

ASEHA Qld Inc

ALLERGY, SENSITIVITY & ENVIRONMENTAL HEALTH ASSOCIATION Qld Inc
PO BOX 96 MARGATE QLD 4019

ABN: 63906425543

Phone: 07 3284 8742

Email: asehaqld@bigpond.com

Website: www.asehaqld.org.au

A volunteer community organisation providing support for people with allergy, food and chemical sensitivity

A participating organisation of National Toxics Network

7th August 2009

Submission No.8

(homelessness legislation)

A.O.C. Date: 12/8/09

Inquiry into homelessness legislation

ASEHA Qld Inc is a support group for individuals with environmental sensitivities (ES) such as allergy, asthma, food sensitivities, chemical sensitivities and other disorders that are adversely impacted by environmental pollutants. It is not unusual to find that those with environmental sensitivities have several coexisting conditions e.g. allergy, asthma, chemical sensitivity, chronic fatigue syndrome/fibromyalgia and auto-immune disease. Many are also physically disabled by their autoimmune disorders or arthritic conditions.

Currently, many in Civil Society who suffer from Environmental Sensitivities such as allergy, asthma and chemical sensitivities are urgently in need of disability access to appropriate housing. Those with severe chemical sensitivities are most disadvantaged because it is often the products used in buildings that contaminate indoor air and can damage human health and exacerbate existing allergy/chemical sensitivity. These include products such as:

- those used to construct the dwelling;
- furnishings, carpets, underlay, curtains, blinds and other window dressings;
- consumer products brought in to the home on a regular basis e.g. fragranced products, household cleaners, laundry products.

There exists a large body of data to support indoor air contamination also known as sick building syndrome, which can in turn cause allergy/chemical sensitivity. However, while indoor air contamination is known to cause specific health problems, it is not only an issue of concern related to environmental sensitivities but has broader implications in public health and urgently needs to be addressed by government. There exists a market for 'clean, green' technology and a low polluting environment as many individuals are concerned about chemicals in their environment and need or want to reduce them as much as possible.

Some individuals with allergy and chemical sensitivities experience difficulty finding housing that is low in allergens, biological contaminants and chemical contaminants. This is creating difficulties in the community for those with severe allergy/chemical sensitivity and some are unable to find a house they can live in that does not make them ill. Such people find themselves homeless and living in their cars. They wander aimlessly from place to place seeking clean air and a house they can live in safely and call home.

Homelessness creates major problems for anyone, but in the case of the chemically sensitive they are especially vulnerable as they are already chronically ill and have special needs in all facets of their lives. Once homeless, not only is personal safety an issue but preparing food for their food allergy or other special dietary need becomes a nightmare and poor nutrition can give rise to more health problems. Toilet facilities present another challenge due to fragranced toiletries and personal care products used by visitors to public toilet facilities as well as the presence of 'air fresheners' to 'deodorise', all of which can trigger allergic reactions, asthma, or chemical reactions that can totally disable a susceptible individual or kill.

As chemical sensitivity is an emerging health/disability issue, such individuals have not been considered by governments in service provision or planning. Currently, individuals with environmental sensitivities are not offered appropriate housing in the public housing system when they apply. Some have medical certificates that are not being taken into account when they are offered housing. Further, low allergy/low chemical housing does not exist in the private sector.

We applaud the House of Representatives Standing Committee on Family, Community, Housing and Youth for the inquiry into homelessness legislation and thank you for the opportunity to provide a submission. We hope the inquiry into homeless legislation will take the issues in our submission into account and facilitate the provision of appropriate 'safe' housing for those with environment sensitivities in the very near future to avoid those disabled by environmental sensitivities from becoming homeless, especially those with severe chemical sensitivities.

Yours sincerely,

Dorothy M Bowes
President

Introduction

Those with allergic disorders and chemical sensitivities have a high level of need for specific housing free from allergens and biological contaminants e.g. mould, while they also need an environment low in chemicals or volatile organic contaminants (VOCs). Often individuals have multiple manifestations of allergy e.g. hay fever, allergic rhinitis, asthma eczema, digestive allergy as well as chemical sensitivity (MCS). Allergy is a risk factor for MCS as individuals with nasal allergy can display hypersensitivity to inhaled environmental chemicals e.g. solvents, pesticides, fragranced products. This can result in anaphylaxis, asthma, hay fever, rhinitis and others.

There are many types of disability in the community. ASEHAs submission will focus on and the wider issue of environmental sensitivities (ES) which will include multiple chemical sensitivity (MCS) and be referred to as ES/MCS. ES/MCS is a new and emerging area with unmet need. It is disability that is not yet included in building standards, current health and disability planning or service provision.

People with MCS have been poisoned by environmental chemicals and because of their special and unmet need, many sufferers cannot access housing, basic health, allied care, nursing home care, in-home support and disability services. In many instances this lack of disability access and inclusion is already creating deep personal crisis and has created great future uncertainty for sufferers who need access to low allergy/low biological contaminant/low VOC housing, health and allied care services, especially nursing home care or in-home service.

Environmental Sensitivities (ES) describes a variety of reactions to chemicals, electromagnetic radiation and other environmental factors at exposure levels commonly tolerated by many people. Environmental sensitivities does not describe a single simple condition with a universal cause. (Sears, M E 2007 p. 3) Environmental sensitivities includes diseases such as allergy, asthma, other lung disease, chronic fatigue syndrome, fibromyalgia, Sjogrens Syndrome, cystic fibrosis, dermatitis/eczema, digestive allergy, coeliac disease, Systemic Lupus and others.

Multiple Chemical Sensitivity is defined as a chronic condition with symptoms that recur in response to low levels of exposure to multiple chemicals that improve or resolve when those chemicals are removed. Symptoms occur in multiple organ systems throughout the body. (NSW Health, Dept of. 2002).

The prevalence of MCS &/or hypersensitivity to chemicals ranges from approximately 5% to 34% in the general population. In Australia, the 2002 NSW health survey reported 24.6% of adults with sensitivity to chemicals, while a South Australian 2002 and 2004 survey reported 16.4% of respondents had chemical sensitivity.

This submission deals with the issues faced by those with ES/MCS when trying to find appropriate accommodation/housing. ES/MCS leads to health, social and economic disability and those with such problems do not have equity of access nor can they take part in civil society. For whatever reason a person has developed MCS, the result is the same – they need to find 'safe' accommodation due to overwhelming chemical contamination in the indoor environment and often have little money or assistance to do it. There is little access to public or suitable housing (rental or for purchase) or 'safe' localities in general. The choices left are:

- move to a remote area,
- continue to live in inadequate housing that worsens the condition; or
- homelessness.

Many with MCS have little to no income and little to no choice despite their need for MCS disability access to buildings being recognised by the Human Rights Commission in their Access to Buildings and Services: Guidelines and Information in the section 'Use of Chemicals and Materials' which states:

'A growing number of people report being affected by sensitivity to chemicals used in the building, maintenance and operation of premises. This can mean that premises are effectively inaccessible to people with chemical sensitivity. People who own, lease, operate and manage premises should consider the following issues to eliminate or minimise chemical sensitivity reactions in users:

- *the selection of building, cleaning and maintenance chemicals and materials (see Note below);*
- *the provision of adequate ventilation and ensuring all fresh air intakes are clear of possible sources of pollution such as exhaust fumes from garages;*
- *minimising use of air fresheners and pesticides; the provision of early notification of events such as painting, pesticide applications or carpet shampooing by way of signs, memos or e-mail. http://www.humanrights.gov.au/disability_rights/buildings/guidelines.htm*

The Human Rights Commission also notes:

'There are a number of relevant environmental and occupational health and safety regulations and established standards, however, as is currently the case with other standards referenced in building law, compliance with those standards may not necessarily ensure compliance with the DDA', and

'For more information on accommodating employees with MCS/ES and ways to eliminate or minimise chemical and fragrance sensitivity reactions can be found at <http://www.jan.wvu.edu/media/MCS.html> and <http://www.jan.wvu.edu/media/fragrance.html> '

Unfortunately, these guidelines do not go far enough. Minimising air fresheners, pesticides, or other chemicals will not protect a person who has already been poisoned by them. As with allergy, the only known treatment of chemical sensitivity is avoidance and only total avoidance will resolve the problem. However, in discussing the health effects of indoor air pollution it becomes apparent that it is not only a problem for those with MCS, it is just that it is more obvious. In addressing the issues of reducing indoor air pollution in housing for MCS sufferers, future illness and exacerbation of existing chronic illnesses may also be avoided, as may homelessness.

Nature of the problem

We live in a heavily polluted world due to man made activity. There are more than 100,000 man made chemicals that affect every facet of our lives and while some chemicals have provided a significant benefit to the way we live. Other chemicals have had harmful effects on humans, especially persistent pollutants e.g. DDT, that invade soil, air, water, wildlife and are slow to degrade. Many such chemicals are found in human blood, body fat, breast milk and some even cross the placenta where they can impact adversely on the unborn (www.cdc.gov/exposurereport). Like wildlife, humans are also species under threat from climate change and environmental pollution, the reality of this is reflected on ongoing scientific studies.

Reactions to pollutants and chemicals in our environment affect a significant proportion of the population and in their 2002 Adult Health Survey; NSW Health found that 24.6% of adults reported sensitivity to chemical odours. NSW Health defined chemical sensitivity as *'a chronic condition with symptoms that recur in response to low levels of exposure to multiple unrelated chemicals and improve or resolve when those unrelated chemicals are removed'*(<http://www.mhcs.health.nsw.gov.au/research/>).

Studies in the USA indicate that the prevalence of Multiple Chemical Sensitivity (MCS) in the community is 33%, which is similar to the allergy rate and in some cases individuals suffer from both conditions (Meggs, W J et al. 1997). Around 50% of individuals with seasonal allergy are also affected by chemicals and other irritants (Shusterman, D and Murphy, M. 2007). Caress and Steinman in the Journal of Occupational and Environmental Medicine (2005) supported the prevalence of 33% in the community suffering from MCS with a substantial overlap between asthma and MCS. Other overlapping conditions include chronic fatigue syndrome and fibromyalgia.

Chemical hypersensitivity/MCS diagnosis Prevalence Rates

| MCS Prevalence Rates | Percentage of respondents | Reference source |
|---|---------------------------|--|
| National Academy of Science | 15% | Mitchell F, ed. 1995 Multiple Chemical Sensitivity: A Scientific Overview. Atlanta: US Department of Health and Human Services, Public Health Services Agency for Toxic Substances and Disease Registry. |
| *California Dept Health Services | 15.9% | Kreutzer R, Neutra RR, Lashuay N. 1999 Prevalence of people reporting sensitivities to chemicals in a population-based survey. Am J Epidemiol.;150:1–12. |
| *Atlanta, Georgia, metropolitan area | 12.6% | Caress SM, Steinemann AC. 2004 The prevalence of multiple chemical sensitivities in a population based study. Am J Public Health.; 94: 746 –747. |
| *State of New Mexico | 16% | Voorhees R. 1997 Results of Analyses of Multiple Chemical Sensitivities Questions. New Mexico Behavioral Risk Factor Surveillance Systems. New Mexico Department of Health, Office of Epidemiology;25. |
| Conversations with medical personnel in clinical settings | 2 – 10% | Mooser SB. 1987 The epidemiology of multiple chemical sensitivities (MCS). Occup Med.;2:663–681. |
| Arizona study Young college students | 15% | Bell IR, Schwartz GE, Peterson JM, Amend D. 1993 Self-reported illness from chemical odors in young adults without clinical syndromes or occupational exposures. Arch Environ Health.;48:6–13. |
| Arizona study Elderly persons | 37% | Bell IR, Walsh ME, Goss A, Gersmeyer, Schwartz GE, Kanof P. 1997 Cognitive dysfunctions and disabilities in geriatric veterans with self-reported intolerance to environmental chemicals. J Chron Fatig Synd.;2:5– 42. |
| Rural Arizona population survey | 33% | Meggs WJ, Dunn KA, Bloch RM, Goodman PE, Davidoff AL. 1996 Prevalence and nature of allergy and chemical sensitivity in a general population. Arch Environ Health. 51:275–282. |
| UK Military Personnel | | Reid S, Hotopf M, Hull L, Ismail K, Unwin C and Wessely S., 2002. Reported chemical sensitivities in a health survey of United Kingdom military personnel. Occup. Environ. Med.;59:196-198doi:10.1136/oem.59.3.196 |
| 1. Gulf War veterans deployed | 1. 28% | |
| 2. Gulf War, not deployed | 2. 14% | |
| 3. Bosnia War | 3. 13% | |
| Caress and Steinemann National survey. 2005 | | Caress S and Steinemann A. 2005. National Prevalence of Asthma and Chemical Hypersensitivity: An Examination of Potential Overlap J Occup Environ Med.; 47:518–522 |
| Hypersensitivity to chemicals | 11.2% | |
| Diagnosed with MCS | 7.4% | |
| Older adults | 34% | Bell I R, Schwartz GE, Amend D, Peterson JM, Stini WA. 1994. Sensitisation to early life stress and response to chemical odors in older adults. Biol Psychiatry 35: 857-63 |
| Older adults | 17% | Bell et al. 1993. Possible time-dependent sensitisation to xenobiotics self reported illness from chemical odors, foods and opiate drugs in an older adult population Archives of Environmental Health 48:315-27 |
| Australian Population, SA Health Monitor Survey, 2002 and 2004. | | Australian Population, SA Health Monitor Surveys 2002 and 2004 |
| Chemical sensitivity | 16.4% | |
| Diagnosed MCS | 0.9% | |
| Australian Population, NSW adult health survey 2002 | | Australian Population, NSW adult health survey 2002 |
| Overall hypersensitive to chemicals | 24.6% | |
| Rural population (hypersensitive) | 23.7% | |
| Urban population (hypersensitive) | 24.8% | |
| Diagnosed with MCS | 2.9% | |
| German population | | Hausteiner C, Borschein S, Hansen J, Zilker T, Forstl H. 2005. Self-reported chemical sensitivity in Germany: A population-based survey. Int. J. Hyg. Environ.-Health. 208; 271-278 |
| Self reported sensitivity | 9% | |
| Diagnosed MCS | 0.5% | |

Socio-economic impacts of ES/MCS

An area that is constantly ignored is the socio-economic impact of MCS. Canada has made some effort to evaluate the cost to the community. Millions of Canadians suffer physical, emotional and financial hardship as a result of environmental illness. As many as one third of Canadians suffer from some form of environmental sensitivities, which affect more women than men and increase with age (Sears, M E 2007 p. 6). This would be true of any nationality. In a 2003 survey 3.6% of all Canadian nurses experienced chemical sensitivities (Sears, M E 2007 p. 4).

The total estimated financial cost of environmental illness to Canada is estimated at \$13 billion per year -

- \$10+ billion per year in lost productivity
- \$1+ billion per year is eroded from the tax base
- \$1+ billion each year in health care costs which is avoidable if the illness were diagnosed and treated in a timely manner and
- \$1+ billion dollars per year in avoidable disability payments. (Kassirer, J and Sandiford, K 2000)

Environmental Illness is one of the most expensive health care conditions in Canada along with heart disease, musculoskeletal disease and cancer. Around 7 million individuals suffer significant symptoms, increased absenteeism and impaired abilities at work due to normally safe exposures to some of the common chemicals and moulds found in their homes and at work. Around half a million adult Canadians are unable to do paid work due to a disability associated with Environmental Illness (Sears, M E. 2007). Some experience homelessness.

The socioeconomic impact of ES/MCS on the Australian community needs to be investigated. The costs are likely to be similar to Canada but may be higher. In Australia, we are struggling to have ES/MCS recognised as a physical condition and suffer disability discrimination. We have not yet addressed homelessness in this population.

Because individuals with MCS/ES suffer discrimination and their issues of inclusion and access are not addressed, they have no opportunity to improve their lives, their health or take part in society. Individuals with MCS/ES disability are often unable to work to support themselves and because they are always ill, they lose the support of family and friends and can become isolated. Income support from welfare services is insufficient to provide for their special needs in housing, disability aids, medical aids, food, and nutrient support as food allergy is often a coexisting factor along with inability to take many medications. Homelessness for those with ES/MCS can only be avoided by addressing the need for 'safe' low allergy/VOC housing in a suitable airshed.

Where do we find chemicals

Many harmful chemicals are found in building materials and products e.g. paint and adhesives; pesticides, floor coverings, furnishings and soft furnishings, clothing and the consumer products we bring into our homes and use on a regular basis. These can include disinfectants, detergents, other cleaning products, hobby and personal care products, especially those that contain fragrance chemicals. Some chemicals in products include human allergens, solvents which are known nerve poisons and other chemicals that are sensitisers, irritants, asthmogens (trigger asthma), carcinogens, narcotic substances, or have some other adverse impact on the human body. Many are volatile organic compounds (VOCs) and add significantly to indoor air contamination which is also known as sick building syndrome (SBS). Other substances in the domestic environment that are harmful to human health are mould and nitrogen dioxide from domestic gas where houses are fitted with gas appliances. These can be especially harmful to allergy sufferers, asthmatics and chemically sensitive individuals (www.epa.gov/iaq).

Chemicals detrimental to building access

Two of the greatest detriments to building access for individuals who have already developed MCS are fragrances and pesticides as these are significant sources of VOC contamination in indoor air. They can provoke reactions which can be mild to severe, or in some cases life threatening. Continual exposure to a chemically contaminated indoor environment can result in:

- people being poisoned
- significant deterioration in the health of those already sensitised
- ongoing deterioration in those who have existing health conditions that can degenerate into chronic conditions and ultimately severe disability.

Once this occurs the inability to work and be self supporting locks those with a high level of special need and a low income base into a cycle of poverty, ill health and in some cases homelessness. This

becomes costly to the community in terms of health and welfare costs. Housing is a health issue and to date we do not have any housing that acknowledges or deals with chemical barriers to housing access in the community. Currently, ASEHA does not know how many ES/MCS sufferers are homeless at this point in time as we are unable to contact them and only know they are there if they contact us. We have included a recent case history at the end of this submission.

Sick building syndrome can affect everybody and is an avoidable public health problem that urgently needs to be rectified. While allowable air levels of contaminants are set for the workplace to protect worker health and safety, the same chemicals can be found in housing, sometimes at higher levels than in the workplace e.g. formaldehyde in newly built houses, yet no levels are set for the domestic dwelling to protect the health and wellbeing of families, or allow safe and accessible housing for those with ES/MCS

Often fragrances and household cleaners/disinfectants are so strong that they cross the fence line to contaminate the air in surrounding dwellings and can badly affect the health of neighbours. Second hand chemical exposures are as dangerous as second hand cigarette smoke because they can cause diseases such as MCS, asthma or trigger severe reactions. Sometimes the same chemicals are involved. Individuals affected by such fumes have not fared well in any form of housing, let alone welfare housing. As they have been poisoned through no fault of their own they are deserving of suitable housing in a safe location, protection from chemicals that can damage their health and access to safe and appropriate health and welfare services.

Two things that would begin to address this are:

- ◆ The development and implementation of a system of low emission building products to reduce harmful contamination in housing with attention to location, housing design, room size and air flow. These may best be part of the Building Code so that clean air standards are developed and policed as a public health issue.
- ◆ A reduction in the strength of harmful substances in furnishings and consumer products is also needed to reduce indoor air contaminants that we bring into our homes on a regular basis. This is also essential to ensure that there are no second hand exposures from strongly fragranced products whose odours/fumes cross the property line and permeate neighbouring homes.

Chemical sensitivity and disability

MCS is listed in the ICD-10 as a disability, it is a disease that is regarded as controversial by the medical profession and not yet included in medical training in Australia. It is also not yet included in government policy and planning for future service delivery in spite of HRC disability access guidelines and mandatory disability plans to ensure access for all. HRC state in their disability access guidelines under 'Use of Chemicals and Materials' that '*a growing number of people report being affected by sensitivity to chemicals used in building maintenance and operation*' and while there are building codes and standards that should address the issue of harmful chemicals, these are not compliant with the Disability Discrimination Act (www.humanrights.gov.au). There are exposure standards for atmospheric contaminants in the occupational environment, yet none exist for the domestic dwelling.

A lack of commitment and government inaction to using less toxic substances is unfortunate as the number of those with sick building syndrome and chemical sensitivity will only continue to rise. Recently the Access to Premises consultation process failed to include the issue of indoor air quality in Building Standards and overlooked the body of data available to support the need for clean indoor air, a safe environment and work already done to support MCS disability access to premises <http://ieq.nibs.org/> further information on indoor air quality is available from the US EPA at www.epa.gov/iaq.

A failure by the majority of the medical profession to accept, diagnose and treat chemical sensitivity not only creates problems of access to health care, but creates social problems as well. Individuals needing medical documentation to substantiate their need for welfare benefits and access to low chemical housing experience difficulty obtaining medical reports. However, once medical reports are obtained, is our experience that Queensland Housing currently does not offer housing according to the medical certificate and special health need. While Queensland Housing recently recognised the need to reduce emissions in homes and built 'research house' in Rockhampton to show 'how houses can be developed to be more socially, environmentally and economically sustainable', they were ill-informed about some materials e.g. carpet, latex underlay, methylmethacrylate sinks and benchtops, gas appliances and halogen lighting. Carpet is an unsuitable flooring for those with allergy, asthma and chemical sensitivity; latex underlay can cause allergic reactions in those who are latex allergic; methylmethacrylate is a known sensitising agent and can sensitise on contact or by inhalation even at

low levels as these can be sustained over a long period of time to produce an acute sensitisation; gas indoors adds to existing ambient air levels of nitrogen dioxide to make indoor air more toxic than outdoor air and is contraindicated for those with allergy, asthma, other respiratory disorders and chemical sensitivities; halogen or fluorescent lighting can cause epileptic seizures, severe and disabling migraines and melanoma in susceptible individuals. People need to have a choice of lighting and materials. In particular, individuals with ES/MCS have a greater level of need for self-determination than those in the population who do not have such disorders.
www.smarthousing.qld.gov.au

Housing affordability

Those with ES/MCS who live on a modest to low income are in need of disability access to safe for them housing. Life is extremely difficult for such individuals if they cannot find a house low in contaminants that will not cause ongoing reactions. Such individuals have a high risk of homelessness – if they are already not homeless. Housing is a health issue and is vital for personal safety and wellbeing. Homelessness should not be allowed to occur and we hope the new legislation will reflect this.

The cost of housing has risen dramatically in SE Queensland and those on low incomes have found themselves locked out of the home buyer and rental market. While there are government subsidies to assist low income earners with rentals costs, the subsidies are insufficient to allow individuals on welfare benefits to rent in the private market and there is no housing in private rental dedicated to ES/MCS. Some on low incomes in private rental live in sub-standard premises, or struggle to survive with unsuitable accommodation that contributes to their ongoing ill health and overall level of disability. Some with MCS become homeless and live in their cars, driving desperately from place to place looking for clean air and an affordable, low chemical house. They are the new dispossessed.

Rental Issues

Renting a property is especially daunting for someone with chemical sensitivity as it is essential for them to find a suitable house in terms of location and low emission materials. A lot of rentals are carpeted, have gas appliances, fluorescent or halogen lighting and contain unsuitable building materials. Sometimes the properties are barely habitable with a lot of mould and carpet that should have been disposed of long ago. By far the worst problem with rental properties is pesticide levels.

When a tenant leaves a property, they are required to have the carpets cleaned and the property treated for pests. This can happen more than once year as some properties have a high turnover of tenants. Many MCS sufferers have accepted a rental property and when moving in have become ill from indoor pesticide levels. Several have had to negotiate another property about to be vacated to be able to stop the carpet cleaning and pesticide treatment. It is not only chemically sensitive individuals who are affected by high pesticide levels, they can affect everyone. It is a public health issue. Allowable levels of pesticides in the domestic environment urgently need to be established.

Access to appropriate housing

Access to appropriate housing that is low in contaminants is essential for individuals who have chemical sensitivity to ensure that their existing health problems do not degenerate into chronic ill health and worsening disability. Currently, public housing discriminates against those with MCS disability who cannot 'fit in'. They cannot live in duplexes, town houses and units which 'warehouse' people in developments that maximise occupancy and available space and as they are crammed close together air quality is an issue. Such accommodation is usually small by nature which is automatically not conducive to good air quality and ventilation. Individuals with MCS need detached housing for health reasons; they need to be further away from neighbours as second hand exposures from those who use strongly fragranced products, pesticides, engage in hobbies or cigarette smoking which can contribute to ongoing levels of ill health and disability over a period of time. Noise can also be an issue for some with damaged eardrums or diseases that cause low noise tolerance.

The location for housing for those with ES/MCS needs to be carefully chosen to ensure there are not toxic emissions in the area that will exacerbate ES.

Currently, the Queensland Department of Housing has no guidelines for ES/MCS disability and has not consulted with ES/MCS groups or individuals re disability access and their special housing needs. While there is no ES/MCS disability housing, there is absolutely no ES/MCS accessible crisis accommodation to deal with this special need.

There must be housing for all, including those with MCS disability. Access to MCS disability housing and crisis accommodation is an equity issue. Currently, appropriate public housing for individuals with MCS disability is unavailable, in spite of the Housing Act which states there should be regard to 'the availability of safe, secure, appropriate and affordable housing in a community'. Housing is a health issue and housing policy needs to be developed to allow access to safe and appropriate housing for individuals with MCS disability so that their health will not be further compromised and they will not join the growing list of homeless people. Action is needed to:

- Establish guidelines for housing individuals with MCS disability;
- In the absence of a medical diagnosis, establish an impairment system or some other process for assessing housing need;
- Consult with MCS groups and individuals with MCS re acceptable guidelines;
- Construct appropriate housing stock with the emphasis on suitable, low emission materials,
- Provide housing in a reasonable location for MCS disability i.e. areas low in pollution.
- Give some consideration to cluster housing developments for MCS disabled individuals so their health will not be compromised by second hand exposures, fumes, noise and other nuisance that drifts from neighbouring properties.
- Establish MCS accessible crisis accommodation for those who urgently need somewhere to go before they become homeless.

Many with chemical sensitivity who are in need of public housing do not apply because the department does not build housing that is sensitive to their special needs. Some who do apply are offered unsuitable accommodations and after a number of refusals are removed from the list and told that the Department cannot house them.

Public housing

While the Queensland Department of Housing has been cooperative and reasonable to deal with when seeking MCS accommodations in the past, we do not know how many people with MCS are already in public housing. The main problem with MCS is that individuals have been poisoned and are not believed. Until government recognition of MCS as a valid medical disease occurs, we will continue to struggle with our problems and issues of disability access to housing, homelessness and other essential services. Chemical sensitivity is an avoidable disability and it is indeed a sad day when MCS disabled people cannot have a house to come home to

***HOUSING, CLEAN AIR AND A SAFE ENVIRONMENT ARE HUMAN RIGHTS
THAT ARE CURRENTLY NOT OBSERVED BY THE AUSTRALIAN GOVERNMENT***

HOW CAN WE MAKE THINGS BETTER IN AUSTRALIA

GUIDELINES FOR DISABILITY ACCESS TO PUBLIC HOUSING FOR INDIVIDUALS WITH ENVIRONMENTAL SENSITIVITY/CHEMICAL SENSITIVITY

TARGET GROUP

People on low incomes with:

- ◆ Asthma, chronic obstructive pulmonary disease, other respiratory diseases
- ◆ Allergy
- ◆ Chemical injury/chemical sensitivity
- ◆ Occupational poisonings to specific products e.g. formaldehyde
- ◆ Autoimmune disorders
- ◆ Sensory disability
- ◆ Ear disease

Disability access to public housing

Public housing authorities are required to house people with a disability and have a responsibility to provide housing that does not make people ill. For people with chemical sensitivities, that means meeting their need for low emission housing that is free of chemicals and other substances that make them ill, or may increase their sensitivity levels to chemicals in the future. As allergy can be a predisposing factor for both, asthma and chemical sensitivities, individuals who suffer from these problems can also have specific needs in housing that require similar considerations.

Location and choice of materials can create poor indoor air as the quality of indoor air starts with the quality of the outdoor environment. The same air pollutants in outdoor air are also found indoors,

with indoor air further polluted by substances brought into the dwelling. These include building materials, paint, adhesives, consumer products such as cleaning chemicals, fragranced toiletries, recently dry cleaned clothes, synthetic materials in furnishings and floor coverings, chemicals used for pest control, books and newspapers etc. (www.epa.gov/iaq). People with allergy and chemical sensitivities vary in their degree of sensitivity to different chemicals and products, they generally need to avoid such products in order to prevent immediate symptoms and further deterioration in their health.

Access to detached housing is essential for individuals with allergy, asthma and chemical sensitivity as they cannot live in close proximity to others who do not have their level of sensitivity to commonly used personal care products, pesticides and household cleaning products, or who smoke. As noise sensitivity is also a common problem for individuals with chemical sensitivity they should not be housed close to others who may engage in noisy behaviours or play loud music. Individuals with these problems may be better housed together in a cluster to avoid the nuisance fumes and noise from their neighbours that can cross the fence line and impact severely on their health and well being.

The following are some basic suggestions to assist with housing for disability arising from Environmental Sensitivity e.g. allergy, asthma or chemical sensitivity:

LOCATION - Preferably in clean air but this is difficult with current pollution levels. Housing should be available in a suitable location.

Suggestions

Close to sea to take advantage of sea breezes and clean air.

On a hilltop or high position to take advantage of breezes and improve airflow indoors

As far away as possible from:

- **Neighbouring houses** – this is essential if sensitivity levels are severe and fumes from fragrances products such as laundry products, detergents, disinfectants, personal care products, perfumes, pesticides, wood smoke, paint, motor exhausts, hobby products etc. Ideally, chemically sensitive individuals need to be housed in areas that are not built out. Where this is not possible, the surrounding properties should be materials that do not require painting. Noise may be an issue for those with ear disease or other conditions that produce noise intolerance.
- **Weatherboard houses or houses built from other materials that require painting** – these can create major health problems to chemically sensitive individuals when they require re-painting or renovations. Many chemically sensitive individuals become severely ill when exposed to paint fumes and as some paints take a long time to outgas e.g, oil based enamel, wood stains, all surrounding dwellings need to be brick or some other finish that does not require painting.
- ◆ **Coastal wetlands** - where coastal wetlands are present individuals will be subject to large volumes of chemicals or live bacterium in the form of biological control agents for mosquito treatments. These can be human allergens, respiratory irritants and neurotoxins. The health impact of these with city pollution is unknown.
- ◆ **Canal developments** - these are often sprayed for midges and mosquitoes.
- ◆ **Industrial estates, particularly where zoned for noxious industry and engaged in waste destruction, asphalt plants, CCA treatment facilities, Oil recycling, Fertiliser plants** - these can contain very toxic substances that are respiratory irritants, carcinogens, human allergens e.g. dioxins, sulphur dioxide, toluenediisocyanate, furans.
- ◆ **Hospital incinerators, Council incinerators, Dump sites**, - these can seriously contaminate air quality with very toxic substances that include human allergens, respiratory irritants, neurotoxins, carcinogens.
- ◆ **Parks, Creeks, Playing fields, Golf courses** - a lot of herbicide and insecticide can be applied. These can contain human allergens, respiratory irritants and neurotoxins. Some pesticides are associated with cancer.
- ◆ **Power stations, electric generators, Overhead power lines, Mobile phone towers**. Some individuals are sensitive to electromagnetic radiation and need to take these into consideration when choosing a suitable location.
- ◆ **Petrol stations, Main roads, a heavily trafficked road, or freeway** - exhaust fumes contain respiratory irritants, neurotoxins, can cause high blood pressure, cardiac disease, cancer, childhood leukemia and affect the birth weight of infants.
- ◆ **Schools** - these are frequently painted, treated with pesticides inside and around the grounds, which are also treated with herbicides. www.oztoxics.org/

- ◆ **Shopping centres** - heavy motor traffic around shopping centres can cause respiratory irritation, neurological problems and cancer.
- ◆ **Train lines** - **these are regularly treated with pesticide and herbicide.** Pesticides and herbicides can cause many health problems including respiratory depression and neurological problems.
- ◆ **Farms** - agricultural chemical usage has caused many health problems. Some problems are allergic reactions, respiratory disease, neurological disorders, cancers, endocrine disruption, developmental delay, low birth weight babies, still births, birth deformities. Some agricultural chemicals can bioaccumulate in the human body and affect genetic material (DNA) which in turn can affect future generations.

BUILDING MATERIALS

Suggestions

Ensure that any materials capable of contaminating indoor air and affect health are not used in the dwelling. Building products and paints that are low in Volatile Organic Compounds (VOCs) are essential to reduce contaminant levels inside the dwelling. Discussions with public housing authorities are essential at this point as each individual will have different sensitivities or sensitivity levels and may need to define which materials need to be avoided. It is essential to ask the person with a disability what they know about materials they tolerate and don't tolerate. In these discussions, it is important that the client is heeded as poor choice of materials can severely exacerbate existing health problems and inflict high medical costs on an individual who is poorly resourced to deal with any increased costs.

If there is any question about the suitability of materials, getting a material safety data sheet from the manufacturer should be the first basic step. This will give further information about a product and assist to assess product suitability (<http://siri.org/msds/mf/cards/> or www.cdc.gov/niosh/). Assistance from the treating doctor may also be required if the issue is understood. Further information about building materials and products is available on the Internet from a variety of sources such as www.epa.gov/air <http://ieq.nibs.org>

Building materials should be low maintenance materials as much as possible because products used for repairs or painting are likely to cause ill health.

BUILDING MATERIALS - as much glass, metal, solid timber (tolerated timbers) and ceramic material as possible.

External walls- brick, cement brick. While timber is an acceptable material it may require painting which can greatly exacerbate disabling health conditions. While painting outside is less of a problem than painting inside an individual with multiple chemical sensitivity (MCS) would have to move out for a period of time. This raises the question of where would such an individual go? There is no crisis accommodation suitable for individuals with MCS.

Roofing - terracotta (clay) tiles, whirly birds in roof to increase air exchange. Some individuals with chemical sensitivities react to electromagnetic radiation. They may not feel well under a metal roof.

Flooring - ceramic tiles, tolerated solid timber. Carpet should always be avoided as should cement floors. Cement floors can be a source of cement dust that can be highly irritating, an added problem with cement is that it contains additives such as chrome and formaldehyde (both sensitisers). Timber flooring is a better option. For a client with arthritis or joint disorders, hard concrete floors will exacerbate their pain state. Stain on timber flooring should be water based.

Internal walls - tolerated materials only - no board products. Some individuals do not tolerate plasterboard.

Wet wall areas - ceramic tiles

Cupboards - solid timber (Kitchen and Bathroom). Avoid any form of chipboard e.g. MDF as it is a major source of formaldehyde contamination. Melamine can also cause severe reactions in chemically sensitive individuals.

Bench tops - stainless steel, powder coated metal or ceramic

Electric stove, cooling, heating and hot water service - **no gas on premises.** Some of these may be better run on solar energy if available.

Bath and basin - porcelain, enameled metal, stainless steel (no fiberglass or plastics)

Shower Base - stainless steel or ceramic

Laundry tub - stainless steel

Taps - stainless steel. Some may tolerate powder coatings.

Decking - Standard grade Australian hardwood decking secured with 50mm galvanised nails.

Water – with the introduction of fluoride to our drinking water, some individuals have found they are unable to drink the water without adverse health impacts or skin problems. Whole of house filtration with a reverse osmosis system is necessary to avoid ill health and skin problems.

Objective - to reduce VOCs and other indoor air contaminants that can provoke reactions in sensitive individuals

The following materials are not acceptable for people with allergy/chemical sensitivities

- ◆ Chipboard – a source of formaldehyde, VOCs. Should never be brought into dwelling.
- ◆ Carpet – dust, mould, VOCs from synthetic materials in underfelt, adhesives and materials in the carpet.
- ◆ Plastics/Synthetic finishes – VOCs
- ◆ Melamine - VOCs
- ◆ Laminated chipboard – VOCs
- ◆ Methylmethacrylate sinks and bench tops - sensitiser
- ◆ Fiberglass products including ceiling insulation - VOCs
- ◆ Fluorescent or halogen lighting – can flicker, causes melanoma, migraine and epileptic seizures. Not suitable for chemically sensitive individuals with light sensitivity due to glare
- ◆ Gas – VOCs, nitrogen dioxide
- ◆ Solvent based products – water based products should be used in place of these.
- ◆ Pest control - housing for individuals with allergy/chemical sensitivity/respiratory disease should not be treated with pesticides.
- ◆ Cleaning - if a dwelling has been previously occupied and needs to be cleaned, it is essential that the client must be consulted prior to any cleaning to ensure that only tolerated cleaning products are used. Should the dwelling have carpets care must be taken to ensure that no scented products or solvent based products are used.
- ◆ Maintenance - should a dwelling require maintenance prior to occupation by a chemically sensitive individual, the individual should be consulted as to tolerated materials.

Note: Many substances used in domestic dwellings are known to be injurious to human health. Some such substances e.g. formaldehyde are known to be higher in the domestic environment than in the workplace. While acceptable air levels of some such substances are set for the occupational environment, no levels are set for domestic dwellings. Further domestic dwellings are not routinely sampled for these toxins and the medical profession is not trained to diagnose injury arising as a result of exposures in the home. In the absence of any known treatment following a sensitisation, as with allergy, avoidance is the only known method of health care. Some nutritional substances and medications are helpful to control symptoms but there is no known cure. Problems associated with indoor air quality have been known for a very long time.

HOUSE DESIGN

- A detached house with a minimum of 2 Bedrooms for a single individual is essential as items of furniture and clothing in the sleeping area are likely cause adverse health impacts. As an allergy sufferer/asthmatic or chemically sensitive individual will spend more time in their bedroom than an individual without these disabilities, they need a room devoid of materials that cause reactions. The bedroom should be a safe haven where they can retire for rest and recuperation. This is essential for maintaining health and being able to get on with day to day activities.
- Detached – as far away from neighbors as possible to offset health problems exacerbated by cigarette smoke, wood heaters, pesticides, strong detergents/disinfectants or laundry products, fragranced products including scented candles, incense and essential oils being burned. Some individuals with behavioural disorders, MCS, chronic fatigue/fibromyalgia syndrome may have a low noise threshold and may not tolerate living in a duplex, town house or unit.
- Open plan - with good cross flow ventilation to maximise air exchange.
- Entrance area that can be closed off from rest of house
- Kitchen that can be closed off from the rest of the house. This is essential as the odours from appliances and cooking may make a chemically sensitive person ill.
- Built up off ground to allow good cross flow ventilation under house (must be dry at all times for mould control) and not have concrete floors.
- Concrete stumps and ant caps or Termimesh - no pesticides inside, around or under dwelling.
- A dry, secure outside storage area is essential for storage and offgassing. New furnishings/electrical appliances/products may need to be left outside of the house for a period of time to allow them to offgas before they can be brought inside and not impact adversely on health. Things like mowers also need to be securely stored well away from the dwelling.

- Windows and doors should seal adequately to allow for efficient air filtering or air conditioning. These work inefficiently if the windows and doors do not seal properly.
- Power points - persons with allergy, respiratory disease and chemical sensitivities may need more power points to run respirators, vaporisers, air conditioners, air filters or other air cleaning devices.
- Exhaust fans in kitchen and bathroom for mould and odour control are essential. Ventilation can also be assisted by a whirlybird in the roof.
- Lighting - Incandescent only. Fluorescent and halogen lighting can cause melanoma, migraines or epileptic seizures.

Note: *Chemically sensitive individuals should not be accommodated in units or townhouses as their health will be compromised by close proximity to individuals who may smoke, use pesticides, fragranced products, burn scented candles or incense. Some substances such as pesticides and fragranced products may cause life-threatening allergic reactions. Those with a low noise tolerance may not tolerate loud music or other noises in close proximity.*

The South Australian Experience

South Australia has begun to make inroads into the MCS problem. In 2005 a Parliamentary Inquiry into MCS conducted by the bicameral Social Development Committee tabled its findings in the Legislative Council. The report concluded that "MCS is very real and that many individuals experience considerable suffering, particularly in light of the lack of recognition surrounding this condition."

A complete copy of the Inquiry is available at <http://www.parliament.sa.gov.au/Committees/Standing/LC/SocialDevelopmentCommittee/CompletedInquiries/22NdReportMultipleChemicalSensitivity.htm>

Since that time the South Australian Government has regularly convened an interdepartmental committee, the MCS Reference Group, to guide debate on MCS and oversee the implementation of the recommendations arising from the Inquiry.

The MCS Reference Group is currently:

- Considering the need for ongoing monitoring of the prevalence of MCS in South Australia.
- Developing guidelines for local governments on mitigating MCS through minimizing exposure to herbicides.
- Developing herbicide/pesticide No-Spray Registers with local governments in order to better identify and protect people in the community with MCS and chemical sensitivities generally.
- Considering a range of education brochures to provide information on MCS to the public and relevant professional groups, such as general practitioners.
- Ensuring that the Department of Primary Industries and Resources' Chemical Trespass Unit is aware of MCS issues and is able to deal fairly with the needs of people with MCS in complaints where neighbour's pesticide use is impacting on their health and their ability to enjoy the amenity of their own homes.
- Attempting to address MCS disability access issues with respect to services and public spaces. In 2006 the Department of Administrative and Information Services included MCS in its Disability Action Plan. Since then the Department of Families and Communities has included several MCS related questions in its disability access checklist guide for government owned and leased buildings.
- Developing hospital protocols for the care of patients with MCS. These are based on existing draft guidelines first developed by the Royal Brisbane Hospital. When completed the protocol will be adopted by all public hospitals in South Australia.

Progress on these issues has been slow but is continuing. The MCS Reference Group has not yet addressed the Inquiry into MCS' recommendations for:

- Placing MCS on the Australian Health Ministers' Advisory Council agenda.
- Lobbying the federal government for research into less toxic methods for weed control.
- Lobbying the federal government for a review of the adequacy of the chemical regulatory system in assessing MCS issues, including product labelling.

In addition to the work of the MCS Reference Group, there are other government departments and institutions in South Australia attempting to address MCS issues.

The Department of Primary Industries' Plant Health Operations, which is responsible for the control of fruit fly in South Australia, has implemented a number of reforms to the benefit of people with MCS. Following major public concern about the over use of pesticides in the fruit fly eradication program, with related reports of people developing MCS and other serious health problems, a review of the fruit fly eradication program was undertaken in 2003. This resulted in the suspension of the use of organophosphate pesticides, which are notorious for their reported ability to induce MCS, and the introduction of integrated pest management using sterile fruit fly releases and minimal amounts of least toxic pesticide. The program has adopted a notification register for people with MCS who are immediately informed about any fruit fly outbreaks and related pesticide use. Issues surrounding MCS are now considered very seriously by Plant Health Operations staff.

The Department of Families and Communities' Housing SA has conducted several staff education workshops on MCS. Housing SA has attempted to provide reasonable accommodation when initially housing some clients with MCS but the response has been inconsistent. People with MCS are routinely denied access to public housing due to claims of lack of housing stock suitable for their needs. There is no purpose built housing for Housing SA clients with MCS. However, the Whalers Housing Cooperative from the South Australian Community Housing Association has built several environmental apartments suitable for people with MCS in Port Elliot, a seaside town 80 km south of Adelaide. Despite these developments public housing for people with MCS in South Australia is consequently entirely inadequate. People with MCS are routinely left in completely substandard accommodations such as tents, caravans, tin sheds and cars.

The South Australian Dental Service, including the Adelaide Dental Hospital, has adopted a policy which provides information to staff on MCS and clarifies organisational requirements in managing clients with this condition. The policy includes public notification asking that clients and visitors to the hospital avoid using strong fragrances.

The Royal Adelaide Hospital is just beginning to recognise the need for fragrance controls in the hospital environment. The hospital's Health Promotion Unit requires its staff and volunteers to refrain from wearing "perfumes and powders" when working in the unit.

The Community Response in South Australia

In addition to the work of the MCS Reference Group there have been other developments in the South Australian community that assist people with MCS with their disability access needs. It appears that the broader community is becoming more informed of issues surrounding MCS and more willing to implement reasonable accommodation measures, notably in the areas of controlling the use of personal fragrances, ensuring good indoor air quality, using fragrance free cleaning/sanitation products, selecting least toxic renovating materials, and adopting integrated pest management systems.

A number of community based organisations have included MCS within their disability access plans and occupational health and safety policies. These include Disability Information and Resources Centre, Disability Advocacy and Complaints Service SA, Disability and Rehabilitation Professionals Association, AIDS Council of South Australia, Relationships Australia (SA), Art Gallery of SA, ME/Chronic Fatigue Syndrome Society of SA, Health Consumers Alliance, Catholic Education Office, and Unions SA Occupational Health and Safety Committee.

Although South Australia has finally started to respond to the MCS problem, in practical terms these developments have not yet resulted in significant improvements in the actual lives of people with MCS, who are routinely denied access to basic services and public spaces due to chemical barriers and general public ignorance of the issues. However, continued developments will hopefully lead to more valuable progress in time. There is an urgent need for a nationally coordinated program recognising the basic human rights and disability access requirements of people affected by MCS. Such a program would have immense benefits not only for people with MCS but also for the large percentage of the population who suffer with other types of environmental sensitivities.

More information on how we can make things better for individuals with MCS/ES in Australia can be found in the publication by Pamela Reed Gibson 'Understanding and Accommodating People with Multiple Chemical Sensitivity in Independent Living' which is provided on the CD that accompanies this submission or at www.ilru.org/html/publications/bookshelf/MCS.html

Homelessness case study: Dora is a 40 year old woman with severe MCS and EMS who cannot find a house in which she can safely live. She lives in her car most of the time because houses she has rented caused reactions as they were not low toxic homes. While looking for another more suitable house, a real estate agent disbelieved her and thought she was a psychiatric case. He called the police who notified local psych services. Dora's mother said she was schizophrenic and she was detained against her will for seven hours while subject to a psychiatric assessment. Dora is not schizophrenic according to her GP. Her mother, like the real estate agent and the police do not believe that she has chemical sensitivities or understand her problems. The latest development with Dora is that she has become suicidal because she cannot get any help, she is very ill, cannot find a safe place to live and since she was detained by the local psychiatric service is now constantly visited by police in her area. Recently, she drove off into the bush to end her life and the local police, a TV station crew and some individuals drove around the area looking for her. She was found, safe, but in a highly volatile and distressed state and taken to a house in the local area occupied by another chemically sensitive person. She did not tolerate the house and became unstable again. We are unable to find her a safe place to live, rest and recover and be able to care for herself. Currently, we have lost contact with Dora and fear for her life.

RECOMMENDATIONS

In any population there is always a group of individuals that does not tolerate substances at commonly tolerated levels. In the Australian population these are the individuals with ES/MCS who need to be taken into account in housing and homelessness legislation.

Recommendation 1

Ensure that inquiries into the principles and service standards that could be incorporated in such legislation includes environmental sensitivities, in particular allergy and chemical sensitivities.

Recommendation 2

Ensure that the new legislation

- safeguards ES/MCS disability rights
- safeguards ES/MCS human rights;
- ensures equity of access to ES/MCS disability accessible housing to avoid homelessness;
- ensures the development of indoor air standards in the Australian Building Code so that Public Health and in particular, those with ES/MCS are protected from toxic materials that out gas and cause ill health or exacerbate existing health problems e.g. nasal allergy, respiratory disorders, chemical sensitivity.

Recommendation 3

Ensure that the principles underpinning the provision of services to Australians who are homeless or at risk of homelessness include the special need of those with ES/MCS to ensure that they do not become homeless which can cause a worsening of their disability.

Recommendation 4

Ensure that the scope of any legislation with respect to related government initiatives in the areas of social inclusion and rights includes ES/MCS. Currently the Basic Human Rights and Disability Rights of those with ES/MCS are currently not observed by the Australian Government.

Recommendation 5

The model used for ES/MCS should be an integrated model that takes a social, medical and disability approach. The models mentioned in the terms of reference may not be applicable to all circumstances.

References

Australia. NICNAS/OCS. 2008. A Scientific Review of Multiple Chemical Sensitivity: Identifying Key Research Needs. http://www.nicnas.gov.au/Current_Issues/MCS/MCS_Report_PDF.pdf

Caress, S M and Steinman, A C. 2005. National prevalence of asthma and chemical hypersensitivity: An examination of potential overlap. *Journal of Occupational and Environmental Medicine* 2005;47:518-522

Fitzgerald, J and Mangas, S. 2004. Summary of Health Monitor Surveys, South Australian Department of Health, Sept 2002.

Kassirer, J and Sandiford, K. 2000. Socio-economic Impacts of Environmental Illness in Canada. Cullbridge Marketing and Communications.

Meggs, W J et al. 1996. 1996 prevalence and nature of allergy and chemical sensitivity in a general population. *Archives of Environmental Health* 51:275-282

Morgan, D P. 1982. Recognition and Management of Pesticide Poisonings. US Environmental Protection Agency. EPA-540/9-80-005.

NSW. Health, Department of. 2002. NSW Adult Health Survey.

Reed-Gibson, P., et al., 2003. Perceived Treatment Efficacy for Conventional and Alternative Therapies Reported by Persons with Multiple Chemical Sensitivity, *Environmental Health Perspectives*, 111:1498-1504, Sept 2003.

Sears, M E. 2007. The Medical Perspective on Environmental Sensitivities. Canada, Human Rights Commission. http://www.chrc-ccdp.ca/pdf/envsensitivity_en.pdf.

Shusterman D and Murphy M. 2007. Prevalance of non-allergic triggers among seasonal allergic rhinitics and normals. AAAAI Annual Meeting. Abstract 441, presented Feb. 25, 2007

US. NIBS. 2005. IEQ Indoor Environment Quality. National Institute of Building Sciences. Indoor Environment Quality. <http://ieq.nibs.org>.

US Center for Disease Control. 2005. Third National Report on Human Exposure to Environmental Chemicals. www.cdc.gov

Wilkie, C and Baker, D. 2007. Accommodation for Environmental Sensitivities: Legal Perspective. Canada, Human Rights Commission. http://www.chrc-ccdp.ca/pdf/legal_sensitivity_en.pdf

US Environmental Protection Agency, Indoor Air Quality. www.epa.gov/iaq

Some other web resources

<http://www.jan.wvu.edu/media/MCS.html>

<http://www.jan.wvu.edu/media/fragrance.htm>

www.ei-resource.org

<http://www.ehcd.com/>

Prepared by Dorothy M Bowes for ASEHA Qld Inc 7 August 2009