand friends in social networks. On its birthday, which it celebrates on the 22nd of March – on the Water and Baltic Sea Day – it receives a lot of congratulations from fans.

There is also the Da-Voda account in VKontakte and Facebook. At the end of 2013, the number of subscribers was over

2.5 thousand people.

The Neva Crayfish regularly interacts with environmentally oriented Internet users. In particular, users are interested in issues related to water and wastewater treatment, work of the Neva Crayfish at Vodokanal's biomonitoring stations. The Neva Crayfish is asked to tell about events occurring in the environmental life of the City. For example, in November 2013, The Neva Crayfish explained the process of potable water treatment to Internet users.

In November 2013, bloggers who participated in the ethnographic expedition headed by Artemy Lebedev (famous designer and traveler) visited Vodokanal facilities including the Southern Water Treatment Plant, South-West

СХЕМА РЕАЛИЗАЦИИ ПРОЕКТА «Юго-западные очистные сооружения»

Пуск Юго-Западных очистных сооружений 22.09.2005



Wastewater Treatment Plant, URS-422 Pumping Station, Youth Environmental Centre and The Universe of Water Museum Complex.

Artemy Lebedev and his likeminded fellows call their world city tours ethnographic expedition. In October and November they studied St. Petersburg. Members of the expedition wrote about their impressions of the city life in their blogs and the final report appeared on Lebedev's web-site in the end of the expedition.

Members of the expedition were especially impressed by the SWWTP

museum "Our Captures"; crayfish that monitor the Neva water and treated effluent; amounts of treated effluent; complexity of the facilities (including URS-422 Pumping Station). In YEC everybody got a water jet meter as a present and got a possibility to play the new touch-table game "Wash up". In the Universe of Water Museum guests saw the most interesting exhibits and a new development – a fragment of the stereo film about the beauty of water.

POLERIVA SVABOLENUEHK TEOT (LALPUEALENVAL)

Besides Artemy Lebedev the team of bloggers, members of the expedition, consists of the illustrator Vlada Myakonkina, the photographer Artem Bogdanov, the poet Natalya Nechayannaya, the camera man Max Kabanov, the sommelier Yuliya Semenova and the acrobat Masha Terentyeva. Alexander Minakov acted as a local historian and organizer. In his blog Alexander shared his impressions of what he saw: "Vodokanal -Leib-Guard SUE, you start to respect it before you get to know it better. Here everything is as it should be. Over the last ten years (out of 155) Vodokanal has been following three principles: Do your business properly. Do not rest on your laurels. Do not forget to tell about it all around". (For details see http://minakovas. livejournal.com). The poet Natalya noted: "What I can say - it sounds amusing: technical thought is in the air", and the illustrator Vlada wrote the following words above the drawing of her team in the museum: "The Water Museum is the coolest. We have seen such 3D that Gravity Movie pales in comparison. Save water!" The photographer and the operator posted on the Internet. The PiterEthnoExp inspirer Artemy Lebedev summarized his story about the tenth expedition day: "Do not forget to flush a water-closet and use toilet brush. Or have so many expensive facilities been built for nothing?"

PARTICIPATION IN EXHIBITIONS AND CONFERENCES

IN 2013, VODOKANAL ST. PETERSBURG TOOK AN ACTIVE PART IN DIFFERENT RUSSIAN AND INTERNATIONAL EXHIBITIONS AT ALL LEVELS IN ORDER TO OPTIMIZE INTERACTION WITH ALL STAKEHOLDERS

IN MARCH 2013, Vodokanal participated in the plenary session of XIV International Forum "The Baltic Sea Days" with the participation of representatives from all states of the Baltic Sea Region, public figures, journalists, governmental authorities of various levels, representatives of scientific community, educational institutions and environmental agencies. Within the framework of the Forum Vodokanal organized the round table discussion -"Environmental education and raising public awareness". Vodokanal experts told about their experience in promoting environmental awareness among children and the youth, rational water use, social media as an instrument of environmentalawareness building in the context of Da-Voda Internet-portal.

IN APRIL 2013, the senior management of Vodokanal took part in the plenary session under the Baltic Sea Forum featuring the chairperson of the Russian Federation Government Dmitry A. Medvedev, Ex-President of Finland Ms. Tarja Halonen, Prime-Ministers of Finland, Estonia, Norway, Latvia, Lithuania and other countries. During the Forum Vodokanal represented its joint project with Baltic Sea Action Group (BSAG) Fund related to the development of the road map aiming at the reduction of adverse environmental impact on the single water system of Ladoga Lake – Onega Lake – River Neva – Gulf of Finland.

IN APRIL 2013, Vodokanal experts attended the Berlin Wasser International Exhibition. At the exhibition Vodokanal presented its new Wastewater Guidebook. This guidebook was drafted together with German scientists and engineers from Bauhaus University of Weimar (specialized in construction and artistic design) and the German Association for Water, Wastewater and Waste (DWA).

IN APRIL 2013, St. Petersburg Vodokanal took part in the International Business Forum "Russia – Switzerland: Energy Efficiency" organized by Eurostandart International Association, All-Russian Quality Organization with the support of Switzerland Joint Chamber of Commerce and the Consulate General of the Russian Federation in Geneva. At the Forum it was announced the Vodokanal received the international award "for compliance with the international norms and requirements to organization of business-processes, the quality of management and end products". Vodokanal achievements were acknowledged at the second All-Russian Congress of Water Companies on 15–20 April 2013 in Ekaterinburg. At the Congress Vodokanal was granted the diploma for XXI century worthy technology intensive and innovative solutions in water and wastewater systems.

ON 25–26 APRIL 2013, Vodokanal representatives participated in the traditional Days of St. Petersburg in Helsinki. This event was devoted to the search for new ways of cooperation in economy, culture, tourism and nature protection. In the course of the round table discussion on "Prospects of environmental cooperation between St. Petersburg and Helsinki" Vodokanal experts made several reports with regard to the development of water and



sewerage systems in St. Petersburg, fulfilment by the Company of its earlier commitments to reduce negative environmental impact on the Baltic Sea as well as new Baltic Sea protection measures.

ON 21–22 MAY 2013, Vodokanal experts participated in VI Neva International Environmental Congress organized by the Inter-Parliamentary Assembly of the CIS alongside with the Federal Council of the Federal Assembly of the Russian Federation, the Executive Committee of the Commonwealth Independent States (CIS), the United Nations Industrial Development Organization (UNIDO). Within the framework of the Congress Vodokanal hosted on its premises the round table discussion – "Integrated management of water resources: water use and water quality".

IN JUNE 2013, experts of the Company took part in the International Forum IQNet in St. Petersburg. At the Forum Vodokanal was awarded with the certificate "for distinguished achievements in implementation and maintaining the outstanding management system". IQNet is a non-governmental and not-for-profit organization, it is an international network of partner certification bodies established in Bern (Switzerland) and dealing with assessment and certification of management systems worldwide.

IN JUNE 2013, Vodokanal delegation attended the Days of St. Petersburg in Turku.

ON 4 JULY 2013, Vodokanal participated in the panel discussion "Eco-technologies of wastewater treatment for small settlements and family houses" organized by the international coalition "Clean Baltics", the public organization "Friends of the Baltic" and the nature protection commission of the Russian Geographical Society.

ON 19 SEPTEMBER 2013, Vodokanal hosted on its premises the 36th ordinary session of the General Assembly of the International Organization for Standardization (ISO). Participants of the session discussed the application of ISO standards in the international system of environmental safety of the Baltic Sea states, environmental certification and problems related to water use and tranboundary waters.

ON 19–20 SEPTEMBER 2013, Vodokanal representatives participated in the briefing – "Russian Hour. Investments of the Russian Business into Sustainable Development" organized in the Permanent Mission of the Russian Federation to the United Nations in New York with the participation of the Russia's Permanent Representative to the United Nations and UN Security Council Vitaly Churkin (New York, USA). The briefing was organized ahead of the UN Global Compact Leaders' Summit.

DURING THE FESTIVE EVENTS ON 8–10 OCTOBER 2013 dedicated to the 155th anniversary of St. Petersburg Vodokanal, the company hosted the International Conference "Innovative path of the company development" with the involvement of federal and regional governmental authorities, high-ranking Russian and foreign guests as well as representatives of the diplomatic corps accredited in St. Petersburg.

IN OCTOBER 2013, Vodokanal representatives participated in the Ministerial Session of the Baltic Marine Environment Protection Commission (HELCOM) in Copenhagen to discuss about the implementation of the Baltic Sea Action Plan.

IN DECEMBER 2013, the delegation of the Company took part in IV All-Russian Environment Protection Congress in Moscow to summarize the results of the Environment Protection Year.





ADOPTION OF ST. PETERSBURG WATER AND WASTEWATER MASTER PLAN

ST. PETERSBURG WATER AND WASTEWATER MASTER PLAN UP TO 2025 WITH AN OUTLOOK TO 2030 WAS ADOPTED BY THE RESOLUTION OF ST. PETERSBURG GOVERNMENT NO.989 DATED 11 DECEMBER 2013

The master plan was developed in the execution of the Federal Law no.416-FZ "On Water Supply and Wastewater Disposal" and in line with the Rules for the development and approval of water and wastewater master plans and master plan requirements set forth by the Decree of the Russian Federation Government no.782 dated 5 September 2013. The master plan was developed in accordance with the city development plan and on the basis of technical surveys of water and sewerage systems. The master plan determines the development of the centralized water and sewerage systems of St. Petersburg and includes the following:

• description of the centralized water and sewerage systems;

• development strategy for the centralized water and sewerage systems;

- water and wastewater balances;
- development targets;

• list of measures to achieve development targets and cost estimates of such measures.

The master plan comprises two parts: the published part including texts and graphics and the supporting part including texts, graphics and e-model. The structure of the published part complies with the requirements applied to the content of water and wastewater master plans. The supporting part consists of the detailed initial data, various development options, rationale for the best option, technical and economic calculations.

MEASURES INCORPORATED IN THE MASTER PLAN ENSURE:

• Improvement of drinking water quality. The master plan provides for the reconstruction of water treatment plants taking water from surface water bodies, construction of water treatment plants taking water from underground water sources in Kurortny District, upgrading UV disinfection plants and rehabilitation of clean water reservoirs.

• Enhancement of wastewater treatment. The master plan provides for the reconstruction of wastewater treatment plants, introduction of wastewater disinfection and tertiary treatment.

• Reliable and stable water/wastewater services. The master plan provides for the reconstruction of water mains including the replacement of all reinforced concrete pipes, valves and fire hydrants, installation of service laterals for houses with different ownership, construction of backup tunnel sewers and connection shafts, reconstruction of existing tunnels sewers and sewerage network.

• Connection of new customers to water and wastewater systems. The master plan provides for the construction of additional water supply and sewerage network to ensure connection of new customers to the systems.

• Construction of water and sewerage network in the territories not connected to the centralized water and sewerage systems. The master plan provides for the construction of water and sewerage network in 70 historical districts of St. Petersburg not connected to the centralized water and sewerage systems as well as in allotment gardens located within the city territory.

• Reduction of adverse impact on the environment. The master plan provides for the treatment of storm water and the construction of sewerage network and tunnel sewers to eliminate untreated wastewater discharges.

• Increase energy efficiency of water and wastewater facilities. The master plan provides for the completion of water supply and wastewater disposal management system, upgrading of all water and sewerage pumping stations, automatic water/wastewater metering and data transmission, development of the chemical balance to control the quantity of pollutants in wastewater.

The water and wastewater master plan is the basis for the development of Vodokanal investment programme as well as action plans to improve drinking water quality and reduce pollutant discharges into city water bodies.

The water and wastewater master plan is subject to yearly adjustments in connection with the implementation of measures incorporated into the master plan and changes made to St. Petersburg development plan.





VODOKANAL ST. PETERSBURG PROVIDES POTABLE WATER TO THE INHABITANTS (OVER 5 MILLION PEOPLE) AND TO THE COMPANIES AND ORGANIZATIONS IN THE CITY (46,600 CUSTOMERS)

Vodokanal activities related to the 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;
- 198 boosting pumping stations;
- 6,865.7 km of water networks;
- 2 sodium hypochlorite plants.

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 (59%) of networks in the St. Petersburg water supply system is made of cast iron.

About 60% of water networks in St. Petersburg have been in operation for 15–50 years. The operating time of 25% of all networks is over 50 years, and such networks need reconstruction or replacement.

ADJUSTED CAPACITY OF WATER TREATMENT PLANTS:*

Southern WTP	900,000 m ³ /day
Northern WTP	608,000 m ³ /day
Main WTP	422,000 m ³ /day
Volkovskaya WTP	211,000 m ³ /day
Kolpino WTP	151,000 m ³ /day
Kronstadt WTP	18,000 m³/day
Zelenogorsk WTP	7,000 m³/day
Duderhof WTP	20,000 m³/day
Gantulovskaya Gora WTP	32,000 m ³ /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 St. Petersburg Government no.1270 dated 21October 2008 (as amended by the Resolution of St. Petersburg Government no.1384 dated 30 November 2009).

DAILY AVERAGE SUPPLY OF POTABLE WATER TO THE CITY

2009	2,028,290 m ³
2010	1,994,690 m ³
2011	1,922,900 m ³
2012	1,853,300 m ³
2013	1,808,800 m ³

Water losses on the networks amounted to 13.7% in 2013; the breakdown rate of water networks (number of damages per 10 km) – 2.9.

THE SOUTHERN WATER SUPPLY SYSTEM COMPRISES

• Southern Water Treatment Plant (first-lift pumping stations, water treatment facilities, clean water reservoirs and second-lift pumping stations);

• Duderhof WTP (first-lift pumping stations, clean water reservoirs and second-lift pumping stations);

• Kolpino WTP (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping station);

• Kronstadt WTP (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping station);

• Petrodvorets WTP (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping stations). Water from Southern WTP is tertiary treated here. The plant is also ready for use in case of need to take water from Nikolsky pond;

• 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.

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,

100% of Krasnoselsky district.

THE SYSTEM SUPPLIES WATER TO THE FOLLOWING ADMINISTRATIVE DISTRICTS:

100% Kurortny district,

65% of Primorsky district,

90% of Vyborgky district,

80% of Kalininsky district,

65% of Krasnogvardeysky district,

85% of Nevsky district' right-bank part.

THE NORTHERN WATER SUPPLY SYSTEM COMPRISES

- Northern WTP (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping stations);
- Zelenogorsk WTP (first-lift pumping stations, water treatment facilities, clean water reservoirs and second-lift pumping station);
- Sestroretsk WTP (first-lift pumping station, water treatment facilities, clean water reservoirs and second-lift pumping station). Water from Northern WTP is tertiary treated here. The plant is also ready for use in case of need to take water from Lake Razliv;
- underground water sources of Kurortny district;
- named boosting pumping stations of the third lift (Murinskaya, Kushelevskaya, Primorskaya, Severo-Primorskaya, Kolomyazhskaya, Ozero Dolgoe, Martynovskaya, Parnasskaya, Osinovaya Roshcha, Gorskaya, Pesochenskaya, Novoselovskaya, Shuvalovskaya WTPs);
- · boosting pumping stations of the third and fourth lift;
- water supply and distribution networks.

THE CENTRAL WATER SUPPLY SYSTEM COMPRISES

• Main WTP (first-lift pumping stations, water treatment facilities, clean water reservoirs and second-lift pumping stations);

• 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

10% of Vyborgsky district,

20% of Kalininsky district,

35% of Krasnogvardeisky district,

20% of Nevsky district's left-bank part,

15% of Frunzensky district,

30% of Moskovsky district,

35% of Kirovsky district,

35% 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 m³/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.

ON ITS WAY TO CUSTOMERS WATER ALSO UNDERGOES UV TREATMENT.

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 0.6–0.8 mm quartz sand, the sand layer height being 800 mm. The upper filter bed is made of anthracite (0.8–2.0 mm); the height of the layer is 400 mm.

The second stage of Zelenogorsk WTP is designed for enhanced removal of iron and manganese and consists of six Culligan pressure filters (Hi-Flo 9 UFR 100), 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 WTPS

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, in the follow-up of the joint work carried out by Vodokanal and St. Petersburg State Institute of Technology (Technical University) with regard to the survey of steel pipe corrosion process and issuance of recommendations on improving anticorrosive features of the treated water, a stepwise water treatment with calcium chloride and soda ash was implemented at St. Petersburg WTPs to enable accurate dosing control which led to reduced consumption of anticorrosion agents.

As a consequence, in 2013, the iron concentrations measured at checkpoints in Petrodvorets and Sestroretsk were always stable low.

TERTIARY WATER TREATMENT TECHNOLOGIES USED AT BOOSTING PUMPING STATIONS AND HOUSE CONNECTIONS

To improve the potable water quality at remote sections of the network, tertiary treatment systems are constructed in the boosting pumping stations and house connections. Special filter media are used there to remove iron. 25 tertiary treatment systems were installed in 2013.

WATER QUALITY CONTROL

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

Water quality control is implemented by the Company in accordance with the approved programs – The Working Program for Production Control of Potable Water Quality and The Production Program for Water Quality Control.

The Working Program for Production Control of Potable Water Quality in St. Petersburg for 2012–2017 has come into effect since 1 January 2012. It 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 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 2013 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.

29,184 water samples were analyzed in 2013. Minor deviations from regulatory requirements with regard to total iron content 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 2013, Vodokanal also additionally 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 (MPC). The action plan for these addresses was developed in order to improve water quality.

THE MONITORING RESULTS SHOW THAT WITHIN 2013 THE

QUALITY OF POTABLE WATER IN APARTMENT BLOCKS (WHERE ABOUT 90,000 PEOPLE LIVE) IMPROVED.

In 2014, this work will be continued. 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 2013

IN 2013, 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

CONSTRUCTION OF THE FIRST-LIFT PUMPING STATION AND WATER INTAKE FACILITIES AT MAIN WTP

New water intake facilities and a first-lift pumping station at Main WTP are being built under the public contract. The work is scheduled to be completed in 2014. Design works related to a new water treatment block at Main WTP will also start in 2014.

2 ESTABLISHMENT OF THE WATER SUPPLY MANAGEMENT SYSTEM IN ST. PETERSBURG

In 2013, under the project for the water supply system modernization in the Southern zone of St. Petersburg energysaving and energy-efficient equipment was installed, including: processing equipment was replaced with energy-saving and energy-efficient equipment at 34 pumping stations;
30 automatic water quality control devices were installed to measure turbidity, nitrogen, aluminium and iron content;

• 53 sensors were installed in water supply networks (at control points) that allowed to optimize the operation of boosting pumping stations;

• 18 flow meters were installed in water supply networks to form the water balance of the Southern zone of St. Petersburg, as well as 12 flow meters were installed to detect illegal connections and monitor water supply at the battery limits with big customers;

• the automated system was installed to collect, accumulate, process and transfer the information about the volumes of water consumed during production, distribution and provision of services to customers.

These activities ensured uninterrupted high quality water supply for customers in Kirovsky, Krasnoselsky, Moskovsky, Nevsky and Frunzenksy districts of St. Petersburg.

A steady trend towards improving the key performance indicators was reached, including:

• the number of network failures in the Southern zone reduced by 30% in 2013 as compared to 2009. The average annual energy consumption reduced by 20% in 2013 as compared to 2009;

• the water loss rate during production and transportation of water to customers reduced by 33% in 2013 as compared to 2009;

• the number of registered customer calls related to low head reduced by 96%.

The reconstruction of pumping stations in the Northern and Central water supply zones in St. Petersburg is being planned. Reconstruction and equipment replacement projects are developed for small WTPs.

Projects for reconstruction of, and replacement of equipment in, machinery compartments at Northern WTP, Murinskaya PS, Kushelevskaya PS, Petrogradskaya PS are developed. In 2014, equipment installation and pre-commissioning will start.

3 WATER SUPPLY FROM UNDERGROUND SOURCES 3.1. Reserve water supply.

The construction and installation works at Kolpino WTP are in progress. Underground water intakes at the town of Lisy Nos are being planned. 3.2. Centralized water supply to households.

The design of WTPs in Molodezhnoye is completed; the design data are submitted to the expertise. With the WTPs in place, the local ground water sources will be used effectively to supply water to Kurortny district and new suburban developments.

The design of WTP at Dyuny ("Rzhavaya kanava") is nearing completion.

4 CONSTRUCTION AND RECONSTRUCTION OF WATER SUPPLY NETWORKS

In 2013, 72.3 km of water supply networks were reconstructed, constructed and overhauled including demounting of "one flow meter for several buildings" systems (in Krasnoselsky, Krasnogvardeysky, Moskovsky and Vasileostrovsky districts). Water supply networks in Tsvetochnaya str. (from Ligovsky pr. to Zastavskaya str.), Novoizmaylovsky pr. (from Basseynaya str. to Krasnoputilovksaya str.), Khasanskaya str. (from Kommuna str. to Entuziastov pr.) were reconstructed. As part of the water supply network reconstruction, 4,116 pieces of equipment were installed and replaced including 3,324 valves, 792 fire hydrants. Valves and fire hydrants were replaced with modern ones that do not require operator's presence and construction of manholes.

In order to ensure the water quality, 25 tertiary treatment systems were installed at house connections on the customer side; 33 house connections were cleaned to provide the required water head.

In order to increase the population satisfaction with water supply services, separate house connections with cold water flow meters were installed in houses having "one flow meter for several buildings" system. In 2014, this work will be continued.

5 CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEMS AT THE TOWN OF OLGINO

To provide centralized water supply and sewerage services to the town of Olgino, the construction of street water supply and wastewater disposal systems was fully completed in 2011–2013: 17.2 km of water supply networks and 15.2 km of sewerage networks were constructed, including the construction of the sewerage network with a length of 6.5 km, the water supply network with a length of 0.9 km, 4 sewerage pumping stations (2013).

In order to connect customers to the street networks, 4.7 km of house connections were constructed in 2012–2013.

6 CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEMS AT THE TOWN OF VOLODARSKY

To provide centralized water supply and sewerage services to the town of Volodarsky, over 28.9 km of water supply networks and 41.0 km of sewerage networks should be constructed. In 2012–2013, 27 km of water supply networks and 32.2 km of sewerage networks were constructed including 10.1 km of water supply networks and 15.9 km of sewerage networks in 2013.

To connect customers to the street networks, 1.5 km of house connections and 3.0 km of sewer outlets were constructed in 2013.

7 PROVISION OF POTABLE WATER QUALITY

In order to ensure the quality of potable water and guarantee its safety, UV disinfection systems were installed at Sestroretsk WTP and Gantulovskaya Gora WTP. The work is scheduled to be completed in 2014.

PROSPECTS FOR WATER SUPPLY SYSTEM DEVELOPMENT

IN ORDER TO INCREASE THE SATISFACTION OF ST. PETERSBURG INHABITANTS WITH THE QUALITY OF WATER SUPPLY SERVICES AND ENSURE RELIABLE AND SAFE OPERATION OF WATER SUPPLY FACILITIES, THE FOLLOWING ACTIVITIES ARE TO BE IMPLEMENTED IN 2014:

• Commencement of design works related to a new 500,000 m³/day water treatment block at the Main Water Treatment Plant.

• Commencement of design works related to the reconstruction of raw water pipes at the Northern WTP as well as the reconstruction of 700,000 m³/day water treatment facilities including the construction of an additional water treatment stage and the reconstruction of clean water reservoirs.

• Commencement of design works related to the modernization of Volkovksaya and Kronstadt WTPs and their transformation to the boosting pumping stations.

• Modernization of UV disinfection systems at WTPs. Efforts related to the modernization of the current UV disinfection systems will allow to ensure the safety of water supplied to inhabitants as well as to save energy.

• Commencement of design works related to the modernization of underground water sources ("Gostilitskiye", "Varvarinskiye", "Vilpovitskiye") including landscaping and site planning as well as the establishment of the monitoring system.

• Commencement of design works related to the construction of the backwash water recirculation system at the Southern Water Treatment Plant.

Completion of works related to the



implementation of the UV disinfection system at Sestroretsk Water Treatment Plant and Gantulovskaya Gora Water Treatment Plant. The installation of the UV disinfection system at these plants will ensure the safety of potable water supplied to inhabitants of Kurortny, Lomonosov and Kronstandt districts and save energy.

• Continuation of works related to the construction and reconstruction of water pipes that provide water to a large number of inhabitants and influence the development of urban areas:

- completion of works related to the

reconstruction of the Lopatinsky water pipeline important for water supply to the right-bank part of the city; – completion of works related to the construction of the pipelines from Northern Water Treatment Plant to Murinskaya pumping station and from Main Water Treatment Plant to Vasilevsky Island.

• Continuation of the program related to the replacement of reinforced concrete water pipe lines, including completion of the reconstruction of the water pipelines along Narodnogo Opolchenia prospect;

Continuation of the reconstruction of the

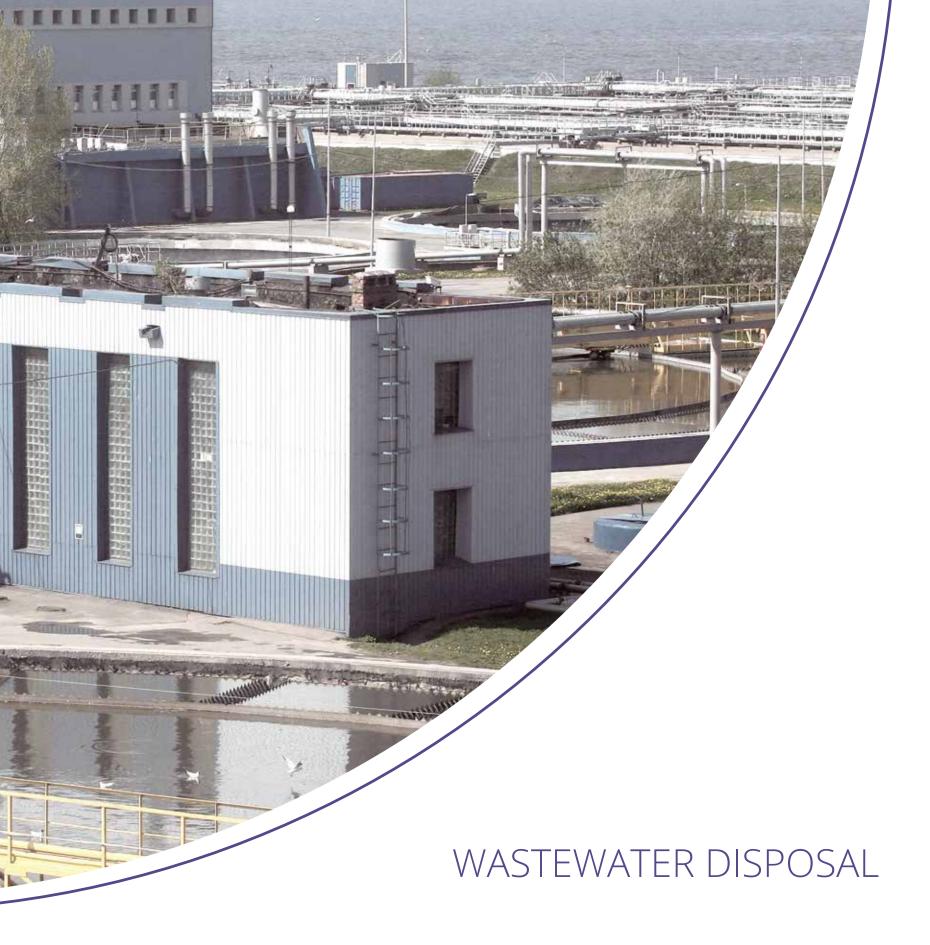
water network (178 km), the installation of tertiary systems at house connections (25 pcs.).

• Continuation of works related to the replacement of valves (5,500 valves to be replaced).

• Continuation of works related to the establishment of the water supply management system in the Northern and Central Water Supply Zones.

• Continuation of works related to the planning of water networks at the Martyshkino, Molodezhnoye, Lisy Nos, Toriki towns, etc. Commencement of water network design at other towns.





ST. PETERSBURG SYSTEM OF WASTEWATER DISPOSAL AND TREATMENT IS A COMPLEX OF INTERCONNECTED ENGINEERING FACILITIES TO PROVIDE COLLECTION OF WASTEWATER, ITS TRANSPORTATION AND TREATMENT AT WASTEWATER TREATMENT PLANTS FOLLOWED BY DISCHARGE INTO WATER BODIES AND WASTEWATER SLUDGE UTILIZATION

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 snowmelt waters are collected separately from other wastewater and discharged currently without any treatment.

As of 1 January 2014, 98.4% of all municipal sewage is treated, there are some discharges channeling wastewater without any treatment directly into city water bodies.

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

Vodokanal continues its work targeted to the closure of untreated wastewater discharges into water bodies, elimination

of direct discharge points and transportation of sewerage to wastewater treatment plants.

WASTEWATER SYSTEM INCLUDES:

- 15 wastewater treatment plants comprising:
- municipal wastewater treatment plants - 13;
- runoff treatment plants 2.
- 141 sewerage pumping stations;
- 8,240.60 km of sewerage networks including:
- gravity pipelines 7,943.1 km;
- pressure pipelines 297.4 km.
- 256.75 km of tunnel collectors;
- 21,960 dump wells;
- 1,206 of direct discharges including:
- 104 of municipal wastewater discharges;
- 1,092 of storm-water discharges and storm-water basins;

- 10 discharges of flushing water from waterworks.

• 2 landfills: Severny, Volkhonka-2 and

- sludge beds in Gorelovo settlement;
- sludge incineration plants 3;
- 10 stationary snow-melting stations:
- 2, Oktyabrskaya Embankment (capacity
- $-7,000 \text{ m}^3/\text{day}$);
- 77 Peterhoffskoe shosse (7,000 m³/day);
- 20, Sevastyanova str., Kolpino $(7,000 \text{ m}^3/\text{day});$
- 45, Rizsky pr. (7,000 m³/day);
- 83, Stachek pr. (3,500 m³/day);
- Letter A, 69, Krasnoputilovskaya str. $(3,500 \text{ m}^3/\text{day}).$
- 123, Volkhonskoe shosse
- $(7,000 \text{ m}^3/\text{day});$
- 2, Rybinskaya str. (5,000 m³/day);
- Mebelnaya str. (7,000 m³/day);
- Kushelevskaya road (5,000 m³/day).

Diameters of the sewerage network range from 100 mm (courtyard networks) to 1.5 m (water mains). Pipelines with diameters up to 500 mm make up 79% of the total length of all sewerage networks.

THE MAIN MATERIAL OF SEWERAGE PIPES IS AS FOLLOWS:

• reinforced concrete – 58.0%

- of the whole network;
- concrete 19.2%;
- polyethylene 10.7%;
- cast iron 7.3%;

• ceramics and other materials – 4.8%. About 44% of all the networks have been in operation for over 40 years.

Tunnel sewers are the basic mains for collecting and transporting wastewater to wastewater treatment plants. Currently, 256.75 km of tunnel sewers are operated in the city having more than 1,000 shafts and bore wells. Internal diameter of tunnel collectors ranges from 2 to 4.7 meters, with laying depth of 15–80 meters.

The capacity of sewerage pumping stations ranges from 300 m³/day to 1.5 mio. m³/day.

ADJUSTED CAPACITY* OF WASTEWATER TREATMENT PLANTS:

South-West Wastewater Treatment Plant	290,000 m³/day
Northern Wastewater Treatment Plant	690,000 m³/day
Central Wastewater Treatment Plant	1,050,000 m³/day
Sestroretsk Wastewater Treatment Plant	17,000 m ³ /day
Zelenogorsk Wastewater Treatment Plant	10,000 m ³ /day
Repino Wastewater Treatment Plant	10,000 m³/day
Petrodvorets Wastewater Treatment Plant	72,000 m ³ /day
Kronstadt Wastewater Treatment Plant	28,000 m ³ /day
Pushkin Wastewater Treatment Plant	71,000 m ³ /day
Kolpino Wastewater Treatment Plant	69,000 m ³ /day
Pontonny Wastewater Treatment Plant 1	1,000 m³/day
Metallostroy Wastewater Treatment Plant	9,000 m³/day
Pulkovo-3 Wastewater Treatment Plant	690 m ³ /day
Kolpino Wastewater Treatment Plant	860 m³/day

* Adjusted capacity of wastewater treatment plants is calculated for rainy weather conditions taking into account wastewater treatment quality requirements and technical condition of the facilities

ACCORDING TO THE RESULTS OF 2013 THE DAILY AVERAGE VOLUME OF TREATED WASTEWATER WAS 2,200,000 M³/DAY.

The percentage of disinfected effluent was 19%.

THREE CATCHMENT AREAS – NORTHERN, CENTRAL AND SOUTHERN – ARE ESTABLISHED IN ST. PETERSBURG

NORTHERN CATCHMENT AREA ocovers the largest part of the city (mainly the right bank of the Neva River) including Nevsky, Krasnogvardevsky, Kalininsky, Vyborgsky, Petrogradsky, Primorsky districts, a part of Tsentralny district, and also receives wastewater from adjacent areas of the Leningrad Region. The main sewer of this catchment area is the Northern Tunnel Collector delivering wastewater to the Northern WWTP. Commissioning of the Northern Tunnel Collector section from Kantemirovskaya str. to Finlandsky bridge significantly increased wastewater volumes entering the Northern WWTP. In addition, this catchment area includes local catchment areas of Kurortny district (Sestroretsk WWTP, Zelenogorsk WWTP, Repino WWTP, Molodezhnoe WWTP).

CENTRAL CATCHMENT AREA covers the territory of the left bank of the Neva River i.e. Nevsky (the left-bank), Vasileostrovsky, Tsentralny, Admiralteysky, Frunzensky, Moskovsky and a part of Kirovsky and Pushkinsky districts. The main collecting sewer is a sewerage collector delivering wastewater to the Central Wastewater Treatment Plant (on the Bely Island). The facility redistributing wastewater between the Northern and Central catchment areas is the sewage pumping station no.6.

SOUTHERN CATCHMENT AREA covers the southern territory of the city. It includes a part of Kirovsky and Krasnoselsky districts and the town of Strelna of Petrodvorets district which wastewater is discharged to South-West Wastewater Treatment Plant through the tunnel collector system. The penstocks located in the shafts of tunnel sewers regulate wastewater between the Southern and the Central catchment areas.

Wastewater from Kolpinsky, Kronstadtsky, a part of Pushkinsky and Petrodvorets districts goes to wastewater treatment plants located in each of these districts through the pressure-gravity collectors.

RUNOFF CATCHMENT AREAS. The area

in St. Petersburg with the separate sewerage system (storm-water and domestic wastewater) account for about 1/3 of the whole sewered area of the city. The remaining 2/3 of the territory is served by the combined sewerage system. In Kolpino, Pushkin, Pavlovsk and Sestroretsk runoffs are discharged into the storm-water sewerage system (which is completely separate system). In Petrodvorets and Kronstadt runoffs are discharged into both storm-water and combined sewerage system (semi-separate system). Currently, the runoff catchment area is defined. The area where runoffs are collected into the sewerage system accounts for 418 km².

A water balance is made for each wastewater catchment area. However, the amount of equipment installed and its technical characteristics do not allow to control wastewater disposal system and to regulate wastewater flow in the sewers depending on the level of rainfall and runoff inflow into the sewerage system.

ST. PETERSBURG IS THE FIRST MEGALOPOLIS 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 city's biggest WWTPs – Central WWTP, Northern WWTP and SWTP – are in operation.

They incinerate sludge produced in the course of wastewater treatment at all 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 Central WWTP;
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 Vodokanal St. Petersburg to achieve significant savings of energy resources.

FLUE GASES OF ALL SIPS UNDERGO A THREE-STAGE PURIFICATION PROCESS.

Treated gases emitted into the atmosphere at all 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 ARE IMPLEMENTED AT VODOKANAL'S WASTEWATER TREATMENT PLANTS

Wastewater treatment quality at WWTPs of the city is regulated by the Russian regulations and international recommendations.

Process diagrams of wastewater treatment plants include the following stages of wastewater and sludge treatment:

• MECHANICAL TREATMENT – to remove coarse impurities and mineral suspended solids from treated wastewater (screens, grit removals, primary sedimentation tanks).

• BIOLOGICAL TREATMENT – to remove suspended solids remaining after mechanical treatment and dissolved organic contaminants from the treated wastewater. Treatment is carried out by activated sludge microorganisms in aeration tanks and secondary sedimentation tanks.

• CHEMICAL TREATMENT – to remove phosphorus phosphates chemically.

• TERTIARY TREATMENT – given that almost all water bodies in St. Petersburg, where treated wastewater is discharged, are categorized as fishery water bodies, it predetermines the quality requirements to wastewater discharged into water bodies – suspended solids of less than 5 mg/l. Therefore, tertiary treatment (post-treatment) is needed to be introduced at all WWTPs of the city in order to stabilize treatment quality. Now it is implemented only at Repino and Petrodvorets WWTPs.

– Disinfection – disinfection using ultraviolet radiation is introduced at Repino WWTP, Sestroretsk WWTP, Petrodvorets WWTP as well as at the South-West Wastewater Treatment Plant.

- Sludge treatment - the main purpose of the wastewater sludge treatment stage is to minimize its volume and eliminate negative impact on the environment (smell, pathogenic microflora). Optimal solution for utilization of sludge produced in wastewater treatment plants is incineration.

In order to ensure the compliance of wastewater treatment with HELCOM recommendations, Vodokanal of St. Petersburg has been constantly upgrading biological treatment by means of advanced nutrients removal technologies.

The advanced UCT biological process (University of Cape Town) has been implemented at SWTP and Sestroretsk WWTP, and JHB process (University of Johannesburg) – at Petrodvorets WWTP, Repino WWTP and Pushkin WWTP. These technological solutions enable to manage the biological treatment system in a flexible way, adjusting the recirculation volumes and supply of oxygen for aeration. As a result, with any changes of external factors affecting the treatment process (wastewater temperature, influent contaminant concentrations), it became possible to select the optimal mode and ensure the required quality of treatment.

The projects of the city wastewater treatment plants reconstruction are meant to upgrade biological treatment with effective solutions of UCT and JHB technologies. Modernization of aeration tanks at the largest WWTPs of the city (Central and Northern WWTPs) is currently under implementation.

The method of phosphorus chemical precipitation has been already introduced to improve phosphorus removal and stabilize treatment parameters at all WWTPs of the city.

The principle of the chemical wastewater treatment is chemical reaction after dosing of chemical agents, and as a result phosphates form insoluble compounds which are removed from the system together with the sludge.

After the introduction of chemical wastewater treatment methods, HELCOM requirement of no more than 0.5 mg/l of total phosphorus in treated wastewater is steadily achieved at all WWTPs of the city.

EFFICIENCY OF WASTEWATER TREAT-MENT AT WWTPS OF VODOKANAL OF ST. PETERSBURG IN 2013 WAS AS FOLLOWS: SUSPENDED SOLIDS AND BOD – OVER 95%; TOTAL PHOSPHORUS – 93% AND TOTAL NITROGEN – 70%.

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

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;

• 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 30,000 components are determined annually.

Besides, wastewater composition control is regularly performed at the following processes points: the inlet chamber, collection chamber after primary clarifiers, effluent collection chamber of each WWTP. 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), phosphates, nitrogen group, suspended solids, alkalinity and 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, VODOKANAL PERFORMS CONTINUOUS MONITORING OF WASTEWATER QUALITY DISCHARGED BY THE CUSTOMERS INTO ST. PETERSBURG CENTRALIZED SEWERAGE SYSTEM.



The main objective of customers' wastewater quality control is to reduce pollution of customers' wastewater coming to sewerage system and water bodies and to evaluate the customers' compliance with wastewater quality norms. During 2013, over 5,000 customers were controlled by Vodokanal. Wastewater samples were taken from 4,300 customers' discharge points. Total number of determinations of wastewater components in the customers' samples was 172,582. In the course of 2013, only 1% of the customers met wastewater quality requirements.

The customers shall pay an extra charge for exceeding regulatory values. Fees are charged for violation of effluent wastewater composition regulations (established in order to prevent negative impact of customers' wastewater on water bodies) * and for violation of the requirements set by "Rules for cold water supply and wastewater disposal" (approved by the Resolution of the Government no.644 dated 29 July 2013) in order to prevent the negative effect of discharges by the customers on the centralized sewerage systems.

To encourage water protection measure taken by the customers, a concession charge for non-compliance with wastewater composition regulations is granted to those who implement such measures.

In 2013, only 182 out of 3,100 customers (5.9%), who exceeded regulatory values, agreed water protection plans with Vodokanal of St. Petersburg, 6 companies were granted a concession charge in due course provided that they would implement water protection measures. However, the number of customers which submitted water protection plans to Vodokanal in 2013 was 4 times more than in 2012 (43 customers). The quality of wastewater coming to WWTPs was slightly improved in comparison with the previous years, evidencing that customers pay more attention to environmental protection. Nevertheless, the quality of wastewater coming to WWTPs still do not meet the requirements necessary for Vodokanal of St. Petersburg to comply with the permissible discharge limits for most of metals and oil products.

In 2013, representatives of the Company and its customers jointly performed 374 inspections of customers' territories to identify sources of wastewater pollution (twice more than in 2012). These inspections form the basis for further development of water protection measures by the customers.

*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.

NEW STANDARDS OF EMERGING INDUSTRY-SPECIFIC LEGISLATION ON WATER SUPPLY AND WASTEWATER DISPOSAL REQUIRE THE INDUSTRIAL CUSTOMERS TO IMPLEMENT WATER PROTECTION MEASURES INCLUDING CONSTRUCTION AND UPGRADE OF LOCAL WASTEWATER TREATMENT FACILITIES

To develop the principle of customers' responsibility for industrial wastewater quality, a number of resolutions were adopted by the Government of the Russian Federation.

According to these regulatory acts:

 standards for the customers wastewater composition and properties are introduced in order to prevent negative impacts on water bodies as well as on the centralized sewerage systems;

• big customers (discharging more than 200 m³/d of wastewater) are subjected to state environmental supervision and required to pay for water bodies pollution. These customers shall also agree environment protection action plans with state water supervisory authorities;

 all big industrial customers as well as customers, whose production activities cause discharge of specific pollutants, are obliged to arrange local treatment facilities;

• all customers discharging more than 30 m³ of wastewater per day, whose production activities cause discharge of specific pollutants, are required to submit a declaration on pollutants discharge to its wastewater company. Such declaration should be the basis for water protection plans of the customer;

• a customer shall pay for violation of the set standards aiming to prevent negative impacts on the centralized sewerage system;

· additional impetus to arrange local treat-

ment facilities is created by a possibility for big customers to setoff funds spent on water protection measures against the charges paid for negative impact on water bodies.

The obligation to construct and upgrade local treatment facilities will come into effect on January 1, 2015.

Therefore, the customers are interested in finding the best possible wastewater treatment processes and other technical solutions to avoid negative impact on the centralized sewerage system and water bodies.

"Rules for cold water supply and wastewater disposal" and "Rules for commercial water and wastewater metering" approved by the Russian Government consolidated the law provisions encouraging the customers to arrange wastewater metering. Thus, the above mentioned Rules oblige big customers (with wastewater discharge over 200 m³/d) as well as the customers who use external water supply without validated water meters) to install wastewater meters.

Vodokanal is interested both in implementation of water protection measures by the customers and in reliable wastewater metering with metering instruments. Therefore, Vodokanal actively cooperates

with industrial enterprises and industrial associations aiming to:

• assist customers in complying with regulatory requirements to the discharge of wastewater into the centralized sewerage systems of St. Petersburg;

assist in arranging wastewater metering;
execute and improve the norms provided in the Law on Water Supply and Wastewater Disposal and relevant by-laws.
The above mentioned cooperation is im-

plemented in the following forms:

• consultations based on the results of the analytical quality control of customers wastewater:

 recommendations on the action plan to prevent discharge of pollutants in excess of the set limits;

assistance in the development of the terms of reference for design and construction of local treatment facilities;
recommendations for, and assistance in, choosing wastewater metering devices;
seminars, workshops, reports made to clarify industry-specific laws, discussion of proposals to improve such laws.

Vodokanal intends to facilitate cooperation with industrial enterprises and entrepreneurs in these areas in the form of individual consultations and recommendations as well as seminars, reports, workshops.

ACHIEVEMENTS OF 2013

SINCE THE EARLY 90-IES, VODOKANAL OF ST. PETERSBURG HAS MADE EFFORTS TO REDUCE THE DISCHARGE OF UNTREATED WASTEWATER IN ORDER TO MITIGATE NEGATIVE IMPACT ON THE ENVIRONMENT OF THE BALTIC SEA

The following measures were taken within the Neva Direct Discharges Closure Programme:

1. In October 2013, the Northern Tunnel Collector Extension was completed. The collector system includes:

• two 4 m diameter tunnels, 12.2 km each with the diameter of 4 m, laid at the depth of 40–90 m;

8 microtunnels, total length – 7,600 km;
64 shafts, 6–9 m diameter each, at the depth of 10–80 m;

• 5.2 km of street sewerage networks, 0.25–1.2 m in diameter.

With the Collector in place, 76 direct wastewater discharges were closed in the period of 2008 – 2013 and 334,000 m³/day

of untreated wastewater were no longer drained into the Neva. It accounts for nearly 122 million cubic meters of wastewater per year. As a result, 98.4% of all wastewater is treated in Petersburg.

2. Construction of the unique hydraulic facility – URS Pumping Station – was finished. It is a powerful pumping station located in a shaft with a depth of 90 m and a diameter of 24 meters between the two lines of the collector. 12 high-capacity pumps are placed around the shaft. The weight of each is about 9 tons, the capacity – 720 liters per second. URS will give opportunity to control the velocity of wastewater in the collector. It is necessary to ensure self-cleaning of the collector from bottom sediments. Wastewater flows in the collector by gravity due to the difference in heights: at the Finlyandsky Railway Bridge tunnels are laid at a depth of minus 52 m, and then the collector gradually deepens up to minus 80 meters. But in the Grenadersky Bridge area the tunnels go up. The movement of water slows down and suspended solids in wastewater settle to the bottom of the collector. It may lead to the silting of the collector. That will cause problems in operation. URS pumping station will eliminate this threat. When necessary, wastewater will be redirected to the pumping station and pumped 60 meters up to the discharge tunnel, through which wastewater will move to Northern Wastewater Treatment Plant - again by gravity.

3. The construction of the micro-tunnel along the Robespierre Embankment made it possible to eliminate backwash discharges from the Main Water Treatment Plant into to the Neva River. Since October 2013, backwash water in the amount of 50,000 m³/day has been delivered to the Northern WWTP.

4. The design of the 1st stage of the Okhta Tunnel Collector was completed. Design documents were submitted for the expertise.5. Closure of untreated wastewater discharges was carried out along the Pirogovskaya Embankment.

6. The intercepting sewers along the Karpovka River Embankment and the Repina Square are being designed.

In the framework of the Sewerage System Reliability Improvement Programme the following works were implemented:

1. Construction of the 2nd line of the backup collector near the Muzhestva Square.

2. Reconstruction of the tunnel sewer along Rizhsky pr.

3. Reconstruction of the tunnel sewer from the shaft no.63 along Revolyutsii shosse to the shaft no.2 along Piskarevsky pr.

4. The design documentation for the following works was under development:reconstruction of the tunnel collector

of the Central WWTP from the shaft no.43 (3, Gapsalskaya str.) to the shaft no.44b (Bely Island);

• construction of the connection line from the shaft 1/27 to the shaft 441/2

(33, Obukhovskoy Oborony pr.);

• construction of the ring tunnel along Basseynaya str. (from the shaft no.8 in Kosmonavtov pr. to the shaft no.6 of the tunnel no.28);

• construction of the ring tunnel no.18 along the Fontanka River Embankment to the tunnel in Ruzovskogo str.

MODERNIZATION AND REHABILITATION OF THE SEWERAGE NETWORKS

In 2013, 68 km of sewerage networks were reconstructed. The length of the sewerage networks cleaned with the hydrodynamic flushing was increased up to 1,023 km per year. This fact made it possible to reduce the number of blockages in the networks up to 5 blockages per 10 km.

To ensure provision of wastewater

services to new residential developments, construction of wastewater networks was completed in Olgino settlement. In Volodarsky settlement installation of the network is underway.

REHABILITATION OF WASTE-WATER TREATMENT PLANTS

In order to meet HELCOM requirements, rehabilitation and modernization of small WWTPs in Kolpino, Kronstadt, Pushkin, Pontonny continued.

Also, the 1st stage of the Northern WWTP rehabilitation was going on with implementation of the cutting-age effective nutrients removal technologies.

In 2013, design works based on JHB process were performed with regard to the sections no.5-6 of the aeration tanks at the Central WWTP to improve wastewater efficiency.

Reconstruction of the aeration tank no.5 at SWTP was carried out in 2013 including:

replacement of the nitrate pumps;
installation of new type mixers;

• Installation of new type mixers,

substitution of air valves automated drives;

• installation of oxygen and air flow sensors.

RECYCLING OF LANDFILLED WASTEWATER SLUDGE

To alleviate the negative environmental impact on the environment, Vodokanal continued works on recycling wastewater sludge stored at the Severny landfill in the town of Novoselki. Along with the geotubes method, new technical solutions to disinfect and neutralize landfilled sludge are being searched. The result of such treatment is the production of safe substrate which is odor free and may be used for manufacturing fertilizers or technogenic soil (to be used for the construction and reconstruction of motorways).

WASTEWATER SLUDGE INCINERATION PLANTS

The expected useful life of the basic SIP units at the Central WWTP is 12 years according to the operation passport. SIP at the Central WWTP has been in operation for over 16 years. In 2013, the design contract with GUP "Lengiproinzhproject" was signed to rehabilitate the sludge incineration facility together with construction of two new incineration lines at the Central WWTP.

STATIONARY SNOW-MELTING STATIONS

Natural and climatic conditions of St. Petersburg are characterized with large amount of precipitations in winter. In this regard, one of the most important tasks of the city economy is snow disposal from the city streets in winter period.

In order to cease snow landfilling in the city area and to reduce negative impacts on water bodies and soil, four snow-melting stations were built and put into operation in 2013 at the following addresses:

- 123, Volkhonskoe shosse (7,000 m³ per day);
- 2, Rybinskaya str. (5,000 m³ per day);
- Mebelnaya str. (7,000 m³ per day);
- Kushelevskaya road (5,000 m³ per day).

In total, 10 snow-melting stations were constructed and put into operation in 2012–2013 to receive snow in the amount of 59,000 m³/day.

FUTURE DEVELOPMENT OF THE SEWERAGE SYSTEM

To decrease negative environmental impact and reach sustainable wastewater treatment quality, the following activities are to be implemented:

1. Close 3 domestic wastewater discharges along Petrogradskaya Embankment with total flow of 4,020 m³ per day.

- 2. Close domestic and storm water
- discharges of Petrovsky Stadium
- on Petrovsky Island with the flow
- of 14,700 m³ per day.

3. Complete reconstruction of small WWTPs in Kronstadt, Kolpino, Pontonny and Pushkin.

4. Finish the 1st stage and start the 2nd stage

of the Northern WWTP rehabilitation. 5. Start reconstruction of the aeration tanks no.5, 6 and design works for the reconstruction of the aeration tanks no.1, 2 at the Central WWTP.

6. Launch construction of new wastewater treatment facilities in Molodezhnoe settlement.

7. Commence designing of 2 new incineration lines at SIP of the Central WWTP. 8. For alleviating the negative impact of the sludge landfills, continue treatment and recycling of wastewater sludge by the geo-tube method in order to produce environmentally safe substrate; go on searching for new technical solutions of sludge treatment in order to produce nonhazardous substance. To increase reliability and to ensure uninterrupted provision of wastewater services, the following measures are to be implemented in 2014:

1. Construction of ring tunnels and backup collectors to ensure the possibility to examine and reconstruct tunnel collectors:

- completion of the construction of the 2nd stage of the backup collector from Vernosti str. to the Murinsky Ruchey near the Muzhestva Square;
- preparation works for ring tunnel construction along Basseynaya str.;
- preparation works for ring tunnel construction along Ruzovskogo str.;
- preparation works for ring tunnel construction in Petrodvortsovsky district.
- 2. Rehabilitation and construction of tunnel collectors:
 - commencement of construction of the 1st stage of Okhta Tunnel collector and design works for the 2nd and 3d stages;
 - reconstruction of the tunnel sewer to Bely Island from the shaft no.43 to the shaft no.44b;
 - completion of the tunnel reconstruction along Rizhsky pr., the section
 - between the shaft no.31 BIS (Rizhsky pr.) and Bely Island (Gapsalskaya str.).

3. Construction of sewerage networks:

- commencement of construction works to close direct discharges between Metallostroy and the Central WWTP catchment areas;
- commencement of reconstruction of the inlet collector to Zelenogorsk WWTP;
- reconstruction of sewerage networks 58.5 km.
- 4. Flushing of the sewerage networks 1,433.6 km

To improve energy efficiency and rational use of resources, Vodokanal proceeds with the establishment of St. Petersburg wastewater management system aimed at ensuring the optimal hydraulic control of the sewerage network and raising efficiency of the centralized wastewater disposal facilities. For this purpose it is necessary to:

- install water flow metering and wastewater quality control instruments with automated data transmission;
- arrange customer service by catchment areas;
- develop chemical balance of wastewater disposal system;
- optimize pollution load on wastewater treatment facilities and water bodies considering chemical balance.



The following activities are planned under the chemical balance development:

• research works to determine the impact of specific pollution on the activity of biocoenosis of the biological treatment at municipal wastewater treatment plants;

research works to investigate impact of untreated runoffs on water bodies;
benchmarking of wastewater policies

applied in the European Union; • continue interaction with industrial

companies to develop action plans for reducing negative impact on the environment;

• conduct workshops with the involvement of other water utilities and industrialists

on the following topics:

 European legislation regulating reception of industrial wastewater into the sewerage system in residential areas;

- Experience in meeting requirements of the European legislation by

enterprises of different industries; – Selection of treatment technologies for various contaminants;

- Indicators of treatment efficiency;

– Laboratory control of the customers' wastewater quality.

To ensure the availability of centralized wastewater disposal services to the citizens, the Company plans to

construct and rehabilitate the following wastewater networks in 2014 to connect new and transformed territories:

 continue construction of the combined sewerage system for "Konnaya Lakhta" facility;

- continue construction of external engineering networks for the new residential development in Krasnoe Selo;
 construct infrastructure in new
- industrial areas;
- continue designing of sewerage networks in Martyshkino, Molodezhnoe, Lisiy Nos, Toriki and etc.;
- start designing of sewerage networks in other settlements.



SPECIALIZED VEHICLES AND EQUIPMENT

DK

A

J.Hvie

St. PETERSBURG

AS OF 1 JANUARY 2014, VODOKANAL ST. PETERSBURG HAS 1,029 TRANSPORT UNITS

VODOKANAL'S VEHICLE PARK INCLUDES:

- 188 specialized van trucks to transport workers and equipment;
- 131 dump trucks;
- 129 items of road construction equipment including 50 JCB loaderexcavators;
- 56 Scania, Mercedes, MAN specialized combined vehicles;
- 31 steam generators
- (STEAMRATOR MHT700);
- 24 tank trailers for drinking water supply;
- 470 other transport vehicles.

500 435 447 400 Quantity, units 300 200 88¹⁰³ 100 0 1-3 years 3-5 years up to 1 year over 5 years 01.01.2010 01.01.2013 01.01.2014

AGE OF VEHICLES

TYPES OF VEHICLES

Types of vehicles	As of 1 Jan. 2014			
Passenger vehicles	62			
Freight vehicles:	348			
Dump truck	131			
Flatbed truck	53			
Van truck	152			
Other	12			
Specialized:	353			
Van trucks to transport workers	188			
Sewage suction truck	29			
Combined trucks	56			
(Scania, Mercedes, MAN)	90			
Other	80			
Buses	24			
Road machinery	129			
Trailers, semi-trailers	113			
Total:	1,029			

Vodokanal has on the balance sheet diesel power plants – 16 units, including mobile diesel-electric station S1400 D5 in containers with the power (basic mode) – 1,250/1,000 kVA/kW (3 units.). If cold water supply is stopped during network repairs, trailer tanks are used for delivery of drinking water to the citizens.

VODOKANAL HAS THE FOLLOWING UNITS ON THE BALANCE SHEET:

• compact mobile boiler units (STEAMRATOR MNT700, MNS700) used instead of outdated automatic smoke exhaust facilities to warm fire hydrants and storm-water inlets in winter period;

1 boring machine ASTEC DD2024;
2 horizontal controlled drilling machines (self-act) UNIVERSAL HDD mod. UNI 60*70;
1 VOLKSWAGEN 2EKE2 CRAFTER car, Van truck – Mobile laboratory for teleinspection. Application of this mobile laboratory for diagnostics and examination of networks using high-tech robotic video system has reduced networks examination time and improved accuracy of defects detection.

IN 2013, VODOKANAL PURCHASED 45 TRANSPORT VEHICLES INCLUDING THE FOLLOWING:

22 van trucks on MAN chassis for transportation of workers;
4 VOLKSWAGEN van trucks for transportation of workers;
Vehicles are equipped to perform works on water supply and sewerage networks and have Euro-4 engines;

- 1 KAMAZ-43114-15 test drilling unit to repair and maintain underground water wells;
- 1 MERCEDES-BENZ SPRINTER 211 CDI mobile metrological laboratory (mobile complex – laboratory to analyze surface water and wastewater samples) which is used to perform rapid analysis of surface water and customers' wastewater. IN ORDER TO INTRODUCE LIQUID SOIL TECHNOLOGY TO BACKFILL PITS AFTER NETWORK REPAIRS, THE COMPANY PURCHASED THE FOLLOWING VEHICLES
- FOR THE PRODUCTION AND DELIVERY OF SUCH LIQUID SOIL TO VODOKANAL SITES: • 8 concrete mixers 58149Z on
- KAMAZ-6520-61 chassis;
- 2 POWERSCREEN METROTRAK crushing plants;
- 2 JCB 426Z loading tractors;
- 2 JCB JS160W excavators.

Vodokanal plans to upgrade and develop its transport vehicles. The Company plans to shift to the operation of the vehicles equipped with EURO-4 diesel motors with advanced technical capability as well as to apply multi-function transport units thus reducing the number of vehicles operated by the Company including: • 2 vacuum excavators, the application of

 2 vacuum excavators, the application of which will reduce the number of vehicles involved in water/sewerage network repairs from five to three units at one site;
 34 emergency vans on MAN chassis characterized with the advanced chassis capability and more comfort during transportation of the teams. These emergency vans will replace outdated emergency vans on ZIL chassis; • 40 cargo and passenger vans Mercedes-Benz Sprinter 311 CDI with advanced technical capability and more comfort during transportation of the teams. These cargo and passenger vans will replace outdated vans on GAZ-2705 chassis; • cargo and passenger van (laboratory) on Mercedes-Benz Sprinter 311 CDI chassis, with high-tech equipment to perform telediagnostics of water supply networks; • 8 sewer flushers SCANIA Flexline (8 m³); • 5 sewer flushers MAN Cityflex 204 (4 m³);

• 3 sewer flushers Scania (13 m³).

ALSO, IN ORDER TO REDUCE NEGATIVE ENVIRONMENTAL IMPACT OF AIR POLLUTING EMISSIONS WITHIN THE PROGRAMME OF CHANGE-OVER TO GAS FUEL VEHICLES, VODOKANAL PLANS TO PURCHASE 8 GAS MOTOR TRUCKS.

ESTABLISHMENT OF BACKUP POWER SUPPLY SYSTEM AT VODOKANAL'S FACILITIES

In 2013, Vodokanal St. Petersburg completed preparatory works for installation of mobile and permanent backup power supply sources (0.4/6/10 kV) at the company's main water and wastewater treatment plants in compliance with the Program on the development of the backup power supply system and St. Petersburg Government Resolution no.1454 dated 20 October 2011 "On the program of installation of backup power supply at socially significant and lifesupport facilities for 2012–2013".

For the first time ever, the company as big as Vodokanal provides the connection of high-voltage pumps (up to 1.5 MW) to backup power supply (diesel-electric power units – DEPUs and variable frequency drives). Technical solutions introduced in the course of the system development are unique and unprecedented. In 2013, 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 (0.4/6 kV);

• 11 sites to accommodate stationary highvoltage diesel-electric power units (0.4/6 kV) at the following core facilities:

- Main Water Treatment Plant;
- Volkovskaya Water Treatment Plant;
- Northern Water Treatment Plant (1st and 2nd pump rooms);
- Southern Water Treatment Plant (3d and 5th pump rooms);
- Kolpino Water Treatment Plant, 2nd elevation;
- Moskovskaya Pumping Station;
- Central Wastewater Treatment Plant;
- Northern Wastewater Treatment Plant;
- South-West Wastewater Treatment Plant.

The 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 to reduce energy consumption of the pumping station by 10–12% due to the pumps operation with variable frequency drives in normal mode.

nn i

THE ESTABLISHMENT OF THE BACKUP POWER SUPPLY SYSTEM AT VODOKANAL'S FACILITIES MADE IT POSSIBLE TO MAINTAIN WATER HEAD IN THE NETWORKS UP TO 10–15 M DUE TO BACKUP POWER SUPPLY UNITS INSTALLED AT WATERWORKS SUPPLYING WATER FROM CLEAN WATER TANKS (WATER STOCK SUFFICIENT FOR THE PERIOD UP TO 12 HOURS), AND TO ENSURE WASTEWATER DELIVERY TO WASTEWATER TREATMENT PLANTS IN CASE OF EXTERNAL POWER SUPPLY INTERRUPTION.







CUSTOMER SERVICE IN 2013

CUSTOMER SERVICE WAS A PRIORITY AREA FOR VODOKANAL IN 2013

From 2010 till May 2013, Vodokanal's territorial divisions established within the Water Supply and Wastewater Disposal Production Branches provided consultation services to customers.

The main task of water supply and wastewater disposal territorial divisions was not only to interact with customers of the service areas (for the purpose of high quality cold water supply and wastewater disposal) but also to monitor the actual situation at the customers' facilities in order to update the contractual relationship. In 2012, Vodokanal completed the inventory of customers' facilities and collected reliable information about its customers.

Since May 2013, taking into account positive experience in operating customer services centers using the one contact principle in St. Petersburg and the opinion of the customers, Vodokanal has been interacting with clients and customers on the basis of the Customer Service Centre.

THE FUNCTIONS OF THE CUSTOMER SERVICE CENTRE ARE AS FOLLOWS:

• issuance of authorization documentation for cold water supply and wastewater networks connection (technical specifications, connection conditions), conclusion of connection contracts, and issuance of certificates of conformity to connection conditions;

• conclusion/amendment/termination of cold water supply and wastewater disposal contracts;

· cooperation in commercial water metering (volume of services);

• collection of payments under the contracts and checking of accounts receivable;

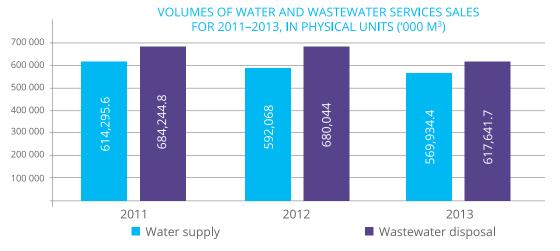
• provision of information and clarifications with regard to the above activities.

In 2013, pursuant to the Federal Law "On the Water Supply and Wastewater Disposal", the Government of the Russian Federation approved the Rules of cold water supply and wastewater disposal (decree no.644 dated 29 July 2013), Rules for commercial water/wastewater metering (decree no.776 dated 4 September 2013), standard contract forms for water supply and wastewater disposal (decree no.645 dated 29 July 2013).

VODOKANAL PROVIDED TO CUSTOMERS INFORMATION AND CLARIFICATIONS IN CONNECTION WITH NEW REGULATIONS.

VOLUMES OF SALES

THE RESULTS OF VODOKANAL ACTIVITIES IN 2011–2013 SHOW A CLEARLY STABLE REDUCTION IN WATER CONSUMPTION BY CUSTOMERS OF ST. PETERSBURG



The diagram illustrates the reduction in water supply and wastewater disposal services in St. Petersburg during 2011–2013.

Volumes of water consumed were reduced by 7.2% in the last three years. Reduction of sales in 2013 amounted to 3.7%.

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

Reduction of water supply volumes for 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.

Thus, the mechanism of economic incentives of rational water consumption works.

Transition to collection of payments for water according to the rules provided in the Decree of the Government of the Russian Federation no.124 dated 14 February 2012 (previously payments were calculated on the basis of standard monthly consumption value) leads to upgrading the water consumption metering and improving the collection of payments for cold and hot water.

Water sales reduction for "Other Consumers" category, from 2011 onwards, is caused by saving 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 is caused by:

• transition to collection of payments for water according to meter readings after the installation of cold and hot water meters (previously payments were calculated on the basis of standard monthly consumption value);

• 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);

• transition to collection of payments for water according to the rules provided in the Decree of the Government of the Russian Federation no.124 dated 14 February 2012.

ACCOUNTS RECEIVABLE

VODOKANAL ST. PETERSBURG 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

To improve control over the accounts receivable and assign relevant experts with personal responsibility for debt recovery, the Customer Service Centre monthly approves, and follow-up the execution of, the 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").

In 2013, Vodokanal had close interaction with the city authorities responsible for the distribution of the funds from the St. Petersburg budget including:

• If required, meetings in district administrations and the city administration committees were held aimed to determine reasons for accumulation of the debt and payment due 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. •Full-scale preparation and issuance of agreements on distribution of St. Petersburg budgetary funds limits (at the request of the customers).

•Timely issuance and delivery of bills to relevant customers on a monthly basis. IN 2013, DUE TO THE TAKEN MEASURES, ACCOUNTS RECEIVABLE OF THE CUSTOMERS UNDER THE "ST. PETERSBURG BUDGET" CATEGORY WERE REDUCED BY RUB 14,800,000 (-40.4%).

At the same time the management of the Customer Service Centre held joint workshops with nonpayers aimed at resolving the issues on the collection and reconciliation of payments.

In 2013, 358 meetings were held. Subsequent to the results of such meetings 83 debt restructuring agreements were concluded with the customers confronted with the lack of funds required to make payments for the provided services.

In 2013, the overdue accounts receivable were monitored with sustainable efficiency. The activities aimed to limit or stop the provision of services to certain customers were well coordinated.

For example, in 2013, upon the request of the Customer Service Centre, the production branches limited water supply/wastewater services for 103 customers and terminated the provision of services to 55 customers. THE CUSTOMER CATEGORY "PRO-VIDERS OF SERVICES TO HOUSE-HOLDS" HAS THE BIGGEST SHARE (60.8% AS OF 1 JANUARY 2014) IN THE OVERALL STRUCTURE OF ACCOUNTS RECEIVABLE. IN 2013, THE SHARE OF SUCH ACCOUNTS RECEIVABLE INCREASED BY 4.4% IN COMPARISON TO 1 JANUARY 2013.

In 2013, the Company continued its interaction with the Housing Committee and the Committee for Energy and Engineering Support in terms of activities aimed at debt recovery by the customers under "Providers of Services" category.

In addition, on behalf of St. Petersburg prosecutor's office in order to avoid violations in the housing and utility sector, the district prosecutors have been checking housing organizations (management companies, housing cooperatives and associations) since May 2013. Vodokanal representatives regularly participate in workshops at the district prosecutor's offices, as well as in the meetings of the interdepartmental commissions to deal with clearing due payments by the customers under "Providers of Municipal Services" category. Vodokanal also interacted with GUP Multiple-Access Computing Center "Housing Services" to study reasons for the growth of accounts receivable of the customers under "Providers of Municipal Services" category. Based on the results of the conducted study it was found that 98% of the total increase of accounts receivable occurred due to the fact that amounts payable in accordance with the "Rules of municipal services provision to owners and users of spaces in apartment buildings and houses" (approved by the Decree of the Government of the Russian Federation no.354 dated 6 May 2011) were under-accrued.

Vodokanal cooperates with public authorities to find ways of solving this problem.

Recovery of accounts receivable through arbitration court and then through enforcement proceedings is one of the instruments to liquidate the accounts receivable.

In 2013, 1398 lawsuits were brought into the arbitration court to collect debt with total amount of RUB 1,551.13 Mio. RUB.

AS OF 30 DECEMBER 2013:

• the arbitration court delivered judgments at 764 lawsuits in favor of the Company at the amount of RUB 499.38 Mio. RUB, and RUB 149.98 Mio. RUB were paid prior to the judgment;

• 219 lawsuits were paid in full prior to the court judgment at the amount of RUB 241.25 Mio. RUB;

• 53 lawsuits resulted in conclusion of amicable agreements on payment by installments with total amount of RUB 91.18 Mio. RUB.

ALSO IN 2013 AS OF 30 DECEMBER 2013:

• 53 claims at total amount of RUB 19.74 Mio. RUB were sent to the respondents and had been paid before the lawsuits were taken to the court;

• the lawsuits brought in arbitration court prior to 2013 were completed, as a result 143 judgments were made to collect RUB 140.64 Mio. RUB.

Thus, totally in 2013 (as of 30 December 2013), 907 judgments on recovery of RUB 640.02 Mio. RUB were issued.

In 2013, 807 enforcement orders at the amount of RUB 636.7 Mio. RUB were received which is 35% more than in 2012 (596 enforcement orders at the amount of RUB 374.6 Mio. RUB); the enforcement orders at the amount of RUB 972.4 Mio. RUB

were paid which is 83% more in comparison with 2012 (RUB 530.9 Mio. RUB).

ADDITIONALLY, IN ORDER TO IMPROVE CONTROL OVER THE CLEARING OF DUE PAYMENTS BY THE CUSTOMERS THE "PLAN OF ADDITIONAL ACTIVITIES TO GENERATE INCOME AND REDUCE ACCOUNTS RECEIVABLE FOR THE PERIOD OF 1 AUGUST 2013 – 31 DECEMBER 2013" WAS DEVELOPED AND APPROVED. THE PURPOSE OF THE PLAN IS TO COLLECT PAYMENTS FROM THE MOST PROBLEM CUSTOMERS.

From 1 August 2013 to 31 December 2013, the Company received funds amounting to RUB 660.4 Mio. RUB in follow-up of the Plan implementation.

In 2013, Vodokanal continued to publish the information about its main nonpayers on its corporate website (section "Lists of Nonpayers"). Such information is updated on a monthly basis.

AS OF 1 JANUARY 2014 VODOKANAL'S ACCOUNTS RECEIVABLE AMOUNTED TO RUB 5,080.83 MIO. RUB.

STRUCTURE OF ACCOUNTS RECEIVABLE AS OF 1 JANUARY 2014

			'000 RUB	
Customer group	Accounts receivable as of 1 January 2013	Accounts receivable as 1 January 2014	Difference in accounts receivable	
Providers of services to households	2,521,232.6	3,090,358.4	569,125.8	
GUP TEK (heat supplier)	168,875.6	166,784.4	-2,091.2	
TGK-1 (electricity supplier)	238,311.2	240,821.7	2,510.6	
St. Petersburg budget	36,656.4	21,829.2	-14,827.2	
Federal budget	388,591.3	234,259.8	-154,331.5	
Organizations in Leningrad Region	457,769.1	595,223.9	137,454.7	
Other	295,814.2	329,686.0	33,871.8	
Industries	364,817.4	401,875.2	37,057.8	
Total	4,472,067.7	5,080,838.6	608,770.9	

THE SHARE OF DIFFERENT CUSTOMER CATEGORIES IN THE STRUCTURE OF ACCOUNTS RECEIVABLE

Customer group	As of 1 January 2013	As of 1 January 2014	Growth or reduction of share 4,4%	
Providers of services to households	56.4%	60.8%		
GUP TEK (heat supplier)	3.8% 3.3%		- 0.5%	
TGK-1 (electricity supplier)	5.3%	4,7%	- 0.6%	
St. Petersiburg budget	0.8%	0,4%	- 0,4%	
Federal budget	8.7%	4,6%	- 4,1%	
Organizations its Leningrad Region	10.2%	\$1.7%	1.5%	
Other	6.5%	6,5%	- 0.1%	
industries	8.2%	7.9%	- 0.2%	
Total	100%	100%		

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.

Customers' applications for authorizations were received by the Customer Service Centre at the address: Building 5, 103 Moskovsky pr., from 9.00 a.m. till 6.00 p.m. (without lunch-break). The one contact principle 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.

THE DATA ON THE ISSUED AUTHORIZATIONS FOR 2013 ARE SHOWN IN THE TABLE:

Type of work	Number of developed documents					Increase in the number of documents		
Year	2007	2008	2009	2010	2011	2012	2013	in 2013 compared to 2012
lssuance of authorizations (including specifications, connection conditions, initial data, etc.)	6,281	7,250	6,987	8,623	11,354*	12,394**	9,956***	0%
Consideration of design documents	3,045	3,169	2,950	3,456	3,794	4,120	4,211	0.03%
The number of connection agreements prepared			123	311	314	476	424	0%
The number of agreements concluded			24	181	260	374	333	0%
The number of letters confirming conformity to connection conditions				489	466	489	363	0%
* Including specifications — 3,261; connection conditions — 1,663; initial data — 219								
** Including specifications — 2,761; connection conditions —1,532; initial data — 298								
*** Including specifications — 3,792; connection conditions — 1,242; initial data — 229								

TIME PERIODS FOR ISSUING AUTHORIZATIONS BY VODOKANAL:

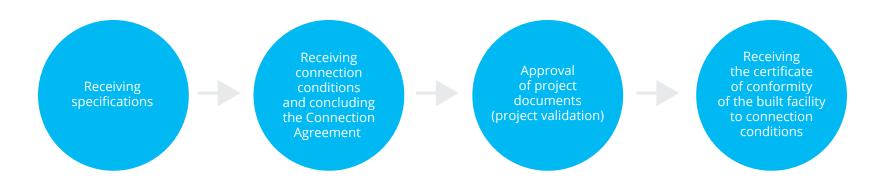
specifications – 2 working days
(by law – 14 working days);
connection conditions – 5 working days

(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

VODOKANAL 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 2004–2013, 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 2004–2013, the number of calls (general inquiries or consultations) increased from 55,659 to 120,493.

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.

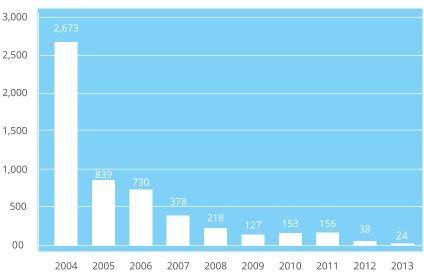
THE NUMBER OF COMPLAINTS RECEIVED BY THE HOT LINE REDUCED FROM 30,146 TO 26,562 IN 2004–2013.

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 2013 there were only 24 legitimate complaints, i.e. the number of complaints has reduced by more than 110 times over 10 years.

The number of complaints related to blockages of the yard sewers has reduced by 2.3 times in 2004–2013.

150.000 116,869_{111,273}108,700 125,000 100,000 93.084 84,355 75,000 50,000 25.000 0 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

INFORMATION REQUESTS



COMPLAINTS ABOUT LOW WATER HEAD

CUSTOMERS' SATISFACTION SURVEY

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

In 2013, Vodokanal 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.

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 and 2013, the sample size was 1000 persons.

Respondents are grouped by age, gender, social status, district of residence, etc. to ensure representative sampling. THE SURVEY-2013 RESULTS SHOWED THAT THE OVERWHELMING MAJORITY OF ST. PETERSBURG CITIZENS (85%) WERE SATISFIED WITH COLD WATER QUALITY. COMPARED TO 2012, CITIZENS' SATISFACTION WITH COLD WATER QUALITY INCREASED BY 4.5%.

97% of residents were satisfied with the reliability of water supply (95% in 2012), and 87% – with the tap water head (86% in 2012).

The overwhelming majority (87%) of residents were satisfied with cold water odour. Satisfaction with tap water color and taste were 86% and 85%, respectively.

The city residents highly appreciate the quality of Vodokanal's Hotline Service – 97% of those who have ever called the Hotline are satisfied with its performance.

More than a half of city residents (66%) are satisfied with cold water tariffs (in 2012, it was 53.4%). 20% of residents were at a loss to evaluate the tariff. 81.4% of respondents could not say what tariff they paid for cold water supply.

55% of the city residents have water meters installed in their flats. The majority of those who have the meters (87%) think that they are worthwhile.

The survey showed that residents have positive attitude to social projects of Vodokanal. Most of St. Petersburg residents know about The Universe of Water Museum Complex, this was confirmed by 69% of respondents. Almost all of them (99.8%) are satisfied with the museum work. St. Petersburg residents also evaluate positively the work of the Youth Environmental Centre.

Almost 90% of respondents are pleased with the Baltic Sea protection measures taken by Vodokanal.

Almost all respondents (98.9%) gave positive assessment of Vodokanal operation of fountains and fountain complexes.

More than 90% of respondents are satisfied with maintenance and service of public toilets. Only 65% of citizens are satisfied with the number of public toilets.

The survey showed that the amount of the citizens, who mistakenly believed that Vodokanal is also responsible for hot water supply, decreased (now 39.8% of respondents think so, in 2012 – 42%, in 2011 – 57%).





IN 2013, VODOKANAL OF ST. PETERSBURG OPERATED 62 FOUNTAINS AND 4 FOUNTAIN COMPLEXES

One of the major tasks related to restoration of cultural and historical look of St. Petersburg is to rehabilitate old fountains, construct new ones and support their reliable functioning. Development of fountain facilities is an important condition for maintaining the status of St. Petersburg as cultural and historical center of Europe.

Fountains are a part of an inimitable look of the capital of the Russian Empire of XVIII–XIX centuries created by outstanding European craftsmen using traditions of building palaces, parks and gardens where fountains played an important role.

The interest in the city fountain facilities deepened in the second half of XIX – beginning of XX centuries and in the 1930s and 1950s of XX century. At that time, there were built full-flowing fountains in Smolny Garden (1934), memorial fountain "Crown of Glory" in Moskovsky Park of Victory (1949) and a lot of typical little fountains in courtyards. These hydraulic engineering facilities amounted to over 300 units in our city. However, by the end of XX century, the major part of fountains was in a critical condition; fewer than 20 fountains were functional.

In 1996, it was decided to transfer the fountains to Vodokanal in order to improve their condition.

As of 1 December 2013, 62 fountains and 4 fountain complexes were under operational responsibility of Vodokanal St. Petersburg



IN 1996–2013, THE CITY TRANSFERRED 56 FOUNTAINS TO VODOKANAL FOR ECONOMIC MANAGEMENT, THE MOST OF WHICH WERE IN NON-OPERABLE CONDITION. DURING THAT PERIOD, VODOKANAL RENOVATED 33 FOUNTAINS.

All fountains are located in most frequently visited places of the city. The fountains are unique: they are different in terms of year of construction, dimensions, architecture and materials. Moreover, fountains are complex engineering facilities which require large-scale maintenance.

In 2009, Vodokanal developed "The procedures for the integrated maintenance of the fountains" specifying maintenance rules and costs for each fountain. Maintenance procedures are individually tailored for each new unit taken over by Vodokanal with due regard to various factors influencing the scope of integrated maintenance (technical condition of a unit, utility networks connections, equipment availability, location, etc.).

In 2013, the reconstruction of the historical fountain in Pisarev Garden (3, Pisareva street, building 1, lit.F) – cultural heritage of federal significance – was completed. The fountain built in 1885 is a part of a newly-reconstructed complex of palace buildings of the Grand Duke Alexei Alexandrovich (presently, House of Music), but it had been mostly in ruins for many decades. The project of the fountain reconstruction was developed under the targeted program of fountain facilities reconstruction in compliance with the requirements of the Committee for State Control, Use and Protection of Historical and Cultural Landmarks.

In the course of comprehensive design works, historical and archival surveys were conducted. As a result of the surveys, a drawing of a vase fountain was found. This drawing was made by the academician of architecture Maximilian Messmacher, the designer of the palace of the Grand Duke Alexei Alexandrovich. In accordance with this drawing, the lost granite vase was replicated using the plaster model approved by the Committee for State Control, Use and Protection of Historical and Cultural Landmarks. Up-to-date equipment to support the water recirculation system was installed inside the authentic and renovated stone structures in accordance with a specially designed technology. The fountain was connected to water and wastewater networks and to the power grid.

Moreover, in 2013, one more historic fountain, the drinking fountain (8, Sennaya Square, bld.1, lit.F) was put into operation after reconstruction. This fountain had been transferred to Vodokanal in non-operable conditions.

Besides, the fountain situated in Yuzhno-Primorsky Park of Victory (27, Peterhof shosse, lit.K) resumed its operation after capital repair.

Capital repairs of the fountains in the western and eastern lanes of the St. Petersburg 300th Anniversary Park (74, Primorsky pr., lit.H, M) commenced.

The reconstruction projects of the following fountains are under development: • the fountains in Smolny Garden (1, Smolny Alley, bld.1, lit.F and bld.2, lit.F; 2, Smolny Alley, bld.1, lit.F and bld.2, lit.F);

• the fountain in Aleksandrovsky Garden (3, Admiralteysky pr., bld.1, lit.F);

the fountains in Rumyantsevsky Garden (2, Rumyantsevskaya Square, lit.M, H);
the fountain "Crown of Glory" in Moskovsky Park of Victory (188, Moskovsky pr., bld.1, lit.F;

• the fountain in Zelenogorsk (559/1, Primorskoye shosse, bld.1, lit.A).

Design works for capital repairs of the fountain "Lighthouse" in the St. Petersburg 300th Anniversary Park (74, Primorsky pr., lit.M) are going on.

The capital repairs of the fountains in the western and eastern lanes of the

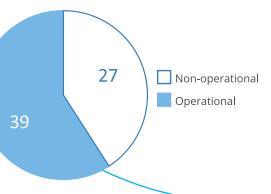
St. Petersburg 300th Anniversary Park (74, Primorsky pr., lit.H, M), which started in 2013, are planned to be completed in 2014.

Besides, the following works will be implemented in 2014:

• completion of the detailed design, construction and installation works for reconstruction of the fountains in Smolny Garden (1, Smolny Alley, bld.1, lit.F and bld.2, lit.F; 2, Smolny Alley, bld.1, lit.F and bld.2, lit.F);

• commencement of construction and installation works for reconstruction of the fountain

Operational condition of the city fountains and fountain complexes being in the economic management of Vodokanal St. Petersburg



"Crown of Glory" in Moskovsky Park of Victory (188, Moskovsky pr., bld.1, lit.F); • completion of the detailed design, construction and installation works for reconstruction of the fountain in Aleksandrovsky Garden (3, Admiralteisky pr., bld.1, lit.F);

• execution of construction and installation works for reconstruction of the fountain in Zelenogorsk (559/1, Primorskoye shosse, bld.1, lit.A);

execution of construction and installation works for capital repairs of the fountain "Lighthouse" in the St. Petersburg 300th Anniversary Park (74, Primorsky pr., lit.L);
commencement of construction and installation works for reconstruction of the fountains in Rumyantsevsky Garden (2, Rumyantsevskaya Square, lit.H, F).

Moreover, detailed designs for reconstruction of the fountains at the following addresses are planned to be developed: 34, Pavlovskaya str., bld.2, lit.A in the town of Kolpino; 1, Komsomola str., bld.1,2, lit.G; 160, Fontanka emb., bld.1, lit.F. Besides, capital repairs of the spherical fountain in 56, Nevsky pr., bld.1, lit.F are planned to be performed.

Vodokanal will continue its cooperation with the public institution the State Research and Design Center of St. Petersburg Master Plan subordinated to the Committee for City Planning and Architecture with regard to the development of the city fountains design, light and hydrodynamic effects concept.





IN 2013, VODOKANAL ST. PETERSBURG OPERATED 598 PUBLIC TOILETS

THERE ARE 740 PUBLIC TOILETS IN THE ECONOMIC MANAGEMENT OF VODOKANAL ST. PETERSBURG, INCLUDING:

- · 214 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;
- 307 mobile cabins;
- 25 urinal-type toilets.

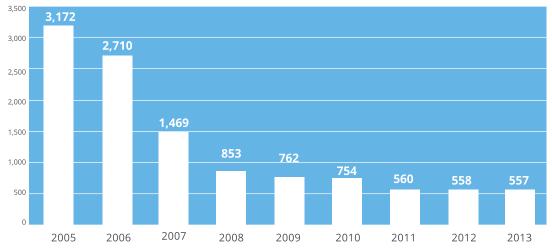
THE FOLLOWING UNITS WERE IN OPERATION:

- 144 stationary toilets;
- 68 modular toilets;
- · 34 modular toilets with storage containers;
- 307 mobile cabins;

20 mobile sanitary and hygienic complexes (installed in buses, semitrailers

and Valday vehicles);

• 25 urinal-type toilets.



NUMBER OF INHABITANTS PER ONE TOILET UNIT IN 2005–2013 (ONLY FOR VODOKANAL-OPERATED TOILETS)

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 and housing offices.

In early 1990s, according to the inventory made by territorial district authorities of St. Petersburg, 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 became responsible for contracting repair, renovation and development works.

Pursuant to the Sanitary Rules of Installation and Maintenance of Public Toilets no.983–72 dated 19 June 1972 approved by the Deputy Chief Sanitary Inspector of the USSR, Vodokanal St. Petersburg issues technical specifications for the mandatory construction of public toilets in new shopping centers. 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. Upon the completion of the public toilets development programme 140 new-generation modular toilets will be installed by 2015.

Vodokanal 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 outsourced specially trained personnel work in every public toilet managed by the Company, 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 a.m. till 09.00 p.m. 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 such the city festivals as the New Year, Christmas, Victory Day, Day of the City and Scarlet Sails Vodokanal sets up mobile toilets.

In total, mobile toilets were provided for more than 800 events in 2013 on requests of different organizations.

In May 2012, the Government Decree no.502 "On target program for capital repairs of public toilets owned by St. Petersburg for 2013–2015" was adopted. 12 stationary toilets will be rehabilitated under this program.

10,708,100 Roubles were spent under the above-said program in 2013. Vodokanal rehabilitated two toilets, commenced construction and installation of 4 toilets and stared designing of 2 new toilets.

In March 2013, the Government Decree "On St. Petersburg public toilets network development program for 2013–2015" was adopted. In accordance with this development program 12 more toilets will be reconstructed in 2014–2015. 15,676,200 Roubles were spent under the program in 2013. Vodokanal performed rehabilitation of one toilet, commenced construction and installation of 3 toilets and stared designing of 7 new toilets and connected to the network 1 modular toilet.

In accordance with the above program Vodokanal purchased 110 mobile toilet cabins in 2013.

By implementing target programs the availability of toilet services provided by Vodokanal will reach the level of 6,554 persons per one toilet.

Thanks to the 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 comfort of the city residents and visitors, Vodokanal closely cooperates with the Committee for Press and Mass Media Relations to place the information about toilets location in municipal media. The information will be updated annually when new toilets are put into operation.

In 2014, Vodokanal plans to complete construction and installation of three toilets, commence the reconstruction of seven toilets and start the design works for two toilets.



PERMANENT SNOW-MELTING STATIONS

0



CONSTRUCTION AND OPERATION OF PERMANENT SNOW-MELTING STATIONS IS A NEW ACTIVITY OF VODOKANAL

In accordance with the St. Petersburg Government Decree no.1334 dated 16 October 2007, snow shall be removed from St. Petersburg roads and streets to specially equipped snow dumps.

The snow storage capacities in St. Petersburg are used up. In the end of 2011, the city management decided to transfer from the snow disposal at special dumps to snow melting at permanent snow-melting stations.

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.

A 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 as opposed to the snow dumps where wastewater may partly infiltrate into soil and produce adverse effect on water bodies and the environment;

• they require a much smaller land area than snow dumps;

· snow disposal to the permanent snow-

melting stations happens very quickly as opposed to the snow dumps where stored snow melts till June which mars aesthetic look of the urban environment, and fine particles contained in snow are polluting air.

Before October 2012, St. Petersburg had only one permanent snow-melting station at 43, Rizhsky prospect. By the time when this station was transferred to Vodokanal for economic management it was quite an outdated facility.

Under St. Petersburg Government Order no.713 dated 12 July 2012 "On the action plan for design, implementation and modernization of permanent snowmelting stations in St. Petersburg in 2012–2013" Vodokanal approved its program for designing, implementation and modernization of permanent snowmelting stations. In accordance with this Order, ten permanent snow-melting stations were constructed in 2012–2013.

Permanent snow-melting stations built in 2012 are as follows:

1. 2, Oktyabrskaya emb. –

7,000 cubic meters of snow per day;

2. 77, Peterhofskoye 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. Permanent snow-melting stations built

in 2013 are as follows:

8. Rybinskya str. – 5,000 cubic meters of snow per day;

9. Mebelnaya str. – 7,000 cubic meters of snow per day (the station has been ready to receive snow since December 2013; site improvement works will be completed in 2014);

10. Kushelevskaya road – 5,000 cubic meters of snow per day (the station has been ready to receive snow since December 2013; site improvement works will be completed in 2014).

The specific feature of snow-melting stations opened in 2013 is sewage pumping stations (depth – max. 35 m) which were

built using the soil freezing technology. In compliance with the instruction of the city authorities, the snow-melting stations were constructed within a very short time, 1.5 times faster than was determined by the project.

In September 2013, design and survey works for the construction of the permanent snow-melting station in Shkipersky protok commenced.

Vodokanal St. Petersburg is the operator of snow-melting stations and provides snow collection and disposal services under the contract with the City Landscaping Committee.

THE OPERATION OF SNOW-MELTING STATIONS IS DIVIDED INTO THE FOLLOWING PERIODS:

• operating period;

• interseasonal maintenance period. DURING THE INTERSEASONAL

MAINTENANCE PERIOD:

• the stations are made ready for operation (15 days of the interseasonal maintenance period);

• the stations are made ready for interseasonal maintenance (the first 15 days of the interseasonal maintenance period).

The snow-melting stations work roundthe-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, 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.

The automatic snow metering system is used to measure the amount of received snow. The system performs the collection, processing, storage, visualization and transmission of the data (tables, report forms, receipts, etc.), keeps records of the road traffic and the amount of snow brought to the snow-melting stations.

IN 2013, PERMANENT SNOW-MELTING STATIONS COLLECTED AND PROCESSED 350,305.20 M³ OF SNOW.

117,637 m³ of snow (the biggest volume) was received by the station located at 2, Oktyabrskaya emb., lit.A.

The total amount of disposed sediments and domestic solid waste was 21,357 m³ and 968 m³, respectively.

The interaction rules were developed for prompt interaction with road services. The key customer for collection and processing of snow at the permanent snow-melting stations is the Municipal Landscaping Center.

THE SNOW-MELTING STATIONS PROVED TO BE FUNCTIONAL, ENERGY-EFFICIENT AND ENVIRONMENT-FRIENDLY. THEY CAN WORK ROUND-THE CLOCK AND RECEIVE SNOW BOTH FROM THE CITY ROADS AND STREETS DURING SNOWFALLS AND FROM TEMPORARY SNOW DUMPS IN DRY WEATHER.





IMPLEMENTATION OF NEW WATER AND WASTEWATER TECHNOLOGIES

VODOKANAL ST. PETERSBURG IMPLEMENTS UP-TO-DATE TECHNOLOGIES ON A LARGE SCALE TO ENSURE PROVISION OF HIGH-QUALITY WATER AND WASTEWATER SERVICES TO ITS CUSTOMERS AND TO MINIMIZE THE ENVIRONMENTAL IMPACT

WATER SUPPLY

ELABORATION OF THE SCIENTIFIC-METHODOLOGICAL FRAMEWORKS FOR SATELLITE AND SUB-SATELLITE MONITORING OF PHYTOPLANKTON IN THE LADOGA LAKE AND IN THE EASTERN PART OF THE GULF OF FINLAND. OPTIONS OF ESTABLISHING SATELLITE MONITORING SYSTEM FOR PLANKTONIC ALGAE FOR THE NEEDS OF VODOKANAL.

At the present time, there exist various methods of quantitative assessment of the antropogenic load on water bodies related to algae bloom in coastal areas. However, an integrated analysis of these methods is practically impossible due to the fact that the surveys were performed locally and at different times, while surveys using various types of satellite imagery, optical and radar data do not have such drawbacks. Advantages of satellite data are wide-scale, regularity, transparency and relative low cost.

In 2013, Vodokanal St. Petersburg together with the Institute of Limnology of the Russian Academy of Sciences elaborated the scientific-methodological basis for satellite and sub-satellite monitoring of phytoplankton in the Ladoga Lake and in the eastern part of the Gulf of Finland and developed options for establishing the satellite monitoring system for planktonic algae for the needs of Vodokanal.

This work was aimed at establishing the system of real-time processing, interpretation and transmission of results of satellite monitoring of planktonic algae to Vodokanal St. Petersburg in the required timescale.

The results of the work are as follows:

• The possibility to use the integrated data of shipboard and satellite measurements for planktonic algae monitoring has been confirmed;

• Options of establishing the system of real-time processing, interpretation and transmission of results of satellite monitoring of planktonic algae have been outlined. Relevant mechanisms of data processing, interpretation and transmission of results of satellite monitoring have been developed.

Integration of sub-satellite surveys helped to test the elaborated mechanism of real-time interaction and transmission of results of planktonic algae satellite monitoring to shipboard measurement systems. Results of available data processing show a high level correlation of highresolution and low-resolution satellite data, which proves the possibility to use satellite data for daily monitoring of planktonic algae. While developing options for establishing real-time data processing system, high level accuracy of qualitative estimation of sub-satellite (shipboard) and satellite measurements (concentration and spatial distribution of phytoplankton) was confirmed. Thus, the real-time remote monitoring system ensures a considerable reduction of contact (shipboard) measurements subject to accessible weather condition for satellite monitoring.

The planktonic algae satellite monitoring system will be a part of the water quality monitoring system for the Neva River – Ladoga Lake water system to be implemented in 2014. 2 EXPERIMENTAL RESEARCH AND FEASIBILITY STUDY OF SURFACE WATER TREAT-MENT TECHNOLOGY.

In 2012, testing of a mobile pilot plant based on new surface water treatment process was completed. The developed technology is a combination of natural surface water treatment processes using new tools, new structural solutions and new materials. The pilot plant was tested at the Southern Water Treatment Plant.

In 2013, the Company made preparatory work for putting a container-type package plant into full-scale operation. The design works for the container-type water treatment and bactericidal treatment plant (1,200 m³/day) were performed. Design and detailed design documentation for the container-type plant were developed. Besides, preparatory works for future installation of the plant were conducted at Kronstadt WTP.

The installation and commissioning of the container-type plant, evaluation and adjustment of the plant operation modes will be performed in different seasons of 2014.

3 PREPARATION AND APPROVAL OF THE GUIDELINES "INSTAL-LATION AND MAINTENANCE OF WATER SUPPLY AND WASTEWATER DISPOSAL

NETWORKS IN ST. PETERSBURG".

In order to improve the operational reliability of St. Petersburg water and wastewater systems, the guidelines "Installation and maintenance of water supply and wastewater disposal networks" was approved in 2013.

The document corresponds to the regulatory acts of the Russian Federation, and to the regional norms and laws of St. Petersburg.

The document includes provisions to support installation and maintenance works; provisions not included into the federal regulatory acts and intended for application in St. Petersburg with due regard to natural and climatic characteristics. social and economic potential of the city as a subject of the Russian Federation; and provisions related to the quality of municipal water supply and wastewater disposal services to ensure at least a 50–100 year service life of water supply and sewer networks.

The document is applicable to cold water supply and sewer networks of St. Petersburg (including all associated facilities) starting from outlet shutoff valves or external walls of municipal waterworks up to water metering units, building and facilities; and from inspection wells up to inlet chambers of municipal wastewater treatment plants excluding capital construction units.

Compliance with the provisions thereof ensures high quality of works and materials during the installation and maintenance of water supply and wastewater disposal networks.

4 USE OF "LIQUID SOIL" TECH-NOLOGY IN VODOKANAL ST. PETERSBURG.

Repair works on water and wastewater networks result in excavation of around 132,600 m³ of soil per year. Landfills to store the municipal waste are overfilled. The price for excavated ground disposal is rising (depending on landfill location the price is 100–250 RUB/m³).

To decrease negative environmental impact and lessen the amount of soil stored at landfills, it was decided in 2013 to use stabilized plasticity soil to refill trenches after emergency repairs of water and wastewater networks.

Stabilized plasticity soil (liquid soil) is a self-hardening, self-leveling, rapid-drying (4–5 hours), removable innovative construction material which does not require vibratory compaction. It is made of excavated soil (95%), mineral clay and low-strength rapidly drying cement.

Ropy consistency of the soil makes it possible to fill in hard-to-reach areas.

Use of liquid soil in the course of emergency repairs enabled to:

 reduce number of ground subsidence;
 reduce consumption of inert materials;
 reduce labour cost for emergency repairs of the network;

4. reduce negative environmental impact by lessening the amount of soil (hazardous waste of the 4th class) stored at the landfills. The following procedure has been developed for preparation of liquid soil to be used by St. Petersburg Vodokanal. Special vehicles deliver soil from a working site. A bucket separator separates asphalt and concrete from soil. Then, soil is fed to a crushing-screening unit where coarse particles are ground for future use. After that, the material is fed to a mobile (stationary) liquid soil production plant. Special vehicles deliver prepared liquid soil to the working site.

5 VACUUM EXCAVATOR USED BY VODOKANAL ST. PETERSBURG FOR PIT EXCAVATION.

A great number of transportation vehicles are used annually during repair works. In winter, time required for emergency and scheduled repairs increases since much time is needed to defrost soil.

During the earth works the risk of damaging the underground utilities (electricity, gas, telephone, heating systems) located close to water and sewer network is very high.

To reduce the number of damages and decrease the time required for emergency repairs, in 2013, it was decided to use a vacuum excavator for pit excavation.

Vacuum excavators are municipal vehicles used for installation and cleaning of municipal utilities, disposal of household and industrial waste, landscaping, posthole digging and other minor and short-term works. Moreover, they are used for removal of liquid waste from cesspools and wells and its further transportation to disposal sites.

The use of the vacuum excavator for emergency repairs enabled to:

1. reduce the number of transportation vehicles from five to two (a van for transportation of repair teams and a vacuum excavator);

 reduce the time needed to do repair works to 8 hours, including winter period;
 stop using hand labour and reduce noise and dust levels;

4. reduce networks probing time and prevent any damage of utilities;5. reduce dimensions of excavated trenches (possibility to work through small holes);

6. increase working culture and reliability;7. improve working conditions and keep the sites clean.

A vacuum excavator consists of a tank, vacuum pump, control valves with pipelines, platforms and supplementary equipment.

Vacuum excavators erode debris and ground and then pull the produced slurry into the tank. The tank is filled up by the vacuum generated by the vacuum pump. The vacuum trucks are emptied by gravity or by air pressure from the vacuum pump.

6 DEVELOPMENT OF THE INTEGRATED POPULATION HEALTH RISK ASSESSMENT METHOD IN VIEW OF THE ADDITIVE EFFECT OF CHEMICALS

AND MICROBIAL AGENTS CONTAINED IN RAW AND DRINKING WATER.

In 2013, Vodokanal of St. Petersburg together with the Chair of Preventive Medicine and Health Care of I.I. Mechnikov North-Western State Medical University developed a model of the integrated population health risk assessment in view of the additive effect of chemicals and microbial agents contained in raw and drinking water.

Based on the integrated risk assessment model, an information system of drinking water quality assessment was developed by criteria of epidemiological safety, chemical safety and organoleptic properties. The information system includes the following calculation modules: • Integrated assessment of drinking water by chemical safety parameters;

• Calculation of integrated epidemiological population health risk in case of using raw water and drinking water;

• Calculation of tap water quality index in terms of epidemiological and chemical safety parameters with regard to the additive effect thereof.

The above approaches have been tested in Vodokanal St. Petersburg. Using these approaches, the integrated risk calculations of chemical and epidemiological safety of drinking water were made. The calculation results testify to the fact that St. Petersburg drinking water is safe, harmless and does not make negative impact on the population health.

WASTEWATER DISPOSAL

PROCESS SOLUTIONS FOR REMOVAL OF SPECIFIC POLLUTANTS.

While searching for technologies to improve the efficiency of specific pollutants removal from the effluent, tests of "Glint" coagulant were performed at the Northern WWTP during 2013. The objectives of the tests were to analyze and evaluate sorption capacity of activated carbon and activated aluminosilicate adsorbent "Glint", to determine allowable filtration speed, duration of the filtration cycle, cycle length of aluminosilicate adsorbent "Glint" and to compare the efficiency of each sorbent to treat industrial wastewater. Works on testing sorbents are going on.

2 TESTING OF UNPLEASANT ODOUR REMOVAL METHODS. Vodokanal is searching for advanced

Unpleasant odour appears at different parts of the wastewater disposal system: sewer networks, sewage pumping stations, wastewater treatment plants, sludge landfills.

Since April 2013, EMF filter installed under a manhole cover has been tested as one of the solutions of sewer manhole odour removal.

AddSorb® VA3 activated carbon is used as filter media. It is high-activity carbon produced by steam activation of selected coal. This carbon type was specially modified to remove hydrogen sulfide, methyl mercaptans and organic odour. Chemicals added into the sorbents ensure effective removal and accumulation of pollutants and good physical adsorption capacity.

A period of filter good performance depends on the concentration of filtered chemicals and on the working conditions such as temperature, humidity and toxicity. The filtration media operation time as stated by the manufacture is 2–4 years. In the course of operation a positive effect was detected – the unpleasant odour from a sewer manhole was removed. Testing is going to determine effective operation time of the filter.

3 IMPLEMENTATION OF METHODS REDUCING THE NEGATIVE IMPACT OF WASTEWATER SLUDGE LANDFILLS ON THE ENVIRONMENT.

Since 2010, Vodokanal has been successfully using the Geotube technology that makes it possible to treat landfilled sludge. As a result of application of this technology treated sludge makes no negative impact on the environment any longer and may be used for various household needs in the future.

In 2013, works were carried out to

search for new methods of odor control at wastewater sludge landfills. A number of laboratory and industrial tests of different chemicals, such as Biofox-Oxidol, BioStreme were performed. Upon the pilot test results a feasibility study is made for each of the chemicals.

From June to October 2013, a pilot test was performed to treat accumulated wastewater sludge with AK-GR-R and MMT-BD-A chemicals and generate the organic and mineral composition "AMIDA". According to test results, there is a positive disinfecting effect, sanitary-bacteriological and sanitaryparasitological indicators of the treated sludge meet the requirements of GOST R 17.4.3.07–2001, and odor is reduced. In 2014, testing of this technology will be continued.

Taking into account the successfully implemented (2012) odour control pilot project at Severny landfill where the odor was removed by fine spraying of chemical aqua solution, in 2013 automatic deodorizing units were installed along the perimeters of Severny and Volchonka-2 landfills. The length of the deodorizing lines is 3,800 meters at Severny landfill and 1,350 meters at Volchonka landfill. According to OAO "Research Institute of Atmospheric Air Protection", automatic deodorizing units provide the reduction of mercaptans up to 70%, and the landfill odor intensity – by 40%.

4 THE SEARCH FOR OPTIMAL METHODS OF RUNOFF TREATMENT.

One of the relevant challenges of Vodokanal St. Petersburg is treatment of runoffs from areas having a separate sewage system to stop discharging untreated rain and melt water into water bodies. As part of activities aimed to develop a runoff treatment conception the search for effective and economically-sound technologies is carried out.

In the course of search for, and assessment of, optimal technologies of treating runoffs from rainwater collected in storm water chambers, peat filters were examined. From April to October 2013, a peat filter was tested at Vodokanal's surface inlet: samples were taken to determine the efficiency of treatment. In parallel, cartridge filters were tested to treat runoffs with the combined treatment system that consists of nonwoven synthetic fabric to clean from mechanical admixtures and sorbent modified activated carbon for fine influent treatment.

According to the test results, pros and cons of these treatment methods were identified. The search for the optimal runoff treatment technology will be continued.

VACUUM SEWAGE SYSTEM.

5 The vacuum sewage system is an innovative technology of domestic wastewater disposal. The outdoor vacuum sewage system for a group of private houses and cottage estates is the most effective.

The vacuum sewage system is also used in areas with a high level of ground water occurrence, unfavorable geological conditions, in areas with rocky or sandy soil, coastal and reclaimed areas, conservation zones and areas with high demands for environment protection.

Mode of operation:

Depending on the topography wastewater is collected in a radius of several kilometers from the central vacuum station. Wastewater from every house is transported by gravity to the collection chamber outside the building. When the collection chamber accumulates a certain volume of wastewater the hydrostatic pressure activates the pneumatic controller that opens the pneumatic vacuum valve and the entire volume of wastewater is discharged into the vacuum sewage pipelines. No power connection of the collection chamber is needed, as all the equipment is pneumatically operated. Atmospheric air is supplied through vacuum valves into the system in points located at a distance from the vacuum station, and wastewater flow goes

at a high speed along the pipelines to the central vacuum station. The system ensures the maximum operational safety with the minimum power consumption.

The main advantages of the vacuum sewage system:

- reduction of financial costs for construction;
- smaller scope of excavation due to narrow and shallow tranches;
- small pipe diameter (90–250 mm);
- flexibility in design and construction of vacuum sewage pipes;
- an easy way to avoid obstacles;
- no need to place sewage wells along the sewage pipeline;

• the isolated from atmosphere system prevents leakages and odour;

- high automation level;
- minimum maintenance;

• vacuum sewage pipes and water supply pipes may be laid in the same trench.

At present, a number of small settlements are planned to be sewered using the new technology – vacuum sewage system.

6 THE DIAGNOSTIC SYSTEM FOR TUNNEL SEWERS INSPECTION.

To solve the challenge of all tunnel sewer inspection regardless the level of wastewater in them, Vodokanal purchased the diagnostic floating system (DFS). The inspection of the tunnel sewer conditions with DFS is performed by moving the system, which is connected with a conducting rope to the ground equipment, through the sewer. The DFS measurement part includes: sensors for ultrasonic underwater scanning; a TV camera with Zoom functions and rotations in different directions to inspect defects of the above water part at different angles; recorders of wastewater chemical composition. The onboard computer correlates the inspection results with the actual position of the pontoon bridge in the sewer (in the section of the sewer and along its axle).

The above ground part of DFS is a truck consisting of a van with equipment, a crane with outboard supports, a hook assembly and a hydrosystem pump.

The purchase of the diagnostic floating system made it possible to get data on all previously uninspected sewer sections.

7) INTRODUCTION OF THE GAS/AIR MONITORING SYSTEM IN THE UNDER VAULT SPACE OF TUNNEL SEWERS.

To determine the methods of continuous diagnostics of tunnels conditions and prevent their destruction, a contract for

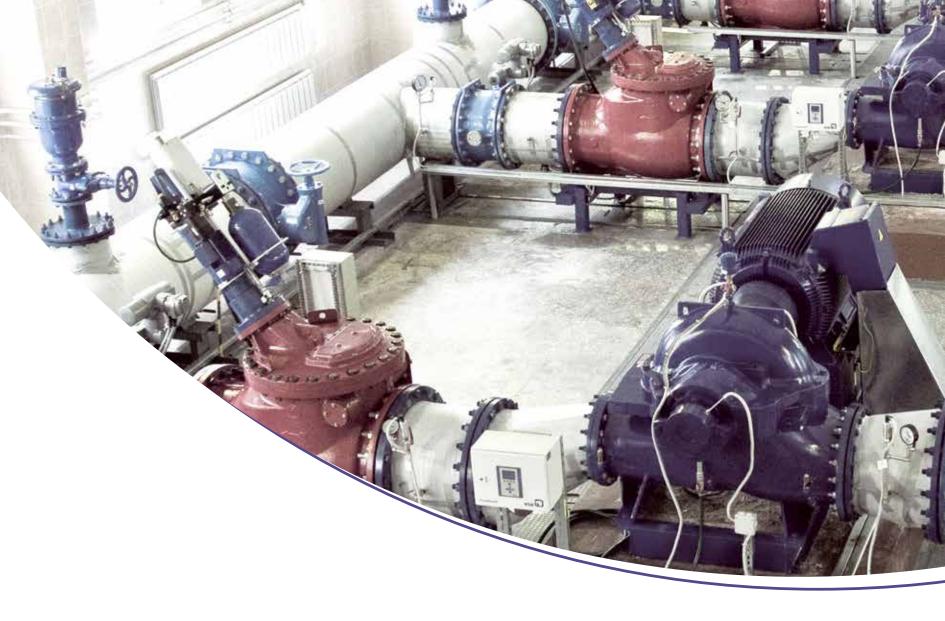
design and implementation of the gas/ air monitoring system in the under vault space of tunnel sewers is concluded between The State Technological Institute and SUE "Vodokanal of St. Petersburg".

The implementation of the monitoring system will provide continuous diagnostics at existing facilities, including:

 determining the chemical composition of gases in the under vault space of the sewer;

• determining the pattern of air movement as well as the amount of air in the under vault space of the tunnel sewer;

 analysis of the deterioration processes of reinforced structures and structures under the influence of microbiological processes in the sewer shafts.
 After the commissioning of the mobile diagnostics system in order to inspect tunnel sewers and create the air/gas monitoring system the unified methodology of tunnel sewer conditions control will be developed.



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

Hydraulic simulation instruments are used to solve both operational tasks and development tasks for water supply network.

During 2013 Vodokanal made calculations of the scheduled service disconnections and switching over to other network in order to forecast changes in water flow and water head, determined options of pumping stations operation modes and assessed impact from newly connected customers on the network hydraulic modes.

Capacities of the hydraulic simulation were widely used for the development of Water and Wastewater Master Plan for the period up to 2025 with the outlook to 2030 adopted by St. Petersburg Government in the end of 2013. On the grounds of the existing models Vodokanal experts developed prospect models incorporating the forecasted water consumption for the target time limit.

The hydraulic calculations made it possible to define indicative technical parameters of construction and reconstruction projects, which were used for relevant cost estimates.



DEVELOPMENT OF THE GEOINFORMATION SYSTEM

57533814

AnyDATA

ESN

-07 @ (6

Model Name: ADU-310A Manufacture date: 08 01 18 SN 2554620 #THINHULLER 5C299Dec

AND A DESCRIPTION OF

COMAN RT QUALCTINE

Made In Korea

3

6

9

ESC

2

5

8

0

1

4

7

Tab

FI

F3

00

DIGPS- SOL i A KTV-

104 r.A

34 m.

5 1

63

n.I.a.E

P

GEOINFORMATION SYSTEM IS DESIGNED FOR PROVIDING ACTUAL, RELIABLE AND COMPREHENSIVE GEOINFORMATION ABOUT THE COMPANY'S FACILITIES AND CITY INFRASTRUCTURE FACILITIES TO VODOKANAL SUBDIVISIONS, CONSOLIDATION OF ALL TYPES OF ACCOUNTING, REGISTRATION OF RIGHTS TO PROPERTY, INFORMATION EXCHANGE WITH STATE AUTHORITIES AND INFORMATION SUPPORT OF PRODUCTION PROCESSES

The structure of geoinformation system includes technical means, software, and cartographic database of Vodokanal and communication channels.

IS "Baltics" is a distribution graphics and information system established by using MapInfo MapXtreme tools. It has an open-architecture core and powerful graphics engine.

IS "Baltics" operation is based on 10 subsystems and their software modules which ensure the following functions of IS "Baltics":

• Cartography – performs standard GIS operations with spatial objects, service cartographic operations, operations on technical record-keeping objects, makes it possible to manage vector and raster data sets, defines the coverage for various territorial zones.

• Property accounting – enables to manage Vodokanal's property, draw reports on current and scheduled payments, update information about buildings, facilities, network and movable assets.

• Technical record-keeping – updates information about the status of water wells and network sections, records changes in technical parameters of engineering network, ensures writing off, planning, repairing and preparation of

the network for cadastral record-keeping; makes it possible to maintain registers of outlets, boosting pumping stations, sewerage pumping stations, connection points, water wells and etc.; enables to submit network cleaning requests, control and confirm their execution: facilitates making of inventories, drafting and concluding of contracts with customers. • WEB-access – performs standard GIS operations with spatial objects, service cartographic operations, makes it possible to browse through records related to technical parameters, events, engineering network, Company's assets and flow meters; enables to manage wastewater network cleaning requests; solves navigation tasks.

• Administration – makes it possible to administer user accounts, lock out editing of registers when several users work with such register, manage lists of users, tasks, roles and news in IS "Baltics".

• Integration with external information systems and resources – makes it possible to update information about facilities and addresses; primarily link the data of accounting and technical record-keeping; specify the place of emergency upon the request from IS "Hot Line"; interact with IS "Customer Service Centre" and software module "Passport of the Facility"; work out and fix on-line the position of the subject from the mobile working place; develop and transmit to SYNERGEE WATER up-to-date model of engineering network.

• Simulation and shaping of water service disconnection areas, analyzing option for optimization of such disconnections – makes it possible to shape disconnection areas, make lists of disconnected customers, passports of the disconnected sites; simulate shaping of disconnection areas and conduct automatic search for excessive stop valves.

• Monitoring of the reconstruction stages in the Southern water supply zone – ensures required levels of control over the reconstruction works.

• Support the water network integrated survey – ensures keeping of, and browsing through, the register of the planned water network integrated survey, visualizes the works completed under the water network integrated survey. • Navigation – makes it possible to position elements of the engineering network on the map and visualize these elements by means of double-frequency GLONASS/GPS receivers (the accuracy in differential mode – equal to or more than 2 m and in RTK online imaging mode equal to or more than 0.20 m). Application of cutting-edge technologies for the development of the Company's own information system allowed to resolve problems of security restrictions

when working with cartographic data related to the location and characteristics of engineering network at users workstations by means of installing the certified information security software WIN 7 PRO no.2180 STEK RS.

Currently, IS "Baltics" cartographic database contains over 150 cartographic layers including:

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 about 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 St. Petersburg territory produced on the basis of the aerial survey conducted in April – May 2011 (resolution – 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 Leningrad Region within a radius of 30 km from
 St. Petersburg as well as the map of the town of Luga;

• thematic information about engineering networks, land plots, buildings and facilities of the Company.

IN 2013, IS "BALTICS" WAS DEVELOPED IN THE FOLLOWING DIRECTIONS:

 Updating of the existing fundamental cartographic base. The work is carried under the data exchange agreement among the Committee for Informatization and Communication, Committee for Urban Development and Architecture, GU "Investment Management" and St. Petersburg Committee for Land Resources and Land Management.
 Development of the package

of interrelated information-computing tasks and models.

The Company experts developed the module for planning and monitoring of emergency and capital repairs in sewerage network, drawing (planning) of repair requests and running of repair reports, visualization of the network elements on the map.

Vodokanal set into operation the subsystem for technical record-keeping of movable assets of the Company, which is supplemented with the technical data from Everest Managements System, established recording function for multi-piece and single-piece equipment, introduced data uploading function.

The Company developed and commissioned the module for the preparation of engineering network to cadastral record-keeping, making lists of facilities under agreements with contracting organizations which intend to introduce changes into cadastral documents related to immovable items of Vodokanal engineering network.

The register "Quality of water in water bodies" was established to provide information support during the control of water quality in water bodies, to introduce the data about water quality control points and results of water quality monitoring as well as to draw standard reports for the given period of time.

The module for informational support of the electrochemical corrosion protection of steel pipelines was developed and set into operation in order to introduce (edit, remove) cartographic data related to the electrochemical corrosion protection into e-map layers including technical characteristics of each electrochemical corrosion element. The register was established with regard to electrochemical corrosion protection units, steel pipeline defects and results of steel pipeline technical surveys.

The following functions were improved under the support contract:

recording of changes related to engineering network, maintaining registers of synchronized asset identification numbers and preparation of the network for cadastral record-keeping;
monitoring of works related to pipeline blockages and accumulation of statistic data on pipeline blockages;
monitoring of opergency and capital

• monitoring of emergency and capital repairs of sewerage system, shaping emergency and capital repair plans.

ENERGY-SAVING AND ENERGY EFFICIENCY PROJECTS

Vodokanal St. Petersburg is one of the biggest energy consumers in St. Petersburg. In 2013, energy consumption of the Company accounted for 722.1 mio. kW/h

The Company gives full attention to activities ensuring energy savings and enhancing energy efficiency.

In 2013, electric energy consumption was reduced by 9.2 mio. kW/h as compared to the previous year. This result was achieved among other things due to the implementation of water supply management system, installation of energy efficient equipment at the pumping stations in the Southern water supply zone of St. Petersburg and use of alternative energy sources (heat and electric energy produced by sludge incineration). In 2013, Vodokanal produced 3 mio. kW/h of its own electric energy.

In 2013, the reconstruction of the following sewerage pumping station was completed: Nizhnyaya doroga PS, Dunayskaya PS, pumping stations no.3

and no.7 in the town of Kolpino. At these pumping stations Vodokanal replaced pumping units and installed the process control system. The Company started reconstruction of two biggest third-lift water pumping stations: Murinskaya PS and Kushelevskaya PS. The works are scheduled for completion in 2015.

Since 2012, Vodokanal has implemented and certified the energy



management system (EnMS) under ISO 50001:2011 "Energy Management Systems. Requirements with Guidance for Use".

Existing energy management system of the Company provides an opportunity to arrange efficient control over rational use of energy resources required for the provision of water and wastewater services and take prompt management decisions aimed at the increase of energy efficiency of Vodokanal's operations.

In October 2013, the energy management system of Vodokanal St. Petersburg successfully passed the audit by the international certification company SAI GLOBAL and the certification association the Russian Register for conformity with ISO 50001:2011 requirements.

In 2013, Vodokanal experts took part in conferences, seminars and panel discussions related to energy efficiency and energy management. In October 2013, some experts of the Company participated in UNIDO seminar – Energy Management System.

PATENTS

Main principles of Vodokanal intellectual property policy are to:

• provide timely legal protection of intellectual property (including technical solutions as inventions and useful models, architectural-design solutions as industrial models) in compliance with the intellectual property law;

• prevent the violation of the Company's

exclusive rights to the intellectual property;

• plan and manage design works and/or development of services.

In 2013, Vodokanal prepared application materials and lodged applications to obtain patents for 14 inventions and utility models including adjustable mounting for water standpipe to be installed in a well (utility model), blocking lock for water standpipe (utility model), system for determination of reliability and uninterrupted operation values for water and sewerage network (invention), backwash water sludge utilization system (invention), precoat filter (invention), sludge scraper movement controller (invention), etc.



The Company conducted patent researches under 20 topics. The Company got permissions to implement four utility models.

In 2013, Vodokanal developed and put to evaluation tests the pilot model of the fire hydrant protection device (temperature compensator) designed for the compensation of temperature variations at ground freezing and thawing. Vodokanal also implemented the following activities:

made pilot model of flush water regeneration by means of membrane bioreactor at water treatment plants and developed the evaluation tests programme to be implemented at the Southern WTP;
made pilot model of wastewater treatment by means of membrane bioreactor to produce process water and developed the evaluation tests programme to be implemented at the Northern WWTP.

Vodokanal started industrial use of technical solution related to water standpipes. 110 water standpipes with blocking locks were manufactured for trial operation.

DEVELOPMENT OF INFORMATION INFRASTRUCTURE

INFORMATION INFRASTRUCTURE OF VODOKANAL IS AN INTEGRAL PART OF PRODUCTION, FINANCIAL AND ECONOMIC OPERATIONS OF THE COMPANY

IN 2013, THE FOLLOWING ACTIVITIES WERE IMPLEMENTED WITHIN THE DEVELOPMENT OF THE COMPANY'S INFORMATION INFRASTRUCTURE:

• To develop communication systems Vodokanal tested and introduced into operation high-speed broadband wireless access which enabled to expand the corporate network and ensure the required throughput when there is no possibility to provide wire communications. • Vodokanal together with the relevant committee of the city implements the pilot project for the installation of fiber optic lines in the sewerage system of the Company by means of microtubule technology.

• Vodokanal launches a large-scale work on switching over to digital phone service (IP-telephony), which serves to increase operational mobility of the Company's employees, enhance the reliability of communication services and optimize costs.

• Within the development of automation aids and systems Vodokanal conducted large preparatory work related to harmonization of automation aids and systems, developed uniform technical solutions for automation of the metering process, completed integration and visualization of process data from 10 production facilities of the Company.

• To develop information infrastructure the Company implemented a number of projects with regard to automation of production operations. For instance, Vodokanal developed and implemented the automated system for metrological assurance of production operations, made some improvements in the integrated record-keeping and accounting system and started the work to optimize the Company's document flow. At the same time, in 2013, Vodokanal introduced technical solutions for the protection of information to ensure the required protection level for the Company's information assets.

For the further development of the Information Security Management System (ISMS) (introduced in 2012) under the International Standard ISO/IEC 27001:2005, Vodokanal organized training of 37 managers of the Company responsible for ISMS in structural subdivisions and fully completed the internal audit programme.

VODOKANAL DEVELOPED AND STARTED THE IMPLEMENTATION OF THE ACTION PLAN (MANAGERIAL AND TECHNICAL MEASURES) THAT MADE IT POSSIBLE TO PASS THE RECERTIFICATION AUDIT AND PROVE THE CONFORMITY OF VODOKANAL'S INFORMATION SECURITY MANAGEMENT SYSTEM (ISMS) WITH THE INTERNATIONAL STANDARD ISO/IEC 27001:2005.



SOCIAL RESPONSIBILITY

AWARENESS-BUILDING

UNDERTAKING ITS MISSION, SUE "VODOKANAL OF ST. PETERSBURG" PUTS SPECIAL EMPHASIS ON DEVELOPING CAREFUL AND RESPONSIBLE ATTITUDE TOWARDS THE 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 the 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 Centre (YEC) and "The Universe of Water" museum complex – both being part of the Information and Training Center.

YOUTH ENVIRONMENTAL CENTRE

IN 2013, 28 ENVIRONMENTAL PROJECTS AND PROGRAMMES WERE IMPLEMENTED AT THE YOUTH ENVIRONMENTAL CENTRE, INCLUDING 20 CITYWIDE, 5 INTERNATIONAL AND 3 REGIONAL ONES, WHERE 35,815 PEOPLE WERE INVOLVED

The Youth Environmental Centre (YEC) is located in the former machine house of Main WTP (built in 1858). It has been working since 2002.

Since then, over 320,000 people have participated in YEC programmes, and over 50 big (also international) projects have been implemented.

In 2010–2011, YEC was reconstructed. At present, several interactive halls are open in the Centre building:

- Hall of First Discoveries;
- The Baltic Sea Hall;
- 3D cinema hall;
- Media-hall;

• Technical hall of the former machine house.

The main task of the Centre is to help the younger generation realize the value of water, to raise the culture of water use in our city, and to teach children simple skills of using this resource sparingly. Children transfer the knowledge and experience they got to their families and schools. YEC is an advanced interactive centre offering interactive classes for preschoolers, schoolchildren, college students and families; it implements environmental projects, provides informational and methodological support to school and college teachers and organizes festival thematic events.

YEC is an active participant of regional and international programmes and projects.

Every day, YEC offers interactive programmes for children and young people of different age groups by request of educational institutions:

for 5–7 year old children: "Droplet's Journey", "Sea Adventures on Your Birthday";
for 1–5 year school students: "Water on Earth", "Water in Everyday Life", "Mysteries of Nature", "Big, Little Sea", "Sea Adventures on Your Birthday";

for 6–10 year school students:
"The Sea Nearby", "Secrets of the Baltic",
"The City By the Sea";

• for 1–5 year school students and college students: "Water Quality Test Lab", "The Sea Nearby", "Secrets of the Baltic", "The City By the Sea".

In 2013, YEC specialists developed and offered to visitors new training activities and programmes: "Water Yesterday, Today and Tomorrow" in the museum rooms; and "Water – a Global Resource", "Baltic Expert", "Water, Environment and Myself" in YEC interactive halls.

ONE OF THE MOST IMPORTANT YEC ACTIVITIES IN 2013 WAS IMPLEMENTATION OF PROJECTS.

Projects are implemented the whole year round according to the content and action plan of each project with the aim to promote sustainable use of natural resources and improve environmental literacy among children, teenagers and families. In 2013, project teams were built by requests of educational institutions. They were trained at YEC workshops and then performed independent activities, made studies or creative works. In the final project phase, the participants presented their results and got recognition of their achievements. The young share knowledge received under the projects with their families and schoolmates and use it in their everyday life.

Key projects implemented by YEC in 2013:

"Water Olympiad" – project for preschoolers and primary school dedicated to the Environmental Protection Year;
"Water +" – project for secondary school dedicated to 155th anniversary

of Vodokanal;

• "ECOgames" project for secondary school dedicated to The Earth Day;

"ECOsummer" project for participants of summer camping programmes;
New Year event "New Year in the Old Tower".

International projects 2013:

• Russian-Finnish project "Training of the Young Through the International Advanced Water Technologies Centre"; in cooperation with Lahti, Finland.

• Russian-British project "Green is great: freshening up ideas for water use"

in partnership with the General Consulate of Great Britain;

• Russian-German project "ECOvision" in partnership with the General Consulate of Germany.

Moreover, YEC participated in regional and international programmes in 2013:

• competition "Fundamentals of Safe Water Use" in the framework of the All-Russian School Olympiad in Life Safety, the city round;

 conference for teachers-YEC partners, with representatives of the Ministry of Environment of Hamburg;

• UN Model International Youth Conference;

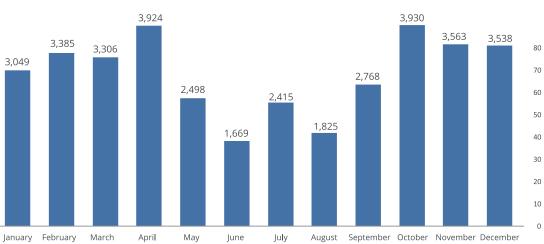
 interactive programme "Water, Environment and Myself" for participants of the festival "Europe Days" in St. Petersburg; • presentation of Vodokanal's awarenessbuilding activities and implementation of interactive programme in the ECOcinema in the framework of VI Neva Environmental Congress;

programme of events for the International Earth Day;
co-organizer of VI All-Russian Scientific Environmental Conference "Water –

Source of Life on Earth";

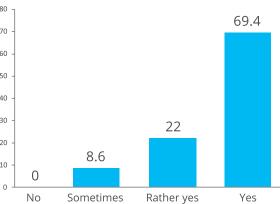
 co-organizer of children programme at the International Environmental Film Festival "Green Vision";

participation in the environmental festival and research-to-practice conference "Krasnoselskaya Rainbow";
co-organizer and participant of the city festival "EcoOkhta", implementation of interactive programme "Learn from Nature".



ATTENDANCE OF THE YOUTH ENVIRONMENTAL CENTRE IN 2013

READINESS TO SAVE WATER AMONG THE PARTICIPANTS OF PROGRAMMES AND PROJECTS (%)



SOCIAL RESPONSIBILITY



THE ACHIEVEMENTS OF VODOKANAL'S YOUTH ENVIRONMENTAL CENTRE ARE RECOGNIZED BOTH IN RUSSIA AND IN FOREIGN COUNTRIES.

In 2004, YEC was awarded the National Environmental Prize of V.I. Vernadskiy Foundation for its contribution to the strengthening of environmental safety and sustainable development. In 2007, YEC was awarded the Certificate of the European Environmental Agency for teaching young people how to conserve the environment and the Baltic Sea.

IN NOVEMBER 2013, AT THE OFFICIAL CLOSING OF THE ENVIRONMENTAL YEAR IN THE STATE KREMLIN PALACE AND AT THE "RUSSIAN ECOLOGY" TELE-MARATHON FINAL HELD AT RIA NOVOSTY NEWS AGENCY, VODOKANAL'S YOUTH ENVIRONMENTAL CENTRE WAS DECLARED THE WINNER OF THE ENVIRONMENTAL YEAR FIRST NATIONAL PRIZE IN THE NOMINATION "ECO-LEADER OF THE YEAR 2013".

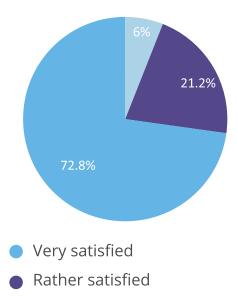
The diploma states that YEC activities are highly commended "for persistent dissemination of environmental values and sharing best practices in the field of environment-friendly technologies and healthy life style".

In 2013, the YEC activities were made known to the Minister of Natural Resources and Environment of the Russian Federation Sergey Ye. Donskoy, the Danish Minister of Environment Ida Auken, representatives of the Russian President's Office, participants of 36th General Assembly of the International Organization for Standardization and others.

In 2013, interactive workshops on "modern environmental education and education for sustainable development" were organized for teachers of educational institutions.

The workshops aimed to disseminate effective education methods and make the teachers more competent in selection of relevant topics for environmental lessons.

Twenty thematic workshops were delivered in 2013; in total, 722 people attended them.



Satisfied

ACCORDING TO THE PUBLIC OPINION POLL REGARDING THE ST. PETERSBURG CITIZENS' OPINION ABOUT THE SERVICES PROVIDED BY VODOKANAL, OVERALL SATISFACTION WITH THE WORK OF YEC WAS 100% IN 2013.

MUSEUM COMPLEX

AROUND 190,000 PEOPLE VISITED THE UNIVERSE OF WATER MUSEUM COMPLEX IN 2013. THE TOTAL ATTENDANCE OF THE MUSEUM COMPLEX AND THE YOUTH ENVIRONMENTAL CENTER WAS 225,500 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 UNIVERSE OF WATER MUSEUM COMPLEX COMPRISES THREE EXHIBITIONS: • Classical museum exhibition "The Water World of St. Petersburg" (in the former 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 wastewater treatment plants. Here, they can also look at a model of the historical center of St. Petersburg. The model was produced by the Institute of Architecture to Vodokanal's order.

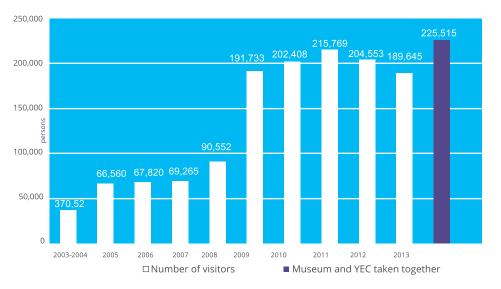
Multimedia exhibition "The Universe

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 there.

In 2013, the museum celebrated its 10th anniversary: the first two exhibitions in the Water Tower were opened in 2003. The Universe of Water exhibition started its work in 2008. Over the five years, it had received over 500,000 visitors. The exhibition located in the former clean water reservoir had been modernized by Vodokanal's 155th birthday. The modernization extended the array of multimedia technologies used, and enhanced capabilities for interaction between visitors and exhibits (knowledge can be obtained in different ways now: by looking, listening or acting). Some films and installations were adapted for children.

Moreover, new interactive facilities were added to the exhibition, such as new video-installations illustrating the topics "The Origin of Life on Earth", "Water Resources on the Planet", "Special Chemical Properties of Water" and "Water Cycle in Nature". The installations are designed for visitors of different age groups including very little children. Besides, visitors can use the novel sensor tables and take a look at the programs designed specially for the exhibition: "100 interesting facts about water" and "Interactive Map of St. Petersburg". New models describing physical properties of water were added to the exhibition. One more exhibit, a stateof-the-art fire hydrant, was put on display.

The reconstruction of the exhibition helped diversify excursions and develop new interactive programmes for children and families.



VISITORS OF THE MUSEUM COMPLEX (NUMBER OF PERSONS)

IN 2013, THE MUSEUM COMPLEX AND YEC RECEIVED 225,515 PEOPLE.



0.2%

4.4%

Museum complex "The Universe of Water" is a permanent participant of the international event "Museums at Night". This event helps impart water information and ideas to many people who are not regular museum goers.

For the international event "Museums at Night 2013" the experts of the museum complex and the Youth Environmental Center developed a special itinerary allowing to visit all three exhibitions of the museum complex and the Youth Environmental Center with the same museum ticket.

As many as 7,953 people visited in the Museums at Night event at the Universe of Water museum complex.

A special concert program dedicated to the 10th anniversary of the Water Museum was presented in the framework of the Museums at Night event. During the program, adults and children could leave their greetings and wishes to the museum. The museum staff continued to work with the participants after the closure of the event: a thematic interactive programme "Family Swim" was organized for the authors of the most interesting works, and museum souvenirs were handed out.

In March 2013, The Universe of Water participated in the 20th Moscow International Travel & Tourism Exhibition (MITT) 2013 held in Expocenter exhibition complex in Moscow. MITT is Russia's largest international travel exhibition in the top five of the world's leading travel exhibitions. MITT organizers highly appreciated the contribution of the Universe of Water museum complex giving it a prize in the nomination "Vivid debut".

As a MITT participant, the Universe of Water museum complex could present itself at the Russian tourist market, find new partners for cooperation and tell potential tourists about its exhibitions.

In late summer and early autumn, both the museum complex and YEC took part in the city's thematic environmental projects "EcoOkhta" and "Planet of Friends" organized in association with the St. Petersburg Krasnogvardeyskiy District Administration.

Environmental awareness-raising programmes "Meetings at the Water Well" and "Learn from Nature" were organized for the project guests.

1,200 people were involved in the special-purpose programmes.

During the autumn school vacation, 1–7 November, the museum complex

participated as usual in the City Festival of children museum programmes "Children Days in St. Petersburg Museums".

The Festival participants were offered excursions to the historical exhibition of the Universe of Water museum complex: • "IMHO: in my humble opinion" – for 13–15 year old children; • "Visiting the Wash'em Clean" – for 7–10 year old children. In the opinion of the children-Festival experts, the museum complex ranked firs

experts, the museum complex ranked first among the "bilberry itinerary" museums (Anna Akhmatova Museum in the Fountain House and the Memorial Museum of A.V. Suvorov).

18,650 people participated in the special Festival programme.

 In 2013, temporary thematic exhibitions were organized at the museum complex:
 Exhibition of miniature art works "New

Atlantis", in cooperation with the St. Petersburg Puppeteer Association. • Solo exhibition of Tatiana Gavrilenko's works "Portrait. Valaam" The exhibition features 28 portraits of well-known clergymen of the Russian Orthodox Church including the brethren of stavropegial Valaam Monastery of Transfiguration of the Savior.

• XI Corporate Exhibition of creative works by Vodokanal employees "Our Arts – for You, Vodokanal!" The exhibition featured different works of art: paintings (oil, watercolours), graphics, sculptures, photos, applied art (wood carving, embroidery, knitting, floristics, bead weaving; quilling, scrapbooking, decoupage, string art); and literary works. There were 60 exponents who presented over 250 works. • Mihail Chemiakin's exhibition "World Concealed in Waterdrops". The exhibition featured 49 original works by the artist created in mixed media painting technique (ink, pencil, watercolours), 16 giclees and 8 original china plates painted according to Chemiakin's sketches at the Imperial Porcelain Factory.

• Exhibition of drawings made by students of St. Petersburg children's art schools and non-formal education institutions "Water! Wow!". The exhibition was organized in association with the St. Petersburg Union of Designers and the Foundation "Petersburg Heritage and Perspective".

In late December 2013, 56 environmental awareness-building interactive programmes "New-Year Adventures in the Gulf of Finland" were conducted for the children of Vodokanal employees and the city schoolchildren.

6,583 people participated in the newyear programmes 2013.

DA-VODA WEBSITE

IN 2013, VODOKANAL'S SOCIAL PROJECT DA-VODA WEBSITE DEDICATED TO CAREFUL ATTITUDE TO WATER (DA-VODA.COM) WAS DEVELOPING. THE WEBSITE WAS LAUNCHED WITH THE SUPPORT OF 2PR AGENCY IN 2010. IT WORKS TO DRAW THE ATTENTION OF ACTIVE INTERNET USERS TO WATER-RELATED PROBLEMS

The main character of the website is the Neva Crayfish, a personage which has much to do with Vodokanal operations. Today, many people know that crayfish from the River Neva work at all Vodokanal's water intakes. They monitor the quality of water taken out of the Neva. The crayfish are a sort of Vodokanal's business card.

Through the Neva Crayfish, the portal Da-Voda explains and demonstrates why many well-known people do not waste water; what technical means are available to save water without impairing comfort; how one can solve domestic water-related problems; and what threats could arise from negligent attitude to water.

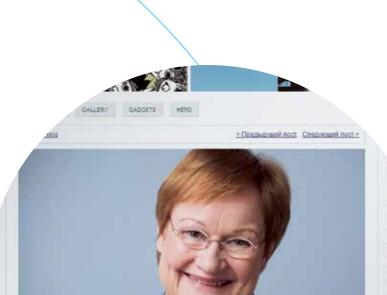
The Neva Crayfish has its pages in the social networks: Facebook, VKontakte, and Twitter. The Crayfish communicates with his friends in Russian and English. In the end of 2013, the Neva Crayfish's friends numbered 11,000 people.

In 2013, the new section "Environmental Protection Year" was added to Da-Voda site. Animated graphics was used for visual presentation of information. The materials were split into several categories: "Project of the Year", "Project of the Month", "Figure of the Month", "Event of the Month", "Quotation of the Month", and "Challenge of the Month". For example, "Event of March" was XIV International Environmental Forum "The Baltic Sea Day" held in St. Petersburg on 20-22 March, and "Project of March" was the opening of Water Olympiad at Vodokanal's Youth Environmental Centre. In October, the Northern Tunnel Collector Construction Project was declared "the Project of the Year", and "the Figure of the Month" was 98.4% - the percentage of wastewater treatment achieved due to the NTC Project completion. In December, "the Quotation of the Month" were the words of the Russian President Vladimir Putin about the need to restore the ecosystems of fresh water bodies in the North-West Russia, pronounced at the meeting of the Security Council in Kremlin where the results of the Environmental Protection Year were summarized: "Degradation of water quality in Lakes Ladoga and Onega can lead to problems in drinking water supply to the whole North-West Region. This issue should be addressed immediately both at the federal and regional levels."

The website character, the Neva Crayfish, told why the Environmental Protection Year was needed at a special video-lesson. In another video-lesson "Don't Ruin Seals!" posted on the website in 2013, the Neva Crayfish discussed why the population of ringed seals in the Russian part of the Gulf of Finland numbers not more than two hundred animals

"Video-lesson" is a popular section of the website where the Neva Crayfish acts as a "teacher". In total, there were over 62,000 visits to the site section to view short animated pictures about careful attitude to water. It should be mentioned that visitors of the website and its accounts in social networks were more interested in global issues: where snow is disposed to, how to use water meters, and what the city does to preserve biodiversity and healthy environment for the citizens.

This year, the website gave a detailed report on the progress of the new project "Help the Pinnipeds". The project initiated by 2PR agency helped save two grey seal pups and three Ladoga ringed seal pups. The pinnipedian rehabilitation centre had been opened at one of Vodokanal's treatment plants where the animals were nursed back to health in March – July 2013. The seals were cured and released to their natural habitat.



Sh Kath 2+ 9+ 2h Misteri A Royaaled 22 0+ 201+ Arctic Island

18.04.2014 Horror for Ento Be Built on





Tarja Halonen: Education, Education, Education Is The Key To Saving Water

In general, the structure of the portal Da-Voda includes several sections.

One of the 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 can find out how much water can be saved by using infrared sensor mixing faucets; why spray nozzles should be used; learn about "training showers" and "cost-saving showers", about water cycles equipped with environment-friendly water engines, etc.

In 2013, the section "Thirst for Networking" featured interviews with the internationallevel stars: the writer and journalist Zakhar Prilepin, Tarja Halonen (The President of Finland in 2000–2012), executive director of Pacific Marine Mammal Center in California Keith Matassa, environmentalist and Environmental Oscar awardee Evgeniy Simonov who is engaged in the saving of water bodies, composer Grogoriy Gladkov; academician Igor Spasskiy, Petersburg actress Ekaterina Gorina, world-renowned architect and author of the bestseller "Cities for People" Jan Gehl, Polish filmmaker and philosopher Krzysztof Zanussi, and a well-known designer and blogger Artemiy Lebedev.

In 2013, the section "Inquiry" also addressed the issues raised under the "Help the Pinnipeds" project. Multiple topics for the city teenagers to discuss contained questions, such as "How shall we save ringed and grey seals in the Baltic Sea?" and "Who should pay for the saving of Red Book animals?"

In 2013, the website was presented at the international conference Sheikh Khalifa Excellence Award in Abu-Dhabi, the United Arab Emirates. In 2012, Vodokanal's Da-Voda project won the best practice competition in creative use of social media organized by the European Foundation for Quality Management (EFQM). The competition was organized under the EFQM programme of recognizing the leading organizations and sharing best practices.

In 2010, the Internet portal Da-Voda won the Runet Award in the nomination "Health and Recreation", and in December 2011, it was announced the winner of the international contest in the field of public relations PROBA-IPRA Golden World Awards-2011 in the nomination "Best Social PR Project".

Wykontakte 0 Share 5 Tweet 0 841 0 Potend 0

 The President of Finland in 2000-2012. Now she is Co-Chair of the UN He Inability, so ecology is included in the list of her professional reson Da-Vode asked Tarja Halonen about water conservation workers of the Ballic Sea ecology.

REHABILITATION OF MARINE MAMMALS

IN THE GULF OF FINLAND YEAR 2013, THE PINNIPEDIAN REHABILITATION CENTRE WAS OPENED AT THE PREMISES OF VODOKANAL ST. PETERSBURG UNDER THE "HELP THE PINNIPEDS" PROJECT

> the first in Russia to develop an aid methodology used to help rare species of marine mammals, and to acquire practical experience in rehabilitation of endangered pinnipeds. Until recently, the lack of permanent base for rehabilitation activities has been the key problem. The endangered animals were taken to diverse places for rehabilitation: mountain-skiing lodge, forest guard's cordon, summer cottages, the Zoo, and to the Gulf of Finland coast for lack of anything better.

> The Pinnipedian Rehabilitation Centre in Repino has been working from March to July 2013. Several functional modules were set up at the treatment plant site: warming unit – for initial inspection and hospitalization of animals with impaired thermoregulation. The animal care ground has isolation wards and an adaptation pond. Moreover, there is a room for food preparation and storage on site. Open-air

Two pinniped species, grey seal and ringed seal, live in the Gulf of Finland and Lake Ladoga. Both species are entered into the Red Book of the Russian Federation. In late winter and early spring, females of marine mammals bring forth and then nurture their pups on the ice. Over the recent years, more and more pups have been prematurely detached from their mothers because of warm winters, quick melting of ice, more dense sea traffic and roundthe-year ice channeling of ships. Many seal pups perish or fall into the hands of humans. The population of ringed seal is reducing catastrophically. In early XX century, the local seal population in the Gulf of Finland numbered 50,000–70,000 animals, in 1982 – 3,500–4,000, and in 2005 – not more than 200 individuals. It can be attributed to the ever-growing anthropogenic burden on the habitat of ringed seals and the fact that no effort is made to preserve them.

The specialists of the Marine Mammal Rehabilitation Centre of Leningrad Region (V. Alexeyev and E. Andrievskaya) were ponds are constructed for the animals ready for discharge.

In March–July, the centre helped two Baltic grey seals and three Ladoga ringed seals. The animals were cured and released to their natural habitat. In parallel, a wide awareness campaign was run to make the public familiar with the problems of marine mammals and the condition of their habitat, the Baltic Sea and Lake Ladoga. The campaign continued after all animals had been released.

Instructions on what people should do when they find any endangered seal pups were disseminated through the mass media. The Hotline phone (+7 812 699-23-99) received calls round-the-clock.

Having got a message from any citizen, the Centre specialists started off to the place where the animal had been found, administered first aid and brought it to Repino. From late March to 17 July, they have delivered medical care to animals using their own unique methodology.

The project was widely disseminated in the mass media. Press releases commenting on each event under the project (the opening of the Rehabilitation Centre, arrival of new "patients", giving names to the pups, release to natural habitat) were posted on Vodokanal website (www.vodokanal.spb.ru) and mailed to the mass media. All in all, 8 press releases were issued under the project. Three press tours to the rehabilitation station in Repino were organized for the mass media. The journalists could see how animals were tube-fed, how they were taught to feed on their own, catch fish, prey and swim. The Centre specialists gave comments and answered multiple questions about the habits and condition of animals, etc.

Three more press tours were dedicated to the release of animals to their natural habitat. There were three "leaving events" in total: two in the Valaam Archipelago and one – in Kurgalskiy wildlife reserve.

All in all, over 200 publications and spots about the pinnipedian rehabilitation centre were issued.

The Centre activities and the condition of its fosterlings were presented in detail on the Da-Voda website (www.da-voda.com) dedicated to careful attitude to water, on the pinnipedian rehabilitation centre pages in VKontakte network, and in the accounts of the Neva Crayfish, the character of Da-Voda website, in VKontakte and Facebook.

The booklet "Help the Pinnipedian" (in Russian and English) and the videofilm "We return seals to the Baltic" (in Russian and English) were issued under the project. The videofilm was shown at Vodokanal's exhibition stand during the Neva International Environmental Congress (St. Petersburg, May 2013). The information on Vodokanal's marine mammal rehabilitation project was included in the presentations made by the company specialists at different conferences and seminars, in particular, during the St. Petersburg Days in Helsinki and Turku and at the briefing presentation "Hour of Russia. Investments of the Russian business in sustainable development" (held on 18 September in the headquarters of the Permanent Delegation of the Russian Federation to UN (New York, USA) in the framework of the UN Global Compact Leaders Summit)). The participants of conferences and seminars, including VI Neva Environmental Congress (May 2013) and the Conference "Vodokanal: Innovative Path of Development" (October 2013) got information about the project.

A master-class dedicated to the project was given for the participants of the international students' competition "Mass Media Perspective 2013" (November 2013).

Many company employees were involved in the project: the internal company portal Vodokanal-Info organized collection of diapers and bedsheets for the Rehabilitation Centre; three videos about the project and a photo gallery were posted on Vodokanal-TV page.

The awareness campaign continued after the last animal was released, up to the end of 2013. The project results 2013 were summarized, and preparations to the next project phase in 2014 were made in consideration of the fact that 2014 had been announced the Gulf of Finland Year.

Patients of the Pinnipedian Rehabilitation Station:

RINGED SEAL MEKKERIKE III

The first ward, a ringed seal pup, was found on the ice of Lake Ladoga on 29 March. The pup was in a poor condition: starved, leukoma of one eye, wounds inflicted by the crows.

Mekkerike III stayed at the Pinnipedian Rehabilitation Centre for two months and recovered completely having put on over 10kg of weight. On the day of discharge, it weighed 20.5kg. On 30 May it was released into Lake Ladoga near Holy Island in the Valaam Achipelago.

GREY SEALS HALLY AND VISTY

Two seal pups were brought to the Centre

in the night of 11 April. The pups were of different sex but of approximately the same age: about 1.5 months old. Their weight was one-fourth of normal: each weighed 10kg instead of standard 40kg. Besides, the female had a severe dislocation of its front left flapper. The flapper was fitted and some time later the animal could lean on it. The female pup later called Hally was found by the crew of the tug boat Sadko in the Luga Bay.

The sailors caught sight of the pup lying on the ice, picked it up and got in touch with specialists.

A male grey seal (Visty) reached a local community having crept away from waterfront over a distance of nearly one kilometer. It was found by Dmitriy Titov, dweller of Vistino settlement.

After a successful rehabilitation course the two Baltic grey seals were released in Kurgalskiy wildlife reserve on 13 June. At the time of discharge, Hally's weight was around 41kg and Visty's – almost 45kg. RINGED SEAL MEKKERIKE IV

On 2 May, 4.00 a.m., the people strolling

near the Kantemirovskiy Bridge caught sight of a ringed seal on an ice floe floating down the Neva. The specialists had to figure out the animal's route and, by the morning of 4 May, the ringed seal was caught on the shore near the motor boat stand in the vicinity of the 300th Anniversary of St. Petersburg Park.

The male ringed seal was about three months old. Mekkerike IV was quite emaciated, and the rehabilitation theurapists made a very guarded prognosis regarding its fate. The pup's weight was 5.7kg only. Such body mass would be normal for a newborn seal but not for a youngster. Moreover, it had a temperature and an injury of the lower jaw: the seal could not move it and, therefore, could not feed on its own.

It has fully recovered by the end of the rehabilitation period. The seal, one of the last "leavers", was released into Lake Ladoga on Holy Island in the Valaam Achipelago on 17 July.

RINGED SEAL MEKKERIKE V

Mekkerike V was found on 29 May on a little shoal between Finlandskiy railway bridge and the Alexander Nevskiy Bridge.

Mekkerike V was the most complex patient of all. In addition to weight deficit, he had a severe bruise on its face and problems with pancreas.

The animal has also fully recovered. It was released into Lake Ladoga on Holy Island in the Valaam Achipelago on 17 July. THE "HELP THE PINNIPEDS" PROJECT IMPLEMENTED JOINTLY BY VODOKANAL ST. PETERSBURG AND 2 PR AGENCY WAS ANNOUNCED THE WINNER IN THE NOMINATION "BEST SOCIAL PR PROJECT" BY THE JURY OF THE INTERNATIONAL AWARD PROBA-IPRA GWA 2013





ST. PETERSBURG IS THE LARGEST CITY OF THE BALTIC SEA REGION. THE CITY AND, CONSEQUENTLY, VODOKANAL BEAR PARTICULAR RESPONSIBILITY FOR THE BALTIC SEA CONDITION

Protection of the environment and the Baltic Sea, sustainable use of natural resources and responsibility to future generations for the results of the company activities are the key priorities of Vodokanal and constitute one of the company's strategic targets.

Vodokanal's environmental concept is based on the understanding of its role in creating a positive environmental situation throughout the Baltic Sea Region. Vodokanal performs its environmental activities, particularly, in the framework of the International Convention of the Baltic Marine Environment Protection Commission (HELCOM). The company implemented and certified its environmental management system in accordance with ISO14001 in order to achieve effective implementation of the environmental concept.

During 2013, Vodokanal continued consistent development of its environmental management system as an essential part of the company management. In 2013, the new Environmental Policy of the company was developed and approved, as the 2008 policy commitments had been fulfiled to a large extent.

It is remarkable that the new version of environmental policy was developed in the year of 10th anniversary of environmental management system implementation in Vodokanal. The policy comprises an extended list of the company's environmental commitments. New commitments were developed in addition to the conventional ones (prevent pollution of regional water bodies with wastewater, implement reliable and effective methods of wastewater disinfection, reduce potable water losses during treatment and transportation, etc.), including: reduction of thermal and electric energy consumption by optimizing the processes, use of vehicles with environment-friendly engines, development and implementation of educational and awareness-raising programmes in the field of ecology and sustainable use of resources.

REDUCTION OF IMPACT ON WATER BODIES IN 2013

The impact on water bodies is mitigated in two ways:

• closure of untreated wastewater discharges;

• construction, modernization or rehabilitation of wastewater treatment plants to meet the HELCOM recommendations and the Russian regulations on wastewater treatment and disinfection.

In 2013, Vodokanal carried out the following activities under the Neva Untreated Wastewater Discharge Closure Programme:

• In October 2013, the Northern Tunnel Collector was completed. The following direct discharges were diverted to the Collector: one at Vyborgskaya embankment, six discharges along Robespierre embankment, and three discharges of backwash water from the Main Water Treatment Plant. The total volume of diverted discharges is 87,000 cubic meters per day. The wastewater treatment level in St. Petersburg reached 98.4%.

• Design of Okhta Collector for the purpose of eliminating untreated wastewater discharge in the Okhta River basin, design of diversion scheme for untreated wastewater discharged into the Karpovka River in Petrogradsky district, design of sewerage network in Repina Square with diversion of untreated wastewater discharged into the Fontanka River.

Parameter	Unit	2006	2007	2008	2009	2010	2011	2012	2013
Mass of suspended solids discharged into water bodies	t/year	20,535	19,418	21,845.4	15,826.9	14,120.8	13,706.9	12,382.2	9,353.6
Mass of total BOD discharged into water bodies	t/year	26,860.2	6,074.3	28,627.3	18,718.2	17,677.9	15,635.6	13,311.7	11,271.2
Mass of total nitrogen discharged into water bodies	t/year	1,282.2	11,037.3	11,048.2	10,729.6	10,003	10,048.6	9,627.7	9,303.4
Mass of total phosphorus discharged into water bodies	t/year	1,576.7	1,269.7	1,177.8	759.9	677.7	492.4	491.8	433.6

The following was done to improve wastewater treatment processes at WWTPs:

 reconstruction of Northern Wastewater Treatment Plant with implementation of the UCT technology by SWECO (Sweden) for enhanced nutrients removal;

• the following works were carried out under the Small Wastewater Treatment Plants (Pushkin, Kolpino, Kronstadt, Pontonny) Rehabilitation Programme:

- Kronstadt WWTP: aeration tank rehabilitation, UCT technology implementation, rehabilitation of secondary clarifiers, rehabilitation of grit channels;

Kolpino WWTP: rehabilitation
of grit channels, rehabilitation of two
primary and two secondary clarifiers,
installation of raw sludge pumps;
Pontonniy WWTP: installation of
periodical bar screens, rehabilitation
of secondary clarifier no.3, repair of two
grit channels and replacement of jet
pumps, repair of sludge thickener;
Pushkin WWTP: mechanical screens
rehabilitation, installation of raw
sludge pumps, installation of four
new blowers, installation of new drum
screen for raw sludge.

Design for Molodezhnoye WWTP construction was developed, which got the positive opinion of the State Environmental Appraisal authority.

The effectiveness of Vodokanal activities aimed at the elimination of untreated wastewater discharge and reconstruction of wastewater treatment plants is proved by reduction of pollutants discharge into water bodies of St. Petersburg.

REDUCTION OF IMPACT ON THE ATMOSPHERIC AIR IN 2013

THE IMPACT OF VODOKANAL FACILITIES ON THE ATMOSPHERIC AIR IS MONITORED BY INSTRUMENTS.

The following measurements are made:

• concentrations of pollutants at 131 sources of industrial emissions;

• air quality and noise level in the buffer zone and the areas affected by 75 Vodokanal facilities;

• performance control of 24 gas and dust removal facilities, incl. 9 flue gas treatment facilities at sludge incineration plants (SIP). At Central and South-West SIPs flue gases undergo a two-stage treatment in electrostatic precipitators and the scrubber systems equipped with acid and alkaline columns; at Northern SIP they undergo a two-stage treatment in electrostatic precipitator and are dry-cleaned in bag filters using chemicals (activated carbon and sodium hydrocarbonate).

Industrial emissions are controlled at the company sites in accordance with the time schedules approved by supervisory authorities in consideration of maximum permissible emissions (MPE) values. As a result, no above-limit values were recorded.

Air quality and noise level control in the checkpoints of the buffer zone and the areas affected by Vodokanal facilities, is performed in accordance with the field observations programmes approved as part of the buffer zone size justification project. The maximum concentrations of all researched components and noise levels in the checkpoints did not exceed the hygienic standards.

Vodokanal employs biomonitoring systems along with the instrumental control. Biosensor information systems are used at South-West WWTP to detect air toxicity. Living organisms, namely, snails, are used as indicators. Such system works to assess the total negative impact (synergetic effect) on the organism-indicator of pollution contained in the South-West WWTP's buffer zone air. Currently, 3 sludge incineration plants are operated in the city. Previously, sludge was disposed to landfills, emissions of which are nowadays the main sources of negative impact on the atmosphere.

The negative impact of landfills on the atmosphere is controlled in two ways: • elimination of negative impact by making the deposited sludge safe for

the environment;

 prevention of landfills odour spreading. The geotube method comprising

chemical treatment and static dewatering of sludge in geotubes has been applied at Severniy Landfill since 2010. The landfill area could be reduced, and hence emissions to the air decreased. By the end of 2013, 12% of the total sludge volume had been recycled in geotubes.

In 2013, the automatic deodorant spraying system for odour removal was put into operation at Severniy and Volkhonka-2 landfills. The length of the deodorant spraying pipeline is 3,800 m and 1,350 m at Severniy and Volkhonka landfills respectively.

The automatic deodorant spraying system comprises a pumping station with a control unit and a pipeline with nozzles, through which the deodorant solution is sprayed (the pipeline is placed on columns along the landfill perimeter). The spraying system operation is adjusted according to the data of the connected meteorological station, which checks the wind direction. The bigger amount of chemical solution is supplied to the downwind side to produce the required odour removal effect.

The applied method proved to be highly effective according to the results of assessment of the Scientific Research Institute for atmospheric air protection (OAO "NII ATMOSFERA"): mercaptans content in the air is reduced by 70%, and odour intensity in total is reduced by 40%.

A range of devices and technologies are implemented and tested at Vodokanal facilities for atmospheric negative impact reduction and odour spread prevention.

The majority of sewage pumping stations is located in urban development areas near residential buildings and public facilities. SPS ventilation emits odorous gases into the air.

A sorption-plasma-catalytic gas cleaning plant was put into operation at sewage pumping station "11 kvartal" to remove organic (aromatic hydrocarbon) and non-organic (ammonia, hydrogen sulfide, sulfur dioxide, mercaptans, etc.) substances. The plant consists of two stages: plasma-chemical reactor (ozonation unit) and catalytic reactor. Passing the high-voltage discharge zone in gas-discharge cells and interacting with the electrosynthesis products, gaseous pollutants are destroyed and transformed into harmless compounds of carbon dioxide and water. The remaining pollutants not decomposed in the plasma-chemical reactor, are destroyed in catalytic reactor by enhanced oxidation. The measurements confirmed the effectiveness of sorption-plasmacatalytic air cleaning.

The existing network of tunnel collectors is mainly located in residential areas and can cause discomfort to citizens with the odour spreading through manholes and shaft hatch covers.

The air treatment systems are installed at shaft no.233 of Rzhevka-Porokhoviye collector and shaft no.7 of the Northern Tunnel Collector in order to eliminate potential odours. The systems include: a filter, leak-proof housing, safety valves and protective ventilation cover of the hatch. The filter consists of a cylinder with removable cover and outlet for connection to air ducts, pre-filters and filler (special activated carbon).

No odours were observed near the collector shafts during the plant operation, and the plant was easy to use. A programme for air sampling and pollutants concentrations measurements is currently under development. The shaft 435/2 of the Northern Tunnel Collector is equipped with the biological air purification unit. The main element of the unit is filtering biomass placed in separate cartridges arranged in parallel in a single package. Biofiltration is based on microorganisms' natural ability to form biofilm on the solid carrier porous surface, to remove admixtures of organic and non-organic volatile substances from the passing air and to oxidize and decompose them to water and carbon dioxide. Natural substances are used as filter layers. They contain mineral salts and substances required for the growth of microorganisms.

Measurement results showed high effectiveness of treatment for all pollutants.

Filters with activated carbon bed for odour removal are applied at Vodokanal's manholes as pilot projects.

The filter is mounted under the manhole cover and is used for sewage odours absorption.

The filter housing is made entirely of polyethylene, with the chamber inside filled with filtering layer (mesh bag impregnated with activated carbon). The filter is equipped with a siphon for surface wastewater draining to the network.





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 to prevent accidents and to create proper conditions at workplaces to achieve high performance. Complexity of production, and diversity of technologies and equipment used are taken into account.

Vodokanal employees 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" also includes 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 implemented measures are an important element of OHSAS. The monitoring system includes: • monitoring of working environment (assessment of sanitary and hygienic conditions of labour, organization
of labour and maintaining favourable
social-psychological environment at work);
monitoring of health status of
employees (health survey for detection
of early symptoms of diseases, biological
monitoring, polling of employees).

The international audit carried out in October-November 2013 confirmed that OHSAS at SUE "Vodokanal of St. Petersburg" is operated in compliance with the requirements of OHSAS 18001–2007.

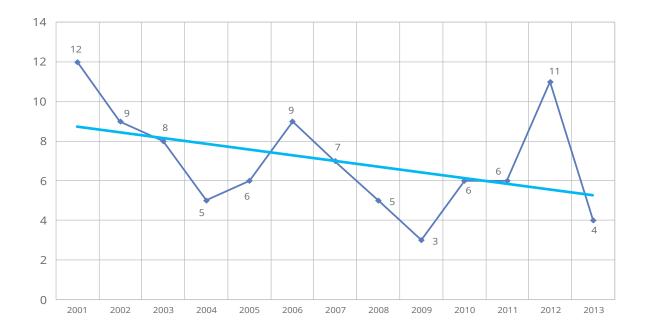
During 2013, Vodokanal carried out the following activities as a part of the Occupational Health & Safety Management System:

working conditions at eight company production facilities were improved due to the introduction of new, safe practices and advanced technologies that ensure reliable and failure-free operation and reduce the rate of injuries and professional diseases;
monitoring and assessment of safe working conditions at 650 workplaces was organized and carried out based on instrumental measurements of hazardous and harmful production factors;

• 100% of employees are provided with individual protective gear;

• 6,163 company employees were trained in occupational health and safety and their knowledge was tested.

ACCIDENT RATE IN DIFFERENT YEARS



The following core indicators could be achieved by the company due to accident prevention:

the number of insurance events per 1,000 employees: Vodokanal's average is 0.46; industry average is 1.48;
the number of days of temporary disability per one insurance event: Vodokanal's average is 124; industry average is 63.9.

Industrial safety compliance inspection is organized and implemented in the company in accordance with Article 11 of the Federal Law no.116-FZ dated 1997 "On industrial safety at production facilities' and the Rules of organization and implementation of control over industrial safety at hazardous production facilities" approved by the Resolution of the RF Government no.263 dated March 10, 1999. On the basis of the Rules, the company developed the Regulation "On control over industrial safety in the course of operation of hazardous production facilities of SUE "Vodokanal of St. Petersburg"" approved by the Director General in December 2013 and agreed upon with the North-Western Department of Rostekhbnadzor.

The company management issued orders to organize control over industrial safety at the hazardous production facilities of the company. Action plans are developed annually to ensure compliance with industrial safety requirements in the course of operation of hazardous production facilities. Information about the organization of control over industrial safety is provided to the local authorities of the Federal Mining and Industrial Safety Inspectorate of Russia.

As of December 2013, 55 hazardous production facilities were registered and operated by the company. Vodokanal operates chemically hazardous facilities, explosive and fire hazardous plants according to relevant licenses issued by the North-Western Department of Rostekhnadzor.







ALL ACHIEVEMENTS OF VODOKANAL STEM FROM THE COMPETENCE OF ITS PERSONNEL, THAT IS WHY THE COMPANY PAYS SPECIAL ATTENTION TO PERSONNEL DEVELOPMENT, ECONOMIC INCENTIVES AND SOCIAL PROTECTION OF EMPLOYEES. ALL THAT HELPS HARMONIZE THE INTERESTS OF THE COMPANY AND ITS EMPLOYEES

As of 1 January 2014, the staff of Vodokanal numbered 8,792 persons.

Categories of personnel	01.01.2014		
Managers	1,616		
Specialists and white collar workers	2,576		
Blue collar workers	4,600		
Total:	8,792		

The average age of employees was 43.63.

	Number of employees	The average age	
Men	5,209	44.41	
Women	3,468	42.39	

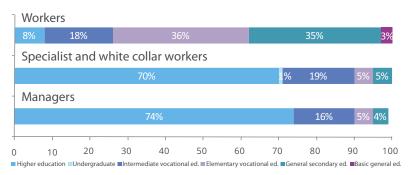
The personnel in Vodokanal is managed in accordance with the personnel management strategy and policy.

Vodokanal strategic goals in personnel management are:

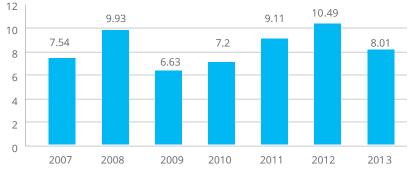
- more effective use of personnel;
- improved personnel development system;
- preservation and development of human resources;
- increase of personnel satisfaction.

In 2013, labour turnover was 8.01%.

EDUCATION LEVEL, %



LABOUR TURNOVER, %



The main personnel management approaches are:

• strong managerial competence and qualification of personnel;

effective use of labour resources; improvement of basic remuneration

 Improvement of basic remuneration and incentive systems, employees motivation;

• achievement of global standards in labour and industrial safety;

• improvement of personnel life quality, development of favorable conditions for labour and recreation, social support of unemployed pensioners;

• creation of conditions for implementation of young employees's initiatives, for professional growth and self-realization;

• development of consistent system of training, promotion, development and evaluation of employees;

 development of dynamic corporate culture supporting effective interaction of employees and accelerating integration of new assets and employees;

provision of appropriate

age/professional composition of the staff; • development of social partnership, mutual responsibility and trust;

• personnel loyalty, stable and positive social environment.

Vodokanal's personnel management policy is aimed to implement these goals.

The personnel management function is based on the process approach.

PERSONNEL RECRUITMENT, MOTIVATION AND APPRAISAL

Personnel recruitment is performed in compliance with the Company standards "Labor Market Research" and "Recruitment and Employment Procedures".

Personnel is recruited according to applications prepared by department managers and submitted to HR-departments. The applications reflect selection criteria for candidates i.e. qualification requirements. To fill vacancies, first of all, candidates are selected from the Company's succession pool.

MODERN HR-TECHNOLOGIES ARE USED FOR SEARCH AND SELECTION OF CANDIDATES FROM THE EXTERNAL LABOUR MARKET: E-RECRUITMENT (WEB-RESOURCES), CAREER FAIRS, TARGETED TRAINING IN UNIVERSITIES, SPECIALIZED AND UNSPECIALIZED PUBLICATIONS, INTERVIEWING, AND COMPREHENSIVE CANDIDATE APPRAISAL.

Motivation system for the company personnel is targeted at highly-efficient work of personnel, continuous development, increase of personnel engagement and social safety, as well as its satisfaction, loyalty and commitment.

Personnel appraisal is made in accordance with Vodokanal's standard "The Personnel Appraisal System" and aimed at personnel development.

All employees who are candidates of personnel reserve pass the competence appraisal. The Talent Group is formed of the employees included in the high potential staff, who are workers with the highest development potential. Based on the appraisal results, Plans of Individual Development of Employees are created for the employees included in the company personnel reserve; career planning is built.

PERSONNEL TRAINING AND DEVELOPMENT

SUE "VODOKANAL OF ST. PETERSBURG" PERSONNEL DEVELOPMENT AT ALL LEVELS IS THE KEY ELEMENT OF DEVELOPMENT AND MAINTAINING OF HIGH PROFESSIONAL LEVEL AND MOTIVATION OF PERSONNEL FOR HIGH OPERATIONAL PERFORMANCE WITH MAXIMUM EMPLOYEES' POTENTIAL ENGAGEMENT

Personnel development comprises training planning and implementation, career planning and development, workforce capacity formation and development, development of young specialists, students' training and internship programme.

The training process in Vodokanal is implemented according to the company standard "Personnel Management at SUE "Vodokanal of St. Petersburg". 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 training is arranged according to the company needs and the training schedule for current year, which is drafted subject to annual applications of the company units.

Given a wide range of personnel training needs, the corporate training system should be highly flexible and mobile, which is achieved through the diversity of training: internal and external training, partnership training projects (Water College, Internal Advanced Water Technologies Centre), cooperation with scientific institutions.

Due to the flexible approach, the training can have optimal content, scope, duration, cost, etc. in each specific case.

Through personnel training and improvement of qualifications, Vodokanal employees acquire the knowledge and skills as needed for successful work performance, work more efficiently and are motivated to continuous professional growth and self-education. A SPECIAL FORM OF TRAINING ACTIVITIES ARE PROFESSIONAL SKILLS CONTESTS THAT HELP IDENTIFY THE EMPLOYEES-TRANSMITTERS OF ADVANCED EXPERIENCE AND PROVIDE PROFESSIONAL DEVELOP-MENT OF OTHER EMPLOYEES THROUGH THE JOINT PRACTICAL ACTIVITY IN PROFES-SIONAL CONTESTS.

In 2013, Vodokanal held 19 final professional skills contests "Best Professional", where 231 persons participated. 58 Vodokanal employees became winners and awardees.

The best specialists in the following spheres were identified: technicians of chemical and biological laboratories; pump operators; electricians for repair and maintenance of electric equipment; electric and gas welders; operators of excavators and truck-mounted cranes: nurses; drivers; repair and maintenance workers; instrumentation repairmen; operational engineers; specialists for occupational safety, industrial safety and production control; health and safety inspectors. Competitions for environmental management and quality management systems auditors were held. Best emergency repair teams in water supply and sanitation sectors were identified.

Moreover, in 2013, Vodokanal representatives participated in interdisciplinary professional skill contests.

Two Vodokanal employees won the "Best Professional" contest among workers of housing and public utilities of St. Petersburg and the Leningrad Region. And seven Vodokanal employees won the "Stroymaster" contest (held among construction market workers of St. Petersburg and the Leningrad Region).

The majority of Vodokanal's professional contests are organized in the Water Utilities Department of the Water College, where the equipment meets modern requirements and can support the complexity level of contest activities. Professional re-training and qualification improvement are performed at the Water Utilities Department.

In the framework of cooperation with the College, Vodokanal provides hands-on training of the College students. In 2013, 28 students got hands-on training in Vodokanal. In addition, Vodokanal provides training for the College professors and foremen at the company sites.

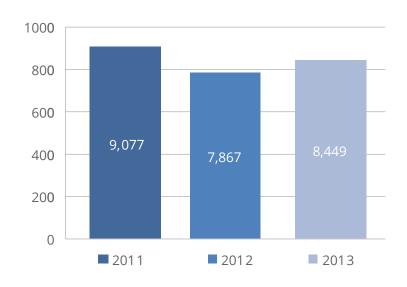
Succession pool establishment is one of the areas of the company HR-management. Succession pool management is performed in accordance with the corporate standard "Succession Pool Management" and aims at personnel potential development. The succession pool comprises the current succession pool and potential succession pool. In addition, the Talent Group is formed of the employees included in the potential succession pool, who are workers with the highest development potential.

In 2013, the final "Leadership" stage of "Strategic Thinking and Ideas Generation" training, aiming at development of the Talent Group members, was organized in the succession pool school.

The students intern programme is implemented in the company for external succession pool of young specialists. It helps students consolidate their theoretical knowledge, acquire practical experience and develop professional skills. Through this programme, students from Russian higher and secondary educational and training institutions have an opportunity to learn advanced technologies and acquire a unique practical experience. In 2013, 84 students from higher educational institutions and 59 students from colleges of St. Petersburg participated in the intern programme.

TRAINING AND QUALIFICATION IM-PROVEMENT OF VODOKANAL EMPLOYEES IS AN ONGOING PROCESS THROUGHOUT THE WHOLE EMPLOYMENT PERIOD. THE COMPANY CREATES A FAVOURABLE TRAINING CLIMATE AND CONSIDERS THE TRAINING COSTS TO BE INVESTMENTS IN THE FIXED ASSETS LEAD-ING TO OPTIMAL USE OF THE EMPLOYEE POTENTIAL.

In 2013, 8,449 Vodokanal employees participated in different trainings.



NUMBER OF TRAINEES, PERSONS

Currently, the HR-department of Vodokanal and the Information and Training Centre Branch are working to optimize training, re-training and qualification improvement of employees and to improve the personnel development and training system which accumulates the professional experience of Vodokanal employees and partners and is closely related to the development strategy of Vodokanal and water sector, in general.





Vodokanal's social policy is an important element of its personnel, production and economic potential. The social policy aims:

• to support the growth of productivity, efficiency and quality of work;

• to motivate the employees to improve their qualifications;

• to solve managerial tasks and to secure the most qualified employees, ensuring their rotation and loyalty to the company.

The basic principles of social policy are set out in the company's Collective Agreement. The social policy is implemented through the social programmes that have the highest value for employees.

The company's social programmes

are aimed at creation and development of high-quality labour resources, qualified management and corporate culture.

Main aspects of social policy:

personnel development, improvement of professional level and skills of employees;
building of corporate culture;

• rehabilitation and recreation of employees including their family members;

• involvement and support of young people, also in the framework of educational projects;

- sports programmes;
- provision of material aid;
- assistance to veterans;

• implementation of different children programmes.

Vodokanal's social policy is applied to all employees and their families, as well as ex-employees, and promotes business sustainability by creating favourable conditions for the solving of operational tasks, reduction of risks in the social and labour spheres, and in relations with the employees and ex-employees, which are based on principles of social partnership and corporate citizenship.

The social aspects related to the company social development are particularly important, since the social strategy parameters are under constant control of the employees, trade union, and managers of Vodokanal.



SOCIAL RESPONSIBILITY



SOCIAL BENEFITS TO COMPANY EMPLOYEES

Social benefits to the company employees and ex-employees are specified in the Collective Agreement of SUE "Vodokanal of St. Petersburg":

• to employees, who reached jubilee age, and to retiring employees;

• to employees with an uninterrupted service in the company for 25, 30, 35, 40 years;

- financial assistance for childbirth;
- financial assistance for medical treatment;
- payments after death of a relative;

• payments in other circumstances;

• targeted material assistance to the war veterans;

• quarterly targeted material assistance to retired employees.

CATERING FOR THE COMPANY EMPLOYEES

In order to provide adequate nutrition for the employees, SUE "Vodokanal of St. Petersburg" organized operation of 17 canteens at its premises, where over 3.5 thousand people a week can be served.

Catering is an important factor and mechanism for implementing the company's social policy. This contributes to increased efficiency and improvement of labour organization.

In the night time, emergency teams and drivers working in 24-hour shifts are provided with free hot meals delivered to their work places in specially equipped vehicles.

RECOGNITION OF EMPLOYEES' ACHIEVEMENTS

SUE "Vodokanal of St. Petersburg" values its employees and recognizes their contribution to achievement of goals and company development.

AWARDING THE TITLE "LABOUR VETERAN OF VODOKANAL ST. PETERSBURG".

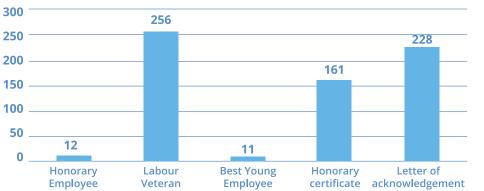
The title "Veteran of Work of Vodokanal St. Petersburg" is awarded to employees who have the record of service of not less than 20 years in the company. At the same time the winner is awarded a lapel badge and certificate, as well as a cash bonus.

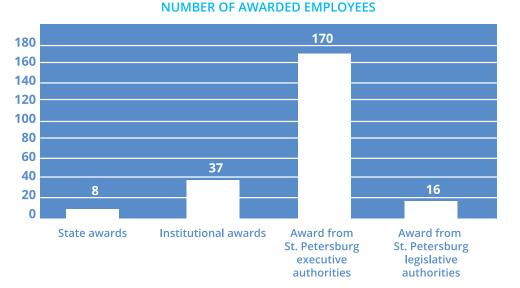
In 2013, the title "Labour Veteran of Vodokanal St. Petersburg" was bestowed on 256 Vodokanal employees.

AWARDING THE TITLE "HONORARY EMPLOYEE OF VODOKANAL ST. PETERSBURG".

The title "Honorary Employee of Vodokanal St. Petersburg" is bestowed on (at the request of managers and co-workers) the company employees and other persons

AWARDS OF SUE "VODOKANAL OF ST. PETERSBURG"





for contribution to development of water supply and wastewater disposal systems of St. Petersburg. The title can be bestowed for development, adoption and implementation of cutting-edge equipment and technologies, application of forms and methods of labour organization leading to a significant economic impact, improvement of the positive image of the company in Russia and abroad, mentoring, strengthening of corporate culture and high professionalism.

At the same time the winner is awarded a lapel badge and certificate, as well as a bonus.

An Honorary Employee has a right to receive a free voucher to Burevestnik sanatorium for recreation and resort treatment.

In 2013, the title "Honorary Employee of Vodokanal St. Petersburg" was bestowed on 12 Vodokanal employees.

THE LAPEL BADGE "THE BEST YOUNG EMPLOYEE OF VODOKANAL ST. PETERSBURG".

The lapel badge "The Best Young Employee of Vodokanal St. Petersburg" is bestowed on the employees of the company under the age of 35, who have the unbroken record of service of 5 years, for personal contribution to management and production, introduction of modern technologies to water supply and wastewater disposal processes, improvement of the service quality, professional skills promoting the development of Vodokanal, active participation in the social life of the company.

In 2013, the lapel badge "The Best Young Employee of Vodokanal St. Petersburg" was bestowed on 11 young employees.

CORPORATE PRIZES AND PRIZ-ES FROM REGULATORY AND AD-MINISTRATIVE AUTHORITIES OF THE RUSSIAN FEDERATION AND ST. PETERSBURG FOR THE COMPA-NY EMPLOYEES.

In 2013, 231 employees were awarded departmental and national prizes as well as prizes from regulatory and administrative authorities of St. Petersburg.

389 employees were awarded the Vodokanal certificate of honour and gratitudes.

ORGANIZATION OF RECREATION

ONE OF THE SOCIAL POLICY PRIORITIES IS ORGANIZATION OF RECREATION FOR EMPLOYEES AND THEIR FAMILIES



Socio-Economic Programmes Implementation Centre organizes cultural and leisure activities aimed at ensuring proper recrteation for the company employees in Burevestnik sanatorium (for children and adults).

Burevestnik sanatorium has three sites:

- Burevestnik;
- Omchino;
- Zvezdniy.

This is a comfortable, modern, wellequipped and advanced recreation and rehabilitation facility which can accommodate over 700 holiday-makers at the same time. The territory of Burevestnik is guarded around-the-clock.

Due to a well-developed infrastructure, the sanatorium provides a wide range of modern recreation facilities. Hollidaymakers can use swimming pools, a Finnish sauna and a Russian steam room, fitness facilities, a gym, tennis courts, outdoor playgrounds for badminton, volleyball and basketball. There is a library, a café, a cinema and concert hall there. For those who prefer equestrian sport there is a riding hall.

Burevestnik has an up-to-date Medical

Centre with the diagnostic division.

In 2013, 349 health care vouchers were provided for the employees and retirees (participants and veterans of the Great Patriotic War – the residents of besieged Leningrad, home front workers, former captives of Nazi camps).

A complex of recovery treatment programs and diagnostic techniques is developed and implemented for Vodokanal employees working in harmful and (or) hazardous labor conditions. Such employees are provided extra leaves (overleaves under the legislation of the Russian Federation), 144 Vodokanal employees had their rehabilitation holidays in the sanatorium in 2013.

In total, more than 8,000 Vodokanal employees and their family members are accommodated in Burevestnik annually.

DURING VACATIONS THE COMPANY EMPLOYEES CAN SEND THEIR CHILDREN TO ZVYOZDNY CHILDREN'S HEALTH CAMP.

All the conditions for children (comfortable and safe accommodation, leisure and cognitive activity) are arranged in Zvezdny. The camp territory is guarded around-theclock and illuminated at night, day-andnight video monitoring is provided.

The camp has its own fire station. The station hosts regular training lessons for children vacationing in Zvezdny dedicated to the basics of fire safety in the following areas:

theoretical lessons on fire safety;
introduction to fire department (including fire truck);

- practical test of evacuation plans;
 fire relay.
- An individual programme aimed at comprehensive development of children is elaborated for each session in Zvezdny. Different session themes and welldeveloped infrastructure do not allow camp children to be bored. The multipurpose sport facilities are located in the camp territory including:
- gyms: volleyball, basketball, mini football;
- tennis and ping-pong;
- gymnastics, trampolining and fitness facilities;
- swimming pools for adults and children;
- computer lab;
- classrooms for study groups;



- disco;
- library;
- winter garden.

Zvezdny has also an indoor riding hall for equestrian sport under the guidance of instructors. Children are given a full set of equipment. There is a cinema and concert hall.

Besides, open playgrounds equipped with modern coverage for playing tennis, table tennis, basketball, volleyball, badminton and football are at the disposal of children.

The Svinechnoe Lake with developed beaches and bathing places for children is situated in the camp territory.

The unique feature of Zvezdny is a private zoo where you can see a family of camels, a brown bear, ostriches, peacocks, pheasants, mandarin ducks, aruis, donkeys, a reindeer, a silver fox in open air enclosures. Also, there is a pets' corner for children to take care of hamsters and chinchillas exploring the natural diversity of the Luga Lands under the supervision of specialists.

In 2013, ecological programs were implemented dedicated to the Environment Year and aimed at developing children overall environmental culture and understanding of the necessity of careful attitude to the environment including water.

As a part of the prevention of road traffic injuries among children and adolescents and for children to learn the Road Traffic Regulations, the "Auto Engineering" lessons were arranged for the first time in 2013. A set of practical and theoretical measures on road safety was developed and implemented in three areas: • Information – to teach the Road Traffic Regulations to children.

• Development – to form practical skills of safety behavior.

• Education – to create motivation for responsible and conscientious behavior in the streets and on the roads.

In future, construction of "Auto City" is planned in Zvezdny territory.

2,675 children aged 6–15 took holidays in Zvezdny recreation camp in 2013.

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 (see more details in Sports Support).

Information about Burevestnik sanatorium (SUE "Vodokanal of St. Petersburg") can be found on the website www.vodokanal-zagorod.ru.

HEALTHCARE

VODOKANAL ST. PETERSBURG HAS A SYSTEM OF MEDICAL CARE AIMED TO SUPPORT OCCUPATIONAL HEALTH AND LONGEVITY, REDUCTION OF INDUSTRIAL ACCIDENTS AND DAYS AWAY FROM WORK, IMPROVEMENT OF THE COMPANY EMPLOYEES' QUALITY OF LIFE

The basis of the medical support for Company's employees is the Medical Center Branch which mission is to provide a high-quality medical care.

The branch staff consists of 346 specialists including 4 professors, 6 doctors and 12 candidates of medical sciences, 30 doctors and 54 nurses of the highest category; 47% employees have higher vocational education.

In 2013, structural units of the Medical Center were reequipp ed. That ensured provision of much-in-demand medical services, increase of the number of patients served, introduction of new methods of diagnosis and treatment by means of high-quality up-to-date medical equipment.

For this puppose the following equipment was purchased and put into operation:

 the universal remotely-controlled X-ray system Luminos RF Classic with the digital radiography device – FCR Capsula X;
 the digital panoramic X-ray dental unit

GXDP-700 with the tomography function; • KaVo dental units;

• the ultrasound diagnostic unit Acuson X300 Premium Edition;

• the ophthalmic diagnostic retina tomograph HRT3;

• the endoscopic video system HI LINE HD+Pentax;

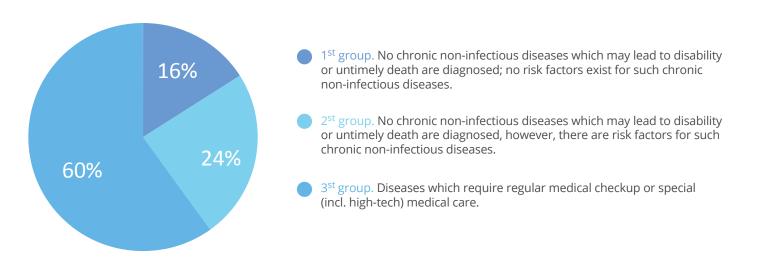
 laboratory and physiotherapy equipment.
 Observations over the health condition of Vodokanal employees show a positive trend to the reduction of disease rate and days away from work. Since 2010, the number of days away from work has been reduced by 24%.

DISEASE RATE WITH TEMPORAL DISABILITY (PER 100 EMPLOYEES/YEAR)



In 2013, the Medical Centre provided medical services to the Company employees according to both the obligatory medical insurance program and the voluntary medical insurance program.

In total, over 310,000 medical services were provided to Vodokanal employees in 2013. The efficiency of curative and preventive interventions is evaluated by such an important index as the healthy and apparently healthy persons index (health groups I – II). In Vodokanal of St. Petersburg this index is around 40%.

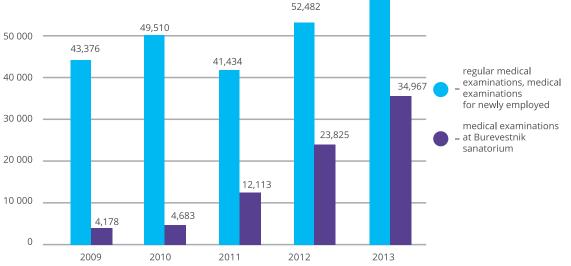


HEALTH CATEGORIES OF THE COMPANY EMPLOYEES

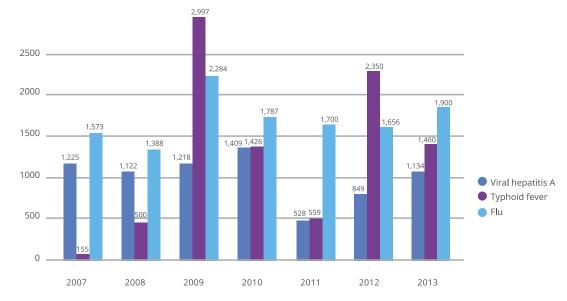
REGULAR MEDICAL EXAMINATIONS VS MEDICAL EXAMINATIONS AT BUREVESTNIK SANATORIUM

An important activity of the Medical ⁵⁰ Center is a long-term follow-up care that includes medical and preventive measures with regard to socially significant diseases. ⁴⁰ Timely identification of such diseases allows providing proper medical services to this group of patients and prevent the development of dangerous complications. ³⁰

In 2013, a great attention was paid to 20 000 regular medical examinations. Over 8,220 employees were examined.



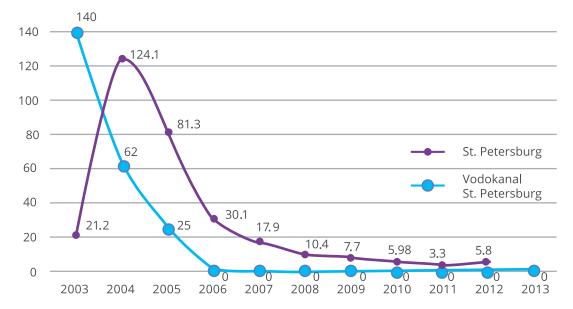
58,120



QUANTITATIVE INDICATORS OF THE COMPANY EMPLOYEES' VACCINATION

An important area of healthcare work is conduction of mandatory vaccination of employees of decreed categories.

DISEASE RATE OF VIRAL HEPATITIS A



Due to obligatory vaccination and revaccination against typhoid fever and hepatitis A no cases of these diseases have been recorded among Vodokanal employees for over 8 years. Comparison of the hepatitis A disease rates in St. Petersburg and Vodokanal is shown on the diagram.



To prevent tuberculosis and early detect respiratory diseases, all Vodokanal employees undergo thoracic organs examinations (chest fluorography, chest X-ray, computer tomography).

Experts of the Medical Center actively participate in workshops and conferences aimed at sharing experience and transferring the best practices. Conclusion of cooperation agreements with Medical Academy of Postgraduate Education, Almazov Federal Heart, Blood and Endocrinology Centre, Russian Research Center for Radiology and Surgical Technologies provided effective interaction and timely high-quality medical assistance to Vodokanal employees.

The Medical Center continued to improve the integrated database on health condition of Vodokanal employees by means of the medical information system Avicenna (MIS Avicenna). At the end of 2013, MIS Avicenna contained about 150,000 ambulatory medical records. All data are available in electronic form which makes it user-friendly. At the same time, data privacy is observed.

Patient e-record was introduced in the Medical Center. Electronic memory of such record processes and stores medical reports, results of instrumental examination, clinic and laboratorial analyses. The certificate of prophylactic immunization is developed and included into e-record of the patient making it possible to monitor immunizations of the Company employees in compliance with the National Immunization Calendar and subject to the profession.

An important element of Vodokanal social policy is the Collective Agreement under which in 2013 the Medical Center implemented the following:

• provision of medical care under obligatory medical insurance policies and voluntary medical insurance policies on the premises of the Medical Center (the Diagnostic and Treatment Centre and a dental clinic);

- provision of certain types of medical and cosmetological services not included into obligatory medical insurance and voluntary medical insurance programs;
- medical support during rehabilitation leaves for Company employees, specified in the Profession (Position) list in the annex to the Collective Agreement;
- medical care for the former Vodokanal employees participants of the Great Patriotic War, who have the certificate "The Participant of the Great Patriotic War", and also Vodokanal employees and former personnel, who worked during the Siege of Leningrad at Company's facilities.

SUPPORT OF SPORTS

IMPLEMENTATION OF THE COMPREHENSIVE ENTERPRISE REHABILITATION PROGRAM AND ARRANGEMENT OF SPORTS EVENTS CONTRIBUTE TO THE DEVELOPMENT AND SUPPORT OF HEALTHY LIFE, TEAM BUILDING, STRENGTHENING INTERPERSONAL RELATIONSHIP AND FRIENDLY TIES

Spartakiada games, festivals and traditional winter and summer competitions are held annually for the Vodokanal employees in Burevestnik sanatorium. Qualification games are also organized for each Company branch in Burevestnik sanatorium.

In 2013, the following events took place in Burevestnik sanatorium:

 Vodokanal winter sports competitions with the participation of over 500 employees;

• two sports contests "Fellowship" of Russia's vodokanals with the participation of the teams from Nizhny Novgorod, Cherepovets, Vologda, Veliky Novgorod, Vladimir, Vologda, Ryazan as well as the partner-companies Akvarius-Auto, Vodokanalstroy, Alliance-Electro, MRG-Invest (over 350 people in total);

• the Youth Games Festival allowed more than 300 young employees to demonstrate

their sports achievements;

• the sports festival "Family Starts" with the participation of over 80 family teams (over 300 people);

• Vodokanal summer sports competition with the participation of over 600 employees.

Organizers of sports festivals use creative approach to arranging competitions. Every time new kinds of sports are included into competition program. In 2013, participants of sports competitions could compete in mock sumo wrestling, match their strength and check their accuracy of fire.

Sports are one of the most important elements of Vodokanal corporate activities. Sports grounds, gyms and swimming pools are rented for sports activities and physical training. The trade union of Vodokanal leased more than 10 swimming pools in different districts of the city attended by more than 700 employees of the Company. Vodokanal has permanent sports teams in volleyball, football, table tennis, swimming, ski race and a football team of Vodokanal veterans.

Vodokanal teams took part in sport competitions arranged by Physical Training and Sports Society FSO Russia (1st place winner), Interregional Trade Union Committee (1st place winner), Central District of St. Petersburg (1st place winner). On the average about 15 sports teams from St. Petersburg industrial enterprises participate in sports competitions. Competitions in 15 kinds of sports are held.

Vodokanal St. Petersburg organized sports competitions for the Company production branches in 13 kinds of sports. Over 800 employees participated in such competitions.

In 2013, Vodokanal employees also participated in the following sports activities:

• FSO "Russia" Ping-Pong Club Championship;

Head of Central District Mini Football Cup;

• Central District Friendship Mini Football Cup;

• Mini Football Championship among veterans;

• Russia Kayak and Canoe Paddling Championship among veterans;

• 1st League City Football Championship;

· Volleyball Championship (amateur league);

• World Championship among production companies in Bulgaria, where Vodokanal took 1st place in football and 3rd place in darts.

In 2013, Vodokanal participated in the regional phase of the photo competition "Sports for All" organized by the Federation of Independent Trade Unions. 5 employees of Vodokanal became the winners of this photo competition.

At present, Vodokanal St. Petersburg is one of the leading company in the development of physical training and sports in St. Petersburg.





LEGAL FRAMEWORK FOR TARIFF REGULATION

Before the adoption of the federal law no.416-FZ dated 07.12.2011 "On Water Supply and Wastewater Disposal", water tariffs were regulated under the federal law no.210-FZ dated 30.12.2004 "On Principles of Public Utility's Tariffs Regulation", the Decree of the Russian Government no.520 dated 14.07.2008 "On Pricing Principles and Regulation of Tariffs, Surcharges and Limiting Indices to be Used by Public Utilities", and the Order of the Russian Ministry of Regional Development no.47 dated 15.02.2011 "On Approving Procedural Guidelines for Calculation of Tariffs and Surcharges in the sphere of Public Utilities".

In order to implement the provisions on tariff regulation set out in the law of water supply and wastewater disposal, the Russian Government adopted the ordinance no.406 dated 13.05.2013 "On State Regulation of Water Tariffs" which provides for:

Water pricing principles; and
 Rules of tariff regulation in the water sector.

The water pricing principles contain general provisions on the regulation of tariffs and limiting indices, the method of estimating the necessary amount of gross revenue, methods of water tariff regulation, and the procedure of connection fee calculation. The reformation of tariff system proceeds in parallel with the reformation of water sector and aims to improve transparency and quality and to strengthen public control over the governmental regulation process.

The main targets of the tariff policy for the coming years are as follows: improved availability of connection to water infrastructure for consumers, transition to long-term tariff regulation, expansion of off-budget financing sources for investment programmes, and implementation of reliability / service quality indicators for the public utilities that carry out regulated activities.

The transition to long-term tariff regulation will provide a possibility to develop longterm investment programmes on the basis of approved targets and to improve the attractiveness of water sector for investors.

Under the current law, tariffs for water companies are regulated by the Russian Federal Tariff Authority (FTA). The Federal Tariff Authority empowered to exercise legal control over the national regulation of prices (tariffs) for services and to monitor the use thereof, determines average price change limits for the subjects of the Russian Federation. At the level of St. Petersburg as a subject of the Russian Federation, any tariff-related activities of Vodokanal are supervised and monitored by the St. Petersburg Tariff Committee.

In 2013, heat tariffs were regulated under the federal law no.190-FZ dated 27.07.2010 "On Heat Supply", the Decree of the Russian Government no.109 dated 26.02.2004 "On Electric and Thermal Energy Pricing in the Russian Federation", the FTA Order no.20-e/2 dated 06.08.2004 "On Approving Procedural Guidelines for Calculation of Regulated Electric (Heat) Tariffs and Prices at Retail Market", Decree of the Russian Government no.1075 dated 22.10.2012 "On Pricing in Heat Supply Sphere", the FTA Order no.130-e dated 08.04.2005 "On approving procedures of setting tariffs and/or tariff caps for electric (thermal) energy (power) and for the services provided at wholesale /retail markets of electric (thermal) energy (power)", and the FTA Order no.231-e/4 dated 09.10.2012 "On establishing tariff caps for thermal energy supplied to consumers by heat suppliers, RF subjects' average for 2013".

The Tariff Committee issues special instructions establishing tariffs for Vodokanal water services for each customer group and for Vodokanal's thermal energy for each subsequent fiscal year.

In addition, the Tariff Committee sets the fee for connection of newly built (reconstructed) real estate units (buildings, structures, and other facilities) to cold water and sewerage networks.

TARIFF POLICY PRINCIPLES

The law of water supply and wastewater disposal establishes the general principles of national water policy:

• provision of potable water and sewerage services to the citizens is a priority task;

• a good investment climate in the water sector, guaranteed repayment of private investments;

 technical and structural integrity of centralized cold water supply and sewerage systems;

• the balance of economic interests between water companies and their consumers shall be achieved and maintained;

• water tariffs shall be based on economically justified expenses

of water companies;

• stable and non-discriminatory conditions for business in the water sector;

,010.0°

• equal access to water services for all customers;

• transparent activities of water companies and the federal authorities, authorities of RF subjects and local administrations responsible for regulation of water sector.

The federal law no.190-FZ dated 27.07.2010 "On Heat Supply" establishes the basic principles of national heat supply policy:

• availability of thermal energy (power) for customers;

• heat distribution costs of public utilities

shall be economically justified; • sufficient funding of any measures required to ensure reliable operation and development of heat supply systems; motivation of energy efficiency and cost-efficiency of heat supply; • the regulation of heat prices (tariffs) shall be transparent and visible to any consumers including households; • control over the observance of the legal requirements regarding the improvement of energy saving and energy efficiency for the purpose of reducing energy losses, including requirements to the development and implementation of energy-saving/energy-efficiency programmes and to energy metering.

TARIFFS FOR VODOKANAL SERVICES IN 2013

WATER TARIFFS OF SUE "VODOKANAL OF ST. PETERSBURG" IN 2013

Water tariffs for 2013 were established by the instruction of the Tariff Committee no.422-r dated 30.11.2012 "On Establishing Tariffs for Cold Water and Sewerage Services to Be Provided by SUE "Vodokanal of St. Petersburg" in 2013".

In 2013 the tariffs were determined with the following calendar breakdown:

• from January 1, 2013, the tariffs had been maintained at the level determined on 01.09. 2012;

• on 01.07.2013 and 01.12.2013, the tariffs were raised for municipal service providers (households) by 15%; for utility water and for other customers – by 4.7%.

In 2013, the annual average tariff grew 8.8% compared to 2012.

	ltom		Cold water ta	riffs, RUB/m ³	Wastewater
Period	ltem no.	Customer group	Potable water	Utility water	tariffs, RUB/m ³
from 01.01.2013 to 30.06.2013	. 1	Municipal service	15.02		15.02
from 01.07.2013 to 31.12.2013		providers	17.27		17.27
from 01.01.2013 to 30.06.2013	2	Households	17.72		17.72
from 01.07.2013 to 31.12.2013	Ζ	(incl. VAT)	20.38		20.38
from 01.01.2013 to 30.06.2013	3	Other	18.70	3.38	21.74
from 01.07.2013 to 31.12.2013	5	Other	19.58	3.54	22.76

Note: the tariffs are shown without the value-added tax except for the Household group.

TARIFF FOR THE HEAT SUPPLIED BY SUE "VODOKANAL OF ST. PETERSBURG" TO CONSUMERS LOCATED IN ST. PETERSBURG, FOR 2013

	Heat tariff							
	Pressurized extraction steam				Live and reduced			
Period	Tariff type	1.2-2.5 kg/cm²	2.5-7.0 kg/cm ²	7.0-13.0 kg/cm ²	over 13.0 kg/cm ²	Live and reduced steam		

Consumers paying for heat production (those who receive heat from the producers' collectors)

from 01.01.2013 to 30.06.2013	Single-rate tariff, RUB/Gcal	_	913.00	_	_	_
from 01.07.2013 to 31.12.2013	Single-rate tariff, RUB/Gcal	_	1,057.56	_	_	_

Note: the tariff is shown without the value-added tax.

The 2013 tariff for the thermal energy supplied by Vodokanal was determined by the Instruction of the Tariff Committee no.557-r dated 17.12.2012 "On Establishing Tariffs for the Thermal Energy Supplied by SUE "Vodokanal of St. Petersburg" to Consumers Located in St. Petersburg, for 2013". FROM JANUARY 1, 2013, THE TARIFF HAD BEEN MAINTAINED AT THE LEVEL DETERMINED ON 01.09.2012. FROM 01.07.2013, THE TARIFF HAD GROWN BY 15.8%. IN 2013, THE ANNUAL AVERAGE TARIFF GREW BY 6.2% COMPARED TO 2012.

CONNECTION FEES

FEES FOR CONNECTION OF NEWLY BUILT (RECONSTRUCTED) REAL ESTATE UNITS (BUILDINGS, STRUCTURES, AND OTHER) TO VODOKANAL'S COLD WATER SUPPLY AND SEWERAGE SYSTEMS IN 2012-2014, RUB/M³/HOUR

Fees for connection of newly built (reconstructed) real estate units (buildings, structures, and other) to Vodokanal's cold water supply and sewerage systems in 2012–2014 were established by the Instruction of the Tariff Committee no.381-r dated 29.11.2011.

Description	Contract demand < 4.17 m ³ /hour	Contract demand 4.17-41.67 m ³ /hour	Contract demand > 41.67 m ³ /hour
Cold water supply	714,000	711,600	709,200
Sewerage	738,000	735,600	733,200

Note: connection fees are shown without the value-added tax.

Until the Rules of Cold Water Supply and Wastewater Disposal approved by the Decree of the Russian Government no.644 dated 29.07.2013, came into effect on 14.08.2013, the amount of connection fee had been calculated in compliance with clauses 14.1 and 14.2 of the Russian Government Decree no.360 dated 09 June 2007 "On approving the Rules of making and performing public contracts for connection to municipal infrastructure", i.e. as the product of contract demand (in m³/hour) and connection fee.

The Decree of the Russian Government no.645 dated 29.07.2013 "On approving model contracts of cold water supply and wastewater disposal" came into effect on 14.08.2013. The Decree determines standard contract forms for (technical) connection to the centralized cold water supply/sewerage systems.

In 2013, connection fees were not raised and stayed at the level of 2009–2011.

REASONS FOR TARIFF GROWTH

In the Financial Plan of Vodokanal of St. Petersburg the total expenditures for purchasing materials, works or services comprise the material costs calculated on the basis of:

 state-regulated tariffs (prices) or their projected values officially communicated by a relevant tariff-regulating (pricing) authority;

• industry-specific forecasted price change indices;

 forecasted price change indices officially published by the Russian Ministry for Economic Development;

 macroeconomic forecast of social and economic development as approved by the government of relevant RF subject in consideration of the special features of regional development;

• actual price trends (the soundness of such calculation shall be confirmed by a relevant regulatory body).

TRANSPARENT TARIFFS

Until the adoption, on 31.01.2013, of the Guidelines for Disclosure of Information in the Water Sector approved by the Order of the Russian Government no.6 dated 17.01.2013, Vodokanal had disclosed information on its regulated activities according to the procedure set out in the Guidelines for Disclosure of Information by Public Utilities no.1140 dated 30.12.2009.

Vodokanal follows a consistent transparency policy aimed to facilitate access to the information that must be disclosed. All information referred to in the Guidelines for Disclosure of Information, and any information regarding establishment and application of tariffs in St. Petersburg, can be found on the official websites of Vodokanal and the St. Petersburg Tariff Committee or in the official journal of the St. Petersburg Tariff Committee ("Vestnik Komiteta po Tarifam Sankt-Peterburga", Order of the St. Petersburg Government no.223 dated 21.02.2011; Certificate of Mass Media no.TU 7800675 dated 27.08.2010).

The above resources are convenient official platforms for centralized, consistent and timely disclosure of information in compliance with the Guidelines for Disclosure of Information.





MAIN FINANCIAL INDICATORS

Indicators, MRUB	2008	2009	2010	2011	2012	2013
Turnover	16,720	18,413	20,060	22,797	23,649	25,276
Operating costs	14,123	15,484	17,694	19,853	19,546	21,311
Operating profit	2,597	2,929	2,366	2,944	4,103	3,965
Net profit (loss)	24	72	379	404	1,074	(291)
Profitability of core operations, %	18.4	18.9	13.4	14.8	21.0	18.6

During 2008–2012, the growth of the main financial indicators provided financing 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.

Vodokanal's operating loss is caused by the growth of other expenses.

The main influence on the growth of other expenses had the increase of property tax (due to the cancellation of property tax privileges) and exchange rate differences (due to a significant change of the euro exchange rate at the end of the year).

Description	2013, (000 DUB	2013,	Deviation		
		'000 RUB '000 RUB	'000 RUB	%	
Other expenses including	4,033,440	2,424,672	1,608,768	66.3	
– exchange differences	628,866	0	628,866	100.0	
– property tax	2,300,667	1,437,015	863,652	60.1	

Indicators	2008	2009	2010	2011	2012	2013
Current ratio (standard: 1 to 2)	2.0	1.6	1.1	1.3	1.4	1.1
Cash ratio (0.2 or higher)	0.2	0.2	0.2	0.3	0.6	0.4

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	2009	2010	2011	2012	2013
Equity to Total Assets	0.84	0.87	0.88	0.90	0.88	0.88
Financial Leverage	0.16	0.13	0.14	0.11	0.14	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 AND INCOME STATEMENT

as of 31 December 2013	OKUD	CODES 0710002	
	Date (day, month, year)	31 12	2013
Organization SUE "Vodokanal of St. Petersburg"	ОКРО	0332380	9
Taxpayer Identification Number	INN	78300004	26
Type of business		90.00.1, 41.00.1, 41.00.2, 85.11,	
	90.00		
Form of incorporation/ Type of ownership		4 50 40	10
State Unitary Enterprise / RF subject owned	OKOPF/OKFS	1 52 42	13
Unit of measurement: '000 RUB	OKEI	384	
Location (adress) 42, Kavalergardskaya st., St. Petersburg, 191015			

CLARIFICATIONS	ITEM	CODE	AS OF 31 DECEMBER 2013	AS OF 31 DECEMBER 2012	AS OF 31 DECEMBER 2011						
1	2	3	4	5	6						
	ASSETS										
	I. NON-CURRENT ASSETS										
1	Intangible assets	1110	373 585	374 450	384 962						
2	R&D results	1120	2 727	3 167	2 279						
-	Intangible development assets	1130	-	_	-						
-	Fixed development assets	1140	-	_	-						
3-5	Fixed assets	1150	175 513 683	159 442 471	143 992 939						
	from Line 1150:										
	buildings	1151	19 167 102	19 141 330	16 679 513						

CLARIFICATIONS	ITEM	CODE	AS OF 31 DECEMBER 2013	AS OF 31 DECEMBER 2012	AS OF 31 DECEMBER 2011
1	2	3	4	5	6
	structures, transfer devices	1152	135 342 400	115 041 680	105 019 925
	machinery and equipment, vehicles	1153	6 645 085	6 962 401	6 607 662
6, 9, 10	Construction in progress	1154	14 145 975	18 059 305	15 428 773
	Income-bearing investments in inventories	1160	-	-	-
7	Financial investments	1170	117 795	395 879	118 110
	Deferred tax assets	1180	406 830	396 148	381 877
8	other non-current assets	1190	344 154	322 056	295 850
	Section I, TOTAL	1100	176 758 774	160 934 171	145 176 017

CLARIFICATIONS	ІТЕМ	CODE	AS OF 31 DECEMBER 2013	AS OF 31 DECEMBER 2012	AS OF 31 DECEMBER 2011
1	2	3	4	5	6
	-	II.CURRENT AS	SSETS		
9	Inventories	1210	1 693 843	1 421 169	1 351 092
	from Line 1210				
	raw materials, materials, etc.	1211	1 011 912	784 320	769 228
	deferred assets	1212	681 931	636 849	581 864
	Value-added tax on purchased valuables	1220	127 037	121 641	110 348
10	Accounts receivable	1230	8 202 620	6 643 553	5 688 978
	from Line 1230				
	Accounts receivable due beyond 12 months after the reporting date	1231	928 787	1 232 155	707 059
	from Line 1231 Buyers and Clients	12311	56 950	29 884	76 436
	Accounts receivable where payments are expected within 12 months after the reporting date	1232	7 273 833	5 411 398	4 981 919

CLARIFICATIONS	ITEM	CODE	AS OF 31 DECEMBER 2013	AS OF 31 DECEMBER 2012	AS OF 31 DECEMBER 2011		
1	2	3	4	5	6		
	from Line1232 Buyers and Clients	12321	5 213 286	4 684 707	3 990 130		
7	Financial investments (other than cash equivalents)	1240	608 000	922 000	-		
*	Monetary resources and cash equivalents	1250	4 708 496	5 837 699	2 583 926		
	Other current assets	1260	-	-	-		
	Section II, TOTAL	1200	15 339 996	14 946 062	9 734 344		
	BALANCE	1600	192 098 770	175 880 233	154 910 361		
LIABILITIES							
III. CAPITAL AND RESERVES							
**	Registered capital	1310	4 851 580	3 475 580	1 467 627		
	Own shares bought out from shareholders	1320	-	_	-		
**	Revaluation of non-current assets	1340	88 461 197	88 630 171	88 719 533		
**	Additional capital (not revaluated)	1350	69 263 870	51 187 569	39 660 639		
**	Special-purpose receipts	1351	2 070 040	7 072 029	6 500 138		
**	Reserve fund	1360	86 339	86 339	80 356		
**	Undistributed profit (uncovered loss)	1370	2 057 468	2 352 430	1 249 067		
	Section III, TOTAL	1300	166 790 494	152 804 118	137 677 360		

* Cash Flow Statement ** Statement of Changes in Equity

CLARIFICATIONS	ITEM	CODE	AS OF 31 DECEMBER 2013	AS OF 31 DECEMBER 2012	AS OF 31 DECEMBER 2011
1	2	3	4	5	6
	IV. L	ONG-TERM LIABI	LITIES	1	
11	Borrowings	1410	8 480 338	9 860 025	7 440 358
	from Line 1410				
	Loans repayable beyond 12 months after the reporting date	1411	6 486 338	7 866 025	5 446 358
	Credits repayable beyond 12 months after the reporting date	1412	1 994 000	1 994 000	1 994 000
	Deferred tax liabilities	1420	279 036	180 359	98 560
	Estimated liabilities	1430	-	-	-
	Other liabilities	1450	-	_	-
	Section IV, TOTAL	1400	8 759 374	10 040 384	7 538 918
	V. Sł	IORT-TERM LIAB	LITIES		-
11	Borrowings	1510	3 905 642	2 860 483	832 633
	from Line 1510				
	Loans repayable within less than 12 months after the reporting date	1511	3 894 765	2 850 129	823 239
	Credits repayable within less than 12 months after the reporting date	1512	10 877	10 354	9 394
11	Accounts payable	1520	9 480 652	7 566 899	6 594 049

CLARIFICATIONS	ITEM	CODE	AS OF 31 DECEMBER 2013	AS OF 31 DECEMBER 2012	AS OF 31 DECEMBER 2011
1	2	3	4	5	6
	from Line 1520				
	suppliers and contractors	1521	3 247 800	2 317 578	3 153 426
	payroll debt	1522	182 359	156 934	149 841
	debt to state extra-budgetary funds	1523	78 470	71 188	64 334
	tax arrears	1524	1 175 744	1 144 173	1 050 881
	other creditors	1525	4 796 279	3 877 026	2 175 567
	Deferred income	1530	2 565 255	2 061 092	1 774 136
12	Estimated liabilities	1540	597 353	547 257	493 265
	Other liabilities	1550	-	_	_
	Section V, TOTAL	1500	16 548 902	13 035 731	9 694 083
	BALANCE	1700	192 098 770	175 880 233	154 910 361

Director General

F.V. Karmazinov

(name)

(signature) Karacey

Chief Accountant

(signature)

G.A. Khachaturova

21 March 2014

INCOME STATEMENT

as of 2013	OKUD	CODES 0710002	
	Date (day, month, year)	31 12	2013
Organization SUE "Vodokanal of St. Petersburg"	ОКРО	0332380	19
Taxpayer Identification Number	INN	78300004	26
Type of business		90.00.1, 41.	
	OKVED	41.00.2, 85.11, 85.12, 85.13, 85.14	
Form of incorporation/ Type of ownership		12	10
State Unitary Enterprise / RF subject owned	OKOPF/OKFS	42	13
Unit of measurement: '000 RUB	OKEI	384	1

Clarifications	Item	Code	2013	2012
	Turnover	2110	25 275 716	23 649 007
	Cost of sales	2120	(21 310 468)	(19 546 351)
	Gross profit (loss)	2100	3 965 248	4 102 656
	Commercial expenses	2210	_	-
	Administrative expenses	2220	_	-
	Sales profit (loss)	2200	3 965 248	4 102 656
	Income from participation in other organizations	2310	1 115	2 211
	Interest receivable	2320	79 462	3 935
	Interest payable	2330	(275 677)	(363 806)
	Other income	2340	651 816	786 925
	Other expenses	2350	(4 033 440)	(2 424 672)

FINANCIAL STATEMENTS

larifications	Item	Code	2013	2012
	Before-tax profit (loss)	2300	388 524	2 107 249
;	Current profit tax	2410	(591 337)	(966 106)
	incl. constant tax liabilities (assets)	2421	(595 662)	(612 003)
	Change of deferred tax liabilities	2430	(98 525)	(81 907)
	Change of deferred tax assets	2450	16 496	14 560
	Other	2460	(6 065)	(192)
	Net profit (loss)	2400	(290 907)	1 073 604
	Result of non-current assets revaluation not included into the net profit (loss) of the period	2510	-	_
	Result of other transactions not included into the net profit (loss) of the period	2520	-	-
	Cumulative financial result of the period	2500	(290 907)	1 073 604

FOR REFERENCE

Base profit (loss) per share	2900	-	-
Diluted earnings (loss) per share	2910	_	-

Director General

F.V. Karmazinov

(signature)

(name)

Varaie

(signature)

G.A. Khachaturova

(name)

Chief Accountant

21 March 2014

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. Tel.: +7 (812) 702-12-98 – Reception room Tel.: +7 (812) 329-34-51 (-52, -59, -68, -74, Fax – 329-34-62) consultancy on calculations Tel.:+7 (812) 438-44-17 – consultancy on prolongation and amendment of the agreements on potable water supply, wastewater and pollutants receive ("unified" agreements) Tel.:+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 CENTRE

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

103, Moskovskiy pr., Room 8 Tel./Fax: +7 (812) 438-44-85 Tel.: +7 (812) 329-34-84, 329-34-40, +7 (921) 965-65-50 Open hours: Monday–Thursday – 9.00 a.m. – 6.00 p.m., Friday – 9.00 a.m. – 5.00 p.m.

OFFICE IN LUGA

16, Zapadnaya Street Tel.: +7 (813-72) 4-33-03, 2-36-60 Website: www.vodokanal-zagorod.ru

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 Moskovskiy pr., St. Petersburg. Tel.: +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–Thursday, 9.00 a.m. – 8.00 p.m., Friday: 9.00 a.m. – 7.00 p.m., Saturday and Sunday – closed. E-mail: medcenter@vodokanal.spb.ru Website: www.med-vdk.ru

