Tribal Healthy Homes Network

CLEAN AIR. SAFE HOMES. HEALTHY LIVES.

Policy Approaches to Mold Prevention, Assessment and Abatement:

State, Local and Tribal Examples for Tribal Consideration

A RESOURCE GUIDE FOR TRIBAL GOVERNMENTS

Tribal Healthy Homes Network, May 2019

This briefing paper summarizes policy approaches to mold prevention, assessment and remediation and is intended to be a resource for tribes working to prevent and/or address mold in homes, workplaces, and other tribal buildings. Two tribal policy examples are provided, as well as numerous policies adopted by state and local governments. Many of these codes include useful guidelines, technical standards and evidence-based approaches that could be modified and adapted by tribes to suit their specific needs and priorities.

Reviewing these model codes may provide a starting point for tribes considering policy approaches to mold. Additionally, conversations with different tribal departments may yield insights into the "fit" of different policy levers. Consider inviting members of your Board or Council, Housing Authority board members, Housing Department management, Housing maintenance staff, Resident Services staff or your Planning team to the table. Facility maintenance management and staff, inspectors, and workplace safety crew would be useful as well. Environmental, Air Quality, Public health and Tribal Clinic staff may be not only interested, but may also lead the collaboration necessary to develop mold policy.

The range of examples here demonstrates that there is no one policy approach to mold and moisture issues, but rather a variety of policy techniques is often employed. As demonstrated on the following pages, policies may target the maintenance or operation of a home or building or establish standards for construction. Policies may address the actions of owners of a property – or the occupants of a home. Policies may focus on the workplace or may be written to address a specific facility. Policies may focus on exposure limits or, more generally, what is considered "habitable". Examples of all of these policy types are included in this briefing document. Please note that this paper does not address implementation issues, enforceability, or efficacy of the policies.

The reader will also note that mold policies discussed here typically do not require mold sampling, consistent with guidelines of the National Institute for Occupational Safety and Health (NIOSH):

"We do not recommend routine air sampling for mold with building air quality evaluations because air concentrations of molds cannot be interpreted with regard to health risks. In many cases, very short-term sampling for mold spores is conducted; however, the results may not be representative of actual exposures. Furthermore, spore counts and culture results, which tend to be what are included in indoor air quality reports, do not capture the full range of exposures. We have found that thorough visual inspections and/or detection of problem areas via musty odors are more reliable. These methods have been used in past NIOSH research and have shown a correlation with health risks in buildings that have indoor environmental complaints."

Policies and data on the following pages come from several sources: 1) the Environmental Law Institute's Database of State Indoor Air Quality Laws, 2) the National Congress of State Legislators Environmental Health Database, 3) exploratory research on mold policies from, "Cross Section of Legislative Approaches to Reducing Indoor Dampness and Mold" (Major and Boese, 2017), 4) the Environmental Health State Bill Tracking Database, 5) the International Code Council, and 6) a search of model tribal and federal codes from sources such as EPA's IndoorAir Plus program and the Tribal Green Building Toolkit.

In the next section, twelve distinct approaches to mold policy are explored. For each approach, several model policies and examples are provided. Each approach is also followed by a discussion of how the codes might be useful or adaptable for tribal communities. If you are reading this document online, you can **click on the green arrow symbol to be taken directly to the code being referenced.**

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1. Address Mold in Habitability Standards

Standards for what is "habitable" were adopted by the State of Arkansas. The habitability standards must be maintained by housing projects funded through the Federal Low-Income Tax Credit program, with a **requirement that dwelling units and common areas must have proper ventilation and be free of mold**. Arkansas (Admin. Code 109.04.4-II).

A **Residential Tenants Health and Safety Act** was adopted by the State of Colorado in 2019, which provides tenants with a residential "warranty of habitability". Essentially, the Act authorizes the Department of Health to adopt a state sanitary code that addresses housing issues affecting the health and wellbeing of the public. Colorado (CO H 1170)

California's Health and Safety Code states that **a dwelling shall be deemed untenantable if it substantially lacks "effective waterproofing and weather protection of roof and exterior walls, including unbroken windows and doors."** Section 1941, 1920.3 or 17920.10.

In Colorado, a residence is deemed uninhabitable if it "substantially lacks any of the following characteristics: (a) Waterproofing and weather protection of roof and exterior walls maintained in good working order, including unbroken windows and doors. § 38-12-505.

The State of Massachusetts adopted a Sanitary Code that establishes Minimum Standards of Fitness for Human Habitation that apply to all dwelling units, including leased units. Code **requires dwelling owners to maintain structural elements (including foundation, floors, walls, doors, windows, ceilings, and roofs) in good repair and free from chronic dampness** and defines chronic dampness as "the regular and/or periodic appearance of moisture, water, mold or fungi." Massachusetts General Laws, ch. 111, § 127A. (105 CMR 410.020)

The State of Vermont Department of Health adopted a Rental Housing Health Code which establishes minimum health and habitability standards for rental housing, including the **requirement that dwellings be maintained "to be free from the regular or periodic appearance of standing water or excessive moisture** which may result in visible mold growth." Vermont Statutes tit. 18, §102 (Code Vt. Rules 13-140-031)

In California, the state legislature **designates mold as a substandard housing condition**, giving code enforcement officials authority to require property owners to address indoor mold growth and its underlying causes. The law also includes language that provides property owners with a number of protections from false claims of mold contamination.

Proposed in the South Carolina legislature, this bill would enact the **Healthy Rental Housing Act of 2019**, provides remedies for tenants of residential rental properties with mold that materially affects the health or safety of the tenant or authorized occupant of the rental property, relates to definitions in the State's residential landlord and tenant act, defines additional necessary terminology, and relates to certain written disclosures that landlords must make to residential tenants. SC S 569

Noteworthy Elements for Tribal Consideration: These codes can be applied either to the owner/landlord of a property, or to the occupant. Adopting or amending existing housing (or sanitary) codes could include language that focuses on units being "free from chronic dampness, standing water or excessive moisture."

2. Integrate Mold and Moisture within Energy Codes, Energy Audits or Weatherization

When weatherization and energy work is conducted without up-front consideration of indoor air quality, one unintended consequence of a tightened, energy efficient home can be mold and moisture issues. These examples show how indoor air can be integrated in order to prevent those issues.

Minnesota requires the Commissioner of Labor and Industry to review the appropriateness of model energy codes for one- and two-family residential buildings and to take steps to adopt a code. This code also **prohibits the Commissioner from adopting a model energy code without research and analysis that addresses air quality and moisture,** among other issues. Minnesota Statutes § 326B.118

Moisture control and Indoor Air Quality (IAQ) are required considerations in the State of Nevada Energy Audit code. This policy provides that when conducting a full "energy audit" an energy auditor must include, among other things: (1) an assessment of building air flow, IAQ and ventilation; (2) any anticipated remediation issues, including moisture or combustion appliance problems; and (3) an assessment of moisture control in the home. Licensure is required in order to perform an energy audit, a limited energy audit, or an energy assessment, and involves established licensure application forms. Nevada Revised Statutes § 645D.300

In their **state weatherization program**, **Texas requires subrecipients of weatherization funding to conduct a whole house assessment** on all eligible units, including the following health and safety items: smoke detectors, wiring, minimum air exchange, moisture problems, lead paint present, asbestos siding present, condition of chimney, plumbing problems, mold, unvented space heaters, carbon monoxide levels on combustion appliances, and carbon monoxide detectors. Regulations (10 Texas Admin. Code 5.522--5.523) also authorize the Department of Housing and Community Affairs to provide mold work practices training to subrecipients and establish procedures

that subrecipients must follow if they discover the presence of mold-like substances that the weatherization subcontractor cannot adequately address. Texas Government Code § 2306.053. (10 Texas Admin. Code 5.612)

Noteworthy Elements for Tribal Consideration: Whether or not a tribal energy code is in place, many tribes provide energy audits, energy efficiency improvements and weatherization programs for their residents. Adopting a tribal policy that any energy audit or weatherization work include a "whole house assessment" of factors related to IAQ, including moisture intrusion, would help integrate mold considerations into energy programs.

3. Focus Attention through Mold Investigation Advisory Boards or Task Forces

In Arkansas, **a board was established to study the effects on public health and safety of existing state mold laws** and regulations, as well as options for revising state laws. Required the Board to report its findings and proposals for new legislation by December 31, 2012, on which date the Board is abolished. 2011 Arkansas Senate Bill 531.

A "**Mold Abatement and Remediation Study Committee**" was established in South Carolina to study the impact of mold in public areas and to ascertain the best method of abatement for mold in public areas. Enacted by the South Carolina legislature in 2019. SC H 3127

Southwestern University established a **Multidisciplinary Mold Team** to address any campus mold issues. Team members included: 1. Managers of Physical Plant (Mechanical Services and Housekeeping/Grounds) 2. HVAC Supervisor/Architectural Supervisor 3. Housekeeping Supervisor 4. Director of Campus Safety & Risk Management 5. Others as needed (Vendors) 6. Backup staff should be identified and trained to fill in when a team member is unavailable.

Maryland established **a task force on indoor air quality and requires the task force to study the nature, location, and extent of health and environmental risks posed to workers as a result of molds, spores, and other toxic organisms located in the HVAC systems of office buildings**. The task force is also required to prepare recommendations regarding prevention of illnesses, remedies and controls, a plan to provide educational information, and legislative or regulatory measures necessary to address current gaps in federal, state and local protection of office workers. 2001 Maryland Senate Bill 283.

State environmental and health agencies were required by the state of Maine to **convene a working group and to submit a report to the state legislature concerning: the science of mold testing and removal; considerations for establishing mold clean-up standards; and considerations for developing building standards**. Maine Resolves 2006 Chapter 174.

Noteworthy Elements for Tribal Consideration: Notable here is the approach of bringing together multiple departments to specifically explore how mold should be addressed. Having a Mold Task Force or a Team, established by mandate of the Tribal Board or Council, may help build collaboration, a shared urgency around mold, and could lead to further policies being adopted.

4. Adopt Facility Inspection Standards or Procedures

In the California Education Code, school districts are required **to establish a facilities inspection system** to ensure schools are maintained in good repair, as a condition of receiving state school facility funds. **Defines "good repair" to include interior surfaces free from water damage and showing no evidence of mold or mildew and to include functional and unobstructed HVAC systems**. Requires state to develop an evaluation instrument consistent with the criteria set in the law. The Facility Inspection Tool developed by the state for use in school inspections includes several IAQ-related items that address ventilation and mold/water damage. California Education Code §§ 17070.75, 17002(d)(1)

This statute in New Hampshire **requires school principals to conduct an annual IAQ investigation of all school buildings**, using a checklist provided by the state Department of Education. Requires completed checklists to be filed with the Department, the school board, and the local health officer and to remain on file for five years. Requires the state to review and consider the checklists when approving schools during the five-year school approval process. School IAQ Checklist adopted by the Department requires schools to indicate whether they follow a wide range of best practices for IAQ Management, including mold/moisture prevention and remediation. New Hampshire Revised Statutes § 200:11-a. The statute also requires the Department to encourage public schools to implement EPA's IAQ Tools for Schools program (click here) and to ensure that every school has a copy of the program materials.

Southwestern University established a clear policy for mold that applies to all of its facilities. The University's "Safety & Risk Management Policies and Procedures" adopted in August of 2018, is a mold policy that covers: 1) How to report and inspect mold contamination in campus spaces, 2) Communication, training and team based approach to mold incidents, 3) How to properly clean mold

infected surfaces, 4) A maintenance plan to prevent the sources of mold contamination (including water, humidity, ventilation and leaks.)

Noteworthy Elements for Tribal Consideration: While school districts operating schools on a reservation may not be subject to tribal policy, tribes can still advocate for the Superintendent to adopt policies that will protect student health and safety. The policies described above, which focus on regular inspections and investigations, may help ensure any water damage or mold issues are addressed more pro-actively. Sample checklists are available that can be provided for the school district's adaptation.

5. Consider Adopting Exposure Limits

California requires that its state health agency **consider the feasibility of adopting permissible exposure limits to mold in indoor environments** and, if feasible, adopt such limits. Establishes criteria to consider in adopting standards and provides that the department may also adopt alternative standards for facilities that serve people at greater risk of adverse health effects. Establishes disclosure and property maintenance requirements for transferors, lessors and tenants of real estate following the department's issuance of standards and guidelines under the law. California Health & Safety Code §§ 26101—26157

Noteworthy Elements for Tribal Consideration: Setting numeric criteria in a mold policy is difficult due to scientific, regulatory and sampling challenges. The State of California, after exploring the feasibility of mold exposure limits, did not end up with numeric criteria. This was not surprising given that no federal standards exist for airborne concentrations of mold. Instead, in 2016, they adopted new language in their Housing Code that states, "If the amount of dampness or visible mold (or certain other conditions) in a dwelling is ***a danger to the health of occupants***, the dwelling is substandard and the owner must remediate." While this sounds subjective, and is difficult to enforce, it does give residents a basic justification (if their health is in danger) for requesting remediation. For tribes interested in a policy that would set exposure limits, even qualitative ones as illustrated here, close involvement by the tribal health clinic and/or scientists from a Tribal Epidemiology Center, is suggested.

6. Establish Workplace Standards for HVAC, Mold and Indoor Air Quality

In California, the Occupational Safety and Health Standards Board implements and enforces regulations promulgated under the law (8 Cal. Code Regs. 5142, 5143) that apply to both private and public workplaces, such as schools. The **regulations require HVAC systems to be operated continuously and inspected annually, and HVAC inspection and maintenance records** to be made in writing and provided to the state and to employees upon request. Additional regulations governing general sanitation (8 Cal. Code Regs. 3362) provide that **when exterior water intrusion, leakage from interior water sources, or other uncontrolled accumulation of water occurs, those conditions must be corrected because of their potential to cause the growth of mold**.

The State of New Jersey adopted a statute that **requires that every employer furnish a place of employment that is reasonably safe and healthful for employees** and authorizes the state to adopt rules. Rules adopted under the law (N.J. Admin. Code 12:100-13.1 et seq.) establish safety and health standards for public workplaces, including certain requirements for addressing indoor air quality. The rules require that employers develop a plan for complying with the regulatory provisions and designate a person who is responsible for ensuring compliance. The rules also require employers to: establish and implement a preventive HVAC maintenance plan that includes a number of specified practices; **undertake certain prevention and clean-up practices for microbial contamination**; protect indoor air quality during renovation; respond to IAQ complaints; and keep and make available records of maintenance activities. New Jersey Statutes §§ 34:6A-1 et seq.

Noteworthy Elements for Tribal Consideration: While second-hand smoke is a frequent topic with respect to workplace safety, mold concerns are not far behind. Tribal offices can range from LEED-certified, state-of-the-art buildings, to former BIA buildings or modular homes provided by FEMA or HUD. This means there is wide variability in the age and condition of the buildings, and HVAC systems may or may not be part of the original structure. Given the issues of building age and condition and the limited federal funding to fully replace aging structures, it is not uncommon for water damage and microbial contamination to be an issue in some worksites. Policies that require frequent building inspection, require prompt attention to water damage, and require the use of evidence-based remediation procedures can help mitigate the impacts of mold on employee health and wellness.

7. Adopt Mold Abatement or Remediation Protocols

In this statute, Connecticut has directed its Department of Public Health to establish guidelines for mold abatement, including protocols and acceptable methods for performing mold

remediation or abatement work. The guidelines cover the licensing required for mold contractors, what type of training they need, third party oversight of an Industrial Hygienist, inspection criteria and more. Importantly, the guidelines state that "**Bulk or surface sampling is not always necessary and should not be done indiscriminately. It should only be undertaken when the IH/IEP has a hypothesis or theory that sampling results will help him/her answer. Such sampling is seldom needed for relatively small jobs such as those in homes and other residential settings.**" Connecticut General Statutes § 19a-111L

The District of Columbia adopted a code **requiring landlords to remediate mold contamination.** The code also directs the District Department of the Environment to establish minimum work practices and guidelines for mold assessment and remediation and to set a threshold level of indoor mold contamination that requires professional remediation. District of Columbia Code §§ 42-3261 – 3269

This statute directs the Kentucky Department of Law to **establish minimum standards for mold remediation companies that are based on the general mold remediation principles set forth by the Institute of Inspection, Cleaning and Restoration Certification** (IICRC). Establishes that the state may take civil action against mold remediation companies that violate the law's provisions. Kentucky Revised Statutes §§ 367.83801--.83807

Noteworthy Elements for Tribal Consideration: Guidelines for mold remediation will help protect any tribal employees as well as residents of tribal housing. If outside contractors are used, guidelines will help ensure minimum standards are met.

Establishing standards for both assessment and remediation could be done through a Board or Council resolution. The standards themselves can be adopted by reference. EPA and CDC both provide guidelines, but the State of New York's Committee for Occupational Safety and Health has some of the most frequently adapted guidelines (click here). The State of New York also has excellent guidelines that include: 1) what should be included in a Mold Remediation Work Plan, 2) an explanation of why Mold Sampling should not be conducted, 3) what a Mold Assessment should include. (New York Fact Sheet here.)

8. Establish Mold Disclosure Requirements for Prospective Tenants

This District of Columbia code (referenced earlier) **requires landlords to disclose previous mold contamination to prospective tenants**. District of Columbia Code §§ 42-3261 – 3269

In Louisiana, licensed home inspectors are **required to include in their written inspection report the presence of suspected mold growth if the licensed home inspector discovers visually observable evidence of suspected mold growth on the inside of the structure during the inspection**. Louisiana Revised Statutes § 1478

This Virginia code requires **landlords to disclose whether there is any visible evidence of mold in a dwelling unit, as part of the move-in inspection report**. It also gives tenants the option of terminating lease if mold is noted in report. Requires that if tenant elects to take possession notwithstanding presence of mold, landlord must promptly remediate condition, reinspect, and issue new report. Virginia Code § 55-248.11:2.

Noteworthy Elements for Tribal Consideration: This may be a sensitive or controversial approach if the housing is tribally owned and if tribal housing has done all that it could to remediate the mold. Conversely, if new residents move into a tribally-owned home, and if those residents have asthma, allergies or sensitivities, their health and well-being will be better protected if they are notified about any current or previous mold issues with the home. (The issue will be whether they have the option to wait for another home, or if the home has been sufficiently remediated.)

9. Establish Water Damage Criteria for Imminently Dangerous Conditions

Defining imminently dangerous conditions was the intent of this North Carolina General Statute § 42-42. Landlords are **required to repair or remedy, within a reasonable period of time, any imminently dangerous conditions on the premises**, after acquiring actual knowledge or receiving notice of the conditions. **Defines "imminently dangerous condition" to include excessive standing water, sewage, or flooding problems** caused by plumbing leaks or inadequate drainage that contribute to mold.

In this statute, Florida authorizes the Board of a Cooperative to **take certain actions in response to damage caused by an event for which a state of emergency is declared**. Authorized actions to mitigate further damage include contracting to remove debris and to prevent or mitigate the spread of fungus (including mold or mildew) by removing and disposing

of wet drywall, insulation, carpet, cabinetry, or other fixtures on or within the cooperative property. Florida Statutes § 719.128

Noteworthy Elements for Tribal Consideration: Given the increasing number of climate-related events that result in flooding or water damage to tribal homes, it makes sense to adopt an emergency-response policy around mold. As these states have done, defining in a code what is considered "imminently dangerous" (such as standing water, sewage or flooding) can help trigger prompt response. Certain agencies, including FEMA and HUD, may allow funding to be used by tribes for mold mitigation after natural disasters or climate-induced events such as flooding.

10. Adopt Tenant Responsibility Provisions around Mold and Moisture

Requiring both landlords and tenants to maintain the premises in a manner that prevents moisture damage and mold growth is the aim of this Virginia code. It **requires landlords to respond promptly to notifications by tenants of mold or moisture accumulation.** Provides that where mold condition materially affects the health or safety of a tenant, the landlord may require the tenant to temporarily vacate premises for up to 30 days, while the landlord undertakes mold remediation consistent with professional standards as defined in the law. Requires landlord to pay relocation cost. Virginia Code §§ 55-248.4, 248.13, 248.16, 248.18.

The Tulalip Tribes Housing Department drafted a Resident Mold and Mildew policy in 2014.

The department also provides new residents with a copy of the Environmental Protection Agency document, "A Brief Guide to Mold, Moisture, and Your Home,". In signing the policy, a tenant agrees to maintain the premises in a manner that prevents the growth of mold, mildew or other fungi in the dwelling unit by reducing or eliminating the sources of excess moisture. Tenant's obligations and guidelines for moisture reduction include, but are not limited to the following:

- To keep the dwelling clean at all times; free of dirt and debris, especially those things that can harbor mold, mildew spores or other fungal growth.
- To clean bathrooms, kitchen surfaces and walls with products which reduce or inhibit growth of mold, mildew or other fungi.
- To clean and dry any visible moisture on windows, walls and other surfaces, including personal property, as soon as the condition occurs.
- To use bathroom fans while bathing or showering, the kitchen fan while cooking or dishwashing and utility area fans whenever water is being used. Continue use of fans for at least 30 minutes following activity.
- To agree to report to the Housing Department when any exhaust fan does not operate.
- To agree to use all reasonable care to close all windows and other openings to the premises to prevent rain and other outdoor water from penetrating the dwelling unit.
- To open multiple windows (weather permitting) at least twice a week for one hour to allow cross ventilation of the dwelling.

- To keep any fish tanks covered, if allowed under the rental agreement.
- To maintain connections and operation of the applicable heating source and to maintain temperatures within a range of 55 to 75 degrees. No non-vented kerosene or other flame-producing space heaters are to be used indoors at any time.
- To allow a minimum of six inches of space between furniture and walls for proper air ventilation.
- To notify the Housing Department immediately of any circumstances involving excess moisture or water leakage such as plumbing leaks or drips, sweating pipes or toilet tanks, as well as, any overflows in the bathroom, kitchen or laundry facilities (if applicable), especially in cases where the overflow may have permeated walls, floors, carpeting or other floor coverings or cabinets. Excess water shall be immediately removed to prevent further damage.
- To notify the Housing Department of any mold growth on surfaces inside the dwelling unit that cannot be removed or controlled by the tenant.
- Tenant agrees to allow the Housing Department to enter the dwelling unit to inspect and make necessary repairs.
- If the dwelling contains excess moisture due to the tenant's lifestyle or activities, the tenant may be required to obtain and maintain a product or product(s) that reduce moisture in the unit.

Noteworthy Elements for Tribal Consideration: The approach of placing some responsibility on a tenant may be compelling to some tribal housing authorities. In this type of policy, residents are required to report any conditions that may contribute to mold, such as plumbing leaks, high humidity or water damage. This could be difficult to enforce however, and the same outcome could be achieved through purposeful resident education. Upon move-in, if residents are provided with a "short-course" on home maintenance, they would more likely to recognize which conditions in a home lead to mold contamination. Educational tools can be used to help reinforce home maintenance knowledge. One example is the Resident Healthy Homes Checklist provided by the Tribal Healthy Homes Network. It can be downloaded as a wall calendar or as seasonal checklists. (Click here to view or contact kthornton@thhnw.org).

11. Adopt Building Codes that Address Moisture Intrusion and Indoor Air Quality

Five different states explicitly **address moisture and weatherproofing in building codes**, in some form: California, Colorado, Georgia, Virginia and Washington. Washington is the only state that also requires that the landlord to give information to the tenant that is either provided by or approved by the State Department of Health. The information must address mold. Virginia is the only state that requires the elimination of mold and the accumulation of moisture. It requires the tenant to promptly notify the landlord and the landlord must promptly respond. More information can be found on the National Conference of State Legislatures.

The International Code Council (ICC) has a 2015 Performance Code with a section specific to moisture. **The code establishes specific performance requirements that help prevent mold damage from internal or external moisture sources**. Section 901 (Surface Water) establishes requirements to prevent local drainage and stormwater runoff from moving across property lines and causing damage to properties. Section 902 (External Moisture) addresses moisture originating at the exterior of a building, but adversely impacting occupant health and safety through moisture intrusion and development of mold. Section 903 (Internal Moisture) addresses water sources within a building (principally through plumbing and ventilation).

EPA's IndoorAir Plus is a voluntary partnership and labeling program that helps new home builders improve the quality of indoor air by requiring construction practices and product specifications that minimize exposure to airborne pollutants and contaminants. In Section 1, **detailed and evidence-based guidelines are outlined that address moisture intrusion. Topics include site and foundation drainage, basement and crawlspace insulation, gutters, downspouts and more.**

The Department of Energy hosts a website called the "Building America Solutions Center". Building code information is provided, including a feature called "Compliance Briefs". This program provides **briefing papers on code-related compliance issues** and shares research, best practices, and new innovations to improve compliance with new code measures. You can do a search by topics, including those related to air sealing, ventilation, HVAC systems and moisture intrusion.

A Tribal Green Building Toolkit is available that provides an assessment tool, tribal case studies, and **detailed information on code development, adoption, implementation and compliance**. Written by EPA and tribal partners, it is a resource for tribal officials, planners, developers and architects, with an emphasis on building green (with and without codes). The topics include land use, materials and resource conservation, human health, energy efficiency and renewable energy, water access/management/sanitation, resilience and adaptability.

Tribal codes highlighted here that relate specifically to moisture and water intrusion include the Pinoleville Pomo Nation Tribal Green Building Code and the Swinomish Tribal Code. The **Pinoleville code does not address mold directly but addresses a key source of mold contamination – *inadequate ventilation***. In their code, the Tribe establishes standards for ventilation, including ventilation rates (amount of air exchanged between exterior and interior sources per hour).

 In the **Swinomish Building and Construction code they have included a chapter on Ventilation and Indoor Air.** In this chapter, they adopted the Washington State Ventilation and Indoor Air Quality Code by reference.

 HUD hosts a web page entitled **"Policy Development and Research in Indian Country".** You can find case studies, reports and highlights of tribal green building initiatives, including some that utilize codes to address ventilation and moisture issues.

 Noteworthy Elements for Tribal Consideration: Building codes are an effective way to prevent the conditions that contribute to mold contamination. Sufficient ventilation, adequate drainage and proper installation of vapor barriers are key examples of how using codes can protect the occupant but also protect the tribe's investment by reducing the potential for mold damage over time.

Streamlined approaches, such as the Swinomish Tribe adopting a state code by reference, can keep the policy process less complicated. Targeted approaches, such as the Pinoleville Tribe's code provision that is specific to ventilation, can be an excellent starting point given the importance of air exchange. Voluntary approaches, such as the IndoorAir Plus program, offer a less binding but technically-sound starting point that may appeal to some tribes, especially those dealing with water intrusion issues in crawlspaces and basements.

The National Indian Law Library hosts a database of tribal codes and policies. While few tribal codes have been adopted specific to mold, there are tribes that use policy to address pre-cursors to mold, such as ventilation and water intrusion. Searching this database periodically may provide information on new tribal approaches.

An organization called GovTrack maintains a searchable database of environmental health bills introduced and/or passed in Congress. The search feature enables the user to find laws related to mold, water damage, moisture intrusion, etc.

The National Conference of State Legislators maintains data on policies, codes and practices at the state level. Using their search feature, typing in search terms such as "mold", "ventilation" or "water damage" will pull up a range of codes, articles, and policies from across the US.

A 2016 compendium of state-level Environmental Health legislation, with policies on mold, radon, lead and other healthy home topics.

The Environmental Law Institute's maintains a database of state Indoor Air Quality Laws. Their "Mold" excerpt, which was useful in assembling this resource, describes mold policies adopted by state.

This article provides a useful discussion and analysis of legislative approaches to mold. See: Major, Jennifer L., and Gerald W. Boese. Cross Section of Legislative Approaches to Reducing Indoor Dampness and Mold. *Journal of Public Health Management and Practice*. 2017; 23(4)