

Annual Report 2003

Tallinna Vesi  


## 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 and setting a Benchmark for Environmental Behaviour in order to Improve the Quality of Life.

## Values

**we**

value our colleagues  
are committed to customers  
are competent and willing to make things happen  
keep our word and promises  
are innovative  
are team players  
take initiative

## Highlights of the year 2003

Implementation of PAX  
in Water Treatment.

May



March

Culture Change programme  
"Tulemuste Võti" Launch.



June

Bio-manipulation Project  
in Lake Ülemiste.

Nitrogen Removal Project Launch  
in Paljassaare.

**August**



**October**

Opening of EU compliant Chlorine  
Storage Facility in Ülemiste.

**December**

Award of Det Norske Veritas  
ISO 14001 certificate.



## Table of Contents

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### Service Delivery Report

- 4 Address by the Chairman of the Management Board
- 8 Operations Report
- 12 Customer Service Report
- 16 Water Treatment Report
- 21 Networks Report
- 23 Wastewater Treatment Report
- 27 Technical Support Services Report
- 31 Laboratories Report

### Sustainability Report

- 38 Water for Life
- 46 Our Employees

### Annual Accounts

- 52 Financial Report
- 82 AS Tallinna Vesi Supervisory Board
- 83 AS Tallinna Vesi Management Board





# Service Delivery Report

Improvements are achieved with  
**clear objectives** and  
**staff commitment**



**We have built further** on the progress made in 2002  
and improved our performance and quality of service  
over a wide range of our area of responsibilities.

## Address by the Chairman of the Management Board

2003 has been a very positive year for the Company. The Company has delivered very real benefits to all its customers during the year. We have complied with or exceeded all Levels of Service set for us by the City of Tallinn. We are particularly proud of our achievements in respect of Drinking Water Quality where the quality levels are the highest ever achieved at 99,97% for biological compliance and 99,02% for chemical compliance.

### Environmental imparments

The Company takes extremely seriously its environmental responsibilities. We are an environmental company and again we have made very positive advances in this area. During 2003 the Bulk Chlorine Storage facility was completed at Ülemiste Water Treatment Plant. This storage facility provides the latest form of secure storage for bulk chlorine, which is fundamental to the protection of the environment and the health and safety of our staff and customers. Also during 2003 we have commenced a major project at Paljassaare Wastewater Treatment Plant to improve the nitrogen removal from the wastewater. This project will significantly improve the quality of the Baltic Sea locally and also provides the opportunity to remove Tallinn from the Helcom 'hotspots' list. We are grateful for the support we have received from the Ministry of Environment on this project.

Perhaps the best demonstration of our continuing drive for environmental quality during 2003 was our achievement of ISO 14001 certification for our environmental management systems. This accreditation when added to our ISO 9001 certification for quality management and ISO 17025 for our laboratories clearly shows where our focus lies and it is an achievement of which all our staff should be proud.

### Success of Culture Change Programme

Without a doubt the improvements made during 2003 could not have been achieved without strong teamwork, clear objectives and great commitment from all our staff. During 2003 a great deal of senior management's time was committed to the delivery of the first stages of a major Culture Change Programme in the Company with the aim of instilling a high performance culture with all staff and the Company as a whole. The programme is called "Tulemuste Võti" (Key to Results) and will run through into 2004 and beyond. It covers the values, leadership and teamwork we need to aspire to and everyone of our staff have been through development workshops over the last 12 months. The benefits we have already seen and the commitment and positive feedback from our staff have been beyond our expectations and we look forward to improving still further in the coming years.



2003 saw the introduction of Performance Related Pay for all our staff together with the rationalisation of our pay and grading structure. We have also improved our internal communication procedures. We have actively carried out Employee Satisfaction Surveys during the year and taken action on the feedback we receive.

#### **Outperformance of financial targets**

I am pleased to be able to say that the Company has once again outperformed the financial targets set for it. Once again we have been successful in making further efficiency savings in operating and financing costs. Also it is pleasing to report that the previously experienced reduction in billed volumes, for main service charges, has shown signs of coming to an end, particularly in the industrial sector. As a result of the change in the capital structure of the Company and the fact that there was no tariff increase in 2003 net profit for the financial year fell by 28,5% to 104,5 million kroons compared to

146,2 million kroons in 2002. It is anticipated that this decline in profitability will be reversed during 2004.

The process for privatisation of the land at our operational sites is currently underway and will be completed during 2004. The precise costs are unclear at present but are estimated to be in the range of 35 million kroons.

#### **Changes in shareholding structure**

In December 2003 the shareholding in International Water UU (Tallinn) BV held by International Water, was purchased jointly by United Utilities and the European Bank for Reconstruction and Development (EBRD). The increased shareholding of United Utilities clearly demonstrates an ongoing commitment to the Company, which together with EBRD as a shareholder adds an extra dimension and real strength. I look forward to their participation in the future.

The average number of employees during 2003 was 351 and the amount accounted in salaries and wages, excluding social tax was 48 798 814 kroons for the same period. The amount paid to the Members of the Management Board during 2003 was 2 470 000 kroons excluding social tax and to Supervisory Board Members, for the same period, 40 500 kroons excluding social tax.

#### **Challenging objectives for 2004**

We have set ourselves challenging objectives for 2004 which will further improve the service we provide. The nitrogen project at Paljassaare Waste Water Treatment Plant will be completed and significant investment will be made in further improving water quality. In addition the first step of the implementation of a new customer services information

and billing system will lead to enhancements to the service options available to our customers.

The ongoing working relationship with our key partners, the City of Tallinn, Ministry of Environment and the Supervisory Foundation of Water Enterprises in Tallinn have once again been positive and constructive and we thank them for their support in helping us to achieve the successes in 2003.



**Robert John Gallienne**

Chief Executive Officer / Chairman of the Management Board

## Operations Report

2003 was a great year! We consolidated the organisation that we had put in place in 2002 and continued our intense work on delivering a better service to our customers. Once again the value of the team has been demonstrated and the results are here: all contractual levels of service have been fulfilled and service quality has improved in every field.

### **A customer orientated company**

A lot of energy has been spent on developing a customer care attitude. The organisation and the procedures, not only in Customer Service Department but in all departments, have been adapted to meet and anticipate the needs of our clients. As an example, the bringing of Networks Department and Customer Service into the same building gave us the opportunity to further improve the flow of information, and to keep the call centre constantly updated with what is happening on the sites. Besides all the improvements in terms of quality of service delivered to the customer, a thorough analysis of all the customer service processes has been undertaken in order to precisely define the structure of the Customer Information System, which we will put in place in the coming months. The detailed analysis gave us the opportunity to adjust and simplify existing processes and the new software will be an excellent tool for delivering a further and better service. As a reward for all the

actions, the results of the customer satisfaction survey were very good with 93% of customers satisfied.

### **A big step in water quality improvement**

2003 will certainly be referred to as a benchmark year in terms of improving water quality. Between January and December the level of compliance with the requirement we have to reach in 2007 improved by 51,4%! This huge improvement has only been possible because of real teamwork between departments. Water Production Department, after a thorough study of all possible effects, replaced the chemical used for removing the pollution with a new one. As a result, the new chemical improves the water balance and its interaction with pipe materials. At the same time the Networks Department implemented strong actions via an extensive air scouring and flushing programme. The Water Laboratory contributed with its expertise in monitoring and analysing the changes in water quality. And all these dynamic actions were supported by improved quality of pipes refurbished or replaced under the management of the Technical Support Services. No doubt that, encouraged by this really successful team story, we will continue to pursue the objective of bringing even better quality to all inhabitants of Tallinn.

### **An enhanced environmental consciousness**

Saying that Tallinna Vesi is an environmental company may seem to be stating the obvious. But 2003 proved that in this field we were able to make it even clearer, and demonstrate it with facts. We undertook and succeeded last year in ISO 14001 Certification, becoming the first ISO 9001 & 14001 certified water company in Estonia. Besides this exercise we demonstrated with several major projects our commitment to our mission "We create a better life with pure water": the project of biomanipulation to restore the biotope of Lake Ülemiste, the reconstruction of a fully safe storage facility for chlorine, the commissioning of an ozone destructor, our extensive work on reducing leakage in the

network, the first stage of construction of nitrogen treatment in the wastewater treatment plant ...

All these projects are and continue to be a part of improving the environment.

All these successes have only been possible thanks to the fantastic enthusiasm and high commitment of our staff. It has been a pleasure to see how quickly everyone in the Company rolled up his or her sleeves to undertake all this. We can proudly say that our people are our most valuable asset.



**Roch Chéroux**

Chief Operating Officer / Member of the Management Board

**Roch Chéroux**

Chief Operating Officer

"It is truly rewarding to work with a team so eager to achieve the best."



**Riho Sobi**

Water Treatment Manager

"Water that leaves the Ülemiste Water Treatment Plant already meets all the European Union requirements for water quality."

**Merle Lindma**

Customer Service Manager

"Each customer has different expectations of our work. The company's success lies in meeting these expectations."

**Leho Võrk**

Networks Manager

"Despite the extension of service area, we have continuously managed to improve the levels of service."

**Meelis Eldermann**

Technical Support Services Manager

"The establishment of Technical Support Services under one unit has justified itself in every aspect."



**Valter Pärn**

Wastewater Treatment Manager

"Results of wastewater treatment have improved over the last decade year by year, and the treatment results of 2003 were among the best in the history of the Treatment Plant."

**Tiit Laur**

Laboratories Manager

"A prerequisite for the existence of every professional laboratory is precision and stability."

## Customer Service Report

The objective of AS Tallinna Vesi is to be an effective customer-oriented company. Customer Service must guarantee a pleasant and high-quality service to all present and new customers. We strive for sustainable use of natural resources, environmental protection and constant improvement of the quality of products and services. We also wish to raise our customers' awareness about the importance of preserving "green environment" and underline that each of us can contribute to that.

### Each employee represents customer service!

Customer Service has continued to build on the activities that have been started over the previous years. A helpful means in planning Customer Service's work was the customer satisfaction survey, conducted in spring 2003 after a three year break. We have thoroughly analysed the feedback received from the survey results and established development trends for the next years.

### Positive results of customer satisfaction survey

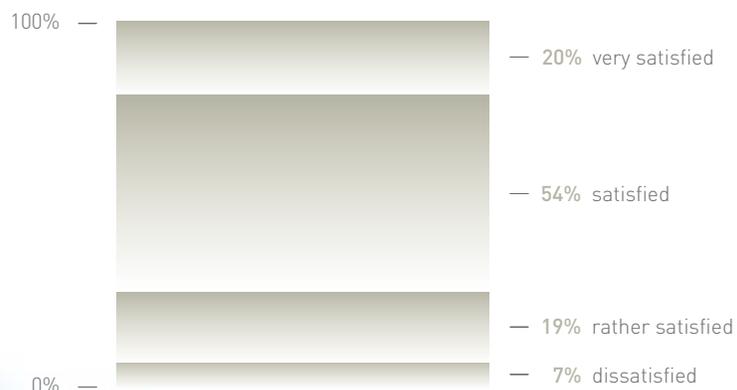
AS Tallinna Vesi conducted the customer satisfaction survey in co-operation with an independent partner, in the course of which a representative

sample of more than 900 of our customers and consumers were interviewed over the phone. Such a survey will now be conducted every year with the aim to get a better overview of customer satisfaction and its changes over the years. The survey also provides a profile of the company's image in the eyes of customers. It also serves as our key tool in the preparation of an action plan for customer satisfaction improvement.

**"93% of the customers are generally satisfied with the company."**

Majority of customers stated that they are satisfied with the water supply system in their building. 84% of customers agreed, that it is easy to communicate with the water service provider. Most of the customers (82%) gave positive feedback also about the reception and transfer of information in the company [See Graph 1].

Customer Satisfaction in 2003 (Graph 1)



The survey suggested that the main areas in need of improvements are water quality, condition of pipes, development of sewerage systems and more active co-operation with apartment associations and real estate companies. Detailed action plans have been put in place to address the issues raised. The next customer satisfaction survey will be conducted in autumn of 2004.

#### **Customer-friendly processes**

From 2003 the company has been using key performance indicators (KPI) that enable us to analyse the company's activities and thereby simplify customer service processes. We have reorganised the connection process to the water supply and sewerage system and made it more customer-friendly. We have also simplified the process of concluding service agreements.

#### **Satisfied employees provide better service**

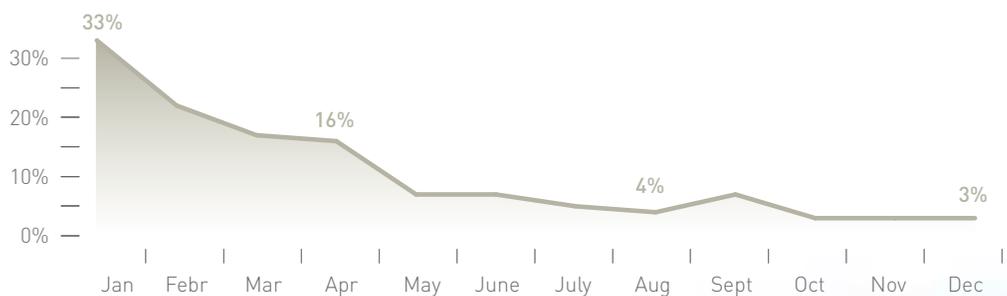
Customer satisfaction is directly linked with the satisfaction of employees. Customer satisfaction, however, is based on a high-quality service, satisfied employees, and customer-friendly processes.

The company is working hard to increase its employees' motivation and satisfaction. Thus, we introduced a new performance related pay system and conducted "Key to Results" internal trainings in 2003.

#### **Improved customer calls management**

The main task of the Contact Centre is to manage all customer contacts and phone calls. One of the objectives for 2003 was to improve the management of the Contact Centre by providing our customers as much operative feedback as possible. The new phone system, was installed to provide reliable information about the quality of phone service. As a result, the efficiency of answering phone calls has improved by five times! (See Graph 2). It is also good to note that customers have started to use more actively a new service, which enables them to report water meter readings over the phone 24 hours a day, at the time most convenient for the customer. In addition to operative handling of phone inquiries, the speed and quality of replies to written inquiries has also improved.

Percentage of customer calls lost in 2003 (Graph 2)





#### **Regular settling of accounts**

In 2003, the company transferred all customers in to one accounting system and account books became invalid. Instead of customers paying for the service in cash at Tallinna Vesi office, they can now report the water meter reading over the phone, by e-mail or fax. We also started to issue estimated invoices to customers who do not report their water meter readings at the agreed time. For customers convenience they also have the possibility to pay for the service at post offices, where AS Tallinna Vesi pays the transaction fee.

#### **Improved customer communication**

In 2003 the company started to communicate more actively with its customers in order to explain company values – the environment, sustainable use of natural resources, quality of products and services. Since water quality is important for all Talliners, we decided to approach all consumers by sending them an 8-page customer newsletter in Estonian and Russian. "Veeleht" is published twice a year and it gives an overview of the company's investments, answers the customer questions and pro-

vides water related advice to our readers. For the first time the company also organised a media campaign for Tallinn citizens to increase their water related awareness.

#### **Structuring of customer database**

In 2003 we continued with the "Customer Census" project to improve data quality, to get feedback from customers and to create a more personal contact. This project also enables us to detect unauthorised water and sewerage connections. Monitoring of Tallinn companies was started last autumn, during which the company checked about 1 000 customers, i.e. more than 2 000 buildings. The majority of buildings visited, are from the Old Town. The "Customer Census" project will be continued until the whole city has been covered.

#### **"Grace period" achieved its goal**

The company conducted the "Grace period" campaign, which gave Talliners a possibility to report on unauthorized water supply or sewerage connections. The campaign objective was to give all owners and business enterprises with unauthorized

connection to the city water supply and/or sewerage system, a possibility to legalise their activity and sign a service contract. The unauthorised connectees, that contacted us during the campaign, were not charged penalties for unauthorised connection or charged retrospectively for the use of Tallinna Vesi services. 216 new customers were added to the customer database during the „Grace period” campaign, the majority of whom were private customers. The „Grace period” campaign received altogether 282 notifications.

#### **Active connecting to city water and sewerage system**

In 2003 AS Tallinna Vesi built more than 1 500 meters of new water pipeline, more than 13 kilometers of new sewerage and more than 5,5 kilometers of storm water network. As a result of network extensions, the company concluded more than 800 water supply and sewerage connection contracts. For about 400 of them the City of Tallinn reimbursed the connection fee. Additionally, almost 7 kilometers of water pipeline and over 5 kilometers of sewers were reconstructed, improving service quality delivered to our customers.

#### **Implementation of Customer Information System**

For the replacement of Customer Information System (CIS) we carried out the following preparatory works:

- Mapping the customer related existing and to-be processes
- Establishing the functional specification of the CIS on the basis of mapping
- Preparing the procurement documentation including the implementation agreement
- Qualifying of the tenderers

A total of nine tenderers qualified for the second stage of the public procurement.

**“Talliners were actively connecting to the public water and sewerage system both in 2002 and 2003.”**

#### **New customer friendly office**

The company started to reorganise the Customer Service office in 2003. Our aim is to provide easily accessible customer service facilities and pleasant working conditions for our employees. As part of the improvements, the Customer Service will have a queue machine for smoother service, water and coffee machines, Internet access and a waiting area with company’s advertising materials and the possibility to fill in necessary documents.

Merle Lindma  
Customer Service Manager

## Water Treatment Report

90 percent of the drinking water of Tallinn comes from Lake Ülemiste, i.e. from surface water. As Lake Ülemiste is the main source of drinking water for talliners residents, it must be protected from external influences that may harm the water quality.

### Lake Ülemiste – the main source of drinking water

Water is our common natural resource with a limited supply. Therefore, every resident should think of how to use water economically at his or her household. In order to turn Lake Ülemiste water into a high-quality drinking water, it passes a 15-hour thorough and modern purification process. In order to improve Lake Ülemiste water quality in an environmentally conscious way, the company has employed biomanipulation, i.e. the establishment of natural food chain in the lake.

### Efficient purification guarantees quality

On average, Ülemiste Plant produces 75 000 m<sup>3</sup> of drinking water per day. (See Graph 3). Ülemiste Water Treatment Plant purifies water according to the classical process: microfiltration, pre-ozonation, coagulation, settling, filtration, post-chlorination (See Graph 4). To ensure safe preservation of drinking water in the City network and its safety to residents, water is disinfected with chlorine before it is pumped to the city network. Ozonation improves water quality, reduces its colour, and water acquires a better taste and smell. Due to ozonation used in water purification process, the amount of chlorine used in the treatment process has been reduced several times in the past 10 years. Chlorine is added to water in order to maintain its quality in the network.

### Revolutionary PAX

One of the most important changes in of the Ülemiste Water Treatment Plant work processes was the implementation of the new water purification chemical PAX. The new chemical was tested for several years on the Water Treatment Plant's pilot equipment. The tests included review of the chemical's influence on the purification process and its possible influence on water quality in the network. The new chemical was fully employed in May 2003 and as the water quality tests show, it improves water stability and preservation in the network and thereby the water quality at a customer's tap. PAX increases the pH level in drinking water and adjusts the chemical balance of water. That, in turn, reduces corrosion in the network. In comparison with the chemicals used earlier, PAX does not contain sulphates and that enables the creation of a protective shield on the walls of the pipeline. During the period that PAX has been used, the analyses taken at the consumers' have shown improvement – a decrease in content iron and thus decreased turbidity and colour.

**“PAX improves water stability and preservation of quality in the network.”**

### Safety and environmental protection

The key words of investments at Ülemiste Water Treatment Plant in 2003 were reliability, environmental protection and safety. In the end of October, the company took Ülemiste Water Treatment

Plant's modern chlorine storage facility into full use. The total cost of designing and constructing of the EU compliant chlorine storage facility, was 10 million kroons. It uses very high-quality safety devices. In case of an emergency they neutralise chlorine vapours already inside the facility and avoid danger to environment and people.

From the environmental protection point of view, the residue ozone decomposer installed at the Water Treatment Plant is of great importance. The ozone decomposer ensures that the ozone emissions into atmosphere are zero.

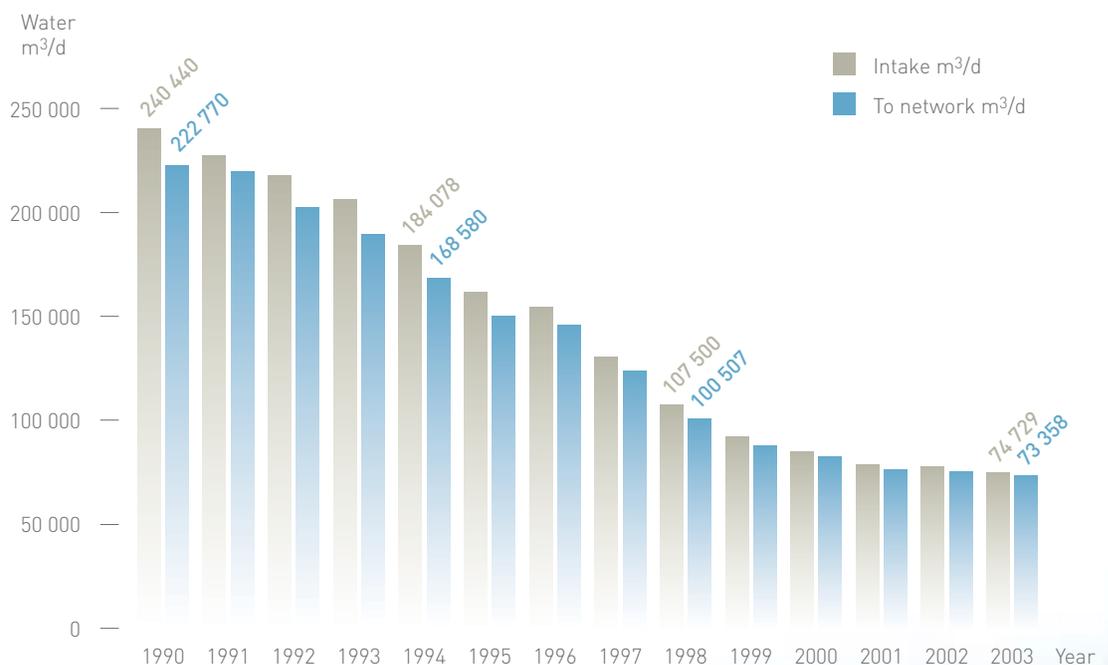
#### Bore wells

About 10 percent of Tallinn residents get their drinking water from groundwater wells. Most of the company's bore wells are located at Nõmme,

Merivälja, Pirita, Kakumäe, Kose, Laagri and elsewhere. Groundwater is taken from two different ground layers – Cambrian-Vendi, where the depth of bore wells is 100 – 200 meters and Ordovician-Cambrian, with the depth at 80 – 90 meters. However, most groundwater in Tallinn is obtained from the Cambrian-Vendi layer. As it is necessary to remove iron and manganese from groundwater at some places, the wells are equipped with necessary treatment devices.

Riho Sobi  
Water Treatment Manager

Water treatment and water to network in 1990 – 2003 (Graph 3)



## Water Purification Process in Ülemiste Water Treatment Plant (Graph 4)

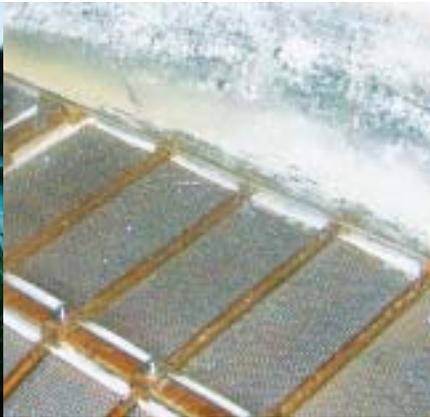
Raw water passes through microfilters which remove algae and suspended solids.

2



1

Water is directed from a catchment area of 2 000 km<sup>2</sup> through Lake Ülemiste to the Water Treatment Plant.



3

Water is directed into basins where all hazardous bacteria is removed by a mix of ozone and air.

Chemicals are added to clarify the water and a sedimentation phase removes suspended solids, chemical floc and precipitate from suspension through gravity settling.



4

Before pumping the water into the network, it is slightly chlorinated for disinfection purposes.



6



5



The water passes through anthracite & sand filters that remove any remaining impurities and improve water taste.

## Purified Water Quality in 2003

Regulation nr. 82 of  
Ministry of Social Affairs,  
EU directive 98/83/EC

Characteristic	Unit	Max	Min	Mean	
Temperature	°C	26	0,9	9,3	
Odour	point	2	1	1	Acceptable to consumers
Taste	point	1	1	1	Acceptable to consumers
Colour	degree	11	<2	0,19	Acceptable to consumers
Turbidity	NTU	0,4	0,07	0,2	1
pH		7,81	6,89	7,23	6,5 – 9,5
Total hardness	mval/l	5,09	3,79	4,27	
Permanent hardness	mval/l	1,82	0,99	1,38	
Temporary hardness	mval/l	3,38	2,27	2,86	
Aluminium, Al <sup>3+</sup>	µg/l	180	60	100	200
Calcium, Ca <sup>2+</sup>	mg/l	84	62	71	
Magnesium, Mg <sup>2+</sup>	mg/l	11	7	9,1	
Sodium, Na <sup>+</sup>	mg/l	6,64	5,54	6,01	200
Carbonate, CO <sub>3</sub> <sup>2-</sup>	mg/l	0	0	0	
Free CO <sub>2</sub>	mg/l	43	10	22,2	
Chloride, Cl <sup>-</sup>	mg/l	26	11	20,2	250
Sulphate, SO <sub>4</sub> <sup>2-</sup>	mg/l	83	25	49,1	250
Ammonium, NH <sub>4</sub> <sup>+</sup>	mg/l	0	<0,003	0,004	0,5
Nitrate, NO <sub>3</sub> <sup>-</sup>	mg/l	0	<0,003	0	50
Nitrite, NO <sub>2</sub> <sup>-</sup>	mg/l	0	<0,5	0	0,5
Fluoride, F <sup>-</sup>	mg/l	0,18	0,07	0,15	1,5
Oxidisability (CODMn)	mg O <sub>2</sub> /l	4,1	2,1	3,04	5
Total organic carbon (TOC)	mg C/l	0	0	6,34	No abnormal change
UV abs. 254 nm	cm <sup>-1</sup>	0,55	0,24	0,347	
Iron, Fe	µg/l	<20	<20	<20	200
Manganese, Mn	µg/l	47,2	1,2	12,3	50
Zinc, Zn	µg/l	1,1	0,16	0,56	
Copper, Cu	µg/l	1	0,45	0,71	2
Barium, Ba	µg/l	46,2	31,1	37,1	
Arsenic, As	µg/l	0,81	0,38	0,56	10
Mercury, Hg	µg/l	0	<0,02	0	1
Chromium, Cr	µg/l	2,1	0,16	0,84	50
Lead, Pb	µg/l	7,2	0	0,62	10
Nickel, Ni	µg/l	0,59	0,39	0,51	20
Cyanide, CN <sup>-</sup>	µg/l	3	0	1	50
Chloroform	µg/l	68	1,4	21,1	
Pesticides	µg/l	0	0	0	0,5
Coliform bacteria.	number/100ml	0	0	0	0
Escherichia coli	number/100ml	0	0	0	0

## Networks Report

AS Tallinna Vesi operates the water supply, sewerage and stormwater network in the city of Tallinn. The networks department is responsible for this area in the company.

### Water network

Today the length of public water supply system in the city of Tallinn is about 900 km, however the age and condition of water network varies considerably.

In 2003, AS Tallinna Vesi registered 2 090 water network emergency works. 480 of them were connected with pipe leakage and most of the problems are a result of a poor quality of the network. The company replaced 334 valves and installed 478 new hydrants. The unusually cold winter of 2003 caused the freezing of many water pipes and thus higher workload for network teams.

### Pumping stations guarantee pressure in network

13 pumping stations all over the city provide the buildings with necessary water pressure. All pumping stations are fully automated and managed by remote surveillance system. Ground water forms about 10% of the total water resource in Tallinn. In 2003 the total production of ground water was 3,27 million m<sup>3</sup>. In order to provide our customers with ground water, the company has 31 ground water pumping stations and 39 ground water wells that are operated by the networks department.

### Pipe air scouring improves water quality

The greatest priority of water network department is to ensure that high-quality drinking water reaches our customers. One way to improve the quality is network pressure washing. Therefore, AS Tallinna Vesi doubled the air scouring programme

in 2003. To clean the pipes, air is injected into the network, and as a result of air mixing with water, the sediments accumulated in the pipes are removed.

Works were carried out in Nõmme, Mustamäe, Õismäe, Kopli, Pirita-Kose and Saue. Pipe air scouring causes temporary inconvenience for the residents, as it is not recommended to consume water during air scouring works. However, in a longer perspective the results of air scouring are very efficient and the feedback received from customers regarding better quality of drinking water has fully justified the benefits of the air scouring programme. We will continue the same programme also next year in order to get maximum benefit for our customers.

**“AS Tallinna Vesi air scours 200 km of water pipeline a year.”**

### Number of sewer blockages decreasing

The length of sewer network together with tunnels and connection pipes, operated by AS Tallinna Vesi, is over 1 000 km. Sewer blockages are one of the main problems that sewer network teams encounter every day. Despite the extension of service area, the service levels have been improving and the number of blockages is continuously decreasing. The main reasons for sewer blockages are the technical condition of old pipes, and a decrease in the quantity and speed of flow due to smaller water consumption, which causes accumulation of sediments in the network.

In 2003 a total of 1 643 sewer blockages, i.e. about 4,5 blockages a day were registered in Tallinn.



However, it is good to point out that the number of blockages is declining year after year.

**“The number of blockages has decreased by 1/3 in last four years.”**

#### **Pressure washing prevents blockages**

To reduce the number of blockages, the company performs preventive pressure washing. In 2003 a total of 73 km of sewerage pipes were flushed. During washing, water pressure generates a high velocity water flow, which flushes sand and other sediments settled in the pipes into a manhole, where they are pulled out and deposited in landfill. Pipe washing reduces the number of blockages that cause inconveniences to our customers and increases the capacity of pipes.

In addition, the networks department carries out washing of grid manholes. For that the sediments settled in the grid manhole are flushed with water under pressure and pulled out by a tank lorry. This enables the prevention of stormwater overflows on the streets of Tallinn.

#### **Fully automated sewerage pumping stations**

There are a total of 59 sewerage pumping stations in Tallinn and surrounding areas that pump the sewage collected from the area to the main pumping station and then to the Paljassaare Wastewater Treatment Plant. All sewerage pumping stations are automated and potential emergencies are monitored by a remote surveillance system.

Leho Võrk  
Networks Manager

## Wastewater Treatment Report

The water used in Tallinn and its vicinity together with stormwater are treated at the Paljassaare Wastewater Treatment Plant by using environmentally friendly and modern treatment technology.

### Environmentally friendly wastewater treatment

45,6 million m<sup>3</sup> of wastewater was treated in 2003, and the treatment results have been constantly improving. The results were good, despite the start of biological treatment upgrade project. The aim of the project is to reduce the amount of nitrogen discharged into the sea by 25% by 2006. As the wastewater is more polluted every year, it is more difficult to achieve high-quality effluent. 1 453 tons of chemicals which is 1/4 more than last year were used to remove phosphorus from wastewater. Due to decreased water consumption, the quantities of wastewater to be treated have been constantly decreasing. (See Graph 5).

### Investments in nitrogen removal

As environmental requirements are becoming stricter and nitrogen consent reduced, additional investments are needed to make the nitrogen removal process more efficient. In 2003, the upgrade of the activated sludge plant was started. As a result, the quantity of nitrogen discharged to

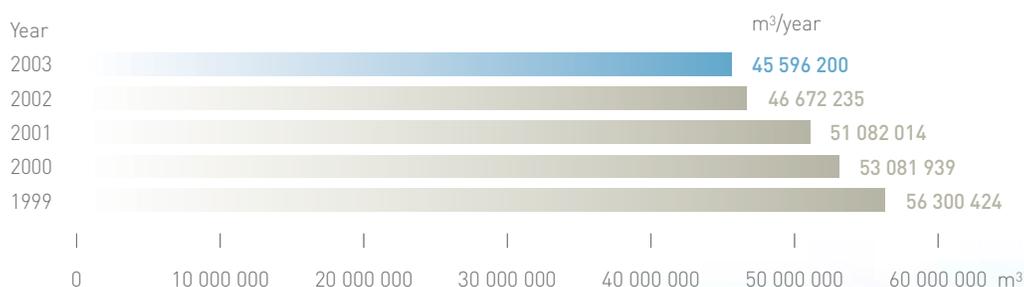
Tallinn bay will be reduced at least by 1/4 in comparison with 2002 level. The necessary reconstruction works will be carried out in 2003 and 2004. In 2003, works on two aeration-tanks and most of the methanol plant construction works were completed.

### Improving sludge treatment

The sludge separated in the wastewater treatment process undergoes an approximately 25-day anaerobic fermentation and a subsequent drying process. 28 044 tons of sludge was extracted last year. 5 455 tons or 19% of the sludge was taken to landfill and the rest was recycled and turned into compost. In addition 2 565 tons of sludge was used at Liikva forest planting experimentation area.

In order to increase the amount of reused sludge and find new environmentally friendly ways to utilise sludge, several research and development programmes were started in 2003. Due to sludge reuse, the percentage of sludge taken to landfill decreased by about 45% in comparison with the previous year. Our goal is to take zero percent sludge to landfill and use it all for composting. A new centrifuge was taken into use in 2003 to ensure steady operation of the optimal sludge treatment process. Its acquisition and installation cost was over 5 million kroons.

Treated Wastewater Quantities in 1999 – 2003 m<sup>3</sup>/year (Graph 5)



## Wastewater Treatment Process in Paljassaare Wastewater Treatment Plant

Coagulant is added.

2

In the aeration tanks microorganisms decompose the biodegradable substance and consume heavy pollution.

4



1

Large particles of waste are removed from the wastewater by screening. Grit and oils are removed. Grit chambers separate grit from the water.

3

Primary treatment is designed to remove settleable organic matter and precipitated phosphorus.

5

Air is injected into sewage to enable microorganisms to grow.

Sludge produced at different stages of the treatment process is pumped into the sludge processing station.

7

Anaerobic stabilisation of sludge produces biogas which contains methane. Biogas is used in the technological process of the sludge treatment facility, as well as for the production of air needed in the biological treatment process.

It is also used for heating buildings.

9

81% of sludge is composted and 19% taken to a landfill.

11



6

During final clarification sludge is separated from the clean water. Water is directed to the sea through the deep sea outlet.

8

In the sludge treatment facility sludge is stabilised, mixed with additives and dried.

10

Sludge is fermented in methane tanks where the organic substance is decomposed by bacteria.

12

Compost produced in such a method is used as a valuable organic fertiliser.



#### **Efficient environmental monitoring**

The Wastewater Inspectorate that monitors sewage and wastewater pollution levels of premises connected to Tallinn sewerage system, improved its work in 2003. In order to get a better overview of pollution levels and potential impact of the effluent conducted to the environment and sewage conducted to the public sewerage system by customers, the Wastewater Inspectorate took 1 454 water samples during the year, which is the largest number of samples ever taken.

#### **Investments in 2004**

The main investments in 2004 in the Paljassaare Wastewater Treatment Plant are connected with environmental protection. The upgrade of biological treatment that started in 2003 will continue with

the aim of achieving more efficient nitrogen removal. Additionally, a larger compost field will be built together with an improved drainage system. The new composting complex will enable us to compost all the sludge and avoids the high-quality sludge from being taken to the landfill.

Valter Pärn  
Wastewater Treatment Manager

## Technical Support Services Report

### Development

#### Active development works in Tallinn continue

In 2003, AS Tallinna Vesi constructed 20,8 km of new water supply and sewerage networks. In addition, 11,8 km of pipeline was reconstructed (See Graph 6). Also two new sewage pumping stations were constructed during the extension of sewerage network at Rohula and Kätki streets.

#### Development projects in neighbouring municipalities

In addition to development works in Tallinn, the company is also actively proposing its service to the neighbouring municipalities. The first constructive step was the appointment of AS Tallinna Vesi and Water Ser as the local water service provider in Apametsa, an area with 3 400 residents. Additionally the company has developed its contracts with the surrounding municipalities, and proposed water and sewerage connections. The connection of neighbouring areas to Tallinn's public sewerage network provides the residents with an

environmentally friendly way to dispose of their wastewater, and a very cost effective solution compared to any others.

### Design

The main task of the Design Department in 2003 was designing the construction works for the water quality improvement programme. Earlier AS Tallinna Vesi outsourced the designing service for new constructions, however, in 2003 most of designing works was made within the company.

Additionally, the department offers its services in designing water supply and sewerage network for residents to build connections inside their plots. This design service was provided altogether to 235 plot owners.

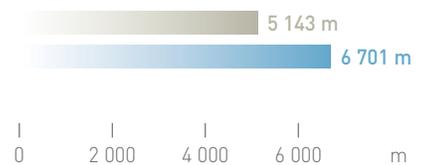
### Geographic Information Systems (GIS)

In 2003, the company continued to develop the Geographic Information System (GIS) implemented

Network Development in metres in 2003 (Graph 6)



Network Refurbishment in metres in 2003



■ Water Network   ■ Sewage Network   ■ Storm Water Network

in 2000. In 2003, the company also completed the hydraulic water supply system model using WaterCad. The model enables the company to better manage the daily operation of network, plan the connection of new areas and prepare water supply system rehabilitation plans. The model helps to locate possible pressure and water quality related problems and find the best solutions for improving the situation. At the same time the initial model has been simplified and optimised in order to accelerate the daily modelling work. Additionally, the development of hydraulic calculation model for sewerage network, based on the current GIS, has been started. This project will be completed by autumn 2004.

GIS information provides all the necessary data about the network such as the locations, depths, dimensions etc. Additionally, the development of a new database was continued. In the course of that

the calculation programme of connection fees (LTS) and GIS database were integrated, training of users and testing of the new system was started.

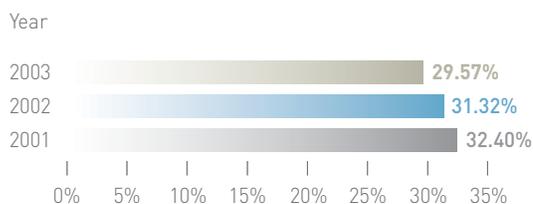
### Leakage and Diagnostics

#### Efficient detection of leakages

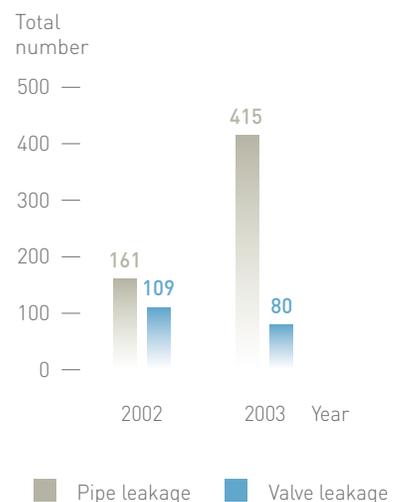
The Leakage and Diagnostics Department worked in 2003 more effectively than ever and the detection of leakages was the highest ever, enabling the reduction of water loss by 6% [See Graphs 7, 8]. The priority areas were Lasnamäe, Centre of the City and Merivälja.

The high percentage of water losses in the first months of 2003 was the result of sudden increase in water network failures due to the cold weather. The second half of the year proved to be better and the aim for 2004 is to maintain the results of the last 5 months.

Total Unaccounted Water in 2001 – 2003 (Graph 7)



Overview of Detected Leakages in 2002 – 2003 (Graph 8)



At the end of the year special zoning sensors were installed on some water network points, registering the flow rate and pressure. The use of such sensors enables to localise leakages faster, thereby reducing water losses.

In 2003 the company also started a pilot project installing water-metering points in the Lasnamäe area. Based on the results of the project analyses, similar water metering points will be installed to other areas of Tallinn in 2004.

#### **Unique bore well camera in the Baltic States**

In the beginning of 2003, AS Tallinna Vesi started working with a video device for examining the condition of bore wells, which is unique in the Baltic States and enables us to examine bore wells up to 500 m deep. This over 1-million-kroon camera enables us to assess the technical condition of bore wells, to decide on the need of repair works or replacement of a bore well. Regular checking of the inside of wells is an essential but rather difficult work. However, this new unique camera system creates excellent conditions for performing that work. Two of AS Tallinna Vesi's specialists who have had prior experience in working with bore wells and pipeline cameras received a special training for working with the new device.

#### **Water Meters**

##### **Water meters testing programme started**

In 2003 AS Tallinna Vesi installed a total of 6 225 new water meters.

In April 2003, a specific programme was started to compare the accuracy of class B multi-jet water

meters with class C single-jet water meters. The aim of the programme is to find out which measuring principle is most suitable for the conditions of Tallinn, what should be the accuracy class of a water metre, and which diameter and type of metre is suitable to the different group of consumers. Meters with accuracy class C were installed in 20 different locations during the programme.

#### **Asset Management**

##### **Efficient Asset Management**

Based on its performance in 2003 it can be said that the company's asset management structure one service providing unit for the whole company has justified itself in every aspect. The overview of the equipment conditions has improved and all information is now available from a single source. That in turn enables to optimise materials inventory and plan investments.

**“Asset Management related costs have decreased by 20% in one year.”**

The two biggest Asset Management projects in 2003 were to find a suitable asset management software programme and the project management of the Wastewater Treatment Plant nitrogen removal project. Both of these projects are on the right track.

The key objective for the new asset management software is to improve the management of the



company's assets, record all actions related to asset management, have a better overview of the technical data and improve the planning process. During 2003, most of the preparatory work to gather data for the new programme implementation was completed. The new system is planned to be fully implemented by the end of 2004.

Asset Management's main tasks in 2004 are the development of the company's technical requirements for the equipment in cooperation with the

production units; mapping of the structural units and Asset Management's areas of responsibilities; and the provision of electrical devices and systems' service to the Wastewater Treatment Plant.

Meelis Eldermann  
Technical Support Services Manager

## Laboratories Report

The year 2003 can be characterised above all as the year of stability for AS Tallinna Vesi laboratories. The laboratories received ISO 17025 certificate in 2001, which confirms our competence in taking chemical and microbiological analyses of ground water, drinking water and wastewater and providing a high-quality laboratory service.

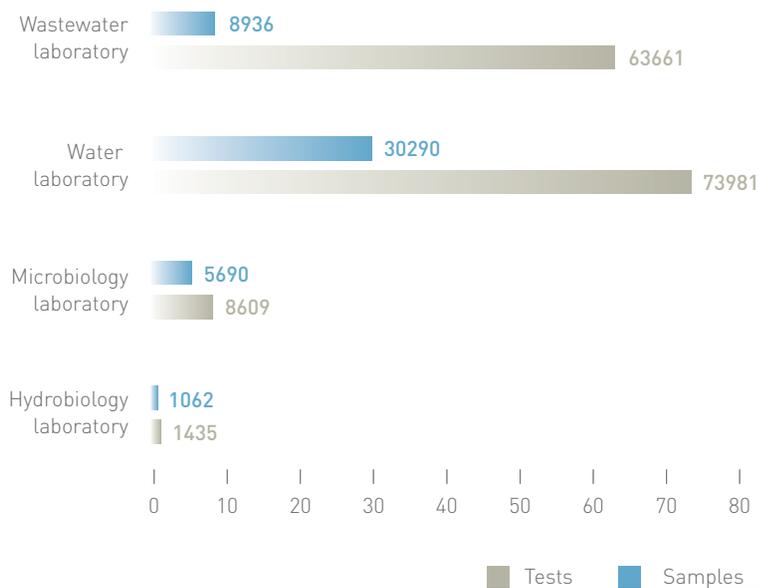
Similarly with the previous years the, water and wastewater laboratories have successfully renewed the ISO 17025 certificate in 2003 and new methodologies have been added to the scope of accreditation in 2003.

### Water laboratory

The quality tests performed by the company's laboratories show that the drinking water quality in Tallinn has improved in 2003. The best results in the quality analyses taken from customers' drinking water were achieved in lower content of iron.

In the year 2003, of all drinking water quality samples taken from Tallinn's water network 99,97% met the current microbiological requirements and 99,02% the chemical requirements. This is the best result over the years (See Graph 9).

Samples taken and tests made in AS Tallinna Vesi laboratories in 2003

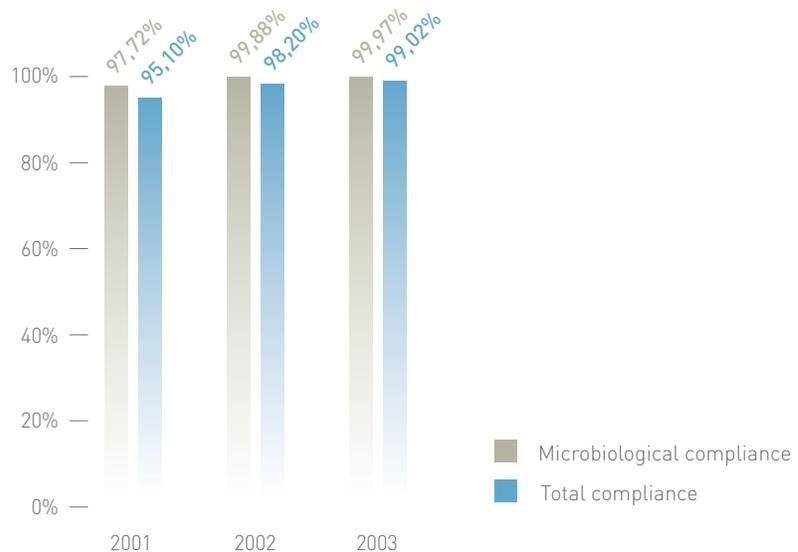


### Stricter quality requirements for drinking water

In June 2002 a regulation establishing stricter quality requirements for drinking water came into force. It stipulates that the iron content in drinking water can be 0,2 mg/l instead of the previous five times higher 1,0 mg/l limit. Due to a considerable variance, there is a transition period until the end of 2006 to comply with the new requirements.

The calculation of 99,02% compliance of water quality chemical indicators was made with the 1,0 mg/l limit of iron content, but considering the 0,2 mg/l iron content limit, which will come into force on 1 January 2007, Tallinn drinking water has made a significant 51,4% increase in quality in 2000 – 2003 regarding chemical indicators (See Graph 10).

Water quality compliance in 2001 – 2003 (Graph 9)



### PAX improves water quality

One of the main reasons for improved water quality is definitely the introduction of PAX in May 2003. PAX also facilitates the network management. During the period that PAX has been used, the analyses taken from customers' have shown decrease in iron content and therefore less turbidity and colour. The new chemical improves water stability and preservation of the pipes and thereby the quality of water in a customer's tap.

Drinking water quality is measured at 120 points in Tallinn & Saue, including check points at customers premises.

In order to get a complete overview of Tallinn drinking water quality, AS Tallinna Vesi water laboratory takes quality samples in the catchment area, inflow channels of Lake Ülemiste and Lake Ülemiste, at different stages of water purification process, from purified drinking water directed to the City, ground water wells, pumping stations and water network.

Compliance with 2007 requirements in 1999-2003\* (Graph 10)



\* Year 2007 requirement is based on 0.2 mg/l limit of iron content

### **Wastewater laboratory**

AS Tallinna Vesi wastewater laboratory analyses the whole wastewater treatment process from the sewage entering the Paljassaare main pumping station to a cleaned effluent directed into the sea, and also sludge and its processing products.

The wastewater laboratory also analyses sewage samples taken by the Sewage Inspectorate from the City sewerage network and different companies.

In comparison with earlier years, the wastewater laboratory results show improvement in the effi-

ciency of phosphorus and oil products treatment. As to nitrogen, its content has been slightly higher due to the reconstruction works carried out at the plant. Thus the allowed nitrogen content in treated wastewater is higher than in the previous years (See Graph 11).

Tiit Laur  
Laboratories Manager

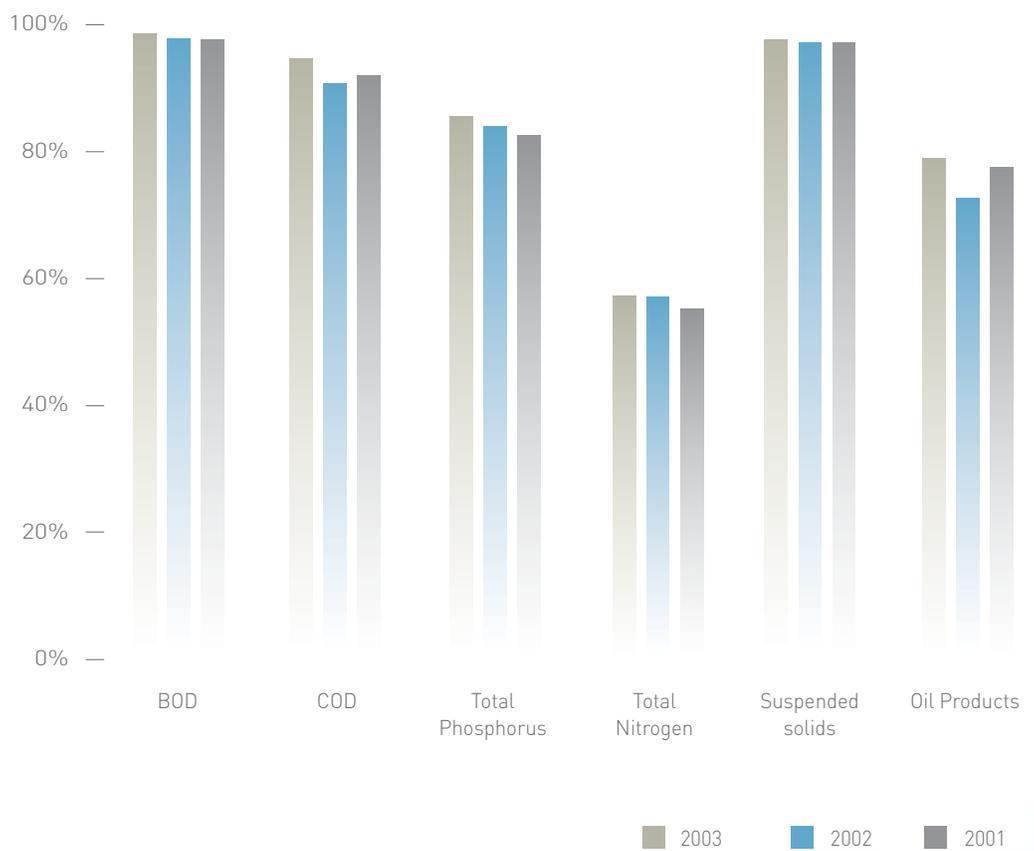


Wastewater Treatment Efficiency Percentage in 2001 – 2003 (Graph 11)

	2003	2002	2001
BOD	98,2%	97,8%	97,6%
COD	94,4%	90,6%	91,9%
Total Phosphorus	85,3%	83,9%	82,5%
Total Nitrogen	56,9%	57,1%	55,2%
Suspended solids	97,3%	97,1%	97,1%
Oil Products	78,6%	72,6%	77,4%

BOD – Biological Oxygen Demand

COD – Chemical Oxygen Demand







# Sustainability Report

Environmental protection is our  
**key responsibility**

## Water for Life

Environmentally conscious thinking is extremely important to AS Tallinna Vesi as the company uses and is responsible for a vital resource – water. In our everyday life we understand our role in the environmental protection with the main objective to keep our living environment clean and provide people with pure drinking water.

### **Implementation of environmental management system**

In 2003, one of the most important objectives for our company was the implementation of the environmental management system. We achieved this objective due to our team effort across the whole company. In December 2003, the Certification company Det Norske Veritas acknowledged the activities of AS Tallinna Vesi to be compliant with the requirements of the environmental management system ISO 14001 standard requirements and the company was awarded with the respective certificate. AS Tallinna Vesi is an environmental company because we operate with the most important component for life – water. That is a great responsibility.

The aim of environmental management system implementation was to reduce any harmful impact to the environment resulting from the company's operations and increase the positive aspects.

### **Environmental projects**

The key environmental projects in 2003 in Ülemiste Water Treatment Plant were the opening of the bulk chlorine storage facility that meets all modern

safety requirements and the installation of an ozone destructor. In addition, raw water quality improvement through biomanipulation was continued. In Paljassaare Wastewater Treatment Plant the company started the project to improve the efficiency of nitrogen removal from wastewater due to which the quantity of nitrogen directed to the sea is reduced significantly. In addition, preparatory works for setting up additional compost fields were done. This project enables to reduce the amount of sludge taken to the landfill and use the sludge for making good quality composting instead.

**“Tallinna Vesi is an environmental company.”**

AS Tallinna Vesi is proud to be the only water company in Estonia and one of the few in the Baltics, to have received the environmental management system ISO 14001 certificate. On July 1 2002, the quality management system ISO 9001 certificate was issued to AS Tallinna Vesi and in December 2001, Ülemiste Water Treatment Plant and Paljassaare Wastewater Treatment Plant's laboratories were given internationally recognised ISO 17025 quality certificates. In 2003, the company successfully renewed both of these certifications.

### **Our contribution to the community**

- Our customers have a constant supply of clean drinking water and the possibility to discharge household wastewater to the sewerage system.
- It is easy for our customer to communicate with us.
- We use natural resources rationally
- Our activities do not have a negative impact on human and natural environment.

### **What do we do for these purposes?**

- We guarantee constant control over the surface and groundwater supplies of Tallinn.
- We purify drinking water.
- We keep the public water and sewerage system, fire hydrants and public draw-off points in a good working order.
- We treat wastewater and handle residual sludge in an environmentally friendly way.
- We build public water and sewerage systems in new service areas.
- We prefer to use environmentally sustainable technology at water purification and wastewater treatment plants and for building the new networks.
- We advise customers how to choose environmentally friendly services provided by the company.
- We find solutions to problems that will help to prevent the pollution of the environment.

### **Water resources**

The City of Tallinn receives almost all of its drinking water from surface water with a total volume of 35 million m<sup>3</sup> from an area of 1 782 hectares. The rivers and springs begin in the forests and bogs of Aegviidu. The water is collected and directed to six reservoirs to keep and maintain the water supply in

Tallinn's largest and most important body of surface water – Lake Ülemiste at a volume of 17 million m<sup>3</sup>. From Paunküla, Soodla, Aavoja, Kaunissaare and Vaskjala reservoirs water is channelled to Lake Ülemiste.

Paunküla reservoir with its beautiful archipelago, rich in fish supplies, is located at the upper course of the River Pirita. The reservoir was established in 1959–1960 and reconstructed in 1975–1979. Soodla reservoir is the third largest of Tallinn after Ülemiste and Paunküla. In 1979, Soodla-Jägala-Jõelähtme-Pirita aqueduct with Soodla reservoir was completed. In 1983, Aavoja channel and Kaunissaare reservoir were completed. Vaskjala dam was finished in 1999. This is an extremely important junction in Tallinn's surface water intake as surface water of the whole system accumulates behind Vaskjala dam. Based on the needs of the City of Tallinn, water is directed to Lake Ülemiste through the channel.

Sustainable use of water resources is especially important in dry periods. One precondition is constant overview of used water quantities – of flows left in rivers and directed to channels. Investments made in establishing water-measuring points and in reconstruction of Vaskjala and Kaunissaare water measuring points in 1999 and of Paunküla in 2003 have fully justified themselves.

Construction of a water measuring points will continue in 2004 at Aavoja. In order to regulate the total surface water intake system, Soodla is also planned to be reconstructed.



Photo of Kurna biomarsh

#### **Lake Ülemiste water quality improvement**

90% of the drinking water used in Tallinn comes from Lake Ülemiste. Requirements for the quality of water are becoming stricter and we are constantly working to improve it even further to provide people with high-quality drinking water. Improving the condition of shallow lakes like Ülemiste is more complicated. AS Tallinna Vesi has conducted several researches to analyse the condition of water and ecosystem in Lake Ülemiste.

#### **Kurna bio marsh**

In June 2002, AS Tallinna Vesi started to use an artificial wetland at Kurna as a natural filter. The aim of creating the artificial wetland was to diminish the load of nutrients coming from Kurna creek to Lake Ülemiste.

The creek's water is directed to the shallow flood meadow of the former Katku creek, covered with vegetation. Water flows through it very slowly before reaching Lake Ülemiste. Wetland is efficient for removing nitrogen, phosphorus, heavy metals and solid particles from water. The working principle of wetland is based on the processes of sedimentation, absorption and microbiological decomposition.

**„Natural self-purification process  
in Kurna improved the quality  
of raw water flowing  
to Lake Ülemiste.“**

#### **Biomaniipulation project continues**

One possibility for the environmental friendly improvement of raw water quality is biomaniipulation or establishing a classical food chain. This method has proved to be successful in lakes in Central and Northern Europe.

A classical food chain in a body of water is as follows: predatory fish – carnivorous fish – zooplankton – phytoplankton. Currently the food chain control from upper levels downward does not work very well as predatory fish only make up for 5% of total fish resources, carnivorous are dominating and have eaten zooplankton thus enabling micro algae to reproduce excessively. In order to create an efficient food chain AS Tallinna Vesi let 45 000 fingerlings of predatory fish in Lake Ülemiste in both 2001 and 2002.

During biomanipulation excessive carnivorous fish like bream, roach and ruff are caught. In winter 2003 an initial plan of activities and timing was compiled for fishing. During preparatory works in summer the digital depth map of Ülemiste was compiled and assembly of fish schools in the lake was investigated by means of the echo sounder. In addition we examined the efficiency of different fishing means and their suitability for mass fishing.

Preliminary work conducted in summer and autumn proved that biomanipulation helps to improve the following indicators of water quality in Ülemiste: turbidity, general phosphorus, general nitrogen and chemical oxygen demand (COD). It appeared that first and foremost the bream population has to be reduced in order to improve the quality of water. Test catches proved that both purse seine and fyke net can be used and are efficient.

As Finland has experience and means for such catches, specialists from the Finnish Environmental Research Institute have provided Tallinna Vesi with fishing equipment as well as know-how. Late autumn catches showed that

bream does not assemble in the lake and therefore thus bream catches were postponed to the year 2004.

#### **New environmentally safe chlorine storage**

The construction of the modern storage facility started in March 2003. The works were conducted in co-operation with the construction companies FKSM and Keskkonnaehitus. The total cost of designing and building the chlorine storage facility, which meets the EU safety requirements, was 10 million kroons. All construction works were completed in October.

The company uses extremely high-level safety equipment in the new storage facility. For neutralising the gas emerging from chlorine we use a special system, which will force the air in the chlorine storage facility to circulate into it if concentration of chlorine gases in the air increases, thus cleaning the air from chlorine gas. The objective is to neutralise chlorine vapours inside instead of letting them out where they may put the environment in danger. The storage facility's equipment is fully automatic and guarantees safe handling of chlorine.



The opening of the facility was an important event for the City of Tallinn and its inhabitants because a highly hazardous chlorine, is now deposited in a storage facility supplied with high-level safety equipment.

#### **Reduced ozone emission**

At Ülemiste Water Treatment Plant water is purified with ozone. In order to make complete use of ozone produced from ambient air a piece of equipment was installed in 2003, which enables to reduce the quantity of residual ozone going back to the atmosphere to zero.

#### **The Baltic Sea becomes cleaner**

In July 2003, the Minister for the Environment, Villu Reiljan and Bob Gallienne, CEO of AS Tallinna Vesi signed an agreement according to which the water company is exempt from pollution charge on nitrogen on condition that the money will be invested in the nitrogen removal equipment of the Paljassaare Wastewater Treatment Plant.

### **“Nitrogen Content will be reduced by 25% by the year 2006.”**

As a result of this project by the beginning of 2006 the amount of nitrogen discharged into to the Bay of Tallinn will be reduced by at least 25% compared to the level of 2002.

The reconstruction of the plant was launched in 2003. In order to find an optimal solution for efficient removal of nitrogen research was conducted in previous years. Necessary volumes for anoxic

zones, relations between inner circulations, quantities for methanol dosing and other parameters, ensuring the reduction of nitrogen in discharged wastewater were determined as a result of the research. Prior to starting the renovation, the Marine Systems Institute at Tallinn Technical University examined the potential environmental impact accompanying the reduction of nitrogen content and its influence on the quality of water in the Bay of Tallinn during the works. The research proved that changes in the quality of water during renovation are irrelevant and operation of the renovated treatment plant will improve the quality of water in the Bay of Tallinn up to 3,5%. Water quality will mainly improve in the surroundings of the outlet and in the Bays of Paljassaare and Kopli.

In December 2003, AS Tallinna Vesi implemented the first phase of the project for more efficient nitrogen removal from wastewater. During the first phase aeration equipment, mixers and pumps were installed, to make the treatment process more efficient. In addition, partition walls were built in activated sludge tanks. As a result, the quantity of air that the bacteria purifying the wastewater needs, will increase, the mixing improves and the biological cleaning process is more efficient. In the course of this project a methanol station, unique in the Baltics, rationalising the wastewater treatment process will be constructed. In 2003, 80% of the general construction of the methanol station was completed. In 2004, construction and electrical installation will be finished, automatic systems and compressors supplied and installed. The project with the testing phase will be completed by spring 2006 and total cost of the project is approximately 26 million kroons.



#### **Environmental friendly use of sludge**

AS Tallinna Vesi uses sludge produced in the wastewater treatment process for producing environmental friendly plant growing soil. It takes up to 1 year to get high-quality compost. The Estonian Research Institute of Agriculture has thoroughly researched the growing soil over the years and confirmed its useful characteristics.

In 2003, 28 044 tons of sludge was produced. Only 5 455 tons or 19% was taken to a landfill. The rest was reused for producing plant-growing soil. In addition 2 565 tons of sludge was taken to Liikva forest experimentation area for planting tests. In 2003, the amount of sludge taken to a landfill was reduced by 45% compared to the previous year. In order to guarantee a stable operation of sludge processing a new centrifuge was implemented. The cost of the centrifuge with installation was over 5 million kroons.

Several development processes were conducted in 2003 in order to increase the share of reusable sludge and find new environment friendly ways for usage of residual sludge. Research was continued

about the possibilities of using sludge in forestation and re-cultivation of exhausted pits. The main objective of this research, which started in 2002 and will continue until 2006, is to evaluate different ways of using processed sludge and the subsequent environmental impacts. In the coming years we have planned to increase the share of reusable sludge further and continue the research programmes undertaken.

Today the area of composting fields in Paljassaare is 4,6 ha. In 2004, the company is planning to build 10 hectares of new composting fields, and the cost of the project is about 20 million kroons. In addition to the composting fields in Paljassaare there is a 2,6-hectare composting field in Liikva.

In 2003, a research was conducted to determine the possibilities of using compost in landscaping, agriculture and recultivation or in other areas. The research includes the probable development trends of legislation about sludge treatment following Estonia joining the EU and assists in further development of sludge treatment.

### **Forest experimentations**

Tallinna Vesi started planting trees at testing fields in the village of Liikva and in Harku rural municipality, where the influence of soil, produced of residual sludge, on the growth of trees is researched. The aim of this action is to increase natural ways of using sludge evolving in the process of treating wastewater. In 2003, different species of trees were planted on prepared testing areas. First test results have proved that mixing thin layers of soil with processed sludge creates good preconditions for using those areas as forest territories. The environmental monitoring has not found any increased pollution of ground water from using sludge.

**„We increase environmental use of compost.“**

### **Sustainable use of methane gas**

In order to avoid the greenhouse effect we reuse the methane gas produced by wastewater treatment as much as possible. The evolving gas is used in the production process and for heating the facilities of the Wastewater Treatment Plant.

### **More efficient environmental monitoring**

In 2003, the Wastewater Inspectorate, in charge of monitoring the connectees to Tallinn sewerage system, controlling the wastewater pollution level and environmental monitoring, rationalised its activities. The Wastewater Inspectorate took 1 454 water samples last year, which is the highest number ever taken, in order to get a better overview of

the pollution level and probable environmental impact of wastewater discharged into the environment.

### **Community projects**

#### **We encourage tap water drinking**

In November 2003, AS Tallinna Vesi launched the company's media campaign to increase the public's water related awareness. Drinking water does not run from taps just by itself. It is an important common natural resource and its purification needs hard work. Moreover, the quality of drinking water is under constant and strict control. Campaign posters were exhibited in bus shelters and public transport in Tallinn.

During the campaign the first customer newspaper was published. "Veeleht" was delivered to 150 000 households in the capital. It handled more frequently asked questions and provided an overview of the company's plans.

#### **We support interesting events**

AS Tallinna Vesi is always happy to support good ideas and events. One of the largest events we sponsor every year is the running race around Lake Ülemiste. Lake Ülemiste area is not regularly open to the public for obvious sanitary reasons and it is fantastic that on one day a year the lake and beautiful landscapes surrounding it are open to everybody.

Sports and healthy lifestyle are important to the company. AS Tallinna Vesi supports several water-related projects like Kalev swimming pool and ice hockey. In addition, we provide drinking water at

Photo of Lake Ülemiste



sports events so that the sportsmen and supporters can quench their thirst with our water. Additionally, charity and ventures related to the development of young people are an essential area AS Tallinna Vesi is willing to support. For several years, we have had a good co-operation with children with special needs at Tallinn Ristiku School. We help the school in organising excursions and camps. We have also helped the charity organisation Ohvriabi (Help to Victims) in order to develop this important assistance programme.

As for projects related to young people, we support the competition for environmental works by the name of Stockholm Water Prize. In co-operation

with the Energy Centre, we organised a water-related exhibition called "Archimedes in the Bath", where Tallinna Vesi supported completion of the exhibit, which demonstrated circulation of water in nature.

Jana Kelus  
Quality Manager

## Our Employees

Principal values of the company, the mission and vision were defined in co-operation with our employees in 2003. The most essential project for the year was the training programme for all employees called Tulemuste Võti "The Key to Results".

## Our values

**We** value our colleagues

- are committed to customers
- are competent and willing to make things happen
- keep our word and promises
- are innovative
- are team players
- take initiative

In Estonian the first letters of the values in turn give another value – We care.

## Our mission and vision

Our mission provides the employees with a unique understanding of the reason for our existence and future aims of AS Tallinna Vesi. The vision, in turn, provides a direction to find ideas and solutions for developing the organisation.

**Our mission:** We create a better life with pure water!

**Our vision:** We will be a Role Model for Every Service Providing Company and Employer, Exceeding the Expectations of our Customers, Employees and Owners and setting a Benchmark for Environmental Behaviour in order to Improve the Quality of Life.





### **Organisational culture**

One of the essential aims for the year 2003 was to further improve the functioning of the organisation. It is important as we wish that our employees feel positive while conducting their work so that together we will achieve the desired aims. In order to better understand the attitudes and traditional behaviours inside the company Tallinna Vesi conducted an organisational culture survey in May 2003. The survey enabled us to see where we are now and what we need to improve in order to achieve our aims in the future.

### **Tulemuste Võti Programme**

Having defined our company values, it was necessary to describe and share them with each and every employee. Therefore we launched the training programme called the "Key to Results". It carries the meaning of the training – to develop, study, change one's habits, analyse oneself in order to achieve better results and create a healthy organisational culture.

The form of the training came from our parent company United Utilities. The programme was extraordinary in the Estonian context, because it was delivered in the same form to all employees of the company. Each employee had a 2-day training in 2003. This training gave an opportunity to be free from everyday working routine, to contemplate on how we think and behave in our private and professional life and agree what should be developed further in us and in our teams.

**"Tulemuste Võti programme proved to be a great success."**

The training resulted in having a better knowledge on how one should shape one's life in order to improve work results and increase satisfaction with the completed work. The trainings also accentuated the values important in one's private life – how to improve one's family relationships, be a better

parent and friend. In addition, we looked at how to act in a team, how we see ourselves and how others see us.

A special aspect of this programme was the fact that our own employees volunteered to be facilitators and conducted the trainings. Six facilitators were thoroughly trained and as a final step to preparation they passed an external accreditation.

By the end of 2003, all employees had participated in the "Key to Results" programme and based on feedback the programme was extremely successful. We have also started with one-day follow-up trainings. The aim of the follow-up is to look back and analyse how what was learned or remembered has already been implemented and what could be done better. "Tulemuste Võti" follow-up days will continue in 2004.

### **Collective Agreement was concluded**

At the beginning of 2003, the trade union and executives of the company concluded the Collective Agreement. The Collective Agreement, the first since 1993, covers all employees of AS Tallinna Vesi and defines several additional benefits for the employees of the water company.

### **Performance Related Pay implemented**

One part of the signed collective agreement comprises of the new grading structure and performance related pay. The aim of the new system is to offer fair pay, which would motivate employees to work well for the company. The performance related pay system, provides every employee the opportunity to receive additional remuneration if he/she has achieved the objectives set personally for him/her for the whole year. The employee's person-





al objectives are set during development interviews with the direct managers once a year.

#### **Fun company events**

The company's annual satisfaction survey has always confirmed one thing – our employees have a high esteem for their colleagues and the time spent with them. Each year we hold the company's summer and winter days plus several other celebrations such as a common Shrove Tuesday. At the end of the year the company also holds a festive Christmas party for all employees.

Sports events are popular as well. For many years competitions between units in different sports have taken place.

Several employees annually participate in the running race around Lake Ülemiste, which is one of the greatest sponsoring projects of the company.

Ilona Lott  
HR Manager



# Financial Report

**Excellent financial  
management** enables  
companies to be succesful



„Our profit was over **13%** ahead  
of the target.“

## Financial Report

The past 12 months has been a period of financial consolidation for AS Tallinna Vesi. It was always anticipated that profits would reduce during 2003 compared to prior years, following the successful negotiation of the EBRD loan, the return of equity to shareholders, the tariff freeze and the continued capital program. Our commitment to improving the quality of supply to our customers and the quality of the environment resulted in a capital spend of over 170 million kroons.

Despite these factors profit before tax was over 13% ahead of our target for the year, and EBITDA was broadly unchanged when compared to 2002, at 241,7 million kroons. This is in part attributable to continued focus by management on cost control but also due to lower loan costs due to reduced Euribor interest rates. It was also pleasing to note that the trend over the years of declining consumer consumption appears to have leveled, despite the

closure of key customers such as Tallinn Prison and the relocation of AS Kalev to a site outside Tallinn.

The recommended dividend of 75 million kroons is in line with the business model. Cash flows remain strong and the company remains able to meet all financial covenants required by the EBRD loan agreement.

Going forward, we anticipate a reversal in the decline in earnings, which is underpinned by the efficient management of our operations with continued focus on cost control whilst achieving all quality and environmental targets.



David Ordman  
Chief Commercial Officer/Member of the Management Board

## Declaration of the Management Board

The Management Board of AS Tallinna Vesi has prepared the management report and annual accounts for the financial year ended 31 December 2003.

The annual accounts have been prepared according to Accounting Law and Generally Accepted Accounting Principles, and give a true and fair view of the financial position, results of operations and cash flows of AS Tallinna Vesi.

The preparation of the annual accounts according to Generally Accepted Accounting Principles involves estimates made by the Management Board of the Company's assets and liabilities as at 31 December 2003, and of income and expenses during the financial year. These estimates are

based on current information about AS Tallinna Vesi and consider all plans and risks as at 31 December 2003. The actual results of these business transactions recorded may differ from such estimates.

Any subsequent events that materially affect the valuation of assets and liabilities until the preparation of the annual accounts as at 5 March 2004 have been assessed as part of this review.

The Management Board considers AS Tallinna Vesi to be a going concern entity.

## Financial Report 2003

The Management Board has prepared the management report and the annual accounts on 5 March 2004.

The Supervisory Board of AS Tallinna Vesi has reviewed the annual report, prepared by the Management Board, consisting of the management report, the annual accounts, the Management Board's proposal for profit distribution and the

independent auditors' report, and has approved the annual report for presentation on the Shareholders' General Meeting.

The annual report has been signed by all the members of the Management Board and Supervisory Board.

Robert John Gallienne Chairman of the Management Board



Roch Jean Guy  
Antoine Chèroux Member of the Management Board



David Andrew Ordman Member of the Management Board



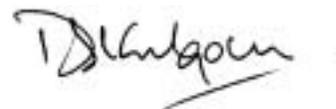
Michael James Southworth Head of the Supervisory Board



Vivian Kingfon Nicoli Member of the Supervisory Board



David John Kilgour Member of the Supervisory Board



Laurence Kenneth Billett Member of the Supervisory Board



Toivo Tootsen Member of the Supervisory Board



Margus Allikmaa Member of the Supervisory Board



Vladimir Panov Member of the Supervisory Board



## Balance sheet at 31 December 2003 and 2002

ASSETS	Note	2003	EEK 2002
			(reclassified)
<b>CURRENT ASSETS</b>			
<hr/>			
Cash at bank and in hand	2	82 357 804	185 304 929
<b>Customer receivables</b>			
Accounts receivable		65 849 287	101 256 095
Allowance for doubtful debts	3	-12 012 720	-14 782 717
<b>Total</b>		<b>53 836 567</b>	<b>86 473 378</b>
<hr/>			
<b>Other receivables</b>			
Receivables from parent company	4	23 175	0
Receivables from associated company	4	17 783	3 971 584
Other receivables		2 209 755	111 599
<b>Total</b>		<b>2 250 713</b>	<b>4 083 183</b>
<hr/>			
<b>Accrued income</b>			
Interest		155 936	0
Other accrued income		27 175	106 428
<b>Total</b>		<b>183 111</b>	<b>106 428</b>
<hr/>			
<b>Prepaid expenses</b>			
Prepaid taxes	5	173 526	9 571
Other prepaid expenses		21 206 262	21 706 828
<b>Total</b>		<b>21 379 788</b>	<b>21 716 399</b>
<hr/>			
<b>Inventories</b>			
Raw materials	6	1 264 543	7 271 537
Goods for sale		0	4 630 902
Prepayments to suppliers		0	57 931
<b>Total</b>		<b>1 264 543</b>	<b>11 960 370</b>
<hr/>			
<b>TOTAL CURRENT ASSETS</b>		<b>161 272 526</b>	<b>309 644 687</b>

## Balance sheet at 31 December 2003 and 2002

	Note	2003	EEK 2002
<b>NON-CURRENT ASSETS</b>			(reclassified)
<b>Long-term financial investments</b>			
Shares of subsidiary companies	7	6 168 874	4 996 459
Shares of associated companies	8	6 125 969	8 504 478
Other shares	9	1 200 000	1 200 000
Long-term deposit		31 447 619	0
Other long term receivables		1 035	2 070
<b>Total</b>		<b>44 943 497</b>	<b>14 703 007</b>
<b>Fixed assets</b>	10		
Land and buildings (at cost value)		303 802 291	314 451 668
Facilities (at cost value)		1 863 685 290	1 819 172 099
Machinery and equipment (at cost value)		472 186 867	441 343 372
Other equipment and fixtures (at cost value)		14 905 362	14 538 774
Accumulated depreciation		-869 440 548	-811 622 949
Uninstalled equipment		4 279 305	3 040 706
Construction in progress		62 797 048	51 168 427
Unfinished pipelines – new connections		93 176 085	99 254 447
Prepayments for fixed assets		8 565 995	18 934 318
<b>Total</b>		<b>1 953 957 695</b>	<b>1 950 280 862</b>
<b>Intangible assets</b>	10		
Development costs		2 239 494	2 946 799
Acquired software and licenses		19 122 002	8 879 163
<b>Total</b>		<b>21 361 496</b>	<b>11 825 962</b>
<b>TOTAL NON-CURRENT ASSETS</b>		<b>2 020 262 688</b>	<b>1 976 809 831</b>
<b>TOTAL ASSETS</b>		<b>2 181 535 214</b>	<b>2 286 454 518</b>

## Balance sheet at 31 December 2003 and 2002

LIABILITIES AND EQUITY CAPITAL	Note	2003	EEK 2002
			(reclassified)
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
<b>Debt obligations</b>			
Current portion of long-term finance lease	11,12	2 632 538	3 007 468
Current portion of long-term bank loans	12	19 000 888	76 003 554
<b>Total</b>		<b>21 633 426</b>	<b>79 011 022</b>
<b>Supplier payables</b>			
Accounts payable		<b>53 378 701</b>	<b>46 867 239</b>
<b>Other payables</b>			
Payables to parent company	4	5 733 547	42 682 679
Payables to subsidiary company	4	0	34 220
Payables to associated company	4	956 938	412 109
Payables to minority shareholder for shares	4	0	71 737 547
<b>Total</b>		<b>6 690 485</b>	<b>114 866 555</b>
<b>Taxes payable</b>	5	<b>15 798 881</b>	<b>18 387 954</b>
<b>Accrued expenses</b>			
Payables to employees		13 097 339	8 725 043
Interest payable		5 185 329	2 429 313
Other accrued expenses		33 440	45 159
<b>Total</b>		<b>18 316 108</b>	<b>11 199 515</b>
<b>Short-term provisions</b>			
		<b>13 667 651</b>	<b>1 707 519</b>
<b>Deferred income</b>			
Water and sewerage services revenues		2 851 807	269 552
Connection revenues		33 643 205	25 850 957
<b>Total</b>		<b>36 495 012</b>	<b>26 120 509</b>
<b>Total current liabilities</b>		<b>165 980 264</b>	<b>298 160 313</b>
	<b>Note</b>	<b>2003</b>	<b>2002</b>
<b>Non-current liabilities</b>			
<b>Long-term debt obligations</b>			
Finance lease	11,12	3 462 373	5 587 018
Bank loans	12	1 110 863 723	1 129 864 611
<b>Total</b>		<b>1 114 326 096</b>	<b>1 135 451 629</b>
<b>Other long-term payables</b>			
Payables to suppliers	13	100 000	11 254 947
<b>Total non-current liabilities</b>		<b>1 114 426 096</b>	<b>1 146 706 576</b>
<b>TOTAL LIABILITIES</b>		<b>1 280 406 360</b>	<b>1 444 866 889</b>

## Balance sheet at 31 December 2003 and 2002

			EEK
<b>EQUITY CAPITAL</b>			
Share capital	14	<b>200 001 000</b>	<b>200 001 000</b>
Share premium		<b>387 000 000</b>	<b>387 000 000</b>
<b>Reserves</b>			
Statutory legal reserve		93 394 233	93 394 233
Accumulated profit		<b>116 192 396</b>	<b>15 000 000</b>
<b>Net profit for the financial year</b>		<b>104 541 225</b>	<b>146 192 396</b>
<b>TOTAL EQUITY CAPITAL</b>		<b>901 128 854</b>	<b>841 587 629</b>
<b>TOTAL LIABILITIES AND EQUITY CAPITAL</b>		<b>2 181 535 214</b>	<b>2 286 454 518</b>

## Income statement for the years 2003 and 2002

	Note	2003	2002
			(reclassified)
Net sales	15	502 972 380	509 912 740
Cost of goods sold		254 965 601	272 182 251
<b>GROSS PROFIT</b>		<b>248 006 779</b>	<b>237 730 489</b>
Marketing expenses		6 341 894	6 601 753
General administration expenses		54 789 321	39 709 667
Other income		2 451 925	1 003 656
Other expenses		20 989 177	17 802 622
<b>OPERATING PROFIT</b>		<b>168 338 312</b>	<b>174 620 103</b>
<b>Financial income/expenses</b>			
financial income from subsidiary company	7	1 382 978	232 210
financial expenses/income from associated company	8	-661 033	666 865
interest income		4 321 017	8 883 258
interest expense		-55 594 630	-13 241 668
other financial income/expenses		2 206 157	-1 473 829
foreign exchange loss		-244 203	-135 875
<b>Total financial income/expenses</b>		<b>-48 589 714</b>	<b>-5 069 039</b>
<b>PROFIT BEFORE TAXES</b>		<b>119 748 598</b>	<b>169 551 064</b>
Income tax on dividends		15 207 373	23 358 668
<b>NET PROFIT FOR THE FINANCIAL YEAR</b>		<b>104 541 225</b>	<b>146 192 396</b>

## Cash flow statement for the years 2003 and 2002

	Note	2003	EEK 2002
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			(reclassified)
Profit before taxes		119 748 598	169 551 064
Adjustment for depreciation	10	73 392 640	69 315 746
Adjustment for income and expenses from constructions	17	-7 615 448	-9 310 863
Adjustment for shares and finance income and expenses		36 886 551	3 458 076
Profit from sale of privatization vouchers (EVP)	16	-5 038 308	0
Income from sale of fixed assets		228 488	-21 034
Write off of fixed assets		682 523	4 712 924
Capitalization of operating expenses	18	-60 144 184	-37 614 753
Change in current assets involved in operating activities		-13 026 194	-2 910 791
Change in liabilities involved in operating activities		21 756 285	-1 989 184
Interest paid		-56 653 592	-20 310 859
<b>Total cash flow from operating activities</b>		<b>110 217 359</b>	<b>174 880 326</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Sale of EVP	16	18 703 423	0
Acquisition of fixed assets	18	-62 583 292	-112 043 752
Payment of pipeline financed by construction income	17	-50 568 296	-64 379 786
Proceeds from pipeline financed by construction income	17	109 171 699	51 440 928
Repayments of loans to third parties		5 601	18 752
Proceeds from sale of fixed assets		11 331 972	167 026
Proceeds from sale of fixed assets transferred to stores earlier		6 000 000	0
Received dividends		1 928 039	0
Interest received		4 165 081	11 798 345
<b>Total cash flow from investing activities</b>		<b>38 154 227</b>	<b>-112 998 487</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Decrease in share capital	14	-112 083 477	-837 916 523
Received long term loans	12	0	1 110 863 723
Repayment of long term loans	12	-76 003 554	-318 412 344
Finance lease payments	11	-3 024 307	-3 573 759
Dividends paid		-45 000 000	-131 828 481
Income tax on dividends		-15 207 373	-23 358 668
<b>Total cash flow from financing activities</b>		<b>-251 318 711</b>	<b>-204 226 052</b>
<b>Change in cash and bank accounts</b>		<b>-102 947 125</b>	<b>-142 344 213</b>
<b>CASH AND EQUIVALENTS AT THE BEGINNING OF THE YEAR</b>		<b>185 304 929</b>	<b>327 649 142</b>
<b>CASH AND EQUIVALENTS AT THE END OF THE YEAR</b>	2	<b>82 357 804</b>	<b>185 304 929</b>

## Statement of changes in equity for the years ended 31 December 2003 and 2002

	Share capital	Share premium	Statutory legal reserve	Accumulated loss/profit	Net profit	EEK Total equity
<b>31 December 2001</b>	<b>1 150 001 000</b>	<b>387 000 000</b>	<b>85 000 100</b>	<b>-12 660 045</b>	<b>167 882 659</b>	<b>1 777 223 714</b>
Transfer of financial year profit to the accumulated profit	0	0	0	167 882 659	-167 882 659	0
Increase of reserves	0	0	8 394 133	-8 394 133	0	0
Declared dividends	0	0	0	-131 828 481	0	-131 828 481
Reduction of shares	-950 000 000	0	0	0	0	-950 000 000
Net profit of the financial year	0	0	0	0	146 192 396	146 192 396
<b>31 December 2002</b>	<b>200 001 000</b>	<b>387 000 000</b>	<b>93 394 233</b>	<b>15 000 000</b>	<b>146 192 396</b>	<b>841 587 629</b>
Transfer of financial year profit to the accumulated profit	0	0	0	146 192 396	-146 192 396	0
Declared dividends	0	0	0	-45 000 000	0	-45 000 000
Net profit of the financial year	0	0	0	0	104 541 225	104 541 225
<b>31 December 2003</b>	<b>200 001 000</b>	<b>387 000 000</b>	<b>93 394 233</b>	<b>116 192 396</b>	<b>104 541 225</b>	<b>901 128 854</b>

There is additional information provided for the share capital in NOTE 14 to the annual accounts.

## **NOTE 1. ACCOUNTING PRINCIPLES**

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The annual accounts for the year 2003 have been prepared according to Generally Accepted Accounting Principles. Generally Accepted Accounting Principles are based on internationally accepted accounting and reporting principles and the requirements are stipulated in the Estonian Accounting Law effective since 1 January 2003, complemented by Estonian Accounting Standards Boards directives.

The annual accounts are prepared in Estonian kroons (EEK) if not otherwise indicated.

The main accounting principles applied in the preparation of the financial statements are detailed below.

### **Foreign currency transactions**

Foreign currency transactions are recorded on the basis of the foreign currency exchange rates of the Bank of Estonia at the date of the transaction. Assets and liabilities recorded in foreign currencies in the financial statements have been converted into Estonian kroons based on foreign currency exchange rates valid at balance date. Profit and loss due to exchange rate changes are aggregated and shown in the Income Statement.

### **Financial assets and liabilities**

Financial assets are cash, trade debts, accrued income, other current and long term receivables. Financial liabilities are accounts payable, accrued expenses, other current and long term liabilities.

Financial assets and liabilities are taken into inventory at acquisition cost, which is assumed to be a fair value paid for or gained from that asset or liability. Initial acquisition cost includes all costs directly related to financial asset or liability.

Financial assets and liabilities are recorded in the Balance Sheet when the Firm acquires the ownership according to financial assets or liability contracts conditions.

### **Cash and cash equivalents**

Cash and cash equivalents within the Balance Sheet and the Cash Flow Statement comprise of cash held on premises,

cash in bank accounts, bonds and short-term, risk free, liquid bank deposits and short-term investments convertible into cash within a 3 month period without penalty.

### **Receivables**

Receivables are recorded with adjusted acquisition price method. Accounts receivable that are considered to be doubtful, are expensed in the "Other expenses" during the financial year and a respective reserve on the Balance Sheet line "Allowance for doubtful debts" is recorded. Receivables which cannot be collected or the collection can be considered to be economically not justified, are evaluated to be non-collectible and written-off from the Balance Sheet. Accounts receivable from previous periods that were recorded as doubtful, but that were received during the year, are recorded on the same expense account as a reversing entry.

### **Accounting for inventories**

Raw materials and spare parts are recorded at acquisition price, which consists of purchase price, non-recoverable taxes, freight costs and other direct costs, less discounts and subsidies received.

Inventories are recorded on the Balance Sheet at the lower of acquisition cost or net realization value. The acquisition cost of inventories is accounted by using weighted average acquisition cost method. Any inventories received at nil cost are recorded at zero value.

### **Long term financial investments**

Shares of associates, subsidiaries and other securities acquired for periods greater than one year are recorded as long-term financial investments. Investments in associated companies and subsidiaries are accounted using the equity method, whereby the investment balance is adjusted each year for the share of the company's profit or loss less any dividends received.

Negative goodwill is calculated as the difference between residual value and expert valuation of fixed assets as a non-monetary contribution into a subsidiary company. Negative goodwill is depreciated over the useful life of the asset.

### Tangible and intangible fixed assets

Assets with useful life greater than one year and with a minimum value of 2 000 kroons are capitalised as fixed assets.

Fixed assets are recorded at acquisition cost, which comprises of purchase price, non-recoverable taxes and other direct costs of taking the fixed asset object into operation including internal labour costs. Capitalisation of internal labour costs is based on hours worked on the acquisition of asset. In addition to salary costs the employees transportation, communication, work space and other costs are included to be capitalized in the same proportion as the salary costs.

The interest cost of company debt during the acquisition period of any fixed assets is capitalized during the construction process, incl. unfinished pipelines – new connections, calculated as the proportion of the amount of construction in progress compared to the balance of the corresponding debt.

Unfinished pipelines – new connections include costs of acquiring water or sewerage pipelines. After completion of construction and the concluding of connection contracts with customers the costs related to the acquisition of these pipelines are recorded within costs of goods sold to ensure the correct matching of revenues and expenses in the same accounting period.

If the construction works of new connections is not compensated by the property owner and takes place in a different accounting period from the connection contract completion date, then the revenue and costs are booked in the accounting period when compensation confirmation is received. Remaining expenses relating to the construction, that are not directly compensated to the company, are recorded within the Balance Sheet as "Facilities" within fixed assets.

If the anticipated realisable value of a fixed asset is consistently lower than the residual value, the asset is written down to the lower amount.

Depreciation is calculated on a straight-line method. The depreciation rate of each fixed asset is based on the fixed asset's useful life, based on the following rates:

- buildings 1,25 – 2,0 % per annum;
- facilities 1,0 – 8,33 % per annum;
- machinery and equipment 3,33 – 50 % per annum;
- instruments, facilities etc. 10 – 20 % per annum;
- intangible assets 20 – 33 % per annum.

Land is not depreciated.

In exceptional circumstances rates may differ from the above rates if it is evident that the useful lifetime of the asset varies materially from the rate assigned to the respective category.

Uninstalled equipment, prepayments for fixed assets and construction-in-process are recorded as fixed assets and are not depreciated.

Improvements to fixed assets are capitalised if the properties of that asset are improved substantially or if as a result of the improvement the useful lifespan of the asset will be extended, or if it is foreseen that additional future revenues will result from the asset. Maintenance and repair works are expensed in the period incurred.

Cost of identifiable and controllable development projects, which are likely to earn future revenues and the acquisition costs of computer software are capitalised as intangible assets on the Balance Sheet to be depreciated on a straight-line basis over up to 5 years. Project documentation and development projects are treated as development expenditures, by which execution additional income from connection fees and water- and sewage services sales is earned or costs are reduced in subsequent years. If the software is necessary to take computer hardware into use, the acquisition cost of such software is capitalised in the acquisition cost of the hardware and depreciated according to the useful life of the hardware. Research costs are expensed.

## **Liabilities**

Liabilities with payment terms greater than one year after the balance sheet date are considered to be long-term liabilities. Other liabilities are considered to be short-term liabilities.

Holiday payment costs are recorded in the period the holiday is earned, i.e. when employee has the right to claim the holiday. Holiday payment earned or the change in the holiday payment is recorded on the Income Statement as an expense and on the Balance Sheet as a short-term liability.

Legal or contractual liabilities which have arisen during the financial year or previous periods, which are reasonably expected to result in abandoning the asset and result in costs that can be reliably measured at any point in the future, but final cost or term of payment is not firmly fixed, are accounted as provisions.

Promises, guarantees and warranties, which in some circumstances may become liabilities in future, are declared in the Annual Reports notes as contingent liabilities.

## **Revenues**

Sales revenue is recorded on an accrual basis based on the revenue principle, if sales revenue and costs related to transaction are reliably defined. Net sales are comprised of the income received from the goods and services sold after deduction of sales discounts and taxes. Sales income from services is recorded in the period when the service has been provided. Interest income is recorded on the accrual basis.

## **Reserves**

Statutory legal reserve is recorded based on the requirements of the Commercial Code and comprises of the provisions made from net profits. The annual provision must be at least 5% of the approved net profit of the financial year until achieving the statutory legal reserve equal to 10% of paid-in capital.

## **Accounting for leases**

Lease contracts are considered as finance leases if all relevant risks and benefits with reference to the ownership of the asset are borne by the lessee, otherwise the lease contract is considered as operating lease.

Operating lease payments are recorded during the period incurred i.e. the asset is neither recorded as a fixed asset nor is depreciated.

Assets acquired under a finance lease and finance lease liabilities are recognised on the balance sheet of the lessee. If ownership is expected to be transferred to the lessee, depreciation is calculated in the usual manner.

## **Provisions**

Accounts include some short term provisions from ongoing court cases and potential insolvencies of high risk customers who have made transactions with the company within the last 6 months of the financial year. The provisions are recorded using the best evaluation by management of AS Tallinna Vesi. The final costs of such transactions may differ from these estimates.

## **Subsequent events**

There were no such significant factors between the balance sheet date at 31 December 2003 and the preparation date of the annual accounts at 5 March 2004 that in the opinion of management, would have a material impact on the disclosure of the assets, liabilities and equity capital of AS Tallinna Vesi.

**NOTE 2. CASH AND CASH EQUIVALENTS**

EEK

	2003	2002
Cash and bank accounts	75 257 804	28 838 529
Short-term deposits	7 100 000	156 466 400
<b>Total of cash and cash equivalents</b>	<b>82 357 804</b>	<b>185 304 929</b>

**NOTE 3. ALLOWANCE FOR DOUBTFUL DEBTS**

	2003	2002
Allowance for doubtful debts opening balance	-14 782 717	-6 485 251
Allowance for doubtful debts	-3 069 057	-9 874 432
Proceeds of invoices treated as doubtful debts	4 739 264	1 476 841
Write off of uncollectible receivables	1 099 790	100 125
<b>Balance as of 31 December</b>	<b>-12 012 720</b>	<b>-14 782 717</b>

**NOTE 4. RELATED PARTIES**

Transactions with related parties are considered to be transactions with parent, subsidiary and associated companies, members of the Supervisory Board and Management Board, their relatives and the companies in which they hold majority

interest. Dividend payments are indicated in Statements of Changes in Equity. The transactions with related parties and respective balances as of 31.12.2002 and 31.12.2003 are recorded as follows:

	Subsidiary	Associated company		Parent company	EEK Company in the International Water Group International Water (Estonia) B.V.
	Vesimer Investeeringute AS	AS Kemivesi	Tallinn City Government and related boards	International Water UU (Tallinn) B.V.**	
<b>2002</b>					
<b>AS Tallina Vesi accounts receivable total</b>	<b>3 971 584</b>	<b>0</b>	<b>38 005 176</b>	<b>0</b>	<b>0</b>
Including:					
Customer receivables	0	0	38 005 176	0	0
Loan to subsidiary company	3 971 584	0	0	0	0
<b>AS Tallina Vesi accounts payable total</b>	<b>34 220</b>	<b>412 109</b>	<b>91 737 547</b>	<b>42 682 679</b>	<b>1 173 498</b>
Including:					
Shares payable	0	0	71 737 547	40 345 930	0
Short-term payables to suppliers	34 220	412 109	10 000 000	2 336 749*	1 173 498
Long-term payables to suppliers	0	0	10 000 000	0	0
<b>Transactions recorded to the Income Statement</b>					
Net sales	465 135	0	104 976 083	0	0
Cost of goods sold	0	8 941 039	0	0	0
General administration cost	536 000	0	0	3 557 208	0
Financial cost	0	0	0	1 297 519	0
<b>Transactions recorded to the other accounts of Balance Sheet</b>					
Prepaid expenses of future periods	0	0	0	0	1 173 498
Unfinished constructions – new connections	0	0	0	12 189 133	0
Other deferred income	0	0	3 284 957	0	0
<b>2003</b>					
<b>AS Tallina Vesi accounts receivable total</b>	<b>17 783</b>	<b>0</b>	<b>4 348 301</b>	<b>23 175</b>	<b>0</b>
Including:					
Customer receivables	17 783	0	4 348 301	23 175	0
<b>AS Tallina Vesi accounts payable total</b>	<b>0</b>	<b>956 938</b>	<b>10 000 000</b>	<b>4 971 917</b>	<b>761 630</b>
Including:					
Short-term payables to suppliers	0	956 938	10 000 000	4 971 917*	761 630
<b>Transactions recorded to the Income Statement</b>					
Net sales	192 823	0	97 370 097	0	0
Cost of goods sold	0	10 327 214	0	0	0
General administration cost	250 013	0	0	19 461 826	761 630
<b>Transactions recorded to the other accounts of Balance Sheet</b>					
Tangible non-current assets incl unfinished constructions and new connections	0	0	0	34 831 057	0
Other deferred income	0	0	727 265	0	0

\* 1 564 664 kroons of 2002 and 3 848 819 kroons of 2003 are the estimated value based upon works done and services provided. The market or agreed prices were implemented in transactions with related parties.

\*\* International Water UU (Tallinn) B.V. was transformed to United Utilities (Tallinn) B.V. on 5 January 2004.

## NOTE 5. PREPAID TAXES AND TAXES PAYABLE

EEK

	31.12.2002	31.12.2002	2003	2003	31.12.2003	31.12.2003
	Prepayment	Liabilities	Incurred	Paid	Prepayment	Liabilities
Income tax on fringe benefits	0	138 799	707 280	734 680	0	111 399
Land tax	6 056	0	695 427	862 897	173 526	0
Income tax	3 515	1 715 641	11 440 151	11 582 547	0	1 569 730
VAT	0	10 285 582	57 957 363	63 847 322	0	4 395 623
Water usage tax	0	2 653 362	9 929 380	10 213 881	0	2 368 861
Pollution taxes	0	563 914	7 556 278	3 622 803	0	4 497 389
Social security tax	0	2 882 719	17 036 918	17 227 609	0	2 692 028
Unemployment tax	0	117 350	676 904	687 013	0	107 241
Pension insurance	0	30 983	322 945	296 794	0	57 134
Maternity holiday from social security tax	0	-396	-4 578	-4 450	0	-524
<b>Total</b>	<b>9 571</b>	<b>18 387 954</b>	<b>106 318 068</b>	<b>109 071 096</b>	<b>173 526</b>	<b>15 798 881</b>

## NOTE 6. INVENTORIES

In 2003 raw materials of value 4 631 343 EEK are greater than 1 year old, and are considered obsolete. These items

have been fully provided in the accounts. In 2002 no provision for obsolete assets was included.

## NOTE 7. LONG-TERM INVESTMENT IN SUBSIDIARY

EEK

**Vesimer Investeeringute AS**

<b>Book value of shares at 31 December 2001</b>	<b>4 764 249</b>
Income calculated using equity method	225 563
Depreciation of goodwill	6 647
<b>Book value of shares at 31 December 2002</b>	<b>4 996 459</b>
Income calculated using equity method	535 809
Depreciation of goodwill	847 169
Decrease in investment value by dividends announced	-210 563
<b>Book value of shares at 31 December 2003</b>	<b>6 168 874</b>

**Equity capital of subsidiary at 31 December 2003**

Share capital	6 501 500
Reserves	63 000
Retained earnings	196 193
Net profit for the financial year	535 809
<b>Total equity capital</b>	<b>7 296 502</b>

**Share ownership %**

<b>at 31 December 2002</b>	<b>100</b>
<b>at 31 December 2003</b>	<b>100</b>

**AS Tallinna Vesi share in the equity capital of subsidiary**

<b>at 31 December 2003</b>	<b>7 296 502</b>
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**Negative goodwill at 31 December 2001**

Depreciation of goodwill 2001(-)	6 647
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**Negative goodwill at 31 December 2002**

Depreciation of goodwill 2002 (-)	847 169
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**Negative goodwill at 31 December 2003****-1 127 628****Received dividends 2002****0****Received dividends 2003****210 563****Number of shares at 31 December 2001****650 150****Number of shares at 31 December 2002****650 150****Number of shares at 31 December 2003****650 150**

## NOTE 8. LONG-TERM INVESTMENT IN ASSOCIATED COMPANY

EEK

## AS Kemivesi

<b>Book value of shares at 31 December 2001</b>	<b>7 837 613</b>
Income calculated using equity method	666 865
<b>Book value of shares at 31 December 2002</b>	<b>8 504 478</b>
Income calculated using equity method	-661 033
Decrease in investment value by dividends announced	-1 717 476
<b>Book value of shares at 31 December 2003</b>	<b>6 125 969</b>

## Equity capital of associated company at 31 December 2003

Share capital	15 562 500
Reserves	538 283
Retained earnings	4 311 262
Net profit for the financial year	-1 988 070
<b>Total equity capital</b>	<b>18 423 975</b>

## Share ownership %

31 December 2002	33,25%
31 December 2003	33,25%

AS Tallinna Vesi share in the equity capital of associated company at 31 December 2003 **6 125 969**

Received dividends 2002	0
Received dividends 2003	1 717 476

Number of shares at 31 December 2001	6 900
Number of shares at 31 December 2002	6 900
<b>Number of shares at 31 December 2003</b>	<b>6 900</b>

## NOTE 9. OTHER SHARES

In 2001 AS Tallinna Vesi acquired 8 B - shares of AS Rocca al Mare Suurhall with nominal value of 100 kroons and in a total amount of 1 200 000 kroons, based on a contract signed

between AS Tallinna Vesi and AS Rocca al Mare Suurhall during the financial year ended 31 December 2000.

**NOTE 10. TANGIBLE AND INTANGIBLE NON-CURRENT ASSETS**

	Land and buildings	Facilities	Machinery and equipment	Other equipment	Uninstalled equipment
<b>Acquisition cost at</b>					
<b>31.12.2001</b>	<b>311 166 341</b>	<b>1 705 348 581</b>	<b>410 101 309</b>	<b>14 382 626</b>	<b>3 890 590</b>
Acquisition	0	37 284	2 108 673	1 002 704	4 451 889
Loan costs capitalization	0	0	0	0	0
Improvements	6 664 359	72 673 298	11 679 810	63 205	0
Sale of fixed assets	0	0	-599 784	-5 000	0
Write-off of fixed assets	-171 325	-4 132 635	-8 868 085	-1 015 090	0
Reclassification within balance sheet	-4 911 015	-449 681	-30 776	0	-323 086
Reclassification to expenses	0	0	0	0	-6 314
Expensed pipelines	0	0	0	0	0
Reclassification	1 703 308	45 695 252	26 952 225	110 329	-4 972 373
<b>31.12.2002</b>	<b>314 451 668</b>	<b>1 819 172 099</b>	<b>441 343 372</b>	<b>14 538 774</b>	<b>3 040 706</b>
Acquisition	0	1	1 600 897	539 806	3 725 933
Loan costs capitalization	0	0	0	0	0
Improvements	827 850	36 340 911	11 752 046	519 611	0
Sale of fixed assets	-12 518 221	-846 280	-2 334 442	-333 392	0
Write-off of fixed assets	-284 103	-5 703 433	-1 907 893	-364 330	0
Reclassification within balance sheet	0	0	0	0	-4
Reclassification to expenses	0	0	0	0	-3 779
Transfer from current to fixed asset	0	0	0	0	1 811 036
Expensed pipelines	0	0	0	0	0
Reclassification	1 325 097	14 721 992	21 732 887	4 893	-4 294 587
<b>31.12.2003</b>	<b>303 802 291</b>	<b>1 863 685 290</b>	<b>472 186 867</b>	<b>14 905 362</b>	<b>4 279 305</b>
<b>Accumulated depreciation</b>					
<b>31.12.2001</b>	<b>44 154 605</b>	<b>517 873 014</b>	<b>185 869 740</b>	<b>9 028 078</b>	<b>0</b>
Depreciation	3 880 519	25 075 535	36 108 770	1 132 935	0
Depreciation of fixed assets sold and written-off (-)	-821 164	-2 598 864	-7 158 033	-922 186	0
Reclassification	-25 159	268 739	-243 580	0	0
<b>31.12.2002</b>	<b>47 188 801</b>	<b>540 618 424</b>	<b>214 576 897</b>	<b>9 238 827</b>	<b>0</b>
Depreciation	4 159 851	26 218 769	38 050 093	1 063 743	0
Depreciation of fixed assets sold and written-off (-)	-1 659 346	-6 146 109	-3 270 853	-633 549	0
Reclassification	-223 525	1 033 262	-774 737	0	0
<b>31.12.2003</b>	<b>49 465 781</b>	<b>561 724 346</b>	<b>248 581 400</b>	<b>9 669 021</b>	<b>0</b>
<b>Net book value</b>					
<b>31.12.2002</b>	<b>267 262 867</b>	<b>1 278 553 675</b>	<b>226 766 475</b>	<b>5 299 947</b>	<b>3 040 706</b>
<b>31.12.2003</b>	<b>254 336 510</b>	<b>1 301 960 944</b>	<b>223 605 467</b>	<b>5 236 341</b>	<b>4 279 305</b>

Fixed asset is written off if the condition of the asset does not enable further usage for production purposes.

Construction in progress	Unfinished pipelines - new connections	Prepayment for fixed assets	Development costs	Acquired licenses and software	EEK Total
<b>88 061 789</b>	<b>126 383 777</b>	<b>19 468 231</b>	<b>7 024 047</b>	<b>6 104 601</b>	<b>2 691 931 892</b>
90 479 070	68 962 082	6 002 338	0	784 657	173 828 697
2 641 758	6 107 957	0	0	0	8 749 715
-91 892 182	0	0	811 510	0	0
0	0	0	0	0	-604 784
0	0	0	-133 400	-662 624	-14 983 159
-13 166	0	-533 993	0	0	-6 261 717
-11 984	-108 461	-271 949	0	0	-398 708
0	-69 962 592	0	0	0	-69 962 592
-38 096 858	-32 128 316	-5 730 309	498 952	5 967 790	0
<b>51 168 427</b>	<b>99 254 447</b>	<b>18 934 318</b>	<b>8 201 109</b>	<b>12 194 424</b>	<b>2 782 299 344</b>
100 244 694	57 781 785	4 761 123	0	1 099 115	169 753 354
2 095 160	1 719 818	0	0	0	3 814 978
-49 592 823	0	0	0	152 405	0
-62 608	0	-488 641	0	0	-16 583 584
0	0	0	0	0	-8 259 759
26 665	-2	-13 896 114	0	0	-13 869 455
-221 119	0	0	0	0	-224 898
0	0	61 470	0	0	1 872 506
0	-61 607 992	0	0	0	-61 607 992
-40 861 348	-3 971 971	-806 161	174 193	11 975 005	0
<b>62 797 048</b>	<b>93 176 085</b>	<b>8 565 995</b>	<b>8 375 302</b>	<b>25 420 949</b>	<b>2 857 194 494</b>
<b>0</b>	<b>0</b>	<b>0</b>	<b>4 045 962</b>	<b>2 201 646</b>	<b>763 173 045</b>
0	0	0	1 341 748	1 776 239	69 315 746
0	0	0	-133 400	-662 624	-12 296 271
0	0	0	0	0	0
<b>0</b>	<b>0</b>	<b>0</b>	<b>5 254 310</b>	<b>3 315 261</b>	<b>820 192 520</b>
0	0	0	916 498	2 983 686	73 392 640
0	0	0	0	0	-11 709 857
0	0	0	-35 000	0	0
<b>0</b>	<b>0</b>	<b>0</b>	<b>6 135 808</b>	<b>6 298 947</b>	<b>881 875 303</b>
<b>51 168 427</b>	<b>99 254 447</b>	<b>18 934 318</b>	<b>2 946 799</b>	<b>8 879 163</b>	<b>1 962 106 824</b>
<b>62 797 048</b>	<b>93 176 085</b>	<b>8 565 995</b>	<b>2 239 494</b>	<b>19 122 002</b>	<b>1 975 319 191</b>

## NOTE 11. FIXED ASSETS ACQUIRED UNDER FINANCE LEASE

EEK

**Machinery and equipment**

<b>Acquisition cost at 31 December 2002</b>	<b>19 344 172</b>
Acquisition of fixed assets	524 733
Terminated rental agreements	-3 920 921
<b>at 31 December 2003</b>	<b>15 947 984</b>
<b>Accumulated depreciation at 31 December 2002</b>	<b>5 107 733</b>
Depreciation	1 505 952
Depreciation of fixed assets of terminated rental	-1 862 437
<b>at 31 December 2003</b>	<b>4 751 248</b>
<b>Net book value at 31 December 2003</b>	<b>11 196 736</b>

**Finance lease liability**

<b>Balance at 31 December 2003</b>	<b>6 094 911</b>
Short-term portion	2 632 538
Long-term portion	3 462 373
Principal payments in the financial year	3 024 307
Interest expense in the financial year	449 866
Annual interest rate %	3,56 – 9,28

## NOTE 12. SHORT-TERM AND LONG-TERM DEBT OBLIGATIONS

EEK

The Company's long-term obligations are as follows:

Bank loans	Loan date	Loan received	Residual amount 31.12.2002	Residual amount 31.12.2003	Short-term portion	Long-term portion	Interest rate %	Maturity date
DePfa bank	04.1999	304 013 438	95 004 442	19 000 888	19 000 888	0	3 months Euribor +3	04.2004
EBRD	12.2002	1 251 731 200	1 110 863 723	1 110 863 723	0	1 110 863 723		05.2015
incl. A loan		860 565 200	763 718 810	763 718 810		763 718 810	5,69	
incl. B loan		391 166 000	347 144 913	347 144 913		347 144 913	6 months Euribor +1,5	
<b>Total bank loans</b>		<b>1 555 744 638</b>	<b>1 205 868 165</b>	<b>1 129 864 611</b>	<b>19 000 888</b>	<b>1 110 863 723</b>		
<b>Finance lease</b>		<b>15 905 092</b>	<b>8 594 486</b>	<b>6 094 911</b>	<b>2 632 538</b>	<b>3 462 373</b>	3,56 – 9,28	06.2007
<b>Total long-term debt obligations</b>		<b>1 571 649 730</b>	<b>1 214 462 651</b>	<b>1 135 959 522</b>	<b>21 633 426</b>	<b>1 114 326 096</b>		

The amount not drawdown from EBRD as of 31.12.2003 is 140 867 477 kroons, which is intended to drawdown during 2004.

Short-term portion of finance lease in the amount of 2 632 538 kroons is recorded on the Balance Sheet line "Current portion of long-term finance lease".

Long-term portion of finance lease in the amount of 3 462 373 kroons is recorded on the Balance Sheet line "Finance lease".

The underwriter of the loan from EBRD is indicated in the NOTE 20. The company has been acting in accordance with all significant requirements established in the loan agreements between the Company and Depfa Investments Bank and between the Company and EBRD and aforementioned creditors will not demand repayment of the whole loan balance in 2004.

Name of the bank	Repayments period
------------------	-------------------

DePfa bank	Quarterly repayments 19 000 888 kroons
EBRD	The repayment starts from 2005

The repayments, including the amount of EBRD loan drawdown in 2004, during the following financial years are as follows:

	Less than 1 year	1 – 5 years	Over 5 years	Total	Repayment period
DePfa bank	19 000 888	0	0	19 000 888	1 year
EBRD	0	396 449 900	855 281 300	1 251 731 200	10 years
<b>Total</b>	<b>19 000 888</b>	<b>396 449 900</b>	<b>855 281 300</b>	<b>1 270 732 088</b>	

**NOTE 13. OTHER LONG-TERM LIABILITIES**

EEK

<b>Liabilities</b>	<b>Balance amount 31.12.2002</b>	<b>Balance amount 31.12.2003</b>	<b>Short-term portion</b>	<b>Long-term portion</b>	<b>Maturity date</b>
Factorings	5 608 947	1 254 947	1 254 947	0	04.2004
Instalment payments of technical facilities	23 090 666	10 000 000	10 000 000	0	06.2004
Long-term guarantee deposit	0	100 000	0	100 000	04.2102
<b>Total</b>	<b>28 699 613</b>	<b>11 354 947</b>	<b>11 254 947</b>	<b>100 000</b>	

The short-term portion of the factoring and the instalment payments for technical facilities in the amount 11 254 947 kroons is shown on the Balance Sheet line "Accounts payable".

**NOTE 14. SHARE CAPITAL**

At the end of the financial year the nominal value for the share capital is 200 001 000 (two hundred million one thousand) kroons, composed of 20 000 000 shares with nominal value of 10 kroons and one preferred share with nominal value of 1 000 kroons.

One B-share has been issued giving the right of veto to the shareholder when voting on the following issues: change in statute, increase and decrease of share capital, issuance of replacement bonds, termination of company activities, joining,

sharing and rearrangements, acquisition of own shares, and on demand of management or supervisory board deciding other issues related to activities of the Company that have not been placed in the sole competence of the General meeting by law.

As of 31.12.2003 International Water UU (Tallinn) B.V. owns 10 086 957 AS Tallinna Vesi A-shares and Tallinn City 9 913 043 A-shares and 1 B-share.

## NOTE 15. NET SALES

EEK

	2003	2002
<b>1. Revenues from main operating activities</b>		
Water supply service	200 889 289	201 245 187
Waste water disposal service	180 738 560	178 026 034
<b>Total revenue</b>	<b>381 627 849</b>	<b>379 271 221</b>
<b>2. Other revenue from main operating activities</b>		
Stormwater treatment and disposal service	44 320 884	42 682 404
Fire hydrants service	1 941 108	1 869 348
Connection fees to water and sewerage networks	69 223 440	79 577 175
Technical inspection services	274 806	354 656
Water and sewerage network repair and maintenance	415 260	684 389
Recalibration and installation of water meters	211 657	216 309
Technical inspections - TV-camera	372 593	80 821
Sale of compost	1 073 563	754 782
Disposal service	297 864	213 670
Connection disconnection and transportation of water	521 058	558 132
Chemical analysis of water	72 671	120 868
Sale of material	361 586	252 584
Lease services	609 907	1 238 344
Services relating with rent of premises	764 976	1 194 024
Design of customer connection pipelines	480 600	532 875
Other work and services	402 558	311 138
<b>Total</b>	<b>121 344 531</b>	<b>130 641 519</b>
<b>TOTAL NET SALES</b>	<b>502 972 380</b>	<b>509 912 740</b>

100 % of AS Tallinna Vesi revenue was transacted within the Estonian Republic.

## NOTE 16. SHARES AND SECURITIES

EEK

	Privatisation vouchers at Hansapank EEK	Privatisation vouchers at Ühispank EEK	SEB bonds EEK	Total EEK
<b>Book value as of 31 December 2001</b>	<b>0</b>	<b>16 060</b>	<b>5 807 136</b>	<b>5 823 196</b>
Sold	0	0	-6 000 000	-6 000 000
Income from sales	0	0	192 864	192 864
Write off	0	-16 060	0	-16 060
<b>Book value as of 31 December 2002</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Transfer from fixed asset prepayments to securities	13 665 115	0	0	13 665 115
Sold	-18 703 423	0	0	-18 703 423
Income from sales	5 038 308	0	0	5 038 308
<b>Book value as of 31 December 2003</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

	Privatisation vouchers at Hansapank No	Privatisation vouchers at Ühispank No	SEB bonds No
<b>31 December 2001</b>	<b>0</b>	<b>47 940</b>	<b>600</b>
Write off	0	-47 940	0
Sold	0	0	-600
<b>31 December 2002</b>	<b>0</b>	<b>0</b>	<b>0</b>
Transfer from fixed asset prepayments to securities	19 471 112	0	0
Sold	-19 471 112	0	0
<b>31 December 2003</b>	<b>0</b>	<b>0</b>	<b>0</b>

## NOTE 17. PIPELINES FINANCED BY CONNECTION FEES

EEK

	2003	2002
<b>Revenue</b>		
Connection fees from pipeline taken into use	69 223 440	79 273 455
Increase in prepayments for pipelines	7 792 248	790 381
Increase/decrease in accounts receivable from pipeline	34 267 331	-28 105 228
Offset with liabilities	-2 111 320	-517 680
<b>Connection fees received</b>	<b>109 171 699</b>	<b>51 440 928</b>
<b>Expenses</b>		
Acquisition costs of pipelines taken into use	-61 607 992	-69 962 592
Decrease in pipelines not in use	6 078 361	27 129 330
Increase in payables to suppliers for pipelines	4 961 335	-21 546 524
<b>Payment for pipelines</b>	<b>-50 568 296</b>	<b>-64 379 786</b>

## NOTE 18. PAYMENTS FOR FIXED ASSETS

	2003	2002
Acquisition of fixed assets	-173 568 332	-182 578 412
Adjustments:		
Acquisition cost of pipelines taken into use	61 607 992	69 962 592
Decrease in pipelines not taken into use	-6 078 361	-27 129 330
Additional finance lease	524 733	4 221 488
Additional factoring	0	466 953
Payment for factoring	-4 354 000	-5 284 706
Payments for facilities	-13 090 666	-13 112 690
Increase/decrease in accounts payable related to investments	6 304 860	-4 954 115
Interest capitalization	3 814 978	8 749 715
Capitalization of operating expenses	60 144 184	37 614 753
Offsetting of payments for investments	2 111 320	0
<b>Total payments for fixed assets</b>	<b>-62 583 292</b>	<b>-112 043 752</b>

#### NOTE 19. POTENTIAL INCOME TAX ON DIVIDENDS

---

According to the Estonian Income Tax Act the accrued profit of a resident legal entity is not subject to tax, as tax is charged only on dividend distributions. Pursuant to the Income Tax Act Section 50 effective since 1 January 2003 resident legal entities are liable to income tax on all dividends paid and other profit distribution irrespective of the recipient. The tax rate applicable is 26/74 on the amount of the dividends paid.

The potential tax liability that may occur if all distributable retained earnings should be paid out as dividends is not reported on the Balance Sheet. The income tax due on div-

idend distribution is recorded as tax cost within the Income Statement during the same period as the dividend is paid.

The company's distributable retained earnings as at 31 December 2003 amounted to 220 733 621 EEK. Consequently, the maximum possible tax liability which would become payable if retained earnings were fully distributed is 77 555 056 EEK.

Tax due on dividend distribution may be reduced by up to 26/74 calculated on dividends received from subsidiaries and associated companies.

#### NOTES 20. COLLATERAL OF LOANS AND PLEDGED ASSETS

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In connection with the loan agreement concluded between the European Bank for Reconstruction and Development (hereafter EBRD) and AS Tallinna Vesi (hereafter the Company) on 8 November 2002, the following guarantee contracts were concluded, which concern the assets of the Company and/or the assets of shareholders of the Company:

**[a]** Account Pledge Agreement, which was concluded between EBRD, the Company, and AS Hansapank on 11 November 2002. All the open accounts and accounts to be opened in Hansapank have been pledged as security in favour of EBRD within the contract;

**[b]** Account Pledge Agreement, which was concluded between EBRD and the Company on 11 November 2002. All the open accounts and accounts to be opened in Nordea Bank have been pledged as security in favour of EBRD within the contract;

**[c]** Commercial Pledge Agreement, which was concluded between EBRD and the Company on 11 November 2002 in favour of EBRD in the amount of 1 877 592 000 kroons;

**[d]** Buildings Pledge Agreement, which was concluded between EBRD and the Company on 11 November 2002. All buildings and facilities at address Järvevana tee 3 which are in possession of the Company have been pledged in favour of EBRD within the contract in net balance value 165 617 804 EEK;

**[e]** Insurance Pledge Agreement, which was concluded between EBRD and the Company on 11 November 2002. According to the contract, EBRD has been established as beneficiary in the Company's asset contracts, business interruption contracts, and liability insurance contracts.

## NOTE 21. LEASED ASSETS

	Asset description	Operating lease expense 2003	Operating lease expense 2002	
	Hewlett Packard and Siemens Finantsinvesteeringute AS	computers	977 173	1 820 404
	Hansa Liising Eesti AS	vehicles	19 138	117 278
	Balti Autoliisingu AS	vehicles	4 173 625	3 934 003
	AS Nordea Finance Estonia	vehicles	59 282	55 192
	AS Rentacar	vehicles	303 371	148 268
	<b>Total operating lease expenses</b>		<b>5 532 589</b>	<b>6 075 145</b>

Minimum operating lease payments are as follows:

Less than 1 year	3 800 113
1 – 5 year	7 601 373
<b>Total minimum lease payments</b>	<b>11 401 486</b>

## NOTE 22. OFF-BALANCE SHEET ASSETS

	Value of assets 2003	Value of assets 2002
Fixed assets received free of charge *	136 474 110	131 266 467
Fixed assets acquired with nil value and financed by connection revenues**	190 088 101	128 921 272
Uncollectible receivables	10 697 354	11 484 905
Other assets received free of charge	815 103	1 519 035
<b>Total</b>	<b>338 074 668</b>	<b>273 191 679</b>

\* Value of assets represents value recorded at customs or the value according to the experts opinion at the moment acquisition.

\*\* Value of assets represents acquisition value of fixed assets.

## NOTE 23. RECLASSIFICATION

Reclassification was made due to change in accounting principles according to the Accounting Law and the Accounting Board's directives valid from 1 January 2003.

Line of balance	Opening balance	Adjustment	Revised Balance
Accumulated loss	-8 358 668	23 358 668	15 000 000
Net profit for the financial year	169 551 064	-23 358 668	146 192 396

Customer prepayments were reclassified to the deferred income group in the balance sheet in 2002 and are disclosed in the line "Water and sewerage service revenue" in 2003.

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& Touche**

## INDEPENDENT AUDITORS' REPORT

To the shareholders of AS Tallinna Vesi:

We have audited the annual accounts of AS Tallinna Vesi ("the Company") for the year ended 31 December 2003. These annual accounts are the responsibility of the Company's Management Board. Our responsibility is to express an opinion on these annual accounts based on our audit.

We conducted our audit in accordance with Estonian Standards on Auditing. Those Standards require that we plan and perform the audit to obtain reasonable assurance about whether the annual accounts are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the annual accounts. An audit also includes assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall presentation of the annual accounts. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the annual accounts present fairly, in all material respects, the financial position of the Company as of 31 December 2003, the results of its operations and its cash flows for the year then ended, in accordance with Estonian Accounting Law and the standards issued by Estonian Accounting Standards Board.



Sander Kallasmaa  
Certified Auditor  
5 March 2004



AS Deloitte & Touche Audit

**Deloitte  
Touche  
Tohmatsu**

## Proposal for the Profit Distribution

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The distributable equity capital of AS Tallinna Vesi is as follow:

Accumulated profit	116 192 396 kroons
Net profit for the financial year	104 541 225 kroons
<b>Total</b>	<b>220 733 621 kroons</b>

The Management Board of AS Tallinna Vesi proposes to distribute 75 000 000 kroons to shareholders as dividends from the available equity capital accumulated by end of the year 2003.

5 March 2004



Robert John Gallienne  
Chairman of the Management Board

## AS Tallinna Vesi Supervisory Board

The Supervisory Board plans the activities of the company, organises its management and supervises the activities of the Management Board. The Supervisory Board consists of seven members whose term of authority lasts two years. The members are elected and appointed according to the following procedure:

- ❶ Five members to the Supervisory Board are elected at the General Meeting, whereas the person who receives the most of votes shall be considered elected. According to this Section hereof a Supervisory Board member may be removed before the end of his or her tenure provided that at least two-thirds of the votes represented at the General Meeting are in favour.
- ❷ Two members of the Supervisory Board are appointed and removed by the holder of Class B Share i.e. City of Tallinn. Members of the Supervisory Board elect from among themselves the Chairman of the Supervisory Board who will organise the activities of the Supervisory Board and

chair the meetings of the Supervisory Board.

The members of AS Tallinna Vesi Supervisory Board are:

**Jim Southworth**, the Head of the Supervisory Board,  
United Utilities International

**David Kilgour**  
United Utilities International

**Vivian Nicoli**  
European Bank of Reconstruction and  
Development (EBRD)

**Laurence K. Billett**  
European Bank of Reconstruction and  
Development (EBRD)

Tallinn City representatives are:

**Vladimir Panov**

**Toivo Tootsen**

**Margus Allikmaa**

## AS Tallinna Vesi Management Board

The Board is the management body of the company that represents and manages the Company and organises its accounting. In management the Board shall adhere to the Council's lawful instructions.

The Board consists of two to five members who are elected for three years. The place of residence of at least one-half of the members of the Board shall be Estonia. If there are more than two members on the Board, members of the Board elect from among themselves the Chairman of the Board who organises the activities of the Board.

The members of AS Tallinna Vesi Management Board are:

**Bob Gallienne**

Chairman of the Management Board  
Chief Executive Officer

**Roch Chéroux**

Member of the Management Board  
Chief Operating Officer

**David Ordman**

Member of the Management Board  
Chief Commercial Officer





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AS Tallinna Vesi Annual Report 2003

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