

THE RISK JOURNAL

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MMRMA Member Shares Property Mitigation Success Story

by Michael Bosanac,
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IN THE JUNE RISK JOURNAL, Cindy King of MMRMA shared insights on the value of prevention and mitigation efforts related to water intrusion that could lead to property damage, losses, and claims.

Water intrusions often cause significant damage and interrupt service operations for extended periods of time. Lingering problems from unseen hazards, including mold and indoor air quality, all point to the value of addressing intrusion vulnerabilities before a loss occurs.

County identifies potential risks

Monroe County, taking note of the value of such preventive measures, invested in hardening our primary government building and surrounding site from stormwater intrusion. This building includes an addition to our courthouse. It was designed and built to match the existing elevation of the courthouse, which is five feet below the surrounding grade.

Additionally, a plaza between the city hall and the county courthouse complex was constructed to provide ease of navigation for citizens/customers as they access both facilities. Stormwater drainage was designed and constructed as part of the plaza but left the county building vulnerable from its lower elevation.

Over the years, our standard maintenance process was to ensure that drains were clean, to keep leaves and debris from plugging inlets, and to verify that emergency generator-powered stormwater pumps were in good working order.

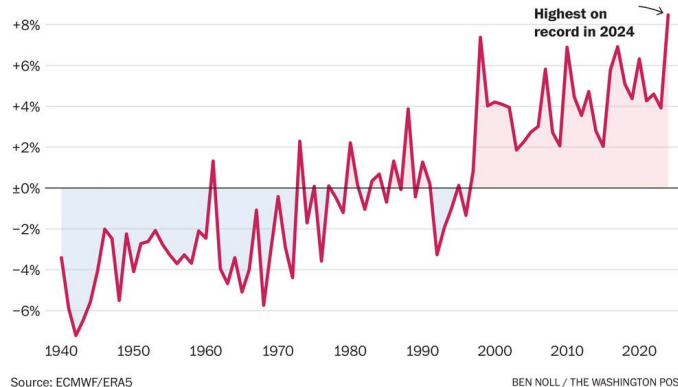
Although we did all these basic steps to protect the property, over the years significant rain events occasionally resulted in water intrusion at door entrances, causing minor to moderate damage to carpet, supplies, and items lying on the floor. This created operational disruptions and the constant concern about a potential big event.

Tracking the data over time

County leaders took note of the occurrence of weather events that brought more

The amount of moisture moving through the atmosphere is rising

Annual moisture flow compared to long-term average



The amount of moisture in the atmosphere has increased dramatically over the past several decades, with 2024 being the highest on record.

rainfall in shorter time periods, leading to stormwater systems reaching capacity more quickly.

One rudimentary gauge of rainfall intensity was the depth of street flooding along one side of the building. Stormwater flooding in the street had, in a couple of instances, nearly reached the top of the curb, but never topped the curb and sidewalk. Still, each succeeding significant rain event showed the potential for problems.

An analysis prepared for the Southeast Michigan Council

of Governments (SEMGOG), *Water Infrastructure Planning Guide*, suggests that the intensity of storms of a given duration and frequency is likely to continue to increase in the future.

The SEMGOG analysis shows climate models predicting higher rainfall intensity for a given rainfall event. Members across the state may experience more intense rainfall events, pushing stormwater systems around their properties to—or above—maximum capacity limits.

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Water Intrusion Success Story, continued from page 1

Torrential rain event proves the risk is real

As we observed and recorded this increased intensity of rainfall, along came the dreaded torrential rain event that topped the street curb, allowing the stormwater to flow down and into the lower level of the county building.

On the plaza side of the building, the rainfall overwhelmed the stormwater system, flooded the plaza near our entryway, and made its way through the entry doors and into the building. The event caused moderate damage to carpet, records, and overall clean up costs. It also served as a wake-up call that we had to do more to prevent a much larger loss in the future.

Plaza Hardening Measures

With a planned renovation of the plaza's concrete surface area, it was time to focus on measures to prevent future damage/loss. We:

- > Eliminated 35% of the hard surface areas, reducing the volume of stormwater runoff.
- > Created landscape planter areas to double as stormwater spillways to capture rainwater.
- > Added more stormwater manhole structures to capture and hold water.
- > Replaced two submersible pumps to mechanically pump water after the gravity feed system hits its capacity. These 3" pumps move 30,000 gallons per hour.

Plaza Hardening Measures



Attractive landscape planters double as stormwater spillways to capture excess rainwater.

- > Installed a backflow preventer valve on the municipal stormwater 12" outlet pipe to eliminate any surcharge back into our building stormwater system.
- > Replaced the 40-year-old standby emergency generator used to power pumps.
- > Installed a unique underground stormwater storage tank. This product, called Aquabox, is assembled onsite like a Lego set and customized in the field for each installation.

In our project, the Aquabox holds 8,100 gallons; water is diverted to this tank as a



Installation of an Aquabox underground stormwater storage tank.



last resort, should everything else hit maximum limits. It's better to divert whatever we can to this storage tank instead of allowing any water to enter the building. So, the tank acts as both a prevention and a mitigation measure.

Street Hardening

Where the city street flooded with rainwater, topping the curb and sidewalk, we added a concrete retaining wall along the back side of the sidewalk to hold back any future street flooding.

We confirmed the high-water mark of the flood event and went 8 inches higher to prevent future water intrusion into the building from this area. The simple addition of this retaining wall helps protect the lower elevation of the building.

Takeaways for members

Not all mitigation efforts need to be this extensive. Some fixes are minor and may involve simply rerouting roof

drains or other easy solutions to prevent or mitigate potential losses. Each building has its unique characteristics, including strengths and vulnerabilities.

Whether you focus on the building envelope and systems or the surrounding site, it is recommended that members undertake a thorough assessment of vulnerabilities and risks. If minor problems are occurring now, make note of these and take steps to invest in measures that prevent these minor occurrences from becoming major losses.

All indications point to an increase in frequency and severity of intense weather systems. With this knowledge, acting now is the proactive and sensible risk management approach and is much less costly than waiting for the loss and correcting things afterwards.

Members can apply for Risk Avoidance Program (RAP) grant funding for emergency generators, portable pumps, automatic water shutoff and water leak detection systems, and other solutions to address property risk exposures. Certification and Accreditation Program (CAP) grants can be used to earn professional designations such as American Public Works Association accreditation (APWA), Certified Facility Manager (CFM), and Facility Management Professional (FMP).

Contact Membership Services with questions about grants, property exposures, and other assistance in addressing risks.

Innovation Can Lower Risk, Enhance Services, Attract Talent

by Cindy C. King, Director
of Membership Services
and Human Resources

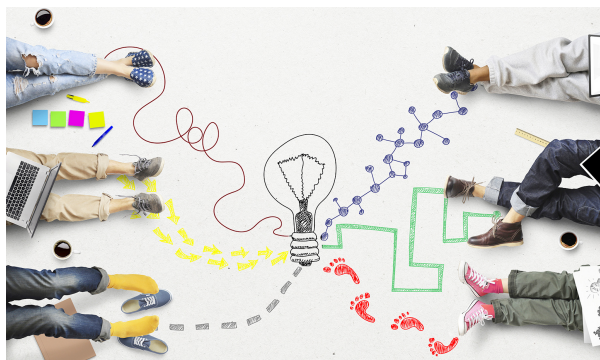
PUBLIC ENTITIES FACE EVER-increasing public demands, constrained resources, and rapidly evolving societal needs. In this climate, innovation is not merely a strategic advantage—it is a necessity. Innovation does not always go smoothly, especially when individuals and teams are weary of uncertainty and continuous change.

Nevertheless, public entities have little choice but to embrace innovation as they strive to improve services and reduce risk. Innovation ensures that organizations remain responsive, relevant, and effective in addressing these shifting demands.

Benefits outweigh the risks

Contrary to the common perception that innovation is inherently risky, public entities could face even greater dangers if they fail to do so. Relying on outdated systems and processes can result in inefficiencies, vulnerabilities, and difficulty responding to crises. By fostering a culture of innovation, organizations can anticipate challenges, test new solutions on a small scale before full implementation, and remain agile in the face of emerging risks.

Innovation can improve service by enhancing the quality, accessibility, and reliability



Supporting innovation requires an investment in people as well as in technology.

of services provided to the public. Examples include streamlining administrative procedures, introducing user-friendly digital platforms, or harnessing data analytics to inform policy. These innovations can improve outcomes for citizens and stakeholders.

Innovative leadership

A culture of innovation can also empower employees at every level to contribute ideas, experiment, and learn from both successes and failures. This type of engagement not only fosters creativity but also builds a more resilient and connected organization.

During periods of upheaval or uncertainty, innovative approaches could be instrumental in promoting calm and stability. That said, the fatigue that arises from constant change can make it difficult to inspire action or sustain momentum. It is essential that leaders

recognize the real impact of change fatigue on employees, which can undermine both morale and productivity.

Foster employee commitment

By openly acknowledging the toll that continuous change takes—and providing space for reflection and feedback—leaders can demonstrate empathy and build trust. It's important to communicate the "why" behind innovation efforts clearly and consistently; celebrate progress, no matter how incremental; solicit staff input, and adapt accordingly.

Innovation thrives when individuals feel safe to express ideas, challenge the status quo, and learn from mistakes. Leaders must actively embrace innovation and create mechanisms for open dialogue. Encourage cross-functional collaboration and invite input from team members with diverse roles and perspectives.

A sensible pace of change

Not every innovation needs to happen at once; too many initiatives can dilute focus and intensify fatigue. Establish

Fostering a culture of innovation can empower employees at every level to contribute ideas and learn from both successes and failures.

clear priorities based on impact, feasibility, and urgency, sequencing projects accordingly. This allows teams to carry early successes and lessons into subsequent efforts. Identify "quick wins" to demonstrate early, tangible benefits, and break complex challenges into more manageable projects.

Supporting innovation requires an investment in people as well as in technology. Training and professional development create opportunities for staff to develop new skills and mindsets.

The power of community

Bolster innovation by inviting engagement from citizens and community organizations, along with frontline staff, in the design and implementation of new solutions. As another avenue for developing a connection to the community, innovation can help alleviate distrust and dispel the notion that residents' concerns fall upon deaf ears.

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Avid rockhunters comb northwest Lake Michigan beaches in search of the iconic state stone, the Petoskey. Its distinctive six-sided honeycomb structure is that of fossilized coral, which lived in the shallow sea that covered Michigan about 350 million years ago. Legend has it that the name comes from Pet-O-Sega, an Odawa chief, and means "rays of dawn."

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Leaders are encouraged to share not only successes but also setbacks, lessons learned, and next steps. This builds further credibility and keeps expectations aligned. Newsletters, town halls, and digital platforms are ways to share progress and solicit input.

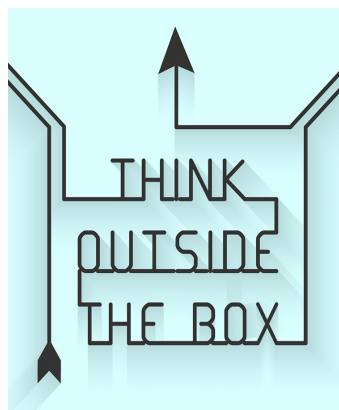
Many government services are now digitized across the public sector for accessibility and efficiency. Online permitting systems reduce wait times and paperwork, while virtual consultation platforms expand access to specialists in rural communities. Mobile apps can allow residents to report municipal issues—for example, potholes—to a public entity so their crews can address things in a timely manner.

Member innovation wins

Several MMRMA members have taken advantage of such solutions. The City of Southfield uses a mobile app to assist residents in applying for building permits. Mobile apps allow Van Buren Township to notify residents about community events and the City of Westland to post job vacancies. Iron Mountain in the Upper Peninsula uses WISE (Wireless SMS E) text messages to disseminate information on Amber alerts, gas leaks, road closures, and other critical news.

Data analytics and HR uses

Data analytics can help public entities better understand community needs, forecast



trends, and make evidence-based decisions, reducing the risk of costly missteps. The City of Detroit's data analytics portal helps keep the community informed about crime incidents, blight citations, and other matters of interest.

Innovation can also attract and retain talent. Today's young professionals seek to work in digitally mature organizations. Using new technologies to improve skills can create opportunities for all employees to become more knowledgeable and receptive to innovation. According to the *Wall Street Journal*, "Digitally mature organizations have a better chance of attracting and retaining talented employees."¹

Technology can boost cooperation and efficiency among and between employee groups and departments, especially when they are spread throughout a county or large city. Cloud-based document sharing platforms and virtual meeting and collaboration tools such as Teams and Zoom are widely used.

Innovation is not a goal in itself, but the means to achieve better outcomes for the people we serve.

Effective crisis response

During crises—such as natural disasters or public health emergencies—agile, innovative approaches enable agencies to pivot quickly. Examples include deploying temporary digital solutions to distribute aid or implementing flexible work arrangements for staff. This can include real-time monitoring of conditions impacting air quality or flood-warning systems.

Innovation is not itself a goal, but the means to achieve better outcomes for the people and communities we serve. Residents rely on effective, responsive, and equitable services from public entities, more than ever in times of uncertainty. By embracing innovation, public entities can reduce risks, improve services, and build resilient organizations capable of navigating an ever-changing world.

Please note that ChatGPT was used to generate some material in this article. The author thoroughly reviewed and vetted all such content.

¹ <https://deloitte.wsj.com/cio/digitally-mature-enterprises-lure-top-talent-1441771308>