Background

Drinking water at KAUST is produced using the industry-leading reverse osmosis process. This process forces seawater through membranes which act as filters, significantly lowering salt and other contaminant concentrations.
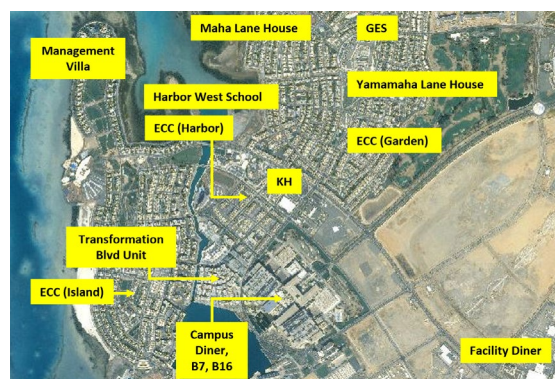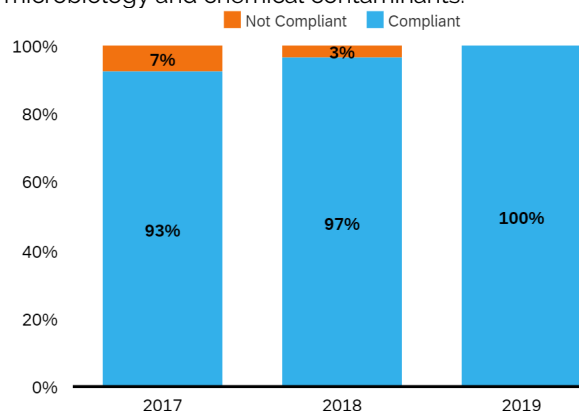
Following complaints of 'rust' colored water in laboratories during March 2014, Health, Safety & Environment (HSE) Department implemented a KAUST-wide surveillance monitoring program focused on contaminants of potential human health concern in drinking water. Drinking water has always been well monitored at KAUST, however improvements areas did exist from a public health perspective.

Operational and surveillance monitoring are key activities in ensuring our drinking water is clean and healthy

Action and Result

Occasional localized water quality abnormalities were identified, however these were determined not to present a risk to health human. Nevertheless, the precautionary principle was applied and departments worked together to improve drinking water quality. During 2019 surveillance monitoring by HSE, 100% drinking water compliance rate was achieved for microbiology and chemical contaminants.

The next step – Water Safety Plan

The journey to a KAUST-wide Water Safety Plan (WSP) is in progress, ensuring internationally recognized best practices are embedded in KAUSTs future to protect our community.

Water Safety Plans are recognized by the World Health Organization as the most effective and proactive means of consistently ensuring the safety and acceptability of a drinking water supply.

The 10 steps to KAUSTs Water Safety Plan are:

1. Assemble the expert **water safety team**

2. Describe the **water supply system**

3. Identify **hazards** and hazardous events

4. Assess and **prioritize the risks**

5. Identify **control measures** for each risk

6. Define the **monitoring** system for each risk

7. Prepare operational procedures to **verify** the WSP is working and **health-based targets** are being met

8. Prepare **supporting** procedures (eg. Training)

9. Prepare **management** procedures (eg. Incidents)

10. Establish **documentation** and **communication** procedures