

UPTOWN



a publication of the Municipal Association of South Carolina

FOCUSING ON FUTURE FLOODS

CITIES INVEST IN STORMWATER SOLUTIONS

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President :
Mayor Barbara Jo Blain, Conway

Executive Director :
Todd Glover tglover@masc.sc

Managing Editor :
Meredith Houck mhouck@masc.sc

Editor :
Russell Cox rcox@masc.sc

Editorial Assistant :
Onye Kelly okelly@masc.sc

Contributing writers :
Page Ivey, Megan Sexton, Eric Shytle

Cover Photo : Charleston's drainage solutions for its flat and extensively developed peninsula includes a deep tunnel system, drilled about 130 feet below ground. Photo: City of Charleston.

Who Should Receive Annexation Reports?

The location of municipal boundaries plays a critical role in local government operations. They allow public safety agencies and public works departments to know which entity is responsible for providing services at an address. They also determine whether a given voter is eligible to vote in a municipal election, and for whom.

The map of a city's boundaries comes with tax considerations as well. Cities with business license taxes need to know whether a business at a given address is inside the city, and therefore subject to inside or outside city tax rates. For sales taxes, cities need to know if an online purchase delivery is inside the city, and for local assessment fees, they would need to know if a ride purchased from a transportation network company like Uber or Lyft originated in the city.

Boundaries move in every case where a city annexes a property, so cities need to document and report annexations to state and local agencies to ensure everyone is working from the same map.

Reporting to the state

State law requires municipalities to notify four state-level entities of every property annexation:

- The office of the **SC Secretary of State**, which issues certificates of incorporation;
- The **SC Department of Transportation**, which needs information on who has maintenance responsibility for roads;
- The **SC Department of Public Safety**; and
- The **SC Revenue and Fiscal Affairs Office**, which draw lines for election districts and to determine Local Government Fund disbursements.

Historically, the Revenue and Fiscal Affairs Office has maintained the most accurate database of GIS boundary mapping in South Carolina. RFA posts its database of city and county boundaries on its website, www.rfa.sc.gov.

To ensure RFA has accurate data, cities and towns should regularly report their boundaries, districts and wards to RFA at least once every year even if no annexations have happened and the boundaries have not changed.

Reporting locally

Beyond the state law requirements, reporting annexations to local entities — including those within the municipality itself — can help with governmental coordination.

Cities should give up-to-date boundary information to all of these groups:

- All municipal departments, preventing incorrect assumptions by city staff about whether a property is in the city;
- The county government, which helps coordinate services, and especially emergency services, properly;
- The county board of voter registration, so it may assign election districts to new annexations; and
- Utility franchisees, so franchise fees can be levied correctly.

Many cities and towns now use their websites to provide boundary maps and zoning maps to help get data into the hands of contractors, engineers or others who may need it.

Officials can find the RFA boundaries database at rfa.sc.gov/mapping/tcn. For discrepancies or other concerns, contact RFA at mapping@rfa.sc.gov or 803.734.3793.

2024 Legislative Session Comes to an End

NEWS BRIEFS

Area Development magazine listed the metropolitan areas of **Charleston-North Charleston, Columbia, Florence, Greenville-Anderson, Hilton Head Island-Bluffton** and **Spartanburg** among its Leading Metro Locations for 2023, noting them as areas poised for long-term economic growth and technology-focused industry.

The **City of Rock Hill** was among 147 utilities to be recognized with the American Public Power Association's Safety Award of Excellence for safe operating practices in 2023.

The second half of the 125th South Carolina General Assembly gavelled to a close on May 9. Since this was the second year of a two-year session, bills that did not pass both the Senate and House or get assigned to a conference committee this session are dead.

Both chambers passed S1192 — the sine die, or adjournment, resolution, which outlines the matters the General Assembly may consider when members return to Columbia in June. As of publication, the General Assembly anticipates returning on June 5 to elect a justice to the SC Supreme Court, and on June 18 and 26 to consider conference reports including the state budget.

Conference committees

For a bill to survive past the end of the 2024 session, it had to either be passed by both chambers and sent to the governor or assigned to a conference committee. A conference committee consists of three members of the Senate and three members of the House, who are selected to iron out the differences in the bill. These legislators cannot add to the contents of the bill unless authorized by a vote of both the House and Senate. Without that authorization, the committee must choose final language from the language found in the current versions of the bill.

Several bills tracked by the Municipal Association were assigned to a conference committee and will continue to be debated. S1017, the affordable housing property tax exemption bill, was amended by the House of Representatives after it was passed by the Senate, and the Senate did not agree with the amendments. A conference committee of Reps. Lee Hewitt, Neal Collins and Russell Ott and Sens. Michael Johnson, Danny Verdin and Nikki Setzler were appointed to resolve the differences between the bill's two versions.

The conference committee for the budget includes Sens. Harvey Peeler, Nikki Setzler and Sean Bennett as well as Reps. Bruce Bannister, Leon Stavrinakis and Phillip Lowe who were assigned to find a compromise between the two versions of the budget.

Other bills

S1021, the abandoned buildings revitalization tax credit bill, was passed by both the House and Senate and enrolled for ratification, where it moved to the governor's desk for his signature or veto. H3734, the municipal election bill, was stopped on a procedural motion in the House and prevented from passing.

H4552, the military tax increment financing bill, stalled in the Senate, but language from that bill was attached to S577. S577 was assigned to a conference

committee of Reps. Bill Whitmire, Jackie Hayes and Mark Willis and Sens. Harvey Peeler, Thomas Alexander and Nikki Setzler.

Unless the sine die resolution is amended and approved by both chambers, the current resolution outlines what bills can and cannot be considered in June, when legislators return to Columbia after primary and runoff elections.

Find out more about the legislative session at the Municipal Association's Annual Meeting, taking place July 17 – 21. Look for a more detailed overview in the 2024 Legislative Report, which will be available at the Annual Meeting and online. This article was written at the end of the regular session and is accurate as of May 14, 2024.

A stylized 'AI' logo in a blue square, set against a background of glowing blue circuitry and data lines.

Embracing the Future

AI's Influence on Local Government

By Kevin Benson, Director of Application Development, VC3

News reports have had plenty of hype and excitement about the wonders of artificial intelligence. Often called AI, it can prepare tax returns, respond to emails and even make music. There are also horror stories about AI replacing jobs, taking over decision making or surpassing human intelligence.

In reality, AI mostly operates beneath the surface, similar to how it's already a part of daily life when asking a smartphone questions or using GPS to get directions. That's where its true potential for local government lies.

Already municipalities are leveraging AI in subtle but powerful ways to become more efficient, improve decision-making and offer tools to residents that empower their interactions with local government.

Use cases in local government

Municipalities are often data-rich in key areas. Envisioning some practical applications of AI within local government helps us recognize its potential.

Waste management optimization: Waste collection involves a lot of data — volume of waste generated, locations of waste bins, waste collection times, the weather forecast, road conditions, traffic patterns, etc. Much of this data is probably sitting within some municipal database. It's possible to leverage that data with an AI tool focused on waste management optimization. With the results, managers can optimize collection routes and schedules, reduce fuel consumption and more efficiently route for collection services.

Municipal planning: Data related to population growth, housing demand, transportation, traffic, etc. can be used to predict future demand for housing and transportation. AI can analyze vast datasets regarding road use, infrastructure conditions and utility usage to prioritize maintenance and development projects. This predictive analysis aids in extending the lifespan of public assets, ensuring the efficient allocation of resources and accommodating growth.

Public service delivery and resident engagement: AI-driven chatbots and virtual assistants can offer residents 24/7 access to information and services, reducing wait times and improving overall resident satisfaction. These tools can handle queries ranging from service requests to informational inquiries,

streamlining communication between the government and the public.

Emergency preparedness and response: Through the analysis of past weather patterns and real-time data such as traffic patterns, AI can enhance emergency preparedness for natural disasters such as hurricanes. Providing residents with actionable steps and optimizing evacuation routes can significantly reduce disaster impact.

Law enforcement: Law enforcement has a lot of data — dispatch logs, incident reports, arrest records, etc. There is potential to use AI on top of existing data for a variety of purposes. For example, what if departments could predict if there's a certain amount of domestic violence in a certain area and then focus more proactively on those areas to address this problem?

AI has the potential to revolutionize local government operations, from efficiency enhancements to better service delivery. While the journey to AI adoption may present its challenges, an informed and forward-thinking approach will help local governments harness the full potential of AI to create tangible benefits for their communities.

Kevin Benson is the director of application development at VC3, the Municipal Association's technology partner.

2024 Annual Meeting to Discuss AI

The Municipal Association of SC 2024 Annual Meeting, taking place July 17 – 21 at the Hyatt Regency Greenville, will include a conference session discussing the potential of artificial intelligence for cities and towns.

Find more details and agenda information about the Annual Meeting at www.masc.sc (keyword: Annual Meeting) and by downloading the Association's app from the App Store or Google Play by searching for "Municipal Association of SC." All hotel reservations must be complete by June 26 and all registrations must be complete by July 5.



Don't Slip Up on Sidewalk Safety

Pedestrian slips, trips and falls can easily become costly insurance claims for municipalities. Claims can come from anything from a poorly maintained sidewalk, a drainage washout after a storm, tree roots pushing up a section or sidewalk, or even a broken or misplaced water meter cover.

In cases where the city has clear responsibility for an uneven sidewalk that has become a trip hazard, it might address the issue by grinding down the protruding section. In plenty of cases, however, the city does not maintain responsibility or ownership of the sidewalk, so municipalities should not automatically accept or deny liability for claims.

Investigating claims

Slip and fall incidents require a claims adjuster investigation to determine the responsible party and the claim's validity. Once a city issues a liability payment for a claim or lawsuit because of a slip or trip in a specific area, it could set a precedent for future claims and lawsuits. Adjusters verify who owns the property where an incident occurred and who is responsible for its design, maintenance and repairs.

What seems like a straightforward task, however, may be complicated. There may have been agreements or easements with municipal or state governmental entities that have changed ownership and maintenance responsibilities for the facility over time, such as a sidewalk or park.

These documents are not always readily available.

When investigating a claim, adjusters will ask how the individual filed the original complaint, what documentation of the notice exists, and if there were independent witnesses to the incident. Municipalities need to report claims immediately to their insurance providers when they happen. Not providing requested information promptly can delay an investigation, and even lead to costly lawsuits.

During a litigation discovery process, the defendants will require the same information the adjuster requested during the initial evaluation of the claim. The legal defense fees for completing the discovery process and taking depositions may cost more than what the case could have been settled for before litigation.

Managing sidewalk risks proactively

Staying on top of potential issues means having a regular inspection process for city sidewalks, a notification process for any city employee to identify and communicate a problem area with the public works department, and dedicated funding in the budget for sidewalk repairs. Many cities have a formalized process for accepting reports of maintenance issues including sidewalk problems. Municipal apps, for example, often allow users to give the location and a photo of the issue.

The best way to prevent buckling from tree roots is to have the right kinds of trees — ones with roots that grow downward — around the sidewalk in the first place. The SC Department of Transportation offers a list available at www.scdot.org, “Suggestions for Street Trees & Sidewalk Plantings,” ranging from Red Maples to Willow Oaks and Cabbage Palmettos.

Making repairs

Sidewalk dangers can be as simple as a drainage washout that has deposited sand or debris on the sidewalk, or a broken or missing meter cover — a frequent source of trip-and-fall claims. Trees can present a more substantial challenge, since root growth under the sidewalk can push it up, creating uneven slabs that can easily trip passersby.

A sidewalk buckled by a growing tree has several solutions. In a mild case with limited slab displacement, the city could use a scarifier to grind down uneven surfaces. In a more serious case, workers can cut out the problematic parts of the sidewalk with a wet saw, remove the root structure and replace the sidewalk. Members of the SC Municipal Insurance and Risk Financing Fund have access to a grant that reimburses up to half the cost of buying or renting scarifiers, up to \$4,000, available on a first-come, first-served basis. Learn more at www.masc.sc (keyword: SCMIRF).

When making repairs, workers should use barricades and signage to close the section of sidewalk to foot traffic. Barricading is also advisable in situations where the tripping hazard cannot be fixed immediately.

Who has liability?

For cases where the sidewalk or walking surface is not owned by the city, but the city has received a report on a dangerous condition, it may still have a duty to inform the property owner — such as the state or the county — of the condition. If the city voluntarily repairs or maintains the sidewalk, it may have

assumed liability. Officials can help the city avoid assuming liability while making a repair with a form letter on file to report dangerous conditions to the property owner. Such a letter should include several points of information:

- A description of the defect or damage involved — for example, a pothole, or a sidewalk lifted up by an overgrown tree.
- The location of the problem area, naming streets and addresses.
- A statement that describes the property owner's legal responsibility

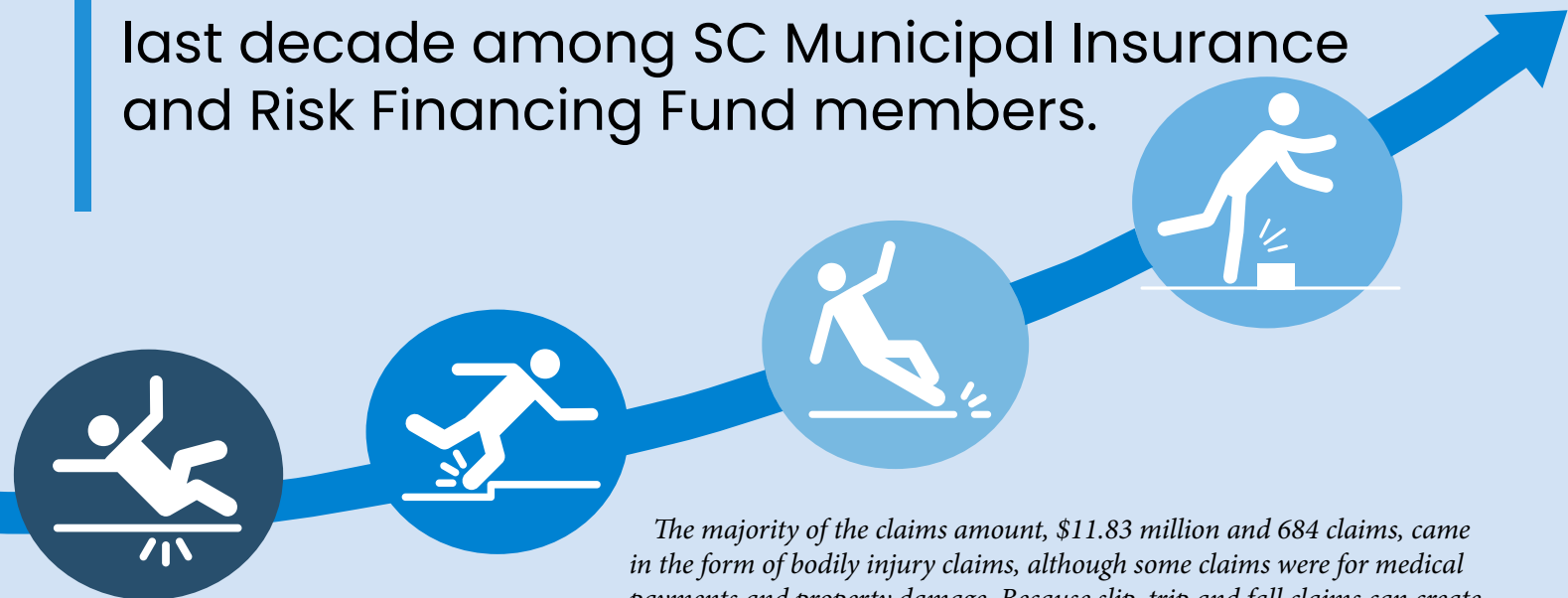
for the maintenance of the problem area and any activities necessary to ensure public safety.

The form letter should state that the city's assistance was a one-time event. For example, the note should state, "please note that after repairs are made the city does not intend to continue maintenance on this segment of the property owner's roadway/sidewalk."

For questions about sidewalk-related risk management, contact losscontrol@masc.sc.

Slip and Fall Claims By the Numbers

\$11.98 million incurred in 893 claims in the last decade among SC Municipal Insurance and Risk Financing Fund members.



The majority of the claims amount, \$11.83 million and 684 claims, came in the form of bodily injury claims, although some claims were for medical payments and property damage. Because slip, trip and fall claims can create significant costs for cities and towns, officials should pay careful attention to who has maintenance responsibilities for the places where they occur — for example, what entity is maintaining a given sidewalk. For the properties under their responsibility, they should take steps to identify and reduce trip hazards.



For Meeting Minutes, 'Comprehensive' Doesn't Mean 'Verbatim'

The South Carolina Freedom of Information Act, SC Code Section 30-4-90, stipulates that “[a]ll public bodies shall keep written minutes of all of their public meetings.”

Beyond merely satisfying a legal mandate, keeping public meeting minutes ensures transparency, accountability and efficiency in governance. It may seem like a routine administrative task, but preparing and retaining minutes is important for maintaining public trust, ensuring legal compliance and preserving a historical record.

Are verbatim minutes required?

There is no legal requirement to record everything that is said at a meeting.

Instead, SC Code Section 30-4-90(a) provides that the minutes “shall include but need not be limited to” these items:

- the date, time, and place of the meeting;
- the members of the public body recorded as either present or absent;
- the substance of all matters proposed, discussed or decided; and,
- at the request of any member, a record, by an individual member, of any votes taken.

Any member of the public body may also request that other information be included in the minutes.

A public body could satisfy the legal requirement to keep minutes by producing a fairly short document for each meeting, setting forth only the details of the meeting,

the members in attendance, and the “substance” of each proposal, discussion or vote. Modern recording and archiving technology make retaining full audio recordings of every meeting inexpensive and convenient. As such, municipalities may generally avoid the time and effort required to produce verbatim minutes.

How should minutes be prepared?

The heart of the minutes-taking process is the responsibility to accurately capture the essence of the meeting. Minutes should provide a comprehensive yet concise summary that provides an understanding of the context and rationale behind decisions taken.

Errors or omissions can have significant consequences: misunderstandings, disputes or even legal challenges. The minutes become the official record of all actions taken and not taken, and can become highly relevant in lawsuits.

In the 2001 case *Davis v. Orangeburg-Calhoun Law Enforcement Commission*, the Court of Appeals of SC concluded that the commission had not adopted a formal financial management policy because the minutes contained no record of such an adoption. When a party tried to prove the approval of the policy by evidence outside of the minutes, the court rejected this evidence. According to the court, external evidence “may not be admitted to explain, enlarge or contradict minutes which are complete and unambiguous on their face.”

Minute-takers must have strong listening and note-taking skills, along with attention to detail. Although there is no legal requirement that the person who prepares

the minutes physically attend the meeting, it is helpful if a person with knowledge of the body and the agenda attends the meeting and takes contemporaneous notes. At the same time, the meeting should be recorded. Either the same person or another staff member should listen to the recording and compare it to notes taken at the meeting, supplementing and correcting as necessary. Staff should proofread the minutes for accuracy and clarity.

Does production of minutes have a deadline?

South Carolina law is clear that the minutes need not be made available immediately, allowing staff time to produce accurate, complete minutes before approval. Even so, timeliness remains critical. Staff should prepare minutes promptly while details are fresh in their minds. Delays in distributing minutes can hinder follow-up actions and diminish the minutes’ effectiveness as a communication tool. Timely distribution also shows a commitment to transparency. When people request minutes that have been compiled but that council has not yet approved, cities should release them with a note or a watermark indicating that the document is a draft.

Minutes have far-reaching implications

Keeping minutes for public meetings is a multifaceted, but critical, task. Accurate, timely, and accessible minutes are essential for fostering trust in government institutions, facilitating resident engagement, and preserving the record of governance.



Most Police Vehicle Losses Come From Routine Driving, Not Emergencies

Patrolling police officers operating out of their cruiser have a wide range of duties to perform while behind the wheel. They scan their patrol areas, looking for suspicious activity, use their radio for communication, and operate their emergency activation equipment. Policing the streets takes specialized driving skills and careful attention to keep officers and the public safe on the road.

The SC Municipal Insurance Trust and SC Municipal Insurance and Risk Financing Fund recently analyzed recorded vehicle loss data among their member municipalities to determine the root cause of emergency vehicle accidents. The study found that from 2019 to 2023, there were about six times more claims related to routine driving versus responding to calls, with total incurred losses of more than \$14.7 million.

Police departments looking to guard against preventable vehicle losses should review their records over a period of

years, and the cause behind each accident, to see if there are ways to improve how officers handle routine driving. When departments focus on the dangers of distracted driving and defensive driving training, they can help manage vehicle and insurance costs.

Numerous insurance claims can result from a single vehicle collision. One incident can generate

- a workers' compensation injury claim, if the employee is injured;
- a first-party auto physical damage claim for the damage to the patrol vehicle;
- a third-party property damage liability claim for the damage to the claimant vehicle; and
- a third-party bodily injury liability claim for injured occupants in the claimant vehicle.

Each of these claims comes with meaningful costs. Not only can the

collision result in premium increases, the injured officer may be out of work and the patrol vehicle will be off the road until it is repaired or replaced. The department may also face reputational consequences if its officer is liable for a collision resulting in serious injury.

Police departments should encourage their officers to eliminate as many unnecessary driving distractions as possible. Use of personal cell phones is a well-known distraction, but eating and drinking while operating the vehicle or adjusting controls that take the driver's eyes off the road are other common sources of trouble.

SCMIT and SCMIRF members have access to an online LocalGovU course, "Distracted Driving for First Responders." They can learn more at www.masc.sc (keyword: LocalGovU). For questions on managing distracted driving or creating a strategy for driver improvement, contact losscontrol@masc.sc.

How Can Municipalities Regulate Fireworks?

Independence Day is a major fireworks holiday, with temporary fireworks stands often setting up in the weeks preceding July 4.

Fireworks can present significant challenges to safety and to property, with the National Fire Protection Association recording more than 19,500 fires started by fireworks every year, and so some cities take steps to regulate them.

Fireworks Prohibited Zones

State law does not allow municipalities to pass ordinances prohibiting or criminalizing the use of fireworks, so an important part of any municipal regulatory effort is making sure that local ordinances do not conflict with state law.

SC Code Section 23-35-175 allows for the creation of Fireworks Prohibited Zones. Both municipalities and property owners may establish such zones. Municipalities also have the authority to regulate the times when fireworks may and may not be discharged — for example, setting an hour in the evening after which they cannot legally be fired.

A 2011 South Carolina Attorney General opinion noted that local officials should be careful to make violations of local fireworks ordinances punishable only with civil penalties, much like the penalties found in smoking prohibitions. Legal precedent, the opinion said, finds local regulation is unreasonable if it effectively bans something that is legal under state law.

Fireworks sellers

While local governments are empowered to regulate the discharge of fireworks, such as restricting it at certain places or certain times, they are generally prohibited from regulating the manufacture, storage and sale of fireworks. Those functions are delegated to the State Board of Pyrotechnic Safety and the State Fire Marshal. The board's staff also performs inspections and receives complaints.

The board's website, llr.sc.gov/pyro, has a licensee lookup feature and also provides the state laws and regulations for pyrotechnics as well as the National Fire Protection Association's code for all pyrotechnic-related activities.

Storefront Facades Make a Statement

First impressions of a person — the perception and judgment of their characteristics, personalities and behaviors — can be formed within three seconds of meeting a person.

Perceptions of a city or town are no different, according to Randy Wilson, president of Community Design Solutions. They are a critical place where visitors form those perceptions is the downtown core, which usually contains the most historic and most distinctive commercial structures in the community.

“While there are other things that play into this perception, such as gateway signage, the streetscapes, the landscaping, and the presence or not of trash, I would argue that our facades, our buildings, play an especially important role,” he said.

Wilson covered the architectural basics of historic storefronts at a recent meeting of the local directors of Main Street South Carolina, the state’s downtown development technical assistance program. The meeting helped attendees better understand both the stock of buildings in their downtown and the aspects that Main Street directors and design review boards should consider when preserving or restoring storefronts.

While the owners of aging storefronts around South Carolina have in past decades sought to cover over maintenance problems with plaster, metal slipcovers or modern hardware that clashes with the building’s original design, a growing appreciation of restored facades in recent history have led numerous cities and towns to use architectural review boards to protect the appearance of buildings, or offer facade improvement grants to help owners address appearance concerns.

Building owners who care for a commercial building’s façade need to pay attention to two key parts: the eye-level storefront and the upper facade. The storefront on the first floor typically will have display windows and possibly a recessed entryway that allows for more display space. The upper facade is typically

the location of windows, and especially in the case of historic storefronts, a decorative cornice — a horizontal molding that tops the building.

“In some buildings, the cornice is simple. It can just be a brick detail. In others, it’s an ornamental piece,” Wilson said. “One of the first things we learned in architecture school is that two most important places in the life of a building is where it meets the street and where it meets the sky. The importance of the street is because that’s where the human being interacts with building. The importance of the sky is because this is where the building terminates.”

Wilson also touched on storefront restorations in a way that acknowledge both the history of the building and the design principles of architecture — for example, awnings should not completely cover masonry piers, which are the vertical sections of brickwork that surround windows. This is because they show how the structure is supported; a visible support structure is more visually coherent and inviting than a concealed element.

In all cases, preserving storefronts can help cities hold on to an important part of what makes their communities unique and memorable.

“Newer buildings or franchise architecture [types of] buildings tend to be fairly similar,” Wilson said. “But the thing that absolutely distinguishes Walterboro from Florence, from Hartsville, is both the assemblage of and the style of the buildings that are deposited in our downtowns. That’s why is behooves us, especially in Main Street circles, to preserve, maintain and enhance our historic structures. They are our most distinctive calling cards.”

Learn more about Main Street South Carolina at www.masc.sc (keyword: Main Street).



Randy Wilson’s design work has included the restoration of this storefront facade on downtown Conway’s Third Avenue. Photos: Randy Wilson, Community Design Solutions.



As a river town near the coast, Conway's periodic experiences with floods have contributed to projects and land use changes designed to make it more flood-resilient. Photo: City of Conway.

As many South Carolina municipalities experience stronger and more frequent flooding, cities are fighting back with everything from improved drainage systems to development regulations that anticipate future climate changes.

When Hurricane Florence drenched South Carolina in 2018, Conway took a particularly hard hit, with some homes and structures submerged in contaminated water for three weeks or more. Conway also experienced major floods in 2016, 2015, 1999 and 1928, City Administrator Adam Emrick said.

"Each of these flood events typically involved two distinct flooding periods — flash flooding during or just after the rain event that lasts a few days, and riverine flooding, which may come days after the event and last for weeks," Emrick said. "Hurricane Florence in 2018 was the worst flood on record, damaging hundreds of homes and businesses."

In the years since, Conway has made flood mitigation the top priority in this city along the banks of the Waccamaw River, 12 miles inland from the coast.

"We can't stop the rain, but we will do everything within our power to ensure that the water that falls on our city can make its way to the sea without disrupting the lives of our citizens," Mayor Barbara Jo Blain said.

Some of the projects undertaken in Conway include Federal Emergency Management Agency buyouts of flood-prone properties, acquisition of conservation property, increased elevation requirements, resiliency and stormwater master plans, tree plantings in flood-sensitive areas and changes to Riverfront Park, said Mary Catherine Hyman, Conway's deputy city administrator.

"Conway recognizes that certain threats are out of its control, but the city has chosen to use every available tool in its toolbox," Hyman said. "Every decision, including capital projects and land use, is made with flooding in mind."

At Conway's Riverfront Park, for example, cypress trees were planted to replace the riprap shoreline, electrical systems were adjusted, the tennis center and fireman's clubhouse were removed, and the riverwalk surface itself was rebuilt with better, more water-tolerant wood.

The city also took steps to create an artificial Carolina Bay similar to the natural oval-shaped depressions that are considered isolated freshwater wetlands. Kevin Chestnut, the city's former public works director, proposed the idea for an area where FEMA funds had been used to buy out properties subject to repetitive flooding.

Chestnut's idea led to a partnership with The Nature Conservancy to bring

in a nature-based engineering firm that proposed converting the areas into a shallow stormwater detention-retention area, mimicking wetlands, she said. Called Chestnut Bay, the city is turning the surrounding land into a community park.

In Charleston, flooding issues are exacerbated by the historic city's geography, coupled with the climate shift in the past decade that has brought increased hurricanes and extreme tides. The city has responded with everything from massive tunnels to move water out of the peninsula to rewriting regulations to ensure new development and redevelopment is done with an understanding of climate change.

"A lot of the peninsula is flat and low-lying. There's not a lot of elevation change to push water out toward the coast, and there aren't creeks or rivers that run through most of the downtown area," said Matthew Fountain, Charleston's director of stormwater management. "So the challenge you have is trying to get water to flow through a traditional drainage system out to the harbor or into the Ashley River."

Charleston's flat land requires larger pipes and pumping stations since there isn't enough slope to cause gravity to move the water quickly. And because Charleston is a historic city with extensive development and infrastructure beneath

its streets, a deep tunnel system, drilled to about 130 feet below ground is being used in some parts of the city.

Charleston has two major tunnel and pump systems downtown, including an older project that had some recent expansion that serves the Market Street area, Calhoun Street and parts of the peninsula. The city also recently finished building tunnels and is now working on a pump station in the U.S. Highway 17-Septima Clark Parkway areas. During a severe rainstorm, the areas will still experience street flooding, but the water in these areas now drains more quickly than other parts of the city, Fountain said.

And while capital projects play a big role in addressing flooding, in 2020 the city also reworked its stormwater regulations for new development and redevelopment projects to make sure the unique water control challenges of Charleston are considered.

Fountain stressed the importance of setting up the capital project and redevelopment regulations to look at future conditions, with a realistic chance of 2 feet of sea level rise in Charleston in the next 50 years.

“That has huge value,” he said. “If you want your city to continue to function in the future, make sure when you’re doing your design work, you’re designing it for those future conditions instead of spending a whole bunch of money building something that will not work in 30 or 40 years.”

Fountain said the standards are not anti-development. In fact, if regulations are written correctly, new development can actually help with stormwater and infrastructure issues.

Beaufort is another coastal city that has dealt with increasing storms and sea level rise. The city has tried to look ahead by commissioning stormwater studies, starting with some of its most vulnerable areas, said John “JJ” Sauv  , Beaufort’s assistant city manager.

“Much of the stormwater issues faced on a day-to-day basis could be described as nuisance waters, i.e., standing water on streets, paths and sidewalks, but these nuisance waters are generally a

sign of a greater problem,” Sauv   said. “Commissioned studies have shown aging or aged-out stormwater pipes, collapsed pipes, dead-end pipes and pipes too small to carry current stormwater runoff. Because of the age of many of these pipes, maintenance is difficult and recurring problems occur at every significant rainfall event.”

One example of the city’s work is in the Mossy Oaks neighborhood, an area of about 550 acres and several hundred homes that flooded after heavy rains, high tides or storm surges. After a multijurisdictional task force was formed in 2017, an engineering study identified factors such as inefficient drainage structures and poor drainage patterns. Other issues included homes built on slabs and overgrown vegetation in ditches.

The \$8 million Mossy Oaks stormwater project was completed in April 2021 and has been “a success for the community, public safety responders, public works maintenance teams and homeowners in the area,” Sauv   said.

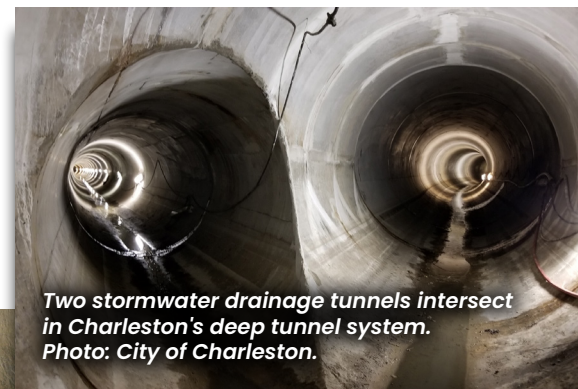
Several other stormwater projects are currently in design or planning stages.

“These projects taken together are intended to give the city a full assessment of and understanding of our current stormwater infrastructure across the

city, so that we can continue to address known issues and prevent issues through responsible infrastructure replacement and maintenance,” he said.

The biggest lesson Beaufort learned is the importance of assessing and understanding stormwater systems.

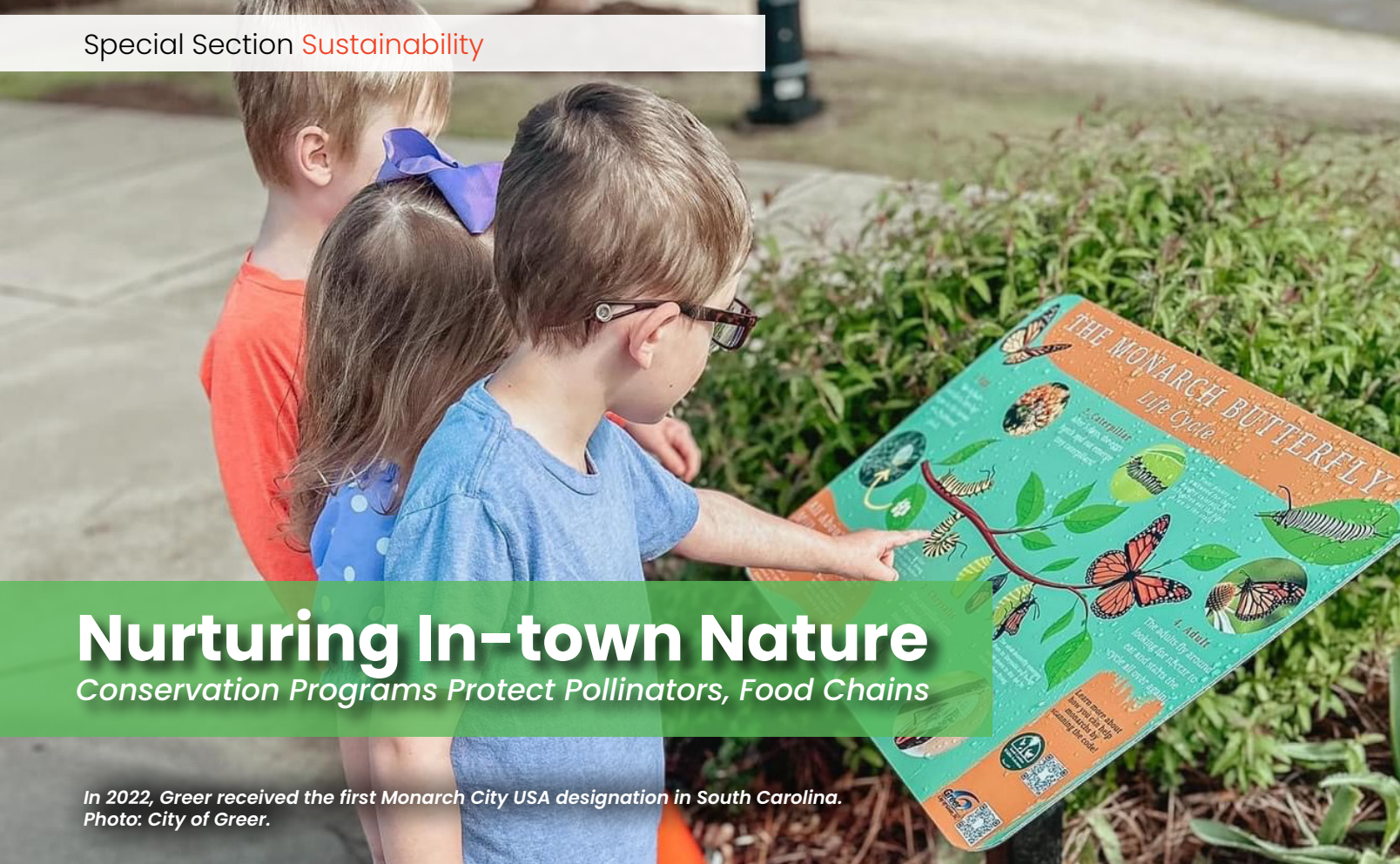
“If you know there is a problem area, find out why there is a problem. It could be a simple fix such as a clogged drain, or it could be as complex as an aged-out piping system, but until you have a full understanding of your infrastructure, you’ll never know the extent of the issue,” Sauv   said. “We must utilize the resources we have such as grant funding and technology. For us one of the key pieces of our long-term planning has been the ongoing process of building out a municipal GIS system to keep track of, among many other things, our critical stormwater infrastructure and to provide council with accurate and up-to-date information.”



Two stormwater drainage tunnels intersect in Charleston’s deep tunnel system. Photo: City of Charleston.



Beaufort’s Mossy Oaks stormwater drainage project included tidal flap gates that can control water flow into the marsh. Photo: City of Beaufort.



Nurturing In-town Nature

Conservation Programs Protect Pollinators, Food Chains

In 2022, Greer received the first Monarch City USA designation in South Carolina.
Photo: City of Greer.

From butterflies and bees to bobcats and sea turtles, South Carolina cities and towns are actively working on conserving their local wildlife.

The task requires a lot of education, many volunteers and — in at least one case, several wildlife biologists on staff — to take care of the animals that in turn play a vital role in the delicate ecosystem.

For the City of Greenwood, becoming a Bee City USA partner was a natural opportunity, considering the town's history as the host of South Carolina Festival of Flowers and the home of the Park Seed Company.

Even though the national program's logo includes a classic yellow-and-black bumblebee, the conservation efforts are about more than just bees. The city's efforts look at ways to improve life for all pollinators and creating an environment for their full lifecycles, said Ann Barklow, who retired as the city's horticulturist and now serves as the Bee City USA liaison and a volunteer coordinator for the city.

The Bee City USA program involves maintaining pollinator-friendly gardens

and doing lots of education and outreach to the community.

"If you're a Bee City USA, you learn to be sort of a messy gardener," Barklow said.

That's because the yard trash that many people clean out of their yards are just the places that pollinators like to nest. To that end, city crews bring piles of leaves that residents have cleaned up out of their own yards and Barklow and her teams of volunteers help create natural pollinator "hotels."

"We concentrate on all the lifecycles of insects, not just the nectar and pollen, but we also provide for nesting bees that nest in the ground," Barklow said. "The leaves provide a habitat for a lot of the insects, including fireflies."

The city gardens also avoid using any sort of pesticides and cultivate hardier plants that can withstand insects. When perennials are cut back in the gardens, the teams leave a healthy stem where bees and caterpillars like to nest.

"Your Eastern black swallowtail [butterfly] needs fennel and dill and parsley, and so we grow a lot of that," Barklow said.

Greenwood's efforts also help other species along the way — including the endangered monarch butterfly. In the City of Greer, monarch butterfly conservation efforts have included planting milkweed — the only plant the monarch caterpillar will munch on — in its gardens, and now has whole swaths of land and gardens dedicated to the butterflies.

Greer Recreation Supervisor Justin Miller, whose job includes managing recreation facilities, occasionally finds himself on "egg patrol" helping protect and hatch monarch butterfly eggs laid on the underside of the milkweed leaves. The harvested eggs are incubated at a city office where people can also learn about the lifecycle of the monarch.

Miller says he is always on the lookout for common houseflies that might also hatch at the same time because they eat the monarch eggs.

"We started collecting those eggs ourselves and started raising those as a department," Miller said. "One of every 100 eggs you leave in the wild will make it to the butterfly stage. Everything is out to get that monarch egg and that monarch caterpillar — the common housefly,

wasps, bees, spiders, I mean, everything. So, we saw the great need to rear those eggs and bring those in — especially after the Monarch City USA designation we received.”

The city earned that designation in 2022, making it the first city in South Carolina to do so. The City of Clemson and Town of Irmo are Monarch City USA designees as well.

The keys to the Greer program’s success are education and partnering with local garden clubs, Miller said. The local council of garden clubs obtained a grant to help establish the Nancy Welch Memorial Butterfly Garden at Greer City Park. Milkweed and other flora that butterflies are drawn to were planted in the garden, and the city avoids using any pesticides that could be harmful to the monarch during its lifecycle.

From there, the city has added milkweed to other gardens and last year received a grant from the South Carolina Wildlife Federation to plant 100 milkweed plants near the golf course and driving range it has owned since 2020.

“When we raise those caterpillars into butterflies, we release at each garden,” Miller said. “Those butterflies, their offspring, whether it be that third or fourth generation, come back to that garden.”

The Town of Kiawah Island also has programs that help butterflies and endangered shorebirds and bluebirds, but the town’s efforts to protect and conserve its bobcat population has gained importance in recent years as the numbers of those animals has dropped.

Three staff wildlife biologists help manage its Bobcat Guardian program

as well as its all-volunteer sea turtle program.

“We do a lot of research projects and management projects with wildlife,” said Wildlife Biologist Jim Jordan, who has been with the town for 25 years.

Since 2007, the town has been tracking its bobcat population, which normally is about 35. Their numbers began to decline in 2017 and got as low as about 10.

“We do this research because we know how important bobcats are to the ecosystem out here,” Jordan said. “We want to make sure they’re protected, that they have the habitat they need to survive.”

The thing that was killing the bobcats, which have few natural predators on the island, was anticoagulant rat poison.

“Bobcats sit at the top of the food chain, they’re one of the top predators out here,” Jordan said. “Their role in the ecosystem is to control prey species. And with bobcats, that’s mainly deer, rats and mice.”

The use of the anticoagulant type of poison does not immediately kill rats and mice, leaving them to be eaten by bobcats, which also become sick and can die when they ingest too much of the poisoned vermin.

Fewer bobcats meant an explosion in the deer population, which nearly doubled in two years, requiring the use of sharpshooters to thin the herd, Jordan said.

“Without bobcats in the ecosystem, prey species increase substantially and lead to other issues,” he said.

To help bring back the bobcats, the town had to work with residents and local pesticide service providers to stop using the specific types of poisons that were affecting the bobcats. The poison is legal to use and the town cannot ban it, because those substances are regulated on a statewide or federal basis.

And, unlike the town’s other protected species — the sea turtle — bobcats are not an endangered species generally and can be found across South Carolina.

Instead, the town’s Bobcat Guardian program enlists residents to pledge not to use four specific types of rodenticides, and to use all pesticides sparingly.



The Town of Kiawah Island established a Bobcat Guardian program to protect the important role that bobcats play in the ecosystem. Photo: Town of Kiawah Island.

The program encourages the cultivation of native plants to provide better habitat for bobcats.

Kiawah Island's sea turtle program is similar to most others that operate along the South Carolina coast, with teams of volunteers permitted by the South Carolina Department of Natural Resources to mark and submit detailed inventories on turtle nests.

The town has the largest sea turtle volunteer program in the state, Jordan said, with over 300 participants. The program operates under a permit from the state but is funded and supported by the town.

The nesting crews work from the beginning of May through early August looking for nests and recording information on them. Once those nests are identified, other volunteers will watch them for hatching and submit county numbers.

The town also has a Shorebird Stewardship program, helping keep track of the birds that nest on the island, as well as bluebird nesting boxes that volunteers check weekly for a count of them.

In all, the town spends about \$500,000 a year on its conservation efforts.

"Kiawah's commitment to the environment and protecting wildlife goes all the way back to when development of the island was first being considered in the mid-70s," Jordan said. "The developers at the time did an incredibly detailed environmental assessment — mammals and reptiles and birds and archaeology and all of these things ... That was kind of the principles on which Kiawah was founded."



Greer's monarch butterfly conservation efforts include butterfly-compatible gardening as well as cultivating monarch eggs. Photo: City of Greer.

Greenwood's pollinator-friendly gardens are tended by volunteers. Photo: City of Greenwood.



Understand Property Coverage, and Keep It Updated



Hurricane season brings with it the potential for many types of property damage or destruction, from storm surge to rainfall-related flooding, wind damage or tornadoes. Some of the key ways that cities and towns can manage their exposure to property losses is to keep their property schedules up to date, and to check over their insurance coverage ahead of time.

Updating property schedules

Schedules are the detailed list of items that municipalities provide to their insurance carrier when they first establish coverage. Afterward, they should update the schedule whenever they buy or sell assets — things like vehicles, buildings and inland marine items, which is an insurance term that can include things like fencing, mobile equipment, and signs.

Checking over property schedules can help prevent a property from being valued incorrectly or discovering that a property was not covered only after a loss. Out-of-date schedules could mean a city is paying premiums on an asset they no longer own, or that they bought an item that has not been reported to their insurance provider promptly, and therefore may not be covered.

In the case of SC Municipal Insurance and Risk Financing Fund members, staff can make updates and adjustments by logging in at www.masc.sc (keyword: underwriting portal instructions.)

Reviewing coverage

Here are some key issues to consider when checking on insurance coverage:

- **Replacement cost or actual cash value** – Understand the amount of money that would be paid if a building were to be destroyed. Coverage written on an actual cash value basis, such as for automobiles, would include a deduction for depreciation, which moves the potential payout lower over time even though the cost of replacement would not decline.
- **Coinsurance** – Know whether coverage includes a coinsurance provision, which requires cities to cover a certain percentage of the value of buildings and building contents. If a city does not insure the property for this minimum amount and experiences a loss, then the city would have to pay a coinsurance penalty amount before any deductibles are applied.
- **Flood zones** – Know whether buildings are located inside high-hazard flood zones, which are any zones beginning with the letters A or V. The National Flood Insurance Program offers a maximum coverage of \$500,000 for a building and \$500,000 for contents. If a building is in a high-hazard area and is not insured to these amounts, then any claims payments may be a payout on top of the NFIP coverage. The Federal Emergency Management Agency offers a Flood Map Service Center at msc.fema.gov.

For more information about managing property schedules and coverage, contact losscontrol@masc.sc.



Municipal Association of South Carolina

1411 Gervais Street | PO Box 12109
Columbia, South Carolina 29211
803.799.9574
www.masc.sc

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Calendar

For a complete listing of the Association's training opportunities, visit www.masc.sc to view the calendar.

JUNE

2 – 5 SC Association of Municipal Power Systems Annual Meeting. Embassy Suites, Myrtle Beach. Topics include regulatory updates, federal funding for disaster recovery and mitigation, using drones for electric system inspections and retail recruitment.

6 SC Association of Stormwater Managers Second Quarter Meeting. Cooperative Conference Center, Columbia. Topics include the impact of septic systems on stormwater management, septic system inspection and maintenance, and illicit discharge detection and elimination programs.

12 SC Business Licensing Officials Association Accreditation in Business Licensing Exam. Municipal Association of SC, Columbia.

12 – 14 Main Street SC Managers' Summer Retreat. The DIY Place, Florence. Topics include promotion walkable communities, community storytelling and a walking tour of the Downtown Florence Cultural District.

25 – 26 Municipal Count Administration Association of SC 101 Session A Training. Municipal Association of SC, Columbia. Topics include a judicial system overview, case lifecycles, types of proceedings, initiating a case, bonds and courtroom processing.

JULY

17 – 21 Municipal Association of SC Annual Meeting. Hyatt Regency Greenville. See page 4 for more information and find agenda and registration details at www.masc.sc (keyword: Annual Meeting).

AUGUST

6 Risk Management Services: Defensive Driving Course. Gignilliat Community Center, Seneca.

6 Setoff Debt Program 2024 Annual Training Session: New Employees of Current Participants. Municipal Association of SC, Columbia.

8 Setoff Debt Program 2024 Annual Training Session: Interested Participants. Municipal Association of SC, Columbia.

14 SC Business Licensing Officials Association Accreditation in Business Licensing Exam. Municipal Association of SC, Columbia.

14 – 16 Municipal Court Administration Association of SC Annual Meeting. Embassy Suites at Kingston Plantation, Myrtle Beach.

20 Business Licensing Essentials Training. Virtual.

22 Small Cities Summit. Hilton Columbia Center.

SEPTEMBER

5 SC Association of Stormwater Managers Third Quarter Meeting and Exhibitor Showcase. Cooperative Conference Center, Columbia.

11 – 13 Municipal Clerks and Treasurers Institute, Year 3, Session A. Hilton Garden Inn, Columbia.

17 Municipal Elected Officials Institute of Government: Forms of Municipal Government and Municipal Economic Development. Regional Councils of Governments locations.

18 Main Street South Carolina 3rd Quarter Managers' Training. Location to be determined, Clover.

18 – 20 Municipal Technology Association of SC Annual Meeting. SpringHill Suites, Greenville.