Under Development

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Several Canadian communities have started incorporating land use planning tools, such as development permits, into their wildland fire management strategies. The idea is that these permits, which can be used to combine management of zoning and site planning, can help reduce potential future losses associated with wildfires.

Land use planning is a tool that many local governments around the world use to reduce the risk of flood damage. Now, several Canadian communities have begun to incorporate planning tools, such as development permits, into comprehensive community wildland fire management strategies.

Development permits are planning tools that local governments can use to manage development, protect the environment and address local health and safety issues. These permits can be used to combine management of zoning, site planning and minor variants into a single process.

As of late, more than a dozen communities in British Columbia and Alberta have started using development permits to control the extent, nature and location of new residential development in the wildland-urban interface — or WUI — essentially those places where housing and vegetation abut or comingle.

It appears the growing use of local government planning tools to address wildfire exposure in western Canada is poised to spread across the country. Indeed, this past June, a revised Provincial Policy Statement now requires that local governments in Ontario use their planning powers to address both flood and, now, wildland fire.

FIRE ON THE LANDSCAPE

Fire is an essential agent for ecological renewal and health in forests and grasslands. However, fire also has the potential to destroy homes, disrupt communities and threaten health and safety.

Loss and damage from fire in the WUI has been growing and is expected to increase significantly over the coming decades unless current practices change. In particular, the rising number of people who live in the WUI, coupled with the impact of climate change on expected area burned, are two factors that will drive fire losses in Canada higher absent action being taken.

For almost one hundred years, fire specialists have managed the risk of loss and damage from wildfire in Canada with little involvement from individual property owners and communities located in or near wildlands.

Historically, most fires were identified soon after they began, and were suppressed quickly. For many decades, there were few wildfire fatalities and relatively little damage to property.

Illustration by Dave Whamond

Since the 1990s, however, there has been a trend of rising costs of fighting wildland fire and fire damage. These costs have been growing in Canada and have increased at an unsustainable rate in some other countries, including the United States and Australia.

The most damaging wildfires in Canadian history, in terms of the value of property destroyed, were relatively recent events in 2003 (Kelowna, British Columbia and nearby communities) and 2011 (Slave Lake, Alberta).

There is widespread agreement that the current approach to fire management in Canada needs to evolve.

Emerging fire management best practices are complex and seek to involve many stakeholders, including all levels of government, land managers, fire management and suppression agencies, homeowners and insurers.

Fire specialists continue to address fires when they ignite. There are also efforts to reduce the risk of large, uncontrolled fire through prescribed burning, thinning of forests and creation of fire breaks.

Beyond the forests, efforts are under way to involve property owners in managing the risk of fire damage. National programs such as FireSmart seek to educate property owners and community leaders about the role of fire in the ecosystem and actions Canadians can take to reduce the risk that fire enters a community.

New wildfire management tools are frequently identified and tested in this changing environment. Of interest here, however, is the emerging role of local government planning officials.

Over many decades, planners have provided important tools to address other hazards, most commonly the risk of loss from riverine flood. However, some progressive communities have recently begun using established tools, like development permits, to address the risk of damage from wildfire.

In June 2014, for example, the Province of Ontario included wildland fire in its planning statement for the first time. Prior to this change, only British Columbia included wildfire in its provincial planning policy statement.

PERMITS AS WILDLAND FIREFIGHTING TOOLS

Several local governments now include covenants in the development permit system requiring fire-resilient building materials for new homes.

Conditions for approving a development permit may include fire-retardant roofing, exterior walls sheathed with fire-resistive materials, windows with tempered or double-glazed glass, decks built with fire-resistant materials, screens on all eaves, attics and roof vents and chimney spark arrestors.

Provincial and territorial governments do not currently include provisions addressing the risk of damage from wildland fires in their respective building codes; fortunately, these public safety measures are now emerging in local government development permit requirements. The development permit system can also address landscaping and site considerations to reduce the risk that wildland fire will enter and spread through a community.

This may include a requirement for defensible space of at least 10 metres around each home free of combustible materials, thinned plantings and reduced combustibles in a zone extending at least 30 metres around each home, underground servicing for hydro, considerations to address the additional risk to structures on a slope, fire breaks and other community safety measures.

The overall objective is to ensure that new residential developments are designed with measures to defend against the risk of wildland fire blowing or burning into the community.

Most significantly, development permits provide local governments with the authority to control and even prohibit residential development in zones of high fire risk. There has been rapid growth in the number of people who live in or near wildlands across Canada, including more permanent residences and seasonal homes.

Evidence from the United States, Australia and emerging in Canada shows that growth in the number of people living in areas at risk is a critical factor that has been increasing loss and damage in the WUI. Development permits give local governments the authority and responsibility to control residential development in interface zones with high risk of fire.

LOOKING FORWARD

Land use planning is a tool that local governments around the world use to reduce the risk of damage from riverine flooding. This is true in Canada as well, as many jurisdictions across the country have endeavoured to keep developers from constructing homes in floodplains and on floodways (some, as has recently been witnessed, with better success than others).

Now, it is emerging several communities have similarly begun to use planning tools, such as development permits, to forge comprehensive community wildland fire management strategies.

The growing population living in the WUI and projections of increasing areas burned by wildfire due to climate change suggests these tools are likely to spread in the years ahead and, eventually, will be used by a number of local governments across the country.

Local planning decisions can provide an important contribution within a comprehensive community wildland-urban interface fire management strategy.

Establishing development permits looks to be an emerging policy instrument for local governments to address the risk of loss from wildland fire and will play a significant role in ensuring that communities located in the WUI are safe places to live, work and play.