

# The Future Fix

Season 4 – Episode 3 – Preventing Extreme Heat Disaster

Published November 30, 2023

## Transcript

00:00:08 Glyn Bowerman

Welcome to the Future Fix.

00:00:29 Glyn Bowerman

2021 showed us just how deadly extreme heat can be to Canadian communities.

00:00:35 Glyn Bowerman

While the country was already in crisis mode, dealing with the pandemic, British Columbia experienced temperatures of over 40°C for an extended period of time.

00:00:46 Glyn Bowerman

Many people, buildings and even whole communities were not prepared for this disastrous Heat Dome Effect and as a result, more than 600 people died.

00:00:58 Glyn Bowerman

The fact is, we're going to experience extreme climate events like the one in 2021 with more frequency. That means communities all over need to prepare themselves for whatever may come their way.

00:01:10 Glyn Bowerman

But how can you predict disaster? And even if it's possible, how do you prepare?

00:01:16 Glyn Bowerman

You're listening to the Future Fix solutions for communities across Canada.

00:01:52 Glyn Bowerman

This is season four of the Future Fix and audio exploration of the way technology and data are shaping communities across Canada. I'm Glyn Bowerman.

00:02:01 Glyn Bowerman

Each episode we present community challenges and solutions and take you to places large and small from coast to coast to coast.

00:02:10 Glyn Bowerman

Predicting where, when and how disaster will strike, including extreme heat events, involves a lot of data and some great tools.

00:02:18 Glyn Bowerman

Doctor Ryan Reynolds is the researcher behind Resilience Mapping in Canada and uses everything at his disposal to help prepare people for emergencies.

00:02:27 Glyn Bowerman

He is involved in multiple projects, including the Canadian Hazards and Emergency Response and Preparedness or CHIRP initiative, which is a mobile app that helps households prepare for emergency and Resilience-C: An online tool for coastal communities.

00:02:43 Glyn Bowerman

We asked Ryan how to determine who's vulnerable and how to stay prepared.

00:02:49 Glyn Bowerman

So Ryan, I wanted to begin by just asking about Resilience Mapping Canada and particularly interested in geospatial modeling, which I hadn't heard the term before, but for technical podcast, I think people will be interested.

00:03:05 Ryan Reynolds

So Resilience Mapping comes out of research that I was doing both as a PhD student at the University of Calgary and then also as a postdoctoral research fellow at the University of British Columbia in the School of Community and Regional Planning. And essentially what we're looking at is how we can map ideas of risk, vulnerability and resilience in Canadian communities at various different scales and.

00:03:28 Ryan Reynolds

And this kind of if you think about it, like old school cartography, where we would draw the coastlines in by hand, we've taken that to the 21st century with, you know, online maps that bring in satellite imagery, bring in data from places like the census or from door to door surveys, whatever that might be to really get down to, say the neighborhood level about what risk for a particular hazard might be.

00:03:52 Ryan Reynolds

And then work with our community partners to address that risk to find some of the source causes of that risk and then also to address, you know, through policy or through planning changes that we can make to reduce that risk and make communities a little bit more resilient to those hazards.

00:04:09 Glyn Bowerman

I imagine you collect the data in various ways, but what are some of the ways that you do collect the data?

00:04:15 Ryan Reynolds

So it's going to depend entirely on the particulars for the hazards, so most hazards we have an official assessment that's completed, usually by someone like an engineer or geospatial expert that on that particular hazard, and they will go through and map out kind of relative risk levels using whatever information is relevant to that particular hazard.

00:04:34 Ryan Reynolds

What we do on our end is then layer on top of that information about the community around that particular risk. So looking at things like census data, looking at proximity to different things like maybe if we're looking at extreme heat, things like parks, water, treed areas, if we're looking at, for example, tsunamis its proximity to a coastline might be something else that we bring in, so there's lots of different data that's out there and it really depends on the questions that we're trying to answer or at least that our or community partners are trying to answer and also what data is available because it's not the same across Canada. We have some areas where we have really great high resolution data. I was just working in Tuktoyaktuk that is not the case up there in the Northwest Territories. So we have to deal with whatever data is available and kind of work to do our best job with what we have.

00:05:23 Glyn Bowerman

And that kind of leads into you're also part of the Canadian Hazards Emergency Response and Preparedness or CHERP Initiative. How does that work?

00:05:33 Ryan Reynolds

So so CHERP is a a kind of research initiative that was essentially designed to be community engagement. So at the time, UBC connecting with community partners, but also to kind of rethink how community preparedness works. Instead of saying we as the community declare that you need to do these things as homeowners, what we're saying is what can you, as a homeowner, do to make yourselves more resilient. And if enough people do that to make your neighborhood, and eventually your community more resilient and the first step of that is really in awareness, so dispelling those myths about particular hazards that they might be encountering, making sure people actually know if they live in zones or they don't live in hazard zones, that actually turns out to be a really big problem where people think they can read a map. And it turns out they're wrong sometimes or they're unclear.

00:06:20 Ryan Reynolds

So we want to be very clear in in doing that at the household level in kind of just a promotion of household values, getting everyone on the same plan. So that if an emergency happens, they know exactly what to do, where to go and what to bring with them in those cases.

00:06:34 Glyn Bowerman

Right.

00:06:34 Ryan Reynolds

Its rethinking, essentially this work.

00:06:37 Glyn Bowerman

And obviously 2021, the the heat wave in BC put a a really fine point on the need for emergency preparedness and and in a lot of ways the lack of a a prepared response when something like that happens. So how do you make people aware of the danger? What are the little things they can do you know in a household level and then what are things that municipalities can do?

00:07:00 Ryan Reynolds

Yeah. And I think the the Heat Dome event that you're talking about in 2021 was really the beginning of the chain of events that have caused us a lot of problems in BC where we have that extreme heat causing drought conditions. Those drought caused trees to fail. Those trees failing cause landslides to happen, which causes more flooding. Like all of that is a cascade that's happened. Essentially what we're looking at is we weren't prepared for extreme heat happening as quickly in climate change as we are experiencing, at least in in BC

00:07:29 Ryan Reynolds

So what we're going to have to do is rethink that process. And that is absolutely happening across the province because there's now funding available for these research projects. There are several of them ongoing right now. The province itself is undertaking work in this area at the provincial scale and at regional scales. And so what we're trying to do is to help the decision makers, the planners see politicians.

00:07:51 Ryan Reynolds

To understand what that risk landscape looks like for them, for heat, who is most at risk, where are they located, etcetera. And then what can we do to kind of bring that heat exposure down a little bit? So maybe planting trees and increasing tree canopy is a good way of doing that, or maybe through policy. So maybe we don't build in areas where there are large amounts of impervious surfaces like buildings, concrete, roads. Maybe. Instead, we prefer land use with a little bit more space, a little bit more green space in that area. Or finally, maybe it's just in policy planning. So maybe we put more cooling centres in places closer to where people need them. The two big issues I'm seeing in the North Shore and Vancouver is things like language. So we know that there are a number of people who don't speak English, English being the major language in that area.

00:08:36 Ryan Reynolds

So they aren't necessarily getting the message to the same degree as a native English speaker might be getting that information and saying, you know, what should I do about this? So we're trying to kind of improve that through policy through, planning approaches, moving things towards people so that you don't need to take the bus to get to a cooling centre, for example.

00:08:55 Glyn Bowerman

So when we talk about extreme heat, how do you define that as a researcher?

00:09:00 Ryan Reynolds

So extreme heat is really being defined regionally, so we don't want to set a specific number that would be used across Canada because it doesn't really make sense. And even within the province of BC, we're looking at several different eco zones where we define that extreme heat a little bit differently. But essentially what we're looking at the simplest form is have you exceeded a specific temperature for a specific number of days and have you exceeded a night time temperature for a specific number of days so that the highs on both ends of the day are above what they would normally be for that particular region for a period of time, not just for a couple of days.

00:09:37 Glyn Bowerman

And if I understand that, you know, going back to 2021, what caught BC off guard in kind of a deadly way, frankly, it is that it doesn't get that hot that often for that prolonged period of time. It was kind of a surprise where I'm here in Toronto, a lot of us have air conditioners. So I I guess what you're saying is extreme heat is a a moving target based on, I guess your ability to deal with it. You know, how do you determine the vulnerability and and who is most vulnerable?

00:10:08 Ryan Reynolds

So when it comes to extreme heat, we have some pretty good data, both from in Canada, especially from this particular event, but also from the US as it's increased its heat exposure and around the world because we're not the only ones dealing with this kind of work.

00:10:21 Ryan Reynolds

What we see is that there's a couple of different groups that are especially vulnerable.

00:10:26 Ryan Reynolds

So this is going to include the elderly in in BC we decided that was about 60 plus that were most vulnerable to that they're less mobile necessarily, they often aren't working and so they're not leaving the house as often sometimes. And so we have some issues there. Another one is adults who live alone.

00:10:42 Ryan Reynolds

They're not necessarily being checked in on on a regular basis, and so if they are having problems, they might not be able to get assistance with that that particular issue. In some cases less so in Canada. But small children, particularly if they're accidentally left in vehicles, can be a particular risk for us.

00:10:59 Ryan Reynolds

And then just looking at other factors that come in, so health factors, there are particular health and mental health conditions that are exacerbated by extreme heat that we want to be very careful for unfortunately, data for that is very carefully protect by the agencies that collect that information. So it's a little bit difficult to to bring that information in.

00:11:18 Ryan Reynolds

But there's lots of these different groups that we're looking at in the the study we're looking at in the North Shore, we have something like 21 indicators that are trying to capture just a little piece. Each of that overall vulnerability that exists in our Community to identify where they are because who's vulnerable in community A is probably going to be slightly different than who's vulnerable in community B on the other side of the community.

00:11:40 Glyn Bowerman

So in in trying to create this resilience, I I guess you have to really take a holistic approach there. That seems like there's a lot of factors.

00:11:48 Ryan Reynolds

Yeah, I mean mapping is 1 tool that we use among many. So engagement is a really important piece actually talking with people about their experiences during this Heat Dome, for example, or where they're encountering barriers and issues in their lives that we might be able to address through either physical structures or policy adaptations or planning changes.

00:12:08 Ryan Reynolds

So all of those come in, but also just a rethinking of what Emergency Management might look like in a community trying to get ahead of the curve in as many ways as we can if we know what heat event is coming.

00:12:18 Ryan Reynolds

Prepositioning people and materials into places where they're probably going to be needed is helpful, but we have to have that plan in advance and that's kind of where we're working with our community partners is to start that process of that planning. And of course that all comes then against the the big evil bad guy of the budget that they have to face in what is possible for that particular community to do.

00:12:40 Glyn Bowerman

And speaking about these communities, who have you been working with and and how can municipalities use this mapping?

00:12:47 Ryan Reynolds

So in BC there are about 5 or 6 communities that are actively working on this. I don't know the details for all of those particulars. The project I'm working on is with the North Shore Emergency Management team. They cover 3 municipalities, so West Vancouver, the district of North Vancouver and the City of North Vancouver and two First Nations Tsleil-Waututh First Nation and the Squamish First Nation.

00:13:08 Ryan Reynolds

So those five communities have come together to kind of assess their regional risks. They're all located in, in roughly the same location and to kind of push that information forward. But it's definitely not happening and backing. We're working with the province. We're working with other communities. We're definitely working with other researchers who are working in this area either nationally, provincially or locally as well.

00:13:28 Ryan Reynolds

Public Safety Canada has done some recent look just in general at vulnerability, and we're adapting some of those processes and the work that we're doing for our mapping to kind of inform decision makers. It's just one piece of of that big puzzle.

00:13:41 Glyn Bowerman

I don't mean to sound dark. But you know, given the climate reality that we live in, extreme heat events, extreme flooding out, all kinds of disasters are are going to happen and there is the old saying that you you prepare for the disaster that already happened. Are you confident that if we had the right data sets that we could at least really minimize the risk and Maybe not necessarily predict far into the future, but at least you know in BC it it took people by surprise.

00:14:14 Ryan Reynolds

Yeah, and I think, climate is definitely changing, and I think we're definitely starting to see the very first major elements of that happening in our society today. But to kind of equate weather and climate is a little problematic because like you're saying, we can only predict so many days in advance realistically with the weather. And so that causes some problems. So what we should be doing instead is looking at what is most likely to happen rather than what happened most recently.

00:14:39 Ryan Reynolds

You're right, we tend to live that last event quite strongly.

00:14:41 Ryan Reynolds

So what we're trying to do is find objective measures of what those hazard risks looks like. And NBC, the new disaster climate risk analysis that's going on right now at the provincial scale and then at regional scales is trying to objectively determine what that risk looks like for all of 6 hazards right now. And then hopefully, we'll expand that down the road. But in terms of heat what we really need to do is acknowledge that our climate is adjusting. It's becoming drier, it's becoming warmer in the South here.

00:15:08 Ryan Reynolds

And as a result, our plans need to be tweaked and adjusted as well. At the same time, we have an increasingly older population. We have an increasing, more vulnerable population as newcomers come in, definitely are seeing wage disparities in in affecting low-income families are becoming broader in some communities. And so all of these are factors that are increasing our vulnerability.

00:15:29 Ryan Reynolds

So we need to find whatever solutions we can to kind of improve that resilience at the same time moving forward, knowing that by say 2050, 2100 period. We're definitely looking at warmer climates across Canada, but particularly in kind of more friendly environments. We have, like the Vancouver area right now, which generally is is pretty good climate wise is starting to get warmer as well.

00:15:50 Glyn Bowerman

Ryan, I want to thank you so much for taking the time to speak with me.

00:15:53 Ryan Reynolds

Very happy to do it. Thank you.

00:16:07 Glyn Bowerman

So there are a lot of ways to try and anticipate where extreme heat disasters will occur.

00:16:11 Glyn Bowerman

The next step is communicating this with residents and making sure you can carry out your emergency protocols before the event occurs.

00:16:19 Glyn Bowerman

Barbara Roden, Mayor of the village of Ashcroft, British Columbia, tells us what that means to the people of her community.

00:16:28 Glyn Bowerman

Mayor Roden, I wanted to begin by just asking you to describe your community of Ashcroft, BC what what's it like and what are the vulnerabilities there?

00:16:37 Barbara Roden

Ashcroft is a town of 1,700 people. We're on the Thompson River about 200 miles northeast of Vancouver, about 60 miles West of Kamloops and we are located in Canada's only true desert.

00:16:53 Barbara Roden

So we we are actually a desert climate, not semi arid or semi desert, we're the we're the real deal here. So as we like to say to people, it is a dry heat obviously and it does attract a lot of people particularly from the lower mainland and people from Northern BC and Alberta who don't like the long hard winters, they don't like the rain and the moisture of the lower mainland, which is where I grew up, so I totally understand that. So. So it's very attractive to people who like that hot, dry climate.

00:17:24 Barbara Roden

It does, however, leave us vulnerable as we see the impacts of climate change on the environment. You know, climate change, if you're already in a desert community, then things are only going to get hotter, drier and we realized, particularly with the heat Dome of 2021, that we had vulnerabilities here in Ashcroft, compounded by the fact that we are a small community. If you listen to, for example, public service announcements in Vancouver or Calgary or Toronto, they'll say to people if it's going to be really hot, go to your local library, which is air conditioned, go to your local mall which is air conditioned. Well, when your local library is only open for 20 odd hours a week and the nearest mall is 60 miles away that is not as helpful for small towns as it could be. So what happened was Health Canada had some funding available and they partnered with Interior Health to do a Heat Alert response study in small communities. They've already done one for for large cities in the wake of what happened in Montreal, a number of years ago where where several dozen people died in extreme heat there.

00:18:42 Barbara Roden

And they wanted to do something similar for small communities, realizing that we do not have the resources that a Montreal or Toronto or Vancouver has. And so Interior Health looked around for our community that that it could use in the study. And they looked at Ashcroft because of our climate, because of the fact that it's already hot here, because we were a fairly decent sized community with with some amenities already, and because they had a good working relationship with the village.

00:19:12 Glyn Bowerman

If I understand that led to the Heat Alert Response System, I'm hoping you can explain a little bit about what that is. You know how it works.

00:19:22 Barbara Roden



As I say, we are a desert climate here. It does attract people. People move here knowing that it's going to be hot. So you have a community where the houses already have small coolers or they already have air conditioning systems. Most of the business are air conditioned. So so people are used to it in that way, what the Heat Alert Response does is codify things so that instead of it it, particularly with the heat Dome of 2021 that we had vulnerabilities here in Ashcroft, compounded by the fact that we are a small community. If you listen to, for example, consecutive days and the the night time hot lows are not going to go below 18 then that triggers our response and we have partnered with an organization in town here in Ashcroft called the Ashcroft Hub. It's our former elementary school, which closed as a school in 2015. Volunteers took it over, formed a a charity, and they now run it as a community hub. So we've discussed with the hub, alright, if we have to trigger our Heat Alert Response.

00:20:38 Barbara Roden

This is what's going to happen. So we started laying the groundwork with residents sending out info bulletins, you know? Do you know the difference between heat stroke and heat exhaustion? Here's what they both are. Here's what to look out for. Here's what to do.

00:20:55 Barbara Roden

So we started paving the way so that people would be familiar with it, so that if we had to activate it, there's not a lot of questions. People aren't well this because planning ahead is key by talking to the hub in advance and saying right if we have to trigger our heat alert response, then you're going to have a room available. It's air conditioned, it has Wi-Fi, there's going to be water available, bathrooms, etcetera. So that when we see that really hot weather on the horizon.

00:21:25 Barbara Roden

All it takes is 1 phone call and the cooling centre is activated.

00:21:30 Barbara Roden

Or are capable of being activated because as as I tell, people who who inquire about this, if you're waiting to get all these ducks in a row until you see Environment Canada telling you ohh next Tuesday there's going to be a heat Dome coming through or it's going to get really hot if you wait till that point you've left it too long.

00:21:49 Barbara Roden

Because you have not done that education piece with the community, you haven't got the the preliminary info out. You're now frantically making phonecalls. Where can we use where? What's available for a cooling centre? So. So really this time of here, November, December, January, this is the perfect time to be sorting all that out.

00:22:08 Barbara Roden

So that come June or July or August, whenever it gets really hot, whenever you get that notice that that, that really hot weather's on the way. As I said, all it takes is 1 phone call and everyone knows what that means and they know what to do.

00:22:22 Glyn Bowerman

Beyond the physical cooling centre and in the information campaign, other other support services programs that are part of this response.

00:22:34 Glyn Bowerman

I'm thinking of, you know, reaching out to seniors who may live alone or, you know, making sure that they have a ride to the cooling centre or, you know, a way to check in on some of the more vulnerable, especially the older, the alone people suffering from mental health issues, which we know from data from BC that they're particularly vulnerable in in cases of extreme heat.

00:22:57 Barbara Roden

No, that's a really good question and that that's something that we do struggle with in small communities is how do you communicate to to anyone, particularly seniors.

00:23:08 Barbara Roden

37.6% of our population, I believe according to the the most recent census is 65 or older. So how do you communicate with with people who may not be as mobile, who may not be getting down into town, who may not be computer savvy? They're they're not on their phones or social media 24/7. So what we've tried to do is we do mail drops to every resident in Ashcroft. We have post boxes here. You don't get home mail delivery. So we will do in the spring a mail drop.

00:23:38 Barbara Roden

Just telling everyone this is what we have, this is what will happen if you have questions, call the village office. We have communicated with Interior Health with their home health nurses and with the senior centre and with the extended care and long term care facilities here in town.

00:23:56 Barbara Roden

We have signs available that you can give them for free from the the province of BC from the I guess the King's printer. Now they're they're signs and they're just an 8 1/2 by 11 laminated signs and on one side it's green and it says OK. And on the other side it's red and it says help.

00:24:13 Barbara Roden

You put them in your window so that people can see from the street, and so we were handing those out to people making them available.

00:24:20 Barbara Roden

I mean it kind of goes hand in hand because extreme heat happens in summer. The other thing that happens in summer here fires or the threat of fires. And we partnered with the local school district and we met with them and said if we need buses, for example, to take people somewhere, do you insure your buses over the summer? Because that's something that I know other jurisdictions have run into. They've had a disaster in the summer time they've turned to their local school district and say, great, you've got a fleet of school buses we can use those and they turn around and say, well, we don't actually insure them over the summer because we're not using them.

00:24:55 Barbara Roden

So you know, we've worked all that out with the school district. So we actually had a sign up sheet in the summer of 2021 for people in case we needed to evacuate due to fires. People could sign up with the hub and if we needed to evacuate and they needed assistance because they didn't have a car, mobility issues. We could send people around to collect them and so that would work as well with the Heat Alert Response.

00:25:20 Barbara Roden

We have volunteers, we have a community bus. We could go pick people up, take them to the Ashcroft hub and then they could stay there for, you know, as long as they needed to.

00:25:31 Glyn Bowerman

So the ball kind of got rolling on this in 2018. You did mention that the heat Dome in 2021.

00:25:38 Glyn Bowerman

Has the Heat Alert Response system been triggered since its inception?

00:25:42 Barbara Roden

You did trigger it in 2021 and I believe in 2022 we triggered it as well. I don't think we did it this year we came. We came close.

00:25:52 Barbara Roden

And then the that's that's sort of the flip side of a system like that. You know, I I think we've done really, really good work in getting the word out, getting people familiar with it so that when we do have to do something, it's not coming out of left field.

00:26:07 Barbara Roden

But but you are walking a fine line because you don't want to be the local government that cried wolf.

00:26:14 Barbara Roden

Because, you know, Environment Canada will tell you that anything more than two or three days out is subject to change without notice. And so they might be predicting really high heat and then something happens and it doesn't come to pass. So we recognize we have to be careful in in deploying this because if you're deploying it every 3rd day throughout the summer.

00:26:36 Barbara Roden

Fatigue is going to settle in and then it'll just become the equivalent of white noise in the background. You know when something really serious happens? Ohh right. This is the fifth time this summer they've done it. It hasn't been that bad.

00:26:48 Barbara Roden

So it's walking that fine line and as I say, people here in Ashcroft are accustomed to the heat. So. So we are fortunate. It's not like the Lower mainland where during the heat don't. What was it? 621 people sadly lost their lives. And a lot of the people there. There was no air conditioning. They didn't even have

fans up here. People are more prepared for that extreme heat. But it's still, you know, the education. I don't think he can ever stop because you do need to remind people, alright. You're used to walking the dog at 10 in the morning. Well, you better not walk the dog at 10 in the morning for the next week or so. You better do it at 7:00 or wait till the evening. Just those gentle reminders.

00:27:30 Barbara Roden

It's common sense stuff. Yes, absolutely. But sometimes we all need a little reminder of of just ohh yeah right I I better change my routine a little bit.

00:27:40 Glyn Bowerman

What has that feedback been from the community?

00:27:43 Barbara Roden

The feedback's been very good. I think people like the fact that we are taking these steps that we are prepared, they just like to see their local governments anticipating these things and being proactive rather than reactive, that's something that we've heard a lot over the last few years with the fires, with the floods, atmospheric rivers, heat domes and you hear a lot of talk of local governments or governments in general needing to be proactive.

00:28:09 Barbara Roden

And so we we took those steps and and I think people like to see that it just reassures them that you know if it's going to sound funny, it reassures you that someone's in charge, which of course someone absolutely is in charge. But but sometimes people like to just get that, that physical reminder that, oh, right, they're looking. They're looking out for us.

00:28:30 Glyn Bowerman

Right, so the the response has been triggered in the past. You you getting feedback from the community, what lessons have you learned so far and what do you hope for the in the short term for the future of the response system?

00:28:41 Barbara Roden

I think one of the things we've learned not so much learned as it's reinforced the need for those community partnerships.

00:28:50 Barbara Roden

In small towns, local government does not have a lot of resources, so it's finding those community partners who can help out and are willing to work with you or able to work with you. So that, as I say, it does just take that one phone call so in our case it's the Ashcroft hub. In other towns might not or probably don't have a facility point like that so you know, reach out to a local church group. You know, most churches have a hall, which might be air conditioned so it's it's a really good way to build those partnerships and strengthen them.

00:29:22 Barbara Roden

I think in the short term it's continued with what we're doing and continue that education piece because it's never a case of alright, well, we sent out all those things back in April of 2021. So our work here is done. Well since April of 2021, we've had a lot of new people moving town. You know there's always turnover in, in communities with people moving in and out.

00:29:42 Barbara Roden

So you can never rest on your laurels. You can never say, alright, well, we're done. We're finished. So and and that's I think an important thing for local governments to realize.

00:29:55 Barbara Roden

And as with anything major, it's always the first steps that are the hardest to take the most because you're you're assembling things from scratch.

00:30:03 Barbara Roden

Once you've done that, though, it is pretty easy year after year just to update it, you know tweet, look at, look at the literature, look at what you've prepared in terms of information pamphlets.

00:30:14 Barbara Roden

And OK, do we need any tweaking here? Just make sure that all your stakeholders, your partners, are all still on board and then it becomes it becomes very easy to do year after year, but it's something that I think you do need to consciously think about. Don't just assume that it's going to work because all it takes is one person who's moved away and you haven't updated their phone number.

00:30:36 Barbara Roden

And suddenly, you're you're scrambling at a time when you do not want to be scrambling.

00:30:52 Glyn Bowerman

Climate change means every community has to have a way to gather data about potential disasters and a plan of action when all signs point to danger. Luckily, we live in an age where gathering and sharing data and broad and fast communication are all available to us.

00:31:10 Glyn Bowerman

In a world of extreme heat disasters, using both of those tools to stay prepared is the fix.

00:31:23 Glyn Bowerman

Thank you for listening to the Future Fix: solutions for communities across Canada. We are a partnership between Spacing Magazine and Evergreen for the Community Solutions Network.

00:31:35 Glyn Bowerman

As the program lead, Evergreen is working with open north to help communities of all sizes across Canada navigate the smart cities landscape. Community Solutions network is supported with funding provided by the Government of Canada. This podcast was produced by myself, Glyn Bowerman and Neil

Hinchley original music composed by Neil Hinchley. Our content consultant, is Angela Parillo. We'll be bringing you more future fix in the new year, have a safe and happy holidays and we'll see you in 2024.