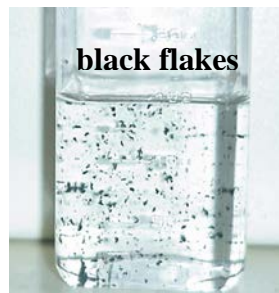


## Information Update for Residents of Stanford University Faculty/Staff Housing

### Fact Sheet: Gradual Chloramine Degradation of Rubber Components in the Potable Water System

Stanford University purchases 100% of our potable water from the San Francisco Public Utilities Commission (SFPUC). On February 2, 2004, the SFPUC switched the disinfectant used in the potable water supply from chlorine to chloramine (a combination of chlorine and ammonia). The reason for the change was to comply with more stringent potable water regulatory requirements. Prior to the change in disinfectant, the Stanford University, Utilities Division provided detailed information (emails, mailers, web site, meetings, etc.) about how the change in disinfectants (chloramines) would impact the campus community. Recently, we have received questions regarding one of the impacts of chloramines - degradation of rubber parts (black flakes in the water). This fact sheet was developed to provide additional information on this issue.

As described in the CA-NV American Water Works Association – Handling Water Quality Complaints Handbook, “Chloramine disinfectants can cause the rubber or elastomer linings on older stainless steel braided flex connections and rubber flapper valves in toilet tanks to break down. This can cause soft, black flakes in the water, usually on the first draw from the tap, but then the water quickly clears up. These flakes sometimes have a “greasy” appearance and will frequently stick and smear on surfaces. If the problem is with your flex connector on the water heater, the black particulate appears just as the water gets hot, then clears up as the black particulate is displaced by the clean water from the water heater.”



Photos by John Marchand, Alameda County Water District

To solve this problem the degraded part should be replaced with new chloramines-resistant formulations (silicone based rubber, synthetic polymers, copper or nylon flex lines). These products should say “chloramine resistant.”



If you have any questions please contact the Stanford University, Utilities Division; Julia Nussbaum at 650-723-9747 or Brian Manning at (650) 498-7279.