



San Francisco Department of Public Health  
Climate and Health Program

# Flooding and Extreme Storms

## Mold Information Sheet

### Climate change is happening now and faster than expected.

Global climate change has local impacts. In San Francisco, sea levels will continue to rise and coastal storms will continue to become more frequent and more extreme. Because of these climate impacts, San Francisco is vulnerable to both rainfall-related flooding in the interior of the city and coastal flooding caused by sea level rise and temporary storm surge.

### Flooding and extreme storms will impact public health

The California Department of Public Health has concluded that the presence of water damage, dampness, visible mold, or mold odor in schools, workplaces, residences, and other indoor environments is unhealthy.

See their statement here: [https://www.cdph.ca.gov/Programs/CCDPHP/DEODG/EHLB/IAQ/CDPH%20Document%20Library/MoldDampStatement2017\\_ENG.pdf](https://www.cdph.ca.gov/Programs/CCDPHP/DEODG/EHLB/IAQ/CDPH%20Document%20Library/MoldDampStatement2017_ENG.pdf)

Extreme storms and flood events increase exposure to indoor dampness and mold. Mold are fungi that grow in warm, damp, and humid conditions. Mold releases tiny spores which float in the air. Humans are exposed to mold when they breathe these mold spores.

Exposure to indoor dampness and mold is associated with increased risk of a variety of health outcomes including cough, wheeze, pneumonia, asthma attacks, skin and eye irritation, nasal congestion, upper respiratory tract infections, headaches, diarrhea, and can affect mental health. Individuals most sensitive to the health effects of mold exposure include infants and children, the elderly, persons with pre-existing respiratory health conditions, persons with allergies, and persons with weakened immune systems such as HIV-infected persons or cancer patients receiving chemotherapy.

### Introduction

This purpose of this document is to direct San Francisco residents to available guidance documents and local resources to protect homes and businesses from indoor dampness and mold, safely identify and clean mold, and treat any health impacts associated with mold exposure.

## People living in moldy homes are...



50%

more likely to currently have asthma.



33%

more likely to have ever been diagnosed with asthma.



50%

more likely to cough.



44%

more likely to wheeze.



52%

more likely to have upper respiratory tract symptoms.



50%

linked to a 50% increase in the odds of having at least four colds in a year.




# Before the Storm

## Prepare for Flood Events

### Learn if your home is in a flood zone

<http://sfgsa.org/san-francisco-floodplain-management-program>

SFDPH Climate and Health Program has assessed vulnerability to the health impacts of flooding and extreme storms.

<https://sfclimatehealth.org/>

### Create an emergency plan and an emergency kit

<https://www.sf72.org/>

<https://www.cdc.gov/disasters/floods/readiness.html>

Additionally, the San Francisco Public Utilities Commission (SFPUC) has compiled information about how to stay safe during extreme storm and flood events.

<http://sfwater.org/modules/showdocument.aspx?documentid=8057#page=2>

### Protect your home

San Francisco Public Works provides San Francisco residents and businesses up to 10 free sandbags leading up to and during severe rainstorms.

<http://sfpublicworks.org/sandbags>

## Prevention Responsibilities (For Property Owners)

### Purchase flood insurance

<https://www.fema.gov/national-flood-insurance-program>

### Inspections and repairs

Property owners can protect their property from mold with regular inspections and repairs of the roof, exterior walls, plumbing, and windows.

For homes in flood plains, have a licensed electrician raise electric components (switches, sockets, circuit breakers, wiring) above your home's projected flood elevation.

The SFPUC Floodwater Grant Assistance Program reimburses eligible property owners for making improvements to protect against flooding caused by rainstorms. You can find more information on this resource at: <http://sfwater.org/index.aspx?page=681>

Additionally, the PUC has provided an interim list of contractors who have bid on projects submitted through the Floodwater Grant Assistance Program. This resource can be accessed at: <http://sfwater.org/modules/showdocument.aspx?documentid=11425>

## Prevention Responsibilities (For Renters)

### Dampness and moisture control

The most effective method of mold control is dampness and moisture control. There are many ways that renters can reduce dampness and moisture.

- Use exhaust fans in the bathroom and kitchen.
- Run dehumidifiers
- Report moisture intrusion to landlord / property owners

### Anticipate and protect

In anticipation of a storm or flood event, renters can protect their home against dampness and mold growth.

- Clean gutters and downspouts
- Elevate valuable items
- Elevate items that contain chemicals (pesticides, cleaners)
  - If possible, safely dispose of toxic products and replace with safer alternatives
- Elevate and protect items that may be especially damaged in flood events and/or are high risk for mold growth like carpets, rugs, curtains, clothes, and furniture.



# During the Storm

## Reporting

During a storm please report sewer emergencies or service problems such as clogged catch basins, street flooding, sewer backups, or wastewater odors to the City's information service and request line, 3-1-1.

Dial 3-1-1 (within SF) or 415-701-231, <https://sf311.org/>



# After the Storm

## How to Identify Mold

### Mold can be identified by

- Visual observation of discolored patches or speckled growth on walls, furniture, or carpets
- Musty or earthy odors
- Experiencing the health effects of mold exposure.

The San Francisco Department of Public Health (SFDPH) and the California Department of Public Health (CDPH) recommend action to remediate mold immediately, even if mold hasn't been professionally tested.

San Francisco Department of Public Health's Environmental Health Mold Information Sheet:

<https://www.sfdph.org/dph/files/EHSdocs/ehsPublsdocs/Mold.pdf>

California Department of Public Health's 'Mold or Moisture in My Home: What Do I Do?:' Information Sheet:

[https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHIB/CPE/CDPH%20Document%20Library/Mold/MMIMH\\_English.pdf](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHIB/CPE/CDPH%20Document%20Library/Mold/MMIMH_English.pdf)

## How to Remediate Mold

### Responsibility

According to the California Residential Building Code, mold is a condition that makes a home substandard. It is the owner's responsibility to remediate mold.

Similarly, the San Francisco Housing Code holds property owners responsible for maintain their property, while the tenants are responsible for routine housekeeping. The San Francisco Health Code further prohibits mold as a public health nuisance.

California Department of Consumer Affairs California Tenants: A Guide to Residential Tenants' and Landlords' Rights and Responsibilities.

<http://www.hcd.ca.gov/manufactured-mobile-home/mobile-home-ombudsman/docs/Tenant-Landlord.pdf>

For information, advice, referrals, or to report health code violations (such as mold), contact the environmental health code enforcement program at (415) 252-3805 or online at <https://www.sfdph.org/dph/EH/Housing/healthy.asp>

To report mold to the City's information service and request line by dialing 3-1-1 or online at <https://sf311.org/>

The Department of Building and Inspection (DBI) Housing Inspection Services enforces the San Francisco Housing Code.

<http://sfdbi.org/housing-inspection-code-enforcement>



# After the Storm (Continued)

## Remediating Mold Without a Contractor

Cleaning mold can lead to significant exposure to mold spores which may impact health. The following are some of the best practices to stay safe while remediating mold without the assistance of a contractor.

- Sensitive populations (children, elderly, immunocompromised, persons with pre-existing respiratory conditions) should stay away from moldy sites.
- Make sure you wear appropriate clothing that protects your mouth, nose, eyes, and skin. This may include safety glasses or goggles, protective gloves, and N-95 respirator.
- Use fans and dehumidifiers to remove moisture and prevent wood decay. Do not use fans if mold has already started to grow, because the fans may spread the mold.
- Work for only short periods of time.

### How to remove mold:

- Scrub mold off hard surfaces (walls, ceilings, glass, plastic, wood, or metal) with water, and normal cleaning supplies. Dry completely.
- Bleach and other biocides are not recommended.  
**Never mix bleach with other products that contain ammonia.**
- Absorbent, soft and porous materials (ceiling tiles, mattresses, curtains, rugs, carpet, or sofas and other padded furniture) may have to be thrown away if they become moldy. Mold can grow on or fill in the empty spaces and crevices of these materials and may be difficult or impossible to remove completely.
  - Items that cannot be cleaned can be taken to a household hazardous waste disposal facility.
  - Carpets or other absorbent, soft and/or porous materials that are not thrown away should be either steam-cleaned or cleaned by a carpet cleaning company.

Centers for Disease Control (CDC) 'What to Wear' guide  
<https://www.cdc.gov/mold/What-to-Wear.html>

CDC Homeowners and Renter's Guide to Mold Cleanup After Disasters

<https://www.cdc.gov/mold/cleanup-guide.html>

SFDPH 'Take Action Against Mold' Guide: English, Spanish, Chinese'

**English:** [https://extxfer.sfdph.org/gis/ClimateHealth/CommunityResilience.Education.Outreach/Mold\\_ENG%2006.16.pdf](https://extxfer.sfdph.org/gis/ClimateHealth/CommunityResilience.Education.Outreach/Mold_ENG%2006.16.pdf)

**Spanish:** [https://extxfer.sfdph.org/gis/ClimateHealth/CommunityResilience.Education.Outreach/Mold\\_SPN%2006.16.pdf](https://extxfer.sfdph.org/gis/ClimateHealth/CommunityResilience.Education.Outreach/Mold_SPN%2006.16.pdf)

**Chinese:** [https://extxfer.sfdph.org/gis/ClimateHealth/CommunityResilience.Education.Outreach/Mold\\_CHN%2006.16.pdf](https://extxfer.sfdph.org/gis/ClimateHealth/CommunityResilience.Education.Outreach/Mold_CHN%2006.16.pdf)

SFDPH Tenants Rights Guide

<https://www.sfdph.org/dph/files/EHSdocs/ehsPublSDocs/housing/HousingOutreachEng.pdf>

San Francisco Department of Environment Safe Cleaning Products Guide

<https://sfenvironment.org/article/residents/cleaning-products>

California Department of Public Health's 'Mold or Moisture in My Home: What Do I Do?:' Information Sheet:

[https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHIB/CPE/CDPH%20Document%20Library/Mold/MMIMH\\_English.pdf](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHIB/CPE/CDPH%20Document%20Library/Mold/MMIMH_English.pdf)

EPA 'Mold Cleanup in Your Home' Tips

<https://www.epa.gov/mold/mold-cleanup-your-home#TipsandTechniques>

San Francisco Waste Disposal Facilities

<https://www.recology.com/recology-san-francisco/sf-transfer-station/>



# After the Storm (Continued)

## Remediating Mold With a Contractor

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Consider searching for an insured, professional, well-reviewed cleaning service. These services can be found by searching terms 'mold abatement' or 'mold removal'.

Ask contractors about training and experience, ask if they have a license or certification for mold remediation, ask if they have insurance, and ask for professional references.

## Services to Treat the Health Impacts of Mold Exposure

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Exposure to mold can be dangerous to health.

If you believe that mold exposure has contributed to health impacts, please contact your medical provider for assistance or referrals to allergy testing.

San Francisco Health Network

<http://www.sfhealthnetwork.org>

SFDPH's Children's Environmental Health Promotion (CEHP) program promotes conditions optimal for children's health and development. Services include environmental assessment in homes of asthma patients referred by their health care providers, education, and supplies for environmental risk factor control.

<https://www.sfdph.org/dph/EH/CEHP/default.asp>

Call 415-252-3956 for CEHP home evaluation services