

Household levels of mold following Hurricane Katrina surpass some agricultural environments

Mold and bacteria levels in New Orleans homes warrant use of strong respiratory protection

[Columbia University's Mailman School of Public Health](#)

In a study assessing flood clean-up procedures in New Orleans following Hurricane Katrina, a team of scientists led by researchers at Columbia University's Mailman School of Public Health, report that household levels of mold and bacterial endotoxins in three single-family homes were so considerable that they equaled or surpassed those in waste-water treatment plants, cotton mills, and agricultural environments. The study is the first comprehensive report documenting levels of mold and bacteria in homes that received sustained flooding.

Following Hurricane Katrina, many New Orleans homes remained flooded for weeks, promoting heavy mold growth. These three New Orleans homes were selected for the study based on their levels of flood water, whether they previously were structurally sound, and if they were located in an area likely to be rebuilt. The study examined the extent to which homes that experienced significant and prolonged exposure to flood waters could be satisfactorily cleaned to enable reconstruction. Homes were inspected for roof leakage, standing water and the extent

of mold throughout their interiors, as well as heating ventilation and air conditioning.

"From our data, it is clear that levels of mold were so high that we strongly recommend that those entering, cleaning, and repairing flood-damaged homes wear respirators that are more protective than plain dust masks," said Ginger Chew, ScD, assistant professor of environmental health sciences at Columbia's Mailman School of Public Health. "While our assessments of the data are based on a small demonstration project, the results give a clear picture of what is acceptable in flood clean-up procedures."

The project was sponsored by the NIEHS Center for Environmental Health in Northern Manhattan and Enterprise Community Partners, and was carried out by the Mailman School of Public Health, the National Center for Healthy Housing (NCHH) and several other academic institutions including Tulane School of Public Health, the University of Cincinnati, Harvard School of Public Health, The University of Iowa, and Case Western Reserve University.

"Our goal was to make recommendations for

the safe removal of flood-damaged articles, safe re-entry into homes, and safe levels of worker protection," said Jonathan Wilson, deputy director of the National Center for Healthy Housing.

According to researchers, these findings not only will inform those involved in current clean-up activities in New Orleans and other environments, but will benefit those responding to any future disasters that may occur.