

SUFFERING AN EXCESSIVE BURDEN: HOUSING AS A HEALTH DETERMINANT IN THE FIRST NATIONS COMMUNITY OF NORTHWESTERN ONTARIO

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Abstract / Résumé

On-reserve housing in Canada is, according to the Royal Commission on Aboriginal Peoples, "in a bad state." A large portion of the estimated 89,000 on-reserve houses in Canada, are in poor condition, overcrowded, improperly serviced, poorly sited and generally, inappropriate given the culturally based shelter needs of the approximated 423,000 on-reserve residents. In Ontario, where the estimated 19,667 on-reserve houses accommodate a population of approximately 74,676, housing units too are in poor condition. In the Treaty 3 area of northwestern Ontario, the twenty-six reserve community's 2,182 housing units are also less than adequate in meeting the shelter needs of the reserve population. Inadequate housing raises the spectra of housing related health concerns. Ranging from tuberculosis to shigellosis right through to mental health issues, inadequate housing and the variety of health issues related to inadequate housing suggests that on-reserve housing is, in many ways, a health risk.

Selon la Commission royale sur les peuples autochtones, le logement dans les réserves canadiennes est « en mauvais état ». Au Canada, on évalue que bon nombre des 89 000 maisons dans les réserves sont en mauvais état, surpeuplées, insuffisamment entretenues, mal situées et généralement inappropriées, compte tenu des besoins en logement culturellement fondés des quelque 423 000 résidents des réserves. En Ontario, où on évalue que les 19 667 maisons dans les réserves accueillent une population d'environ 74 676 personnes, les unités de logement sont aussi en mauvais état. Dans la zone du Traité n° 3, dans le nord-ouest de l'Ontario, les 2 182 unités de logement des 26 réserves de la région sont très inadéquates pour répondre aux besoins en logement de la population. Qu'il s'agisse de la tuberculose ou de la dysenterie bacillaire, ou même de problèmes de santé mentale, les logements inhabitables et la variété de problèmes de santé liés aux logements inhabitables suggèrent que le logement dans les réserves est, sous nombre d'aspects, un risque pour la santé.

Introduction

On-reserve housing in Canada is, according to the Royal Commission on Aboriginal Peoples, “in a bad state.”¹ A large portion of the estimated 89,000 on-reserve houses in Canada, are in poor condition, overcrowded, unaffordable, improperly serviced, poorly sited and generally, inappropriate given the culturally based shelter needs of the approximate 423,000 on-reserve residents.² On-reserve housing conditions are such that the Department of Indian and Northern Affairs, who along with the Canada Mortgage and Housing Corporation, has accepted much of the responsibility for ensuring that on-reserve housing needs are being met, maintains that over forty percent of the units are inadequate.³ Canada Mortgage and Housing Corporation in the Research Highlights document, “Housing Conditions of Native Households,” makes a similar claim when it suggests that only half of all on-reserve housing meets or exceeds the standard for suitability and adequacy.⁴

In Ontario, where the estimated 19,667 on-reserve houses accommodate a population of approximately 74,676, housing units too are in poor condition, overcrowded, unaffordable, improperly serviced, poorly sited and generally inappropriate.⁵ According to the Corporate Information Management Directorate of the Department of Indian and Northern Affairs, approximately forty-one percent of the on-reserve housing in Ontario requires major and/or minor repairs and a further five percent needs to be replaced.⁶ Beyond housing adequacy, twenty-five percent of Ontario’s on-reserve drinking water systems are “not up to basic safety standards”, almost twelve percent are not serviced with any type of sewage disposal system, roughly eight percent have no electrical servicing and about half of the on-reserve communities have either no solid waste disposal services or those services that are provided are inadequate.⁷

In northwestern Ontario, or more specifically, the Treaty 3 area of northwestern Ontario, there are twenty-six reserve communities housing, according to the Department of Indian and Northern Affairs’ *Housing and Infrastructure Assets Summary Report*, approximately 7,580 individuals.⁸ Stretching from Saugeen First Nation in the east to Iskatewizawaagegan in the west to Wabauskang in the north to Couchiching in the south, the community of the Treaty 3 area includes approximately 2,182 housing units.⁹ Like the general on-reserve housing stock in Ontario, these units leave much to be desired. Indeed, one-time Grand Chief of the Grand Council Treaty 3 and current band councillor of Naotkamegwaning First Nation, Francis Kavanaugh, in reflecting on the housing question, suggested that “the biggest issue Aboriginal communities are facing is the lack of adequate housing.”¹⁰ Speaking specifically to the circumstances of housing in the Treaty 3 region,

Kavanaugh indicated that there is

“...severe backlog in housing. In our territory alone, I think there are about 5,000 houses that need to be built to catch up to the needs. Present housing is in need of renovation – major renovation because of various problems such as mould.... Bad housing leads to social issues and social issues are...a big item for a lot of leaders.”¹¹

The so-called “social issues” can also be described as health or health related issues. Where, for example, people are contracting respiratory disease because of mold infestation or shigellosis because of inadequate housing, sanitation, and water delivery systems or tuberculosis because of crowded living conditions, housing is more than a social issue, it is also a health issue.¹² As is suggested by Health Canada, on-reserve housing is one of the more significant “Non-Medical Determinants of Health” and further, a fairly accurate measure of community well-being.¹³

On-Reserve Housing as a Health Determinant

In the formative study, *Health Effects of Housing and Community Infrastructure on Canadian Indian Reserves*, T. Kue Young, Linda Bruce, John Elias, John O’Neil and Annalee Yassie have argued that in Canada’s reserve communities “a variety of health problems are associated with poor housing.”¹⁴ The so-called “range of health problems that can be attributed to poor housing conditions” they maintain further, “is large, from psychological and physiological effects to specific diseases varying in the degree of associated morbidity.”¹⁵ Including eye infections, tuberculosis, meningitis, measles, intestinal, skin and middle ear infections, respiratory diseases, asthma and diarrheal diseases, the authors point to overcrowding, improper ventilation, inadequate heating, high humidity levels, inadequate water servicing and waste disposal (sewage and solid wastes), poor drainage and unit disrepair, as the major housing related health issues confronting the reserve community. The authors also speak to the mental health and so-called “Psychosocial Effects” impact of inadequate housing, maintaining that these too are factors of poor housing.¹⁶

In 1996 the Royal Commission on Aboriginal Peoples reported that:

“The current state of Aboriginal housing and community services poses acute threats to health. Disease spread by inadequacies of water, sanitation and housing (tuberculosis and infections, for example) are more common among Aboriginal people than among non-Aboriginal people.”¹⁷

Arguing further that thirty-eight percent of the on-reserve houses occu-

ried by Aboriginal peoples in Canada are in need of major repair, twenty-six percent are in need of replacement, fourteen percent are without a piped water supply, eleven percent had no bathroom facilities, nineteen percent had no flush toilet, seven percent have no electrical services, eleven percent require additional bedrooms in order to adequately accommodate the number of occupants, almost five percent contain multiple families and that approximately twelve percent of the households were in core housing need, the Royal Commission clearly documented the inadequacy of on-reserve housing.¹⁸ More importantly, however, the Commission's *Report* made the link between housing inadequacy and well-being.¹⁹ Concluding that the "bad state" of on-reserve housing was "threatening the health and well-being of Aboriginal people," the Royal Commission called for dramatic action to address the housing needs of the on-reserve population in an effort to solve many of the other "social, economic and political problems" confronting the on-reserve population.²⁰

Also in 1996, the Canadian Medical Association through their publication, the *Canadian Medical Association Journal*, made the housing-health connection, albeit rather tentatively, in the special issue entitled "Aboriginal Health." Authors Harriet MacMillan, Angus MacMillan, David Offord and Jennifer Dingle in the "Cover Story," suggested that in order to "understand the health issues of Native (sic) people, it is essential to have some knowledge of the conditions in which they live."²¹ Looking at what was cited as "Health determinants," the authors concluded that "Aboriginal people generally live in poor housing" and as a result, they "sustain a disproportionate share of the burden of physical disease and mental illness."²²

Shigellosis, one of the infectious diseases that was linked by Young *et. al.* to inadequate housing in the *Health Effects* study, was more thoroughly developed as part of the on-reserve housing equation in a 1997 paper entitled, "Shigellosis on Indian Reserves in Manitoba, Canada: Its Relationship to Crowded Housing, Lack of Running Water, and Inadequate Sewage Disposal."²³ In examining the "relationship between disease rates and water delivery, sanitation, and household density," the authors argued that "epidemics of shigellosis may be preventable through the provision of adequate housing, sanitation and water delivery systems."²⁴

In 1999, Health Canada through the publication *A Second Diagnostic on the Health of First Nations and Inuit Peoples in Canada* entered into the discussion of the ongoing, housing related, health issues confronting the on-reserve population. The Health Canada report pointed specifically to overcrowding and housing adequacy as on-reserve, health

determinants. Overcrowding, according to the report, was in part responsible for “the transmission of infectious diseases such as tuberculosis, hepatitis A and shigellosis” and also, the increased risk for “mental health problems; family tensions and violence.”²⁵ Housing adequacy or the lack of adequate housing was linked to mold infestation which in turn was linked to “a variety of adverse human health effects including respiratory and immune system illnesses.”²⁶ Although not as directed as the Royal Commission *Report* in its’ conclusions, the Health Canada report also made housing related health recommendations. In this regard, the on-reserve health problems were described as being “in part due to the widespread inequities the Aboriginal population faces” and that to address these issues it was necessary to address the “socioeconomic conditions” on reserve.²⁷

The Department of Indian and Northern Affairs in a report entitled *On-Reserve Housing Policy, Impact Assessment 1996-2000*, also acknowledged the connection between adequate housing and health. In the “Executive Summary” to the report it was clearly stated that

“It has been recognized that decent housing is a prerequisite for healthy and productive communities. Inadequate housing effects one’s health, education, employment and social well-being.”²⁸

Although perhaps not as pointed as the Health Canada document, the link that was made between healthy and productive communities and “decent housing” clearly underscored the fact that Indian and Northern Affairs, at least in theory, realized the importance of ensuring that the Aboriginal community had access to adequate housing.

The Walkerton Inquiry, in its final report entitled “A Strategy for Safe Drinking Water,” tabled an overview assessment of on-reserve water servicing which spoke to on-reserve water quality as “some of the poorest quality water in the province.”²⁹ Water supply, as is argued in *Health Effects of Housing and Community Infrastructure*, is very much apart of the healthy housing equation.³⁰ As is shown in the Walkerton report, “water is not provided for Aboriginal (sic) people at the standards that generally prevail throughout Ontario.”³¹ Indeed, in itemizing the issues associated with on-reserve water supply, the Commission spoke to infrastructure that is “either obsolete, entirely absent, inappropriate, or of low quality,” operators that are not “adequately trained or certified,” “inadequate” testing or inspection procedures and “frequent” microbial contamination.³² The so-called “high-risk,” water supply systems found on a “high proportion of reserves” clearly exasperate on-reserve “health and safety concerns.”³³

In the April 2003, *Report of the Auditor General of Canada*, Sheila

Fraser not only vividly captured the “unacceptable housing situation on reserves” but she also clearly underscored the connection between inadequate housing and poor health.³⁴ In the “Main Point” summary of the *Report*, for example, Fraser argued that:

“Poor housing on reserve has a negative effect on the health, education, and overall social conditions of First Nations individuals and communities.”³⁵

In identifying the problem, Fraser went on to say that:

“...there were about 89,000 housing units on reserve to accommodate about 97,500 households, a shortage of 8,500 units. In addition, around 44 percent of existing units required renovations.”³⁶

While overcrowding and housing adequacy were described by the Auditor General as significant on-reserve health determinants, the main consequence of “poor housing” was presented in the *Report* as being mold contamination. Described as a fungus that “produces poisonous substances that can cause headaches, dizziness, and nausea,” mold contamination was directly related to the “lack of maintenance, inadequate air circulation and ventilation, poor site selection and drainage, overcrowding and improper construction.”³⁷ Concluding that the “unacceptable housing situation on reserves is a long-standing problem” and that while “some progress” has been made in addressing on-reserve housing needs, the Auditor General concluded that “the high level of substandard housing and overcrowding are expected to continue.”³⁸

Health Canada’s recent discussion of Aboriginal health and well-being has resulted in the release of the December 2003 document entitled *A Statistical Profile on The Health of First Nations in Canada*. Touching on health related topics that ranged from perinatal health to immunization, the *Statistical Profile* offered a detailed overview of the health of the First Nation community as was seen by the federal government. While the study identified “Housing and Community Infrastructure” as one of the five “Non-Medical Determinants of Health” it also concluded that:

“It is difficult to isolate housing, water supply, and sanitation from other determinants of health—such as socio-economic status accessibility to health services and nutrition—in order to determine the specific impact of individual factors.”³⁹

Difficult or otherwise, the report made the connection between overcrowded units, inadequate water and sewage delivery systems, poor water quality and, major and minor repair requirements and First Nations health. It stated, for example, that there “is a higher risk of tuberculosis in communities with higher levels of crowding” that communities “with overcrowded housing conditions, inadequate sewage disposal

or lack of running water may be at risk for hepatitis A virus outbreaks” that “higher rates of shigellosis have been associated with inadequate sewage removal systems, substandard water delivery systems and overcrowded housing” and that “inadequate housing can lead to mould growth, which leads to a number of health problems.”⁴⁰

In the document *Improving the Health of Canadians*, housing is described as one of the “four frequently cited determinants of Aboriginal health.”⁴¹ In many ways acknowledging the inadequacies of on-reserve housing, the report argues further that poor construction which often leads to mold growth, gives rise to “health problems such as respiratory and immune system complications” that crowding, inadequate sewage disposal and poor water servicing increases the “incidence of shigellosis” and that high density housing occupancy heightens the occurrence of tuberculosis.⁴² The Canadian Institute for Health Information, like Health Canada and the Auditor General, clearly makes the link between “poor housing conditions and a host of health problems” that confronts on-reserve residents.⁴³

Whether it is shigellosis, hepatitis, tuberculosis, meningitis, measles, respiratory diseases, asthma, diarrheal diseases, intestinal, skin or middle ear infections, eye infections or what Health Canada has called, “mental health problems, family tensions and violence,” the literature clearly suggests that many of the health issues encountered by the on-reserve population are tied directly to the conditions of on-reserve housing.⁴⁴ Housing that is overcrowded and in short supply, poorly ventilated, inadequately heated, lacking in water servicing, waste disposal (both sewage and solid wastes) and electrical servicing, poorly sited (particularly for drainage) and that requires considerable repair and/or maintenance to make it habitable, offers a less than healthy living environment to on-reserve residents with limited housing options. Indeed, on-reserve housing, as a health determinant and a measure of community well-being, clearly demonstrates that the on-reserve population suffers “an excessive burden of many of the diseases associated with poor housing.”⁴⁵

On-Reserve Housing in Northwestern Ontario

The region that is now known as northwestern Ontario, has been occupied by Aboriginal Peoples since time immemorial. Including the Ojibway, Cree and Metis Peoples, the Aboriginal community of northwestern Ontario has fished, hunted, trapped, harvested wild rice and generally enjoyed the bounty of the land as has been provided by the Creator from the beginning of time. Like other Aboriginal Peoples, the people of northwestern Ontario have had a special relationship with the land. Very much based on the world view or belief structure of the com-

munity and emphasizing a holistic perspective of their universe, this special relationship has allowed the Aboriginal community to prosper.⁴⁶ In the process, not only did they establish their winter lodges, their fish camps, their hunting grounds and/or their trapping territories but they also nurtured and maintained the resources of the land.

With the arrival of European peoples and the introduction of the Treaty process, the complexion of the Aboriginal community of northwestern Ontario changed dramatically. First through the Robinson - Superior Treaty of 1850, then Treaty 3 in 1873 and finally Treaty 9 in 1905 and the adhesions of 1929 and 1930, the Aboriginal community of northwestern Ontario slowly came to be a reserve based community. Treaty 3, for example, according to the Dominion of Canada's interpretation, stipulated that,

“The Saulteux Tribe of the Ojibbeway Indians and all other ...of the district hereafter described and defined, do hereby cede...and yield up to the Government of the Dominion of Canada for...Queen and Her successors forever, all their rights, titles and whatsoever, to the lands....”⁴⁷

and in return, the government of Canada set aside

“...reserves for farming lands...and also...other reserves of land in said territory hereby ceded...such reserves, whether for farm or other purposes, shall in no wise exceed in all one square mile for each family of five.”⁴⁸

Like the Robinson - Superior Treaty and Treaty 9, Treaty 3 as it came to be applied by the federal government, forced the Aboriginal community of northwestern Ontario to relocate and/or re-settle on to the so-called “reserves of land.”

Defined as a the territory that runs

“...from the watershed of Lake Superior to the north west angle of Lake of the Woods and from the American border to the height of land from which the streams flow towards Hudson's Bay,”⁴⁹

the Treaty 3 area encompasses approximately 88,000 square kilometres of what is now northwestern Ontario and a small portion of what is also eastern Manitoba. There are at present twenty-eight reserve communities located in the Treaty 3 area – two in Manitoba and twenty-six in northwestern Ontario. Based on community profile information collected by the Department of Indian and Northern Affairs it would appear as though Wabassemoong First Nation would be the largest of the Ontario communities with 914 on-reserve residents and Lac Des Mille Lacs First Nation the smallest with 3 on-reserve residents.⁵⁰ Average community size in terms of population would appear to be somewhere in the neigh-

borhood of 380 on-reserve residents.⁵¹

Working with the *Housing and Infrastructure Assets Summary Report* of the Department of Indian and Northern Affairs it is not only possible to get a glimpse of the housing circumstances of the Treaty 3 community but it is also possible to get an overview of community well-being. The data which documents population size, housing adequacy, housing occupancy, water, sewage disposal and community servicing, offers valuable insight into the First Nation community. It also suggests that in a communities such as Big Grassy where over forty percent of the housing units require either major/minor renovations or replacement or at the Ojibway of Onegaming community of Sabaskong Bay where one hundred percent of the housing units have no water service or at the Wabaseemoong First Nation community of Islington where there are approximately 5.5 occupants per housing unit, there are serious health implications associated with on-reserve housing in the Treaty 3 area.⁵²

The twenty-six Ontario, Treaty 3 communities have an estimated total of 2,182 housing units. The majority of the units have been considered “adequate” by the Department of Indian and Northern Affairs.⁵³ Approximately sixty-five percent of the houses identified as Treaty 3, on-reserve housing stock were determined to be adequate. The remaining thirty-five percent or approximately seven hundred and fifty units were assessed as inadequate.⁵⁴ Of these, approximately thirty-three percent of the units were described as requiring major repairs, fifty percent minor repairs and seventeen percent were designated as replacement units.⁵⁵ All in all, a fairly significant portion of the Treaty 3 housing stock is either uninhabitable or requires major remedial work. When, as is the case with large percentage of the Treaty 3 housing stock, housing units include structures with “sagging foundations,” “falling plaster” or “defective plumbing and/or electrical wiring,” housing is more than a remedial project; it in fact becomes a health risk.⁵⁶

Of the twenty-six communities, fourteen or almost fifty-four percent of the Treaty 3 communities have over forty percent of their housing stock recorded by the Department of Indian and Northern Affairs as requiring major/minor renovations and/or replacement. In four communities, Naicatchewenin, Northwest Angle #33, Northwest Angle #37 and Wabauskang, over eighty percent of the total housing stock requires major/minor renovations and/or replacement while in four others, Lac La Croix, Ochiichagwebabigoing, Wabaseemoong and Washagamis, almost fifty percent of the stock requires major/minor renovations and/or replacement.⁵⁷ The data, when it is broken down community by community, clearly suggests that a number of Treaty 3 communities are experiencing a housing crisis. The high health risks which are associ-

ated with inadequate housing have also become part of the Treaty 3 housing crisis. Occupancy rates are also a telling measure of housing adequacy. Two and three bedroom units which appear to be the norm in most of the Treaty 3 communities are accommodating on average 3.4 occupants. While this would not necessarily be described as overcrowding, in at least six communities occupancy rates are well over 4 people per unit. In the communities of Big Grassy, Grassy Narrows, Nicatchewenin, Naotkamegwanning and Seine River, occupancy rates are 4.1, 4.3, 4.3, 4.3, and 4.4 respectively while in the community of Wabaseamong it rests at 5.5.⁵⁸ Overcrowded housing not only leads to the rapid degeneration of the housing unit but as is suggested by T. Kue Young *et. al.*, rates of

“...respiratory, skin and eye infections and tuberculosis, meningitis, and measles have been found to be higher in crowded households.”⁵⁹

This too it would appear is part of the Treaty 3 housing conundrum.

The vast majority of the houses in the Treaty 3 area are serviced by piped water systems. Approximately eighty-two percent of the units recorded by the Department of Indian and Northern Affairs are connected to a piped water system.⁶⁰ This, however, does not necessarily mean that eighty-two percent of Treaty 3 households have access to piped, potable water. As was determined by the Walkerton Inquiry and even with piped water systems in place, the water provided to “First Nations reserves is some of the poorest quality water in the province.”⁶¹ In summarizing the water service problems of the reserve community, the inquiry pointed to the fact

“infrastructure is either obsolete, entirely absent, inappropriate, or of low quality; not enough operators are adequately trained or certified; testing and inspection are inadequate; microbial contamination is frequent; and distribution systems, especially on reserve, are sized to deliver about half the water available per to other Ontarians.”⁶²

Other methods of water servicing in the Treaty 3 area include community wells, individual wells, trucked service and what Indian and Northern Affairs has termed “other.”⁶³ Of the eighteen percent of the households not serviced by piped water systems, thirty-seven percent are dependent on a community well, twenty-two percent an individual well, thirteen percent are serviced by other means and roughly two percent are dependent on trucked water systems.⁶⁴ A fairly significant total of twenty-five percent of the non-piped water households have no water service whatsoever.⁶⁵ Particularly glaring here are communities such as Lac Seul First Nation where approximately fifteen percent of all housing

stock in the community has no water service (this is also described by the *Housing Infrastructure* report as having “no indoor plumbing”), Wabaseemoong where almost nine percent of the houses are without water service or Washagamis Bay where roughly thirty-three percent of the houses are recorded as having no water service.⁶⁶

Although Health Canada reports that ninety-three percent of on-reserve dwellings in Canada have “adequate sewage disposal systems,” in the Treaty 3 area and even with what the government may describe as adequate sewage disposal systems, the

“...thin soil cover typical of many communities located in the Canadian Shield may result in sewage effluent reaching the lakes and rivers relatively untreated, resulting in bacteriological contamination.”⁶⁷

This is particularly true in the Treaty 3 area where approximately five percent of all households are recorded as having “no wastewater service” whatsoever.⁶⁸ For the remaining ninety-five percent of the households, sewage disposal is provided through piped service, a community septic tank and field or an individual septic tank and field. The majority of units (forty-three percent) are serviced by a piped sewage disposal system while thirty-two percent are serviced by an individual septic tank and field and nineteen percent by a community septic tank and field.⁶⁹ In communities such as Lac Seul First Nation, however, where almost fifteen percent of the households are reported as being without any sewage disposal system or in Northwest Angle #37 where approximately thirty-three percent of the households are described as being without sewage disposal systems or Northwest Angle #33 where roughly twenty percent are without sewage service and Washagamis Bay where the percentage of households without sewage disposal systems is reported as high as thirty percent, there are serious health concerns. Secondary health concerns over the issue of sewage disposal are reported at Saugeen First Nation where from two hundred and sixty housing units sewage is discharged

“...to a collection and/or treatment system that is inconsistent with provincial/territorial practice and INAC Levels of Service Standard (LOSS) and poses a health or environmental threat.”⁷⁰

Community services which are identified by the Department of Indian and Northern Affairs as electrification, road access, solid waste disposal and fire protection are also very much a part of the on-reserve housing equation. In the Treaty 3 area, all the reserve communities with the exception of Wabauskang and Wabigoon Lake which are reported as being powered by a diesel generator, appear to be connected to the

electrical grid.⁷¹ While this does not necessarily mean that every household is powered by electricity (either from the grid or diesel generators) it does suggest that every Treaty 3 community is reported as having electrical capacity. Road access, like electrical capacity, appears to be a fairly standard characteristic of the Treaty 3 community and it would appear as though all communities are road accessible.⁷² Solid waste disposal and fire protection present a somewhat more dubious community service record. In roughly thirty-eight percent of the communities reporting on solid waste disposal, the methods of waste disposal were determined by the Department of Indian and Northern Affairs as “inadequate,” posing “a health or environmental hazard.”⁷³ The commonest methods of disposal which are described as burning, burying or “indiscriminate dumping,” all in their own way create health concerns.⁷⁴ Fire protection, particularly in the north, is a tremendously important community service. With the most recent fire reporting information showing a twenty year increase in on-reserve fires of approximately seventy percent, fire protection has become integral to the well-being of the reserve community.⁷⁵ In the Treaty 3 area sixty percent of the communities report either a “Not Verified” or a “No Service Provided” fire protection response.⁷⁶ While not verified could mean that services were not verified by a “fire protection specialist” it could also mean that the service does “not meet Levels of Service Standard,” does “not provide a staffed and trained fire department” or “does not have a mutual aid or Municipal Type Agreement.”⁷⁷ When the “Not Verified” responses are combined with the “No Service Provided” responses, it would seem to suggest that the majority of Treaty 3 communities are in need of fire protection service.

Conclusion

A very large percentage of on-reserve housing is acknowledged by both the Department of Indian and Northern Affairs and the Canada Mortgage and Housing Corporation as inadequate. In the Treaty 3 area of northwestern Ontario, thirty-five percent of the on-reserve housing stock is considered inadequate. Upon closer scrutiny, however, it would seem as though in fifty-four percent of the Treaty 3 communities the percentage of inadequate housing stock exceeds forty percent of the total number of housing units. In several communities, the percentage of inadequate housing is well over fifty percent of the total housing stock in the community. Occupancy rates which are also a telling gauge of housing adequacy, show that in several of the Treaty 3 communities occupancy rates are well over four persons per household and in some communities it exceeds five person per household. Community services

such as water, sewage disposal, solid waste disposal and fire protection also suggest that Treaty 3 housing would also suggest that housing infrastructure is also problematic. Where, for example thirty percent of the housing stock in a particular community is without a sewage disposal system or thirty eight percent of the Treaty 3 communities are without adequate solid waste facilities or sixty percent of the communities appear to be without fire protection services, there are also infrastructural housing adequacy issues.

Inadequate housing raises the spectra of housing related health concerns. As is clearly suggested in the literature, tuberculosis, meningitis, measles, intestinal, skin middle ear infections, respiratory disease, hepatitis, shigellosis as well a variety of mental health problems can all be linked to inadequate housing. Adequate housing helps to provide for a healthy living environment and if, as is the case with a large number of Treaty 3 communities, housing stock is inadequate, residents are forced to contend with the health risks associated with inadequate housing. Where, for example, housing units are poorly ventilated, mold infestation occurs and occupants run the risk of contracting any one of a number of respiratory diseases or where, water delivery systems circulate contaminated water, many households will contract shigellosis or where houses are overcrowded, the house becomes a breeding ground for tuberculosis.

Understanding the circumstances of on-reserve housing and the associated health related issues requires an understanding of the realities of the reserve community. Including not only housing but also family relations, hunting or fishing patterns, traditional practices and even local decision making, housing on-reserve is so much more than simply shelter. It is also, however, a determinant of well-being and when, for example, the house does not provide adequate living space for the occupants or when it does not include the work space necessary to process the hunt or when the house is situated in such a way so as to preclude family gatherings, then the house is not meeting the needs of the occupants. This too is a measure of well-being.

References

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2. Canada, Report of the Auditor General, Chapter 6, "Federal Government Support to First Nations - Housing on Reserve," April, 2003, p. 3.

3. Canada, Health Canada, A Statistical Profile on the Health of First Nations in Canada, December 2003, p. 61.
4. Suitability refers to unit size as is measured by number of bedrooms and adequacy is measured by the condition of the unit. See the discussion of suitability and adequacy in Canada Mortgage and Housing Corporation, Research Highlights, "Special Studies on 1996 Census Data: Housing Conditions of Native Households," Socio-Economic Series, Issue 55-6, January 2001.
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6. Ibid.
7. See drinking water in Ontario, Ministry of the Attorney General, Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water, Part Two, 2002, p. 488, sewage disposal in the Housing and Infrastructure Assets Summary Report, p. 20., electrical servicing in Ibid., p. 24 and solid waste disposal servicing in Ibid., p. 26.
8. Canada, Department of Indian and Northern Affairs, Housing and Infrastructure Assets Summary Report, pp. 55 - 74.
9. Ibid.
10. Adrienne Fox, "Housing Top Priority for Candidate Kavanaugh," Wawatay News, June 26, 2003, p. 20.
11. Ibid.
12. See the discussion of mould infestation in Ontario, Ministry of the Attorney General, Report of the Walkerton Inquiry, p. 12, shigellosis in T. Rosenberg, O. Kendall, J. Blanchard, S. Martel, C. Wakelin and M. Fast, "Shigellosis on Indian Reserves in Manitoba," American Journal of Public Health, V. 87, N. 9, September, 1997, p. 1550 and tuberculosis in Canada, Health Canada, A Second Diagnostic on the Health of First Nations and Inuit Peoples in Canada, Ottawa, 1999, p. 14.
13. Canada, Health Canada, A Second Diagnostic on the Health of First Nations and Inuit Peoples, p. 61.
14. T.K Young, Linda Bruce, John Elias, John O'Neil and Annalee Yassie, The Health and Effects of Housing and Community Infrastructure on Canadian Indian Reserves, Ottawa: Public Works and Government Services, 1991, p. I.
15. Ibid., p. 29.
16. Ibid., p. 36.
17. Canada, Report of the Royal Commission on Aboriginal Peoples, Vol. 3, "Gathering Strength," 1996, p. 372.
18. There is a tendency in the literature as well as through the program delivery of on-reserve housing to treat on-reserve housing as a sin-

gular entity. Each community is different and so too is the housing stock and housing needs. One of the more glaring problems with program delivered, on-reserve housing is that it has been delivered through government defined, universal housing programs.

19. This material is summarized from the Report of the Royal Commission on Aboriginal Peoples. See; *op. cit.*, pp. 366 - 369.
20. *Ibid.*, pp. 365 - 372.
21. Harriet MacMillan, Angus MacMillan, Davie Offord and Jennifer Dinlge, "Aboriginal Health," *Canadian Medical Association Journal*, V. 155, N. 11, December 1, 1996, p. 1572.
22. *Ibid.*, p. 1572 and p. 1577.
23. T. Rosenberg, O. Kendall, J. Blanchard, S. Martel, C. Wakelin and M. Fast, "Shigellosis on Indian Reserves in Manitoba, Canada: Its Relationship to Crowded Housing, Lack of Running Water, and Inadequate Sewage Disposal," *American Journal of Public Health*, V. 87, N. 9, September, 1997, pp. 1547 - 1551.
24. *Ibid.*, p. 1550.
25. Canada, Health Canada, *A Second Diagnostic on the Health of First Nations and Inuit Peoples in Canada*, Ottawa, 1999, p. 14.
26. *Ibid.*, p. 15.
27. *Ibid.*, p. 30.
28. Norbert Koeck, *On-Reserve Housing Policy, Impact Assessment 1996 - 2000, A Report Prepared for Community Infrastructure and Housing Directorate, Department of Indian Affairs and Northern Development*, October, 2000, p. 3.
29. Ontario, Ministry of the Attorney General, *Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water, Part Two*, 2002, p. 486.
30. T. K. Young, *op. cit.*, p. 10.
31. Ontario, Ministry of the Attorney General, *Report of the Walkerton Inquiry*, *op. cit.*, p. 486.
32. *Ibid.*
33. *Ibid.*, p. 488.
34. Canada, *Report of the Auditor General, Chapter 6, "Federal Government Support to First Nations - Housing on Reserve," April, 2003, p. 1.*
35. *Ibid.*
36. *Ibid.*, p. 3.
37. *Ibid.*, p. 12.
38. *Ibid.*, p. 2.
39. Canada, Health Canada, *A Statistical Profile on the Health of First Nations In Canada*, December 2003, p. 65.
40. See tuberculosis in *Ibid.*, p. 44, hepatitis A, pp. 44 - 45, shigellosis, p.

- 45 and mould p. 66.
41. The four health determinants are housing, the legacy of residential schools, climate change and contaminants and community control/self determination. See the discussion in *Improving the Health of Canadians, A Report Prepared for the Canadian Institute for Health Information*, Ottawa, 2004, p. 84.
 42. *Ibid.*, p. 86.
 43. *Ibid.*
 44. Canada, Health Canada, *A Statistical Profile*, op. cit., p. 14.
 45. T.K. Young et. al., op. cit., p. 29.
 46. See a discussion of world view in A. Hallowell, "Ojibway Ontology, Behavior and World View" in S. Diamond (ed) *Culture and History*, New York: Columbia University Press, 1960, D. McPherson and J. Rabb, *Indian from the Inside*, Thunder Bay: Centre for Northern Studies, 1993 and T.W. Overholt and J.B. Callicott, *Clothed In Fur*, Lanham: University Press of America, 1982.
 47. Canada, *Indian Treaties and Surrenders*, Vol. 1, Ottawa, 1891, p. 304.
 48. *Ibid.*, p. 305.
 49. Canada, *Order in Council Setting Up Commission for Treaty 3*, 1871.
 50. The community profile information as is available through the Department of Indian and Northern Affairs is at best overview information. It should not be seen as totally accurate nor should it be viewed as representative of the First Nations demographic perspective.
 51. This information like much of the demographic information used in this paper has been taken from the *Housing and Infrastructure Assets Summary Report of the Department of Indian and Northern Affairs*. See: Canada, Department of Indian and Northern Affairs, Corporate Information Management Directorate, Corporate Services, 1999 *Housing and Infrastructure Assets Summary Report*, 1999. (hereafter *Housing and Infrastructure*)
 52. See Big Grassy in *Housing and Infrastructure*, p. 55, Sabaskakong Bay in *Ibid.*, p. 56 and Islington in *Ibid.*, p. 69.
 53. Adequate is defined by the *Housing Infrastructure* report as "units that do not require any minor or major renovations or replacement." See: *Housing and Infrastructure*, p. 5.
 54. Inadequate is defined by the *Housing Infrastructure* report as units requiring major/minor renovations or complete replacement. Major renovations are further defined as renovations that are required "because a house fails to meet minimum National Building Code standards in several areas." Minor renovations are defined as "normal preventative maintenance or repairs and upgrading." Replacement units are those units that are "no longer habitable" or that are con-

- sidered “unsafe or unfit for human habitation.” See the various definitions employed by the Department of Indian and Northern Affairs in the Housing Infrastructure report, pp. 3 - 10.
55. Housing Infrastructure, pp. 55 - 57.
 56. *Ibid.*, p. 5.
 57. *Ibid.*, pp. 55 - 57.
 58. Housing Infrastructure, pp. 67 - 69.
 59. T. K. Young et. al., *op. cit.*, p. i.
 60. Housing Infrastructure, pp. 61 - 63.
 61. Ontario, Ministry of the Attorney General, Report of the Walkerton Inquiry, p. 486.
 62. *Ibid.*
 63. “Other” is defined by the Department of Indian and Northern Affairs as “The number of housing units with water service provided by other means.” See; Housing Infrastructure, p. 6.
 64. Housing Infrastructure, pp. 61 - 63.
 65. *Ibid.*
 66. *Ibid.*, pp. 55 - 57.
 67. See the discussion of “adequate sewage disposal systems” Canada, Health Canada, A Second Diagnostic on Health of First Nations, *op. cit.*, p. 16 and the reference to “bacteriological contamination” in T.K. Young, et. al., The Health Effects of Housing, *op. cit.*, p. 11.
 68. Housing Infrastructure, pp. 64 - 66.
 69. *Ibid.*
 70. Housing Infrastructure, p. 8.
 71. *Ibid.*, p. 56.
 72. *Ibid.*, pp. 55 - 57.
 73. *Ibid.*, pp. 55 - 57 and p. 10.
 74. T.K. Young, et. al., *op. cit.*, p 11.
 75. *Ibid.*
 76. Housing Infrastructure, pp. 55 - 57.
 77. *Ibid.*, p. 10.

