Information for Building and Facility Managers

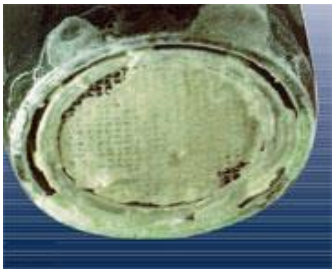
How to Troubleshoot Building Water Quality Questions and Complaints

Given the periodic questions about discoloration of domestic water in buildings and general water quality on campus, we are providing this information for general reference about the campus domestic water distribution system quality and what may affect water color (since this is the most common observed complaint) in buildings. Also some steps that should be taken if/when you observe or receive complaints about building tap water.

Background

Stanford's domestic water system quality is monitored in compliance with the State Water Resources Control Board Division of Drinking Water regulations and it is fully compliant with state and federal drinking water standards. Samples from the campus distribution system are collected frequently and all samples comply with regulatory standards. See Stanford University's most recent Annual Water Quality Report:
https://suwater.stanford.edu/annual-water-quality-reports

Some common causes for building tap water color changes



Sediment build-up in faucet aerator

Occasionally, tap water inside buildings may appear discolored. Some common causes for this are as follows:

- Low water use, so water sits in pipes for extended periods. This situation can happen after long weekends or holiday breaks.
- Low water use of hot water. This may occur also due to sediment accumulation in hot water heaters or building piping.
- Building water turned off for a period of time.
- Aerators on taps collecting sediment, needing cleaning.
- Construction work in the building or close by that may cause enough vibration to stir up sediment in piping.
- Construction work inside the building, affecting the building cold and/or hot water.
- System flushing in an adjacent area.
- Piping in new buildings needing additional flushing.

Recommended actions in response to complaints about building water quality

- Obtain specific information about the complaint:
  - What is being observed (e.g., yellow or greenish color, odor, taste)
  - Location of observed problem (e.g., bathroom, tap, appliance, etc.)
  - Is the observed problem on cold water or hot water, or both? (Caution that mixing valves can be difficult to isolate one or the other, and the mixing of hot and cold water could cause odor as chloramines breakdown)
  - Has the area in the building had very low or no water use for more than 72 hours?
  - Is there redundant/excessive water storage such has multiple hot water heaters that could cause unnecessary dead ends?
  - Has the water been shut off in the building?
  - Has there been recent construction in the building?
  - Has there been recent construction adjacent to the building? (causing a lot of vibration)
- Is the building water system flushed periodically? When was it last flushed?
- If the observed discoloration of tap water is observed throughout the building, request that flushing be performed for the whole building.
- If the observed discoloration of tap water is observed locally or on 1 floor in the building, request that flushing be performed for that floor.
- If odors are observed at sinks, as well as in appliances (dishwashers and washing machines), a potential cause could be sewer gas from the lines/drain. Check that the traps and vents are functioning properly. Dry traps could cause gases to come up from the sewer, and plugged vents could prevent gases from venting out of the building properly.

For campus buildings, if the problem persists after flushing is completed, contact Stanford's Water Planning & Stewardship team. Our contact information can be found at suwater.stanford.edu/wps.

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