



**Institute for Catastrophic
Loss Reduction**

Building resilient communities

Making flood insurable for Canadian homeowners

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Speaking notes. Check against delivery

Good afternoon, it's nice to see you all and great to be here. Thank you for the opportunity to allow me to share our research with you, our insurance industry supporters.

Living in one of the most developed economies in the world, Canadian homeowners enjoy access to many things – however insurance for overland flood is not one of them. In fact, Canada is the only G8 country in which flood insurance is not available to homeowners. Even Russians, whose economy isn't exactly known for being one of the most advanced in the world, can purchase a rider to cover their homes against overland flood. But Canadians cannot.

To make matters worse, most homeowners in Canada are of the mistaken belief that they are, indeed, covered for overland flood. A professionally administered ICLR survey conducted in 2004 showed that more than 70% of respondents believed that their homeowners policy covered them for overland flooding. More than 60% believed that their policy covered them for coastal flooding.

People with these mistaken impressions oftentimes learn the hard way that they are wrong.

But who can blame them for thinking as they do?

We confuse homeowners by covering some forms of water damage, but not others.

Homeowners insurance in Canada routinely covers sewer backup, but not overland flood.

It covers burst pipes, failed hotwater heaters and the like, but not overland flood.

It even covers burst municipal watermains, but not overland flood.

To confuse homeowners even more, when a pipe in a home bursts from age, we cover the damage caused by the water or sewage, but not the cost of the plumbing repair. But when a pipe bursts due to freeze/thaw, we cover both damage from the water or sewage and for the plumbing repair.

We say sewer backup is a covered peril but infiltration flooding is not; yet when a basement is filled with 'grey' water after a storm event, we may call it 'sewer backup' and pay the claim anyway – for customer relations and/or PR reasons.

We say that homeowners insurance is not a warranty, yet we provide coverage for failure of a sump-pump, even if the problem could have been caught by a routine inspection by the homeowner.

What's more many – if not all – Quebec insurers are reported to cover infiltration flooding, and at least one Quebec-owned national company covers infiltration flooding outside of Quebec.

Commercial enterprises in Canada can purchase flood insurance, and so can condominium corporations for common areas; but individual homeowners cannot.

What's more, flood damage is covered under the comprehensive portion of the typical auto policy.

The bottom line is that we cover essentially all forms of wind damage and all forms of fire damage, but not all forms of water damage. And we collectively wonder why our insureds don't hold us in high regard.

As insurers, how does this make you feel?

Are we, as an industry, doing what's best for the policyholder or what's best for the shareholder? Can't we do both?

Are we locked into an old way of thinking about flood and flood insurance?

The Fraser Institute, in a very recent study on earthquake insurance, warned against the dangers of 'split' coverage. Speaking of a peril in which damage from shake (which is covered in a separate rider) is split from fire-following (which is covered in the standard policy), the study raises the specter of U.S. Gulf Coast-style "wind versus water" or "slab" claims.

After Hurricane Katrina, many homeowners went to their insurance carrier with a total-loss claim, only to be told that they weren't covered because the loss was not from the covered peril of wind but from the uncovered peril of storm surge. Just last month, one of these cases went to the Mississippi Supreme Court. So more than six years after the loss event, such arguments still live, underscoring the problems the insurance industry often gets itself into, often due to ambiguous wordings but in this case, by splitting coverages. And for six years, the insured is in limbo waiting for a court ruling.

We can and should learn from such occasions.

The truth is flood has different meanings to different people. If you ask an insurer what is meant by the term "flood" – you will get a highly technical definition outlining some of the finer points I mentioned earlier.

Ask a homeowner, and you will get an entirely different answer, with the bottom line being that, to the policyholder, water is water. It doesn't matter to them how it manifested itself, they just want the problem fixed.

So where do we go from here?

In November 2010, ICLR and Swiss Re issued a discussion paper entitled "Making flood insurable for Canadian homeowners."

The paper explores historical flood damages in Canada, current flood management practices at the national level in Canada as well as flood management practices for four case study provinces: Ontario, Quebec, British Columbia and Alberta. International approaches to flood insurance are also explored, with a focus on flood regimes in the U.S., France, Germany and the United Kingdom. Finally, a possible model for insuring flood for homeowners in Canada is discussed.

The paper, though comprehensive, is not a roadmap for making flood insurable in Canada, but serves to start an important, and likely protracted discussion into what is needed to change what I've just outlined to you.

While conducting our research into flood insurance, we looked at many aspects of the issue and determined several things.

We looked at government relief programs for flood. As private insurance is available for most other types of large disaster events, government relief programs are primarily applied to flood losses. Programs vary in each case study province, but generally are only for uninsurable damages and only for essential items. Some provinces have caps on the maximum that can be paid out, and some have no cap but pay only a portion of the assessed current value of essential items eligible for coverage.

In addition, some municipalities offer limited payouts – sometimes called compassionate grants – to at least partially reimburse those affected by specific events, such as widespread basement flooding after a large rainstorm. Such grants may lead to a problem with moral hazard, which is to say that a homeowner may not take measures to prevent basement flooding from occurring or reoccurring if they have access to such funds, which are often made available even though the hazard is insurable, and even if insurance is in place.

All-in-all, the objective of insurance, we must remember, is to bring homeowners back to where they were just prior to the loss, while relief programs only seek to reduce immediate hardship. The latter is hardly a fair and equitable replacement for the former.

We determined that flood insurance has many advantages over government relief programs. For one, risk based premiums and deductibles can provide incentives to encourage actions to reduce flood risk. Also, insurance companies have experienced personnel and well established methods and systems for assessing and paying claims, which can result in faster recovery.

We determined that it is very likely that any proposed insurance model would have to be adopted by and applied at the provincial level, rather than at the federal level. Federal systems are the most common in other countries, except Switzerland, which has more than one flood insurance regime due to its decentralized political structure.

We determined that to ensure economic viability for a flood insurance program, it may be necessary to exclude certain very high risk homeowners from the program.

We determined that flood insurance in Canada should cover all causes of flooding and water damage to avoid ambiguity when flood claims are made by insureds.

We determined that risk based pricing and deductibles will be an essential feature of a flood insurance program in Canada. Homeowners with greater risk of flood damage should pay more for insurance protection, and those who work to reduce their flood vulnerability by adapting their buildings or properties to reduce risk should pay less.

We determined that flood insurance must not incentivize building in flood prone areas, or encourage risky behaviour on the part of insured homeowners. Rather, flood insurance should complement existing flood management approaches applied by governments across Canada, and in many cases will likely require a renewed commitment by governments for structural and non-structural flood management.

And we determined, through a review of existing research on flood insurance, that there must be six conditions in place in order for a peril to be insured:

- 1) Mutuality: A large number of people must combine to form a risk community.
- 2) Need: There must be a need for insurance cover when the anticipated event occurs.
- 3) Assessability: The peril must be assessable in terms of possible losses.
- 4) Randomness: The event must be independent of the will of the insured, and the time at which the insured event occurs must not be predictable.
- 5) Economic viability: The risk community must be able to cover the financial needs of claimants.
- 6) Similarity of threat: The risk community must be exposed to the same threat and the occurrence of anticipated damages must result in the need for funds in the same way for each member of the community.

Most of these conditions are met for flood insurance so it is not a surprise that flood insurance for homes is available in many countries. A need for coverage of flood exists, as flooding often results in serious damages. Randomness is present to a certain extent, however, some flood losses occur very frequently and thus may not be considered as random. Less frequent floods, especially those occurring in undefined flood areas (as with urban flooding and flooding caused by

extreme rainfall, and so on) are less predictable, and may be considered more random. It is clear that flood coverage should not be sought only when a flood is predicted, as this completely eliminates the condition of randomness. There are, however, several actions that can be taken to address the issue of randomness in favour of a viable flood insurance regime. These are discussed in the study.

At least three challenges that arise when considering the implementation of a flood insurance regime are mutuality, economic viability and adverse selection.

With mutuality, the thinking here is that only a limited population may be formally defined as exposed to flood. If only those who are exposed to flooding are insured, only a small insurance community would exist, which would be too small to compensate for possible flood losses.

Economic viability is a concern if a large loss event affects an area with a large concentration of policyholders and there is only a limited number of policyholders in the pool on which to draw. The event could easily overwhelm the capacity of the small insurance community, and that community (i.e. the risk pool) would not be able to compensate for losses. In these cases, if only those at risk are insured, premiums would have to be extremely high to cover potential flood losses, thus rendering the insurance model economically unachievable.

Mutuality and economic viability are directly related to the problem of adverse selection. Adverse selection occurs when flood insurance is demanded only in areas that have a high occurrence of flooding. Thus, if coverage is available, adverse selection leads to a situation where coverage is too expensive for homeowners to purchase.

Certainly every country with flood insurance has had to deal with these same challenges. Canada is surely not unique or alone in this regard, and we shouldn't behave as though we are.

We believe that the problems of mutuality, economic viability and adverse selection can be overcome through the application of bundled flood insurance coverage.

Generally speaking, our research indicates that flood insurance regimes fall under one of four categories: public and bundled, as in Spain and France; public and optional, as in the United States; private and bundled, as in the United Kingdom and Switzerland; and private and optional, as in Germany.

Under an optional system, insurers offer flood insurance upon payment of a specific premium. This system is in place in Belgium, the U.S., Germany and Italy.

Under a bundled system, insurers offer flood insurance along with other perils, such as fire and theft. This system is in place in the United Kingdom, Japan, France, Portugal, Israel and Spain.

One of the primary problems with the optional flood coverage approach is adverse-selection. Adverse-selection occurs in situations where flood insurance is offered as an option on insurance policies, because insurers may “select against” homeowners by making the policy available only in areas considered to be safe, and homeowners may “select against” insurers by buying the policy only in areas they consider prone to flooding.

Adverse-selection results in reduced economic viability for flood coverage, as the risk community or insurance pool on which to draw is too small to cover flood losses. The result is that flood insurance, when it is available, is very expensive and has a low market penetration. This has been observed in many cases, most notably the National Flood Insurance Program in the U.S.

A paper released by the Organization for Economic Co-operation and Development in 2003 argued for bundled flood insurance over optional coverage. The study reviewed international flood insurance approaches following severe flooding in Europe in 2002, and revealed that countries where bundled flood insurance was in place, including Israel, Japan, Portugal, Spain, Switzerland and the UK, had very high flood insurance penetration rates. This is compared to countries with optional flood insurance coverage, including the United States, Austria, Belgium, Germany and Italy where insurance penetration was low.

The bundled system allows insurers to spread out flood risk over time, geographically, across risks, and across rating areas. As homeowners who live in areas that are at relatively low risk of flooding will have to purchase flood insurance, a very large insurance community can be created as market penetration will be high, thereby overcoming the problems of mutuality and economic viability.

If risk based insurance coverage is provided, a bundled insurance program can be equitable as those with a lower risk of flood will pay less for flood coverage, whereas those with a higher risk of flood will pay higher prices. Further, under some flooding scenarios, for example extreme rainfall in urban areas, practically any homeowner can experience flooding, despite their location within or outside of identified floodplains or coastal flood risk areas. Thus, though some cross-subsidization may be required under the proposed insurance model, every homeowner who purchases flood insurance has the potential to benefit from flood coverage.

With all these considerations and more, we also determined that the best suited approach for Canada could be based on the approach that has been in placed in the United Kingdom for the past 50 years.

In the UK, a bundled system for flood insurance is applied where flood insurance is available as part of standard or general home insurance policies, and flood insurance is generally included in contents and buildings policies. Private insurers, in turn, purchase reinsurance on the international market. While

insurance is not compulsory in the UK, building coverage is generally required when homes are financed under a mortgage – as is the case in Canada. Under this bundle system, most types of flood risk are covered by flood insurance, and the vast majority of households are covered for flood damages.

In 1961, a “Gentleman’s Agreement” was established between insurers (now represented by the Association of British Insurers or ABI) and the UK government to loosely define each party’s responsibilities in the partnership. At that time, natural perils, including flood, were bundled with fire in insurance policies, and insurers would not refuse flood coverage for any residential property, regardless of flood risk.

The original agreement set between the UK government and the insurance industry in 1961 guaranteed flood coverage for all residential properties. However, a review of the state of structural flood control measures in some parts of the UK resulted in reluctance of some insurers to continue writing flood coverage in some areas. In 2002 the agreement was altered to restrict guaranteed coverage for those who occupy the 1 in 75 year flood zone.

The pricing of policies is differentiated to reflect risk, such that homeowners with a higher flood risk are charged more and those with lower risk are charged less. The deductible on the policy, however, is small, in the range of £50. Deductibles may be higher in cases where insurers have chosen to insure properties with a significant flood risk.

The government has an important role to play in making flood insurance feasible in the UK. The three main responsibilities of the government are guaranteeing quality flood maps, ensuring adequate flood defence, and applying effective land use policies.

Individual property owners have a significant role in the UK flood insurance system; specifically through paying risk based insurance premiums and deductibles. As well, in cases where flood risk may be significant, households may be involved in reducing flood risk to determine insurability. New homes built after January 1, 2009 will not be guaranteed flood insurance, thus developers and property buyers will have to ensure that properties are eligible for flood insurance before they build or buy them.

The Association of British Insurers Statement of Principles on the Provision of Flood Insurance outlines the characteristics of flood insurance in the UK, as well as agreed responsibilities of both the government and insurance industry. These characteristics are prescribed to enable the insurance industry in the UK to provide flood insurance to the majority of households and small businesses.

Through the Statement of Principles, insurers agree to the following:

In areas with a flood probability of 1 in 75 years or lower, insurers will provide flood coverage as a standard feature of household (and small business) policies. Flood insurance rates will vary based on flood risk.

In areas with a 1 in 75 year or higher probability of flood risk, and where improved flood defences are planned to reduce flood risk below a 1 in 75 year probability within five years, flood insurance for households and small businesses will be maintained.

In areas with a flood risk greater than 1 in 75 year probability, and where no flood defences are planned, insurers will examine insurability on an individual basis, and will not guarantee flood coverage. Insurers may work with high risk property owners to identify methods of reducing flood risk, and with the government to identify flood risk reduction strategies so that individual properties with a significant flood risk may become insurable.

Of the many different approaches to flood insurance found around the world, the UK approach to flood insurance provides the best example on which a Canadian model may be based. Specific reasons include:

- 1) A bundled approach to flood insurance helps to reduce the problem of adverse selection;
- 2) The UK system provides an option for exclusion of very high risk homeowners, which also assists in reducing adverse selection;
- 3) The UK system provides for the use of risk based pricing;
- 4) The system fosters a three-way partnership approach between the insurance industry, governments and private homeowners;
- 5) Specific responsibilities of the insurance industry and of the government are defined through a formal agreement;
- 6) Government responsibilities reflect many current measures carried out by Canadian governments and include land use planning to reduce flood risk, investment in structural flood controls and production of flood maps which identify flood return periods that are relevant for the industry;
- 7) The system requires involvement of individuals in flood management, through carrying a portion of flood damage through deductibles and premiums and by becoming involved in risk mitigation on their own properties, and;
- 8) The system is a private insurance program that is supported by government flood risk reduction actions.

The UK model is an active partnership between private insurers and government, and requires significant participation by private property owners. The

management of the system, including bundled coverage, has resulted in an extremely high flood insurance penetration rate of 95%. Through this high rate of insurance penetration, coverage has remained relatively affordable, though in cases of recurrent flood claims, private insurers have had flexibility to raise premiums and deductibles. The bundle system also helps the industry avoid adverse-selection.

The insurance industry has also been highly involved in flood management in the UK, including funding or conducting studies on structural flood controls and flood vulnerability. Flood maps are also produced and available through the national government. Further, the UK insurance system relies purely on private industry, and there is no involvement of the government in terms of setting insurance premium prices, requiring insurance coverage, subsidizing rates, or paying out claims. This is a favourable scenario for insurance coverage, as it reduces the potential burden on public finances during flood damage events. It also provides the industry flexibility in covering flood on its own terms, which includes application of tried-and-tested methods of assessing policyholder risk and paying out claims.

Now, as to the bundling issue, though it may sound like a leap for Canadian insurers, it really isn't.

As you may or may not know, the homeowners policy in this country (indeed, all property policies) began as fire policies. In fact, many Canadian property insurers still have the word 'Fire' in their names.

Over time, additional perils got tacked onto the fire policy, to a point where the fire-only policy morphed into today's all-perils form.

In Canada, it has been reported anecdotally that roughly 80% of homeowner policies sold use a comprehensive or broad form. According to one industry source, it is difficult to think of any insurer that does not at least offer an all-risk or comprehensive homeowners product.

Also, as mentioned earlier, it is not as though we do not cover water in our policies. We do, though as noted we are somewhat selective. We are simply saying that overland flood should be just another scenario included in the bundle (with the appropriate pricing and deductible structure included as well).

This is doable.

Now, is overland flood currently insurable for Canadian homeowners? The short answer is 'No.' As currently constituted, it is not insurable, at least not if the insurer wishes to stay in business for any length of time.

What would be needed to make it insurable?

A viable Canadian flood insurance program will require a three-way partnership between the insurance industry, governments and homeowners.

The role of insurers in a Canadian flood insurance model will be to provide flood coverage to all homeowners, aside from those occupying very high risk areas. As well, insurers should apply risk based insurance premiums and deductibles, keep track of environmental and structural changes that have implications for the flood risk of their policyholders, and participate in flood risk communications with their policyholders, including providing information on how individuals can reduce flood risk. Insurers should also monitor their accumulation of flood risk and ensure policyholders are aware of the characteristics of their insurance coverage.

Governments would need to increase flood risk assessment and reduce flood risk. To achieve this, they may choose to reduce flood risk through maintenance and enhancement of current practices that restrict development in flood prone areas, ensure continued investment in flood control measures, and work to increase public flood risk awareness. A viable insurance program will also require that public relief programs do not conflict with flood insurance.

Private homeowners would need to become aware of their own flood risks, and implement appropriate flood damage mitigation measures on their own property. Private property owners will have to participate in flood losses through retention of some of the damage costs through insurance deductibles. Risk based premiums and deductibles will help to ensure that higher risk property owners retain a higher proportion of the costs. Homeowners should also consistently communicate with insurance providers when improvements are made to buildings or when flood mitigation measures are installed to reduce the risk of underinsurance and ensure fairly priced premiums and deductibles.

Providing flood insurance to individual homeowners is good public policy and good for business.

It can serve to increase confidence and satisfaction with insurance companies, and may provide opportunities for modest profits for the insurance industry. The expansion of current coverage to add flood protection is an opportunity for insurers to address a gap in current coverage and better serve their clients. Providing flood insurance coverage will help the many Canadian homeowners who experience flood damage each year, and will bring the peace of mind and security of insurance protection for flood to the majority of Canadian homeowners. As well, provision of flood cover will reduce ambiguity regarding water damage claims, and can also provide an opportunity for growth in Canada's developed insurance market.

The Canadian property and casualty insurance market is considered to be mature (rather than emerging, as with many markets in eastern Europe, Asia and Latin America). As such, there is less scope for business growth, as hundreds of insurance companies vie for business in a market which grows very little each year. Reinsurers serving the market find they are competing for business that is

often shrinking each year, as large carriers retain more risk and buy less and less reinsurance. One of the only options for growth in such a market is to create new products, either by completely innovating new lines or forms of coverage, or by providing indemnity for a hazard that is currently being excluded in the standard policy. Providing flood insurance to homeowners in this country would do just that.

The joint study “Making flood insurable for Canadian homeowners is not the end of the flood insurance discussion, nor is it the beginning – it is the end of the beginning.

The next step will involve a discussion among insurance companies exploring their willingness to provide coverage.

There is much to be done, and many discussions that need to take place. But hopefully, a few years down the road, we will be able to say with pride that all G8 countries, without exception, provide flood insurance to their respective homeowners.

Thank you.