

## Water (WR)

### Water Conservation Implementation Program

The university has constructed four ponds, which are useful for creating attractive scenery and allowing trees to grow well. In addition, they can help store rainwater during heavy rainfall, which in turn can help reduce flooding in the rainy season. There are 4 ponds on Bangplee campus:

1. The Health Garden Pond 1: containing a water capacity of 1,390 m<sup>2</sup>
2. The Health Garden Pond 2: containing a water capacity of 1,097 m<sup>2</sup>
3. The Chin Sophonpanit Building Pond: containing a water capacity of 2,974 m<sup>2</sup>
4. The Sixty-Six Rai Pond: containing a water capacity of 28,270 m<sup>2</sup>



**Figure 1.** The Health Garden Pond 1



**Figure 2.** The Health Garden Pond 2



**Figure 3.** The Chin Sophonpanit Building Pond



**Figure 4.** The Sixty-Six Rai Pond

### Water Recycling Implementation Program

Huachiew Chalermprakiet University has an aerated wastewater treatment system. According to the wastewater treatment system operation plan, some amount of chlorine will be added to the treated wastewater in order to kill germs or remove harmful contaminants. Then it will be transferred and stored in the recycling wells before being pumped to be used for watering plants and lawns. The university will use 100% of all recycled water for watering the plants in the university.



**Figure 1.** Wastewater Treatment Plants



**Figure 2.** The use of treated recycled water to water plants

### Water Efficient Appliances Usage

Huachiew Chalermprakiet University has a total of 7,198 items of water-using equipment including sink taps, bidet sprayers, toilet bowls, faucets, urinals, and showers. At present 4,004 items out of the total are considered water-saving water equipment. The overall ratio of water-saving equipment to water-using equipment is 55.63 %. For examples, water-saving sink taps have a water consumption rate of not over 6 liters per minute. Water-saving toilet flush valves and urinal flush valves use not over 12 liters of water per time and not over 6 liters per minute, respectively.



**Figure 1** Water-Saving Sink Taps



**Figure 2** Water-Saving Flush Valve of Toilet Bowl



**Figure 3** Water-Saving Urinal Flush Valve

### **Consumption of treated water**

Huachiew Chalermprakiet University students and staff use tap water for consumption and supplies. Therefore, water treatment equipment is not installed on campus.

### **Percentage of additional handwashing and sanitation facilities during Covid-19 pandemic**

The university has preventive measures in order to deal with the COVID-19 situation by checking the temperature of all persons entering the university. Temperature scanners are located at the entrances and exits of buildings, where individuals entering the building must scan their temperature before entering the building. Alcohol gel is placed in both indoor and outdoor areas, such as the building entrance, in front of the office, cafeteria, and finger scanner, etc. There is a sink with hand sanitizer installed for the student and staff before eating in all the university cafeterias. Therefore, the percentage of installation of hand sanitation and sanitation equipment during the COVID-19 pandemic per total number of buildings is equal to 57.14%

Besides, indoor disinfectant is also sprayed. Housekeeping is carried out at school desks and staff desks and areas that are shared every day, and antiseptic sprayers are sprayed around the campus.



**Figure 1** washbasin at canteen 1



**Figure 2** washbasin at canteen 2



**Figure 3** Temperature scanner and hand sanitizer with alcohol gel before entering the building.



**Figure 4** Pressing alcohol gel to wash hands before leaving the building.



**Figure 5** Alcohol gel near finger scanner area



**Figure 6** Temperature scanner and alcohol spraying system for cleaning hands



**Figure 7** Temperature scanning and pressing alcohol gel to clean hands before entering the building



**Figure 8** Indoor disinfection spraying