

Promotion of Water Service System to Taps in Elementary and Junior High Schools

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Overview

Currently, a water distribution system supplying water from a receiving tank to the taps is used in many elementary and junior high schools. However, because of the decrease in water consumption caused by decreasing numbers of children and no consumption on weekends, water in the tank becomes stagnant, leading to concerns about tap water quality, such as high amounts of residual chlorine. Yet, water distribution pipes have been installed in recent years and consequently direct water service systems have become common, which are capable of supplying water directly to buildings that are three floors or higher with the pressure of distribution pipes.

With this trend, the project "Water Service System to Taps in Elementary and Junior High Schools (School Fresh Taps)", which assumes part of the costs of direct water supply conversion work in schools, has been carried out since 2007 in order to transmit the Japanese culture of drinking water directly from the tap and to promote the modification of water supply from receiving tanks, which bring concerns about water quality management, to water service system to taps.

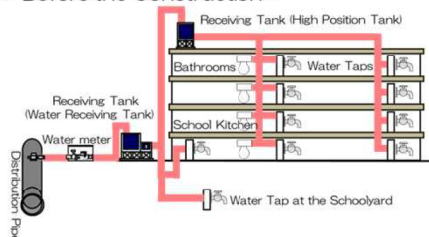
Our intent is to make children recognize the benefit of Tokyo's tap water by drinking cool, delicious water directly from taps and promote awareness of delicious water to families, schools, and subsequently the district and all of Tokyo. Simultaneously, we will improve on the situation in which people are reluctant to drink tap water, and convey the convenience of tap water, which anyone can drink easily and safely.

Project Content

1. Project Content

- Targets the part to convert water taps to direct water supply, in the section from the water meter downstream.
- Existing water tanks are left in place and used in combination with the new system, such as to flush toilets

< Before the Construction >



< After the Construction >

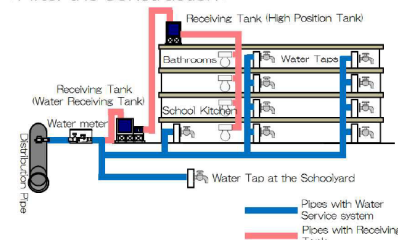


Figure 1. Diagram of direct water supply construction

2. Project Scheme

- The total cost of construction is divided, with the municipality or private school bearing the cost of materials and the Tokyo Waterworks bearing other construction costs excluding materials
- Cost sharing ratio is determined by the water supply system

	Cost Sharing Ratio		Role
	Direct Pressure Supply System	Pressure Boosted Water System	
Municipality or private school (Cost of materials)	20%	40%	Design and construction
Bureau of Waterworks, Tokyo Metropolitan Government	80%	60%	Technical support and share part of construction costs

Table 1. Project Scheme

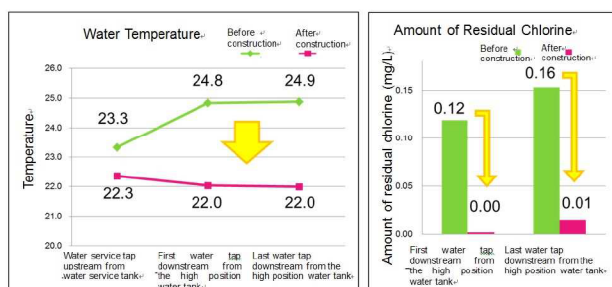
Project Benefits

1. Current Achievements

- Implemented in 663 schools in the period from April 2007 to March 2016
- Implemented as follow up at 10 schools in 2017

2. Measurements of water temperature and residual chlorine concentration

Figure 2. Changes in water temperature and amount of residual chlorine before and after construction



- Reduced warming after construction
- Reduced chlorine residue after construction

3. Questionnaire Surveys

- Conducted follow up questionnaires at schools where projects were conducted regarding how they drink water and their level of satisfaction after conversion to direct water supply
- Questionnaire results showed high praise from pupils, students, and teachers

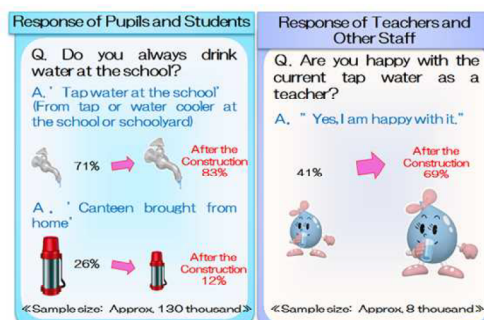
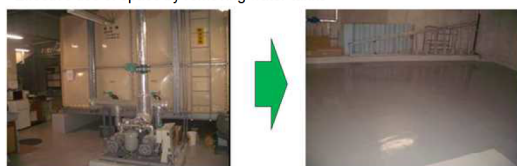


Figure 3. Questionnaire Survey Results

4. Examples of installation

- Effective use of space by removing water tanks



- Beautifully renovated drinking fountain



CONCLUSIONS

- Direct water supply conversion realized in more schools with active PR activities, such as by making individual visits and holding project seminars at municipalities and private schools.
- Project benefits have been highly praised by elementary and junior high schools where the project was implemented.
- The ripple effect of this project has led to municipalities starting their own direct water supply conversion initiatives even at newly built or renovated schools which are not targeted by this project
- We will continue to implement PR activities including technical support according to circumstances, with the goal of spreading direct water supply