LAPORAN PENELITIAN

Universitas Gadjah Mada Drinking Water Supply System (UGM-DWSS) Potential on Supporting Green Campus Program in Universitas Gadjah Mada

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Potensi Sistem Penyediaan Air Minum Kampus (SPAM Kampus) Dalam Mendukung Program Green Campus di Universitas Gadjah Mada

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Intan Supraba, ST.,M.Sc.,Ph.D.

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THE 3rd INTERNATIONAL CONFERENCE ON SCIENCE AND TECHNOLOGY

11–12 July 2017 / Yogyakarta, Indonesia

5th Asian Network for Natural and Unnatural Material
2nd Computer Symposium
2nd Geomaritime Symposium
1st OMICS Symposium: from Genomics to Metabolomics
1st Infrastructure Technology Symposium
Dear our respected authors,

We would like to inform you that the following paper:

**DESCRIPTIVE ANALYSIS OF DRINKING WATER SUPPLY SYSTEM ON CAMPUS (SPAM KAMPUS) POTENTIAL ON SUPPORTING GREEN CAMPUS PROGRAM IN UNIVERSITAS GADJAH MADA**

AdhiFahrianto

is

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For your obvious information, the important dates of Infrastructure Technology Symposium ICST 2017 are following bellow:

- **9 June 2017**: Early bird payment
- **19 June 2017**: Registration and payment deadline
- **1 July 2017**: Camera ready submission
- **11-12 July 2017**: The conference

Regarding to the payment, we will send the author invoice later.

Furthermore, please kindly sign the attached LETTER OF STATEMENT and submit the signed letter of statement via epaper.uasc.ugm.ac.id.

Best regards,
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Universitas Gadjah Mada Drinking Water Supply System (UGM-DWSS) potential on supporting green campus program in Universitas Gadjah Mada

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Green Campus is a campus environment that is designed to increase energy efficiency, preserve resource and improve the quality of the environment. One of the important elements to support the green campus program is the existence of drinking water supply system. Universitas Gadjah Mada Drinking Water Supply System (UGM-DWSS) is a drinking water or potable water supply service to supply drinking water for the campus. This research aims at analyzing UGM-DWSS potential and its performance to support Green Campus. This research was based on primary data collection in UGM campus. Data collection techniques consist of observation of UGM-DWSS facilities, interview with UGM-DWSS water managers and users, and questionnaires distribution to UGM academic community. The daily water production of UGM-DWSS was 10 l/s drinking water. Everyday the water discharge distributed from UGM-DWSS to 49 water fountains and 12 water dispensers was 1.71 l/s, while the estimated daily water consumption rate was 0.07 l/s. It is assumed that those who did not consume water from UGM-DWSS facilities bought plastic drinking water bottle. Everyday, it is estimated that the number of generated plastic drinking water bottle waste was 19,168 bottles with capacity 600 ml/bottle. Indeed, by comparing to the total water production capacity being produced daily, the idle capacity was 99.3 %. The tendency of negative response from the majority of UGM inhabitants for using UGM-DWSS was due to hesitation about water quality, continuity of water supply, and ease of access to the nearby water fountains and water dispensers. Improvement of UGM-DWSS facilities that is supported by massive socialization programs including innovation to utilize produced drinking water are recommended to optimize the role of UGM-DWSS to create Green Campus.

Keywords: Universitas Gadjah Mada Drinking Water Supply System (UGM-DWSS), green campus, plastic waste
# Infrastructure technology symposium schedule

**DAY 2**

**Date**: Wednesday, 12 July 2017  
**Room**: Carnation

<table>
<thead>
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<th>Time</th>
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<th>Title and Authors</th>
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| 10:45 – 11:15 |      | **Symposium session III**  
**Moderator**: Intan Supraba, S.T., M.Sc., Ph.D. |
| 10:45 – 11:15 | Prof. Dr. Tech. Ir. Danang Parikesit, M.Sc.  
Universitas Gadjah Mada, Indonesia |
| 11:15 – 11:30 | IO-05 | Development of batch photocatalytic solar reactor into a continuous system to degrade peat water into clean water  
Gusfiyessi, Hendri Sawir, and Edo Handika |
| 11:30 – 11:45 | IO-06 | Microbiological quality assessment of drinking water in Teros Village, East Lombok District,  
West Nusa Tenggara Province, Indonesia  
Baqi Liana Widiyanti, Ig L. Setyawan Purnama, Adi Heru Sutomo, and Setiadi |
| 11:45 – 12:00 | IO-07 | Rain behaviour at Mt. Merapi area as observed by XMPR and ARR  
Roby Hambal, Hanggar G. Mawandha, Djoeko Legono, Rachmad Jayadi, and Satoru Oishi |
| 12:00 – 12:15 | IO-08 | Impact of sedimentation counter measure on the performance of flood control: a case study of Wonogiri reservoir  
Rachmad Jayadi, Istiarto, and Ansita Gukitapingin Pradipta |
| 12:15 – 12:30 | IO-09 | Simulation of angular flow in a shallow basin triggered by a rotating vertical cylinder by SPH method Warniyati, Radianta Triatmadja, and Nur Yuwono |
| 13:15 – 13:30 | IO-10 | **Symposium session IV**  
**Moderator**: Endita Prima Ari Pratiwi, S.T., M.Eng., Ph.D. |
Adhi Fahrianto S., Intan Supraba, Radianta Triatmadja, and Budi Kamulyan |
| 13:30 – 13:45 | IO-11 | Campus drinking water supply system performance analysis in Universitas Gadjah Mada of Yogyakarta  
Teguh Setiawan, Radianta Triatmadja, Intan Supraba, and Budi Kamulyan |
Universitas Gadjah Mada Drinking Water Supply System (UGM-DWSS) Potential on Supporting Green Campus Program in Universitas Gadjah Mada

ADHI Fahrianto S\textsuperscript{1,a}, INTAN Supraba\textsuperscript{2,b*}, RADIANTA Triatmadja\textsuperscript{3,c} and BUDI Kamulyan\textsuperscript{4,d}

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Keywords: Universitas Gadjah Mada Drinking Water Supply System (UGM-DWSS), green campus, plastic waste

Abstract. Green Campus is a campus environment that is designed to increase energy efficiency, preserve resources and improve the quality of the environment. One of the important elements to support the green campus program is the existence of drinking water supply system. Universitas Gadjah Mada Drinking Water Supply System (UGM-DWSS) is a drinking water or potable water supply service to supply drinking water for the campus. This research aims at analyzing UGM-DWSS potential and its performance to support Green Campus. This research was based on primary data collection in UGM campus. Data collection techniques consist of observation of UGM-DWSS facilities, interview with UGM-DWSS water managers and users, and questionnaires distribution to UGM academic community. The daily water production of UGM-DWSS was 10 l/s drinking water. Everyday the water discharge distributed from UGM-DWSS to 49 water fountains and 12 water dispensers was 1.71 l/s, while the estimated daily water consumption rate was 0.07 l/s. It is assumed that those who did not consume water from UGM-DWSS facilities bought plastic drinking water bottle. Everyday, it is estimated that the number of generated plastic drinking water bottle waste was 19,168 bottles with capacity 600 ml/bottle. Indeed, by comparing to the total water production capacity being produced daily, the idle capacity was 99.3 %. The tendency of negative response from the majority of UGM inhabitants for using UGM-DWSS was due to hesitation about water quality, continuity of water supply, and ease of access to the nearby water fountains and water dispensers. Improvement of UGM-DWSS facilities that is supported by massive socialization programs including innovation to utilize produced drinking water are recommended to optimize the role of UGM-DWSS to create Green Campus.

Introduction

Green Campus is a campus environment that is designed to increase energy efficiency, preserve resources and improve the quality of the environment. Green Campus program is an international environment educational program which offers measured and supervised instruments on campus education by participating in resolving environmental issues, creating innovation on environmental rescue, and implementing on daily campus learning. Green campus is holistically created to form awareness and environmental action as an intrinsic part of life [1].

Shortly, green campus is a sustainable environment management system to create environmental-based campus and aimed to resolve the current environmental problems. Green Campus Initiative in Indonesia had been implemented by Universitas Indonesia since 2008 [2]. The term green campus itself was popularized by Harvard University since 2000. Harvard was considered as the best example of Green Campus Initiative implementation. Such program was
applied by making a continuous campus plan of green cleaning, integrated pesticide control management, recycling and waste management programs, especially non-degradable ones.

Universitas Gadjah Mada Drinking Water Supply System (UGM-DWSS) is a drinking water supply service or potable water to supply drinking water for campus. The idea to establish UGM-DWSS was proposed by Students Association of Civil Engineering of UGM by designing UGM-DWSS. Then The Ministry of Public Works and Housing (Pekerjaan Umum dan Perumahan Rakyat) adopted the idea and granted funds to some government universities in Indonesia such as Universitas Gadjah Mada (UGM), Universitas Negeri Sebelas Maret (UNS), Institut Teknologi Bandung (ITB), and Universitas Tadulako. UGM-DWSS was designed as a tool for students and other academic community to learn about drinking water treatment technology, and as for drinking water supply development to succeed Green Campus. It consists of a water treatment plant to process raw water into drinking water, and pipe line networks to distribute drinking water to 50 water fountains and 12 water dispensers. UGM-DWSS supports a specific program stated in National Development Plan (Rencana Pembangunan Jangka Menengah Nasional) year 2015 – 2019 that access to drinking water shall reach 100% in 2019.

The daily water production of UGM-DWSS was 10 l/s drinking water. If the produced drinking water is not fully utilized, then it is assumed that the rest bought plastic drinking water bottle. Thus, this study aims to analyze daily drinking water consumption rate for understanding the effectiveness of UGM-DWSS to support Green Campus program, and to recommend solutions for optimizing the role of UGM-DWSS.

Methodology

This research was based on primary data collection in UGM campus. Data collection techniques consist of observation of UGM-DWSS facilities, interview with UGM-DWSS managers, operators, and users, and questionnaires distribution to UGM academic community. Observation was conducted by engaging surveyors to observe the utilization of UGM-DWSS facilities for seven days, starting from 07:00 to 16:00 during weekdays when there were lectures. Interview was done with the operators and users of UGM-DWSS, while the questionnaires were distributed to the users of water fountain and water dispensers.

Data processing used descriptive analysis to illustrate research propositions. Sample determining in the research used purposive sampling based on considerations upon water dispenser facilities in university surroundings as many as 52 units. Questionnaire measurement used Likert scale which contained affirmative and negative form of question to measure each scale of agreement. Affirmative questions were scaled 5, 4, 3, 2, and 1; while negative ones were scaled 1, 2, 3, 4, and 5 or -2, -1, 0, 1, and 2. Likert scale options were: entirely agree, agree, hesitate, disagree, and entirely disagree.

Results and Discussion

Water supply

The drinking water produced by UGM-DWSS distributed using a network pipelines from UGM-DWSS to 49 units of water fountains and 12 units of water dispensers (see Fig. 1). Water discharge distributed from UGM-DWSS is estimated by doing a survey to measure the water discharge using a measuring cup at 5 water fountains located at Faculty of Mathematics and Natural Sciences, Faculty of Dentistry, Vocational School, Library, and Faculty of Veterinary Medicine (see Table 1).
Figure 1. Location of water fountains and water dispensers in UGM
(Source: UGM-DWSS Team UGM, 2015)

Table 1. Estimated water discharge supplied from UGM-DWSS

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Based on Table 1, the average water discharge distributed from UGM-DWSS to 49 water fountains and 12 water dispensers was 1.71 l/s that is obtained by calculating the average value of discharge in each locations, and then sum up the total discharge in 5 locations. Then the total discharge in 61 locations can be calculated by taking linear relation from the total discharge in those 5 locations.

**Water demand**

Water demand in each water fountains and water dispensers is measured by counting the average number of users and the amount of water usage in 5 water fountains for 24 hours within 3 days observation (see Fig. 2).

**Figure 2.** The average number of users in 5 water fountains

From observation, each person took water using 600 ml bottle. Thus, the consumption rate in those 5 observed locations was 518.5 liters/day. By assuming linear relation, the estimated consumption rate in 61 locations (49 water fountains and 12 water dispensers) was 6,325.7 liters/day or 0.07 liters/second. The above results showed that the highest average number of user comes from Faculty of Mathematics and Natural Sciences as 352 people, followed by Faculty of Dentistry as 198 people, Vocational School as 192 people, Main library as 77 people, and Faculty of Veterinary Medicine as 46 people. The observation results showed that the lowest number of users were from Faculty of Veterinary Medicine due to the improper location of the fountain that is far from locations used by students for their daily activities.

Results also showed that the number of users increased during the lunch break between 12.00 and 14.00, while the lowest usage occurred in the morning, in the beginning of campus hours between 7.00 and 8.00 am. The reason was because students have brought water from their residences, and run out of water during lunch time. Thus, UGM-DWSS managers need to pay attention during peak hours in order to avoid constraints that result in dissatisfaction of UGM-DWSS users.

**Survey on UGM-DWSS User**

Survey conducted by distributing questionnaire forms to UGM-DWSS users located in the research area for getting information about the amount of water demand, the potential of development in the interest of the academic community towards UGM-DWSS, and the ability to pay academicians. This research questionnaire was designed to get the information about the experience in utilizing UGM-DWSS facilities, satisfaction in the utilization of facilities, assessment of facilities, and views on the development of facilities and drinking water needs in UGM Campus.
1. Experiences in using water fountain and water dispenser in UGM

The questionnaire result related to experiences of using water fountain and water dispenser in UGM is shown in Table 2.

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<th>No</th>
<th>Statement</th>
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<th>Std. Deviation</th>
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<td>Utilize if on campus</td>
<td>3.40</td>
<td>0.33</td>
</tr>
<tr>
<td>2</td>
<td>Buy bottled water if you are on campus</td>
<td>2.75</td>
<td>0.31</td>
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<td>3</td>
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<tr>
<td>4</td>
<td>Never seen this tool not working properly</td>
<td>2.96</td>
<td>0.53</td>
</tr>
<tr>
<td>5</td>
<td>If you do not use this tool, you bring drinking water from your home / boarding house</td>
<td>3.21</td>
<td>0.30</td>
</tr>
<tr>
<td>6</td>
<td>If you do not use this tool, you buy bottled water if you are on campus</td>
<td>2.84</td>
<td>0.30</td>
</tr>
<tr>
<td>7</td>
<td>In addition to drink, the water you use also for other purposes</td>
<td>1.78</td>
<td>0.21</td>
</tr>
<tr>
<td>8</td>
<td>In addition to use on campus, you bring home water for use at home / boarding</td>
<td>2.06</td>
<td>0.36</td>
</tr>
<tr>
<td>9</td>
<td>You've been disappointed with the performance or results of this tool</td>
<td>2.09</td>
<td>0.27</td>
</tr>
<tr>
<td>10</td>
<td>If you suggest to others to take advantage of this tool</td>
<td>2.99</td>
<td>0.34</td>
</tr>
</tbody>
</table>

Total Revenue: 2.64

Based on the results of analysis in Table 2, the average total respondents perception to the experience of using water fountain and water dispenser was 2.64. Adjusted to Likert scale where scale 1 to 2 shows the state of disagreement, scale 3 shows doubt between agree and disagree, while scale 4 and scale 5 indicate approval, then the average perception of respondents to the experience of utilizing drinking water facilities shows a negative tendency.

Related to experience in utilizing water fountain and water dispenser, the highest user experience is in the statement about utilizing drinking water facilities on campus with an average of 3.40, which means respondents tend to respond positively to statement. It meant that the respondents tend to use drinking water from UGM-DWSS during the campus hour. As for the statement “other than to drink, water from fountain facilities used for other purposes” shows a mean of 1.78 which means respondents respond negatively to the statement. In other words, respondents tend not to use water from UGM-DWSS for other purposes besides for drinking.

Results showed that some respondents were still hesitate to use either water fountain or water dispenser especially about its water quality. From the interview with the Director of UGM-DWSS, it was said that the produced drinking water has been tested. Water quality analysis results was done to test water quality at the water source, water fountains, and water dispenser for 17 parameters including pH, turbidity, E.Coli, Coliform, Total Dissolved Solids, Fe, and Temperature. Results showed that the drinking water complied with Minister of Health Republic of Indonesia Decree No.492/MENKES/PER/IV/2010 (Keputusan Peraturan Menteri Kesehatan Republik Indonesia No.492/Men.Kes/Per/IV/2010) about drinking water standard.

2. Satisfaction in using water fountain and water dispenser in UGM

The questionnaire result related to satisfaction in using water fountain and water dispenser in UGM is shown in Table 3.

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Average</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Benefits of existing water fountain on campus</td>
<td>3.59</td>
<td>0.19</td>
</tr>
<tr>
<td>2</td>
<td>Your experience utilizes it all along</td>
<td>3.35</td>
<td>0.20</td>
</tr>
<tr>
<td>3</td>
<td>Care and maintenance of this facility</td>
<td>3.09</td>
<td>0.17</td>
</tr>
<tr>
<td>4</td>
<td>Cleanness and care of the surrounding environment</td>
<td>3.21</td>
<td>0.14</td>
</tr>
<tr>
<td>5</td>
<td>The quality of the water produced</td>
<td>3.42</td>
<td>0.19</td>
</tr>
<tr>
<td>6</td>
<td>Volume of water produced</td>
<td>3.07</td>
<td>0.23</td>
</tr>
<tr>
<td>7</td>
<td>Easy to reach (accessibility)</td>
<td>3.17</td>
<td>0.20</td>
</tr>
<tr>
<td>8</td>
<td>Convenience when in use</td>
<td>3.41</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Total Revenue: 3.59
The average total perception of respondents to the satisfaction of using water fountain and water dispenser valued 3.29. This means the respondents' perception of satisfaction of using drinking water facility was categorized as positive. Based on the results of questionnaires on the level of user satisfaction in the utilization of drinking water facilities UGM campus showed that the highest satisfaction of UGM-DWSS facility users lies in the benefits of fountains located on UGM with an average yield of 3.59. The result points out the respondents' perception of the satisfaction of the benefits of fountain in UGM is positive, or in other words the respondents tend to be satisfied with the existence of UGM-DWSS in UGM.

All of the water fountains and water dispensers are free of charge to academicians and everyone who is in the campus area. The use of this facility also helps in producing healthy, cheap and efficient drinking water which also eco-friendly. The usage of water fountains and water dispensers can reduce the consumption of plastic drinking water bottles in which the waste has been increasingly accumulated and difficult to decompose [3]. Therefore, the participation of academicians in using this facility can participate in realizing the green campus program in UGM.

Fountain users who tended to express any reluctance about the volume of water generated by UGM-DWSS facilities shown with an average of 3.07. The cause of such reluctance may vary because when compared to the results of data analysis and water volume generated by UGM-DWSS, it should be abundant to meet the water needs of the academicians.

Consequently, in order to improve services to consumers, researchers suggest improving the water distribution system. The existing condition can be improved by rearranging the operation schedule of the distribution pump, taking into account the fluctuation of water consumption, and to improve socialization program about drinking water quality [4]. The benefit obtained by changing pump operations is the increasing water pressure, especially on low pressure areas. Furthermore, new distribution pipes installed in parallel so at peak hours the water pressure throughout the service area will be positive.

3. Assessment on water fountain and water dispenser in UGM

The questionnaire result of assessment on fountain facilities in UGM is presented in Table 4.

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Average</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Functionality and stability of the installation</td>
<td>3.41</td>
<td>0.41</td>
</tr>
<tr>
<td>2.</td>
<td>Production volume (debit)</td>
<td>3.13</td>
<td>0.22</td>
</tr>
<tr>
<td>3.</td>
<td>Appeal or appearance</td>
<td>3.49</td>
<td>0.22</td>
</tr>
<tr>
<td>4.</td>
<td>Water quality</td>
<td>3.45</td>
<td>0.16</td>
</tr>
<tr>
<td>5.</td>
<td>Cleanliness and hygiene</td>
<td>3.40</td>
<td>0.15</td>
</tr>
<tr>
<td>6.</td>
<td>Cleanliness and hygiene of the surrounding environment</td>
<td>3.29</td>
<td>0.14</td>
</tr>
<tr>
<td>7.</td>
<td>Its easy to use</td>
<td>3.63</td>
<td>0.18</td>
</tr>
<tr>
<td>8.</td>
<td>Location or aksesilitasnya</td>
<td>3.17</td>
<td>0.23</td>
</tr>
<tr>
<td>9.</td>
<td>Number of installed available unit</td>
<td>2.62</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td><strong>Total Revenue</strong></td>
<td><strong>3.29</strong></td>
<td></td>
</tr>
</tbody>
</table>

The average of assessment on drinking water facilities UGM Campus of 3.29, or in other words the perception of respondents to the assessment of drinking water facilities includes in positive category.

The result of the assessment of the water fountain of UGM campus shows that the highest assessment of the users of the facility is its ease to be used with an average of 3.63 which means the respondents opinion related to the ease of use of drinking water facilities tend to agree. In other words, respondents stated that UGM-DWSS facility is easy to use. The use of drinking water facilities can be said to be easy and practical enough because it has provided instructions on how to use this facility across the campus area. Basically, the use of water fountain in UGM area is practical. Users simply provide a glass or bottle to hold water to drink. Then press the faucet down
to let out the water. The UGM-DWSS Team added that the instruction has been installed on each faucet [5]. There are steps of using the tool on it, and there are things that can be done and should not be done in using it.

The lowest assessment of the fountain facility in UGM is few installed or available units with an average of 2.62, or in other words the respondents’ assessment related to the number of installed units are categorized as negative. Based on the Annual Report of Campus Water Supply System 2015, the outputs of UGM-DWSS Stage I Phase 1 and Phase 2 only have 12 water dispensers and 50 fountains installed. In fact, the facilities are quite sufficient comparing to the number and the placement, including the overflow of water from UGM-DWSS. Instead, the respondents’ negative response to the number of installed units is possibly related to the water distribution at every faculty in UGM and the channel that needs development to enable users to get UGM-DWSS water access.

In addition, the excess production reached up to 99.3%. Currently, the excess drinking water production is used for some purposes such as distributed to Kinanti dormitory for being used as clean water, for backwash, for cleaning water reservoir located at Kinanti dormitory, and for producing plastic drinking water bottle based on order. The produced plastic drinking water bottle is named Toya Gama (see Fig. 3). It creates a problem because it was produced in plastic bottle so it generated plastic waste. Another problem is the existing UGM-DWSS are often misused such as using the water fountains for washing face and hands causing large amounts of wasted water.

Figure 3. Toya Gama (toyagama.ugm.ac.id/en/home)

Conclusions

Conclusions of the current research results can be summarized as follows:
1. The total capacity of water production from UGM-DWSS was 10 l/s. The daily water discharge distributed from UGM-DWSS to 49 water fountains and 12 water dispensers was 1.71 l/s, while the estimated daily water consumption rate was 0.07 l/s so the potential of generated plastic drinking water bottle from those who did not utilize either water fountains or water dispensers was 19,168 bottles with capacity 600 ml/bottle.
2. There was an excess water as 9.93 l/s. Currently, the excess water was being used for clean water at Kinanti dormitory, backwash, and for cleaning water reservoir.
3. Results showed that users of water fountains and water dispensers respondents tend to use drinking water from UGM-DWSS during the campus hour, tend not to use water from UGM-DWSS for other purposes besides for drinking, feel hesitate about drinking water quality, and
tend to express any reluctance about the volume of water. However, users felt satisfied with the existence of UGM-DWSS.

4. Related to point 3, water quality analysis for 17 parameters have been conducted regularly and results showed that those parameters complied with drinking water standard stated in Minister of Health Republic of Indonesia Decree No.492/MENKES/PER/IV/2010.

5. This study recommends improvement of socialization of UGM-DWSS existence including the facts about the abundant of water volume and the good water quality. The information of water quality shall be posted in each water fountains and water dispensers. Another recommendation is to establish policy that UGM-DWSS shall produce drinking water in gallon instead of plastic bottle and every departments and faculties in UGM should buy gallon drinking water produced by UGM-DWSS instead of buying commercial drinking water.

References
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<th>TOTAL BIAYA (Rp)</th>
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<td>hari</td>
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<td><strong>TOTAL</strong></td>
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## JAYA MULIA

PHOTOCOPY CENTER

Sedia: Alat-alat tulis, Perlengkapan kantor Dll
Melayani: Fotocopy, Jilid, Hard cover Dll
Jl. Letjen Soeprapto 49 Ponorogo ☎️ (0352) 461787

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Ponorogo 20

Jumlah Rp. 200.000
Kepada Yth.
Intan Supraba
UGM, Yogyakarta

No: 12/CV/INV/V/2017

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TOTAL PEMBAYARAN

Rp. 9.800.000,-

Terbilang: Sembilan Juta Delapan Ratus Ribu Rupiah

Keterangan:
Non PPN dan Non NPWP

Hormat Kami,

[Signature]

CV. SEMPURNA

Direktur