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Preparing for the Bomb

The Development of Civil Defence Policy in Canada, 1948-1963

Mark Davidson

During the period 1949 to 1963 civil defence in Canada developed in a number of stages that reflected changes in technology, weaponry and scientific discovery. The first stage of development, roughly between 1949 and 1952, witnessed only minor developments. Civil defence followed the Second World War practice, with a focus on air raid shelters and, if possible, evacuation. In the years 1952 to 1954 as the possibility of a nuclear attack became more real as a result of the Soviet development of intercontinental bombers, civil defence officials moved towards a policy of mass evacuation of target areas and the rescue of survivors. The detonation of a hydrogen bomb and the discovery of radioactive fallout in 1954 led to yet another change in civil defence plans. Civil defence officials became more convinced that mass evacuation of target areas was the answer, however, fallout shelters were also recommended for those areas outside the target area likely to be blanketed with radioactive debris. In the late 1950s and into the early 1960s civil defence again had to be redefined as intercontinental ballistic missiles (ICBMs) were developed and evacuation was no longer possible as nuclear attack could occur virtually without warning.

Responsibility for civil defence was divided amongst all three levels of government – federal, provincial, and municipal. At the federal level, responsibility for civil defence first fell under the Department of National Defence and Minister Brooke Claxton. The development of civil defence policy was the responsibility of Federal Civil Defence Coordinator, Major-General F.F. Worthington,¹ who oversaw most civil defence issues at the federal level. In 1951 responsibility was transferred to the Department of National Health and Welfare, and its minister,

Paul Martin. In 1959, responsibility for civil defence was again reallocated, this time to three departments: the Department of National Defence, a committee within the Privy Council called the Emergency Measures Organization (EMO), and the Department of National Health and Welfare. This lasted until the mid-1960s when the Lester B. Pearson government transferred responsibility for civil defence to the Department of Defence Production.²

The organization of civil defence at the provincial level reflected that of the federal government. In Ontario, responsibility for civil defence fell to a newly-formed civil defence committee which was made up of the deputy cabinet ministers, a civil defence coordinator, and emergency officials such as the Ontario Fire Marshal and the Ontario Provincial Police Commissioner. Following the transfer of civil defence to the federal Emergency Measures Organization (EMO), a provincial EMO was also formed, but membership remained virtually unchanged from the structure of the Civil Defence Committee.³

Civil defence organization at the municipal level varied greatly. A general structure, set out in an Ontario government document, called for the appointment of a Civil Defence Control Committee to be composed of the following: the mayor, a quorum of municipal council, and a selection of prominent citizens from industry, the clergy, the press, the Canadian Legion, service groups, the Red Cross, and St. John's Ambulance.⁴

On 23 September 1949 the President of the United States, Harry S. Truman, announced that





Canadian Forces Joint Imagery Centre ZK 578

Major-General F.F. Worthington was appointed Federal Civil Defence Coordinator in 1948. Previous to that he had had a distinguished career in the Canadian military during the First and Second World Wars, and was regarded as a Canadian pioneer in tank warfare.

job studying civil defence in various countries around the world, attending civil defence training in Britain and surveying existing civil defence preparations across Canada.⁷ In 1949 some civil defence measures began to be developed and implemented. One of the first nation-wide measures was an effort to standardize fire equipment, so that hoses from undamaged or lightly damaged centres could be connected to hydrants in heavily damaged centres.⁸ Other measures taken at this time included plans for an attack warning system, mass evacuation, designs for shelters and arrangements for the care of casualties.⁹

Federal civil defence authorities identified cities that would be likely targets because of their importance as government or economic centres. These included Halifax, Québec City, Montréal, Ottawa-Hull, Toronto, Sault Ste. Marie, Sarnia, Winnipeg, Edmonton, Calgary and Vancouver. The list would be revised and amended many times in the years to come as cities changed in importance.¹⁰ In these cities civil defence preparations would be especially important. In this early stage of civil defence planning the responsibilities of the various levels of government were also decided upon by the federal government as follows:

Federal: To assess and keep under continuous review the forms and scales of attack to be anticipated in the event of war and to initiate and guide planning of appropriate civil defence measures; to organize federal services for civil defence; to coordinate plans and activities of the provinces and municipalities.

Provincial: To prepare regional plans and responsible for preparatory and other measures within their area; to coordinate activities of municipalities, to organize provincial services for civil defence.

Municipal: To be responsible for local planning and for organizing municipal services for civil defence; to be responsible for coordinating all services and implementing all civil defence measures in the municipal area.¹¹

As this document suggests, although civil defence policy was formulated for the most part at the

the Soviet Union had successfully completed an atomic test.⁵ Following Truman's announcement, press reports focused on the Soviet Union's technological achievement, and questions as to how the Soviet Union managed to complete a nuclear weapon much earlier than expected, only four years after the United States. Editorials in the *Globe & Mail* and *Montreal Gazette* stressed that the Soviet atomic test posed little threat to the western world, and that "nothing more has happened than what was bound to happen."⁶ In the month following the Soviet atomic test there were no press accounts on the need for civilian defence in the *Globe & Mail* or the *Montreal Gazette*.

In fact, civil defence planning had started in Canada, but only recently and on a small scale. In 1948 Major-General F.F. Worthington was appointed Federal Civil Defence Coordinator and he spent much of his first year on the

federal and provincial levels, plans as to how civil defence was to be carried out on the ground and implementation of those plans were a municipal responsibility.

Civil defence preparations would continue in 1950 with renewed public interest as international events such as the victory of the Communist forces in China's civil war in 1949 and the outbreak of the Korean War in June 1950 raised the public perception that a third world war might break out in the near future.¹²

In August 1950 representatives of the federal and provincial governments met in Ottawa for a Dominion-Provincial conference on civil defence. In his opening statement, Minister of National Defence Brooke Claxton informed those gathered of the growing threat posed by the Soviet Union and of the proposed measures to protect civilians. Claxton informed the delegates that the Russians were in possession of "aircraft of the B-29 type capable of delivering atomic or conventional bombs" to North America.¹³ In addition to describing the nature of the threat, the Dominion-Provincial conference also provided many specific details as to what form civil defence was to take. The conference recommended the protection of Canada's vital points, which it defined as those establishments, industrial or administrative, "essential to the prosecution of a war or to the maintenance of basic economic life and for which there is no satisfactory alternative." These vital points were to be assessed by the Royal Canadian Mounted Police (RCMP) and to receive adequate protection. This included measures to prevent sabotage, such as the installation of fencing, and the stationing of guards.¹⁴

The Dominion-Provincial Conference report also recommended that the country be divided into three types of areas – "target areas," "cushion areas," and "reception areas" – each with its own role in the event of enemy attack. The report argued that these target areas should be organized immediately for civil defence in order to minimize the effects of an attack. In addition to fire and police personnel, target areas were to have a headquarters with communications and reconnaissance wings and five main units: wardens, rescue, pioneer, welfare, and ambulance.¹⁵ The "cushion area" which surrounded the target area should be of sufficient size to provide aid to the stricken city

and immediate aid to distressed people. These areas were to be strong in the rescue, pioneer, welfare, and ambulance elements of civil defence. Finally the "reception area" was to provide refuge, shelter, and aid to refugees who could not be accommodated in the "cushion area." Most of the smaller cities and rural areas in Canada would be designated reception areas.¹⁶ It is interesting to note that this document was not advocating evacuation of the target areas prior to an attack; rather it anticipated that survivors of an attack would exit the area afterwards. Civil defence officials anticipated that survival would be possible in shelters of the type used in Britain during the Second World War.¹⁷ But unlike the experience of Britain in the Second World War little effort was made in these years to construct large public shelters of the type used in London during the war. Some did suggest that the Toronto subway stations then under construction could be used as shelters, but such action was not taken.¹⁸



Canadian War Museum 20040030-1



Nevertheless, pre-attack evacuation was not completely ruled out. A three-stage evacuation process was recommended if it were deemed possible. In the first stage those non-essential to the war effort – children up to age 12, expectant mothers, and aged people, for example, would be evacuated. Second, those essential to the war effort, but not required in the immediately vulnerable area, were to be evacuated. Finally key citizens who had to remain close to their jobs in a key industry or utility or administrative unit would be evacuated.¹⁹ Civil defence officials were reluctant to recommend mass evacuation of target areas for fear of the effect evacuating workers would have on the economy and on the production of essential war materials. In addition, plans at this stage were still based on the effects of the “standard,” or Hiroshima-sized, A-bomb (roughly 20,000 kilotons or the effect of 20,000 tons of TNT). Therefore it was felt that methods similar to those used in the Second World War, such as air raid shelters including improvised facilities like subway stations, would provide adequate protection.

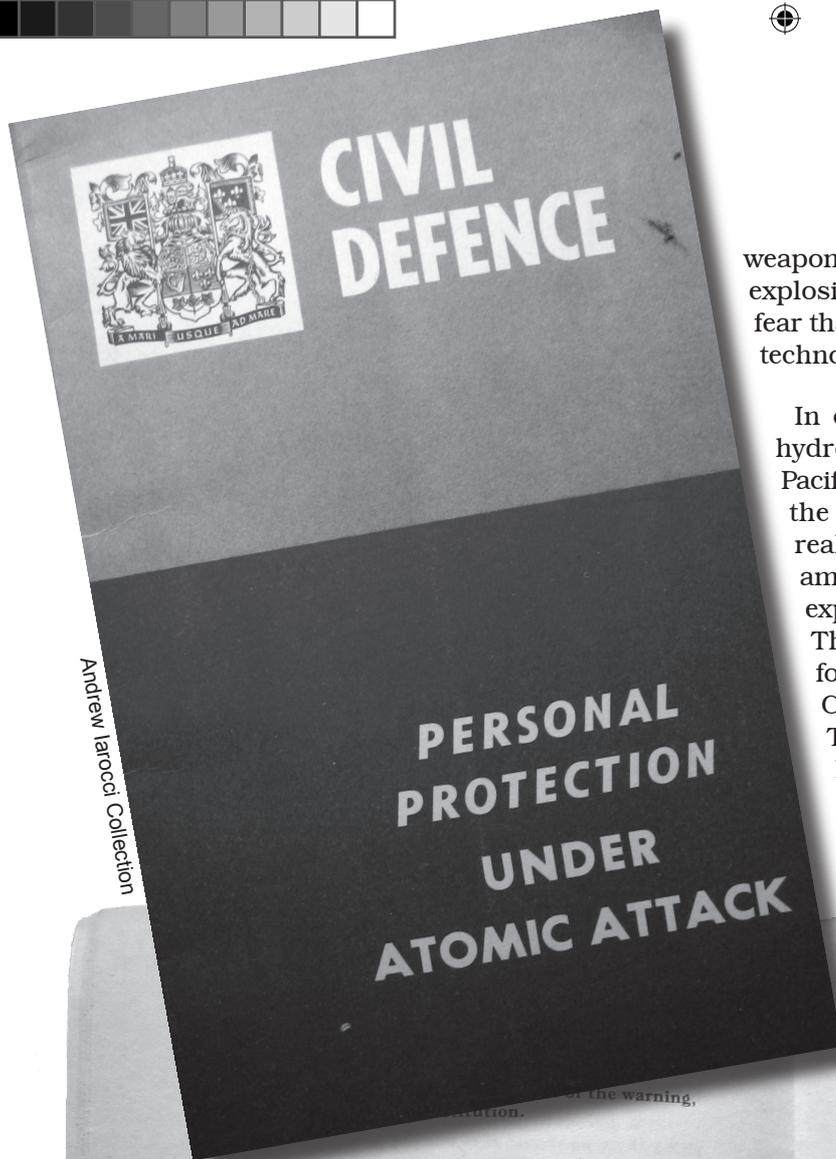
In addition to organization at the federal and provincial levels, some municipalities also began to organize in 1950. In Toronto, the municipal council in conjunction with the County of York decided to establish a civil defence committee which was immediately to begin registering volunteers for the various divisions of civil defence. An initial budget of \$2,000 was established for the group. However, it was noted by the city council that the municipality had not yet received enough information from the province to proceed, so initially only a skeleton organization was organized.²⁰

On 23 February 1951, the second Dominion-Provincial Conference on Civil Defence was held in Ottawa. Claxton closed his remarks with several recommendations including that civil defence organization be completed at the provincial and municipal levels, that training of civil defence personnel continue, that a campaign of public information be started, and that the provision of warning devices and specialized civil defence equipment be carried out. Finally Claxton announced that civil defence was, for the most part, not a federal responsibility and therefore should not be the responsibility of National Defence; civil defence would be transferred to the Department of National Health and Welfare under

Paul Martin.²¹ Civil defence was considered to be primarily a local responsibility because to be effective civil defence plans would have to be adapted to local circumstances and carried out by the local authorities. The suggestion that civil defence be transferred to another department was not a new one. In the House of Commons opposition members had been suggesting for several weeks that the defence minister was carrying a great burden and that civil defence as a civilian activity be transferred from National Defence to another department.²²

Shortly after receiving responsibility for civil defence the Department of National Health and Welfare released an instructional booklet entitled *Personal Protection Under Atomic Attack*. The booklet advised building shelters in cellars or backyards and compared building a shelter to other normal precautions such as “putting a lightning rod on the roof or anti-freeze in a car.”²³ The blast and initial heat effects of the atomic bomb were viewed as the greatest threat. Therefore, the booklet advised citizens to get rid of fire hazards, cover windows with plywood, and have pails of water or sand at hand to fight fires. The third effect of the bomb, radiation, was dismissed by the booklet: there was no reason to become “panicky” about radioactivity as like an x-ray the radioactivity in a nuclear attack would last for only about a minute and any lingering radioactive particles would be scattered over so many miles that they would no longer be dangerous.²⁴ As this booklet demonstrates, during this period citizens were expected to take shelter within their own homes; government literature did not recommend evacuation and often downplayed the effects of a nuclear attack. The atomic bomb was represented to the public as being just another way of causing an explosion, just one more powerful than a conventional weapon.²⁵

The years 1954 to 1957 would mark a major transition in civil defence planning. The advent of the much more powerful H-bomb and the discovery of radioactive fallout would lead to a focus on mass evacuation as the only means of survival for those within target areas. Warnings about the destructive power of the hydrogen bomb had been discussed in the press for years. Articles predicted that the hydrogen bomb would give a significant political advantage to whichever superpower was the first to produce such a



weapon and in the years prior to the first H-bomb explosion there were many articles that expressed fear that the Soviet Union had already discovered the technology.²⁶

In early 1954 the United States began tests of hydrogen bombs on the Bikini Atoll in the South Pacific, the results of which were shocking.²⁷ Beyond the enormity of the explosions themselves the real surprise was the distance that concentrated amounts of radioactive debris (fallout) from the explosion travelled from the site of detonation. The "phenomenon of 'fallout'" was the primary focus of a report issued by the US Atomic Energy Commission in February of 1955 on the tests.²⁸ The report stated that fallout from the March 1954 thermonuclear bomb test at the Bikini Atoll was deposited in varying amounts that contaminated an elliptical area that extended 220 miles downwind and varied in width up

IF THERE IS NO WARNING

While the chances of an atomic attack without any warning are not great, we must be ready for this possibility. We cannot be prepared adequately for atomic attack unless we know what to do should it come suddenly.

The first sign of attack will be a dazzling flash of light. To look at it would cause temporary blindness.

Forget about protecting your house, running to a shelter or doing anything that takes time. Act immediately to save yourself.

The attack may come when you are out in the open or are indoors. Wherever you are, there are certain things to be done for your protection.

• *If Caught in the Open*



If you are caught out of doors when the flash comes, drop to the ground, face downwards, with one arm shielding your face and the other hand clasping the back of your neck. If you can do so without losing time, drop in any spot which is lower than the surrounding area. In a city street, if you are within two or three paces of the curb, drop into the gutter without pausing to see whether or not your clothes are going to get dirty.

Don't go further than two or three paces whatever happens. If a strong wall is nearer than the curb, lie down

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beside it. If you can squeeze yourself into the angle of a doorway, this will give a little extra protection.

If you are driving a car as the flash comes, stop it as safely as you can. Turn off the engine and crouch down as low as you can with your face turned downwards.



Clothing is a partial protection. The more your body is covered at the time of attack, the better. Light colored clothes are better than dark. Pull your coat collar up and hat down.

• *In a House or Apartment*

Drop down quickly, against an inner wall or under a table or bed away from the window. Its important, especially if there are several persons in the room, not to scurry around selecting a place but to get to the most suitable spot near where you were standing or sitting at the time of the flash.

Lie flat on your stomach with your face pressed downwards. If there is a rug or blanket handy, pull it over yourself, but don't lose precious seconds trying to get this extra protection.

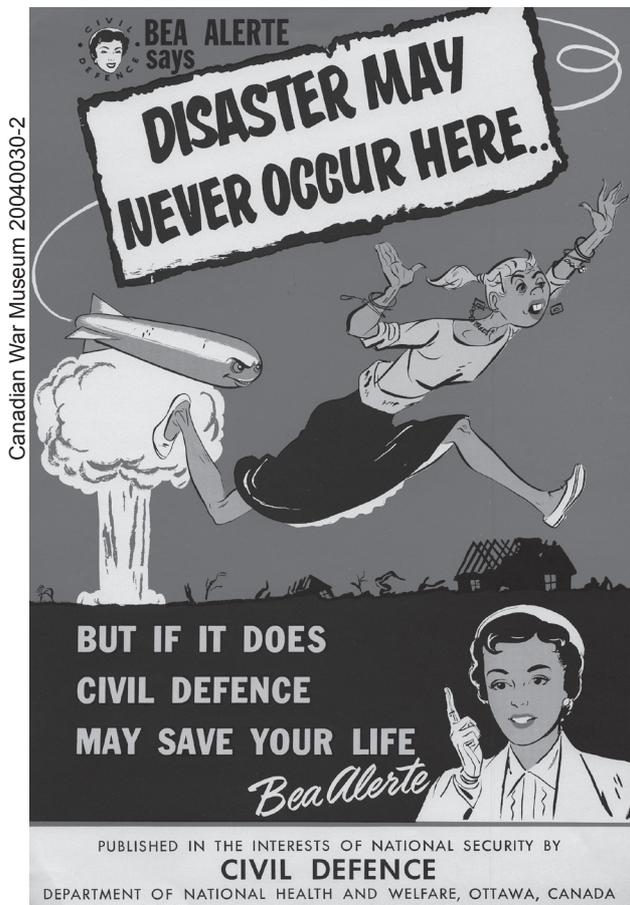
• *In an Office or Factory*

Do just as you would at home except that you may have to drop under the nearest desk or work-table. If you are near an inner wall, lie down close to it. However, there will not be space or time for all the workers in a large department to look for the best place. The key-words in this operation as the flash comes are "Down" and "Fast". Lie flat on your stomach with face and eyes shielded.

• *In an Institution*

You may be in a corridor when the flash comes and,

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current stock pile had been planned for a 20 kiloton bomb), and if shelters could be used.³¹ In a speech to the Corps of Imperial Frontiersmen in June of 1954, Major-General Matthew Penhale, Commandant of Canada's Civil Defence College at Arnprior, Ontario,³² noted that the destructive power of the H-bomb increased the possible zone of destruction from three to seven miles up to 10 to 15 miles. Such a bomb, Penhale noted, would leave no portion of any Canadian city without damage.³³ Therefore taking shelter within a target city or evacuating the population to the immediate outskirts of a city would no longer be effective.

In a speech reprinted in the Civil Defence Bulletin for June 1954, Paul Martin put forth three considerations for any future plans. First, early warning of an approaching attack had become increasingly important. Second, the days of local, and self sufficient, civil defence organizations were over now that the possible area of destruction had become so large. Third, the H-bomb did not eliminate the possibility of an attack by other means.³⁴ A similar message was touted by the civil defence coordinator for the Metropolitan Region of Montreal, Lieutenant-

to 40 miles. The report went on to estimate the effect this widespread fallout would have on a populated area. Assuming that people had taken no precautions, had remained outdoors without shelter, and had been exposed for 36 hours and therefore received a maximum dose, there was "sufficient radioactivity in a down-wind belt about 140 miles in length and of varying width up to 20 miles to have seriously threatened the lives of nearly all persons in the area who did not take protective measures."²⁹ This discovery would change civil defence plans not only in designated target areas but also in communities downwind from potential targets. Of course fallout had always resulted from previous A-bomb explosions, but the H-bomb tests revealed just how widespread and deadly fallout could be.

When asked in the House of Commons how the test of a hydrogen bomb and the discovery of radioactive fallout would affect Canada's civil defence, Paul Martin responded that they would need to be re-examined.³⁰ On 28 April 1954 Paul Martin asked the civil defence committee to determine if population dispersal was a possibility, if medical stockpiles should be increased (as the



Colonel W.A. Croteau, who in an interview for the *Montreal Gazette* stressed the importance of early warning, and urged traffic engineers to examine the possibility of planning for evacuation.³⁵

At the local level in 1954, there was also some progress. Attempting to quiet complaints that too heavy a burden had been placed on municipalities in the federal government's civil defence plan, Paul Martin announced the intention to share the expense of civil defence among the three levels of government. The plan called for the federal government to assume 50 percent of the cost of all approved civil defence projects with the provincial and municipal governments each paying 25 percent of the cost. This was a significant change as prior to this reform municipalities, with the aid of the provincial government in some cases, were responsible for providing the entire civil defence budget save for programs such as fire equipment standardization where each level of government paid one-third of the costs. Responding to this plan Conservative opposition leader George Drew noted that many provinces (most notably Ontario and Quebec) had not agreed to the formula, and that therefore municipalities would still be left on their own to fund civil defence projects.³⁶

As civil defence plans shifted away from air raid shelters toward a policy of mass evacuation in 1954 and 1955 much attention became focused on how to make evacuation of Canada's largest cities possible. On 2 February 1956 Federal Civil Defence Coordinator F.F. Worthington sent a copy of a provisional civil defence plan to all Provincial Coordinators. The plan called for mass evacuation of 12 target areas.³⁷ Evacuation was to take place in four phases. Phase A called for the evacuation of non-essential civilians when intelligence and a deteriorating world situation indicated that an attack was about to be launched. Phase B called for the withdrawal of the remaining population as the enemy approached Canada. Phases C and D called for the return to the city of emergency workers and for civil defence workers to search for survivors, provide aid, and begin rehabilitation. The plan assumed that in any future war nuclear weapons would be used against North America from the beginning. Furthermore it was believed that the first few days of a nuclear war would be the worst. Finally it was assumed that Canada would receive a minimum of three hours notice of an



Canadian Civil Defence
Health worker's armband

approaching attack from the radar lines in the north, which would provide adequate time for the evacuation of cities. However the plan noted that many Canadian cities would not be hit in the first wave of attacks as most of the primary targets were in the United States; this too would provide more time for evacuation.³⁸

On 27 July 1956 Paul Martin announced that evacuation was official civil defence policy in the House of Commons during the debate on the estimates. "Our Civil Defence policy," he stated, "should now be based on the development and testing of plans for the orderly evacuation on short notice of the main urban areas in Canada should the possibility of attack on such areas by nuclear weapons appear to be imminent." To this end Martin requested a civil defence budget of \$7,010,018 or approximately 43 cents per capita. The majority of the federal civil defence budget, about 34 percent, would be spent on the medical stockpiling program, with 29 percent going to the provinces and municipalities and 10 percent to the civil defence college at Arnprior.³⁹

The announcement of a new federal civil defence policy was a long time coming, but only a few months later there were signs that it would soon be obsolete. By April 1956 both superpowers had begun to experiment with short-range ballistic missiles. Although a perfected design and mass production of missiles were still sometime in the future, it was a sign that civil defence plans would soon need to be revised.⁴⁰

Throughout the early part of 1957 mass evacuation remained the principle means of civil defence. Metropolitan Toronto City Council minutes reveal that much of the discussion of civil defence in that area focused on the



construction and improvement of highways to make evacuation of the city possible. In January 1957 Metro Council requested that the provincial and federal governments become involved in the construction of the Don Valley Parkway and the Lakeshore Expressway as part of their contribution to civil defence.⁴¹ This request for assistance was rejected in March 1957 by the Department of Public Works, which argued that while the project contributed to civil defence it was a provincial and municipal responsibility to construct such highways.⁴²

Nuclear attack by ICBMs became all the more probable when the Soviet Union launched the world's first satellite, Sputnik, on 4 October 1957. Early newspaper reports focused on the scientific achievement Sputnik represented,⁴³ yet it was hard to miss the fact that the rocket that launched a peaceful satellite orbiting the earth could become a guided missile with a hydrogen bomb warhead. The development of ICBMs held major implications for civil defence planning. Mass evacuation was based on the assumption that an enemy attack would involve manned bombers, and Canadian cities would receive a minimum of three hours' warning from the radar lines of an impending attack. ICBMs would shorten the warning period considerably and increase the possibility of a surprise attack in which no warning would be received.

In 1958 the recently-elected Diefenbaker government appointed the retiring Chief of the General Staff, Lieutenant-General Howard Graham, to conduct a review of civil defence policy and recommend changes which should be undertaken in response to the development of ICBMs.⁴⁴ At this same time greater responsibility was taken on by the federal government, which assigned the militia some duties previously assigned to civil defence volunteers and local organizations. In the House of Commons Diefenbaker's Minister of National Defence, G. R. Pearkes, explained that some militia units would be organized into approximately 50 mobile columns consisting of reconnaissance companies, rescue companies, and traffic control units designed to help implement civil defence measures in the event of enemy attack.⁴⁵ Pearkes went on to stress that "the appearance of an organized, disciplined, uniformed body would do more to restore morale than almost anything

else."⁴⁶ This comment suggests that Pearkes may have felt that the current volunteer civil defence organization was not up to the task and would not be able to restore morale, a message which the former minister in charge of civil defence, Paul Martin, stated had upset many people in Canada who felt that adequate civil defence could be provided without the military.⁴⁷

The Diefenbaker government became focused on preserving civilian government in Canada, a new aspect of civil defence which would become known as continuity of government. As early as 1957 documents were circulated by federal civil defence authorities that stressed the importance of having an operational civilian government to respond to the crisis following a nuclear attack in order to co-ordinate the distribution of food, fuel, and other essential supplies, maintain law and order, allocate manpower, conduct foreign relations regarding the war, and manage public finances. A 1957 document considered three courses of action. The first was to provide protection for the government within the capital. This approach it was argued would require maximum protection and would therefore be prohibitively expensive. A second option involved relocating each unit of government outside the probable target area. The third and recommended option was to provide a re-located seat of the federal government outside Ottawa, with a number of federal/provincial regions and federal/provincial sub-regions across the country. This would allow for the government to function independently in each region until communication facilities and other basic services were restored.⁴⁸ As early as 1957 civil defence officials were preparing to build shelters to ensure the survival of key government officials in various locations across the country.

Graham handed his report to the Diefenbaker government in early 1959. The report was kept confidential and therefore not discussed in parliament or in the press.⁴⁹ Some of Graham's recommendations were later published in his memoirs. He advised that a close relationship between civil defence and the military should exist. Furthermore Graham noted that an attack was unlikely, but suggested that once hostilities commenced the warning period would be short, possibly a matter of minutes. He also concluded that the mass evacuation of cities was not only



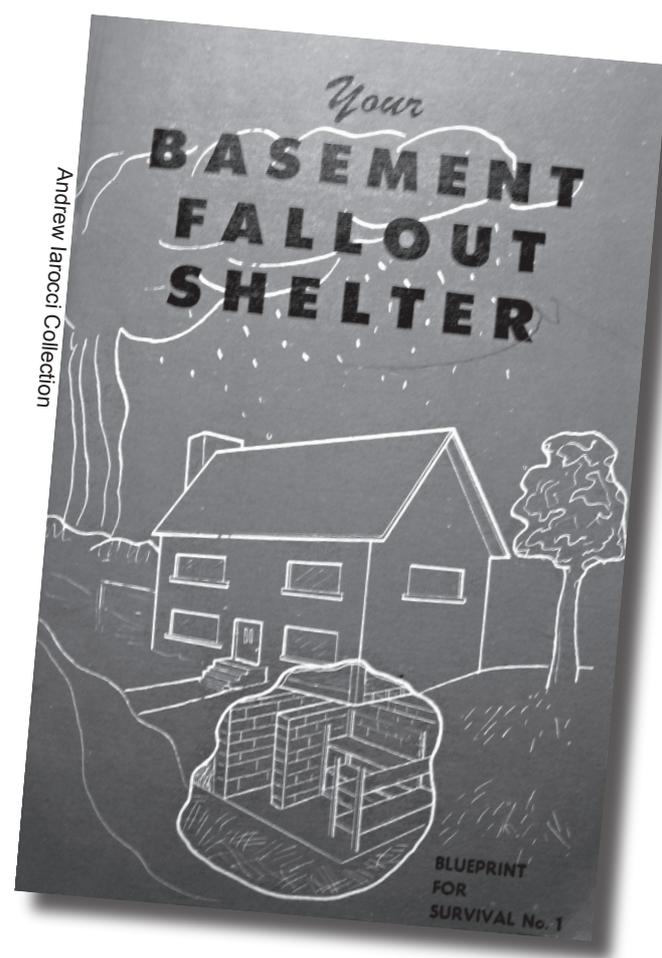
impractical, but also unacceptable to the public. Finally Graham recommended that the federal government should assume sole responsibility for civil defence.⁵⁰ Graham's recommendations for improving civil defence in Canada were obviously aimed at complaints that Canadians were uninterested in civil defence, that plans were unrealistic, and that municipalities were ill-equipped to bear the cost of civil defence.

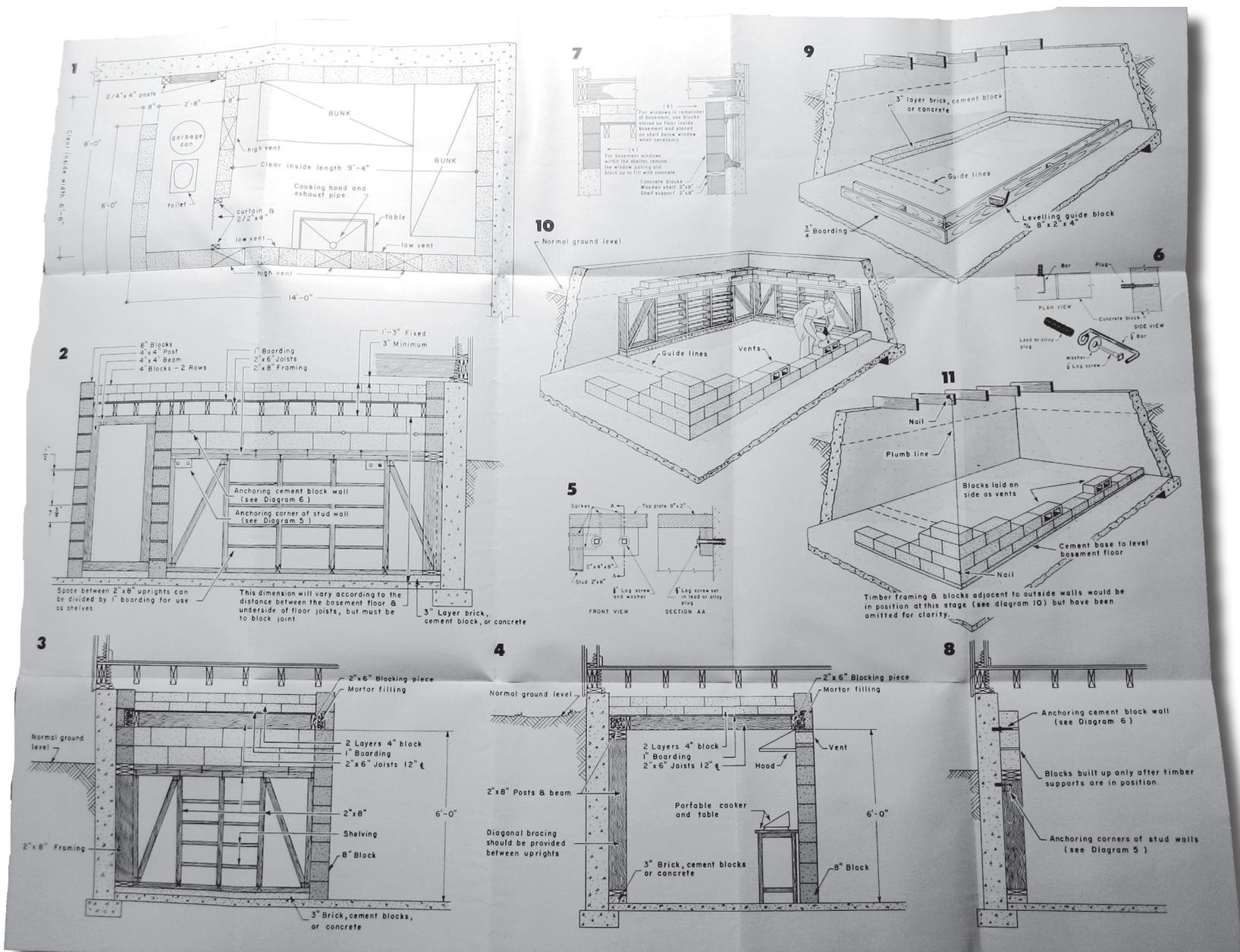
Prime Minister Diefenbaker announced a new civil defence policy in the House of Commons on 23 March 1959. The federal government did assume some responsibilities which were previously assigned to the provinces and municipalities, but responsibility for civil defence was not placed solely under National Defence as Graham had recommended. The military was assigned a number of the technical civil defence functions, for example sounding warning signals, and tracking fallout. Humanitarian tasks such as providing for the sick, injured, and displaced, and providing emergency accommodation remained the responsibility of the Department of National Health and Welfare as well as the provinces and municipalities. Finally the Emergency Measures Organization (EMO), a division within the Privy Council Office and thus the responsibility of the Prime Minister, was to assume a coordinating role between the various departments and carry out responsibilities not assigned to other departments.⁵¹ The federal government also assumed a greater portion of the financial responsibility for civil defence – fully three-quarters – leaving the provincial governments to pay 15 percent and the municipal governments to pay ten percent.⁵² This new funding formula prompted those provinces and municipalities which had previously refused to fund or cancelled their civil defence programs to allocate funds.⁵³

Diefenbaker's announcement did leave a major aspect of civil defence policy undefined. As Paul Martin pointed out, the prime minister's announcement did not specify whether or not evacuation was still the principle means of civil defence.⁵⁴ The government would not have an answer to this question until July 1959 when Minister of National Health and Welfare J.W. Monteith announced that studies conducted by the Rand Corporation and the US Congress suggested that the best means of protection from ICBMs would be to construct shelters capable of

shielding individuals from fallout.⁵⁵ In the months ahead many different ideas as to what form shelter construction should take would emerge, but ultimately the government and the civil defence organization would promote basement fallout shelters which could be constructed by individuals in their home basements for a cost of about \$500.⁵⁶

In the years that immediately followed the 1959 changes in civil defence policy, developments focused on two main areas – the implementation of the home shelter policy and the protection for continuity of government. The effort to encourage individuals to construct home fallout shelters was met for the most part with frustration. Although the government published booklets such as *11 Steps to Survival* (1961) and *Your Basement Fallout Shelter* (1961), which





These are the fold-out plans contained in the pamphlet, *Your Basement Fallout Shelter*.

encouraged shelter construction and provided instructions as to how to construct a shelter, the number of individuals who chose to build home shelters was disappointing.

As well the government did undertake shelter construction to ensure the continuity of government. The Diefenbaker government authorized the construction of an emergency regional site in each province from which federal, provincial and military personnel could operate during a nuclear war, independently if need be, to coordinate the war effort and survival operations.⁵⁷ Known as BRIDGE Installations,

each of these 58 fallout shelters of varying sizes were constructed outside the provincial capitals, Ottawa⁵⁸ and various regional headquarters, and were to house a mix of essential provincial, federal, and military personnel. The shelters were to offer protection from fallout, though not blast damage, construction costs were paid by the federal government, and each location was to be linked to the others by an emergency communication system.⁵⁹ Prime Minister Diefenbaker was not to be evacuated to the so called "Diefenbunker," the Federal government's emergency site outside Ottawa. Instead as Diefenbaker explained to parliament, a shelter





exactly like the shelters ordinary Canadians were advised to build in their own homes was constructed at his official residence, 24 Sussex Drive. As Diefenbaker exclaimed, “that is where I shall be when and if war should come.”⁶⁰

During the years 1948 to 1963 Canada’s Civil Defence policy was continuously revised and adapted to changes in technology, weaponry, scientific discovery and world politics. In the years after 1963 civil defence policy would remain much the same and it would be the organization itself which would have to change in order to remain viable in the face of a growing public perception that civil defence efforts were futile and unnecessary. Although many civil defence measures such as the BRIDGE shelters would remain in use, in some cases into the 1990s, an increased willingness on the part of US and USSR to use negotiation to avoid nuclear war led civil defence organizations to redefine themselves.⁶¹

Historian Costia Nikitiuk documents this change within civil defence organizations using the example of the British Columbia civil defence organization. He argues that British Columbia’s civil defence organization evolved over time from an organization originally intended to deal with the emergency situation of nuclear war in the early 1950s into an organization designed to handle everyday emergencies such as forest fires, floods, and earthquakes by the late 1960s and early 1970s.⁶² Nikitiuk argues that these changes occurred as “the public lost confidence in the ability of civil defence organizations to make realistic preparations for war.”⁶³ In fact, from the outset civil defence organizations were designed to be “dual-use” organizations focused on planning for nuclear war, but able to respond to more everyday emergencies such as floods, fires, earthquakes, and other natural disasters. As early as 1950 MPs in the House of Commons suggested that Canada’s civil defence organization should be set up in such a way that it would be not only be useful in the event of nuclear war, but also for natural disasters.⁶⁴

The study of Canada’s civil defence preparations adds much to our understanding of Canada’s participation in the Cold War. Canada’s involvement in the Cold War is most often compared to the experience in the United States. In this respect Canada is often said to have

been more calm, deliberate, and at times more rational.⁶⁵ Nevertheless it is widely recognized in the historiography that in many respects the Cold War was largely a psychological war which created a culture of fear which permeated every aspect of Canadian society.⁶⁶ It is in this respect that civil defence has been an overlooked aspect of Canada’s Cold War history. As this study has demonstrated, Canadians were concerned about the possibility of nuclear war and many precautions were implemented to aid the survival of the population. Millions of dollars were spent on infrastructure and programs intended to protect and educate Canadians in preparation for nuclear war. In this way civil defence provided a means through which Canadians could cope with the psychological aspects of the Cold War.

Notes

1. See Paul Martin, *A Very Public Life, Vol. II* (Toronto: Deneau Publishers, 1985), 146.
2. Lawrence S. Hagen, *Civil Defence: The Case for Reconsideration, National Security Series No.7* (Kingston: Centre for International Relations, Queen’s University, 1977), 46.
3. Members of the Ontario Civil Defence Committee, April 1950. R.J. Cuddy Files – Correspondence of the Deputy Provincial Secretary – Ontario Civil Defence Planning Board, RG 8-9, Box 20 File 7, Archives of Ontario.
4. Wartime Civil Defence – Fire Plan – Metropolitan Toronto – Metropolitan Toronto Civil Defence Organization, 1957. R. J. Cudney Files – Correspondence of the Deputy Provincial Secretary – Ontario Civil Defence Planning Board, RG 8-9, Box 20, File 71, Archives of Ontario.
5. “Statement by the President on Announcing the First Atomic Explosion in the USSR, September 23, 1949,” Public Papers of the Presidents of the United States: Harry S. Truman. (Washington: United States Government Printing Office, 1964).
6. “Russia Has the Bomb,” *Globe & Mail*, 24 September 1949, p. 6. Quotation from and “No Time for Hysteria,” *Montreal Gazette*, 24 September 1949, p.8.
7. Canada, House of Commons Debates (17 March 1949), p.1551 (Hon. Brooke Claxton, MP). Claxton was member of the Liberal Party and Minister of National Defence in the government of Prime Minister Louis St. Laurent.
8. To the Minister, September 1949, John Francis Wallace Fonds, MG30 E211 Vol. 4 File 4-1. Library and Archives Canada. This was a progress report following 10 months of existence of the post of civil defence coordinator.



9. Memorandum for Minister of National Defence – F.F. Worthington, 5 November 1949, John Francis Wallace Fonds, Library and Archives Canada (LAC) MG30 E211 Vol. 4 File 4-1.
10. *Ibid.* The list of potential target cities was often revised and amended for example a 1956 document lists many of the same cities, but removes Sault-Ste Marie, Sarnia, and Calgary and includes the cities of Hamilton, St. John, and Victoria. See: To: All Provincial Civil Defence Co-ordinators, Federal Civil Defence Coordinators Department of National Health and Welfare, F. F. Worthington 2 February 1956. John Francis Wallace Fonds Series: LAC MG30 E211 Vol. 2; A 1960 document listed 16 target cities: Montreal, Toronto, Vancouver, Ottawa, Hamilton, Windsor, Halifax, St. John's, Winnipeg, Niagara Falls, Edmonton, Calgary, Victoria, St. John, Quebec City, and London. Memorandum for all Regional Officers – Provisional Basic Army Assumptions for Survival Operations, March 1, 1960. Matthew Penhale Fonds, LAC MG31 G12 Box 10 File: Directorate of Survival Operations – Development of Survival Plans – Memoranda and Correspondence 1959-1960.
11. Civil Defence Emergency Planning and Organization to Date 1949 – App.A, 1949, John Francis Wallace Fonds, LAC MG30 E211 Vol. 5 File 5-12, p.2.
12. Vladislav Zubok and Constantine Pleshakov, *Inside the Kremlin's Cold War: From Stalin to Khrushchev* (Cambridge Massachusetts: Harvard University Press, 1996), pp.63-64. See also Chen Jian, *Mao's China and the Cold War* (Chapel Hill: University of North Carolina Press, 2001), pp.54-55. For reaction of Canadians to the Korean War and how fear of war impacted civil defence see Marijan Salopek, "Western Canadians and Civil Defence: The Korean War Years, 1950-1953," *Prairie Forum*, Vol. 14, (1989), p.75.
13. Opening Statement by Honourable Brooke Claxton, Minister of National Defence, Appendix A - Dominion – Provincial Conference on Civil Defence, 23 August 1950. John Francis Wallace Fonds, LAC MG30 – E211 Vol. 2.
14. Protection of Vital Points, Appendix B – Dominion Provincial Conference on Civil Defence, August 23, 1950. John Francis Wallace Fonds, LAC MG30 E211 Vol. 2.
15. Methods of Civil Defence, Appendix D – Dominion Provincial Conference on Civil Defence, 23 August 1950. John Francis Wallace Fonds, LAC MG30 E211 Vol.2. The term 'pioneer' is not defined in this document and does not appear in subsequent documents. It is suspected that pioneers were to venture into the destroyed target area following an attack to access damage and search for survivors.
16. *Ibid.*
17. Shelters, Addendum No. 6 – Dominion Provincial Conference on Civil Defence, August 23, 1950. John Francis Wallace Fonds, LAC MG30 E211 Vol.2.
18. "Subways and Shelters," *Globe & Mail*, 26 February 1951, p.6.
19. Evacuation of Casualties and Others, Addendum No. 8 – Dominion Provincial Conference on Civil Defence, August 23, 1950, John Francis Wallace Fonds, LAC MG30 E211 Vol.2.
20. Civilian Defence Matters, City Council Minutes Toronto, 1950, Vol.2, pp.2084-85.
21. Opening Statement Hon. Brooke Claxton Minister of National Defence, Appendix A – Dominion Provincial Conference on Civil Defence, February 23, 1951. John Francis Wallace Fonds, LAC MG30 E211 Vol. 2, File 2-9. The transfer of responsibility for civil defence to the Department of National Health and Welfare was made official in parliament by the Governor in Council on the recommendation of Prime Minister Louis St. Laurent on 23 February 1951 see His Excellency the Governor in Council, 23 February 1951. Paul Martin Fonds, LAC MG32 B12 vol. 24 File 5-Civil Defence-General 1951-57.
22. Canada, House of Commons Debates (5 February 1951), p.102 (Major-General George R. Pearkes, MP); Canada, House of Commons Debates (12 February 1951), p.274 (Mr. Clarence Gillis, MP). Mr. Gillis, a member of the C.C.F. for Cape Breton South, went so far as to recommend a civil defence department and a Minister of Civil Defence. (p.275).
23. *Personal Protection Under Atomic Attack* (Booklet) Authority of Paul Martin – National Health and Welfare, 1951. John Francis Wallace Fonds, LAC MG30 E211 Vol. 2 File 2-20. Several other booklets were released by the Department of National Health and Welfare in 1951 including Basic First Aid, First Aid and Home Nursing Supplement, Technical Guidance on the Provision of Air Raid Shelter, and the Training Plan.
24. *Ibid.* Effects of radiation were often compared to x-rays or sunburns during this period.
25. *Survival Under Atomic Attack* (Booklet) Issued by the Civil Defence Committee of the Province of Ontario, Arthur Welsh, Provincial Secretary, 1951, Department of Education Records, RG 2-43 Box 372 File 5. Archives of Ontario.
26. "Doubt Latest Soviet Blast an H-bomb," *Kitchener-Waterloo Record*, 1 September 1953, p.1; Richard Kasischke, "Soviet Claims Atomic Bomb of 'New Type,'" *Kitchener-Waterloo Record*, 18 September 1953, p. 1; "Reds Propose Atomic, Hydrogen Weapon Ban," *Kitchener-Waterloo Record*, 23 September 1953, pp.1, 2; Alton L. Blakeslee, "H-Bomb Like a Hole Card in World Game of Poker," *Kitchener-Waterloo Record*, 25 September 1953, p. 6; "Russia Demands Superbomb Ban, Armed Forces Cut," *Globe & Mail*, 22 September 1953, p.1; "Predicts H-bomb Cheap and Simple for All Nations," *Globe & Mail*, 24 September 1953, p.10.
27. Elie Abel, "Explosion out of Control, Eisenhower Acknowledges," *Globe & Mail*, 25 March 1954, pp.1, 2; H-bomb Brightness Rivalled Sun Itself," *Globe & Mail*, 25 March 1954, p.1.
28. "A Report by the United States Atomic Energy Commission on the Effects of High-Yield Nuclear Explosions, United States Atomic Energy Commission, Washington D.C., 15 February 1955, R. J. Cudney



- Files - Correspondence of the Deputy Provincial Secretary Fonds – Ontario Civil Defence Planning Board Files, RG 8-9 Box 20 File 5. Archives of Ontario, p.1.
29. *Ibid.*, p.4.
 30. Canada, House of Commons Debates (2 April 1954) pp.3597-3598 (Hon. Paul Martin, MP responding to question of Mr. Gordon Churchill, MP). Mr. G. Churchill was a member of the Progressive Conservative Party for Winnipeg South-Centre.
 31. Minutes of the Civil Defence Committee, April 28, 1954. Matthew Penhale Fonds, LAC MG 31 G21 Vol. 11 File: Hydrogen Bomb – Civil Defence Preparations in Response to this Weapon – Minutes of Civil Defence Committee and Memoranda 1953-1954. KT refers to Kiloton or the equivalent of 1,000 tons of TNT, MT refers to a Megaton or the equivalent of 1,000,000 tons of TNT. Typically H-bombs would be in the Megaton range whereas most A-bombs were in the Kiloton range.
 32. The Canadian Civil Defence College was established in Arnprior Ontario in June of 1954 to train civil defence workers who in turn would train others in their home communities. The college was given property owned by National Defence which included 25 buildings and 2 aircraft hangers. The college would train approximately 2,000 people a year. See Canadian Civil Defence College – Department of National Health and Welfare, not dated. Matthew Penhale Fonds, LAC MG31 G21 Vol. 11 File: Hydrogen Bomb – Civil Defence Preparations in Response to this Weapon – Minutes of Civil Defence Committee, Correspondence and Memoranda 1953-1954; see also Canada, House of Commons Debates (19 June 1954) p.6313 (Mr. Clarence Gillis, MP).
 33. Address to Corps of Imperial Frontiersmen in Canada: Golden Anniversary Dinner, June 18, 1954. Matthew Penhale Fonds, LAC MG31 G21 Box 8 File: Canadian Civil Defence College – Lectures Delivered Outside the College 1954-1960.
 34. “Hon. Paul Martin Makes Statement on Civil Defence and the H-Bomb,” *Civil Defence Bulletin*, No. 35, Ottawa: Federal Civil Defence Coordinator, Department of National Health and Welfare, (June 1954).
 35. “Need for CD Now Greater – Croteau,” *Montreal Gazette*, 8 June 1954 p.4.
 36. Canada, House of Commons Debates (22 June 1954) p.6502 (Hon. Paul Martin, MP); Canada, House of Commons Debates (22 June 1954) pp.6503-6504 (Hon. George Drew, MP). George Drew was leader of the Progressive Conservative Party and formerly Premier of Ontario; See also “Alter Civil Defense Grants to Benefit Municipalities,” *Globe & Mail*, 23 June 1954, p.1; Forbes Rhude, “Civil Defence Costs Big Issue: Quebec, Ontario at Odds with Ottawa Over Who Should Foot Bills,” *Montreal Gazette*, 18 June 1954, p.15.
 37. To: All Provincial Civil Defence Coordinators, Federal Civil Defence Coordinator, Department of National Health and Welfare. F.F. Worthington, February 2, 1956. John Francis Wallace Fonds, LAC MG30 E211 Vol. 2. The 12 target areas in priority order were: Montreal, Toronto, Ottawa-Hull, Windsor, Halifax, Vancouver, Hamilton, Winnipeg, Edmonton, Quebec City, St. John N.B., and Victoria.
 38. *Ibid.*
 39. Edgar F. Bevis (Civil Defence Coordinator for Ontario) to R. J. Cudney, Attached: New Federal Government Policy in Relation to Civil Defence – Statement on Civil Defence by Paul Martin (Minister of Health and Welfare) in the Estimates Debate House of Commons, Ottawa, July 27, 1956, August 9, 1956. R. J. Cudney Files - Correspondence of the Deputy Provincial Secretary Fonds – Ontario Civil Defence Planning Board Files, RG 8-9 Box 21 File 45. Archives of Ontario.
 40. “2000 Miles to Go!,” *Globe & Mail*, 7 April 1956, p.1. Photo and caption show a test of the American ‘Snark’ ICBM designed to travel about 2,000 miles from Florida into the Atlantic Ocean.
 41. Minutes of Metropolitan Council 15 January 1957. Metropolitan Toronto Council Minutes 1957 Vol. 1, Item 22. City of Toronto Archives. The motion was approved by a majority of fourteen on February 12 1957 see Minutes of Metropolitan Council 12 February 1957. Metropolitan Toronto Council Minutes 1957 Vol. 1, Item 57. City of Toronto Archives.
 42. Minutes of Metropolitan Council 12 March 1957. Metropolitan Toronto Council Minutes 1957 Vol. 1, Item 78. City of Toronto Archives; Wartime Civil Defence – Fire Plan – Metropolitan Toronto – Metropolitan Toronto Civil Defence Organization, 1957. R. J. Cudney Files - Correspondence of the Deputy Provincial Secretary Fonds – Ontario Civil Defence Planning Board Files, RG 8-9 Box 23 File 71. Archives of Ontario.
 43. “Russia Launches First Satellite,” *Globe & Mail*, 5 October 1957, p.1; “Hear Signal Loud, Clear Over Toronto,” *Globe & Mail*, 5 October 1957, pp.1, 2; “Paves Way to Planets, Soviets Say,” *Globe & Mail*, 5 October 1957, pp.1, 2.
 44. Howard Graham, *Citizen and Solider: The Memoirs of Lieutenant-General Howard Graham* (Toronto: McClelland and Stewart, 1987), p.243.
 45. Canada, House of Commons Debates (4 January 1958) p.2854 (Mr. George. R. Pearkes, MP).
 46. *Ibid.*, 2p.853.
 47. Canada, House of Commons Debates (4 January 1958) p. 2853 (Hon. Paul Martin, MP).
 48. Continuity of Government an Appreciation by the Director EMO, 19 December 1957. Matthew Penhale Fonds, LAC MG31 G21 Vol. 11 File: Emergency Measures Organization – Procedures and Organization Detailing Civil Defence, Particularly in Alberta and Ontario. Memoranda and Correspondence 1954, 1957-1960.
 49. “Graham’s CD Report Won’t be Made Public,” *Globe & Mail*, 24 January 1959, p.3.
 50. Graham, pp.243-245.
 51. Canada, House of Commons Debates (23 March



- 1959) pp.2129-2130 (John Diefenbaker, MP). Responsibility for civil defence was officially transferred to the Department of National Defence, the Emergency Measures Organization and Department of National Health and Welfare with the passage of P.C. 1959-656, a bill which revoked Order in Council PC 985 of February 1951 to transfer responsibility to the Department of National Health and Welfare see Clerk of the Privy Council R.B. Bryce 28 May 1959 PC. 1959-656. Premier Leslie M. Frost General Correspondence, RG 3-23 Box 26 File: Civil Defence – Emergency Measures Organization 1959, 1960 III. Archives of Ontario. The changes at the federal level were soon duplicated at the provincial level for example in 1960 the Ontario EMO was created See Copy of an Order in Council – Order 201/60, 14 January 1960. Premier Leslie M. Frost General Correspondence, RG 3-23 Box 25 File: Civil Defence 1957-1961. Archives of Ontario.
52. Canada, House of Commons Debates (23 March 1959) pp.2129 (John Diefenbaker, MP).
 53. Canada, House of Commons Debates (27 April, 1959) p.5053 (Hon. Jay Waldo Monteith, MP). In his address to parliament Minister of National Health and Welfare J. W. Monteith noted that the provinces and municipalities reacted positively to the federal government's announcement that it would assume 75 percent of civil defence costs.
 54. Canada, House of Commons Debates (27 April 1959) p.3053 (Hon. Paul Martin, MP).
 55. Canada, House of Commons Debates (18 July 1959) p.6363 (Hon. Jay. W. Monteith, MP).
 56. Fallout Shelter Programmes, 7 December 1960. Matthew Penhale Fonds, MG31 G21 Vol. 11 File: Evacuation and Shelter Problems Plans and Policy – Memoranda and Correspondence 1955, 1959-1960. In this document individual shelters are recommended over mass evacuation.
 57. Progress Report on Civil Emergency Planning Activities – J. F. Wallace Assistant Director Emergency Measures Organization, 1960. John Francis Wallace Fonds, LAC MG30 E211 Vol. 4 File 4-11.
 58. The so-called 'Diefenbunker' constructed outside Ottawa in Carp, Ontario is a very large four story building constructed completely underground and designed to provide fallout and some blast protection to 535 personnel for a period of thirty days. See Diefenbunker Museum. 2002, <www.diefenbunker.ca/english/default.asp> (accessed 29 September 2005).
 59. A. F. Cooney (Regional Officer – Ontario EMO) to W. J. Scott Direction of EMO Ontario – BRIDGE V. Continuity of Government, 20 July 1960. Premier Leslie M. Frost General Correspondence, RG 3-23 Box 25 File: Civil Defence 1957-1961. Archives of Ontario. The Ontario regional shelter at Camp Borden was designed to provide for 55 federal government personnel, 68 provincial government personnel, and 25 military personnel. For more information on the regional shelters see Bill Manning, "Beyond the Diefenbunker: Canada's Forgotten 'Little Bunkers', *Material History Review*, vol. 57, (Spring 2003).
 60. Canada, House of Commons Debates (23 September 1961) p.8802 (Hon. John Diefenbaker, MP). The reason for Diefenbaker's decision to remain at 24 Sussex Drive in the event of a nuclear attack was due to the fact that he was unwilling to leave his wife behind and evacuees to the 'Diefenbunker' were not permitted to bring family members with them into the bunker.
 61. The 'Diefenbunker' for example would remain in use until the end of the cold war when it was closed and subsequently turned into a museum in 1993. Diefenbunker Museum. 2002, <www.diefenbunker.ca/english/docs/0/18/77.asp?type=Web&id=77> (accessed 05 January 2007).
 62. Costia Nikitiuk, "Emergency and Organizational Legitimacy: The Dilemma of Emergency Planning in B.C.," *B.C. Studies*, No.38, (Summer 1978), p.47.
 63. *Ibid*, p.52.
 64. Canada, House of Commons Debates (8 June 1950) p.3360 (Mr. Douglas Harkness, MP).
 65. Reg Whitaker & Steve Hewitt. *Canada and the Cold War* (Toronto: James Lorimer & Company Ltd., 2003), p.6.
 66. Whitaker & Hewitt, p.6; Robert Bothwell, *The Big Chill: Canada and the Cold War* (Toronto: Irwin Publishing, 1998), p.1.

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