

AS Tallinna Vesi

***ENVIRONMENTAL
REPORT 2010***

Tallinna Vesi



April 2011

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AS TALLINNA VESI IN BRIEF

General facts

- The largest water utility company in Estonia, providing drinking water and wastewater disposal services to approximately 1/3 of Estonia's population.
- The Company provides water and wastewater disposal services to over 22,000 customers and 430,000 end-consumers in Tallinn and its surrounding areas.
- The Company has the exclusive right to provide water and sewerage services the Tallinn service area until the year 2020.
- A Services Agreement with 97 Levels of Service has been concluded between the City of Tallinn and the Company for providing the services.
- The Company has two main treatment plants: Ülemiste water treatment plant (WTP) and Paljassaare wastewater treatment plant (WWTP).
- Water has been treated at Ülemiste since 1927. A new water treatment plant was built in 1979.
- The Water Treatment plant produces an average of 60,000 m³ of water per day.
- Almost 88% of drinking water is produced from surface water at Ülemiste, 12% of the consumers use regional ground water.
- Average water consumption in 2010 was 95 litres per inhabitant (95 litres in 2009).
- Paljassaare WWTP started operating in 1980.
- The wastewater treatment plant treats on an average 120,000 m³/day.
- The Company has an accredited water laboratory and an accredited wastewater laboratory, which together conducted over 126,300 analyses in 2010 (73,000 chemical and 10,000 microbiological analyses from drinking water and 43,333 analyses from wastewater).
- The public water supply system holds approximately 940 km of water networks, 16 water pumping stations and 64 ground water borehole pumping stations with 93 boreholes.
- The public sewerage system holds approximately 907 km of wastewater networks, over 408 km of storm water networks and over 144 sewerage-pumping stations across the service area.
- During 2010 AS Tallinna Vesi founded its 100% owned subsidiary, Watercom, to diversify the Company's product offering and pursue business development and growth.
- In 2010, the Company and its subsidiary employed a total of 319 employees. On an average the Company employed 305 people in 2010.
- The Company's shares are listed on the main list of Tallinn Stock Exchange.

Operational sites

- Head office, customer service, support services and OÜ Watercom in Ädala 10, Tallinn.
- Ülemiste water treatment plant, water and microbiological laboratory at Järvevana road 3, Tallinn.
- Paljassaare wastewater treatment plant, composting fields and wastewater laboratory at Paljassaare põik 14, Tallinn.
- Sludge composting and experimental site in Liikva village, Harju county.
- The catchment area ca 1800 square kilometres in Harju and Järvamaa counties.

MISSION

We create a better life with pure water!

VISION

We will be a role model for every service providing company and employer, exceeding the expectations of our customers, employees and owners. We will be the benchmark company for behaving in an environmentally conscious way to improve the quality of life.

OUR VALUES

Commitment - We work with passion, doing the maximum to achieve the objectives

Customer focus - Our actions help our customers and colleagues to find solutions

Teamwork - We all form one team who knows that our success depends on the contribution of each individual

Creativity - We have the courage and the energy to seek new opportunities and achieve better results

CHAIRMAN'S STATEMENT

2010 has been an extremely challenging year for AS Tallinna Vesi. Our company, our performance, our financial results and our business model have all been criticised by various politicians, political groups and state institutions. All of these criticisms have been made without any prior discussion with our company, or without making any attempt to understand our services agreement or our financial model. In addition we have been faced with some of the most extreme weather conditions, in both winter and summer, seen in Estonia in decades, which has contributed to the most difficult operating conditions we have faced.

Therefore it gives me great pleasure to say that our operating performance across most business areas has continued to improve. This improvement is a testimony to the attitude and commitment of our staff who have worked tirelessly to provide a better service for our clients in spite of the adverse weather conditions and the difficult political environment. For this, on behalf of the Board and owners of the company, I would like to say thank you.

It is also very pleasing to see that our efforts have been recognised externally. At the NASDAQ OMX Baltic Stock Exchange awards for 2010 we once again won the award for the company with the best Investor Relations in Estonia. In addition the Ministry of Environment presented the Company with the "Environmental Player of the Year Award" for our operational performance and our customer awareness campaigns during the year. These awards are clear demonstrations of the Company's commitment to improving environmental awareness and of course transparent reporting and high quality corporate governance, both of which are pre-requisites for any responsible utility company.

Operations & Customer Service – best ever water quality at western European levels

We have continued to ensure we meet or exceed the services contract we have with the City of Tallinn. This services contract requires us to maintain a high standard of service to our customers across a range of over 90 levels of service, ensuring that we deliver a service to our customers that is second to none.

We invested almost 275 mln kroons in 2010, in our networks, treatment plants and catchment area to help deliver an improved service for the people of Tallinn. In 2010, the highlight of our operational performance was the quality of tap water with drinking water quality compliance at the customer's tap improving to almost 99.6%, which is well above the EU standard and close to the highest standards in Western Europe.

Network access for everyone

In November 2007 we agreed a partnership with the City of Tallinn to finance and deliver over 3,500 new sewerage connections by the end of 2010 and to finalise the construction program fully by end of 2012. We are pleased to report that all the connections promised by

the end of 2010 were delivered and this important environmental programme was completed on time. As a result of the efforts of our teams and our contract partners we have constructed 170 km of water, wastewater and storm water networks and 3,779 connection points in the past three years. These constructions bring significant environmental benefits and cost savings to all the households that have been given the opportunity to connect. Furthermore, fulfilling this programme on time enables the City of Tallinn to fulfil its EU obligation regarding network accessibility. We are rightly proud of our contribution in this extremely important project.

Customers recognise our quality

I was delighted to see that our customer satisfaction rating improved in 2010. After a disappointing fall in 2009 our performance rating in 2010 for domestic customers increased to 78 points on the TRI*M Index, an increase of 11% year on year and brings our customer satisfaction back to 2007 levels. It is extremely positive that, in spite of the negative media comment about the company our customers recognise the quality of our products and services. We fully understand the responsibility we have before our customers and are determined to provide an even better service.

Our People and teams

In 2010 the commitment of our workers was exemplary. The severest of winters and the dries of summers placed additional stresses on our teams and our resources. However it comes as no surprise for me to say that our people rose to these challenges and once again delivered an excellent service that is without comparison across the Baltic's. During the year we made some structural changes in our customer facing departments in order to make our working processes and internal communications even more customer focussed. We expect our customers to see the full benefits of these changes in 2011.

In AS Tallinna Vesi we strive to develop our talented members of staff. In 2010 we saw a number of our talented young people rise into management positions. This is something I very much welcome and hope that giving opportunities for personal and professional development will make the company an attractive employer for the brightest and the best.

Stable Revenues, returns in accordance with other privatised utilities

Our financial performance continues to be robust. Our turnover from our main business activity, sales of water and wastewater decreased by 0.1% to 706.7 mln kroons (45.2 mln Euros) and our operating profit from these activities increased by 10.1% to 377.9 mln kroons (24.2 mln Euros). The real return (net of inflation) on invested capital in our main business was 5.5% in 2010 and 6.3% over the five year period from 2006 to 2010, which is in accordance with the rates of return made by other privatised water utilities.

Uncertain growth potential

Our excellent operational performance leaves us well placed to expand our service offering across the Baltic's. We already provide a very high quality service and we should be able to utilize this operational strength to increase revenues from activities outside of the City of Tallinn whilst bringing a better quality service to other municipalities at a lower cost. In 2010 we created our subsidiary Watercom to offer our world class services across the country. Unfortunately the new regulatory regime implemented in late 2010 lacks clarity and may mean that our growth opportunities within Estonia are limited. We will however continue to work with the various ministries and regulatory authorities to demonstrate the benefits that outsourcing in the water sector can bring for both customers and the environment.

Change of law and new regulator

It is impossible to review 2010 performance without commenting on the potential impact on the company of the changes in the way the water sector will be regulated from 2011 onwards.

In August 2010 the Act on Establishing Price Limits on Monopolies was passed by Parliament, which gave the power to set tariffs to the Estonian Competition Authority. On 10 November the Competition Authority also published their recommended methodology which they will use as the basis to regulate prices in the water industry.

This act and methodology fundamentally changed the contract that we have with the City of Tallinn. In previous years our tariffs were approved by the City of Tallinn in accordance with the tariff mechanism agreed on privatisation, and the 'K' factors agreed when the contract was amended in 2007. This was a simple and effective tariff mechanism that gave little room for dispute and, as 'K' factors were agreed until 2020, gave excellent transparency to all stakeholders.

From 1 November 2010 we have had to apply to the Competition Authority for our tariff increase due from 1 January 2011. In order to ensure our application was as professional as possible we worked with Oxera, the UK economic consulting group, to analyse our current contract and ensure that the returns made by the company were in accordance with those made by other privatised utilities. This analysis proved that this was correct and that our real rates of return were not excessive. Therefore, as per the terms and conditions of our contract, on 9 November 2010 we applied to the Competition Authority for a 3.5% tariff increase from 1 January 2011. To date however the Competition Authority has not processed our tariff application or taken the opportunity to engage in meaningful discussion on the merits of the application. Therefore, at present our tariffs remain frozen at 2010 levels.

Uncertain outlook and a request to respect the contract

The change in regulatory environment leaves the company in a very uncertain position. At present we have no clarity of revenues, do not know the policies and levels of risk we may have to take when purchasing supplies which are absolutely necessary but where the prices are extremely difficult to predict, such as energy and chemicals, and are unsure of the quality standards we must achieve on behalf of our customers, nor the investments we need to make to protect our services and the environment. In summary we are currently unable to fully manage our business and will be unable to do so until the authorities engage in meaningful discussion about our current contract. However I would like all our stakeholders to know that we are doing everything in our power to ensure this contract is fully respected as we believe it has brought and will continue to bring significant benefits to the citizens of Tallinn. In this uncertain interim period we are 100% committed to bringing the same high level of service to all our direct customers and service users.

Finally, I would like to thank my colleagues in Tallinna Vesi and Watercom, and all our suppliers and business partners for all their energy, commitment, and support in serving our customers in this challenging and uncertain year. It is because of all your efforts that we are once again able to report

Ian Plenderleith,

Chairman of the Management Board

COMPANY'S MAIN OBJECTIVES 2010

Objective	Evaluation base	Status
Customer service		
To reduce the number of written complaints	Number of written complaints has reduced compared to 2009 (target <328)	234
To improve the speed of responding to customers	80% of written complaints answered within 2 workdays	82
To improve the speed of responding to customers	20% of written complaints answered within 8 workdays	18
To increase customer satisfaction	On the basis of the results of external surveys, customers' satisfaction with the service has improved by 5% when compared to 2009 (external TRI*M index was 67)	73
To increase customer satisfaction	On the basis of the results of monthly internal surveys, customers' satisfaction with the service has improved by 5% when compared to 2009 (result of internal survey was 87.2%)	84.6
Operational performance		
To improve water quality	Water quality is 99.31% compliant	99.59
To reduce customer contacts regarding water quality	Number of customer contacts regarding water quality has reduced 7% compared to 2009 (429)	399
To reduce the number of unplanned interruptions	Number of unplanned interruptions reduced at least by 5% compared to 2009 (in 2009 there were 732 unplanned interruptions)	355
To reduce floodings/blockages caused by public sewerage network on customers' properties	Number of floodings/blockages caused by public sewerage network on customers' properties has reduced compared to 2009 (<1089)	1152
To improve wastewater treatment	To achieve the compliance of effluent pollution parameters in at least 2 quarters	1
People		
Committed, creative, customer-focussed teams	ASTV TRI*M index 10 points higher than Estonian average (>58)	66
To improve interdepartmental cooperation	In 2010 ESS the score for inter-departmental cooperation is better than in 2009 (≥5.0)	5.0
To reduce the number of short-term sick leave days	Number of short-term sick leave days is lower than in 2009 (<1260)	974
To improve employees' feedback regarding management	In 2010 ESS the score for employees' feedback to the unit management is better than in 2009 (≥5.0)	4.2
To reduce the number of work accidents that the employer is liable for	0 work accidents that the employer is liable for	5

ASTV – AS Tallinna Vesi

ESS – Employee Satisfaction Survey

TRI*M – Measure, Manage, Monitor

Legend: **achieved**; **not achieved**

COMPANY'S ENVIRONMENTAL OBJECTIVES 2011

Drinking water quality

- ✓ Drinking water quality is in compliance with the SM 82 regulation over 99.31% at customers premises in all activity areas (excl Maardu)
- ✓ To ensure the compliance of drinking water quality with requirements of the Services Agreement
- ✓ To replace at least 5 km of the depreciated water pipeline

Compliance with environmental requirements

- ✓ To ensure compliance with regulatory requirements and requirements of the Services Agreement
- ✓ To ensure the awareness of sub-contractors about significant environment related aspects of the Company

Usage of water resources

- ✓ To use water resources sparingly
- ✓ To ensure compliance with the requirements of the water permits and the Services Agreement
- ✓ To reduce the level of leakages to 19% or below
- ✓ To effectively repair leakages on average in 60 hours or less
- ✓ To extend the use of on line sensors for detecting leaks and zoning
- ✓ To ensure that customers have a timely calibrated water meter

Wastewater collection

- ✓ To ensure compliance at all storm water outlets
- ✓ Number of information requests regarding sewer blockages, floodings and storm water is less than 2550.
- ✓ To carry out maintenance on 180 km of the sewerage network
- ✓ To replace at least 5 km of the depreciated waste water pipeline
- ✓ To identify over polluters and invoice all identified over polluters
- ✓ To react in case of blockages and floods within 2 hours more than 90% of cases
- ✓ To achieve service contracts for the agreed number of subsidy connection to be connected during 2011

Wastewater treatment

- ✓ To ensure compliance of waste water pollution parameters with regulatory requirements and requirements of the Services Agreement in 3 Q as minimum
- ✓ To finish the construction of biofilter for 3rd Q 2011
- ✓ To continue with improvement of waste water mechanical treatment process to finish the project in 2012

Chemicals handling

- ✓ To control and optimise the usage of chemicals
- ✓ To reduce the risk of accidents occurring as a result of chemical usage

Waste Management

- ✓ To reduce the waste produced
- ✓ To continue with sorting and recycling of the waste produced compared to the previous year
- ✓ To recycle all sludge and sell 32,000 t of compost
- ✓ To ensure the sludge handling compliance with the requirements of the waste permit
- ✓ To increase the proportion of e-invoices, sent out by Customer Services.

Energy consumption

- ✓ To use energy resources more efficiently and more sparingly
- ✓ To increase the effective usage of biogas
- ✓ To analyse and implement a plan to increase the production of green energy
- ✓ To make the use of transport more efficient

Air emissions

- ✓ To ensure the compliance with air pollution permit requirements

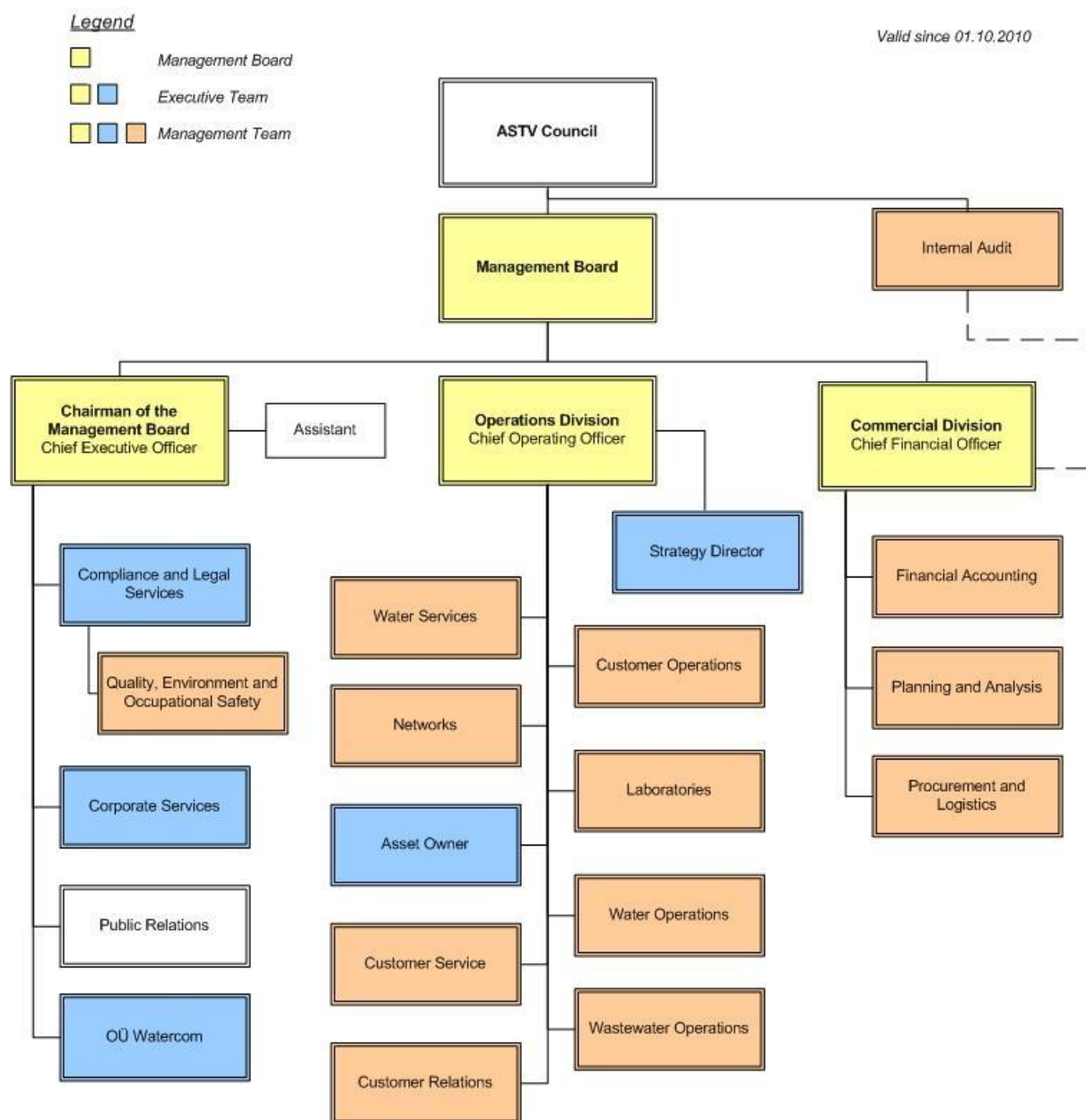
Ensuring continuous supply

- ✓ To avoid emergencies, which cause significant damage to the population and nature

Environmental awareness

- ✓ To support environmental, ecological and educational projects areas and activities according to the sponsorship principles
- ✓ To implement the Environmental Educational programme for schools
- ✓ To carry out Open-door days at Ülemiste water treatment plant and Paljassaare wastewater treatment plant

COMPANY'S STRUCTURE



ENVIRONMENTAL POLICY

Quality and environmental policy approved by the Company's Executive Team expresses the Company's principles in organizing corporate social responsibility activities.

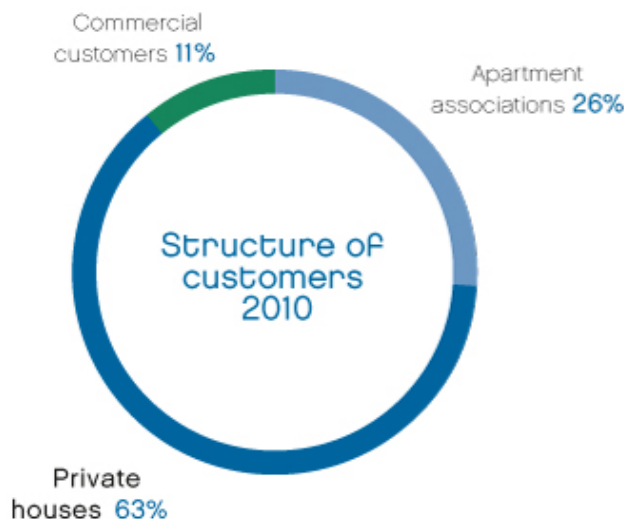
OUR CONTRIBUTION TO CUSTOMERS AND THE COMMUNITY

- Our customers have a possibility to continuously use pure drinking water and the possibility to discharge wastewater and stormwater environmentally wisely.
- Our customers can communicate with us conveniently; we are fast and professional in finding solutions to their problems.
- We take responsibility and are aware of our impact on the health and quality of life of residents.
- We do more than required by the legal acts and we follow the best practices.
- We use natural resources sparingly.
- We shape the environmentally conscious way of thinking in our community by keeping an open dialogue, cooperation and valuing education.
- We proactively include various stakeholders, find sustainable solutions and constantly improve our services and work organisation.
- We are open and honest in providing regular information about our activities to our stakeholders.
- We strive to be a good neighbour in the community, by supporting water related activities that promote environmental awareness and healthy life style.

CUSTOMER SATISFACTION

In 2010, the Company provided water supply and sewerage services to more than 22,000 customers and 430,000 end users in Tallinn and its surrounding areas. The strategic objective of the Company is to achieve customer service excellence and to provide the best customer service of any utility company in the Baltic States.

Our customers:



Annual customer satisfaction survey

The Company undertook significant efforts in 2010 to further improve the quality of its drinking water and service reliability. We also made efforts to enhance customer communication by making our activities more visible and open to our customers. Customer satisfaction survey results indicate that these improvements were recognized by the customers and were met with a positive reaction. Customer satisfaction has significantly increased compared to the previous years. Despite a high customer satisfaction, the Company continues to enhance its customer service strategy also in 2011.

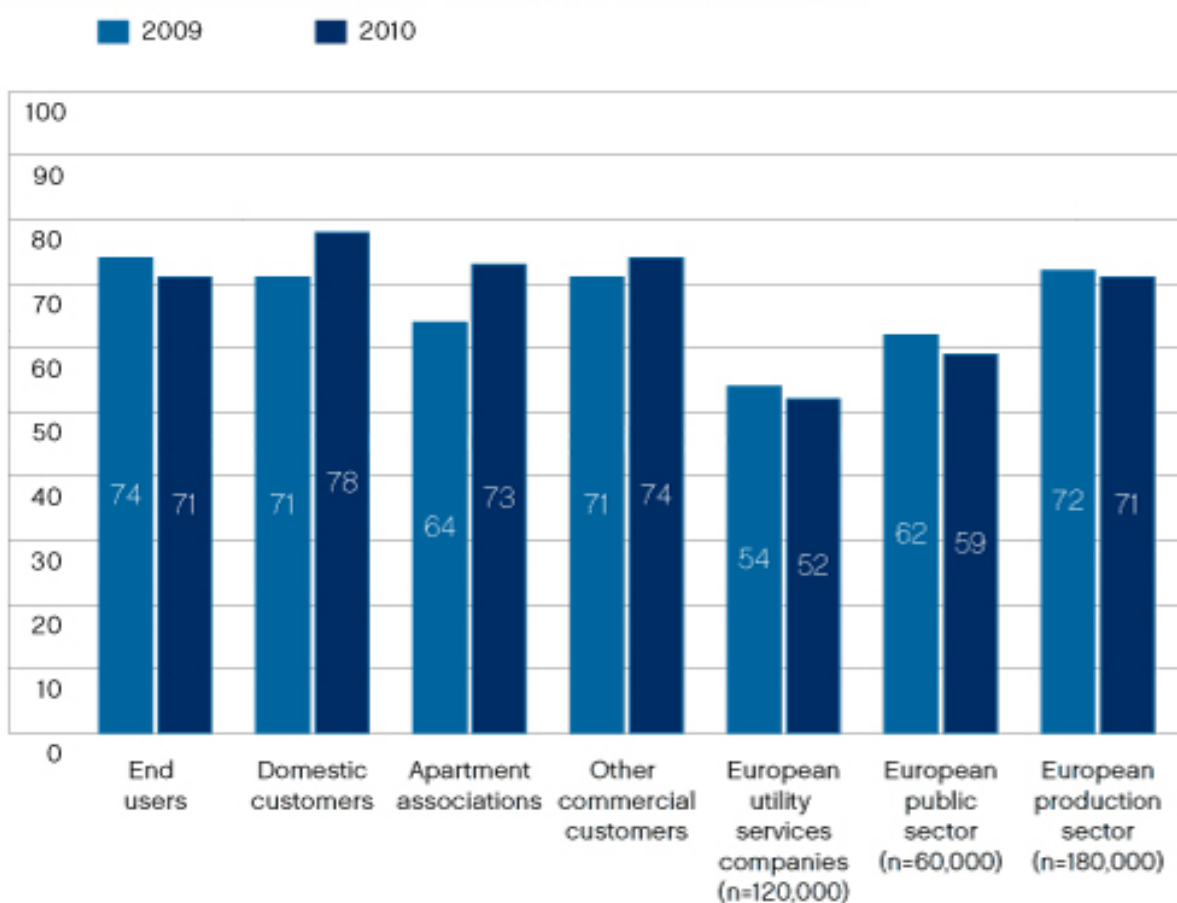
An independent market research company TNS Emor carried out a customer satisfaction survey for the Company, conducting phone interviews with 901 customers and end users regarding their satisfaction with the customer service of the Company in 2010. Satisfaction was measured on the basis of the TRI*M method developed by the research company to characterise the strength of customer relationships and to allow comparison with other companies. This model focuses on three elements:

- TRI*M index, which measures the strength of customer relationships and comprises further four elements – general satisfaction, recommendation, repeated use and usefulness/necessity of services products;

- TRI*M typology of customer relationships, describing the satisfaction and loyalty of customers;
- TRI*M grid analysis to highlight the strengths and weaknesses of a company.

The Company scored 73 points among its customers and 71 points among its end users in the final TRI*M index of the customer satisfaction survey on a scale of 100. The results of the study show that satisfaction is above 70 points in all segments. Compared to the previous year, satisfaction has increased among both domestic and commercial customer segments. The satisfaction of end users has gone through a slight decrease and was 71 points after being stable at 74 points in the past three years.

Customer and end user satisfaction 2009-2010



Compared to other utility companies in the world, the Company's customer relationships can be considered to be good and the score of the Company in terms of satisfaction of customers and end users is within the upper third among similar companies.

The strength of customer relationships and customer satisfaction are first and foremost influenced by the quality of services, primarily the quality of drinking water, the condition of infrastructure, the price of the service, and reputation of the Company, as well as the handling of problems and customer communications. Compared to the earlier results regarding the handling of problems, improvements can be seen in the ratings from both private and

commercial customers. However, the outcome cannot yet be considered as sufficient. Both private and commercial customers expect improvements in the area related to billings and water meters, also handling sewer blockages, interruptions to water supply and emergencies. Providing stable water supply and pleasant communication by e-mail are considered as the main strengths of the Company. According to both private and commercial customers, the price/quality relationship continues to require further attention. Also, in order to strengthen the customer relationship, the Company needs to make continuous contributions to the activities, which help to preserve the environment and increase customer awareness. Positive image of the Company, which is created by the information provided to the customers via open communication plays an important part as well.

Customer satisfaction with different aspects of services

2009-2010, on a scale of 5

	2009 commercial customers	2010 commercial customers	2009 private customers	2010 private customers
Taste of water	3.7	3.8	3.9	3.9
Odour of water	3.9	3.9	4.1	4.0
Clarity of water	3.8	3.9	4.0	3.9
Stable water pressure	4.0	3.9	3.8	3.8
Low number of emergencies and interruptions	4.0	4.0	4.0	4.1
Price/quality relationship	2.9	2.7	3.0	2.8
Accuracy and clarity of invoices	4.2	4.2	4.2	4.2
Customer Information line	3.7	3.7	4.0	4.0
Communication by e-mail	4.0	4.1	3.9	4.0

Development of customer service

The Company considers it extremely important to solve the issues associated with the handling of problems. In particular, improvements are needed as regards to the speed of problem solving and finding the best possible solution. In 2010, the Company also continued improvement activities based on the feedback received from the customer satisfaction survey. The main activities to be pointed out are as follows:

- The Company renewed its promises to customers aimed at explaining our operational principles to customers. Upon us failing a standard, the customer receives a compensation of 19.17 EUR;
- As a result of analysis and continuous improvement activities, in comparison with 2009, the number of written customer complaints reduced from 328 to 234;

- In 2010, the Company also continued activities to ensure faster reaction to customer requests. On average, written requests were answered within 1.62 days, whereas the internal standard foresees the response to be given in 8 days;
- Based on the analysis conducted on monthly survey and complaints, the Company improved its work processes that resulted in our ability to react faster to customer enquiries. The main focus was on standardisation of inter-departmental cooperation regarding the feedback or responses provided to customer requests. Scheduling planned works and informing customers of our actions have also improved;
- The Company carried out a campaign “Don’t clog the bog” in order to help the customers to prevent problems related to blockages;
- The Company was consistent in notifying customers and end users of problematic subjects via different communication channels such as the back of the invoice and the Company’s web page. Also, meetings with local population were organised in co-operation with the city district governments in order to resolve and prevent issues in the course of open communication.

ENVIRONMENTAL MANAGEMENT SYSTEM

The company’s environmental activity is in compliance with the requirements of the international environmental management standard ISO 14001 and EU Eco Management and Audit Scheme (EMAS) Regulation.

The environmental management system forms a part of the Company’s management system, the objective of which is to avoid or at the least minimise environmental pollution via integrating the environmental management system elements into the daily activities of the Company.

The basis for the environmental management system is the identification of both negative and positive significant environmental aspects and impacts which form the basis for determining the Company’s environmental objectives and tasks for improving performance. Significant environmental aspects are those different facets of the Company’s activities, which, in contact with the surrounding environment, have the most serious consequences for the natural environment, the quality of life and the Company’s business activities.

An overview of the significant environmental aspects of the Company, their actual or potential environmental impact, the accompanying environmental objectives and tasks as well as progress against the objectives is presented in the chapters of this Environmental Report.

Management of the environmental system has been established in accordance with the Company’s structural scheme, described on the page 12. The main responsibility for ensuring and improving the functioning of the environmental management system lies with the senior management and the heads of structural units. Unit managers involve their employees in setting and fulfilling environmental objectives and tasks.

COMPLIANCE OF THE ACTIVITIES WITH ENVIRONMENTAL REQUIREMENTS

Compliance of the activities with environmental requirements

Significant environmental aspects	Impacts
Environmental management systems implemented Improvement activities carried out	Improvement of environmental performance, enhancement of cooperation with stakeholders
2010 objectives and tasks	
Work and environmental safety trainings for contractors and suppliers +	

ENVIRONMENTAL LEGISLATION

The minimum requirement of environmental management system is compliance with environmental legislation. All improvements to the environmental management system must also be in accordance with the requirements and restrictions set out in applicable legislation.

To a large extent the Company's environmental activities are regulated by requirements arising from EU as well as national and local government legislation.

Amongst these the Water Act, the Public Water Supply and Sewerage Act, the Waste Act, the Chemicals Act, the Ambient Air Protection Act and regulations adopted on the basis thereon have the most significant impact on the Company. In order to meet the minimum requirements, the Company systematically monitors the relevant environmental legislation and amendments thereto. Each month the area of the Company's activities affected by the amendments are determined and the managers responsible for the particular areas are notified thereof. Managers of the respective areas ensure that the required changes are carried out.

Together with the Estonian Water Companies Association (EVEL) the Company has participated in working groups for developing water economy and environmental legislation and has published opinions on draft acts on the participation web. In 2010, amendment proposals were submitted to the draft amendment to the Environmental Charges Act, the draft decree concerning the sanitary protection zone of the water catchment area, the draft procedure for the extent of the data submitted to the form of Report on Water Use and the procedure for submitting the Report.

In 2010 the Tallinn City Public Water Supply and Sewerage Development Plan for 2010 – 2021 was approved, in the development of which the Company's employees were involved. At the same time, pursuant to the requirements of the Emergency Act, the Company prepared a risk analysis for the continuous operation of vital services and approved the plan for continuous operation. In April 2010, the Company submitted to the City of Tallinn a possible solution for ensuring the water supply to the City of Tallinn in case of the emergency in Ülemiste Water Treatment Plant, which causes a production stoppage.

ENVIRONMENTAL PERMITS

The main licensing authority for the Company is the Environmental Board's Harju-Järva-Rapla regional department, who has issued the following environmental permits to the Company as until 31.12.2010:

- 5 special use of water permits (details on page 35);
- 2 waste permits (details on page 58);
- 2 ambient air pollution permits and 1 special permit for ambient air pollution (details on page 67).

In 2010 the Company operated in accordance with the conditions established in the valid environmental permits in all aspects except the quality of effluent discharged to the sea through the deep-sea outlet pipe (details on page 49). Issues related to the environmental permits were solved in cooperation with the Environmental Board's Harju-Järva-Rapla regional department and the Company does not have any outstanding commitments arising from the above to the state.

REQUIREMENTS OF THE SERVICES AGREEMENT

Besides legislation, the activities of the Company are also regulated by the Services Agreement concluded between the Company and the City of Tallinn for ensuring 97 Levels of Services. Performance of the Service Agreement is supervised by the Supervisory Foundation for the Water Companies in Tallinn, appointed by the local government, to whom the Company annually submits a detailed report on compliance with the requirements of the Service Agreement.

95 Levels of Service out of 97 were met in 2010. One of the levels of service, which the Company did not manage to fulfil in 2010 concerned interruption to supply, which lasted longer than 12 hours. There were 355 interruptions in total in the Company's water supply network and in one case it took longer than 12 hours to eliminate the emergency. The other level of service, which was not fulfilled, was the stipulated compliance of the concentration of nitrogen compounds in effluent discharged to the sea through the deep-sea outlet pipe as an annual average. The main reasons for the non-compliance were the low volumes due to unfavourable weather conditions in turns with heavy downpours in 2010, which caused hydraulic shocks and brought about high peaks of pollution load and increased nitrogen loads in incoming wastewater compared to 2009. Each year the Company submits detailed reports to the City of Tallinn and the Supervisory Foundation of Tallinn Water Companies regarding compliance with the levels of service in the previous year.

REQUIREMENTS TO CONTRACTUAL PARTNERS

Considering the requirements set for the Company, the Company also requires its suppliers to meet environmental and work environment requirements.

To ensure the above, the Company has established environmental and work environment criteria for the qualification of suppliers in its procurement procedures. The environmental and work environment related compliance of bidders is assessed on the basis of questionnaires filled by bidders in the course of the tendering procedure. Bidders for construction works must additionally confirm that they apply health and safety and environmental protection measures at the construction sites.

Company's employees as well as the supervision staff of the Company's subsidiary OÜ Watercom monitor the environmental and work environment activities of suppliers on site. After the term of the contract the supervision staff assesses the activities of suppliers in ensuring compliance with the requirements in case of larger contracts (construction works starting from EEK 1,000,000, other services from EEK 200,000 and above, starting from 01.01.2011 respectively 65,000 and 15,000 euros). In 2010 the average assessment given to the environmental activities of the suppliers was 4.66 on a scale of 5 points, which can be considered as a very good result.

In order to improve the awareness of suppliers, opening meetings were carried out for all construction and reconstruction sites in 2010 (except for the constructions of individual connection points). The aim of the opening meetings was to additionally introduce before the commencement of the construction works to the contractors the Company's objectives, contractual requirements, construction norms and the quality, environment and occupational safety requirements applicable to the Company.

MANAGEMENT SYSTEM CONTROL AND AUDITS

Several authorities monitored the Company's compliance with environmental and other legislation in 2010. Assessments and precepts related to environment or work environment were issued by the Transport Department of the City of Tallinn, the North-Estonian Regional Rescue Centre, the Northern Region of the Environmental Inspectorate and the Labour Inspectorate. The Company has presented its solutions for the received precepts, which have been approved by the authorities.

In addition to supervisory authorities, the Company's compliance with environmental legislation and Services Agreement requirements as well as with other intra-Company requirements is also monitored in the course of internal and external audits of the management system.

In the course of internal audits carried out in 2010 the internal auditors put forward a total of 40 non-conformities and 50 proposals, which formed a good source of management system improvement ideas for the managers.

In 2010 external audits were carried out in the Company by accredited certifier Det Norske Veritas in order to evaluate the compliance of the management system with the requirements of ISO 9001, ISO 14001, OHSAS 18001 standard and with the EU (EMAS) Regulation 761/2001.

As a result of external audit Det Norske Veritas confirmed the compliance of the management system with the requirements of the standards and renewed all management system certificates. During the external audit no non-conformities to the requirements of ISO standards and EMAS Regulation were discovered.

COMPANY'S ECOLOGICAL FOOTPRINT*

The basis for the calculation of ecological footprint is land as a limited resource, which people use for satisfying their needs. The surface of the globe is divided into categories:

- Bioproductive land (arable land, pasture and woodland);
- Bioproductive sea (main territory for fishing);
- Energy land (land required for the producing energy and distribution systems);
- Built land (buildings, roads, etc);
- Biodiversity (unspoilt nature);
- Other land (rocks, deserts, etc).

Ecological footprint is a measure of human demand for the use of natural resources for its activities. Ecological footprint assesses the use of room accompanying the lifecycle of a product or service and can be measured in hectares per year (hereinafter ha per year). The Ecological Footprint Index demonstrates how much water and productive land is occupied for producing using and absorbing materials to be consumed.

In the calculation of a company's ecological footprint, two simple matters of fact are taken as the basis:

- It is possible to monitor and detect the majority of the resources, which the company consumes and several outputs produced;
- It is possible to measure the majority of the resources and waste flows in terms of biologically productive area, which is required for producing these resources and for disposing and neutralising waste.**

Ecological footprint factor*** is a conversion unit, which helps to equalize the measured source data so that the result would be easily understandable and comparable.

**According to the Estonian Fund for Nature (hereinafter EFN), the method of ecological footprint is one of the best and globally increasingly more used method, which enables in a complex manner to assess the impact of the activities of organisations and states to the environment.*

*** The load of the states to the ecosystems from "Ecological Footprint of Nations", 1997, page 32.*

**** Ecological footprint factors were taken from the book by Chambers et al "Sharing Nature's Interest" 2000 available in the library of EFN).*

ENVIRONMENTAL IMPACT MEASURED ON THE BASIS OF THE ECOLOGICAL FOOTPRINT METHOD

12 different components* have been taken into account in the calculation of the ecological footprint (details on page 66), which correspond to the products and services used or produced in the Company's activity. Components have respectively been divided in six fields (water, waste, electricity, heating, transport for people and transport of goods). In order to get a better comparison, the ecological footprint per one employee has been pointed out separately. It must be emphasised that it is fair to compare the ecological footprints per person of various companies only in case the companies provide similar products or services and the ecological footprint has been calculated for the same indicators.

**These components have been taken into account for the calculation of which there is a respective factor.*

TREATMENT PROCESSES

WATER TREATMENT PROCESS

1. Surface water is gathered to lake Ülemiste and is directed to Ülemiste Water Treatment Plant.
2. Raw water passes through screens and microfilters which remove algae and plankton from the water.
3. Water is led into reservoirs where a mixture of ozone in air is injected into the water to deactivate microorganisms and oxidize organic substances.
4. A water treatment chemical coagulant is added to clarify the water.
5. During the clarification phase particulate matter, chemical flocs and precipitates are removed from the water.
6. Water passes through filters. In summer, dependent on the raw water quality coming into the plant, activated carbon may be added in order to remove any remaining particles and to improve the taste of the drinking water.
7. Chlorine is added to the water for disinfection purposes.
8. The water is directed to drinking water reservoirs, from which it is pumped to the city water network in accordance with demand.

WASTEWATER TREATMENT PROCESS

1. Wastewater collected through the sewerage network is directed into the Main Pumping Station. Storm water is also collected into the combined sewerage system and directed to the Main Pumping Station.
2. Storm water collected in the areas of separate sewerage network is led to the storm water outlets through a separate storm water network.
3. In the mechanical treatment stage, the wastewater is screened to remove larger solids and the grit removal tanks remove grit and sand from the wastewater.
4. Smaller solid particles are removed in the primary sedimentation basins, formed sludge is removed from the process.
5. Coagulant is added to the wastewater for the chemical treatment of the phosphorus.
6. For the biological treatment the wastewater is conducted to the aeration tanks where the vital activity of various bacteria helps to remove nitrogen and biologically decomposing substances from the wastewater. To ensure a living environment suitable for the bacteria and to make their work more efficient, air and additional carbon in the form of methanol is injected.
7. The activated sludge is settled in the secondary sedimentation basins.
8. Treated wastewater i.e. effluent is pumped via a deep sea outlet into the sea.
9. Sludge removed during the different phases of the treatment process is pumped to the sludge treatment plant.
10. Sludge is digested and stabilised in anaerobic digesters where bacteria make the organic matter decompose.
11. The biogas created in the course of anaerobic sludge digestion is used for the technological process and heating in the plant.
12. The stabilised sludge is dried and mixed with peat.
13. The outcome – sludge mixture with high nutrient content - is used in cultivation.

DRINKING WATER QUALITY

Drinking water quality

Significant environmental aspects	Impacts
Opportunity to connect the water network	Maintaining and improving the quality of life and the status of the environment
Compliance with drinking water requirements	Retaining and improving quality of life
Non-compliant drinking water in Maardu area	Danger to population's health

2010 objectives and tasks

To complete refurbishment of ozone equipment of Water Treatment Plant +

The customer satisfaction survey has demonstrated that drinking water quality is one of the main factors influencing customer satisfaction. (See more details on p 16)

Drinking water quality must comply with the Minister of Social Affairs Decree no. 82 from 31 July 2001 “ Quality and Control Requirements and Analysis Methods for Drinking Water” (hereinafter referred to as Decree No 82) that originates from the Estonian Water Act and the European Union Drinking Water Directive 98/83/EC.

The Company has a detailed Drinking Water Quality Monitoring Program for 2010-2013, approved by the Northern Department of the health Board, which includes separate quality control requirements set for the water treatment plant, the ground water system and the city network. The named programme details the frequency of taking samples and the parameters to be determined.

Conditions of ground water usage have been determined in the permits for special use of water HR01037, HR1112, HR0960, HR0961 and HR0885, issued to the Company. Although the usage of ground water is limited by the water permits, it is possible to cover the ground water demand and still have sufficient reserves to replace some of the surface water supply in case of a problem of supply from Ülemiste Water Treatment Plant.

Drinking water quality analyses are carried out by the Company's Water Laboratory, which is accredited on the basis of the internationally recognised ISO 17025 standard. In 2010 the Water Laboratory and Microbiology Laboratory performed a total of over 83,000 analyses.

TREATED WATER QUALITY AT ÜLEMISTE TREATMENT PLANT

In 2010 the treated water quality at Ülemiste Water Treatment Plant was compliant with the requirements of Decree No 82, as provided in the table on page 33. The quality of drinking water is mostly ensured by the quality of surface water and the effectiveness of the treatment process.

SURFACE WATER QUALITY

In 2010 the quality of raw water taken into the treatment system complied with the class A2 requirements of the European Council Directive 75/440/EC. To ensure compliance, the raw water quality indicators are checked once per day at the intake to the treatment system.

Raw water pollution indicators, such as total phosphorus (P_{tot}) and total nitrogen (N_{tot}), are checked once per week. Additionally, a detailed in-depth analysis of raw water is carried out once per month in accordance with the drinking water control programme.

Surface water quality is dependent on weather conditions – such as precipitation and thaw water, but also on the geographical conditions of the catchment area, moors, wetlands, areas of karst and forest, etc.

In the first half year of 2010, the permanganate oxygen demand was practically very similar to 2009, but decreased in the second half of the year. Water colour indicators were higher in the beginning of the year compared to 2009, however, the difference decreased by the end of the year.

Permanganate oxygen demand in raw water

2006 – 2010, mg/l

	2006	2007	2008	2009	2010
COD Mn	10,6	9,3	9,3	10,2	9.7

Raw water colour

2006-2010, degrees

	2006	2007	2008	2009	2010
Colour	45	43	45	53	54

Drinking water quality in Ülemiste Water Treatment Plant

2006 – 2010

Parameter	Unit	Average results					Decree no 82 EU directive 98/83/EC
		2006	2007	2008	2009	2010	
Odour	points	1	1	1	1	1	Acceptable to consumer
Taste	points	1	1	1	1	1	Acceptable to consumer
Turbidity	NTU	0.11	0.10	0.13	0.11	0.12	1
Colour	Pt mg/l	2	2	3	3	2	Acceptable to consumer
Dry residue	mg/l	287	276	274	280	263	
pH		7.37	7.36	7.36	7.33	7.31	6.5-9.5
Conductivity	µS/cm	443	438	441	435	373	2,500
Alkalinity	mg-ekv/l	3.05	2.72	2.70	2.8	2.76	
Total hardness	mg-ekv/l	4.3	4.15	4.16	4.14	3.95	
Temporary hardness	mg-ekv/l	3.1	2.72	2.70	2.8	2.76	
Permanent hardness	mg-ekv/l	1.2	1.44	1.45	1.35	1.20	
Permanganate index (COD Mn)	mg O ₂ /l	3.1	3.2	3.2	3.3	3.0	5.0
Total organic carbon (TOC)	mg/l	6.3	6.2	5.9	6	6	Without unusual changes
Free CO ₂	mg/l	18	14	14	16	16	
Carbonates CO ₃ ²⁻	mg/l	0	0	0	0	0	
Bicarbonates HCO ₃ ⁻	mg/l	188	165	166	171	168	
Chlorides Cl ⁻	mg/l	24	25.5	26.8	27	26	250
Sulphates SO ₄ ²⁻	mg/l	37	46.2	40.1	34	28	250
Orthophosphates PO ₄ ³⁻	mg/l	0	0	<0.01	<0.01	<0.01	
Fluoride F ⁻	mg/l	0.1	0.10	0.09	0.07	0.08	1.5
Nitrates NO ₃ ⁻	mg/l	2.4	3.4	3.3	2.7	1.9	50
Ammonium NH ₄ ⁺	mg/l	0.003	0.003	0.003	0.003	0.005	0.50
Calcium Ca	mg/l	71.9	67.3	70.3	68.2	65	
Magnesium Mg	mg/l	8.7	8.5	8.1	7.8	7.15	

Drinking water quality in Ülemiste Water Treatment Plant

2006 – 2010

Parameter	Unit	Average results					Decree no 82 EU directive 98/83/EC
		2006	2007	2008	2009	2010	
Total iron Fe	µg/l	0	<10	<10	<10	<10	200
Manganese Mn	µg/l	5.1	3.0	2.5	6.67	12.5	50
Aluminium Al	µg/l	88	82	93	94.5	108	200
Sodium Na	mg/l	6.7	6.7	7.1	6.84	6.1	200
Potassium K	mg/l	2.7	2.6	2.7	2.77	2.7	
Chromium Cr	µg/l	0.53	0.50	0.66	0.56	0.62	50
Copper Cu	µg/l	0.38	0.67	0.96	0.33	0.42	2,000
Mercury Hg	µg/l	0.02	0.02	<0.05	<0.005	<0.05	1
Lead Pb	µg/l	0.01	0.03	0.05	0.015	0.01	10
Selenium Se	µg/l	0.28	<0.4	<0.4	<0.4	<0.4	10
Zinc Zn	µg/l	0.26	0.41	0.59	0.18	0.30	
Acrylic Amide	µg/l	0.015	0.014	0.02	0.016	0.016	0.10
Chloroform	µg/l	20	20	20	21	25	
THM	µg/l	25	25	26	26.3	30	100*
Enterococh	CFU/100ml	0	0	0	0	0	0
No of colony forming units at 22°C	CFU/ml	2	3	0.5	0	0	100
<i>Coliform bacteria</i>	CFU/100ml	0	0	0	0	0	0
<i>Escherichia coli</i>	CFU/100ml	0	0	0	0	0	0
<i>Clostridium perfringens</i>	CFU/100ml	0	0	0	0	0	0

* Trihalogenmethane (THM) permitted level decreased from 150 to 100 from 01.01.2009 by EU directive 98/83/EC and Decree no 82.

ÜLEMISTE SANITARY PROTECTION ZONE

Lake Ülemiste is the drinking water resource for Tallinn and thus, pursuant to the Water Act, it is not a public water body. Taking into account the requirements set for the water quality of a lake used as a drinking water resource and the need to ensure that these are also met in the future, a sanitary protection zone of Lake Ülemiste catchment area was approved in 2009. The sanitary protection zone shall include the lake, the water catchment facilities thereof, the bank reinforcement facilities and the area surrounding the lake, which must be kept in its natural condition. Under the Water Act, entry into the sanitary protection zone is permitted only for persons performing duties related to environmental supervision and health protection, servicing of water intake facilities and forest maintenance, mowing of grass plants and water monitoring.

In March 2010, a Polish cargo plane made an emergency landing on the ice of Lake Ülemiste near the shore, ca 2 km from the Water Treatment Plant. During emergency landing, the fuel that partly spilled from the aircraft tanks into the lake and on the ice, polluted the falling track. In order to remove the fuel, the absorbent booms, mats and certain powder were immediately used. The area of the incident was surrounded by an underwater barrier that kept the pollution spreading under the ice. When ice melted, the barrier was pulled on shore together with the pollutants, which were neutralised on site. These actions prevented the pollution to spread further in the lake. The Company took additional water samples in the Water Treatment Plant and monitored water quality around the incident site, additional oil blocks were also placed at the intake of the treatment plant. The Company was also prepared to use additional chemicals and activated carbon in order to neutralise potential pollution. The results of the analyses showed no signs of pollution in the water taken into the treatment plant and the event did not impact the quality of drinking water.



EFFICIENCY OF THE WATER TREATMENT PROCESS

Requirements established with regard to raw water quality are the basis for the design of the treatment process. Based on the quality of surface water in Lake Ülemiste the use of physicochemical treatment – prechlorination, coagulation, sedimentation, filtering and disinfection - is foreseen by legislative acts for ensuring the quality of drinking water. The treatment process in Ülemiste Water Treatment Plant is more efficient than prescribed by the compulsory requirements, as ozonation, which ensures the high quality of drinking water more effectively, is used instead of prechlorination and preliminary filtration. Moreover, ozon is an environmentally friendlier and safer chemical than chlorine.

Treatment of drinking water focused more than before on the ozonisation process. Ozone generators were cleaned and repaired, air preparation equipment was refurbished and the air preparation compressor was also replaced by a new and economical one. Those changes make the process of disinfecting raw water more reliable and contribute to the sustainability of the treatment plant. In order to reduce short-term interruptions in water supply and to increase the immunity of power supply to the pumps, the frequency converter in the II level pumping station was replaced by a more modern and reliable one.



In 2010, the Company carried out test studies in Ülemiste Water Treatment Plant in order to update the treatment process in the future. It studied the possibilities to reduce organic substance in the treatment process. A process working on the principle of magnetic ion exchange, called the MIEX system, turned out to be suitable for processing raw water.

GROUND WATER QUALITY

Approximately 10% of consumers in Tallinn, in the districts of Nõmme, Pirita, Merivälja, Laagri and Tiskre, are supplied with water produced from the Cambrian-Vendi or Cambrian-Ordovician aquifers. Ground water is also used in the Saue City, Maardu City and the Harku Rural Municipality.

In 2010, the quality of drinking water at the borehole pumping stations complied with the requirements of Decree no. 82 of the Ministry of Social Affairs that is illustrated by the table on page 33. There were no cases of ground water pollution or potential pollution in 2010, demanding notification to the City and Health Board.

Pursuant to the requirements established in the special use of water permits and to the drinking water control programme the Company monitors all quality parameters, which are important in evaluating the situation.

Water samples are taken from all boreholes, which are in use in order to carry out a detailed chemical analysis. In addition to the full chemical analysis required by the water permit, the Company also studies the content of 12 micro-components and analyses the water from both the Cambrian-Vendi and the Cambrian-Ordovician aquifer. The Company also partially tests ground water for substances listed as dangerous to the water environment in the Water Act, e.g. mercury, antimony, arsenic, cadmium, boron, barium and others. In addition, the Company studies the quality of treated water (iron, manganese, ammonium) in 21 ground water reservoirs.

According to the Water Framework Directive (Directive 2000/60/EC), the qualitative or chemical condition of ground water is considered good, if the concentration of pollutants does not indicate an inflow of salty water or other water and does not exceed the respective quality standards.

The natural radioactivity of Estonian ground water has been thoroughly studied by the Geological Survey of Estonia as well as the Estonian Radiation Centre and the outcome of these studies have shown that the majority of ground water samples from the Cambrian-Vendi aquifer do not meet the levels stipulated in the Estonian regulation.

In relation to the radionuclides content in the ground water in Estonia, the Health Board carried out the health risk assessment in ground water areas (incl. Nõmme, Maardu, Saue, Tiskre, Pillado, Pirita, Merivälja, Pärnamäe and Keila) in 2010. Based on the results of the risk assessment, any health damage of accidental nature resulting from the content of radionuclides in the water is unlikely. According to the calculations of assessing the radiation safety and optimisation models, theoretically approximately 4 people of 100,000 may be get sick in a lifetime due to the highest possible effective dose (0,6 mSv/y) received from the consumption of water. According to the opinion of the Health Board there is no need to apply supplementary measures in Tallinn to reduce radionuclides content in drinking water.

Additional information on this topic is available on the website of the Health Board and the relevant information is also up on the Company's website.

GROUND WATER TREATMENT

The ground water used for producing drinking water is of quality classes I-III. Quality class I water needs no treatment – all Cambrian-Ordovician aquifer boreholes in Nõmme fall under this category. Ground water from the Cambrian-Vendi aquifer, which forms the main part of ground water used as a source of drinking water, mostly falls under quality classes II and III

and needs respective treatment. Water quality classes II and III are usually caused by an excessive iron, manganese and ammonium content and the non-compliance of colour with the raw water requirements.

The Company uses filters and aeration as ground water treatment methods to ensure the compliance of drinking water with requirements. Pressure filters have been installed to ground water borehole-pumping stations for the removal of excess iron and manganese. Raw ground water is aerated and filtered in the pressure filters, no chemicals are used. Water samples taken show that treatment reduces water turbidity, iron and manganese content, improves colour and the stability index and increases the content of oxygen in the water.

The mixing of water from the two aquifers is also used for improving water quality. The Company's ground water monitoring data are used in national ground water monitoring when evaluating the quality conditions of ground water in the region of Tallinn.

Ground water quality in pumping stations

(excl Maardu City) 2006 - 2010

Parameter	Unit	Average results					Decree no 82 EU directive 98/83/EC
		2006	2007	2008	2009	2010	
Odour	points	1.1	1.1	1.02	1.12	1	Acceptable to consumer
Taste	points	1	1	1	1	1	Acceptable to consumer
Temperature	°C	9.03	8.9	8.3	7.75	8.4	
Colour	mg Pt/l	4.98	4.56	3.69	4.17	3.6	Acceptable to consumer
Turbidity	NTU	0.95	0.46	0.37	0.45	0.5	Acceptable to consumer
Dissolved O ₂	mg/l	5.24	5.3	6.6	6.5	5.4	
pH	pH unit	8.02	8	8	7.99	8.00	>6.5 and <9.5
Conductivity	µS/cm	578	568	596	594	518	2,500
Permaganate index (COD Mn)*	O ₂ mg/l	0.7	0.7	0.75	0.75	0.7	5.0
Total organic carbon	mg/l	1.2	1.0	0.8	0.72	0.7	Without unusual changes
Alkalinity	mg-ekv/l	2.55	2.51	2.52	2.54	2.49	
Total hardness	mg-ekv/l	3.37	3.27	3.51	3.57	3.4	
Temporary hardness	mg-ekv/l	2.51	2.49	2.50	2.52	2.5	
Permanent hardness	mg-ekv/l	0.87	0.78	1.01	1.05	0.9	
Free CO ₂	mg/l	3	3	3	3.39	3.5	
Total iron Fe	mg/l	0.08	0.05	0.02	0.055	0.05	0.2
Fluoride F ⁻	mg/l	0.58	0.58	0.61	0.61	0.59	1.5
Manganese Mn	mg/l	0.034	0.024	0.009	0.0169	0.014	0.05
Ammonium NH ₄ ⁺	mg/l	0.202	0.143	0.114	0.127	0.135	0.5
Nitrites NO ₂ ⁻	mg/l	0.014	0.012	0.009	0.0114	0.022	0.5
Nitrates NO ₃ ⁻	mg/l	0.55	0.731	0.743	0.788	0.75	50
Stability index		0.19	0.15	0.14	0.14	0.09	
Sulfides S ₂ ⁻	mg/l	0.005	0.004	0.005	0.0045	0.005	
Dry residue	mg/l	300	307	324	346	312	

Ground water quality in pumping stations

(excl Maardu City) 2006 - 2010

Parameter	Unit	Average results					Decree no 82 EU directive 98/83/EC
		2006	2007	2008	2009	2010	
Calcium Ca	mg/l	48	47	50	50	47	
Magnesium Mg	mg/l	13	12	13	11	12	
Sodium Na	mg/l	45	42	43	47.4	41	200
Potassium K	mg/l	6.8	6.7	6.7	7.12	6.8	
Sulphates SO_4^{2-}	mg/l	29	14	19	18.5	20	250
Bicarbonates HCO_3^-	mg/l	155.5	152.9	153.6	154.9	152	
Chlorides Cl ⁻	mg/l	90.4	90.1	101	89	83	250
Boron B	mg/l	0.15	0.17	0.17	0.1558	0.17	1
Aluminium Al	µg/l	1.14	0.91	1.27	2.843	1.03	200
Arsenic As	µg/l	0.09	0.09	0.10	0.106	0.11	10
Cadmium Cd	µg/l	<0.01	<0.01	<0.01	0.01	0.02	5
Chromium Cr	µg/l	0.51	0.45	0.58	0.5	0.45	50
Copper Cu	mg/l	0.003	0.0045	0.0064	0.0067	0.0056	2
Mercury Hg	µg/l	<0.02	<0.02	<0.05	<0.05	<0.05	1
Nickel Ni	µg/l	1.59	1.81	2.40	2.1	1.24	20
Lead Pb	µg/l	0.12	0.13	0.41	0.325	0.23	10
Antimony Sb	µg/l	0.01	0.009	0.01	0.01	0.02	5
Selenium Se	µg/l	0.54	0.44	0.4	<0.4	0.58	10
Enterococci	CFU/100ml	0	0	0	0	0	0
Colony forming units 22°C	CFU/ml	6	13	5	12	9	Without unusual changes
Coliform bacteria	CFU/100ml	0	0	0	0	0	0
Escherichia coli	CFU/100ml	0	0	0	0	0	0

* Decree No 82 does not establish a requirement to determine COD in drinking water, provided that total organic carbon has been determined. The listed indicator has been determined in the drinking water sources and the content of that does not change after going through filters.

Sampling for dry residue, potassium, sulphate, sodium, boron, aluminium, arsenic, cadmium, chromium, copper, mercury, nickel, lead, antimony, selenium and magnesium have not been required by the Decree No 82. However, the listed substances have been determined in the drinking water sources and the content of these does not change after going through filters.

The Company started operating the assets of Maardu City water company on July 1st 2009. This gives the residents of Maardu the opportunity to access Company's fully EU compliant water.

Ground water quality in Maardu pumping stations

2009-2010

Parameter	Unit	Average results		Decree no 82 EU directive 98/83/EC
		2009	2010	
Odour	points	1	1	Acceptable to consumer
Taste	points	1	1	Acceptable to consumer
Temperature	°C	8.2	8.5	
Colour	mg Pt/l	4	3.6	Acceptable to consumer
Turbidity	NTU	1.55	1.55	Acceptable to consumer
Dissolved O ₂	mg/l	3.9	3.3	
pH	pH unit	7.96	7.99	>6,5 - <9,5
Conductivity	µS/cm	1,159	1,052	2,500
Permaganate index (COD Mn)	O ₂ mg/l	1.26	0.93	5,0
Total iron Fe	mg/l	1.16	0.165	0,2
Fluoride F ⁻	mg/l	0.38	0.415	1,5
Manganese Mn	mg/l	0.063	0.072	0,05
Ammonium NH ₄ ⁺	mg/l	0.462	0.511	0,5
Nitrites NO ₂ ⁻	mg/l	0.005	0.004	0,5
Nitrates NO ₃ ⁻	mg/l	0.5	0.53	50
Calcium Ca	mg/l	94.5	88	
Magnesium Mg	mg/l	17.3	17	
Sodium Na	mg/l	100.2	90	200
Potassium K	mg/l	10.2	10.4	
Sulphates SO ₄ ²⁻	mg/l	5	3.67	250

Parameter	Unit	Average results		Decree no 82 EU directive 98/83/EC
		2009	2010	
Chlorides Cl ⁻	mg/l	266	265	250
Boron B	mg/l	0,073	0,082	1
Aluminium Al	µg/l	0,84	1,88	200
Arsenic As	µg/l	<0,1	0,1	10
Cadmium Cd	µg/l	<0,01	0,01	5
Chromium Cr	µg/l	0,4	0,77	50
Copper Cu	mg/l	0,75	1,02	2
Mercury Hg	µg/l	<0,05	<0,05	1
Nickel Ni	µg/l	0,67	0,74	20
Lead Pb	µg/l	0,08	0,135	10
Antimony Sb	µg/l	<0,01	0,01	5
Selenium Se	µg/l	<0,4	0,4	10
Enterococci	CFU/100ml	0	0	0
Colony vorming units 22°C	CFU/ml	21	4	Without unusual changes
Coliform bacteria	CFU/100ml	0	0	0
Escherichia coli	CFU/100ml	0	0	0

Sampling for potassium, sulphate, sodium, boron, aluminium, arsenic, cadmium, chromium, copper, mercury, nickel, lead, antimony and selenium have not been required by the Decree No 82. However, the listed substances have been determined in the drinking water sources and the content of these does not change after going through filters.

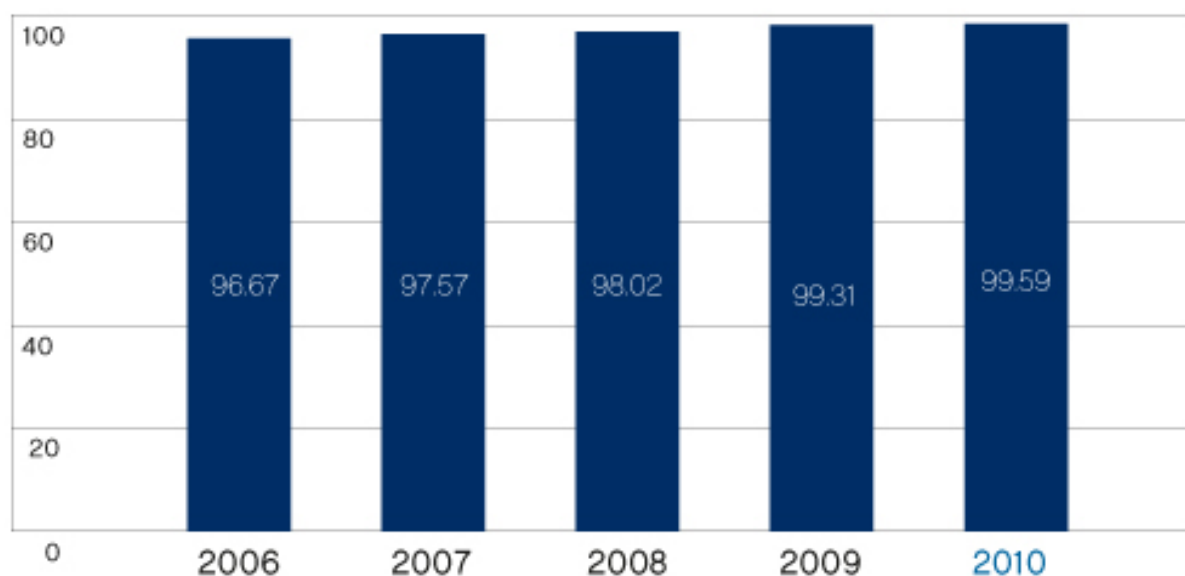
Measuring total organic carbon (TOC), alkalinity and total hardness in pumping stations is not required in the drinking water monitoring programme of Maardu.

WATER QUALITY AT THE CONSUMERS PREMISES

Company has analysed drinking water quality in compliance with Drinking Water Quality Monitoring Program for 2010-2013 approved by the Northern Department of the Health Board. During 2010 the Company took samples twice a month from sampling points agreed with the Northern Department of the Health Board. A total of 2,913 samples were taken from the city water network during the year. In 2010, 99.59% of all samples taken, including 99.97% of microbiological samples, complied with the requirements of Directive 98/83/EU and Minister of Social Affairs Decree No 82.

Water quality compliance with, with the Estonian Minister of Social Affairs Decree No 82 requirements that became fully effective from 01.01.2008

Compliance of water samples, %



WATER NETWORKS MAINTENANCE AND INVESTMENTS

Preventive works in the form of networks flushing and renovation of old water networks are carried out to maintain and improve the quality of drinking water used at homes of the customers. 165 km of water pipes were cleaned using the pressure washing method in 2010. Extraordinarily cold winter and high amount of snow constituted the main reason for a reduction in the volume of network cleaning compared to the previous years. Temperature below -10°C and lot of snow make the works very difficult. During this cleaning process, air is directed into the water pipes where it mixes with water, helping to remove sediments from

the walls of the pipes, which is one of the main methods for improving the water quality in distribution pipes.

Investments in replacing old water pipes and network extensions have facilitated improvement in water quality and more efficient usage of water resources. 16.7 kilometres of water pipes were renovated and 6.2 km of new pipes were constructed in 2010, creating the opportunity of connecting 126 new properties to the public water supply network.

Flushed water network

2006-2010, km

	2006	2007	2008	2009	2010
Kilometers	238	227	229	232	165

Water network reconstruction

2006-2010, km

	2006	2007	2008	2009	2010
Reconstructions	6.4	6.9	16.7	23.8	16.7

Water network extensions

2006-2010

	2006	2007	2008	2009	2010
Network extensions, km	0.8	2.6	3.0	5.5	6.2
Number of new customers given access to water network	21	26	86	80	126

USAGE OF WATER RESOURCES

Usage of water resources

Significant environmental aspects

Impacts

Metered and provided drinking water	Overview of the consumption of water resources
Interruptions to water supply	Decrease in the quality of life

2010 objectives and tasks

To use water resources sparingly +
To ensure compliance with regulatory requirements and requirements of the Services Agreement +
To maintain the level of leakages below 18% -
To effectively repair leakages on average in less than two days +

SPECIAL USE OF WATER

The activities of water undertaking in using water resources are regulated by the Water Act and its implementing provisions. For operating, a water company must have a permit for special use of water and pay a charge for the water resource used.

The permit for special use of water defines different activities, for instance the amount of water which the Company may extract, water quality monitoring requirements, requirements set for accounting for water extracted, the permitted limits of pollutants contained in effluent, pollutants monitoring requirements and measures reducing the impact of special use of water.

All requirements established in the permits for special use of water were met in 2010 except for the nitrogen content in the effluent. High concentration of nitrogen was caused by the extraordinary weather conditions and an increase in pollution load in 2010.

The fee for special use of water is paid for the amount of water taken into Ülemiste Water Treatment Plant and for water pumped out of ground water aquifers. In 2010 the fee for special use of water amounted to 3.37% of the operating costs.

Valid water permits of AS Tallinna Vesi

Permit	Valid until	Description of special use of water
Water Permit no HR1112 (L.VV.HA-194367)	31.10.2013	Saue City, Harju County Extraction of ground water from boreholes, over 5 m ³ /day. Collection of wastewater and directing wastewater to Paljassaare Wastewater Treatment Plant owned by AS Tallinna Vesi.
Water Permit no HR01037 (L.VV.HA-171414) With annex 03.12.2010	01.04.2013	Tallinn public water supply and sewerage system main licensed operating area. Tallinn surface water catchment system facilities area in Harju and Järva Counties Regulating surface water resources in water bodies of Ülemiste-Pirita-Jägala surface water system, water extraction from Lake Ülemiste, extracting ground water from Ordovician-Cambrian and Cambrian-Vendi aquifers through Tallinn public water supply and sewerage system boreholes, for discharging biologically treated effluent through a deep-sea outlet pipe into Tallinn Bay and for discharging mechanically treated storm water into the sea, Mustjõe Stream and Pääsküla Wetland.
Water Permit no HR0960 (L.VV.HA-138048)	31.12.2011	Tiskre Village, Harku Borough, Harju County Extraction of ground water from borehole, over 5 m ³ /day. Directing all wastewater to Paljassaare Wastewater Treatment Plant.
Water Permit no HR0961 (L.VV.HA-138050)	31.10.2011	Harku Village, Harku Borough, Harju County Extraction of ground water from borehole, over 5 m ³ /day. Directing all wastewater to Paljassaare Wastewater Treatment Plant.
Water Permit no HR0885 (L.VV.HA-47734)	23.03.2011	Maardu City public water supply and sewerage system main licensed operating area Extraction of industrial and drinking water from Cambrian-Vendi aquifers at the expense of 40 ground water deposits of Harju County in order to supply water to the institutions, enterprises and inhabitants of Maardu City, Kallavere and Muuga area, and to discharge industrial wastewater, storm water and excess water to the receiving waters. (The wastewater outlet on Vana-Narva road does not meet the requirements of the Water Permit. Actions to be taken to bring the outlet into compliance have been approved by the Environmental Board.)

USAGE OF SURFACE WATER RESOURCES

The Company receives surface water from an extensive water catchment system encompassing the river basins of Pirita, Jägala and Soodla River with a total area of ca 1,800 km², covering mostly the Harju sub-basin. The water catchment system consists on hydropoints constructed on rivers and of water reservoirs as well as the connecting canals.

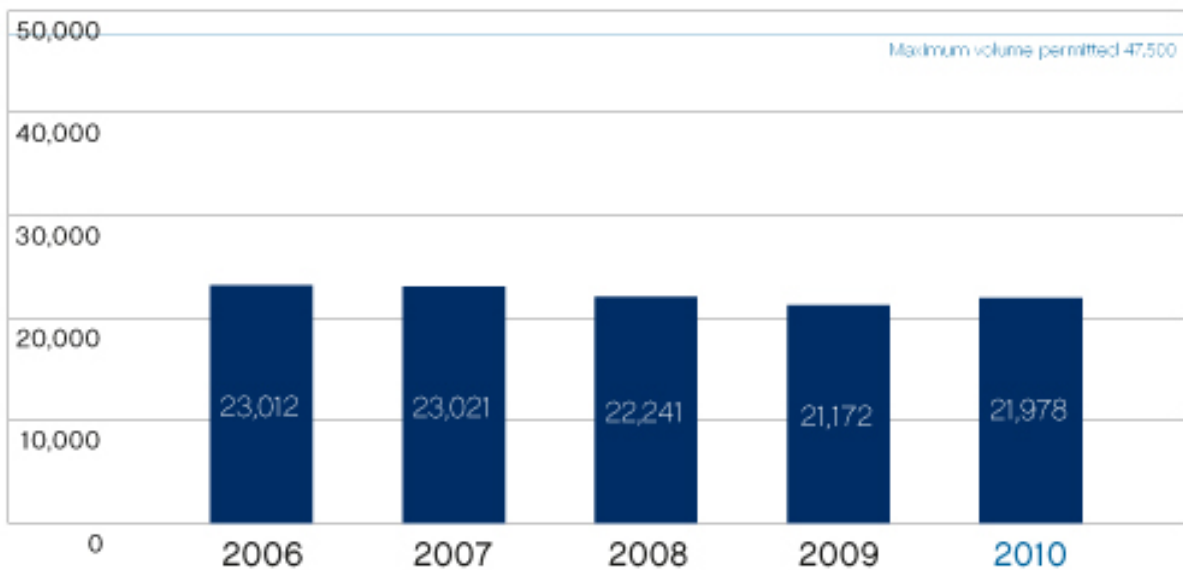
The most important water reservoir is the Lake Ülemiste with a net volume of 15,8 million m³ on a normal headwater level. Additional water reserves for dry periods have been accumulated to Paunküla water reservoir on the headwaters of River Pirita (9,9 million m³) and to Soodla water reservoir on River Soodla (7,4 million m³).

The extent of water resources in Tallinn's surface water catchment system primarily depends on the amount of precipitation and its distribution over the year. In a year of average rainfall approximately 50% of the possible water resources in the system are used up.

In the end of 2009 the water levels and runoff were high, which had a strong impact also on the water levels in early 2010 and the runoff of rivers in 2010 as a whole was higher than the long-term average. Territorial distribution of runoffs was very uneven. Even within the Tallinn surface water catchment area the monthly average flow volumes varied significantly during some summer months and were substantially lower than long-term average flow volumes. Water resources of Lake Ülemiste were supplemented from July till December mainly from Vaskjala hydrpoint from the account of the Pirita River. Water resources of Soodla water reservoirs were used from mid July till mid-August. Water reservoirs from Paunküla were not used in 2010.

Usage of surface water From Lake Ülemiste and compliance with special use of water permit no HR01037

thousand m³



In 2010, the Company used 624,149 m³ of water for its own use, which creates an ecological footprint of 46.99 ha/y (see page 65). Ecological footprint is not calculated for water production, because those numbers are included in the end-users' ecological footprint.

Continuous overview of the flow amounts allows the Company to use water resources in a more sustainable way. In order to regulate water resources in an optimal and precise manner, water metering points have been constructed to all hydropoints, allowing the measurement of both the flow amounts directed into canals as well as the so-called sanitary flow amounts remaining in the rivers. Measuring is carried out on a regular basis, following the requirements of the special use of water permit.

USAGE OF GROUND WATER

The Company regularly measures ground water levels in order to continuously control the state of Tallinn's ground water resources. Automatic hydrostatic pressure sensors, enabling the measurement of the ground water level, have been installed at all of the Company's operating ground water facilities. Measurement of the water level in boreholes shows an increase in the pressure level of the aquifers in use and thus also the recovery of the ground water resources.

The Company met all requirements established in the special use of water permits in 2010.

Usage of ground water and compliance with special use of water permits no HR01037, HR1112, HR0960, HR0961 and HR0885

2006-2010, m³

	2006	2007	2008	2009	2010
Actual usage by Tallinn	2,447,792	2,457,784	2,450,533	2,552,685	2,461,524
Incl from Cambrian-Vendi aquifer	2,130,310	2,134,427	2,168,265	2,186,521	2,042,743
Maximum volume permitted	6,880,250	6,880,250	6,676,945	6,676,945	6,676,945
Actual usage by Saue	249,298	247,553	214,028	202,621	222,473
Incl from Cambrian-Vendi aquifer	221,389	233,682	166,770	146,184	165,110
Maximum volume permitted	460,250	460,250	474,500	474,500	474,500
Actual usage by Tiskre	33,266	40,813	39,661	41,733	43,513
Maximum volume permitted	65,700	65,700	65,700	65,700	65,700
Actual usage by Harku* Settlement	20,810	32,308	6,372	703	0
Maximum volume permitted	21,850	51,100	51,100	51,100	51,100
Actual usage by Maardu City**				766,505	714,454
Maximum volume permitted				1,383,350	1,383,350

*In 2009, the Harku borehole pumping station was stopped, since the Harku settlements is now supplied with surface water from the Ülemiste water treatment plant.

**The Company signed in 2008 an agreement with the City of Maardu and AS Maardu Vesi for operating the public water supply and sewerage infrastructure assets in the City of Maardu and started its activity in summer 2009.

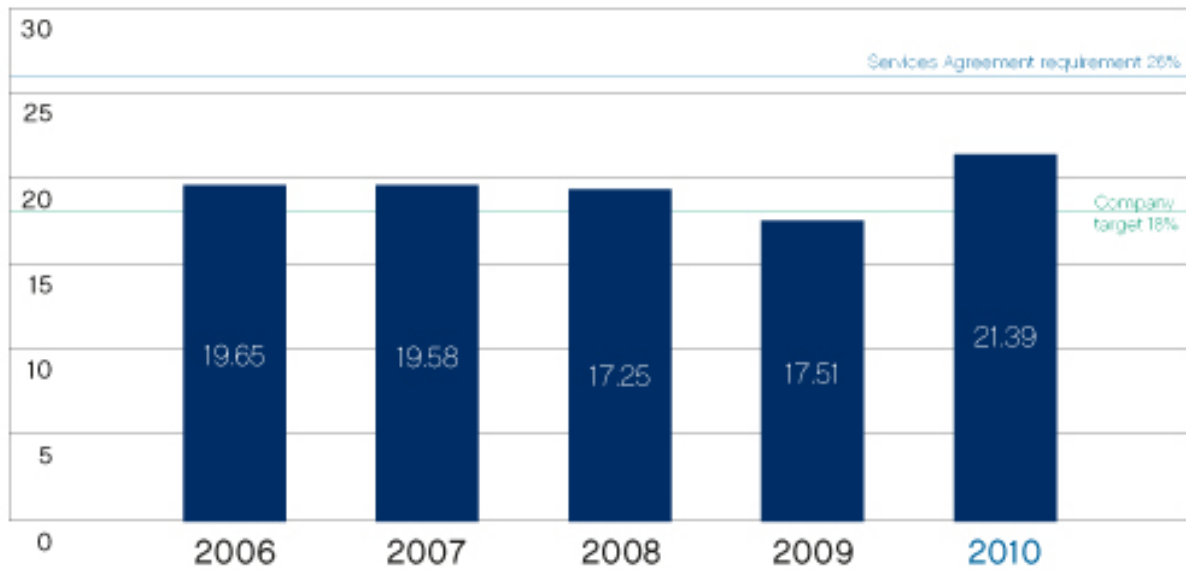
LEAKAGES AND WATER SUPPLY INTERRUPTIONS

Another important aspect of water usage is the reduction of water losses in the network. Water losses caused by leakages and the unmetered water volumes have increased during the year. Increase in water losses was impacted by the extraordinary weather conditions at a low temperature due to frozen ground and a very thick layer of snow. In 2010 the frequency of pipe burst increased in comparison with 2009 by 28%, which resulted in an increased number of leakages. Snow and the thickness of the layer of snow did not enable to find leakages fast. As all wells required for detecting the location of leakages were under snow during wintertime, a lot of additional time was spent on finding and opening these. Also due to the combined effect of cold weather and a lot of snow the time for repairing a leakage site increased. By the end of 2010 the Company achieved a leakage level of 21.39% which is better than the Company's commitment in the Service Agreement (26%). To achieve this, new leakage detection and remote reading devices were obtained and remote control system was upgraded. A new correlator for detecting leakages and acoustics equipment were obtained.

In 2010 the Company purchased three small water tanks with a volume of 0.5 m³. Small tanks enable to offer temporary water supply to customers fast and in a more flexible way even in case of water interruptions of shorter duration. Small water tanks can be transported by car instead of truck, and the volume of water not consumed is smaller if discharged into sewerage system. In addition the Company has 5 large water tanks with a capacity of 5 m³ and a truck carrying a water tank. In case house connection is closed for sensitive customers, if necessary, temporary water connections to water metering points are constructed and temporary water supply is ensured with an air-water pressure tank.

Leakages level 2006-2010

in percentage terms



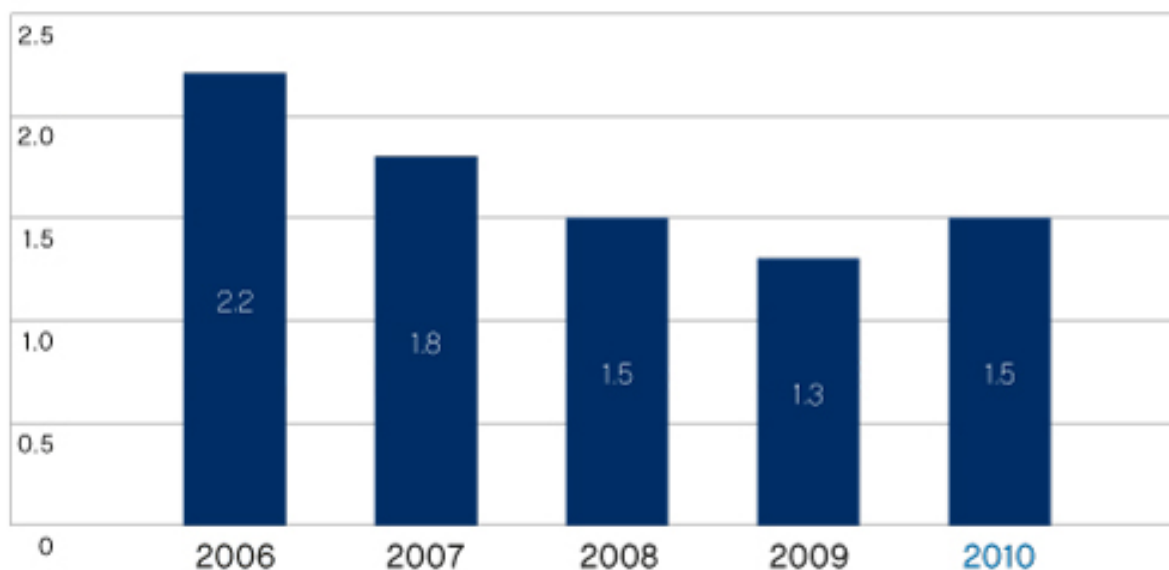
Quick discovery and elimination of leakages are essential in reducing the leakages level. Daily work is supported by an updated water supply network information system, leakages specialists have special equipment for leakage detection, and along with the network zoning and distance reading system this allows to detect possible water leakages on the network rapidly.

The optimum leakage level calculation made for Tallinn shows that the suitable indicator in our conditions falls within the range of 15-18%. The Company has set a target to reduce the leakage level again below 19% by the end of 2011. The leakage data has been compared to the Helsinki Region Environmental Services Authority (Helsinki seudun ympäristöpalvelut, hereinafter HSY), where the average leakage level has been ca 17%, however in 2010 it also increased up to 19.5%.

The Company will continue work in 2011 to reduce the leakages level in order to achieve the optimum leakages level. The optimum leakages level is considered to be the level where the further reduction of leakages would cost more than water production. Factors such as the cost of finding and repairing leakages and the cost of water production are taken into account in calculating the optimum leakages level.

Average time For liquidation of leakages 2006-2010

in days



It is important for customers to have a 24hour access to water with excellent quality indicators and right pressure. The likelihood of water interruptions cannot entirely be excluded. Nevertheless, it is possible to reduce the number and duration of interruptions and notify the customers in advance; however, in case of unplanned interruption it cannot always be done at the right time. The 2010 objective was to reduce the number of such cases, where the customers were not informed of unplanned interruptions beforehand, from 732 in 2009 to 699. In 2010, 355 interruptions occurred when the customers were not informed. This result is significantly well above the target. In order to improve the work organisation, thorough changes were made in the Company's structure. Amongst other things a Customer Operations Department, which is responsible for planning the works, was created. As a result of the improvement of work organisation, the advance notification of customers of planned activities on the network was also made more efficient.

WATER METERING

All customers of the Company have been equipped with water meters. In total over 21,000 water meters have been installed to customers' connection points, facilitating the reaching of more accurate accounting for the usage of water resources.

In 2005-2011 the Company transfers to the more reliable and accurate single jet class C water meters. As a result, the number of expert analyses ordered by customers for verifying the accuracy of the water meters has decreased. While a total of 540 expert analyses were carried out in 2007, this number was 391 in 2008, 487 in 2009 and 308 in 2010. The rise in 2009 is explainable by the fact that the new customers from Maardu City were highly interested in verifying the accuracy of their water meters.

The Company has the obligation to replace water meters every two years and the replacement of water meters takes place on the basis of a respective programme. The 2010 objective was to replace 11,220 water meters, which was achieved.

WASTEWATER COLLECTION

Wastewater collection

Significant environmental aspects	Impacts
Extensive floods	Pollution of the ground and sea water, danger to population's health, decrease in life quality, damage to the assets of the population
Opportunity to connect to the public wastewater network	Maintaining and improving the quality of life and the status of the environment
Over pollution payments	Influencing the customer towards retaining and improving environmental condition

2010 objectives and tasks

To ensure compliance at all outlets -
To reduce blockages to 1200 or less +
To carry out maintenance on 170 km of the sewerage network -
To rehabilitate or replace at least 5 km of the existing sewerage mains +
To complete network extension programme +

The main measures for ensuring the collection and discharge of wastewater are linked to preventive flushing of wastewater networks as well as sewerage and storm water networks reconstructions and extensions, additionally wastewater concentration levels are regularly monitored in order to prevent failures of the treatment process.

CLEANING AND MAINTENANCE OF THE WASTEWATER NETWORK

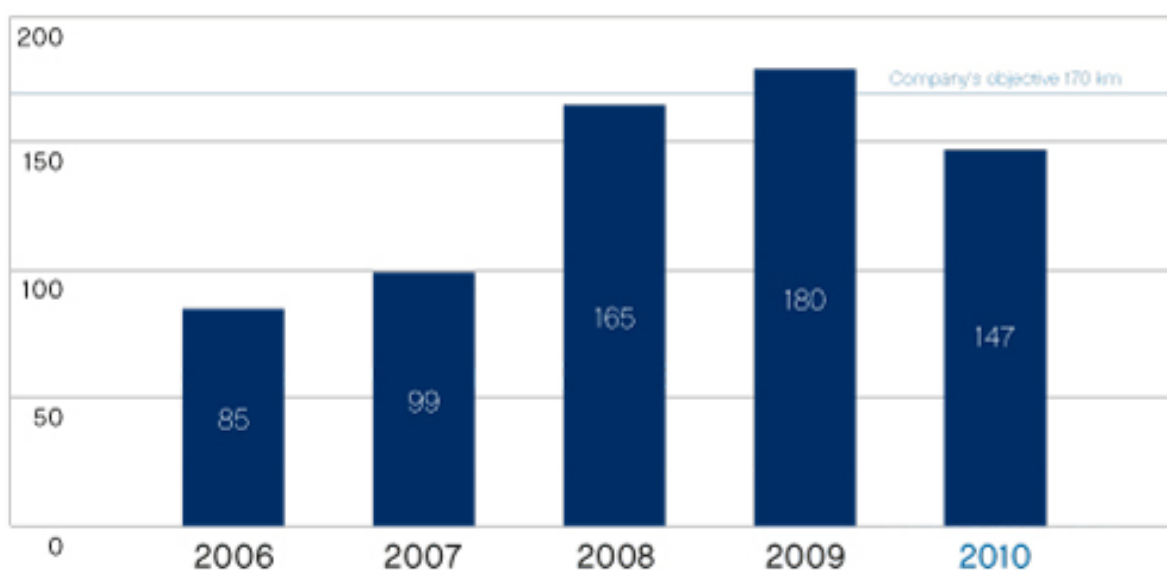
The purpose of wastewater network cleaning is preventive maintenance in order to avoid flooding and reduce blockages. At the same time it must be noted that pressure washing may not directly reduce the number of blockages as it depends on various factors.

Blockages are mainly caused by sediments settling in wastewater pipes. The lower water consumption of recent years has resulted in smaller wastewater flow amounts and flow speeds, which in turn increases the risk of blockages. Additionally the sewerage network extension should also be taken into account when assessing the total number of blockages. Earlier, the Company carried the flushing works on the pipes out itself. Since the launch of the affiliate Watercom OÜ, this service is outsourced to the affiliate.

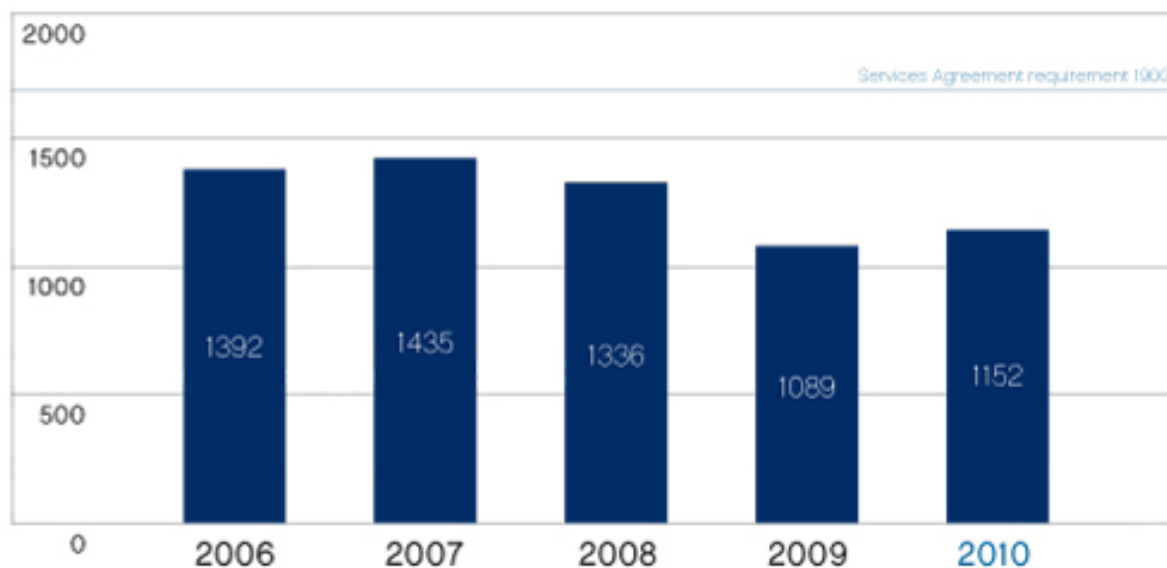
Despite the continuous expansion of the service area, the number of blockages is still maintained at a level lower than the set requirement, and the total number of blockages has decreased. One reason behind this is the systematic work on databases and increasing the amount of power-wash works carried out on the sewer systems, as well as the analysis, which is done after each blockage to identify and remove the reasons behind it. Unfortunately, number of blockages in 2010 was higher than in 2009. This is due to difficult weather conditions: 2010 winter was exceptionally cold and snowy, and summer drier and warmer than in previous years. Dry period in summer caused a situation where there was not enough water in wastewater pipes to clean the network and pipes began to block with sedimentations.

Wastewater network cleaned 2006-2010

km



Number of blockages 2006-2010



WASTEWATER NETWORKS RECONSTRUCTION AND NETWORK EXTENSIONS

Investments into the replacement of worn-out sewerage network and construction of new network contribute to the improvement of the quality of environmentally friendly service and to the creation of a safe opportunity to discharge wastewater for end-users who did not have the option so far.

In 2010 the Company kept on renovating the existing wastewater network and constructing new sewerage and storm water system.

In 2010 the wastewater network extensions were carried out in the districts of Nõmme, Kristiine, Pirita, Lasnamäe, Haabersti and City Center areas. The bulk of storm water network construction activities took place in Nõmme, Pirita, Haabersti and City Center areas.

Wastewater and storm water network reconstruction 2006-2010

km

	2006	2007	2008	2009	2010
Reconstructions	5.6	5.2	5.9	5.5	5.7

Wastewater and stormwater network extensions 2006-2010

	2006	2007	2008	2009	2010
Sewerage network extensions km	6.4	13	34.1	42.8	41
Storm water network extensions km	5.3	11.5	14.3	8.2	14.6
Number of new customers given access to wastewater network	310	618	1,204	1,423	1,176

CONTROLLING OVERPOLLUTION CAUSED BY CUSTOMERS

In order to ensure acceptable concentrations of pollution in the wastewater reaching the wastewater treatment plant, the Wastewater Inspectorate of the Company regularly monitors and checks the compliance with regulatory requirements at (industrial) commercial sites where wastewater is discharged into the public sewerage system. The majority of the industrial wastewater in the sewerage system is from the food processing industry.

The Wastewater Inspectorate has the right to take wastewater samples in order to check the wastewater facilities on sites and to identify overpollution caused by customers. In 2010, altogether 1,402 wastewater samples were taken at customers' premises.

Based on the results of wastewater sampling the pollution group is determined, providing the Company with the right to charge the customer for over pollution fee. In 2010, the Wastewater Inspectorate made 477 control raids to the sites. Throughout these raids, 359 customers who had caused overpollution were identified and all together 1176 over pollution invoices were issued to the customers.

Information on the average pollution indicators of major industries is also regularly submitted to the Environmental Board's Harju-Järva-Rapla regional department.

STORM WATER OUTLETS

In 2010 the Company monitored, pursuant to the requirements set forth in the water permit, 21 storm water outlets, the largest of which are the Lasnamäe, Harku and Mustoja outlets. The outlet taken over from the Port of Tallinn in Lootsi str. was added in 2010.

Samples for determining pollutants are taken regularly from storm water outlets pursuant to the sampling procedure determined in the special use of water permits HR01037 and HR0885. Upon agreement with local government four storm water outlets have been equipped with local treatment facilities such as sand and oil traps, in order to avoid possible environment pollution. Maintenance and cleaning of traps takes place regularly once a month.

The requirements set forth in the water permit were met in 2010.

In total 5,698,232 m³ of stormwater, carrying pollutants to the environment, was discharged through these outlets in 2010. Pursuant to Environmental Charges Act pollution charge was not applied.

Storm water volume 2006-2010

m³

	2006	2007	2008	2009	2010
Storm water volume	3,032,757	5,180,175	5,414,016	5,468,711	5,698,232

Pollutants From the main outlets 2006-2010

in tons

	2006	2007	2008	2008	2010
Suspended solids	43	89	109	90.9	110.6
Oil products	3.4	3.6	4.5	3.4	0.4

WASTEWATER TREATMENT RESULTS

Wastewater treatment results

Significant environmental aspects

Impacts

Wastewater compliant with the requirements discharged into the sea	Retaining the condition of sea water
Wastewater non-compliant with the requirements discharged into the sea	Deterioration of the condition of sea water
Flooding of wastewater collection area	Deterioration of human environment and sea water, pollution of soil

2010 objectives and tasks

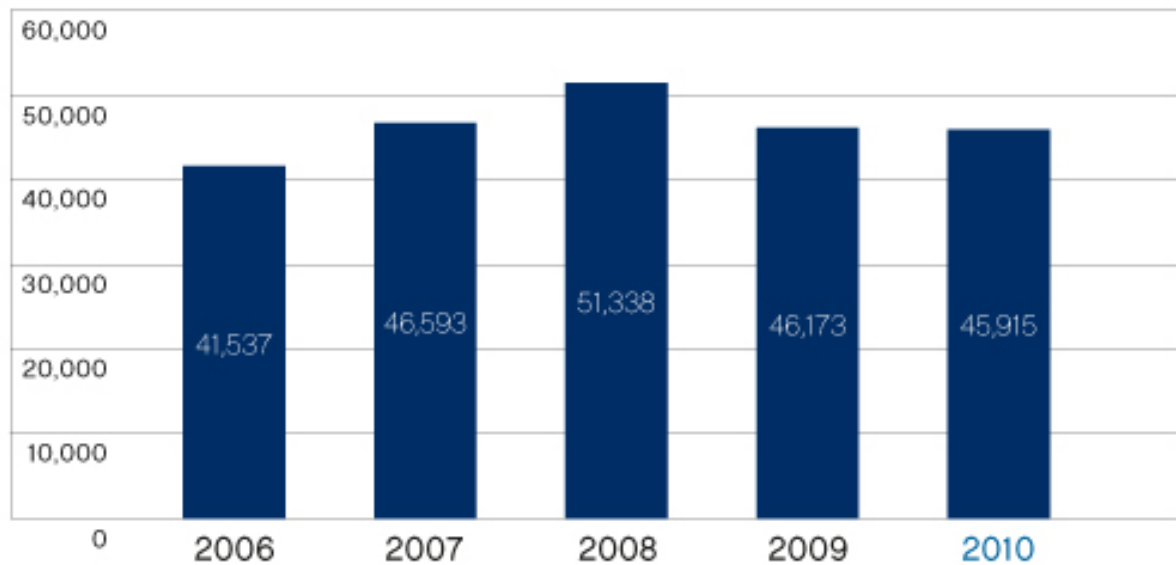
To ensure full wastewater quality compliance at all outlets -
To commence construction of nutrient removal treatment plant +

45,914,796 m³ of wastewater was treated at Paljassaare Wastewater Treatment Plant in 2010.

In 2010, wastewater volumes were the same than in 2009 (variance 0.5%). At the same time, the daily volumes fluctuated a lot – during the thaw period in the end of March/beginning of April, the maximum daily flows exceeded 400,000 m³/d, whereas the daily storm water flows in the 3rd and 4th quarters stayed mainly below 100,000 m³/d. The thunder storms, which occurred in the 2nd half of the year caused short-term flow peaks, which caused hydraulic shocks in treatment facilities.

Treated wastewater volume 2006-2010

thousands m³/year



The quality of water discharged to the sea is set by legislation and the special use of water permit HR01037. The concentration of pollutants in sewage led to the treatment plant and in the wastewater led from treatment, as well as the efficiency of the treatment process are monitored in order to assess wastewater quality. The following are the most significant indicators monitored:

- Biological oxygen demand (BOD₇) shows the amount of oxygen required for the defined biological decomposition of organic matter in the course of 7 days;
- Total phosphorus (P_{tot}) and total nitrogen (N_{tot}) are elements contained in nutrient salts, which increase the growth of plankton in water. If the content of nutrient salts is too high, such growth can be so strong that oxygen is used up and a shortage of oxygen arises;
- Suspended solids (SS) shows the volume of solid matter in water which is caught in a filter with a defined mesh size;
- Chemical oxygen demand (COD-Cr) is a measure of the decomposition of organic matter, measured as the consumption of oxygen in chemical oxidation of all organic matter in water;
- Oil products show the amount of light (like petroleum) and heavy (like heavy fuel oil) oil products

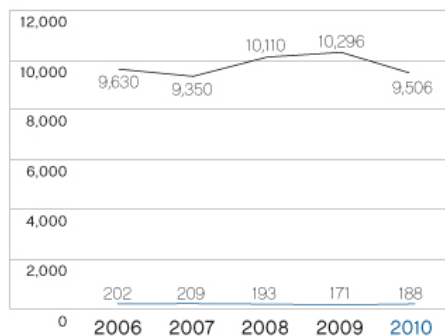
About pollution loads: content of organics in wastewater (BOD₇, COD) have decreased by 6-8% compared to the previous year, the amount of phosphorus was equal to the previous year, the amounts of total nitrogen and suspended solids have increased by 3-5%. At the same time, the daily pollution loads were still uneven, varying by 3-6 times for different pollutants and

the high peaks of pollution loads are still related to heavy rains, which refers to the fact that the pollutants are washed with storm water from the City's territory into combined sewer system. The wastewater laboratory conducted ca 43,333 analyses in 2010.

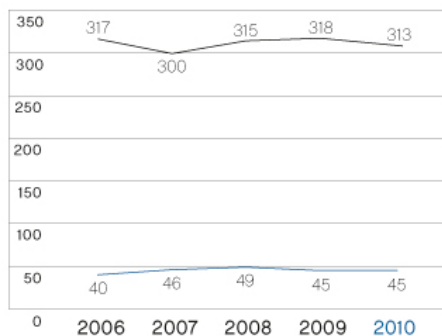
Amounts of pollutants coming into the Treatment Plant and discharged into the sea 2006-2010

in tons

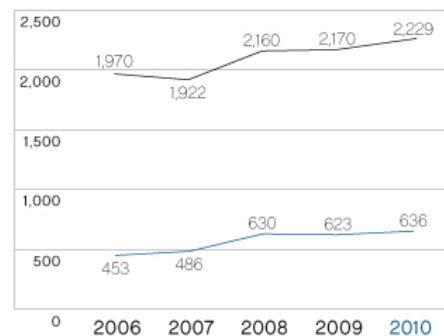
BOD₇



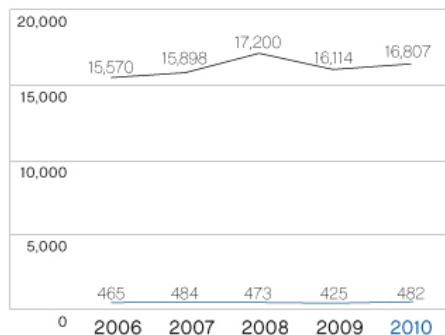
P_{total}



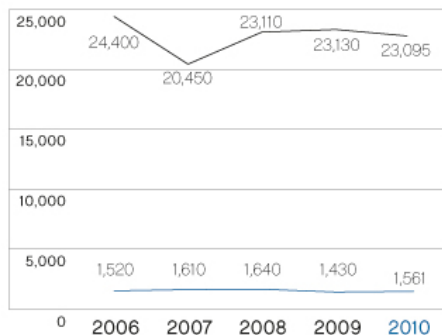
N_{total}



SS



COD-Cr



— Influent
— Effluent

In the reporting year, the operation in all stages of the treatment process was continuously improved, in order to achieve maximum treatment results in the conditions where the pollution loads (especially for nitrogen compounds) exceed the process capacity. Despite the high treatment efficiency, which was achieved with excellent operating and without any limits to chemicals and power consumptions, the stretched target for the nitrogen compounds was not achieved in the 2nd, 3rd and 4th quarters, neither was the compliance for the nitrogen compounds as an annual average required by the law achieved.

The main reasons for not achieving the compliance lied are the increased nitrogen load compared to 2009 and unfavourable weather conditions – low flows in turns with heavy rains, which caused hydraulic shocks and brought along high peaks in pollution loads.

The decrease in the value indicating the pollution load of oil products both in the water coming into the plant and exiting the plant, is not caused by a smaller pollution load but by the change of an analysis method. The gravimetric method (SFS 3009:1980) used previous years gave excessively high results at low concentrations, resulting in a higher than actual estimate of oil pollution. The new method using gas chromatography (EVS-EN ISO 9377-

2:2001) implemented in 2010 is significantly more sensitive and provides considerably more reliable results at low concentrations.

Due to the increasing trend in pollution loads, the Company started with compiling the design and procurement for the technological process of the 3rd treatment stage based on biofilter in 2009. Considering the Company's growth strategy, the Tallinn Public Water Supply and Sewerage System Development Plan, as well as the decision taken by HELCOM, the Company started the construction of the 3rd treatment stage in 2010. The execution of the project, completion of the test period and commissioning of the 3rd treatment stage is planned in the 3rd quarter of 2011.

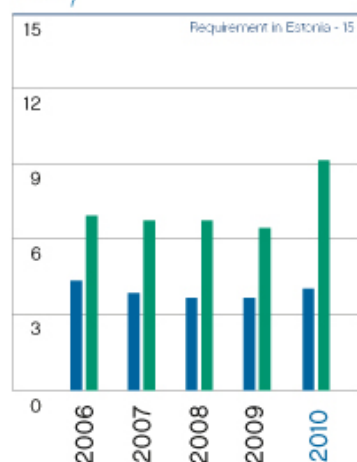
The treatment results can also be compared to larger Estonian water companies and our close neighbour HSY. However, differences in the treatment technology and, in the case of Helsinki, also in the regulatory environment must be taken into account when comparing the figures.

The treatment results (exl. total nitrogen) of 2010 were in compliance with the HELCOM requirements, which are similar to the requirements set by legislation. The Helsinki Commission, or HELCOM, organizes intergovernmental cooperation between countries located round the Baltic Sea in order to protect the Baltic Sea environment from all sources of pollution.

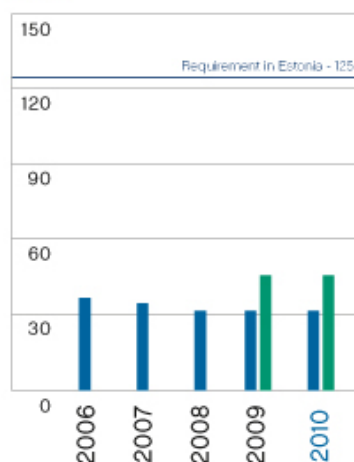
Average pollution indicators in treated wastewater 2006-2010

compared to regulatory requirements and the results of HSY*, mg/l

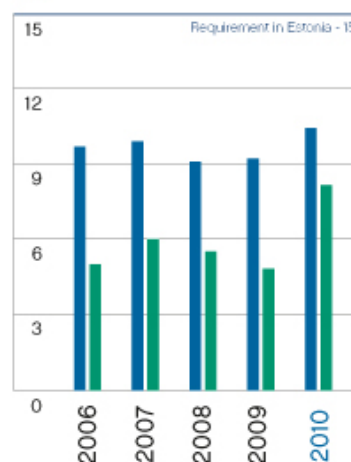
BOD₇



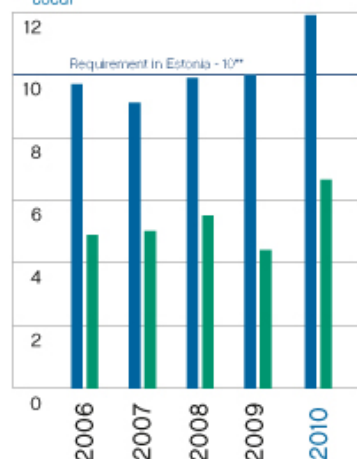
COD



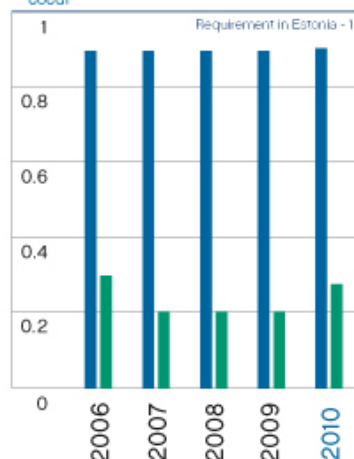
SS



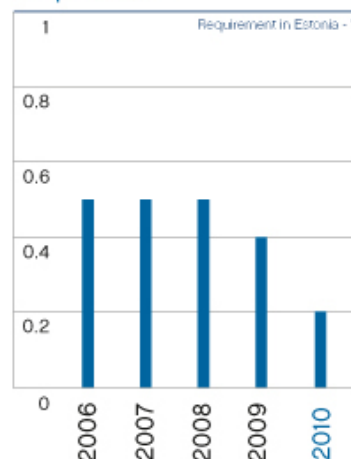
N_{total}



P_{total}



Oil products



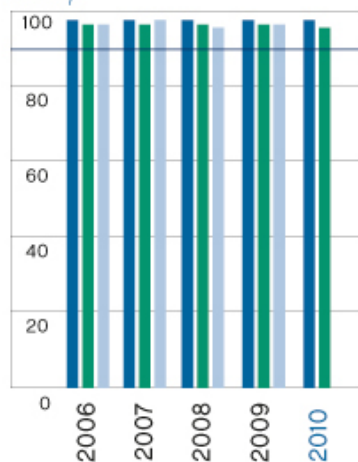
*Until 2009, the results were compared to those of Helsingi Vesi Oy, which since 01.01.2010 operates under the Helsinki Region Environmental Services Authority

**In line with the applicable legal acts, the compliance of total nitrogen has not been analysed at the wastewater temperature below 12°C.

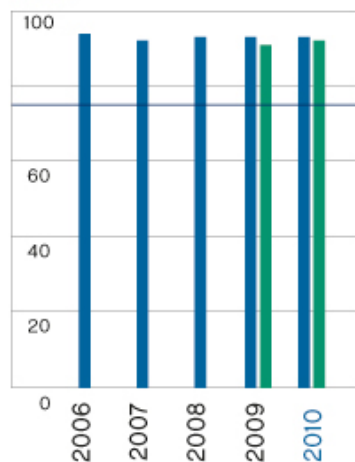
Wastewater Treatment Plant treatment efficiency 2005-2009

In percentage terms, compared to the regulatory requirements, Estonia's average results* and the results of HSY

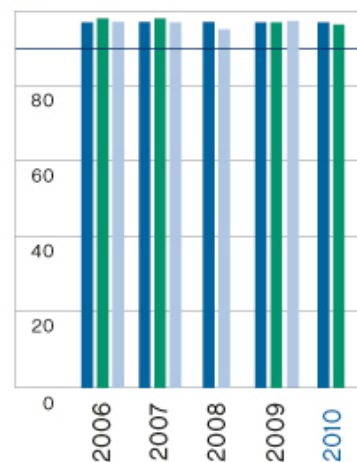
BOD₇



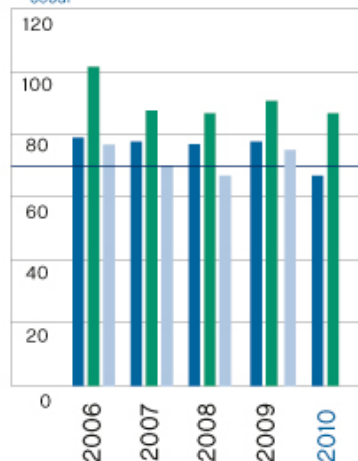
COD



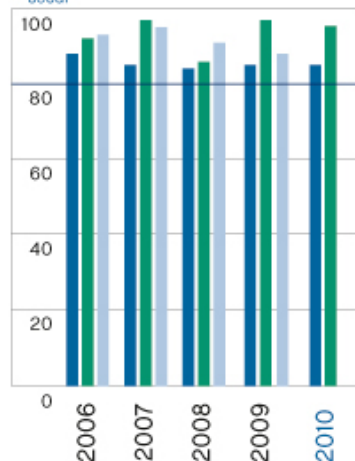
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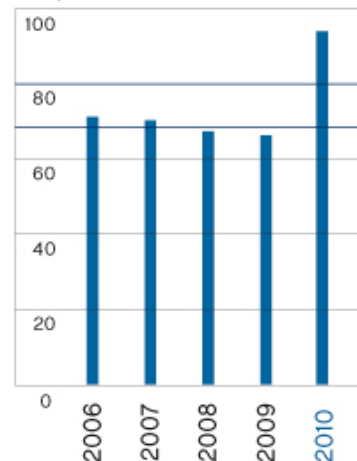
N_{total}



P_{total}



Oil products



- Tallinn
- Helsinki
- Estonian average
- Minimum requirement in Estonia

* The most recent data on Estonia's average are available for 2009. The calculation is based on the data from the five largest water companies in Estonia.

OUTLETS TO THE SEA

No untreated wastewater was discharged into the sea in 2010.

Throughout the year, 173,941 m³ of highly diluted wastewater, which underwent mechanical treatment, was discharged to the sea through the deep-sea outlet due to the shock loads, which exceeded the biological treatment capacity. The majority of partly treated wastewater was conducted to the sea in the end of the 1st quarter and in the beginning of the 2nd quarter during the thaw period, the rest of the volume during some days of heavy rains, i.e. in extraordinary weather conditions.

Wastewater Treatment Plant overFlows 2006-2010

m³ /year

	2006	2007	2008	2009	2010
Untreated wastewater discharged to the sea	0	0	12,489	0	0
Partly treated wastewater discharged to the sea	66,000	395,810	61,386	64,181	173,941

ENVIRONMENTAL CHARGES

The Company has the obligation to pay a pollution charge for pollutants discharged to water bodies. Taxable pollutants contained in treated effluent and storm water, which are established for the specific outlet in the special use of water permit, are included in the pollution charge calculations.

Both the receiving water coefficient of the specific outlet as well as compliance with the pollutant limit value in effluent are taken into account in pollution charge calculations. In case the limit value is exceeded, a ten-fold pollution charge is set for the exceeding amounts of pollutants; if the pollutant levels remain below the limit value or are equal to it, legislation foresees a possibility to apply for a 50% reduction of the pollution charge. A reduction of the pollution charge is only possible when the results of all outlets comply with the water permit requirements.

In 2010 the Company had a possibility to apply for a 50% reduction of the pollution charge for one quarter. The pollution charge amounted to 9.12% of operating expenses compared to 4.85% in 2009.

CHEMICALS HANDLING

Chemicals handling

Significant environmental aspects	Impacts
Drinking water compliant with requirements	Retaining and improving life quality
Wastewater compliant with the requirements discharged into the sea	Retaining the condition of sea water

2010 OBJECTIVES AND TASKS

To minimise the usage of chemicals -
To reduce the risk of chemical accidents or emergencies +

The Company uses approximately 450 hazardous and less hazardous chemicals in its operating activities. On one hand chemicals become hazardous primarily due to their characteristics, which pose a danger to the population and the environment, on the other hand, the level of hazardousness depends on the amount of chemical used.

Large amounts of hazardous chemicals are used, above all, at the Company's treatment plants. The amounts of chemicals used at the treatment plants predominantly depend on the volume and characteristics of the water reaching the plants, which, in turn, depend on weather conditions in the case of surface water and on the level of pollution in the case of wastewater.

WATER TREATMENT CHEMICALS

CHLORINE

Under the Chemicals Act the Company has been classified as a category B Company with risk of a major accident due to the large amounts of chlorine used in the water treatment process.

In the water treatment process water is disinfected, so that the water would be safe to human health. The most common disinfectant in use is chlorine, which is effective and has a longer-term effect in the water distribution network. As a chemical, chlorine that is a poisonous gas, is heavier than air, causes irritation, has a corrosive effect and affects mucous membranes both internally and externally. Thus in the case of a chlorine emergency the people in the affected area may suffer serious damage to health or die.

The likelihood of accidents involving chlorine has been minimized by applying all necessary safety requirements.

A crisis action plan has been put in place in order to be able to liquidate an unlikely but still possible chlorine emergency. In addition to the annual instruction and practical training on safety of chemicals given to the employees, practical trainings of chlorine emergency liquidation are frequently carried out in cooperation with the Rescue Centre. In 2010, the training on



emergency situations involving chemicals was organised as a joint training between Northern-Estonia's Rescue Centre, the Alarm Centre of Northern Estonian Centre, Tallinn Emergency Medical Care Centre and Ülemiste Water Treatment Plant. The training was aimed at practicing cooperation with the staff on site as well as the coordination between different institutions in managing the elimination of an accident involving hazardous substances.



OZONE

The usage of chlorine has decreased considerably over the past decade. The main reason behind the reduction is the replacement of water prechlorination with ozonation. Ozone effectively breaks down organic matter and disinfects water. Ozone is produced locally in the Company and only in amounts needed. Thanks to the closed process and the fact that no stock is kept, the risk for the environmental is minimal.

An ambient air pollution permit has been issued to the Company for limiting the residual ozone emissions and the permit was renewed in 2010 (see more details on page 74). A thermic destructor of residual ozone has been integrated into the process in order to meet the requirements of the ozone plant pollution permit. With temperature increasing, residual ozone emitted from the system is in turn broken down into oxygen and thus no ozone is emitted into ambient air. 100% of the residual ozone was broken down in 2010.

COAGULANTS AND POLYMERS

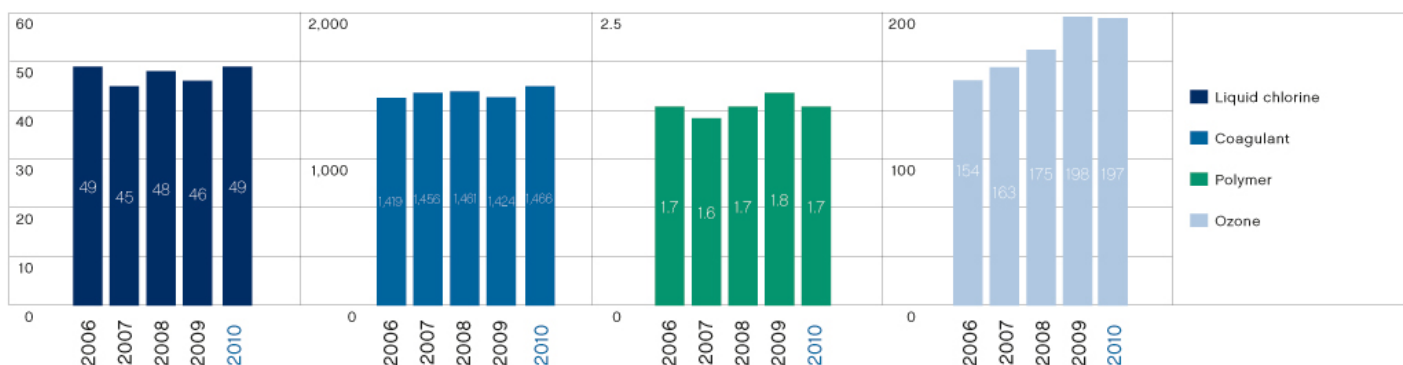
Significant amounts of coagulants and polymers, which help to remove the particular matter, suspended solids, etc. from water, are used in the treatment process. Both coagulants and polymers are used in liquid form. These do not possess as toxic characteristics as chlorine and provided that the safety requirements are met, they do not pose a danger to the environment or the population.

USAGE OF WATER TREATMENT CHEMICALS

Despite the very different characteristics of water and the highly variable weather conditions the usage of chemicals has remained relatively stable. Chemicals usage is directly depended on the surface water quality. The Company is obliged to ensure that the quality of supplied water complies with legal requirements and regarding some parameters, as set out in the objectives of the Company, the legal standards are to be outperformed. In 2010, the Company set an annual target for reducing the content of organic matter in drinking water and the Water Treatment Plant reached this target. Additional amounts of treatment chemicals and optimum treatment process are required to achieve better performance. Although the raw water quality in Lake Ülemiste was poor, the doses of chemicals used/m³ in the first half of the year stayed in the same range as in 2009, however towards the end of the year it was possible to somewhat reduce the doses. The amounts of chemicals used were higher than in 2009 due to a higher volume of drinking water treated.

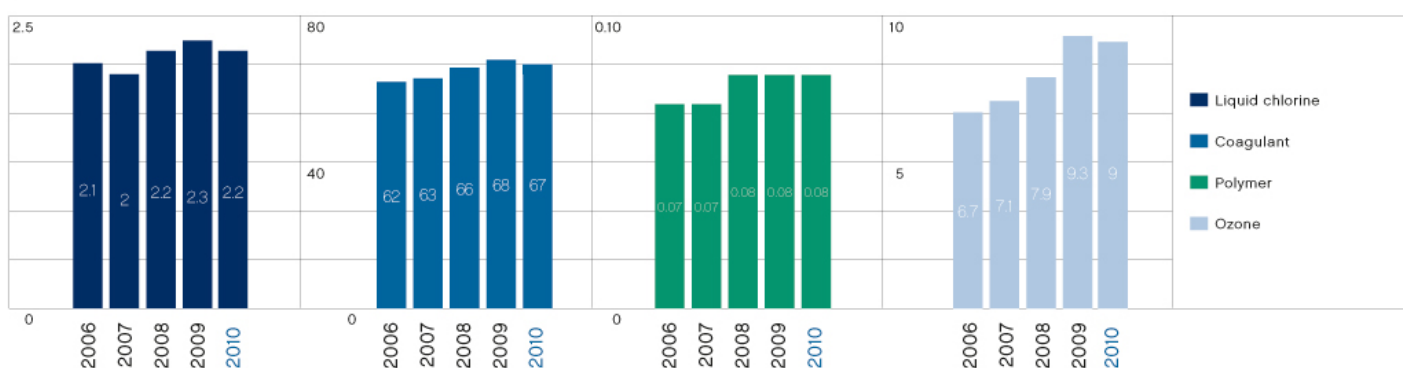
Usage of water treatment chemicals 2006-2010

in tons



Average usage of water treatment chemicals per unit of production 2006-2010

g/m³



WASTEWATER TREATMENT CHEMICALS

METHANOL

Due to the methanol used in wastewater treatment, the Company has been classified as a hazardous company on the basis of chemical legislation. Methanol usage was started in 2005 in connection with the nitrogen removal activities of the bacteria participating in the biological treatment process.

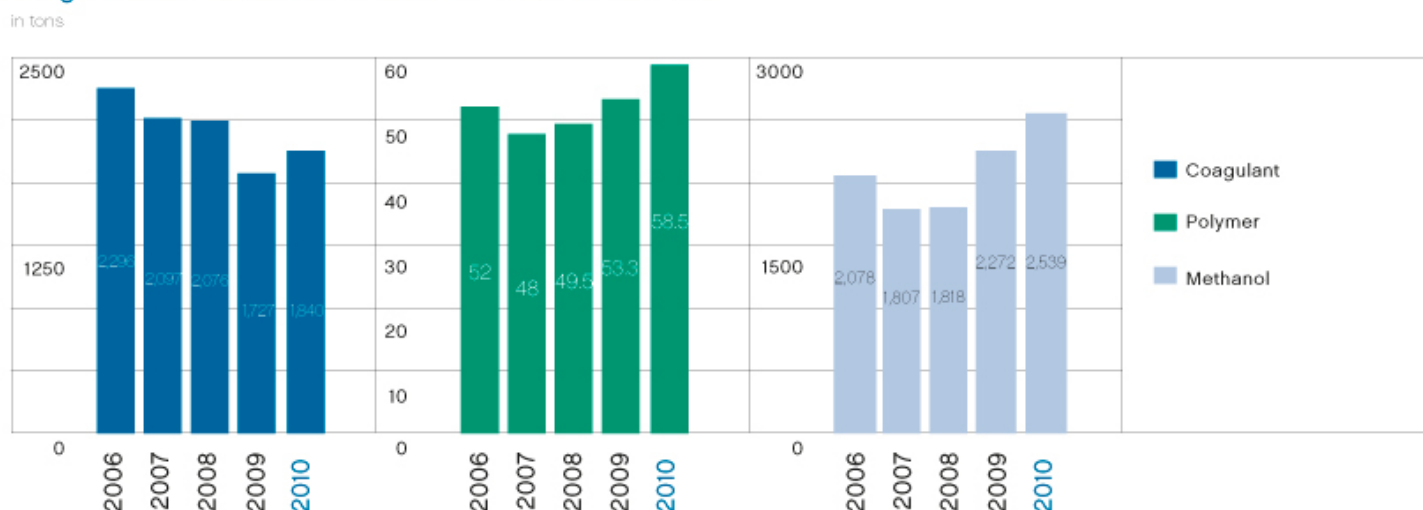
COAGULANTS AND POLYMERS

Significant amounts of coagulants and polymers are used in the wastewater treatment process. Coagulants are used for the chemical processing of wastewater to remove phosphorus. Polymers are used to charge the qualities of sediment and adding them makes it easier to remove water from the sludge. Provided that safety requirements are followed, these are not hazardous to the environment or the population.

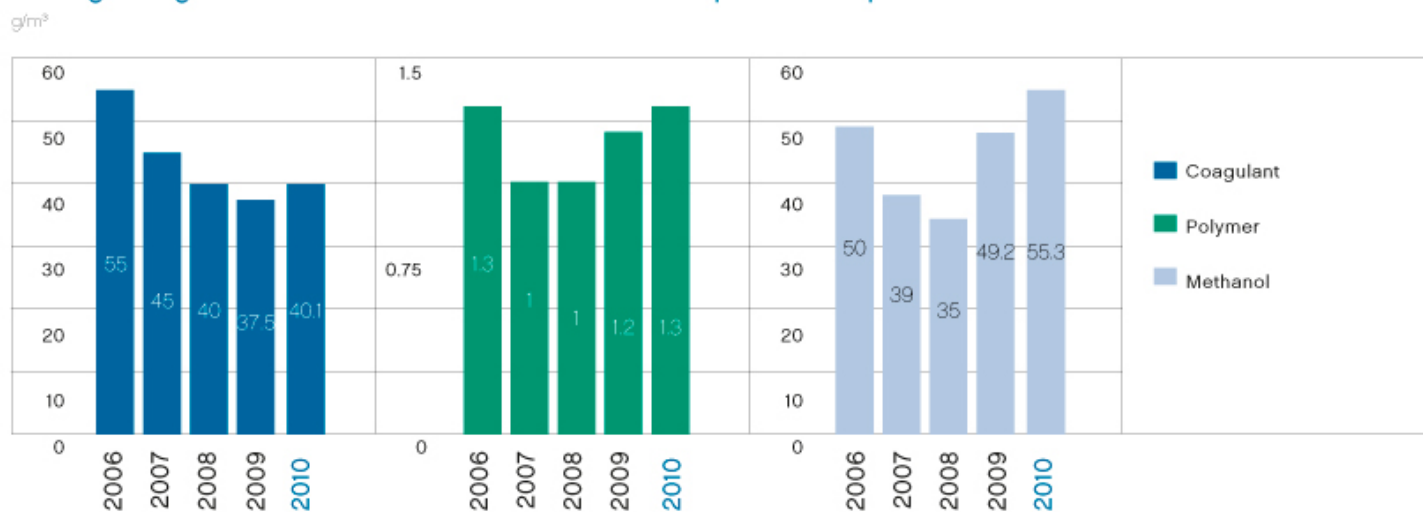
USAGE OF WASTEWATER TREATMENT CHEMICALS

Amount of coagulant and polymers used in 2010 was somewhat higher than in 2009 when it was optimal. Higher use methanol was due to the need to achieve maximum treatment results while the incoming nitrogen pollution loads exceeded the process capacity.

Usage of wastewater treatment chemicals 2006-2010



Average usage of wastewater treatment chemicals per unit of production 2006-2010



ENSURING CHEMICALS SAFETY

The likelihood of accidents involving chemicals has been minimized, as the chemicals handling systems are compliant with the security and safety requirements.

The necessary conditions for the storage and use of all chemicals have been created, also the information from the chemicals safety data sheets, the regulatory requirements and the safety instructions are followed. Chemicals safety data sheets are available in the Company both electronically as well as in hard copy at the handling sites of the given chemical.

Absorbents and personal protective equipment are also available at the chemical handling sites. The sites for handling hazardous chemicals are equipped with automated alarm and degassing system for the early detection and liquidation of possible leakages.

The Company has established procedures for ensuring the training of employees and the liquidation of emergencies. Provided that the security and safety requirements are followed, the likelihood of chemicals emergencies (chlorine, methanol, biogas) with serious consequences to human health and the environment is small. As a rule, chemicals emergencies constitute smaller leakages, which do not escape the purposefully adapted production premises and do not damage the environment or people.

There were no reported chemicals accidents in 2010, which would have caused damage to people or the environment.

WASTE MANAGEMENT

Waste management

Significant environmental aspects	Impacts
Consumed sludge	Reducing and recycling of waste, improving the qualities of soil
Recycled soil and asphalt	Reduction of waste in the landfill, saving natural resources

2010 OBJECTIVES AND TASKS

To reduce the waste produced –
To continue modernisation of the mechanical treatment process and reduce wastewater treatment waste taken to landfill +
To establish medium and long term sludge recycle outlets +
To recycle all sludge +

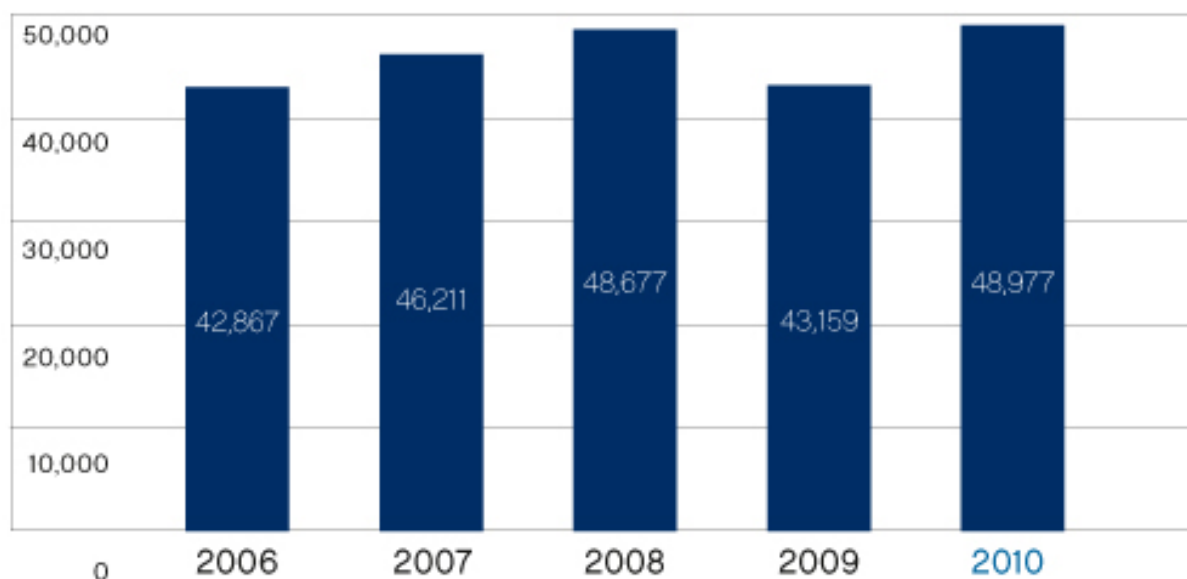
A total of 48,977 tons of waste, which is over 5,000 tons more than during the previous year, was produced in Company in 2010. There is no separate record kept for the waste produced by the subsidiary, these numbers are included in the general calculation of the Company.

In 2010, mixed municipal waste created an ecological footprint of 690.5 ha per year, in 2009 it was 585.51 ha per year.

Most of the waste produced is non-hazardous waste. The majority of Company's waste is produced at the Wastewater Treatment Plant and in the networks department.

Waste produced 2006-2010

in tons



WASTE RELATED TO WASTEWATER TREATMENT

The largest share, i.e. over 70% of none-hazardous waste was wastewater sludge as a by-product from the wastewater treatment process. Other treatment process related waste such as waste from screens and sand traps' sludge is also produced in significant amounts.

The amount of sludge, but also of waste from screens and sand trap grids, depends directly on the amount of incoming wastewater, the weather conditions and the efficiency of the city's road cleaning service. The amount of sludge was more in 2010, but waste from screens was collected less than in 2009.

All sludge is reused, the Company stopped depositing it to landfill in 2003. In addition to wastewater sludge processing, possibilities for additional treatment of other waste created in wastewater treatment and reduction of waste going to landfill are explored. The possibility of washing screen waste and sand trap's sludge produced during mechanical treatment instead of transportation to landfill was also considered.

In 2008 one screen waste press with a washer was installed for testing at the screens used for removing large waste. Testing showed that it is reasonable to systematically regulate the volume of water required for washing the waste and it was decided to combine the

employment of waste pressed with washers with the entire mechanical treatment reconstruction project. The design stage of this project, aimed at reducing the volume of waste and increasing the efficiency of mechanical treatment, has been completed and the implementation of the project was commenced in 2010.

EXCAVATION WASTE

The amount of excavated soil and stones form the bulk of the waste produced at networks maintenance and repair works. The amount has increased in recent years in connection with the increase in the number of leakages and in connection with the redaction Tallinn City Council Regulation No 28 of 20.05.2010 of Tallinn City Excavation Works Regulation enforced on 29.05.2010, which set an obligation on the performers of excavation works to carry out asphalt reinstatement works in a larger volume. In connection to that also the volumes of asphalt waste increased.

SORTED OFFICE WASTE

In 2010 the Company continued to separate paper and cardboards as well as packages from mixed municipal waste, in order to allow further recycling and use. The proportion of electronic bills to customers was increased and double-sided printing was made automatic, where possible, in order to reduce the amount of paper used. In 2010, wastepaper and cardboards created an ecological footprint of 34.3 ha per year, in 2009 it was 31.85 ha per year.

The Company also collects biodegradable waste separately from mixed municipal waste since 2008 in order to ensure compliance with legislation.

HAZARDOUS WASTE

The share of hazardous waste of all waste is small, below 1%, and its amounts have remained stable over recent years. The largest category of hazardous waste is old oil and oil waste, which is the result of maintenance works in machinery and equipment.

Similarly to the recent years, the proportion of reusable waste from ordinary waste is over 90%, with both sludge reuse and reusable waste delivered to partners taken into account.

Types and amounts of the more significant waste 2006-2010

in tons

	2006	2007	2008	2009	2010
Mixed municipal waste	149	134	115	145	171
Paper and cardboard	11	14	14	13	14
Packages	1.4	2	4	4.7	4.7
Biodegradable waste	-	-	2.5	5.2	5.4
Waste from screens	280	275	286	337	303
Wastewater sludge	35,434	33,834	35,691	31,087	33,885
Sandtraps grid	288	957	1,105	975	716
Excavated stones and soil	6,000*	10,432	10,334	9,569	11,750
Asphalt waste	301	489	1,021	947	1,790
Mixed building waste	209	31	33	43	18
Concrete and bricks	36	8	48	29	40
Metal scrap	39	28	14	0.5	26.7
Hazardous waste	4	3.5	5	4	3.5
Other waste	115	1.5	4.5	1	250.2**
TOTAL	42,867	46,209	48,678	43,159	48,977

Possible to reuse

* Estimated volumes

** Includes 248 tons of mineral snowcleaning waste

SLUDGE REUSAGE

The main part of recycled waste was wastewater sludge. Sludge mixed with peat, i.e. the sludge mixture, can be used for landscaping and horticulture. Sludge mixture is prepared on 14 ha of composting fields constructed on the territory of the wastewater treatment plant, a part of the sludge is also transported to the Company's field in Liikva.

The Wastewater Laboratory monitors the sludge mixture quality on a regular basis. The results of analyses confirmed the compliance of the sludge mixture with regulatory requirements. 33,807 tons of sludge mixture was sold to customers in 2010.

RESEARCH INTO SLUDGE REUSAGE POSSIBILITIES

Based on the studies to date, the peat soils of bogs are the most suitable soil for afforestation. The tolerance of different tree species towards the amount of sludge used differs, being higher among bigger plants with a stronger root system. The main factors hindering tree growth in bogs are the insufficient air content of the soil, an excess amount of sludge as well as wild animals, to whom the trees in areas processed with sludge serve as a tasty forage.

WASTE PERMITS

Waste permits

Permit	Valid until	Description of waste permit
Waste Permit no L.JÄ/317241	09.09.2014	Issued for recycling stabilised waste in Paljassaare regarding part of stabilised waste, domestic wastewater sludge and biodegradable waste.
Waste Permit no L.JÄ/317829	30.12.2014	Issued for recycling stabilised waste and for transporting waste to Liikva as well as for recycling biodegradable waste.

The conditions of waste permits related to sludge recycling were met in 2010.

Compliance with Paljassaare waste permit L.JÄ.HA-317241

in tons

Type of waste	Permitted	Actual				
		2006	2007	2008	2009	2010
Domestic wastewater treatment sludge	450,000	35,434	33,834	35,691	31,087	30,986
Stabilised waste	45,000	25,935	24,429	26,270	16,784	20,480
Biodegradable waste	10,000	0	0	0	0	0

Compliance with Liikva waste permit L.JÄ.HA-317829

in tons

Type of waste	Permitted	Actual				
		2006	2007	2008	2009	2010
Stabilised waste	15,000	9,499	9,405	9,421	14,303	10,506
Biodegradable waste	3,000	0	0	0	0	0

ENERGY CONSUMPTION

Energy consumption

Significant environmental aspects

Direct impacts

Biogas produced and consumed	Reduction of waste in the tip, saving natural resources
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Significant environmental aspects

Indirect impacts

Electricity and thermal energy consumed	Contributing to the pollution of the environment due to the production of electricity, decrease in natural resources
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2010 objectives and tasks

To use energy resources more efficiently -
To increase the effective use of biogas, gas engine hours run 4000 hours +
To make the use of transport more efficient +

ELECTRICITY CONSUMPTION

The majority of electricity consumed is used for running the core processes of the Company – in the Water and Wastewater Treatment Plants, and in the Networks to operate pumping stations and other equipment.

The total consumption of electricity by the Company had steadily increased up to 2008, mostly due to updating the technological process of wastewater treatment and due to extending the operating area of the networks' pumping stations. Electricity generated from biogas compensates the use of grid electricity to a certain degree (see more further).

Electricity consumption 2006-2010

kWh

	2006	2007	2008	2009	2010
Water Treatment	10,173,744	10,389,547	10,237,200	10,371,961	10,656,875
Wastewater Treatment	18,803,680	19,443,371	20,167,157	19,645,827	19,749,590
Incl electricity from biogas	1,190,978	1,159,057	1,390,471	730,299	1,966,080
Networks pumping stations	5,636,745	5,588,984	6,213,493	5,964,515	6,432,559
Maardu*				383,728	693,265
Other	982,193	994,502	924,809	885,720	865,723
TOTAL	35,596,362	36,416,336	37,543,659	37,251,751	38,398,012

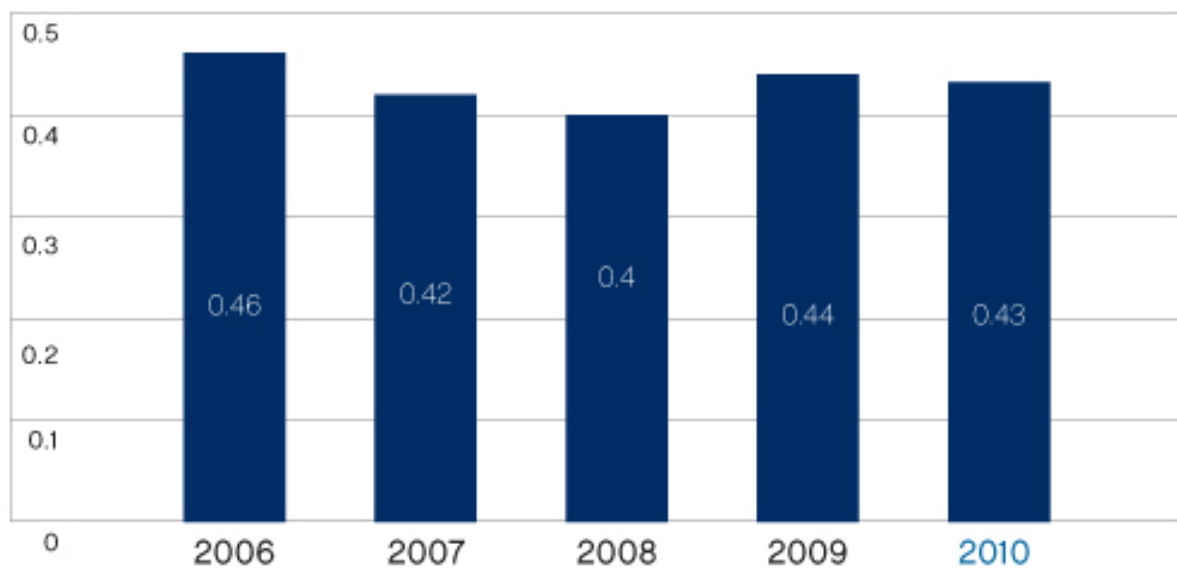
*The Company started operating the assets of the water company of Maardu City on 1 July 2009.

Ecological footprint is calculated in the Company only with regard to the volume of electricity purchased from Eesti Energia in ha per year per MWh. The use of biogas belongs to green energy, regarding which there is no specific calculation factor. In 2010, an ecological footprint of 5,865.55 ha per year was made and in 2009 ecological footprint was 5,879.88 ha per year. Footprint reduced as in 2010 the use of biogas increased by 1,235,781 kWh and by that amount less electricity produced on the basis of oil shale was used in the Wastewater Treatment Plant.

The increase in energy demand linked to the new technology used in wastewater treatment is also illustrated by electricity consumption per unit of wastewater treated, which has been almost the same for the last four years since the reconstruction of the process, but has stabilized. Electricity consumption is to a large degree also impacted by the weather, for example constantly wet period enables steady pumping and does not cause energy peaks when frequently starting the pumps.

Electricity consumption per unit of wastewater treated 2006-2010

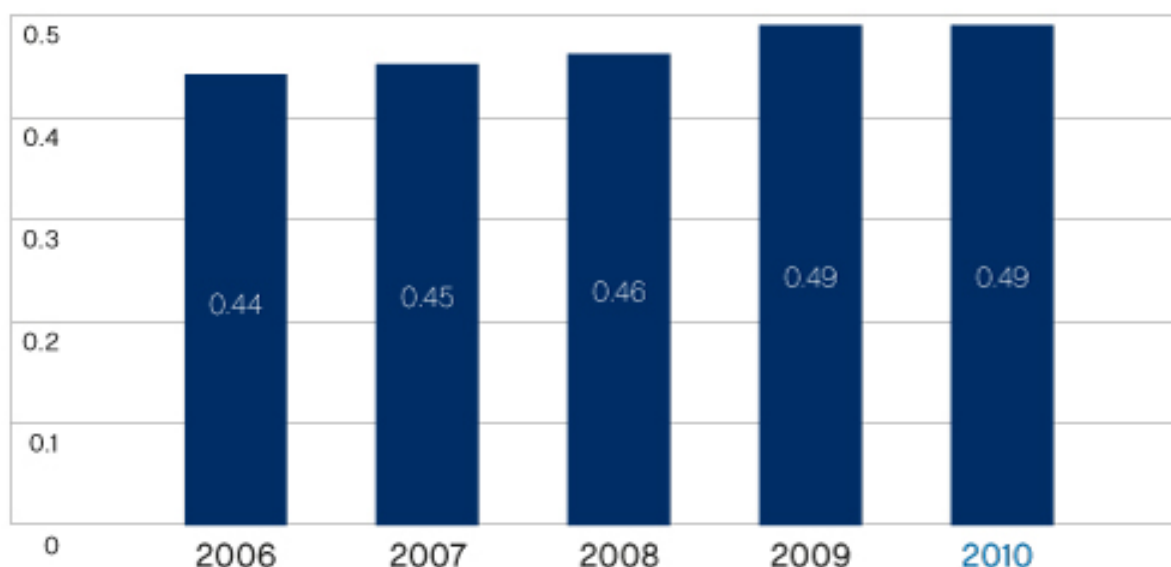
kWh/m³



In the water treatment process, electricity is mostly used for pumping water in the various stages of the treatment process and into the water supply system, a great part of electricity is used for producing ozone. In connection with relatively high ozone doses and extraordinarily cold weather the electricity costs remained at the same level compared to 2009 (in 2010 slight increase 0.489 kWh/m³, in 2009 0.49 kWh³).

Electricity consumption per unit produced at the Water Treatment Plant 2006-2010

kWh/m³



CONSUMPTION OF HEAT ENERGY

The majority of heat energy consumed is used for running the core processes – for heating the operations and office buildings.

Heat energy is purchased from AS Eesti Gaas and AS Tallinna Küte. To some extent the use of heat energy is compensated by the heat energy received from the biogas in wastewater treatment plant.

Consumption of heat energy 2006-2010

MWh

	2006	2007	2008	2009	2010
Water Treatment	7,309.1	5,475.9	5,142	4,264	5,617.6
Wastewater Treatment	5,775	6,765	7,423	6,515	8,176
Incl electricity from biogas	3,228.9	4,447.8	4,654	5,032.5	4,505.6
Territory of Adala office	995.6	983.5	960.4	956.6	1,256.7
Maardu*				66.6	38.4
TOTAL	14,079.7	13,224.4	13,525.4	11,802.2	15,097.7

*The Company started operating the assets of the water company of Maardu City on 1 July 2009.

Due to an exceptionally cold winter the cost of heat energy has increased in 2010. In 2010, the ecological footprint related to the consumption of heat energy was 528.1 ha per year in water treatment plant and in 2009 it was 400.8 ha per year. Part of the heat used in wastewater treatment plant is produced from biogas; ecological footprint was calculated for the use of

natural gas. In 2010 it was 345 ha per year and in 2009 it was 139.4 ha per year. The ecological footprint of the territory of Ädala office in 2010 was 118.13 ha per year and in 2009 it was 89.9 ha per year. In total the ecological footprint of the Company in relation to the heat energy produced from natural gas in 2010 was 995.66 ha per year and in 2009 it was 636.35 ha per year.

USE OF ENERGY

GREEN ENERGY

An excellent opportunity for reducing damage to the environment is the use of green energy. For the Company this means above all maximum usage of biogas created as a result of sludge fermentation in wastewater treatment in other processes, however, at the same time the Company is trying to find also other environmentally-friendly solutions.

In 2010 three feasibility studies were ordered regarding the opportunities of producing green energy. Two of these were regarding the opportunities of combined heat and power in Wastewater Treatment Plant and the third feasibility study was regarding the heat pumps in Water Treatment Plant. Results of the analyses will be available during 2011. For details on hydro energy, please refer to page 63.

BIOGAS REUSAGE

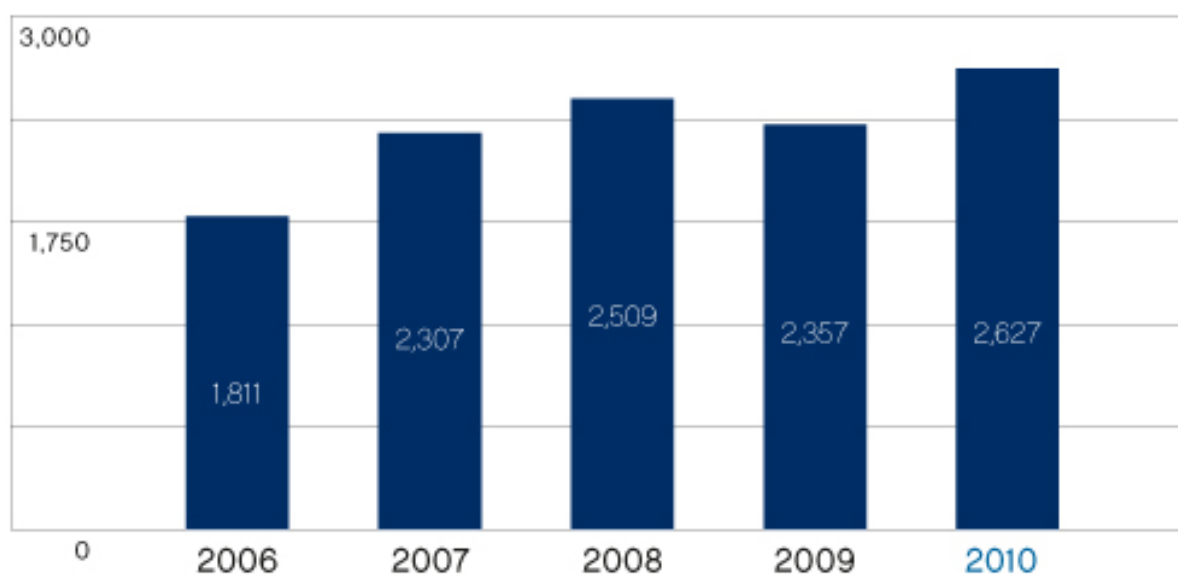
Over recent winters the production of biogas has been hindered by wastewater collected from the streets, which has mixed with snow clearing chemicals and causes disruptions in the digesters` fermentation process. In 2010, digesters were operated by using an operating tactic implemented in 2008, which helped to keep the biogas production at the same level as in the previous year.

In 2010, a total of 2,627,343 m³ of biogas was produced in Paljassaare Wastewater Treatment Plant digesters. Biogas is directed to an air blower operating on a gas engine, which produces air necessary for the biological treatment bacteria, or to the boiler house for heat production.

In 2010, 88% (2,314,306 m³) of biogas was used for operating the gas engine or for heat production. A part of the biogas produced was burned in connection with emergency interruptions of the gas engine.

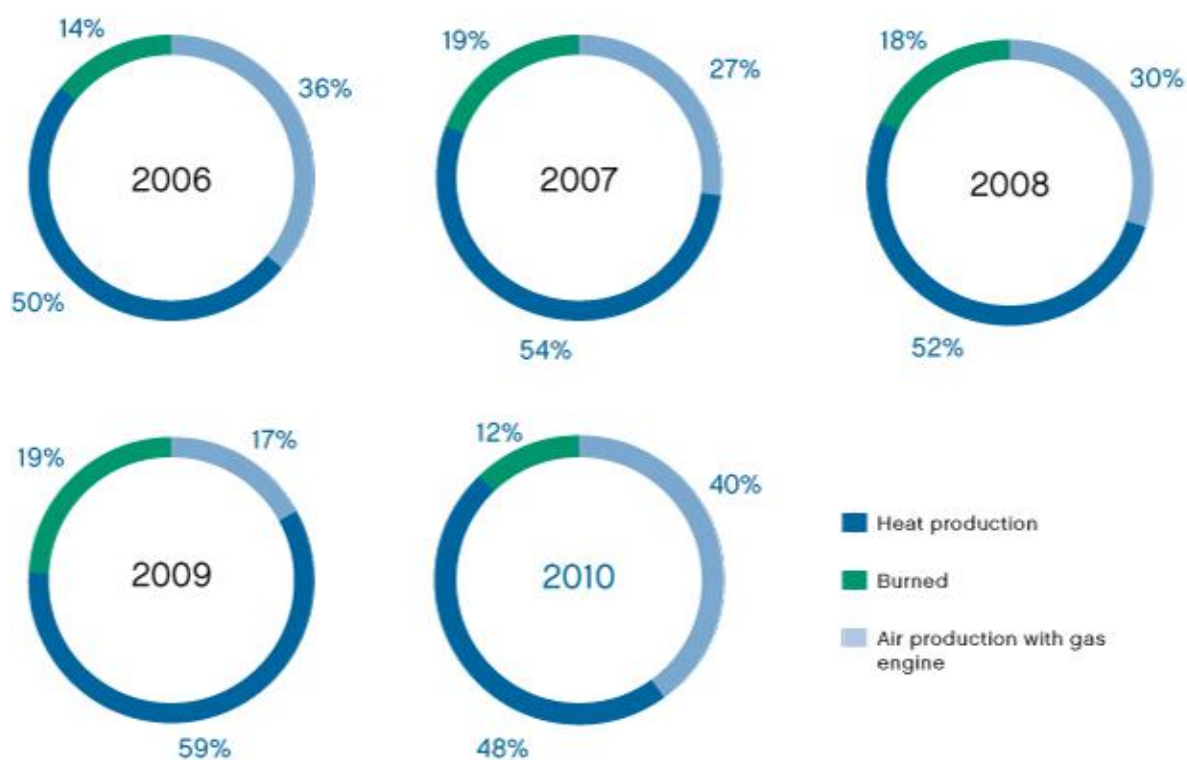
Biogas production 2006-2010

thousand m³



Biogas usage 2006-2010

%



Biogas contains about 70% of methane, which is explosive and is one of those gases recognized as having a negative impact on the ozone layer. In 2010, there were no accidents related to biogas.

OPPORTUNITIES FOR PRODUCING HYDRO ENERGY

The operating hydropower plants in the Company's hydropoints of Soodla and Kaunissaare are also related to the production of green energy. Since 2003 a hydropower plant is in use on Kaunissaare dam, operated by OÜ Kaunissaare Hüdrolektrijaam. Starting from the end of 2008 the hydropower plant is also operating in the Soodla water reservoir dam, which is operated by OÜ Uus Energia. The maximum capacities of these hydropower plants are ca 260 kW and 170 kW respectively. These hydropower plants do not belong to the Company, however, cooperation contracts have been concluded and the Company is participating in operating the plants.

FUEL CONSUMPTION

At the beginning of the year the Company had 132 vehicles for carrying out different operating tasks, with establishing a subsidiary 124 vehicles remained, over half of them use petrol for fuel. The biggest group of vehicles is passenger cars and operating vehicles, including minivans and team vans. A smaller group of vehicles includes special purpose vehicles such tractors and trucks.

Fuel consumption has decreased significantly compared to the previous year. Decrease in consumption is due to many factors, for example the number of vehicles has reduced, vehicles were equipped with GSM monitoring systems, which make work with vehicles more efficient and logistically better manageable. The Company controls fuel consumption primarily through limits set for car users.

The use of environmentally friendlier fuel has decreased compared to the previous year, the primary influence on consumption being the higher price of this fuel.

Fuel consumption 2006-2010

in litres

	2006	2007	2008	2009	2010
Petrol	123,868	135,251	141,644	126,286	85,735
Incl more environment friendlier fuel	10,202	8,885	6,782	4,471	2,762
Diesel	216,604	210,827	205,738	201,351	170,365
TOTAL FUEL	340,472	346,078	347,382	327,637	256,100
Total number of vehicles	147	135	140	137	124

TRANSPORT

According to the method for calculating the ecological footprint, transport is divided into two:

- Human transport includes employees' travelling due to work by car, bus, train, ship and plane;
- Goods transport includes goods transported with heavy goods vehicles.

The Company does not keep a separate record of the mileage covered, but this can be calculated per vehicle type, taking into account average fuel consumption. In 2010 the mileage of vehicle transport was 885,374 km and in 2009 the respective figure was 1,215,754 km. In 2010, human transport created an ecological footprint of 53.12 ha per year and in 2009 it was 72.95 ha per year.

In 2010 provisionally 549,516 tons/km* have been covered for the transport of goods and in 2009 the respective figure was 771,587 tons/km. This created an ecological footprint of 38.47 ha per year in 2010 and in 2009 it was 54.01 ha per year. For reasons behind the reduction in the environmental impact of vehicle transport, please see more details on page 63.

In 2010 bus service was used for transporting people on 3 occasions and altogether a distance of 525 km was covered, the related ecological footprint of 0.02 ha per year. In 2009 bus service was used on 5 occasions, in total covering a distance of 2,378 km, thus creating an ecological footprint of 0.07 ha per year.

Company's employees have business trips also outside Estonia. To some extent travelling by ship has been used, however, travelling by plane has been used more often. 712 km was covered by ship in 2010 and 534 km in 2009, and the ecological footprint related thereto in 2010 was 0.007 ha per year and the respective figure in 2009 was 0.005 ha per year.

In 2010 Company's employees used plane transport only for short-distance flights (less than 5000 km). Altogether 115,668 km was covered, the ecological footprint of which is 10.4 ha per year. In 2009 long-distance flights (starting from 5000 km) totalled 8,967 km and short-distance flights totalled 100,509 km, creating an ecological footprint of 9.59 ha per year.

**Unit of measurement 1 ton-kilometre is equivalent to a transport of 1 ton of goods to a distance of 1 km or a transport of 0.5 tons of goods to a distance of 2 km.*

SUMMARIZED TABLE OF THE COMPANY'S ECOLOGICAL FOOTPRINT

The environmental impact of 12 different aspects was measured on the basis of the ecological footprint method.

SUMMARIZED TABLE OF THE COMPANY'S ECOLOGICAL FOOTPRINT

Aspects that serve as the basis for calculating the ecological footprint		Consumption/production (rounded)	Ecological footprint per employee (ha per year per employee)	Ecological footprint (ha per year)
Water m ³				
1. Water consumed	2010	624,149	0.164	49.93
	2009	595,732	0.146	47.66
Waste t				
2. Recycled paper	2010	14	0.112	34.3
	2009	13	0.974	31.85
3. Recycled metal	2010	26.7	0.096	29.37
	2009	0.5	0.002	0.55
4. Concrete (to a landfill)	2010	40	0.013	4
	2009	29	0.009	2.9
5. Mixed municipal waste (to a landfill)	2010	171	2.264	690.5
	2009	145	1.791	585.51
Electricity MWh				
6. Electricity from oil shale	2010	36,432	19.231	5,865.55
	2009	36,521	17.981	5,879.88
Heat energy MWh				
7. Heat energy produced from natural gas	2010	10,592.1	3.264	995.66
	2009	6,769.7	1.946	636.35
Transport for people km				
8. By car	2010	885,374	0.174	53.12
	2009	1,215,754	0.223	72.95
9. By plane	2010	115,668	0.034	10.4
	2009	109,476	0.029	9.59
10. By bus	2010	525	0.0001	0.02
	2009	2,378	0.0002	0.07
11. By ship	2010	712	0	0.007
	2009	534	0	0.005
Goods transport MWh				
12. Heavy goods vehicles and trailer	2010	549,516	0.126	38.47
	2009	771,587	0.165	54.01
TOTAL	2010		25.470	7,771.33
	2009		22.389	7,321.32

The Company has the greatest impact on the environment through the use of electricity, followed by the use of heat energy. Use of electricity and heat energy are in a close and

inevitable connection with the Company's core activity and with the expansion of the activities also the ecological footprint inevitably increases. Efficient and sustainable use of electricity and heat energy are being thoroughly controlled in the Company.

AIR EMISSIONS

Air emissions

Significant environmental aspects

Impacts

Emission of exhausts	Polluting the air
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2010 objectives and tasks

To ensure compliance with the requirements of the environmental permits +
To reduce air pollution -

In order to reduce ambient air pollution, the Company focuses on limiting the amount of pollutants emitted from Ülemiste and Paljassaare boiler houses, particularly the pollutants of primary importance, such as nitrogen dioxide, carbon monoxide and volatile organic compounds as well as CO₂ greenhouse gas emissions. Also the emissions of ozone produced for drinking water treatment are regulated.

The Company pays a pollution charge for pollutants emitted into ambient air. In 2010 the charge remained under 1% of the total pollution charge paid. The requirements set with the ambient air pollution permits were all met.

Permit	Valid until	Description of ambient air pollution permit
Pollution permit no LÕV/HA-21334	31.12.2010	Valid for Ülemiste Water Treatment Plant pollution sources – the chimney of the boiler house and the exhaust pipe of the diesel generator. Establishes the list of pollutants emitted into ambient air and the annual permitted emission amounts thereof.
Pollution permit no LÕV/HA 48701	termless	Valid for Paljassaare Wastewater Treatment Plant pollution sources – the chimney of the boiler house, exhaust pipes, the chimney of the combined heat plant. Establishes the list of pollutants emitted into ambient air and the annual permitted emission amounts thereof.
Pollution permit no LÕV/HA-21490	31.12.2010	Valid for a pollution source at Ülemiste Water Treatment Plant - the ventilation system of the ozone production plant. Establishes the list of pollutants emitted into ambient air and the annual permitted emission amounts thereof.
Pollution permit no LÕV/319438	termless	Valid for Ülemiste Water Treatment Plant pollution sources – the chimney of the boiler house, ozonisation, diesel generator. Establishes the list of pollutants emitted into ambient air and the annual permitted emission amounts thereof.

Ambient air pollution From Water Treatment Plant pollution sources 2006-2010

in tons

Pollutant	2006		2007		2008		2009		2010	
	Permitted	Actual	Permitted	Actual	Permitted	Actual	Permitted	Actual	Permitted	Actual
Nitrogen dioxide	2.4	1.9	2.4	1.5	2.4	1.4	2.4	1.4	2.4	1.5
Carbon monoxide	1.9	1.8	1.9	1.5	1.9	1.3	1.9	1.3	1.9	1.4
Volatile organic compounds	0.17	0.12	0.17	0.1	0.17	0.1	0.17	0.09	0.17	0.10
Carbon dioxide	1,691	1,660	1,691	1,360	1,691	1,209	1,691	1,145	1,691	1,271
Sulphur dioxide	0.01	0.001	0.01	0	0.01	0	0.01	0	0.01	0.007
Total solid particles	0.05	0.003	0.05	0.002	0.05	0.002	0.05	0.003	0.05	0.003

Ambient air pollution From Wastewater Treatment Plant pollution sources 2006- 2010

in tons

Pollutant	2006		2007		2008		2009		2010	
	Permitted	Actual	Permitted	Actual	Permitted	Actual	Permitted	Actual	Permitted	Actual
Nitrogen dioxide	29.8	14.2	29.8	14.9	29.8	17.4	29.8	10.6	29.8	23.5
Carbon monoxide	210.1	97.9	210	96.5	210	115	210	62.3	210	161.9
Volatile organic compounds	14.0	6.8	14	6.4	14	7.7	14	4.2	14	10.8
Carbon dioxide	4,440	3,438	4,440	4,798	4,440	3,697	4,440	3,229	4,440	4,135
Hydrogen sulphide			17.8	18.7	17.8	17.5	17.8	16.9	17.8	16.9

Despite the fact that due to exceptionally cold weather it was necessary to heat the buildings more intensively, the pollution volumes produced remained below the allowed limit.

ENVIRONMENTAL PERFORMANCE

In addition to the data on ecological footprint and as set out by the requirements of EMAS III, the Company outlines below its main indicators of the environmental performance regarding energy efficiency, material efficiency, water, waste, biological diversity and emissions. 3 elements have been presented for each main indicator:

- figure A, which stands for the total annual input/impact in the respective area
- figure B, which stands for the total gross sale revenue of the organisation in millions of Euros,
- figure R, which stands for the ratio A/B

ENVIRONMENTAL PERFORMANCE

Main indicators of environmental performance	Consumption (rounded) i.e. annual input (figure A)	Annual output of the Company (figure B)	Ratio R (A/B)
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Energy Efficiency

Electricity MWh

Electric power produced from oil shale	2010	36,431.9	49.68	733.33
	2009	36,521.4	49.37	739.75
Electric power produced from biogas	2010	1,966.1	49.68	39.58
	2009	730.3	49.37	14.79

Heat MWh

Heat produced from natural gas	2010	10,592.1	49.68	213.21
	2009	6,769.7	49.37	137.12
Thermal energy produced from biogas	2010	4,505.6	49.68	90.69
	2009	5,032.5	49.37	101.93

Material Efficiency

Handling of chemicals t

Liquid chlorine	2010	49	49.68	0.99
	2009	46	49.37	0.93
Coagulant	2010	3,306	49.68	66.55
	2009	3,151	49.37	63.82
Polymer	2010	60.2	49.68	1.21
	2009	55.1	49.37	1.12
Ozone	2010	197	49.68	3.97
	2009	198	49.37	4.01
Methanol	2010	2,539	49.68	51.11
	2009	2,272	49.37	46.02

Water th m³

Surface water	2010	21,978	49.68	442.39
	2009	21,172	49.37	428.84
Ground water	2010	3,442	49.68	69.28
	2009	3,564	49.37	72.19
Effluent	2010	45,915	49.68	924.21
	2009	46,173	49.37	935.24

ENVIRONMENTAL PERFORMANCE

Main indicators of environmental performance		Consumption (rounded) i.e. annual input (figure A)	Annual output of the Company (figure B)	Ratio R (A/B)
Waste t				
Mixed municipal waste	2010	171	49.68	3.44
	2009	145	49.37	2.94
Recycled paper and cardboard	2010	14	49.68	0.28
	2009	13	49.37	0.26
Recycled packages	2010	4.7	49.68	0.09
	2009	4.7	49.37	0.09
Recycled biodegradable waste	2010	5.4	49.68	0.11
	2009	5.2	49.37	0.11
Waste from screens	2010	303	49.68	6.1
	2009	337	49.37	6.83
Recycled sludge	2010	33,885	49.68	682.07
	2009	31,087	49.37	629.67
Sandtraps grid	2010	716	49.68	14.41
	2009	975	49.37	19.75
Recycled excavated stones and soil	2010	11,750	49.68	236.51
	2009	9,569	49.37	193.82
Asphalt waste	2010	1,790	49.68	36.03
	2009	947	49.37	19.18
Mixed building waste	2010	18	49.68	0.36
	2009	43	49.37	0.87
Concrete and bricks	2010	40	49.68	0.81
	2009	29	49.37	0.59
Recycled metal	2010	26.7	49.68	0.54
	2009	0.5	49.37	0.01
Hazardous waste	2010	3.5	49.68	0.07
	2009	4	49.37	0.08
Other	2010	250.2	49.68	5.04
	2009	1	49.37	0.02
Biological diversity m²				
Land use, land carrying buildings	2010	456,702	49.68	9,192.87
	2009	456,775	49.37	9,252.08
Emissions t				
Nitrogen dioxide	2010	25	49.68	0.5
	2009	12	49.37	0.24
Carbon monoxide	2010	163.3	49.68	3.29
	2009	63.6	49.37	1.29
Volatile organic compounds	2010	10.9	49.68	0.22
	2009	4.29	49.37	0.09
Carbon dioxide	2010	5,406	49.68	108.82
	2009	4,374	49.37	88.6
Sulphur dioxide	2010	0.007	49.68	0
	2009	0	49.37	0
Total solid particles	2010	0.003	49.68	0
	2009	0.003	49.37	0
Hydrogen sulphide	2010	16.9	49.68	0.34
	2009	16.9	49.37	0.34

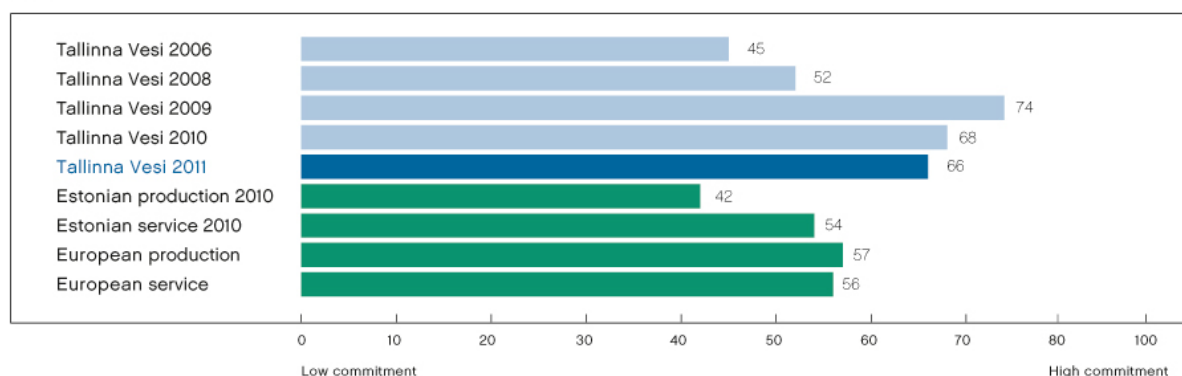
ORGANISATION AND EMPLOYEES

In 2010, the departments in operations division went through significant rearrangements both in terms of the responsibilities of managers and work allocation. A subsidiary company called OÜ Watercom was created, the successful launching of which assumed changes to be made inside the Company and introduction of new competencies, which would allow the subsidiary company to manage providing services and products on a competitive market. Management Team of the Company deems the involvement of employees in the decision making process, regular informing and equal treatment of staff very important. For that purpose development seminars were organised at the time of creating the Subsidiary, the Management Board had meetings with the staff at least once a quarter and monthly newsletters were issued to provide an update on the delivery of objectives as well as financial and operational performance.

At the end of 2010, the Company and its Subsidiary employed a total of 319 employees under permanent employment contracts. This number has reduced by 5% compared to the same period previous year when 336 people were working for the Company. The average number of full time employees was 305 in 2010 and 322 in 2009. Reduction in staff resulted mainly from the reorganisation of the departments in the end of 2009.

Employee commitment and satisfaction was at a high level in comparison to both Estonian and European average in service and industry sector in 2010 (Figure 1).

AS Tallinna Vesi employee commitment
remains at 2009 level.
TRIM Index



Development of employees

The sufficient number of committed employees with necessary qualification is one of the most important priorities for the Company. The average age of the staff in the Company and the Subsidiary is high (46.3 and 45.5 respectively) and in bigger operational units a considerable number of employees is over 50 years old. Thus a significant number of staff is going to be in a retirement age in the next few years. In order to ensure the delivery of the Company's business objectives, maintaining the know-how and developing a new generation of operational specialists is one of the key priorities for the Company.

The Company has launched several employee development programmes with the aim to provide all employees, who have such will and readiness, with an opportunity to develop themselves professionally. The management of the Company deems it the most important method for growing a new generation of specialists, supporting the organisation in adapting to changes and maintaining the high commitment of employees. Emphasis is also on expanding multi-functionality and flexibility of the workforce instead of specialising on a narrow area, which enables the employees to rotate smoothly onto new positions. Development of the staff forms one part of the remuneration and recognition system of the Company and is a key for planning a career in the Company.

There were 930 training days in total in 2010, which amounts to an average of three training days per employee. The number of in-house trainings, where knowledge was passed from one colleague to another, grew considerably. Almost 20% of the staff is participating in different long-term development programmes.

Occupational health and safety

Work environment related activities of the Company are in compliance with the requirements of legislation and the international occupational health and safety management system standard OHSAS 18001.

Work environment management system is based on an assessment of risks in the work environment area and execution of activities aimed at preventing or reducing these risks. Workplaces are under constant internal monitoring and internal and external audits of the management system are carried out.

In 2010, special focus was on the improvement in following work safety requirements at the excavation sites of both the Company and subcontractors as well as on internal and external occupational health and safety trainings. In order to improve the compliance with occupational safety requirements, the Company increased the number of occupational safety inspection visits at excavation sites. As a result of a more vigilant supervision, the proportion of sites, which were given an unsatisfactory mark reduced both among the sites of the Company as well as of its subcontractors.

In 2010, 9 occupational accidents occurred, of which 5 could have been avoided by the Company taking necessary measures. Of the 5 accidents, 2 were related to lifting weights, 1 concerned handling of chemicals, 1 falling on ice and 1 using a ladder. The other 4 accidents were either caused by third persons, the general health status of an employee or a hidden failure of equipment.

Due to work accidents the Company lost 159 work days in 2010, at the same time in 2009 there were no work accident in the Company with absence from work. The causes of all occupational accidents were thoroughly analysed by the Work Environment Council. Action plans to prevent any further occupational accidents of a similar type were put together and the timely delivery of those action plans is constantly monitored. In order to determine the causes and prevention opportunities of occupational accidents, an internal training was organised for

addressing the causes of occupational accidents that occurred in the Company in the last 10 years. The Company internally organized a promotional occupational safety campaign for better staff involvement and improving occupational safety awareness. The cash award was spent on improving the work environment in a method chosen by the winners.

Work environment training

The implementation and results of work environment related actions are largely dependent on the awareness of employees and, therefore, much attention is paid to work environment training, information resources and other actions to raise awareness on the issues of work environment. Training events held in 2010 included:

- regular training courses on lifting and pressure equipment;
- first aid training and in-service training;
- ergonomics and occupational hygiene training;
- training on temporary traffic reorganisation (marking road works) and briefing on the new Traffic Act;
- training courses on the choice, use and maintenance of personal protective equipment;
- fire, electrical, chemical and gas work safety trainings.

A thorough chlorine safety training was carried out in co-operation with the Northern-Estonian Rescue Board, Tallinn Emergency Medical Care Centre and the security company G4S in the water treatment plant. The training simulated the rescue activities in case of a chlorine accident. The Rescue Board also inspected the conditions of the emergency situation reporting system and sirens at the wastewater treatment plant.

In the area of occupational safety, introductions on ergonomics were conducted. The internal training course series “Change your mindset in safety issues”, continued in 2010. The purpose of this training is to draw attention to the possibilities of implementing effective and positive changes in the safety behaviour of employees. In 2010, the training was intended for new managers and senior specialists.

Continuous improvement in the occupational safety area

Several actions for improving the work environment were carried out in 2010 at the treatment plants, water and sewerage networks, laboratories and offices. The more important works were:

- Updates and renewal of the Company’s work environment risk analysis, amongst other things the risks of lifting weights by hands was assessed in all departments;
- Repair of work and rest areas;
- Reconstruction or reconditioning of ventilation systems;

- Improvement of the ergonomics of computer workstations;
- Noise and lighting measurements, which were used to improve the conditions at work places;
- Renovation of the heating system.

Promoting occupational health

For the sixth year, the Company successfully participated in the “Health Promoting Work Places” project, aimed at developing a healthy work environment, primarily by changing mindsets and increasing the mutual involvement of both employers and employees.

The Company organises various sports activities for its employees to promote a healthy lifestyle. Employees of the Company have the opportunity to use two gyms, as well as squash and ball courts and also take part in the sporting events of the Company. The Company’s Intranet, newsletters and posters were used to raise health awareness of employees by drawing their attention to different subjects such as work stress, dangerous preservatives in food and healthy nutrition habits. Employees were also called to participate in various sports activities. In co-operation with the Infection Centre a briefing on viral hepatitis was organised for the employees of the Company. The success of the Company in the field of health promotion has been noticed by other organisations and, as a result, the occupational health and safety specialists of the Company are held in high regard as speakers among the members of the network of health promoting working places.

Employees attend regular health checks, as foreseen by law, which provide the basis for adjustment of working conditions where needed. In addition to the procedures foreseen by legislation, the Company provides influenza vaccinations to all interested employees and prophylactic massage according to the prescription of the occupational health doctor. Also, the occupational health doctor can be consulted in the medical office of the Company.

EMPLOYEE INVOLVEMENT

To increase its employees’ environmental awareness, the Company consistently introduces various environment and energy saving issues and Company’s contribution to healthy and caring community in its internal newsletter “Infotilk“, in the Intranet and on stands.

The Company’s employees are actively involved in environmental activities:

- The bee days already becoming a tradition take place each year. In 2010, garbage was cleaned in cooperation with the employees of Coca-Cola HBC in Pikakari Beach on the Paljassaare Peninsula. The Company has favoured its employees to join the cleaning campaign by giving a day off to the participants in the bee day, providing transport and necessary tools and catering. The intention is to continue the same initiative in 2010.



- Employees of several different departments are involved in the organisation of open-door days at the treatment plants.
- Ca 10% of the Company's staff participates in carrying out the annual internal audits on environmental system, whereas the auditors are also passing regular in-service trainings.
- Within the Environmental Education Programme, the employees of the Company visit kindergartens and introduce the circulation of water in nature, give tips how to save water and avoid sewer blockages.



- Environmental awareness of people is improved through the Company's internal newsletter, Intranet, stands (the so-called Green Stand) and posters. Also, regular in-house trainings on the same subject are carried out.
- All employees have the possibility to present their ideas to improve environment, quality and work environment to the Good Ideas Bank. All ideas are assessed once a quarter by the Work Environment Council. The ideas, which receive a positive decision get implemented and authors of these ideas get recognition.

OUR COMMUNITY

The Company wants to be an actively participating member of the communities where it operates. The Company takes a serious approach to integrating the principles of corporate social responsibility into the Company's everyday activities. Through educating employees and customers the Company hopes to shape an environmentally conscious way of thinking in the community by supporting water-related initiatives, which promote environmental sustainability and healthy lifestyle. In 2010, the Company continued implementing its corporate social responsibility strategy to establish a clear objective of integrating existing community and environmental projects with day-to-day operations and plan further actions to make a wider sustainable impact in Estonia and globally in the future.

Cooperation and involvement

The Company has a very serious approach towards its relationship with the various stakeholders, therefore Company's employees have regularly participated in meetings with

various customer groups, also in cooperation with City District Administrations. In addition to organising regular information exchange, the Company's representative presented tips on water efficiency at a conference held in Russian aimed towards apartment associations in November. Regular meetings have also been held with the Ministry of Social Affairs, Ministry of Environment and other government institutions who regulate the water industry. As a member of EVEL (Estonian Water Undertakings Association), the Company has organised several water and sewerage themed seminars and training programs for other EVEL members.

- In 2010 the Company continued the sponsorship agreement concluded in 2009 with an athlete of great promise, decathlete Mikk Pahapill. In June 2010 Mikk Pahapill came second at the Athletics Super League held in Estonia, which lifted him to the fourth position in the European ranking. During the year Mikk visited several motivational events and trainings aimed towards Company's employees. In addition, Mikk has acted as the Company's promotional face in various campaigns.
- In 2010 the Company continued cooperation also with Estonian Union of Sports for the Disabled. The Company wants to support the interest of the disabled in sports and their will to participate in community life. AS Tallinna Vesi is supporting the trainings of the swimming team and their preparation for 2011 European Championship and 2012 London Paralympic Games.
- In April 2010, the Company continued with the memorandum of understanding concluded with Tallinn Technical University to support their interdisciplinary doctoral programme with Company's expertise and through granting access to Company's resources. In addition to joint projects organised with Tallinn Technical University, the continuity of human resources is also ensured through cooperation with Tallinn Kopli Vocational School, which hopefully will provide future employees for the Company.
- In 2010 the Company supported several outdoor and sports events with providing pure drinking water. From May to August, the Company supplied free water from hydrants and water tankers to the Flower Festival in Tallinn's Old Town. From May to October water was provided to weekly running and walking events organised by Eesti Energia. The Company provided water also to the Nordic walking event organised by Estonian Rheumatism Association, car-free day organised by the Ministry of Environment, Tallinn Marathon, Students' Days and Rat Race.
- In cooperation with the City District Administrations of Tallinn the Company established ice rinks and provided soil to the apartment associations for landscaping after the winter.
- Company's employees and their families participated in a Cleaning Up event on 1 May during which the beach of Pikakari at Paljassaare Peninsula was cleaned in cooperation with Coca-Cola HBC. In September close to 60 climbing shrubs called *ampelopsis* were

planted to the wall surrounding the Pirita pumping station in cooperation with Pirita Local Association.

Activities aimed towards citizens

One of the Company's objectives is to improve the awareness of its customers regarding Company's products and services. Company's activities were recognised at a competition organised by the Ministry of Environment of the Republic of Estonia, where the Company was awarded with a prize "Top Performer 2010 in Environment Area". In the category of environmental management the Company was positively highlighted for environmental education aimed towards residents.



- Traditional Open Door Days at Paljassaare wastewater treatment plant on 29 May 2010 brought 270 visitors to come to see the plant, including 40 children. The Company's mascot Tilgu and Pippi Longstocking were in charge of providing entertainment for the children. In addition to games, issues like water cycle, human impact on nature and other environmental issues were introduced to children.
- In June 2010 the Company launched a social campaign, the aim of which was to explain to the residents the necessity of and possibilities for preventing sewerage blockages. With a merry slogan "Don't clog the bog!" the Company drew attention to the sewerage pipes intended for discharging water, wastewater and toilet paper.
- Open Door Days at Ülemiste Water Treatment Plant took place on 28 August 2010. During the Open Door Days the Company's employees showed the visitors around the plants and explained how the treatment processes function. The Ülemiste Open Door Days coincided with the running competition around Lake Ülemiste and Lotte Children's Run, which attracted many old and young sportsmen. The run is popular among Tallinn residents, not least due to the fact that under usual circumstances the naturally picturesque territory surrounding the lake is closed to the public as a sanitary protection zone. In previous use years the visitors have primarily been schoolchildren and graduate students, this year there was also an interest in the water company from whole families. The feedback from the visitors



showed that they learned a lot of new information about water treatment and water efficiency. The event was attended by approximately 1500 people, of which close to 300 also came to see the water treatment processes. The Company's children's tent where children of each age group could draw and play water-related games proved to be especially popular.



- Tallinn miniregatta took place on Vabaduse Square from 30 July to 8 August 2010, organised in cooperation of the Company and the City of Tallinn. The event was a part of a wider campaign, the aim of which was to inform Tallinners about the construction of public water supply and sewerage system in Tallinn to be completed by 2011, which provides each house in Tallinn with the possibility to connect with public water supply system.



Children and education

The Company's objective is to be a responsible member of the community. For years the Company has supported children with special needs. For example, the Company's Christmas greeting cards have featured the drawings of children from the "Õunake" kindergarten for several years already, joint gingerbread baking events have become a tradition during Christmas. The Company has also continued the long-term cooperation with Ristiku primary school, supporting their summer camps financially. The Company's employees also gave

lessons at the Ristiku school on environmental sustainability in 2010 as a part of the “Back to School” program.

Considering the volume of cooperation the Company already has with schools, kindergartens, and higher educational establishments, it was decided to consolidate ideas for an environmental educational programme for all educational levels from pre-school to university. The Company continued increasing children’s environmental awareness also in 2010.

- Within the environmental education programme the Company prepared a Tilgu trick book “How to save water” in July. It is a puzzle book meant for children of 5-6 years, which helps to improve children’s knowledge about water efficiency in a playful manner.



- In addition to the water-related PC-game “Traveller Drop” released in 2008, worksheets on the same topic were published in 2010. Worksheets are meant for children of various age groups both to kindergartens as well as to schools. Worksheets include 8 topics: water cycle on earth, Lake Ülemiste, water treatment plant, water pipeline, water at home, sewerage pipeline, wastewater treatment plant and sea.
- In 2010 the Company completed the tap water pilot project launched in 2009 in cooperation with Lilleküla Secondary School. During the project public water taps were established in the school building, which enable both children and adults to use tap water for drinking. Based on the survey carried out at school it turned out that 93% of the respondents gladly drink tap water and approximately 66% of the respondents consider tap water fountains at school to be very necessary.



- In addition to annually participating in Youth to School (“Noored kooli”) programme, in 2010 the Company launched a kindergarten pilot project within Charity Day programme. Within the project several Company’s employees carry out discussions on water in kindergartens. The target group of the project is children in the age of 4 to 7, who are told about water cycle, water efficiency and with whom interesting water-related games are played. During two months the Company visited 11 kindergartens within Harju County, thereby increasing environmental awareness for close to 330 children.
- In 2010 the Company participated in the project “Free exercise book” with the campaign “Don’t Clog the Bog!”. In cooperation with Road Administration, Rescue Board, Tax

Board and Police Board a total of 10 000 exercise books with social message were compiled, which support the social topics included in the curricula of schools of general education. The objective of the project was to increase environmental awareness and efficient consumption in Estonian educational institutions.

EMAS VERIFICATION

DNV Certification Oy/Ab has an accredited verifier (FI-V-0002) examined the environmental management system and the information given in the 2010 environmental report of Tallinna Vesi. It has been verified on the 4th of May 2011 that both the environmental management system and the environmental report fulfill the requirements of EU Council Regulation 1221/2009 of Eco Management and Audit Scheme EMAS. The environmental report is available on the website at www.tallinnavesi.ee . Next report will be published before the end of August 2012.