

Home Safe Home

The Cowichan Reclamation Project



Canada

In 2001, Cowichan Tribes, Indian and Northern Affairs Canada (INAC), the Canada Mortgage and Housing Corporation (CMHC), and Health Canada, along with Jacques Whitford Environment Ltd., banded together to confront a potential health crisis that affected virtually every family on the Cowichan Indian Reserve, a First Nations community on Vancouver Island.



The threat to the well-being of approximately 2,000 people was so acute, that immediate intervention was required. To solve the problem and guard against future reoccurrence of the crisis, the partners embarked on possibly the most comprehensive residential mould study and abatement project ever attempted in North America.

It is the hope of everyone involved in this effort that the lessons learned will benefit not only other First Nations communities in British Columbia, but also make a major contribution to public knowledge about the construction and maintenance of safe and healthy home environments for all Canadians.

Cover photo: Clarence Elliot outside his newly renovated home, Cowichan Reserve, British Columbia.



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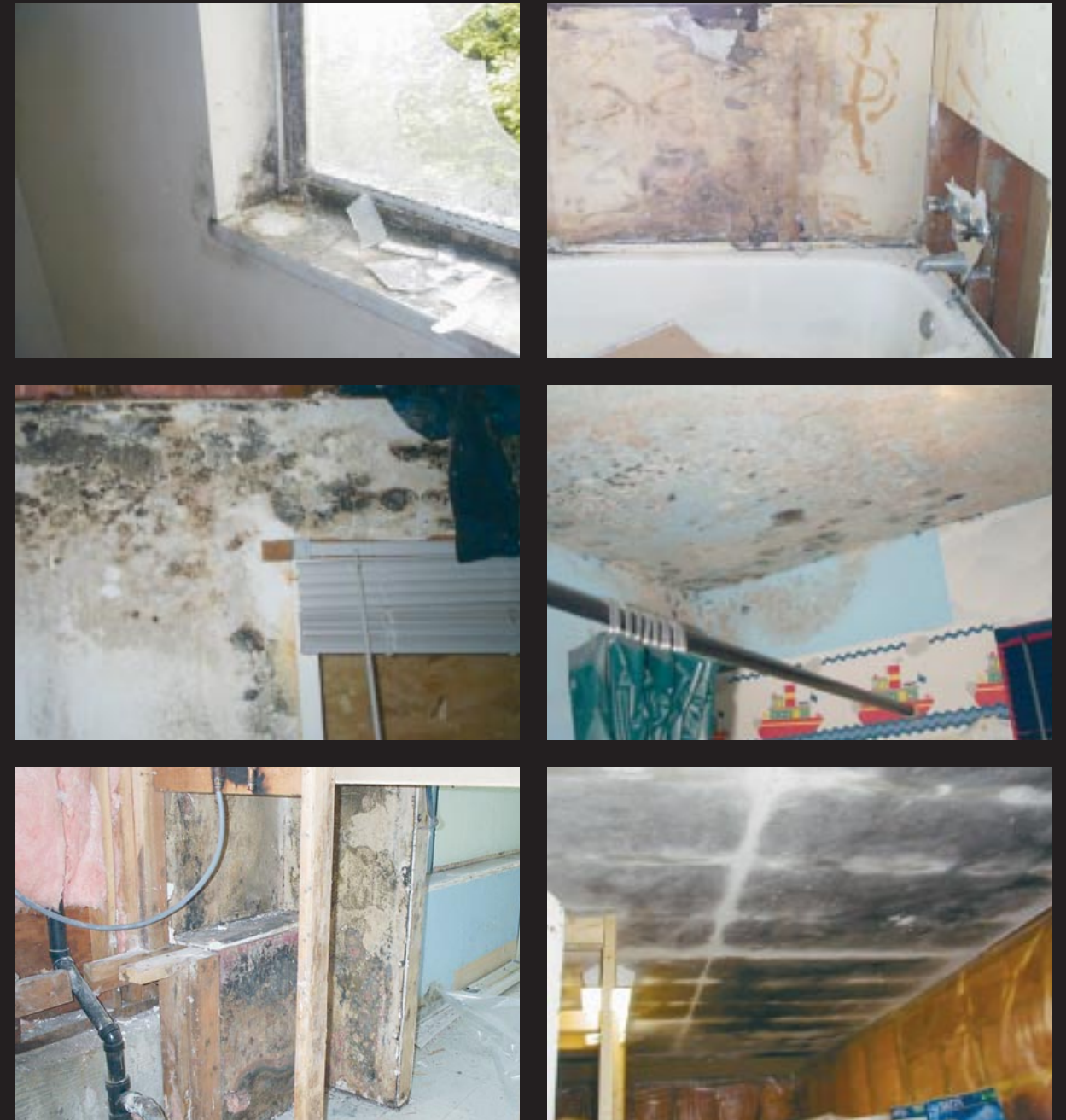
Mould: A Primer

Moulds are a subset of fungi, which also include yeast and large mushrooms. Outdoors, moulds and fungi are an important part of the ecosystem, providing for natural decomposition and recycling of organic material necessary for sustaining plant, animal, and human life. Mould can also be helpful in medical science. The antibiotic penicillin, which has saved untold millions of lives, was discovered in bread mould.

Mould enters homes through outdoor sources and requires only moisture, still air, and a food source in order to grow. Common food sources include anything made of wood or paper, ceiling tiles, paint, wallpaper, insulation materials, drywall, carpet, fabric, and upholstery. Homes with relatively high humidity, water damage, and inadequate ventilation are at high risk of mould growth. Mould spores are present everywhere, and lie dormant until home humidity increases and the spores bloom and grow, producing more spores that travel on air currents throughout the home. Mould is commonly found on window sills, window caulking, walls that have blocked air circulation, walls and ceiling intersections, closets, bathrooms, crawlspaces and basements.

THE THREAT

Although mould can be beneficial out-of-doors and in controlled laboratory environments, household mould can cause severe health problems, including allergies and respiratory diseases, and deplete the immune system, which results in lower resistance to infections. Health experts indicate that depending on the type of mould present in a home, the amount and degree of exposure, and the health condition of the occupant, people living in mould infected homes run a higher risk of developing these health problems. Those most susceptible to the adverse effects of mould are those who spend most of their time indoors—young children, the elderly, and the chronically ill.



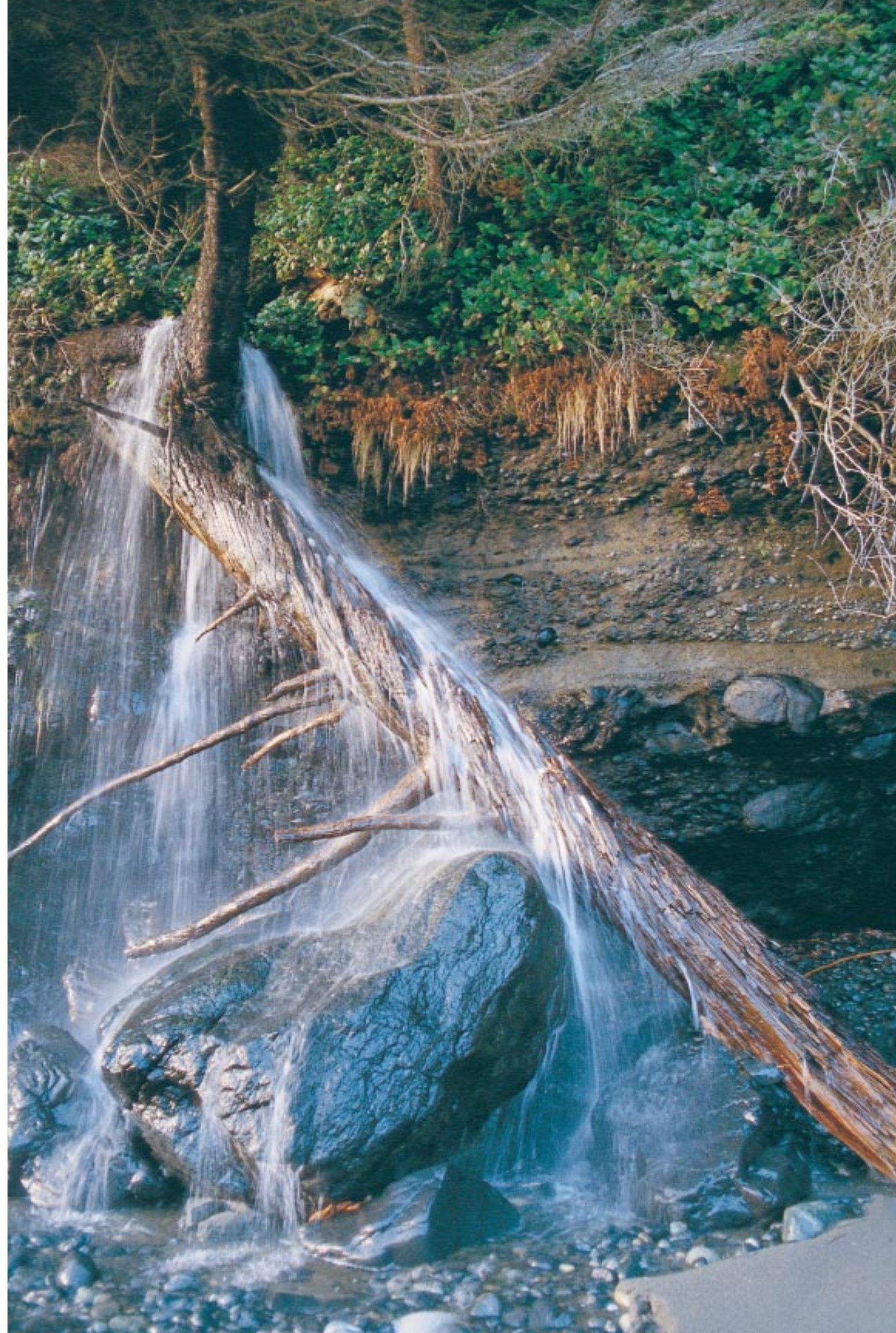
What if our homes are making us sick?

At Home in Canada's Rainforest

It rains a lot on Canada's Pacific shore. In fact, the Coast of British Columbia is one of the wettest places in North America. On average, Southern Vancouver Island receives over a metre of precipitation per year. And yet it is also the mildest place in the nation, regularly holding the distinction of being Canada's warmest place during winter.

Vancouver Island is located in the heart of the world's largest temperate rainforest, which stretches from San Francisco to the Alaska Panhandle. The rainforest hugs the edge of the Pacific Ocean, and the sustaining moisture and mild temperatures allow it to grow some of the biggest and oldest trees in the world. The humid, damp conditions found here promote the growth of one of earth's richest ecosystems, making it a place of remarkable abundance and beauty.

Environmental health inspectors have also found an alarming rate of excessive mould growth in British Columbia's First Nations communities and the problem has become acute in the coastal regions of the province, particularly the Cowichan community on Southern Vancouver Island.



The Cowichan Story

The Cowichan (Quw'utsun') people have thrived on Canada's West Coast for over 4,500 years. In the nineteenth century, when European settlers arrived in Vancouver Island's Cowichan Valley, they found nearly 6,000 people living in mostly large, multi-family longhouses on a floodplain along the Cowichan River. Accomplished hunters and fishers, the Cowichan were well adapted to their rainforest environment.



Today, the Cowichan way of life is still marked by strong family and village ties. Nearly 3,500 Cowichan people live on Vancouver Island, making them the largest tribe in British Columbia. The Cowichan Indian Reserve is located on Vancouver Island, adjacent to the City of Duncan. This 2,355-hectare reserve is home to 1,900 of the band members, living in some 450 houses. The Cowichan people elect their chief and tribal councillors.

Cowichan chiefs never signed a treaty with European settlers. Like many other Aboriginal groups in British Columbia, the Cowichan are in the midst of treaty negotiations with the governments of British Columbia and Canada.

A CRISIS AT HOME

In the late 1990s, Cowichan Tribes was inundated with concerns over household mould and related health problems. Many band members are or have become very sensitive to their environment and have developed a myriad of symptoms, the majority affecting the respiratory system. Due to the extent and severity of the mould problem, Health Canada recognised that there were significant public health concerns and a potential public health crisis in the Cowichan community in 1998.

The direct health effects tell only part of the story. The household mould crisis has also affected the Cowichan community mentally, emotionally, socially, and spiritually. The crisis has touched virtually every family and resulted in condemned homes, large-scale relocation, and years of uncertainty.

FIRST RESPONSE

INAC immediately began providing funds to relocate and shelter those most affected. Over 100 people were displaced and relocated to rental accommodations off-reserve. Funds were also provided to Cowichan Tribes for mould remediation in 72 houses. However, this did not solve the problem and all of the houses needed additional work and in some cases major repairs.

These efforts ultimately failed due to the size and complexity of the crisis. There was widespread lack of knowledge about the causes and effects of mould, as well as a lack of appropriate planning and funding.

...no other community in Canada has reported a mould crisis of such proportions.





Helen Dunlop

Mould Program Registered Nurse, Cowichan Tribes

No one knew mould was a problem in other parts of the country. I have 25 years experience across North America but this was a very heavy learning curve for me. I had this stuff growing on my basement wall and we just painted over it. I didn't know what it was and I'm a nurse! You aren't born knowing these things. You have to be taught it.

When I arrived, what I noticed right off was the number of respiratory compromised members: bronchitis, pneumonia, and asthma. In addition to the physical symptoms, I see a lot of apathy and depression and a feeling of helplessness. People were not getting better in these sick homes—their homes were making them worse. It's also psychologically tough to leave your home, especially when you don't know when you are going to get back.

People are healthier once they are out of their mouldy homes. I'm seeing real improvements. I sent a questionnaire to those involved in the Pilot Project and, of the responses I got back, 95% said their health had improved.

The biggest obstacle is changing people's ideas on how to live in their homes. It is a paradigm shift. You can't just live in your house, you have to take care of your house. It's your home, it's your life and it's your right. It's also your responsibility.

I would like to get through to the kids. It's like the whole recycle thing. My kids nag me about recycling—now I recycle. To make real change you have to get to them when they're young. Education is the key.

“It's your home, it's your life and it's your right.
It's also your responsibility.”

A Plan of Action

In October 2000, INAC sent senior staff to the Cowichan Reserve to assess the crisis firsthand. What they saw shocked them. The team was required to wear full body protection and respirators to enter several uninhabited homes that had the words “Danger” and “Health Hazard” spray painted across the entrance. The severity and extent of the mould problem bore no resemblance to the situation in the surrounding non-native community. This left a lasting impression—and a moral imperative to help those affected.

Cowichan Tribes did not have a management structure capable of handling a crisis of this magnitude. Committed to avoiding the mistakes of the past (where houses were repaired and then quickly recontaminated), INAC proposed bringing in environmental experts to determine the root sources of the problem.

In December 2000, Cowichan Tribes hired consultants Jacques Whitford Environment Limited to manage the project. The work was divided into three stages. First, it was necessary to clearly define the nature of the problem and the work required. An assessment of the residential homes on the reserve revealed that all would require minor to major remediation resulting from the effects of mould. Contributing factors included: poorly designed housing for the climate, inappropriate materials, poor construction and inspection, minimal application of building codes, overcrowding, lifestyle of the occupants, inadequate maintenance, and lack of ownership (unwillingness to invest in rented accommodation). Following the inspections, Cowichan Tribes was provided with an assessment of mould contamination within their housing stock and a mould remediation plan detailing necessary repairs on a select group of houses.

The Cowichan Pilot Project was launched on August 1, 2001. It was determined that the Boys Road

Subdivision would be part of the first 48 houses to be addressed. The pilot was conceived as a sample case to work out the logistics of the overall five-year project, and an invaluable opportunity to gain knowledge that could eventually help other communities facing similar mould problems.

Throughout the pilot, communication and cooperation were key success factors allowing the parties to work better together.

A TEAM APPROACH

Due to the magnitude of the undertaking, it was crucial that a solid project management structure be created. This team was responsible for managing the day-to-day aspects of the Pilot Project as well as the long-term direction and strategic planning of Sustainable Housing for Cowichan Tribes. The management team consisted of the Cowichan Chief and Council, the Housing Committee, INAC, CMHC, and Jacques Whitford.

Keys to the project’s success included:

- > direct involvement of the Cowichan Tribes
- > early and decisive action
- > clear direction, duties and goals
- > qualified and experienced project managers
- > adequate and sustained funding
- > accurate records and proper data management, and
- > a commitment to transferring skills and duties to Cowichan members.

Assessing the Problem

There are three types of housing on Cowichan reserve lands: Band-rentals, CMHC-funded social housing, and privately owned houses. All types of housing were infected by mould. Initial investigations were conducted to determine the source and extent of the mould problem in the entire housing stock.

The findings outlined the suspected causes and suggested a course of action to combat current mould growth and prevent its reoccurrence. Where the cause of the mould was not apparent during the initial investigation, a more thorough “intrusive” investigation was conducted. This consisted of cutting inspection holes in walls, floors and/or ceilings. Initial investigations were conducted on 396 homes. Of those, 119 required intrusive investigations.

HOUSE SITE AND EXTERIORS

Building site deficiencies were also noted during the field investigations. These included: houses built on a floodplain, septic tank overflows, poor grading of house and site leading to inadequate drainage, exposed footings, and seismic safety concerns. Investigations revealed deficiencies which may have allowed water to penetrate the building envelope and contribute to mould growth. These included:

- > use of wooden gutters, single pane windows, and wood frames
- > inadequate flashings, soffits, fascia board and overhangs
- > lack of maintenance of roofs
- > missing and/or disconnected downspouts
- > clogged gutters and improperly sealed joints
- > lack of, or inadequate damp proofing
- > poor construction practices resulting in damage to foundation walls
- > lack of ventilation (roof, gable, and soffit vents)
- > lifestyle of the occupants, and
- > lack of maintenance.

HOUSE INTERIORS

Inside the homes, other problems were observed which may have contributed to mould growth. These include:

- > cracks in foundation walls
- > dryer/range exhausts not vented to the exterior
- > insufficient capacity exhaust fans and/or no exhaust fans in the bathrooms and kitchens
- > bathroom exhaust fans venting inside the attic space instead of outside the house
- > lack of vapour barriers on crawlspace floors
- > poor installation and lack of insulation in attic spaces
- > accumulation of dust and debris
- > inadequate sealing of penetrations
- > overcrowding
- > lifestyle of the occupants, and
- > inadequate plumbing and maintenance of plumbing.

FINDINGS

During the investigations, a vast amount of useful data was collected related to mould occurrences, exterior and interior building deficiencies, and site problems. The result was likely the largest mould investigation of residential houses carried out in Canada, if not North America. All 396 homes required repairs to either remove existing mould and/or minimise the likelihood of mould occurrence.

It was determined that the compounded problems of poor construction of houses, overcrowding, lack of maintenance, and lifestyle issues resulted in an extraordinary amount of mould occurrences throughout the Cowichan community.



Lydia Hwitsum

Former Chief, Cowichan Tribes

On the reserve there is a real sense of detachment when it comes to home ownership. Under the *Indian Act*, Cowichan land is ours to use but it's owned by the Crown—and that sets up a whole dynamic of dependence. Under the Act, even if we own our houses, we don't own the land they sit on so we don't get to enjoy the benefits of equity. People outside the First Nations community need to be aware of that.

And yet the community's attitude toward personal responsibility is growing. Our people are embracing the fact that they are in control of, and responsible for, their health and their homes.

Once we understood the problem, we were able to treat the causes instead of the symptoms. Having the knowledge and data to back it up helped us target our resources and respond efficiently and effectively.

In the end, this project saved lives. I have no doubt about that. You could see people's health improving... and their lives changing for the better.

“In the end, this project saved lives.”



Jeneen Roberts

Manager of Housing, Cowichan Tribes

My family was living in a rental house on-reserve. We were in the Pilot Project. There wasn't a lot of visible mould in our house but it was the toxic kind. We were not feeling well; we had no energy.

I have three children. My youngest was a baby when we moved out. He couldn't get rid of his bronchitis no matter what we tried. He hasn't had bronchitis since the day we moved out. He was the one who was most affected, health-wise, because of the mould.

We were off the reserve for four and a half years. We had to move twice. Having to move around had quite an emotional impact on my family. My husband and I actually separated for awhile because of the stress it put on our relationship. The kids were just getting comfortable in one school and we had to move again. That was hard.

Now we live in one of the new houses on Boys Road. The house is beautiful and we haven't had any problems. I've reunited with my husband... and the kids love being home.

I feel I'm very fortunate when I listen to what the other members went through. Others have had it worse. I had two miscarriages in that old house. Sometimes I wonder about that too. And that feeling of loss. This new house gives me peace of mind.

Now I work for the housing department. I oversee property management for the band members (CMHC and Band-rentals) and the elders' home. I make field calls and help with the elders and make sure the rents are collected.

In our community, there was a lack of understanding that mould can affect your health. There were many reasons for the mould problem: poor construction, lack of proper inspections, and overcrowding. But the members are learning in the workshops. It's going to take a community effort to improve our housing. It's up to us to improve our community.

Some members have thanked the housing department for all the work they've done. They're grateful to be back home again. It means a lot—especially to our elders. There's no place like home.

“It's up to us to improve our community.”

Works Engineer, Sustainable Housing Department

I've never seen a mould problem as bad as this—in intensity, scope and impact on the population. This is the most severe I've seen. I can't image it could be worse than this. You have to see it to believe it.

Many of the homes were built incorrectly. Inspections were not monitored as closely as they could have been. Seventy of them had crawl spaces on floodplains, so the moisture crept up from below. The technology was fine but the construction quality was dismal. No one is innocent. Who is at fault? Nobody and everybody. However, the effect is a dysfunctional house.

We should design our houses to fit into the environment in which they are built. We shouldn't apply the standards from other places. Here we're taking the best building practices and technology. On the seismic upgrades alone, we're ahead of the codes by 15 years.

Cowichan people like big gathering places in their homes, mostly the kitchen and dining area. So we developed this “farmhouse” style design to accommodate that. The kitchen and dining area are huge compared to the bedrooms, for example. Very little time is spent in the bedrooms, other than for sleeping, so we maximised the space where it counts the most. This is part of using culturally appropriate design.

This is the best project I've built in 30 years. These homes were built with Cowichan labour and the quality of construction is superior. I'm quite proud of this project. It's a good way to end my career.

“This is the best project I've built in 30 years.”

Cliff Proctor, (left) Works Engineer, and Jamie Swanson, Housing Technologist, Sustainable Housing Department.



The Pilot Project

The Pilot Project involved 48 homes and included extensive repair as well as demolition and reconstruction. Through knowledge transfer and training, Jacques Whitford gave significant support to help Cowichan Tribes manage such a large scale project.

In advance of the Pilot Project, 12 houses were manufactured off-site and placed in the community to provide transitional housing. In addition, four new houses were added to the Uy Stun'us subdivision. Constructed locally and brought to the community for assembly and finishes, these houses were a joint venture of Pacific Home Builders and Cowichan Tribes. All of the homes were designed to avoid or minimise mould and meet specific seismic, structural, and functional requirements. In addition to helping many Cowichan members remain in the community during remediation work on their homes, the transitional housing also helped reduce overall project costs by limiting the need to pay for off-reserve housing.

DEMOLITION & RECONSTRUCTION

After a cost-benefit analysis, a decision was made to demolish 16 houses and build 17 replacements. The new homes have numerous innovative construction features and technology to minimise the potential for mould growth, including: large eaves, cottage style roofs, rainscreen technology, large crawl spaces, and modern heating and ventilation systems. Because much of the land is located on a floodplain, the new homes are built to withstand a 200-year flood event.

REPAIR & REINSTATEMENT

The project called for the repair and reinstatement of 31 houses. Building materials and construction methods were selected to provide cost-effective and efficient houses that require less maintenance, have a longer service life, and have specific mould reducing measures.

MITIGATION

Since the Pilot Project directly affected only a fraction of the community's housing stock, there was a need to address the remaining 392 houses on reserve. Most of the remaining houses had mould that would likely worsen without immediate attention. Simple, cost-effective mitigative work was subsequently conducted on 235 houses. This work included: repair of roof leaks and gutters, HEPA (High Efficiency Particulate Air) vacuuming of houses, installation of downspouts, clean-up of minor amounts of mould, repair or installation of bathroom and kitchen fans, provision of better house ventilation, and education about the triggers for mould growth. These mitigation measures cost less than \$5000 per home.

COWICHAN PARTICIPATION

Whenever possible, Cowichan members were trained and employed in the various components of the project. Contractors received training and guidance on the most up-to-date building practices and will be better equipped to conduct future renovation work. Examples include: the Cowichan Mould Team, Moving Guys, HEPA crew, Cleaning Crew, and Khowutzun Mustimuhw Contractors Limited Partnership (KMCLP).



A SHARED RESPONSIBILITY

Cowichan Tribes estimates the overall cost to address the mould problem in their community to be \$50 million. The Cowichan Pilot Project has been a shared effort between the federal government and the community, with each party contributing financially. Technical expertise and training was provided by the government departments.

INAC's contribution to the pilot included the initial assessment, demolition and abatement, housing subsidies, the development of a subdivision and transitional housing, ongoing capacity support, and training. CMHC provided substantial capacity support and training, the provision of Section 95 housing units through combined loans and operating subsidies, Residential Rehabilitation Assistance

Program (RRAP) support for renovation, and Youth Initiative funding. Health Canada provided professional advisory services during the initial identification of the problem, as well as ongoing monitoring.

Perhaps most significantly, Cowichan Tribes has been responsible for all costs above what regular government programs cover. Cowichan Tribes has taken on a substantial equity position to meet this challenge, and has invested future tax revenues into the provision of healthy houses for its community.



New duplex under construction

Retired Community Health Representative, Grandmother

In the winter the house wouldn't dry. In the summer, when you first walked in you would be hit with steam. The sheets and the mattresses were damp. There was mould growing under my bed. I was constantly cleaning but it always came back. The floor rotted on one side and it fell about an inch, so I couldn't open the front door for eight or nine years. I got so scared and so worked up when the slugs started crawling in. My great grandson was just crawling then, and I was worried he might pick one up and put it in his mouth.

It wore on the health of the kids. Six of us had asthma. My stomach was so upset I had to be medicated. My daughter got arthritis. My grandson had eczema and hives. It touched every member of my household.

I was off-reserve for four years. Being off-reserve is like living in another world. Culturally, our people are close and like to help each other when there are problems or celebrations in the family. I felt cut off from the community. My life is better now that I'm in this house.

Poor construction was a major problem but I also saw a lot of people not taking care of their houses. They don't have pride and respect for what they own. I think the welfare system spoiled a lot of my people. They think they don't have to do anything because they'll get it from the government. I don't blame other people for how they live, I don't condemn them for it and I don't make them feel inadequate because of it. It's not anyone's fault. The residential schools had a lot to do with the lack of parenting skills... They've never had pride or respect in what they own. They've never been taught that. My grandmother taught me that when you own something you take care of it. If you care for someone, if you love your children, you take care of them—they didn't get here on their own!

We need to educate the people so they can understand the consequences of mould and what they should do. I really appreciate Jacques Whitford being around. I have gone to many workshops and they've talked about what to do and how to maintain your house. We need to teach the kids how to respect and show pride in what they have.

There are people who would love to have a home but can't. I say, be grateful to what you come back to.

“We need to teach the kids how to respect and show pride in what they have.”

Lillian Charlie, with her granddaughter, Stephanie Charlie, administrative assistant to the project director, Cowichan Tribes Community Housing.



Ensuring Sustainability

Investments made in new and upgraded housing were only part of the story. Recognising the need for diligence in preventing the return of mould rests with the Sustainable Housing Department of Cowichan Tribes as well as individual residents. To ensure the sustainability of the project, a comprehensive Tenancy Agreement and mould awareness education programs have been instituted and maintained by Cowichan Tribes.

TENANCY AGREEMENT

Families involved in the Pilot Project were required to sign a Tenancy Agreement, which contains a variety of provisions designed to promote sustainability. These include: establishing occupancy limits, prohibiting alterations to the residence without prior consent, a maintenance schedule that designates the resident's responsibilities, regular inspections by Cowichan Tribes, and providing maintenance training courses to families. When maintenance is not performed, the agreement authorises Cowichan Tribes to complete the work and recover the cost from the residents.

TRAINING & MAINTENANCE

In addition to signing the Tenancy Agreement, residents are required to participate in a practical, hands-on Mould Awareness program and CMHC's Home Maintenance education program. These education programs detail the impact of having mould in a home, the proper way to clean and remove mould,

the importance of involving the Sustainable Housing Department as circumstances require, and the importance of basic home maintenance techniques.

Four Cowichan members participated in CMHC's "Train the Trainer" program. These local trainers will conduct all future home maintenance workshops for community members. Cowichan Tribes now has the training resources to ensure the sustainability of the program. Through these home maintenance workshops, changes in attitude and behaviour with respect to home maintenance have been realised. As band members increase their understanding of home maintenance techniques, and the link between home maintenance and mould management is made, families are becoming better prepared to maintain their homes.

FUTURE DEVELOPMENT

A systematic, sustainable approach to future housing development within the Cowichan community is a top priority. To ensure growth is managed properly, the development of a comprehensive set of guidelines and recommendations for new construction and renovations is now in place. These include: guidelines for construction planning, construction permits for privately-owned homes, scheduled maintenance, and recommendations for ensuring better environmental stewardship of the land.



To ensure growth is managed properly, the development of a comprehensive set of guidelines and recommendations for new construction and renovations is now in place.



Bubba Peter

Maintenance Co-ordinator, Sustainable Housing Department, Cowichan Tribes

I'm here to help my people. I recognised the need to organise something. I can be proud of the fact that I've had a hand in building up this program.

We HEPA vacuum everything to make sure we're not transferring contamination from one house to the other. It all has to be wiped down. Having our own people do the job makes our members feel more comfortable. We're the ones handling their personal belongings, helping them move out into temporary accommodation... There's a positive interaction with the members when they see us doing the work, helping them move into a clean house.

After the new houses are constructed and the renovations are complete, it will all be about maintenance. We have to get serious about it now. The more we do the more we learn. If there are other tribes who have this problem, we could take our skills and help them.

Our people have to be accountable. They realise that now. They will be liable. Before, they looked to the tribe to take care of everything. We have to re-educate people and let them know that they have to take personal responsibility for their home. That's the message we're trying to send.

“Our people have to be accountable.
They realise that now.”

A Solid Foundation

The Jacques Whitford study concluded that the causes and contributors of mould in the Cowichan community were numerous. A solution to the problem was found in a commitment to teamwork.

Comprehensive planning, innovative construction techniques, stringent oversight, and community education have brought about a renewal in the housing stock and improved health for the Cowichan community. One immediate measure of success has been the dramatic reduction in hospital admission rates of Cowichan members due to respiratory illness.

The Pilot Project showed that a comprehensive, planned response was the only way to approach the crisis. A shared responsibility for funding and managing the project—with the onus being on the community—created a sense of purpose and responsibility that ensured success. Cowichan Tribes has committed their entire tax base (\$1 million per year) as well as necessary loans, in order to complete the project.

CHANGE FOR THE BETTER

The Pilot Project served to reconfirm much of CMHC's previous policies and procedures in relation to mould mitigation and remediation. Since the

pilot's completion, CMHC is developing *Mould Matters: a Resource Guide for First Nations Housing Providers*. This complete reference kit is being designed for all those seeking assistance in developing remediation strategies in First Nations communities across Canada.

As a result of the experience gained in the Pilot Project, Cowichan Tribes and INAC have made changes in policy and procedure in relation to housing. The maintenance model and housing practices adopted by Cowichan Tribes are now being duplicated in other First Nations communities. INAC's regional terms of reference for subdivisions in British Columbia now include site grading. This and other mould mitigation construction practices employed in the pilot are quickly becoming industry standards in British Columbia.

In 2003, the Office of the Auditor General's report on First Nations housing criticised the government's initial lack of strategy in dealing with the residential mould issue. Now that the Pilot Project is complete, the experience gained by INAC and its partners is available to other communities and should set the national standard for responsive, sustainable mould abatement.



Lessons Learned

The Cowichan Pilot Project has reconfirmed that household mould is a complex matter, involving moisture and a variety of causes. The experience has shown that successful mould abatement requires the following:

- > community commitment
- > professional assessments
- > a rational approach with minimal disruption to the occupants' lives
- > professionally prepared remediation plans
- > supervised abatement
- > enforced construction and inspection standards
- > recognition that mould is the result of an underlying moisture condition
- > moisture and mould awareness training
- > strong occupancy and maintenance policies
- > a vigilant monitoring regime, and
- > personal responsibility.

Chief, Cowichan Tribes

The Cowichan have always had tight knit family groups. In the past our people lived in longhouses with several families living in one building. I had 12 people living in my house—three generations of family.

We almost lost my granddaughter because of the mould. Her kidneys started bleeding and she was listed as “critical” for two days with a 50/50 chance of survival. She recovered, thank God. My youngest grandson, Quinlan, was only a year and a half when he developed respiratory problems and had to use inhalers. His doctor said he would be on them for the rest of his life. But one week after we moved to a mould-free home, he didn’t need inhalers anymore. However, it took two and a half years for my granddaughter to gradually regain her health.

We can now look back and understand why we had constant colds, headaches, nose bleeds, fatigue, depression, and memory loss. I was living in my house for years and didn’t even realise how it was affecting our health. What I’m trying to say is that we became acclimatized to the odour. When we finally realised how bad it was, the health department issued an immediate evacuation notice and my house had to be demolished. Because of the high standard we set, and the quality assurances we put in place, I’m proud to say that the new home has passed the test of time.

Cowichan Tribes is taking a quality-control approach to make sure this won’t happen again. We’re building to a standard that is much higher than the B.C. and federal building codes. We have our own inspectors involved with the construction phases from the ground up. Our engineer and project manager ensure construction, renovation, and mitigation crews complete the work to our standards. We have an excellent team working on the problem. The former Chief and Council really laid much of the groundwork, and the current Chief and Council have greatly enhanced the Housing program. The health of our families is our top priority.

We say Hy’ tseep qa’ siem, which means “thanks to all of you.”

I truly believe our community will be stronger for having overcome this problem. Some families have been out of their homes for up to five years and when they move back, you can see their joy. It gives me great satisfaction to see their faces. We want to thank all of our strategic partners, INAC, Jacques Whitford, CMHC, Health Canada, and the Bank of Montreal for making this happen.

“Hy’ tseep qa’ siem
thanks to all of you...
our community will be stronger.”



Sharing Knowledge

The wisdom gained in the Cowichan community is applicable for other First Nations and non-native communities across Canada. While other mould problems will vary in severity and cost, the housing construction and maintenance standards, abatement strategies, tenant agreements, and training programs developed during the Pilot Project provide useful reference material for other communities facing a mould problem. The CMHC web site provides more information on the causes and health effects of mould in homes, how to identify and clean small mould problems, and when to seek professional help. For this and other information on how to build and care for a safe and healthy home, visit CMHC's web site at www.cmhc-schl.gc.ca.

For a look at some of the reference materials developed by Cowichan, including the Tenancy Agreement, visit the Cowichan Tribes web site at www.cowichantribes.com.

CMHC's comprehensive mould kit, *Mould Matters: a Resource Guide for First Nations Housing Providers*, is available in the fall, 2003, by calling 1-800-668-2642.



To request this publication
and for information contact:
Canada Mortgage and Housing Corporation
Toll free 1 800 668-2642
visit the home page at www.cmhc-schl.gc.ca

Indian and Northern Affairs Canada,
British Columbia Region
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or call the British Columbia Region Public Enquiries Line
Phone 604 666-8695
Toll free 1 800 665-9320

The Government of Canada has been pleased to work with the Cowichan Tribes on the ongoing resolution of the mould problem on the Cowichan Reserve. None of the stories in this document should be taken as an admission of liability by any of the parties listed herein.